CATTLE GRAZING IN THE NATIONAL PARKS: HISTORICAL DEVELOPMENT AND HISTORY OF MANAGEMENT IN THREE SOUTHERN ARIZONA PARKS

by

Robin Lothrop Pinto

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Abstract

The places that we inhabit are, in part, historical artifacts of past environments. They have been created by people interacting with their own landscapes, according to their own traditions, and in their own times. This research traces the history of one land use, cattle grazing, and its effects on three national park landscapes in southern Arizona. It presents a collection of studies that examine the factors affecting that use, the ranchers who made their living from the landscape, and the federal land managers responsible for sustaining the landscape resources. These factors have contributed to the resulting park landscapes we enjoy today.

By the end of the Civil War, cattle grazing was the dominant industry on the arid range lands of the United States. Cattle grazing as a use was never constant. It grew, changed, and declined across western landscapes as a function of different influences, some environmental but most human-derived. Ranching communities developed from small homesteading settlements. In southern Arizona, immigrant Mexican-Americans seeking opportunities to acquire their own land and develop their own businesses were some of the first to claim homesteads. The efforts of the early settlers, and of the later stockmen who assembled those homesteads into larger ranching enterprises, were affected by natural and human factors: climate, topography, and natural resources; social and cultural pressures; economic events and political legislation; and regulations and decisions by federal land managers.

The US Forest Service (USFS) was the first land agency to oversee cattle grazing. Despite its desire to manage its resources sustainably, the agency was under constant pressure to maximize short-term human benefits. The USFS perceived rangelands as a means to sustain its industry, not as a landscape element with other values to be conserved. Because of the National Park Service's (NPS) own enabling legislation, the Park Service was dependent on the Forest Service to manage cattle in its many parks. Park employees were frustrated by grazing practices that were neither in line with their values nor under their control.

The Park Service Organic Act of 1916 mandated that NPS conserve and protect its natural resources "by such means as will leave them *unimpaired* for future generations (emphasis added)" and, at the same time, opened park lands to grazing – the only permitted extractive use. Carved from public lands already carrying livestock, western national parks were burdened with grazing as a grandfathered use. From the outset, these parks were at a cultural and social disadvantage. Residents and politicians often expressed displeasure at their establishment; the communities feared that these new federal reservations would interfere with local growth and industry.

Employees at Saguaro National Park, Organ Pipe Cactus National Monument and Fort Bowie National Historic Site were hired to supervise visitors and develop recreation infrastructure; they came with little experience and were given no policies or guidelines for managing livestock. Poor funding, limited manpower, and political and administrative interference allowed cattle grazing to continue, largely unregulated, for decades, significantly altering vegetative communities and promoting soil erosion. Finally, in the late 1960s, changing cultural values concerning environmental conservation, the waning power of the livestock industry, and the rise of activist scientists impelled the Park Service to reexamine its resource responsibilities and initiate actions to terminate grazing as an approved use. Throughout most of its history, the Park Service had been unwilling to develop on its own the scientific programs necessary to measure and monitor the changes wrought by grazing. In the absence of such documented evidence, the Park Service turned instead to a legal justification to terminate grazing.

Both the institution of cattle grazing and the Park Service itself have changed radically in recent decades. Grazing on federal lands is more regulated and more carefully monitored by land managers and environmental institutions. The National Park Service is now mandated to support ecological and cultural research and incorporate the lessons learned from that research into management decisions. While older grazing permits are gradually being retired, land acquisitions for new parks and additions to existing ones in the West continue to present additional grazing management responsibilities to park employees. The purchase of grazing permits now offers a new financially limited opportunity to retire this use on the most ecologically or archaeologically sensitive lands.

Even though cattle have been eliminated from all three of the parks studied here, the ecological changes and the vernacular remains of that traditional use are still present and visible in those landscapes. These historical features in park landscapes are important components of each park's cultural and administrative history. They offer opportunities to park managers to interpret a significant regional tradition and an as yet untold controversy in park management history.

Part I

Grazing on National Park Lands

CHAPTER 1

Introduction

National parks have been reserved from public lands by Congress and the President for the purpose of protecting and preserving unimpaired those landscapes, their features and their values for the enjoyment of future generations. Yet much like our public use lands under the Bureau of Land Management and the US Forest Service, cattle grazing has been permitted in more than 150 units within the National Park System.[1] While the history of grazing on public lands has been extensively researched, almost nothing has been written about grazing in the national parks. Bits and pieces of that history can be found in individual park administrative histories – where they have been written. For decades, the National Park Service asked for and kept few records of livestock use. With few exceptions, park files on grazing are rarely elaborate. And yet this one permitted commercial use has caused significant and permanent change to landscapes and soil and vegetation resources in most of our western parks – certainly more than any other single activity. Why has this legislated use been so ignored both in and out of the Park Service? Today, most cultural and natural resource managers are largely uninformed about their own park history, the extent of grazing as a commercial use, and the ecological alterations that have occurred within the landscapes they are hired to care for. The absence of accurate historical information can lead present park management to erroneous interpretations of their own resource studies and, ultimately, inaccurate condition assessments of those resources.

The purpose of this research is to explore the history of cattle grazing management as it occurred in three national park units – Saguaro National Monument (now Park), Organ Pipe Cactus National Monument, and Fort Bowie National Historic Site. Each is located in Southern Arizona in arid or semi-arid grasslands. Each was established during the middle of the 20th century with a requirement to maintain the existing land use: cattle grazing. That use continued for four decades into the late 1970s for Saguaro and Organ Pipe, and until 2000 for Fort Bowie. Each park faced political, legislative, social, and cultural challenges that effectively perpetuated cattle grazing. Some of these challenges were common to all three parks, some were unique. Each park struggled to deal with damage to vegetation, restrictions on park management options by external influences, and protracted difficulties in eliminating a commercial use in a reserve designed to preserve the landscape, its resources, and its history.

This thesis examines issues and decisions that confronted the National Park Service and the employees at each park. The grazing histories form a triad of studies with which to investigate the efficacy of agency administrative decisions, policies, and actions. Com-

[1] Mark Fiege, Maren Bzdek and Ruth Alexander. 2008. "Livestock Grazing in the National Parks: An Administrative History." Phase 1. Draft. Copy in author's possession. Pages 14-15.

parisons identify common problems or limitations, productive responses and solutions, and highlight issues unique to each park. The challenges were not limited to park unit managers. Administrators at regional and national levels were also embroiled in the political, ecological, and, ultimately, the legal ramifications of cattle grazing.

This research illustrates an agency-wide neglect of, or lack of interest in, the ecological conditions that created the very landscapes and resources the Park Service is charged to preserve. It also illustrates a consistent lack of will among NPS administrators to assist or defend park managers as they struggled to protect the natural and cultural resources. The National Park Service was unwilling to confront external political pressures either from congressional representatives or livestock lobbying groups. This study also documents some of the damages done to ecological and historical resources inflicted by livestock grazing.

Federal land management decisions, in turn, had consequences for the communities that surrounded each park and for the ranchers and their families that depended upon park resources. This research also examines how those families utilized federal lands and how changes in federal grazing management and policy affected their ranching operations and influenced settlement, community culture, and changes in land use.

1.1 Research Format

The format of this research derives from the qualitative case study methodology. Using historical and modern data from the three Southern Arizona parks, this thesis examines the similarities and differences between their management histories and the factors that have influenced those histories. Comparative studies provide a valuable methodological tool that allows the researcher to investigate in greater depth the "how" and "why" questions regarding specific phenomena. These types of studies are often used to research social entities, institutions, or multiple related institutions such as the National Park Service and its associated park units.[2]

Social scientists have observed that a major strength of case study research is its ability to deal with a wide range of different types and sources of evidence.[3] The process of close comparison among multiple cases leads to a better understanding of significant issues and subsequently to the development of more precise questions or propositions which help to elucidate why and how those issues came to be important.

Comparisons also lead to the identification of common factors that confounded on-the-ground management at different parks. They highlight the evolution of individual management responses and the relative success and/or failure of those responses. Comparisons or triangulations between cases lend not only a depth and richness to the history

[2]Charles Schell. 1992. "The Value of the Case Study as a Research Strategy." www.finance-mba.com/Case%20Method.pdf; Yin 1984; Pamela Baxter and Susan Jack. 2008. "Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers." *The Qualitative Report*, 13(4): 544-559. www.nova.edu/ssss/QR/QR13-4/baxter.pdf

[3]Baxter and Jack. 2008; R K Yin. 2003. *Case Study Research: Design and Methods.* Thousand Oaks, California: Sage Publications; R E Stake. 1995. *The Art of Case Study Research.* Thousand Oaks, California: Sage Publications and references therein.

and context of each case but also a validation of the importance of the findings and results in common.

1.2 Sources of Information

The backbone of this investigation has its origin in Park Service records. Correspondence between managers and other administrators forms the majority of that skeletal component. They span more than 80 years of park management and administration. Despite the stylized agency format, distinctive personalities, attitudes, and emotions are revealed in years of letters and memoranda. Expressions of frustration over landscape conditions, and exasperation in the absence of response and resolution are eminently audible within the constrained formality. Specific details relating resource condition changes were derived from interviews, published scientific papers, and agency and contracted reports. These records are located in a number of national archives (College Park, Maryland; Riverside, California; Washington, DC; Denver, Colorado; and Tucson,Arizona) and in individual park collections (Saguaro National Park, Organ Pipe Cactus National Monument, Fort Bowie National Historic Site, and other Arizona parks). Other federal agency records were found at the Bureau of Land Management offices in Phoenix and Tucson, Arizona; at the Coronado National Forest office in Tucson, Arizona; and at the University of Arizona Special Collections Library and the Arizona Historical Society, both in Tucson, Arizona.

Interviews, both those previously recorded by other historians and my own, are the sinews that hold the bones together. Most of the older transcripts and recordings relate experiences from ranchers, settlers, and their descendants. Modern interviews are mostly with retired Park employees. Memories, of course, create their own biases depending on the individual. Each interviewee was pleased to relate their stories; they freely offered thoughtful and detailed remembrances covering, in many cases, decades of experiences and events.

Context, historical and modern, is the skin that holds this work together. Secondary sources provide an additional, external perspective – the view looking at events and decisions from the outside or from a later time period. Sometimes they confirm information in original documents, sometimes not. Those contextual secondary sources include national park and forest administrative histories, environmental histories, theses, dissertations, and other unpublished manuscripts.

1.3 Organization

This dissertation is divided into six parts. Chapter 2 of this first part explores the similarities and differences between the three Arizona parks as they dealt with the challenges of cattle grazing. It compares the origins of grazing in each park. The differences in origins imposed specific land-use prerequisites on each unit. Grazing management at individual parks was constrained by external and internal agents (park administrators, other land agencies, and congressmen) and factors (inadequate staffing, funding, policies, and ecological and legal knowledge). Ultimately, outside agents provided the solutions to release each park from that use.

The requirements for resource management have evolved significantly in the past two decades. Advancements in natural resource inventory and monitoring in all three parks are encouraging. Resource challenges from the effects of cattle grazing are ongoing. Chapter 3 of Part I assesses some of these modern issues.

Parts II through VI offer five separate studies. Each one presents a different perspective in the history of grazing at the three national parks. Part II examines the rise of homesteading and cattle ranching near Saguaro National Park. It presents a history of cattle grazing from the perspective of the early settler and later the rancher. With the removal of the Apache Indians in the late 1800s, Mexican-American families settled near available water to farm the land, improve their homestead claims, and ultimately gain title to that claim. Economic pressures during and after WW I initiated a change in land use from subsistence homesteading to larger cattle ranching enterprises. At the same time, a cultural shift began with the arrival of better-financed Anglo Americans. The small homestead parcels formed the building blocks out of which these stockmen developed their larger base ranches. Yet they were still largely dependent on nearby public lands (national forest, monument, and state) for their livestock forage. Ranchers, like the homesteaders before them, faced problems of drought, economic downturns, and gradually diminishing resources as they struggled to make cattle grazing an economically sustainable enterprise.

In many national parks, including Saguaro and Fort Bowie, grazing was managed by other federal land agencies – either the US Forest Service or the Bureau of Land Management. These multiple use agencies had already developed range management programs with experienced range conservationists. Despite their expertise, these range managers were largely unsuccessful in limiting overgrazing on national forest and monument ranges. From its inception, the Forest Service was plagued by significant management challenges from inadequate mastery of range ecology to interference by congressional representatives to stubborn users unwilling to modify their traditional practices. Part III describes the history of those issues that handicapped livestock management at Coronado National Forest and ultimately at Saguaro National Monument.

Parts IV, V, and VI contain the histories of cattle grazing and grazing management at three individual parks: Saguaro National Monument, Organ Pipe Cactus National Monument, and Fort Bowie National Historic Site. Part IV describes how the conflict over cattle grazing at Saguaro National Monument nearly led to the cancellation of the park. Created from Coronado National Forest lands, Saguaro National Monument inherited the Forest's grazing allotments and permittees. Saguaro's establishment angered the ranching community and its political representatives who feared the loss of grazing access and their ranching investments. The monument's status remained insecure until Park Service administrators guaranteed grazing permits in perpetuity. Appalled by the rangeland degradation by cattle grazing, environmental and university activists were instrumental in persuading the National Park Service and the Department of the Interior to eliminate cattle from the park.

Part V examines the grazing history at Organ Pipe Cactus National Monument. The monument was carved from the last unclaimed public domain lands in the continental United States. Unlike Saguaro, park employees were responsible for managing cattle grazing on monument lands. Like Saguaro, unhappy congressional representatives demanded guarantees that the ranching enterprise on monument land continue unrestricted. After

decades of overgrazing of park resources, an Interior solicitor's opinion finally offered a legal justification to eliminate cattle from the monument.

In a slightly more modern history, Part VI presents similar challenges of grazing management at Fort Bowie National Historic Site. Promises of continued grazing secured community support for the proposed park. With little range management oversight from the BLM, cattle overgrazed the historic landscape and damaged the military ruins. Like Saguaro and Organ Pipe, Fort Bowie's problems of grazing languished unresolved for three decades. Despite recent and nearby examples of grazing elimination, no administration bothered to investigate that option until prodded by regional resource managers and Interior solicitors.

CHAPTER **2**

Opportunities and Constraints: Lessons from Historical Study Comparisons

> The problem of grazing in the national parks and forests is a knotty problem at best, never solvable in precise terms.[1]
>
> John Ise

2.1 Limitations, Constraints and Opportunities in Managing and Ending Grazing

As John Ise astutely pointed out, many issues have conspired over the years to perpetuate cattle grazing in national parks. Numerous factors exposed these national parks to the burden of livestock grazing and perpetuated that use for decades. Early attitudes and perceptions about natural resources and their values strongly influenced grazing as a land use and its later management by federal agents. Both ranchers and rangers clung to the belief that desert grasslands would always recover from overuse even as the evidence contradicting that belief accumulated. Limited understanding of desert grassland processes and functions left forest and park rangers without sufficient information to develop sustainable grazing strategies. Rangers were unable to regulate proper forage utilization or persuade permittees to adhere to recommended grazing procedures.

On the other side of the grazing coin, ranchers, steeped in their own experiences and traditional knowledge, were equally convinced that their grazing strategies were appropriate for the desert environment and desert resources. They were unwilling to abandon familiar patterns of grazing, especially during periods of financial stress from drought and economic downturn. Poorly conceived and inappropriately applied grazing strategies played a significant role in the decline in grassland productivity and the quality and availability of livestock forage. The decline in the ranching enterprises around these southern Arizona parks followed in concert with this change in the natural resources. That decline, in turn, precipitated the land-use change from ranching to residential development.

Within the parks, actions and decisions at each level of park management were constrained by internal and external factors. The original Park Service legislation opened parks to grazing. Enabling acts defined in which parks grazing was to be accommodated. Internal constraints originated from regional and Washington level administrators who directed individual park activities or controlled options through research and funding. These administrators also regulated the degree of authority given to park managers to make important decisions. At all three parks, managers possessed insufficient authority

[1] John Ise. 1961. *Our National Park Policy. A Critical History.* Baltimore: Johns Hopkins Press. Page 302.

to terminate grazing, yet upper level administrators were unwilling to undertake that responsibility themselves. The most difficult constraints to overcome were the apparently binding political concessions (later deemed unlawful) made to ensure park establishment or security. Park grazing policies offered little alternative guidance in either day-to-day management or in procedures for terminating that use. Later legislation for both park and other federal agencies required resource condition assessments to be incorporated into management planning and to inform management decisions.

External factors, while infrequent, created more complex constraints. They also generated important opportunities that helped park employees to resolve management problems. Congressional representatives imposed limitations on park management depending upon their attitudes toward the park unit in particular and/or the National Park Service in general and upon their dedication to their local constituents affected by park actions. Stockmen and their industry representatives resented actions by NPS employees to restrict grazing access that had historically been available. The livestock industry used congressmen to threaten or punish the agency or park. Dependency upon other range agencies left park employees disconnected from grazing management and left the use of forage resources to be governed by philosophies and policies different from those of the Park Service. Environmental activists from the general public and the scientific community were key to arousing park administration and interior officials to resolve the ultimate grazing question: Did the National Park Service have the authority to terminate an activity causing significant damage to public resources?

2.2 Legislative Constraints: the National Park Service Organic Act of 1916

Before the creation of the national parks and its governing agency, traditional patterns of land use, including cattle grazing, were well established. The early landscapes within all three parks had been extensively grazed. Descendents of Kino's first cattle had ranged throughout Organ Pipe since the early 1700's. The US military grazed horses and cattle in Apache Pass in the 1860's. Settlers at the base of the Rincon Mountains ran cattle on the foothills from the early 1870's onward. The well-publicized "success" of the Forest Service's range management program during its first decade lent support to the belief that grazing could be adequately managed on all public lands. Thus many believed that rangelands set aside for visitor enjoyment could and should be available for livestock grazing too.

The philosophical battle for the heart of the National Park Service during its legislative creation pitched preservationists against conservationists. Followers of John Muir wanted the proposed agency to protect and preserve spectacular scenery and wildlife for their own sakes. Those, like Gifford Pinchot, who believed in the "wise use" of natural resources, argued that the Forest Service could do it all – extract natural resources for the public's benefit and still provide for visitor recreation. A few years earlier, Yosemite National Park had been violated by the forced intrusion of the Hetch Hetchy dam. Preservationists wanted an agency that would protect Park resources, not open them up to extraction.[2] But the en-

[2]Horace Albright and Robert Cahn. 1985. *Birth of the National Park Service: the Founding Years. 1913-33.* Salt Lake City: Howe Brothers. Pages 32-41; Robin W. Winks. 1997. "The National Park Service Act of 1916:

abling legislation needed the support of key Western congressmen for authorship and to navigate the path to passage.[3] In order to secure that authorship, Director Steven Mather agreed to open all parks except Yellowstone to grazing.[4] Cattle grazing would be the sole extractive use approved in most national parks. The legislation authorized the Interior Secretary to issue permits when, in his opinion, grazing was not detrimental to the purpose of the park or interfered with tourist visitation. The Secretary could initiate agreements with the US Forest Service to manage parks created from national forest lands.[5] A similar agreement was later extended to the Bureau of Land Management in 1940 for parks excised from public domain lands.[6] It was this language in the 1916 Organic Act that directed grazing at Saguaro to be managed by the Forest Service and, likewise Fort Bowie's grazing to be administered by the BLM.[7]

This legislative arrangement with other land agencies had both advantages and significant disadvantages for park managers. Park employees were free to focus on what they did best – to educate the park visitor and provide appropriate recreational opportunities during his stay. Most park employees had little training in resource management and little experience in dealing with ranchers and their livestock. While park managers were expected to participate in range assessments and in discussions regarding stocking numbers, utilization levels and seasonal timing, they inevitably deferred such decisions to range conservationists who possessed much better training and experience in range issues. Park employees felt inadequate to challenge Forest Service or BLM range decisions. As a consequence, grazing management at Saguaro and Fort Bowie continued according to Forest Service and BLM policies of maximizing forage utilization and livestock production. Most ranchers and, indeed, many land managers into the 1950's, left livestock on rangelands until close to 100% of available forage had been consumed. Even as late as the 1970's, utilization remained significantly higher than 50%.[8] These traditional practices of resource consumption were distinctly at odds with the Park Service philosophy of, and requirement for, natural resource preservation. Until both Saguaro and Fort Bowie were

'A Contradictory Mandate'?" *Denver University Law Review,* 74(3): 575-623; Richard Sellars. 1997. *Preserving Nature in the National Parks: A History.* New Haven: Yale University Press. Pages 28-46.

[3]Winks. 1997; Fiege *et al.* 2008. Pages 14-15

[4]"[The Secretary of the Interior] may prescribe, grant the privilege to graze livestock within any national park, monument, or reservation herein referred to when in his judgment such use is not detrimental to the primary purpose for which such park, monument, or reservation was created." The Act of August 25, 1916 (39 Stat.535), National Park Service Organic Act (16 USC section 3).

[5]"[I]n the supervision, management, and control national monuments contiguous to national forests the Secretary of Agriculture may cooperate with said National Park Service to such extent as may be requested by the Secretary of the Interior." The Act of August 25, 1916 (39 Stat.535), National Park Service Organic Act (16 USC section 2).

[6]Ben Johnson. 1977. "Livestock Grazing in the National Park System." Washington DC: US Department of the Interior National Park Service, Division of Natural Resources Management. Pages 10-11.

[7]Organ Pipe Cactus National Monument which was excised from public domain lands had been proposed prior to the enactment of the Taylor Grazing Act and was therefore excused from this dependency on other land agencies for grazing management.

[8]Robert D Baker, Robert S Maxwell, Victor H Treat, and Henry C Dethloff. 1988. *Timeless Heritage: a History of the Forest Service in the Southwest.* US Department of Agriculture, Forest Service, FS-409. Pages 100-102; Larry S. Allen. 1989."Livestock and the Coronado National Forest." *Rangelands* 11: 14-20; Charles R Ames. 1967. "The History of the Forest Service." *The Smoke Signal.* The Tucson Corral of the Westerners. 16: 117-127; Saguaro National Park Grazing Records, Saguaro National Park Archives.

determined to eliminate cattle, that overgrazing continued in many portions of park rangelands. Range assessments of park lands were infrequent and generally done as a "ride-by." Actual documentation of range conditions at Saguaro did not begin until the late 1950's and not until the 1970's at Fort Bowie. Range managers, already overloaded with their own work, gave less attention to allotments for which they were not responsible.[9]

At Organ Pipe, monument employees, unskilled at dealing with ranchers and cattle, had no such intermediary management agency. Range management required handling people as much as it did controlling animals. The Gray ranching family members were unwilling partners in a two-step dance with the Park Service. The Grays abused every aspect of their permit from ignoring stocking limits and required roundups to trespassing on non-permitted lands and destroying public property. Yet the park administrators, from the director on downward, were unwilling to revoke the Grays' revocable permit. Park employees at Organ Pipe were not as disconnected from the grazing activity as they were at Saguaro and Fort Bowie. However, they were given no authority or backing from upper administrations to enforce regulations, press charges, or impose fines. The administration, fearful of the influence of Senator Carl Hayden, allowed the destructive cattle practices to continue unfettered for four decades. Under different circumstances, perhaps with different permittees, Organ Pipe managers might have been able to effect better range management. But scant funding for fences, insufficient manpower to accomplish management goals, and inadequate administrative support to enforce protective policies, left no room for alternative outcomes.

2.3 Legislative Constraints: the Antiquities Act and Park Enabling Acts

In 1906 Congress passed the Antiquities Act giving the President the authority to set aside areas with "objects of historic and scientific interest" as national monuments. The act became a valuable tool in the presidential arsenal to secure public lands from exploitation; a simple presidential proclamation required much less time, effort, and consensus than congressional legislation. Originally envisioned to save threatened archaeological sites, Theodore Roosevelt shifted the purpose of the act to protecting much larger, more diverse areas such as the Grand Canyon. Responsibility for protection of each monument usually fell to the agency in whose domain it resided, but subsequent to June 1933, all national monuments were administered by the National Park Service.

Early monument proclamations were short and precise. They included little more than a name, an area description, and a warning against abuse. Another common element of these proclamations was the recognition of previously existing, valid rights such as homestead and mining claims within designated park boundaries. "Valid rights" apparently also included traditional use.

Saguaro and Organ Pipe were established to protect their unique species and associated plant communities. Both areas had been heavily grazed. Saguaro grazing was managed under Forest Service permits. Organ Pipe, however, was still part of the unclaimed public domain; cattle grazing there was an unregulated traditional use. Organ Pipe ranchers possessed no property rights; they controlled much, but they owned no land. Yet social

[9] Johnson. 1977. Page 11.

and cultural attitudes in Arizona concerning the importance of ranching and the livestock industry obligated the National Park Service to approve continuation of that use – even though scientists warned that grazing would "destroy the very thing for which the monument[s were] established."[10]

Most early presidential proclamations allowed cattle grazing to continue. They did not, however, authorize grazing by law. Hoover's proclamation of Saguaro approved continuation of all Forest uses that did not harm the purpose of the reserve but forbade any that interfered with the preservation of the monument's resources.[11] His phrasing was unusual, but important, and confirmed a higher requirement to protect monument resources. The statement was utilized four decades later to justify terminating grazing at Saguaro.

With parks created by Congress, the enabling legislation for each is unique to the particular park. The legislation provides an opportunity for Congress to define its precise purpose and dictate its future operations according to circumstance, history, and personal persuasion. In such legislation, congress members may apply restrictions to management. These restrictions can continue in perpetuity, unless later removed by subsequent legislation. During the congressional subcommittee discussions over Fort Bowie's establishment, Interior officials affirmed to concerned representatives that continued grazing at the national historic site would be acceptable. However, despite congressional interest, that prescription to maintain grazing was never included in Fort Bowie's final legislation. In the absence of that requirement, Fort Bowie administrators were legally allowed to terminate cattle grazing four decades later.

Cultural and social expectations regarding traditional land-use practices demanded continuation of cattle grazing in each of the three parks. The importance of ranching and the livestock industry during the first half of the century ensured an almost universal acceptance of grazing in national parks and monuments – even in reserves set aside for species protection. That general belief that cattle grazing was more valuable and should take precedent over protection of park resources began to wane with the rise of the environmental movement in the 1960s.

2.4 Legislative Opportunities: Support for Resource Protection

Public anger against unfettered resource extraction and environmental damage compelled Congress to pass numerous laws in the 1960's and thereafter. The combined effect of these laws required federal agencies to manage public resources in a sustainable fashion and to protect other non-extractive attributes such as wildlife, water, and soils. The National Environmental Policy Act of 1970 opened the door to public involvement in land management. It also gave activists and the environmental community the power to challenge Park Service actions and decisions and compelled federal officials to hold to those environmental mandates. The Redwood Amendment in 1978 provided further support for protecting

[10] WB McDougall. 1937. "Grazing in Organ Pipe Cactus National Monument." Quoted in Memo to the Secretary of the Interior Stuart L. Udall from Solicitor Frank M. Barry, April 4, 1968. Organ Pipe Cactus National Monument Grazing Archives.

[11] Proclamation #2032 of March 1, 1933.

park resources and reaffirmed the agency's mandate from the Organic Act to preserve the integrity and values in all national park units.[12]

2.5 Promises, Promises

A significant obstacle for park managers to overcome to eliminate cattle grazing were historical agreements. These administrative agreements came in two forms. Planners, prior to park establishment, would make verbal promises to land owners in order to foster exchange negotiations. Planners for Fort Bowie knew that without a grazing agreement local ranchers and owners of ruins property would never consent to the proposed authorization.

In the case of Saguaro and Organ Pipe, administrators made political concessions to congressional representatives in order to cultivate good will and support. Assistant Director Arthur Demaray promised Senator Carl Hayden that all Gray family members would have lifetime permits at Organ Pipe at a specific stocking level. For years, ranchers fearing the loss of their grazing permits fought to have Saguaro lands given back to the Forest Service. Because of its ongoing uncertain administrative status, Southwestern National Monuments Superintendent Frank Pinkley broke with Park Service policy and promised to transfer grazing permits upon the sale of each ranch. In order to end that administrative uncertainty, Demaray promised Carl Hayden that grazing permits would continue in perpetuity for the four ranches using Saguaro lands. Park managers at all three units believed they were bound by these administrative contracts to continue grazing without further recourse and that few if any options remained to manage overstocking and overgrazing.

Any observer would want to ask why Arthur Demaray, an experienced Park administrator in Washington, would make promises that so dramatically constrained park management and forced employees to tolerate overgrazing for decades. Were Demaray here today to defend himself, he would probably provide us with two responses. His immediate answer in the case of Organ Pipe would be to keep Arizona Senator Carl Hayden happy. Like many congressional representatives, Hayden was intimately involved with the establishment and functioning of parks in his state, especially when park actions interfered with the livelihoods of Arizona citizens. But Hayden had a more important role over national parks. As the long-surviving chairman of the appropriations subcommittee overseeing funding for national parks, Hayden's approval was essential not only for Organ Pipe but for the entire Park Service. In the case of Saguaro, Hayden, like Park Service administrators, wanted the ongoing crisis of Saguaro's status resolved. Hayden was adamant that grazing should continue; Washington officials were equally insistent that the monument remain under Park Service administration. Directors Arno Cammerer and Newton Drury saw Saguaro National Monument as a valuable reserve that protected a unique and signature species of the desert. Retaining control of the entire unit was crucial to preserving its habitat. For Demaray, providing ranchers assurance of a grazing permit in perpetuity appeared the lesser evil compared with the loss of the monument.

[12]The 1978 Redwood Act amended the National Park Service general authorities act of 1970 and stated that "protection, management and administration of [national parks] shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress."

Demaray would offer a second response to our original query as well. As one of the original "Mather men," Demaray had watched at close range as both Horace Albright and Steve Mather negotiated challenging political waters to develop the new agency and acquire more parks.[13] During the congressional debates over the agency's establishment, the issue of grazing in national parks was raised. Mather responded in the affirmative; continued grazing could be accommodated. Horace Albright, Mather's assistant, was stunned. "Mather was strongly opposed [to cattle grazing], but tended to take the long view. To him the important thing for the present was to get a National Park Service Act passed; the grazing provision was something we could eventually get rid of."[14] Demaray, like Mather, "took the long view." He was not as concerned about cattle and the damage they might inflict on park resources as he was about keeping Saguaro safely in Park Service hands and Organ Pipe in Carl Hayden's good graces. Park by park, grazing has gradually been eliminated from many western units. However, Mather's hope that the grazing provision could ever be "gotten rid of" has not yet been fulfilled.

2.6 Grazing Policy History

Early grazing policy was frustratingly vague. No policy described how grazing should be managed; no policy described how grazing elimination should be accomplished; no policy described what authority employees had to limit damage, and no policy described what park employee responsibilities should be when grazing was managed by other federal land agencies. More than six decades would pass before park employees were given useful guidance. In 1917, Horace Albright wrote the National Park Service's first policy statement. It simply reiterated the wording of the Organic Act: cattle grazing should occur in "isolated regions not frequented by visitors."[15] Later in 1931, Albright reaffirmed that grazing was still allowed but qualified that permission by declaring that grazing in all parks should be eliminated "as soon as practicable."[16]

During World War II, the livestock industry demanded that national parks open their boundaries to more cattle. Director Newton Drury staunchly defended the national parks from additional incursions.[17] Of all National Park Service administrators, Newton Drury was most aware of the detrimental effects of grazing. Backed by Secretary of the Interior Harold Ickes, Drury asserted, "The ultimate aim of the Service is to eliminate all such grazing." A policy of elimination would be essential for the "protection of scenery, wildlife, vegetation and other unique features."[18] Drury instituted the first policy limitation for a Park Service grazing permit: existing permits would be valid only for the lifetime of the permit holder or until his base ranch was sold to a new owner.

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[13]Demaray was hired as a draftsman in the first staffing of the new agency in 1917. He became associate director in 1933.

[14]Horace and Cahn. 1985. Page 36; see also Horace Albright and Marian Albright Schenck. 1990. *Creating the National Park Service: the Missing Years.* Norman: University of Oklahoma Press. Pages 128-129.

[15]Lary M. Dilsaver. 1994. (Editor) *America's National Park System. The Critical Documents.* Lanham, MD: Rowman and Littlefield. Page 48.

[16]Ibid. Page 97.

[17]Grazing already existed in 10 national parks and 33 national monuments at this time.

[18]Dilsaver. Page 171-172.

The duration of grazing permits could be prescribed by the legislature in park enabling acts. They could also be left to the discretion of the Secretary of the Interior (in reality the Park Service Director). Until 1960, permits were granted for the lifetime of the permittee, and in some cases such as Organ Pipe, for the lifetimes of multiple generations if family members were participants in the ranching enterprise. Interior Secretary Stewart Udall in 1961 decreased the duration of grazing permits to 10 years with one possible additional renewal.[19]

One might imagine that in older parks grazing should have been eliminated within a generation or less. However, two situations have conspired to prolong those permits. With every addition of Forest or BLM lands, either as an expansion to an existing park or as a new one, new permits and new grazing activity are added to park responsibilities.[20] Congress has recently chosen to legislatively extend certain permits before they expired. Thus grazing in park units could continue indefinitely depending on the mood of Congress and its interest in expanding the Park System further.[21]

In the early 1960's, following a series of external reports strongly criticizing the Park Service, Director George Hartzog initiated the first effort at a comprehensive set of policies for management of park resources. These policies affirmed a need for active management instead of passive protection. They required park employees to minimize human-induced changes to natural processes and to restore indigenous plants and animals. Under the new management policies "grazing of domestic livestock in natural areas is permitted only when it is sanctioned by law, is incidental to visitor use, or is desirable to preserve and interpret significant historical resources in the area. Where grazing has been permitted and its continuation is not specifically covered by aforestated conditions, it should be eliminated through orderly and cooperative procedures with the individuals concerned."[22]

For the first time, park administrators had begun to specify under which circumstances grazing should be accommodated. Congressional legislation could sanction grazing as a condition for park establishment. Grazing was also admissible as a component of an approved historic scene. The new policy still left open Albright's loophole. In essence, the new policy continued to permit grazing in any non-urban park outside of populated areas. At Saguaro and Organ Pipe, grazing was neither sanctioned by law nor incidental to visitor use. Yet the policy still did not provide specific direction for elimination.

A subsequent version of the management policy handbook from 1978 stated that grazing would not be permitted anywhere it was deemed "detrimental to the purpose of the park."[23] Yet there is no definition, no explanation of the word "detrimental." Was detrimental to be measured at an extreme end by the loss of biodiversity, significant shifts in ecosystem processes, permanent changes in populations and habitat, or was it at an early stage where increases in unwanted species, soil erosion, and loss of native grasses were

[19]Kathy Davis. 2006. "General and Specified Legislated Authorities Pertaining to Domestic and Federal Livestock for Grazing in the National Park Service." Unpublished draft July 23, 1999 revised January 18, 2006.

[20]Ibid; Johnson 1977.

[21]In 1943, Newton Drury reported grazing in 43 Park units. In 1977 Ben Johnson recorded 27 Park units with grazing. In 1999 Kathy Davis listed 31 and then, in 2006, 18.

[22]National Park Service. 1968. *Administrative Policies for Natural Areas.* Washington DC: USDI National Park Service. Page 18.

[23]National Park Service. 1978. *Management Policies.* Washington DC: USDI National Park Service. Page IV-5.

occurring? No guidelines were included to determine which effects were detrimental and which might be compatible. Land agencies have often preferred legislation and policy statements that were vague and indefinite. This lack of precision offers administrative flexibility and significant room for alternative interpretations.[24] Yet the ambiguity of these early policies gave little assistance to managers confronted with difficult situations and decisions.

Environmental legislation, the Redwood Amendment, and court challenges to Park Service management all compelled the agency to dramatically expand management policies with the next revision. By 1988, grazing policies had been crafted with much greater specificity. Grazing, now defined as a "special use," was expressly restricted to three well-defined situations: 1) as an essential part of a historic scene, 2) where authorized by federal law, or 3) when required by a reserved right from a land acquisition.

Under the 1988 policies, grazing management plans were required for all parks with livestock. Individual management plans necessitated more information on animal handling, fee, physical improvement, and area restrictions. By demanding increased scrutiny of range conditions on all allotments, the grazing plans reduced the possibility of resource damage. Livestock use was limited to a level below the range carrying capacity and could not result in "significant damage to park resources" as determined by the wording of "the Organic Act, the park's enabling legislation, and the values and purposes of the park."[25] While changes in management policy were encouraging, still no grazing plan was ever produced for Fort Bowie. Fort Bowie was too low on the totem pole of important park sites to warrant that kind of attention from administration.

2.7 Unequal Status, Uneven Administration

Numerous historians have commented on the hierarchy among park units that has existed since before the establishment of the agency.[26] This stratification has set apart those famously magnificent reserves with stunning scenery such as Yellowstone, Yosemite, and the Grand Canyon from national monuments and other units without a "Park" designation. Lesser units were often established under the Antiquities Act to protect objects rather than regions. Lesser units tended to be smaller in size with fewer resources. In the 1920's and 30's, 24 of these "lesser" units were scattered across the Southwest; none of them were considered "crown jewels." Organ Pipe and Saguaro National Monuments were part of the Southwestern National Monuments collection. Fort Bowie would have been one too if it had been established during the 1930s.

The second-class designation was perpetuated by the first NPS director, Steven Mather, who was unwilling to take these small, unspectacular sites that drew few tourists into the

[24] Paul Hirt. 1994. *A Conspiracy of Optimism. Management of the National Forests since World War Two.* Lincoln: University of Nebraska Press. Pages 171-172.

[25] National Park Service. 1988. *Management Policies.* Washington DC: USDI National Park Service. Section 8:14-15.

[26] Hal K. Rothman. 1989. *America's National Monuments. The Politics of Preservation.* Lawrence: University of Kansas Press. Pages 89-116; Dwight F. Rettie. 1995. *Our National Park System: Caring for America's Greatest Natural and Historic Treasures.* Urbana: University of Illinois Press. Pages 26-33, 74-84.

Park System. Despite their later incorporation into NPS in June 1933, these parks remained at a lower status throughout the 20th century; many are still there today.

National monuments were assigned custodians; superintendents were placed at national parks. Custodians worked for almost no pay. They managed entire parks without assistance, yet had little authority to make major decisions. As a result, monuments remained undeveloped for decades, often saddled with management problems that continued unaddressed for years. Second tier parks were at a significant disadvantage with respect to allocated resources, especially manpower and money. Reduced resources influenced other aspects of park operations and management. Scant funding could limit inventory and monitoring, staffing levels, resource protection assistance from outside specialists, and structural repair and maintenance.[27]

Saguaro and Organ Pipe remained unstaffed for two years before Pinkley could find employees to take on these jobs.[28] The first funds for development arrived in 1952 for Saguaro and during Mission 66 for Organ Pipe. Funding for resource management and range assessment did not come to either park until the 1960's. Since funding was rarely allocated to lesser parks, Organ Pipe and Saguaro were unable accomplish essential scientific studies that would document ongoing overgrazing. Instead they had to wait for a legal opinion to resolve the grazing issue.

While not part of the Southwestern National Monument group, Fort Bowie endured much the same fate as Organ Pipe and Saguaro in earlier decades. A relatively small park unit situated far from any significant population, Fort Bowie attracted only a small but passionate cadre of history buffs willing to hike the two miles into its ruins. Since its authorization in 1964, Fort Bowie had been relegated to satellite status beneath Chiricahua National Monument. Managed only by a unit ranger, the historic site has played second fiddle to the larger monument in funding, management resources, and research projects. While Chiricahua superintendents were concerned about the effects of overgrazing on soils and vegetation and the ongoing damage of Fort Bowie's historic resources, they were either ignorant of their options to terminate grazing or uninterested in investigating those options further. The Southwest regional office, responsible for dispensing funding, paid no attention to 20 years of park pleas for funding to assess vegetation conditions and monitor environmental changes. A small park with a small constituent base without a vocal advocate received little attention, information, or funding.

2.8 The Beginning of Grazing Management, the Influence of Park Science

Overgrazing in many national parks and monuments did not go unnoticed or unrecorded by park employees. Yet there were too few individuals trained in either field sciences or range management to track abuse in detail and to recommend changes in grazing management. Frank Pinkley's Southwestern National Monuments and later the Southwest regional office never had more than one science technician on staff. Shortly after the establishment of Saguaro and Organ Pipe in the 1930s, wildlife biologist Walter McDougall

[27] Rettie. Pages 13-37, 73-84.

[28] Pinkley's search occurred in the midst of the Great Depression when many out of work laborers were looking for any kind of employment.

reported on their overgrazed ranges. At the onset of World War II in 1941, Newton Drury was under significant pressure to open western parks to more cattle. Drury had hired Harold Ratcliff, the first Park Service employee with a background in range management, to assess the carrying capacities of parks throughout the Southwest region. Could the national park rangelands sacrifice more vegetation for additional livestock? Ratcliff, traveling under the title of ecologist, recorded grazing conditions and, for the first time, documented the number of permittees and livestock in each park unit. Soon superintendents throughout all western regions were clamoring for Ratcliff to review ranges in their parks. Few, if any, parks had sufficient forage within easy reach. With Ratcliff's assessments in hand, Drury successfully faced down industry demands for increased access. Both Ratcliff and Southwest Regional Director Minor Tillotson exhorted Drury to develop an explicit statement of grazing policy to protect the national parks against further public pressures. From that suggestion, Drury wrote "The National Parks in War Time," one of the clearest statements asserting the Park Service philosophy that resource "preservation supersedes all extractive uses regardless of their monetary worth."[29] Tillotson also strongly recommended that an experienced range man be appointed in each region.

During the war years, the Park Service was confronted by repeated threats of additional grazing. In 1943 Senator Clair Engle proposed legislation to open all national parks to grazing. In 1946 Senator Edward Robertson submitted a bill to transfer all grazing lands from national parks and forests to the states. Demoted for its irrelevance to the war effort, the agency was shunted out of Washington DC to Chicago. Operational and staffing budgets were cut by more than 50%. The agency was reduced to a mere "protection and maintenance basis."[30] Even after the agency returned to Washington, the Park Service during the postwar years remained on a lean budget. Tillotson's recommendation for range men stationed in all NPS regions came to naught.

Ratcliff continued to provide grazing guidance and management assistance for Southwest regional and other western parks. He wrote the first Park Service range handbook that gave park managers information on how to judge range capacity and health, how to relate to a permittee, how to provide appropriate water and fencing on allotments, and how to protect range resources.[31] Ratcliff helped many parks and monuments terminate their grazing permits as ranchers passed away or ranchlands were sold. Between 1941 and 1948, Ratcliff was instrumental in guiding parks in the Southwest region to eliminate more than half of the grazing permits.

Harold Ratcliff never achieved the titles of range examiner or range conservationist as he might have under US Forest Service employment. Instead Ratcliff's title shifted repeatedly from ecologist to forester to soil conservationist even though his responsibilities remained essentially the same. The lack of any appropriate title for Ratcliff's work is indicative of the Park Service's continued reluctance to recognize the serious problems and issues engendered by cattle grazing on park lands. Reasons for the agency's denial of the need to regulate grazing in western parks have yet to be determined, but I would hy-

[29]Dilsaver. 1994. Pages 167-173, 165.

[30]Richard Sellars. 1997. *Preserving Nature in the National Parks: A History.* New Haven: Yale University Press. Pages 150-151.

[31]Harold Ratcliff. 1944. "Range Management Handbook." Region 3 (Southwest). Saguaro National Park Archives.

pothesize that the Park Service feared attracting attention from congressional crusaders for the livestock industry, most notably Senator Patrick McCarran and Edward Robertson who, during the 1940's and 50's, were intent on dismantling the authority of federal range management agencies.[32]

Conrad Wirth assumed the director's chair in 1951. The Korean War again gave the livestock industry an excuse to browbeat the Park Service to expand grazing into more park ranges. In 1956 Director Wirth initiated a major redevelopment program; Mission 66 funding reinvigorated aging recreational and administrative infrastructure in almost all parks. While there was little support for science or technical staff, the program did provide a small amount of funds to construct fences and exclude trespass livestock[33]. Along with redevelopment in individual parks came major changes to the entire park system. Existing parks acquired new lands and many new parks were established. Over 100 parks including 32 national recreational areas, 59 historic sites, and 12 natural resource areas were added during the two decades spanning 1952 to 1972.[34] Fort Bowie National Historic Site was part of that expansion. As new western parks were added, so too were thousands of acres of grazing lands under permit. Just a few years earlier, a gradual reduction in grazing in the national parks had been achieved. Suddenly numbers of livestock, permittees, and problems associated with grazing management once again blossomed during those two decades.[35]

Stewart Udall was appointed Secretary of the Interior in the Kennedy administration. An Arizona resident and conservationist at heart, Udall was determined to stimulate and improve science and natural resource management within the Park Service. Udall commissioned two independent reports that highlighted the absence of scientific research and its application in resource management decision-making. Both reports asserted that an ecological understanding of all resources had to be fundamental to all park planning and management.[36]

Udall supported these findings by steering additional funds to individual parks to hire scientists. Udall's decision was critical in bringing the first paid naturalist, and later research scientist, Scotty Steenbergh, to Saguaro.[37] Steenbergh embarked on an extended project to study the ecology of the park's signature plant. He encouraged additional ecological research by outside scientists and later initiated the first inventory and monitoring projects in both Saguaro and Organ Pipe to assess the effects of grazing on those soil and vegetation resources.

Outside of the Park Service, the public interest in the environment was growing and likewise a new desire to protect public lands from the actions of extractive industries. Visitors to Organ Pipe and Saguaro were appalled by the incessant presence of cattle in public areas and the widespread destruction of plant communities at both parks. They

[32]Ratcliff was employed by the Park Service until the late 1950s. There is no evidence that anyone with range management experience was hired to replace him until the mid-1980s.

[33]Conrad Wirth. 1980. *Parks, Politics and the People.* Norman: University of Oklahoma Press. Pages 225-240.

[34]Barry Mackintosh. 1991. *The National Parks: Shaping the System.* Washington DC: USDI National Park Service. Pages 62-85.

[35]Johnson 1977.

[36]Sellars. Pages 214-215.

[37]Ibid. Page 239.

wrote angry letters to public employees at all levels from park superintendents all the way up to Secretary of the Interior Udall. They demanded to know why park managers had allowed such destruction to occur. At the same time, university scientists were studying the declining vegetation conditions at Saguaro and their relation to cattle grazing. Two nationally-known ecologists became actively involved in exposing what they believed to be public land mismanagement at Saguaro. Niering and Whittaker's published papers and long letters to Udall kept the issue of overgrazing and its effects on park resources under the spotlight at the Department of the Interior.

Natural resource management practices and management policy made significant progress during the 1970's within the Park Service. Environmental legislation enacted during the decades of the 6'0s and 70's goaded the Park Service to support scientific investigations inside and outside the agency. The creation of the Cooperative National Park Resources Studies Unit in the University of Arizona did much to aid southern Arizona parks in basic research.[38] Steenbergh and others continued to monitor ecological changes at Saguaro and Organ Pipe after cattle were eliminated from the parks.

For both Saguaro and Organ Pipe Cactus National Monuments, the confluence during the 1960's and 70's of all of these factors – activist scientists challenging park policies, public pressure for better resource management, scientific investigations documenting overgrazing, and the waning political support for the livestock industry – were critical to initiating management change. All of these factors finally led Udall to actively intervene against cattle grazing at Organ Pipe.

2.9 The Influence of the Legal Opinion

Science and public pressure had convinced Udall that he needed to act. Yet he wanted confirmation that terminating an activity "detrimental to the primary purpose for which the park was created" was appropriate and within his authority. A legal opinion offered by his Interior Solicitor invalidated Arthur Demaray's promise of continued grazing access at Organ Pipe. It also reaffirmed that Udall's primary responsibility was to protect Organ Pipe resources by terminating that grazing privilege.

This same legal opinion clarified for Saguaro administrators their authority to terminate grazing at their own park. These administrators moved slowly and cautiously: first waiting for the end of the 10-year permit term, then warning the permittee two years in advance of the deadline to give him time to find other grazing opportunities, and finally providing additional time beyond the initial deadline to remove livestock. Organ Pipe's legal opinion had stiffened administrators' resolve to eliminate all cattle. They were nonetheless sensitive to the financial trauma to be imposed on the permittee and, more importantly, wary of a public impression of a heartless federal agency dismantling a struggling man's livelihood. As a result, another decade passed before cattle grazing at Saguaro was finally brought to an end in 1978.[39]

At the same time, the nearby Tonto National Monument initiated its own process of terminating grazing. Like Saguaro, grazing at Tonto had been managed by the US For-

[38] Later renamed as the Desert Southwest Cooperative Ecosystems Studies Unit.

[39] Robin Pinto. 2013. "Cattle Grazing and Ecological History of Saguaro National Monument. Executive Summary."

est Service. Ongoing damage to archaeological resources pushed Tonto administrators to enclose its entire 1000-acre property with fencing. Finally, in 1981, cattle were excluded from the park.[40] Whether the Interior legal opinion instigated the decision by Tonto administrators is unknown but the parallel actions by both park units gives weight to that supposition. One might have expected such patterns of progress in grazing management and control to have spread elsewhere. But somehow the lessons learned did not travel any great distance.

Fort Bowie National Historic Site was authorized by Congress in 1964.[41] The park remained unattended for seven years due to a lack of development funding and planning consensus. Even after its dedication 1972, the Historic Site received no guidance from regional or Washington offices on Park Service grazing policies or the park's obligation to continue grazing. No one questioned continued grazing at Fort Bowie. No one had noticed that grazing at Fort Bowie was not authorized by law.[42] No one bothered to pursue the incompatibility of sensitive cultural resources with the destructive effects of livestock among the ruins. Since 1968, stated Park Service policy limited grazing to a specified term of years or until the permittee sold his ranch. A 10-year term would have permitted grazing use through 1974 or until the first sales of both ranches in 1970 and 1978. The absence of administrative attention from Chiricahua National Monument, regional, or Washington offices left Fort Bowie with 30 years of accumulating vegetation, soil, and historic ruins damage.

The arrival of Kathy Davis, a natural resource specialist with a range management background, to the Southern Arizona Office in the mid-1980s was critical to eliminating cattle at Fort Bowie. Just as Radcliff had done four decades earlier, Davis was able to guide Fort Bowie through the process of grazing termination. Davis persuaded Chiricahua's superintendent that eliminating grazing was both achievable and important for Fort Bowie's cultural and natural resources. She initiated contact with Interior solicitors who confirmed that the park was not permanently bound by old agreements that were detrimental to the purpose of the park.[43]

[40]Bart Barbour. 1999. "Tonto National Monument Grazing History." Tonto National Monument Archives; Pinto. 2011. "The Ranching Conflict at Organ Pipe Cactus National Monument and Its Influence on Grazing at the National Park Service." Paper Given at the American Society for Environmental Historians. Phoenix Arizona; Nancy Dallett. 2008. *At the Confluence of Change: a History of Tonto National Monument*. Tucson, Arizona, Western National Parks Association. Pages 172-175.

[41]Though discussions of perpetuating grazing within the proposed Park occurred during congressional committee meetings and in planning meetings with landowners, no requirement for sustaining grazing was included in Fort Bowie's authorization legislation.

[42]Telephone interview with Bill Hoy, retired Fort Bowie Ranger-in-Charge, April 9, 2014; telephone interview with Larry Ludwig, Fort Bowie Historian, April 8, 2014.

[43]Telephone Interview with Kathy Davis retired Superintendent Montezuma Castle, April 24, 2014.

CHAPTER 3

Reasons for Optimism in Park Management of Grazing

3.1 NPS and Grazing Today

The National Park Service has evolved as an agency, especially since the start of the 21st century. No longer is the agency unwilling to fund and support research. Instead it has embraced its responsibility to promote research of both natural and cultural resources within the parks.[1] Since 2001, the agency has embarked on an ambitious effort to inventory, monitor, and assess the condition of park natural resources. Mandated by the National Parks Omnibus Management Act of 1998, the National Park Service must now develop quality resource information either in-house or through collaborative research institutions and must integrate that information into all planning and decision-making. All three parks have now completed initial inventories that identify species and issues of interest and summarize the results of previous research efforts. [2] This new focus can provide managers and researchers with basic condition information from which to further investigate issues, track changes in resources, and develop mitigation measures. Superintendents are required to implement such research-informed decisions that create positive trends in park resource conditions. This legislation is the mandate that scientists, park managers, and administrators have called for for decades. As Dave Harmon, retired research biologist, points out, it will be incumbent on superintendents to put this mandate into action at the park level.[3] Congress reiterated that demand for better science implementation a year later when it allocated additional funds to support natural resource research efforts. A similar funding program on behalf of research development for cultural resources, however, has not yet materialized.[4]

[1] David Harmon. 1991. "The New Research Mandate for America's National Park System: Where It Comes from and What It Could Mean." *George Wright Forum*, 16 (1): 8-23.

[2] B. F. Powell, W. L. Halvorson, and C. A. Schmidt. "Vascular Plant and Vertebrate Inventory of Saguaro National Park, Rincon Mountain District." OFR 2006-1075. U.S. Geological Survey, Southwest Biological Science Center, Sonoran Desert Research Station, University of Arizona, Tucson, AZ; B. F. Powell, C. A. Schmidt, and W. L. Halvorson. 2006. "Vascular Plant and Vertebrate Inventory of Fort Bowie National Historic Site." USGS Open-File Report 2005-1167. U.S. Geological Survey, Southwest Biological Science Center, Sonoran Desert Research Station, University of Arizona, Tucson, AZ; Schmidt, C. A., B. F. Powell, and W. L. Halvorson. 2007. "Vascular Plant and Vertebrate Inventory of Organ Pipe Cactus National Monument." USGS Open-File Report 2006-1076. U.S. Geological Survey, Southwest Biological Science Center, Sonoran Desert Research Station, University of Arizona, Tucson, AZ; E. B. Ahnmark, and D. E. Swann. 2008. "A History of Saguaro Cactus Monitoring in Saguaro National Park, 1939–2007." Natural Resource Report NPS/SODN/NRR-2009/093. National Park Service, Fort Collins, Colorado.

[3] Harmon. 1991.

[4] Janet A. McDonnell. 2008. "Reassessing the National Park Service and the National Park System." *The George Wright Forum*, 25 (2): 61-14.

Despite these exciting advances, the Park Service still needs to make a greater commitment to support grazing management, especially in bringing in more staff experienced in range management and range resource recovery. Until positions in resource management in regions and at individual parks became more common in the 1980s, there were few individuals able to address any grazing issues. In 1996, the Park Service created the part-time position of Grazing Coordinator to formally develop grazing management programs and monitoring protocols for individual parks and to assemble technical information to share among resource and professional staff.[5] The staffing position is a good start but insufficient given the enormity of the task at hand.

In 2001, more than 100 parks had commercially permitted grazing or livestock grazing to re-create a park's historical environment. Fewer than 10 range professionals were on park staff. That staffing commitment is especially important at those parks where grazing allotments are still managed by other agencies and that agency coordination is essential. NPS range ecologist, Ben Bobowski, at Glen Canyon National Recreation Area was hired to work with range managers at four overlapping BLM districts. In the past, perceived differences in resource values and agency policies had left communication in a poor state between park resource managers and BLM range management specialists. Bobowski was able to demonstrate that BLM and NPS policies and resource values shared much in common. From that common ground, a deeper respect and greater level of trust developed between both sides of range management; more useful data were collected and better monitoring accomplished and shared because of that new found trust. Without sufficient staff interested and willing to maintain those important communication channels, range management will remain uncoordinated and monitoring data, essential to park planning, are less likely to be incorporated into good decision-making.[6]

Since 2000, Management Policy revisions have been explicit in the recognition of the Park Service's mandate to protect all resources and values from "derogation." Managers are required to regulate all uses so that those resources and values remain unimpaired. Director's Orders (D0) contain detailed guidance to help managers make day-to-day decisions. DO-53 offers information on special park uses including grazing and developing a management plan. A second DO on livestock management, 77-3, was drafted during the 1990s. It is still unavailable today apparently awaiting Director approval. Likewise a draft form of a grazing permit as a special use was rewritten two years ago. It now languishes unattended. Administrators familiar with the revision process suggest that grazing management is still not a high priority in the Washington office.[7]

[5]Kathy Davis, retired Montezuma Castle National Monument Superintendent, personal communication, April 24, 2014; Mark Fiege, Maren Bzdek, and Ruth Alexander. 2008. "Livestock Grazing in the National Parks: An Administrative History." Phase 1. Draft. Copy in author's possession.

[6]Ben R. Bobowski. 2001. "Rangeland Resources Monitoring: Concepts and Practical Applications." PhD Dissertation. Utah State University, Logan, Utah

[7]Kathy Davis, retired Montezuma Castle National Monument Superintendent, personal communication, April 24, 2014.

3.2 Eliminating Grazing Permits

Opportunities to retire grazing permits are more available now than in the past. The importance of protecting cultural and natural resources carries a much higher recognition in parks today. At Wupatki National Monument in northern Arizona, the largest grazing permit was set to expire in 1998. An archaeological inventory had documented the extent of the parks prehistoric resources as well as the damage done by cattle. Despite significant pressure from a powerful ranching family to extend their grazing permit, park management was able to justify its proposed termination. The park's decision was supported by then National Park Service Director William Mott. Funding for construction of 16 miles of fencing arrived in time to secure the park from subsequent trespass cattle.[8]

Voluntary permit relinquishment has long been a primary method of eliminating cattle grazing on Park lands. But relinquishment was always dependent upon a permittee's initiative to terminate his agreement. Recently, a growing interest in the possibility of permit "buyouts" provides another opportunity to encourage livestock operators to relinquish their grazing permits. Funding for these buyouts most often comes from outside sources, usually conservation foundations. The value of the permit is calculated by the duration of allotted forage use during one year – the number of animal unit months. In the late 1980s, Capitol Reef National Park in Utah concluded a plan to repurchase permits from willing sellers. With this buyout process, the park eliminated almost 70% of cattle grazing on park lands.[9] 10 years later, the similar effort led to permittees at Great Basin National Park in Nevada returning their permits in exchange for compensation. Too many visitors were having confrontations and conflicts with cattle.[10]

These buyout agreements can be mutually beneficial for both sides. National parks can remove cattle from specific sensitive sites such as high recreational areas, cultural sites, riparian areas, or habitats for endangered species. Stockmen under financial or environmental stress and retired from ranching with their water and property rights still intact with a considerable cash allocation in hand. [11] While the idea of buyouts raises hopes for more of these "win-win" agreements, considerable pushback from ranching communities, local federal representatives, and some executive administrations has slowed progress. Ranching associations object to the loss of permit availability and diminution of forage options on federal lands. They view these exchanges as interference by other organizations in the operations of the ranching industry.[12] Many fear that retirement of permitted federal lands will lead to the sale and residential development of no longer functioning ranches.[13]

US Representative Raul Grijalva and others have repeatedly introduce legislation in

[8]Steve Cinnamon. 1990. "Wupatki Grazing Terminated." *Park Science*, 10 (1) Winter: 20.

[9]J Frye Bradford. 1998. "From Barriers to Crossroads: an Administrative History of Capital Reef National Park, Utah." Volume 2, Chapter 12. Cultural Resources Selections, Intermountain Region, National Park Service, Denver, Colorado. www.nps.gov/history/online_books/care/adhi/adhi

[10]Salvo, Mark and Andy Kerr. "Permits for Cash: A Fair and Equitable Resolution to the Public Land Range War." *Rangelands*, 23 (1): 22-24.

[11]*ibid.*; Leshy, John D. and Molly S. McUsic. 2008. "Where's the Beef? Facilitating Voluntary Retirements of Federal Lands from Livestock Grazing." *New York University Environmental Law Journal*, 17: 368-397.

[12]Leshy and McUsic. 2008.

[13]Soussan, Tania. "Buyout Plan Targets Ranchers; Grazing Permits Would Be Retired." *Albuquerque Journal*, January 23, 2005.

the last decade to allow holders of permits to return them for the purpose of furthering conservation. In exchange, the federal agency would be required to withdraw that allotment permanently from grazing. While Congress has authorized individual buyouts to proceed, it has yet to pass any overarching legislation that would formally relax such transfer restrictions for all land agencies.[14]

3.3 Landscapes at Saguaro, Organ Pipe, and Fort Bowie

Cattle grazing ceased at Saguaro and Organ Pipe close to 40 years ago and at Fort Bowie almost 15. Even as those events recede into the past, active management projects are still ongoing at all three parks to mitigate landscape changes and stimulate natural recovery from historic ranching and grazing.

At Saguaro, restoration is underway to eliminate old roads and cattle paths. These features have been covered with soil and restored with native plants. Many early stock tanks fed by seeps and springs have been disconnected. The surrounding wetlands are slowly recovering as native plants gradually fill back in. According to Don Swann, research biologist at Saguaro, changes in vegetation associated with grazing are still occurring throughout the landscape. Shrubs, subshrubs, and grasses have increased in cover and density. As native vegetation continues to recover, park scientists believe that these changes will also benefit mammals and other wildlife populations.

Mesquite and Palo Verde, once stripped by the wood cutters to make lime, have also begun to fill in. These shrubs and trees act as nurse plants providing shade and cover for young saguaros and other desert plants. Their elimination during the early 1900s played a significant role in reducing survival of juvenile saguaros.[15] Most dramatically, the Saguaro cactus populations in the park have rebounded significantly since grazing was eliminated.

Grazing was not the only factor in altering the park landscape. Drought, freeze events, variable patterns of precipitation, and fire have affected germination, growth, and survival of many plant species including saguaros. Historic causes of vegetation change have become more deeply interwoven into modern ones driven by recent and stronger influences, especially climate change.[16]

The consequences of overgrazing at Organ Pipe were much more widespread, more challenging, and more long-lasting. Unlike at Saguaro and Fort Bowie, the highly visible problems of active erosion stimulated a much stronger management response. Active management to restore denuded landscapes began in the early 1950s and continued for over a decade under the guidance of the Soil Conservation Service. Cattle trails and exposed soils in the Monument's lower valleys became sites where water runoff from summer thunderstorms initiated sheet and gully erosion. Park managers responded by building dikes and water spreading structures along the southern border – some of which were over half a mile long. Numerous check dams were constructed to slow water flows and

[14] "Approve Grazing Buyout." *The Register-Guard*, August 2, 2008.

[15] Don Swann, Saguaro National Park Research Biologist, personal communication, April 5, 2014; Ahnmark and Swann. 2008.

[16] Elizabeth Krone. 2013. "Long Term Effects of Cattle Grazing on Age Distribution in a Population of Carnegiea gigantea in Saguaro National Park." Masters Thesis. Arizona State University, Phoenix, Arizona

stem gully development. Freshly disturbed soils were seeded with native grasses. According to park botanist, Sue Rutman, these management actions only made restoration of these sites more complicated. Historic water spreading structures altered natural drainage and fostered linear distribution patterns of newly established plants. Many of these areas where soils were disturbed by park management are still barren of vegetation today. In areas denuded by cattle but without historic conservation structures, plant density and cover have increased on their own since livestock removal. Mountain slopes where historic grazing was less intense are also recovering.[17]

Ecological investigations and monitoring efforts to track vegetation recovery began with the removal of livestock in the late 1970s.[18] By the mid-1980s, areas around seeps and springs were supporting new growth of marsh species, annuals, and shrubs especially those considered highly palatable for livestock. That recovery has since been reversed as migrants moving through the border region are followed by the Border Patrol.[19]

Proliferation of mesquite has been linked with historic grazing and fire suppression in semi-arid grasslands.[20] In the early 1980s, the landscape of Fort Bowie National Historic Site began to undergo a dramatic change in vegetation cover as mesquite filled the valley. These small trees were overtaking areas that had previously been open grasslands. Mesquites damaged historic ruins as roots undermined foundations and branches injured walls. The expanding forest hid ground level historic resources from visitors and jeopardized the integrity of the park's historic views, a major attribute of the National Register landscape.[21] Unable to reintroduce fire as a grassland management tool, park managers have worked hard for the last 30 years to maintain those viewscapes by mechanical removal of mesquite shrubs.[22] As a result of these intensive management efforts, the grasslands have recovered; more native species are now repopulating the valley.[23]

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[17]Rutman, Sue. 1998. "Dirt Is Not Cheap: Livestock Grazing and the Legacy of Accelerated Soil Erosion on Organ Pipe Cactus National Monument, Arizona." In: *Proceedings of a Symposium on Environmental, Economic, and Legal Issues Related to Rangeland Water Developments.* 13-15 November 1997, Tempe Arizona. Center for the Study of Law, Science and Technology, Arizona State University, Tempe. www.law.asu.edu/Portals/20/Files/confs/rangeland1997/Soil%20-%202%20Rutman.pdf; Greta Anderson, Sue Rutman, and Seth M. Munson. 2011. "Plant Population and Habitat Characteristics of the Endemic Sonoran Desert Cactus Peniocereus striatus in Organ Pipe Cactus National Monument, Arizona." *Madroño,* 57(4):220-228; Sue Rutman, retired Organ Pipe Cactus National Monument Ecologist, personal communication, May 9, 2014.

[18]Warren F Steenbergh and Peter L Warren. 1997. "Preliminary Ecological Investigation of Natural Community Status at Organ Pipe Cactus National Monument." Cooperative National Parks Resources Studies Unit. University of Arizona, Tucson, Arizona.

[19]Sue Rutman, retired Organ Pipe Cactus National Monument Ecologist, personal communication, May 9, 2014.

[20]Joel R. Brown and Steve Archer. 1999. "Shrub Invasion of Grassland: Recruitment Is Continuous and Not Regulated by Herbaceous Biomass or Density." *Ecology,* 80(7): 2385-2396; Dawn M Browning and Steven R Archer. 2011. "Protection from Livestock Fails to Deter Shrub Proliferation in a Desert Landscape with a History of Heavy Grazing." *Ecological Applications,* 21(5): 1629-42.

[21]Robin L. Pinto. 2012. "The Past and Future of Fort Bowie National Historic Site. An Administrative History." Desert Southwest Cooperative Ecosystems Studies Unit and The University of Arizona. Pages 119-125.

[22]The density of historic structures throughout Fort Bowie's landscape has made the reintroduction of fire highly problematic.

[23]Larry Ludwig, Fort Bowie National Historic Site Historian, Personal Communication, April 8, 2014.

3.4 Grazing and Other Causes of Landscape Change

Landscape change is ongoing. That change is driven by modern influences and events as well as those from the past. The effects from these events are cumulative. A single drought or a single episode of overgrazing are not likely to initiate vegetation and soil changes. But in combination or after multiple occurrences, those events do have significant effects on park ecosystems. It is not the intent of this document to attribute all of those changes to livestock grazing alone. Discussions regarding the specific causes of landscape change in the southern Arizona region have continued in the literature for decades; they still continue as new ideas, new information are collected and assimilated. Most researchers allocate causality to a suite of influences – some natural, some anthropogenic. Turner and others in an epic work have documented patterns of vegetation change by comparing historic and modern photographs. They conclude that woody plant invasions into southern Arizona desert grasslands have been driven by a tangled combination of livestock grazing, fire suppression, and climatic stress. "It is virtually impossible to tease apart the changes that are due to natural causes – the hotter drier climate – from those due more to anthropogenic causes – livestock grazing and fire suppression."[24] Likewise, in a recent and exhaustive review of the literature of grazing impacts on the Sonoran Desert, John Hall and others conclude that livestock grazing has adversely impacted soils, biological soil crusts, plant community composition, structure, and function.[25] Yet they too qualify their judgment of the extent of grazing consequences. "Specific cause and effect – historic grazing versus current grazing versus cyclical weather patterns – were not always possible to tease out in the various studies."[26] Nonetheless, cattle grazing has been a primary (if not the primary) influence of ecological change in these three national parks.

Hall and collaborators expressed frustration that few grazing studies have been able to provide specific descriptions of grazing activities such as seasonality, duration, frequency, or intensity. They suggest that detailed information on the grazing histories would assist in more reliable productions regarding causes of vegetation change.[27] From my own experiences gained from these investigations, I heartily concur with their sense of frustration. Locating and assembling this kind of information has been remarkably difficult. The most complete histories of annual grazing records for individual allotments and their permittees were gathered by early forest rangers. Correspondence, memoranda, roundup check sheets, livestock numbers, seasonal entry dates, sales records, land ownership and transfer records were all included in their files. Unfortunately most records older than a few decades have not been retained in local archives but were divested to intermediary repositories such as the federal records centers. Tracking information associated with these records has often been mislaid or lost as administrators retire and leave. Unlike the

[24] Raymond M. Turner, Robert H. Webb, Janice E. Bowers, and James R. Hastings. 2003. *The Changing Mile Revisited. An Ecological Study of Vegetation Change with Time in the Lower Mile of an Arid and Semiarid Region.* Tucson: University of Arizona Press. Page 276.

[25] John A. Hall, Stephanie Weinstein, and Cheryl L. McIntyre. 2005. "The Impacts of Livestock Grazing in the Sonoran Desert: a Literature Review and Synthesis." The Nature Conservancy in Arizona, Tucson. Page 11.2. azconservation.org/dl/TNCAZ_Grazing_Sonoran_Desert_Impacts.pdf

[26] *ibid.* Page 11.3.

[27] *ibid.* Page 11.4.

national archives, the federal records centers are closed to the public leaving researchers at a vexing dead end with few options to retrieve this valuable information.

Tragically, historical records of annual grazing activities on national park lands are nonexistent. While Forest Service's early records were comprehensive in scope, the information that forest rangers summarized and shared with park staff was superficial and uninformative.[28] Similarly, the Bureau of Land Management collected decades of monitoring data, but did not share that grazing information with Fort Bowie managers or with NPS administration.[29] Apparently no one in the Park Service cared enough to ask for more information.

3.5 Grazing in the Future

Management of cattle grazing on national park lands still faces many unresolved problems. Two, in particular, stand out – Congress and climate change. The greatest threat is the legislative mandate that perpetuates grazing in future parks and on newly acquired lands. It is, unfortunately, a hazard against which park administrators have little control. Its risk will be measured by the degree of political influence of the ranching industry in any given location.

Climate change already presents a significant challenge for management of park ecosystems and will continue to do so in the near future. The impacts of expected increases in temperatures and decreases in precipitation in southern Arizona will retard vegetation recovery and reduce primary productivity in grasslands. Declining plant abundances will expose soils to greater runoff and erosion. Those soil instabilities will only add to ecosystem protection concerns.

Climate change will also complicate the present difficulties confronting ranching families who depend on federal lands. As productivity of rangeland declines, park managers will face pressure to retire those allotments that support habitat for endangered species. In an industry where financial margins are already very small, the loss of forage access can mean the difference between economic sustainability of the ranching enterprise or the end of a long tradition of land use.

Nonetheless, the future for grazing management in the parks has certainly improved. Park Service recognition of the effects of cattle grazing on natural and cultural resources and its desire to manage that use on a sustainable basis will go a long way to protecting resources from further damage. A willingness to explore and pursue new opportunities to eliminate grazing suggests that perhaps there is still hope for Steven Mather's belief that the Park System will someday be rid of unwanted grazing in those special areas that we have set aside for our children's heritage.

[28] Ben Johnson. 1977. *Livestock Grazing in the National Park System.* Washington DC: US Department of the Interior National Park Service, Division of Natural Resources Management

[29] Bobowski. Page 116.

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Part II

Homestead Settlement and Cattle Ranching in the Rincon and Tanque Verde Valleys

CHAPTER 1

Introduction[1]

This chapter presents a history of settlement and ranching on the western slopes of the Rincon mountains in southeastern Arizona (Figure 1.1). The primary purpose of this cultural landscape research is to investigate how these small settlements along the Rincon and Tanque Verde creeks developed over time. Both evolved from clusters of Mexican-American homesteads to a few mid-sized, Anglo-American cattle ranches, and, finally, to broad swaths of residential communities. A secondary, but equally important, purpose of this research is to illuminate the ranching experience and its relationship to federal range management by Coronado National Forest and Saguaro National Monument.

Despite their distance from Tucson 20 miles to the west, both valley communities were natural outgrowths from the city. Both settlements in the Rincon and Tanque Verde valleys arose because of the variety of natural resources readily available within the valleys: grasses for livestock fodder, wood for fuel and building supplies, and water. Both were confined by the physiographic boundaries of the mountain range to the East and the less habitable, arid Tucson basin to the West. Both creeks flow westward from the Rincon foothills, the Tanque Verde ten miles north of the Rincon. Both creeks are and were never perennial in their flows. They are brief in length joining the Pantano Wash as they descend to the Tucson basin. Vegetation in both valleys varies with elevation. The valleys contain primarily desert scrub except within the riparian corridors. Both historically supported grass communities that have declined significantly over the last century and been replaced by more shrubs, mesquite, and nonnative invasives.

Settlement in both valleys began at the same time; their patterns of growth and change were remarkably similar, and were clearly influenced by the same cultural, social, economic and environmental factors. The natural resources of the area initially provided for a small number of families at essentially a subsistence level. Later the homesteading communities shifted economic focus from small scale farming and wide-ranging harvesting of natural resources to a more intensive utilization of local vegetation to support livestock enterprises. In the long run, neither the valleys nor the adjacent mountain slopes could offer sufficient range resources to keep those cattle ranches viable. Impacted by episodic drought and economic downturns, the livestock enterprises were short-lived and largely financially unrewarding. When cattle ranchers could not be sustained by livestock production alone, they turned to other business opportunities such as cattle and horse breeding, horse racing, and guest ranching. None but the last were economically sustainable; only one guest ranch has survived to modern times.

[1]This report was, in part, funded by Saguaro National Park in 2005 and then later expanded in 2007 with additional funding from Diamond Ventures.

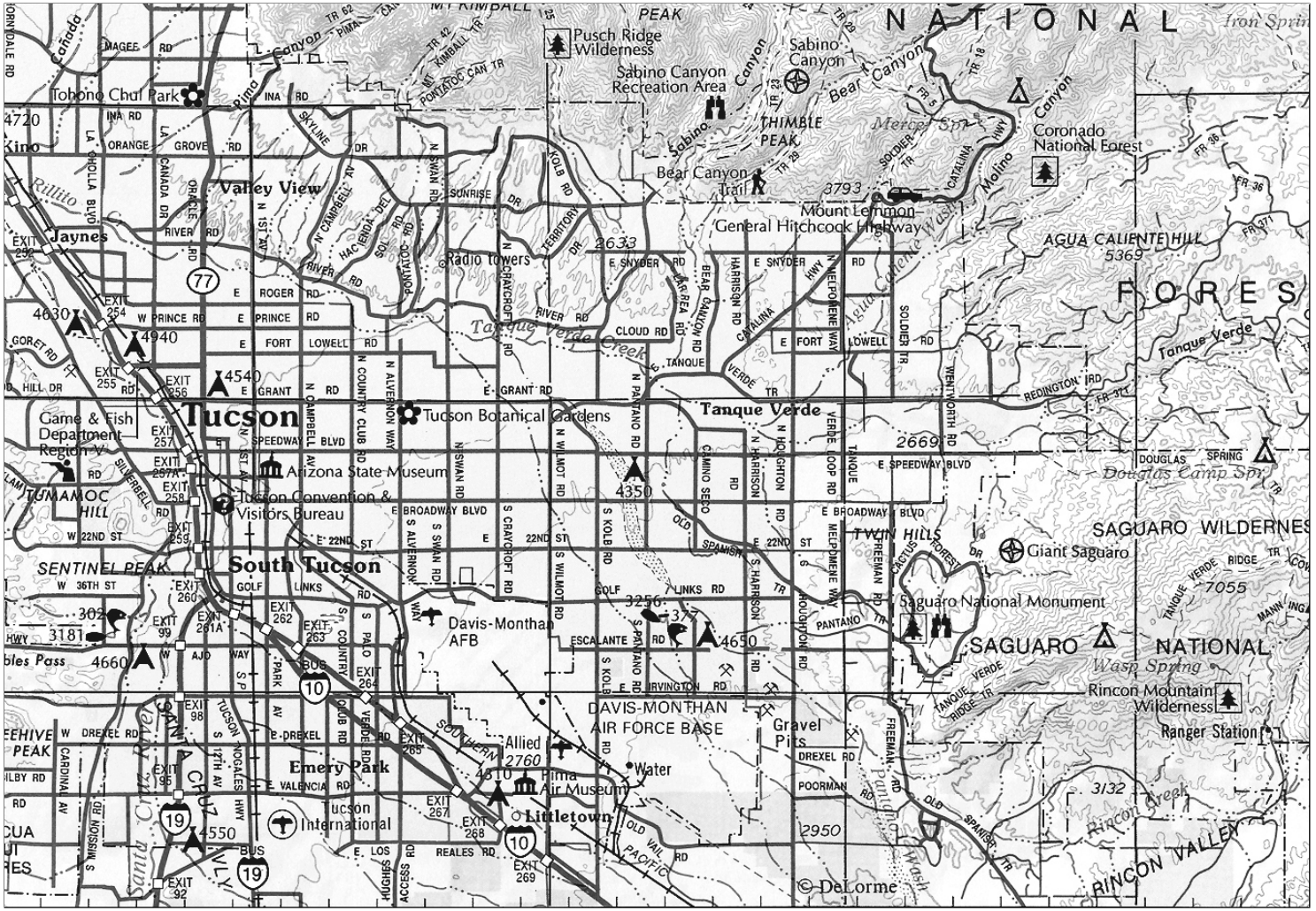

Figure 1.1: Map showing Tucson, Arizona in relation to the Rincon and Tanque Verde valleys. The Rincon Valley is located east of Tucson and immediately South of Saguaro National Park. The Tanque Verde Valley is just North of Saguaro National Park. From Arizona Atlas and Gazetteer by DeLorme.

Political influences also feature strongly in this story. The federal decision to control and eliminate Native Americans was the catalyst for early settlement in Arizona. Homestead legislative requirements affected the location and speed of early settlement in both valleys. Federal land reservations – first the Coronado National Forest and later Saguaro National Monument – imposed an additional layer of external influences on the communities. The actions of federal managers directly affected the livelihoods of early homesteaders and later restricted the ranching activities of the stockmen.

With changes in the pattern of land use, there was a concomitant shift in the community structure and culture. The early Mexican American homesteaders were replaced by a small number of Anglo-American ranchers; they, in turn, were supplanted by even fewer land developers.

The primary sources of information for this report are the original records of settlers in the Tanque Verde and Rincon valleys.[2] These homestead records have generally been ignored by historians for unknown reasons; yet they provide a remarkable window on the history of homesteading in Arizona. The records describe how these individuals struggled in difficult times and under difficult conditions. They list places of origin, names of neighbors, dates of settlement, landscape descriptions, and ranching and farming activities. Oral histories provide color, depth and a view into individual attitudes and emotions. Taken together, the details illuminate periods of continuity and change within these two communities. Documentation of the history of the ranching community is derived from oral histories, Saguaro National Park, and Coronado National Forest records.

1.1 A Historical Overview

Following the creation of the Chiricahua Apache Indian Reservation in Sulphur Springs valley in 1872 and the establishment of Fort Lowell in the spring of 1873, settlement in areas beyond the boundaries of the city of Tucson could now occur in relative safety. The vast majority of early arrivals in the Rincon and Tanque Verde areas had recently emigrated from Sonora, Mexico. Most had arrived with little money but hoped to find a better life in a land with greater opportunities. One of the most readily available methods of improving one's social and economic standing in the United States at that time was to file a claim on a "homestead," an unreserved parcel of land within the public domain. The homesteader gained ownership to his claim by cultivating the land and completing a specified number of improvements to the property within a given time period. The homestead provided the settler with food for his family and cash from crops and cattle he might raise. Through utilization of surrounding natural resources, a family could maintain a relatively high degree of independence from the traditional economic relationships. Most homesteaders believed they would succeed by farming the flood plains or by small-scale ranching on the rich grasslands of the Rincon mountain foothills.

[2]See John P Wilson. 1988. "A Homestead and Its Records." *The Kiva* 53 (4): 363-372 for the process of ordering homestead records although in these modern times ordering can be done on line: www.archives.gov/contact/inquire-form.html#84. See also Robin L Pinto. 2012. "General Land Office Documentation and Its Value in Studying Settlement in the Vail Region." Paper given at the Arizona Centennial Conference. Homestead files from the Tanque Verde and Rincon valleys that are used as references are hereafter simply listed under the claimant's name.

The struggle to gain title to this land, however, was long and frequently daunting due to the cultural, economic, environmental, and legal challenges that confronted most homesteaders. Almost one third in the Rincon and Tanque valleys failed to complete their residency. Episodes of drought, family illness, or financial constraints were the usual causes for relinquishment of a claim. The Homestead Act and its rules for completion of the homestead claim created some of the greatest obstacles to the homesteaders. The requirements for agricultural production were often incompatible with the arid and unpredictable environment of the Southwest. The regulations for proving up were complicated and difficult to comply with, not only for those fluent in English, but more so for non-English speakers. Few homesteaders understood the regulations; their confusion resulted in missed deadlines, fees, or documentation. Those who did gain title found the continuing ranching challenges often overwhelming and later sold their properties either to neighbors or to the growing influx of Anglo-Americans for cash.

Major social and cultural change in the valley began to occur at the end of the 1910s. World War I briefly brought good prices to the beef industry. With those rising prices, other Americans became interested in investing in larger-scale cattle enterprises. The best pieces of land, those with access to water, had been claimed for homesteads. Purchase of patented lands became the next option for those interested in the business of ranching. The first Anglo-American family moved into the valley in 1911 by purchasing an existing homestead, not by proving up on one. By the mid-1920s, the US Forest Service began to restrict access to grasslands in the Rincon mountains. An extended drought and the Great Depression drove many Mexican-American homesteaders to sell their patented lands and move to Tucson.

In 1916 Congress, for the first time, recognized that agriculture in the arid Southwest was not a viable requirement for the orderly transfer of land. Congress enacted the Stockraising Homestead Act and affirmed that livestock production was a legitimate use of the land. Most of the Stockraising homesteads in the Rincon valley filed between 1920 and 1934 were claimed by Anglo-Americans. In the late 1920s, the US Forest Service began to restrict grazing access to the grasslands of the Rincon mountains. In conjunction with the Great Depression, many Mexican-American ranchers were forced to sell their lands and move out of the valley to Tucson.

The practice of homesteading in the continental United States ended in 1934 with the Taylor Grazing Act. Its enactment marked the end of the open and free range for cattle ranchers. During the 1930s, many homesteads were purchased and consolidated by wealthy landowners into a small number of ranches, the Rocking K and the X9 in the western and eastern portions of the Rincon valley and the Tanque Verde and Cebadilla ranches in the Tanque Verde valley. Raising and racing quarter horses displaced cattle ranching as the primary financial interest. By the early 1950s the ranching businesses in the valley were failing due to insufficient grass resources and extended overgrazing. A few remaining homestead families continued to rely on their lands primarily as places of residence rather than depending upon them as sources of income; instead they sought income through outside employment. Today small enclaves of those early homestead communities still exist in the Rincon valley.

1.2 Tucson History

Prehistoric peoples have inhabited the Tucson Basin for more than 12,000 years. The historic period of settlement, however, began with the arrival of Don Hugo O'Conor in 1775 when he established a new military presidio for the Spanish government on the eastern bank of the Santa Cruz River. The constant threat of attack from Apache Indians drove all noncombatants to settle within a safe distance of the presidio walls. The Mexican government took over control of the Tucson presidio and protection of the local inhabitants in 1821 after winning its independence from the Spanish crown. The population in the western half of the basin waxed and waned throughout the 19th century as a function of the financial and military support of the presidio and the external threat posed by the Apaches. With the Gadsden Purchase in 1853, the lands south of the Gila River including the Tucson basin were formally appended to the southwestern United States. A small troop of American dragoons took command of the Tucson presidio from the last of the retreating Mexican forces in 1856.[3]

The landscape of the eastern half of the Tucson Basin remained unused and uninhabited. Beyond the immediate safe zone afforded by the presidio's military presence, early settlers could only look to themselves for defense against Apache attacks. Those who wished to farm the land or graze cattle had to maintain a constant vigilance. Frequently they were attacked by Apaches who stole settlers' cattle and horses, burned their fields and farmhouses, and sometimes murdered entire families.

In the 1870s, the US government initiated two separate land management policies designed to improve the economic stability of the Tucson region and the personal safety of its residents. In September 1872, General O O Howard signed an agreement with the Chiricahua Apaches led by the warrior, Cochise. In exchange for a cessation in hostilities, the Indians were granted a reservation of land that included most of the Sulphur Springs valley in southeastern Arizona.[4] A second, and equally important, reservation of land occurred the following spring when Camp Lowell, previously situated within the Tucson city boundary, was relocated to an area eight miles northeast.[5] This military reservation encompassed much of the Tanque Verde creek drainage eastward to the Rincon mountain foothills.[6] For the first time in almost 100 years, settlement could expand eastward in relative safety beyond the confines of the Santa Cruz River area.

[3]C.L. Sonnichsen. 1982. *Tucson: The Life and Times of an American City*. Norman: University of Oklahoma Press. Pages 7-9.

[4]Edwin R. Sweeney. 1997. *Making Peace with Cochise: The 1872 Journal of Captain Joseph Alton Sladen*. Norman: University of Oklahoma Press. Pages 93-98.

[5]Mary Caroline Hughston. 1964. *Old Fort Lowell*. Tucson: Arizona Silhouettes.

[6]Theodore F. White. 1876. "Survey of Camp Lowell Military Reservation. Pima County, Arizona." Book 1793. Bureau of Land Management Archives, Tucson, Arizona; Philip Contzen. 1900. "Field Notes of the Survey of the Exterior and Subdivisional Lines of T14S R15 and 16E within the Fort Lowell Military Reservation and also Meander Lines of the Tanque Verde River." Book 1799. Tucson Bureau of Land Management Archives.

CHAPTER **2**

Claiming the Land – Mexican-American Settlement

2.1 Early Settlers and Settlement Patterns

Some of the earliest settlement beyond the immediate vicinity of Tucson occurred in the Rincon and Tanque Verde valleys (Figures 2.1, 2.2). When siting a farm or establishing a ranch in the desert southwest, the presence of water has always been the primary consideration. Nearly perennial water made both locations highly desirable for settlement.[1] The Tanque Verde valley north of Tanque Verde ridge contains numerous springs that supplied the area and the creek with almost year-round water. A second area of available surface water was located in the Rincon valley. Rincon creek flows westward out of the inner elbow of the Rincon mountains and is primarily supplied by rainwater during summer and winter storms. Subsurface rock formations below the creek bed force seasonal water to flow above ground at its eastern end. While the soils in the creek bottoms are rich in organic material, those on the surrounding bajadas are poor; they support a variety of grasses, desert shrubs such as catclaw and palo verde, and cactus including the giant saguaro. Early settlers were attracted to these foothills for their abundant grasses for cattle grazing.[2] The lower valleys provided good water and fodder in the summer; the upper foothills of the Rincon mountains during the winter season.

William Oury, the first Anglo-American to drive cattle westward from Texas to Tucson, chose to settle north of the Tanque Verde ridge in the early 1880s. He described in a letter to his daughter his hopes for success in cattle ranching.

> I shall say that your mama and I have concluded to give up city life, build a small but comfortable house at the Tanque Verde Ranch, and give our entire attention to the raising of cows and calves . . . With ordinary luck, at the end of four or five years, we will have accumulated a sufficiency of this world's stores to enable us to spend our declining years in California, or some other more hospitable clime. Still, we have about 500 head of cattle left, most of them good, gentle, American stock . . . With proper attention and no bad luck, they

[1] Philip Contzen. 1897. "Field Notes of the Survey of Subdivision Lines T14S, R16E." Books 877 and 878. Tucson Bureau of Land Management Archives; Contzen 1900.

[2] Theodore F. White. 1873a. "Southern Boundary of Township 15 South, Range 16 East, Gila and Salt River Meridian. Surveyor's Notebook No. 1455." Bureau of Land Management Archives, Tucson, Arizona; b; c; Martineau 1893a; Theodore F. White. 1873b. "Southern Boundary of Township 15 South, Range 17 East, Gila and Salt River Meridian. Surveyor's Notebook No. 1455." Bureau of Land Management Archives, Tucson, Arizona; Theodore F. White. 1873c. "Survey of T13S R16E, Gila and Salt River Meridian. Book 779." Bureau of Land Management Archives, Tucson, Arizona; Contzen 1897; Contzen 1900.

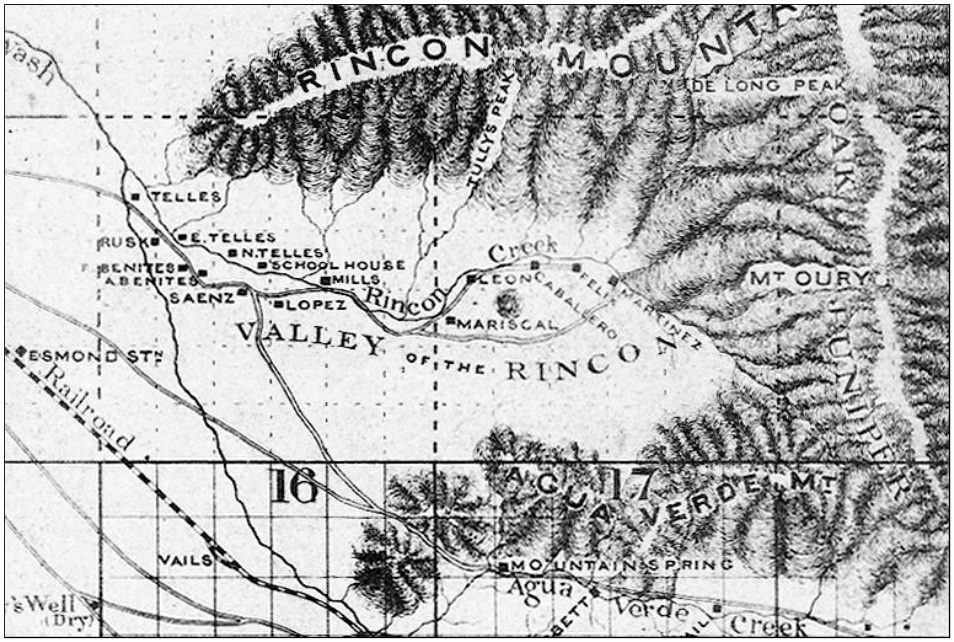

Figure 2.1: Inset from Pima County, Arizona map by George Roskruge, 1893 showing as yet unsurveyed lands in the Rincon Valley. Individual homes and their owners marked with small, black squares. Note close association of home placement with Rincon Creek.

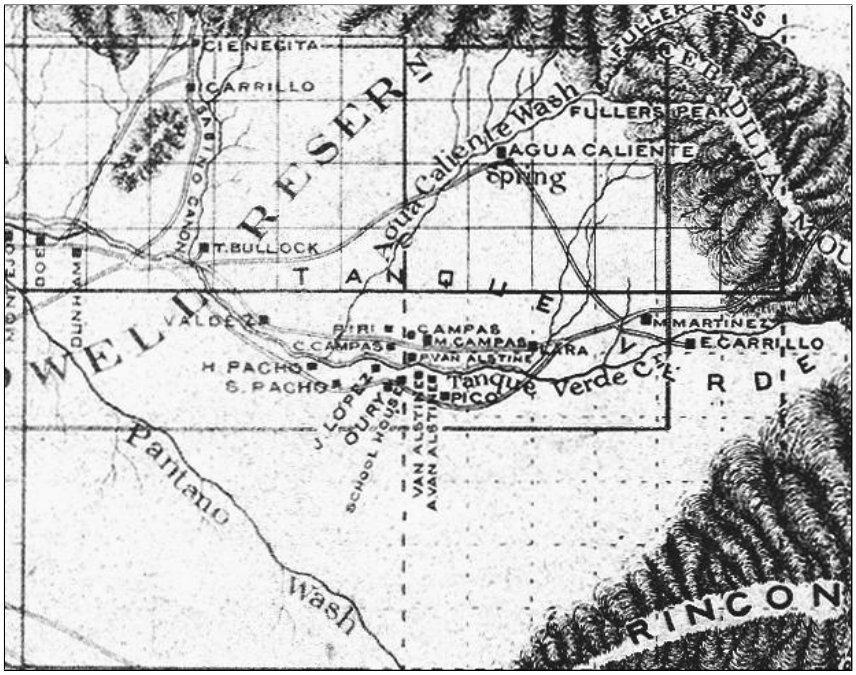

Figure 2.2: Inset from Pima County, Arizona map by George Roskruge, 1893 showing as yet unsurveyed lands in the Tanque Verde Valley. Individual homes and their owners marked with small squares. Note close association of home placement with Tanque Verde Creek.

> ought to increase in five years to 1500. At present rates this should produce some $35,000, more than enough to ensure us against the poorhouse.[3]

With a few exceptions like Oury, most early settlers to the Rincon valley were Hispanic in origin. Some, like the Leon and the Tellez families, had resided for multiple generations in the Tucson vicinity. Francisco Solano Leon was a sergeant at the Tucson presidio prior to its transfer to the United States. According to great-grandson, Ernesto Solano Leon, Francisco had received a grant of land in the eastern end of the Rincon valley. While its exact origins are uncertain, this grant probably was given to Leon by a presidio supervisor as payment for his military services.[4] Other settlers, like Joaquin Tellez, had farmed small fields in the Santa Cruz River basin or maintained shops outside of the walls of the presidio. Despite the transfer of sovereignty in 1856 to American rule, the Tellez and Leon families chose to remain close to the Tucson area, become American citizens, and begin to develop their cattle ranches. Both the Leon and Tellez families moved to the newly open lands of the Rincon valley in 1872.

Many Mexicans migrated north to Tucson region in 1873; they sought escape the feudal hacienda system and the political and ethnic strife in Sonora.[5] Declaring their intent to take American citizenship as soon as they completed the required period of residency (five years), Mexican families as well as young individuals settled on newly available lands. Often it was the younger members of the family, like Gregoria Barcelo, Esau Mills, and Librada Leon, who filed the paperwork and made formal homestead claims to lands their parents had been living on for many years.

Some of the early homesteaders in the Rincon and Tanque Verde valleys were Anglo-American. Many arrived at the time of transfer of authority as part of the US military forces. Theadore G Rusk arrived in Tucson as part of the 1856 dragoons. He became a miner and owned property in Tucson. He married Concepcion Tellez, the sister of Joaquin and homesteaded near the Tellez family in the western part of the valley. Frederick Hughes came west following stories about mineral or grassland riches.[6] Like Rusk, Hughes and other Anglo-Americans arrived as single men, married Hispanic women, and became part of extended Mexican-American family clusters.[7]

The federal government dissolved the Chiricahua Indian Reservation in 1876; many of the Apaches returned to their traditional raiding patterns. For the next 10 years per-

[3]Smith, Cornelius C. No date. "The Indian Fighter." In: *Tanque Verde: The Story of a Frontier Ranch*, Tucson, Arizona. Privately published by author. Page 48.

[4]James E. Officer. 1987. *Hispanic Arizona, 1536-1856*. Tucson: University of Arizona Press. Pages 284-286; Charles Poston. "Land Grants and Land Claims." *Phoenix Herald*, June 4, 1891; Ernesto Solano Leon. Interviews with author, April 7 and June 19, 2000. Few of these small military grants appear to have been recorded, however, and as a result they were probably not recognized legally after the transfer of the area to the United States.

[5]Edward H. Spicer. 1980. *Cycles of Conquest. The Impact of Spain, Mexico, and United States on the Indians of the Southwest, 1533-1960*. Tucson: University of Arizona Press.

[6]Named references in parentheses indicate sources of additional stories or information in the Personnel Files for those individuals. In this instance, additional documentation regarding military associations and activities has been collected and stored in files for Frederick Hughes.

[7]95% of the Anglo population in Tucson in 1860 were adult males. See Thomas E. Sheridan. 1986. *Los Tucsonenses: The Mexican Community in Tucson, 1854-1941*. Tucson: University of Arizona Press. Page 32-34, 37. Joseph Mills, Frederick Hughes, William Eustis, Van Alstine and William Allen.

sonal safety in the region again became a significant problem. A well-documented attack occurred in the Rincon valley in 1886. A young boy, Octaviano Gastellum, and a herd of cattle were taken by Indians from the Joaquin Tellez' ranch. A rescue party of settlers and supporters from the Tanque Verde and Rincon areas was assembled immediately. The party included Mariano Samaniego, William Oury, Juan Tellez, Eusebio and Dionicio Tellez, Ramon and Jesus Saenz and seven others. They followed the Apaches across the Rincon mountains and two days later recovered the boy.[8] Later that year the remaining Chiricahua Apaches finally surrendered to the US Army and the entire tribe was relocated to Fort Marion in Florida. The removal of the last of the Apache tribes brought a cessation to Indian raiding but not an assurance of complete safety to the region.

Living conditions for the early settlers still remained hazardous. Criminal elements among Hispanic and Anglo-American populations were just as likely to threaten a settler's life and livelihood.[9] An individual or a family was less likely to be subjected to attack, however, if others lived nearby. Consequently, early settlement often occurred in clusters, either as a coordinated effort among acquaintances[10] or, more likely, among related families.[11]

A third influx of Mexican settlers occurred in the early 1900s.[12] Like the earlier Hispanic arrivals, these families were also seeking to escape political and cultural upheaval in Mexico. Yaqui and Mayo families from the state of Sonora were fleeing Mexican troops who had been ordered to deport and/or exterminate the last remnants of these tribes.[13] Known for their skills in handling cattle, many Yaquis and Mayos gravitated to the established ranching communities of southeastern Arizona.[14] Only a few of these Indian families filed on homestead lands;[15] others remained landless preferring to work as hired vaqueros on the larger ranches such as those belonging to Eduardo Carrillo, Rafael Carrillo, and Tomas Mills. Some of those landless vaqueros, nevertheless, owned and maintained their own herds of cattle.[16] They ran their herds on the same slopes with cattle that belonged to their employers.

Berle Clemensen describes the stockmen's early grazing patterns at the end of the 19th century.

> Beginning in the 1870s ranchers began to locate along drainages of the Rincon Mountains. Manuel Martinez was the first to locate on Tanque Verde creek in 1872. By 1880 his cattle herd had grown to 200. Others soon moved near Martinez and raised cattle as well. In 1880 over 1000 cattle ranged over public domain around the future monument and Fort Lowell Military Reservation.

[8] Juan I. Tellez "Reminiscences." Arizona Historical Society Archives, Tucson Arizona

[9] Smith. no date. "Don Emilio." Pages 29-42.

[10] Francisco Solano Leon, his daughter, Librada Leon with Jesus Maria Martinez.

[11] Tellez and Ruiz families; Barcelo, Eustis, and Hughes families; Eduardo Carrillo and Manuel Martinez.

[12] Smith. no date. "Jose Moreno." Pages 127-135.

[13] Spicer. 1980. Page 80-82.

[14] Smith. no date. "Jose Moreno." Pages 127-135.; see also *Tucson Citizen*. "City Closing in on Barrio." January 4, 1979.

[15] Cristobal Valenzuela, Fermin Cruz, and Andrea Maria Salcido.

[16] Smith. no date. "Jose Moreno." Pages 127-135.

> Three men, Martinez, Emilio Carrillo, and William Oury, came into prominence on the north side of the present-day Rincon unit of Saguaro National Monument in the latter part of the 19th-century. Each man probably kept over 400 cattle by the later 1880s. To the south along the Rincon wash, two ranches developed, one owned by the Tellez brothers and the other by Joseph Mills. Although the Tellez' herd grazed primarily in the Rincon Mountains, the other ranchers took their entire herds there during times of drought. The dry period of 1892 and 1893 undoubtedly reduced these cattle. By 1900 Carrillo remained as the primary rancher on the north with the Mills and the Tellez brothers on the south.[17]

Property boundaries were essentially nonexistent. The only physical restrictions to the movement of cattle were the small mesquite post-and-brush arrangements to hold cattle in corrals or to keep cattle out of vegetable gardens. Few could afford the recent invention of barbed wire for fencing; its use did not come into prominence in the Rincon area until 1910. Cattle moved with relative freedom from valley floor to upper elevations in the mountains. Ernesto Leon stated that cattle belonging his great grandfather, Francisco Solano Leon, roamed at will from Vail to Florence.[18] Once a year the ranchers from the Tanque Verde and Rincon areas would join together to conduct a rodeo (roundup) throughout the Rincon mountain area to gather their cattle for branding and sale.[19]

But the unbounded range and the freedom of the graziers to run their cattle across the landscape started to change in 1893; General Land Office surveyors began to measure and mark the Tanque Verde and Rincon valleys so that more settlers could lay claim to lands and their homesteads.

2.2 Homestead Acts: Origins and Opportunities

As we have already seen, early federal reservations influenced both the timing and location of historic settlement in the Tucson Basin. Another set of federal land laws also had a profound effect on settlement patterns in Rincon area. The Homestead Acts provided real opportunities for many settlers and, at the same time, created serious hardships. These acts offered an important mechanism for poor and middle-class Americans as well as recent immigrants to establish homes, improve their social and economic standing, and create viable and functioning communities.[20] The rules governing the process of completing a land claim, however, were complicated and difficult to comply with, not only for those fluent in English, but even more so for non-English speakers. Few homesteaders understood

[17] Berle Clemensen. 1987. "Cattle, Copper, and Cactus: the History of Saguaro National Monument. Historic Resource Study, Saguaro National Monument." National Park Service, Denver Service Center, Denver, Colorado. Page 67.

[18] Interviews with Ernesto Leon 2000; see also Anne E. Harrison. 1972. "The Santa Catalinas: A Description and History, Sabino Canyon Visitor Center." Unpublished manuscript. Archives of the Coronado National Forest Service, Tucson District Office. Tucson, Arizona. Page 92.

[19] Theodore Knipe. "Theodore Knipe Collection." Reserve Files. Arizona Historical Society. Tucson, Arizona.

[20] Pat H. Stein. 1990. *Homesteading in Arizona, 1862-1940: a Guide to Studying, Evaluating, and Preserving Historic Homesteads*. Phoenix: Arizona State Historic Preservation Office. Page 9.

the regulations; their confusion resulted in missed deadlines, late fees, or incomplete documentation. The requirements for agricultural production were often incompatible with the desert southwest environment. In Arizona, more than half of all homesteaders failed to acquire ownership of the land in which they invested years of time, money, and effort.[21]

In 1862, the US legislature enacted the first of the Homestead laws. This law and the many others that followed were based upon democratic notions developed by Thomas Jefferson that every American citizen had the right to acquire property and improve his standing in society through farming the soil and developing his land.[22] In theory, each family would become economically independent, sustained by their labors and the produce from their land. The federal government having recently achieved independence from Great Britain found itself rich in land but poor in cash and burdened by debts incurred from the revolutionary war. If an appropriately sized parcel of land could be disbursed in a fair manner to each citizen, the economy of the region would be enriched by the energies of all settlers. The federal government through the sale of these lands would acquire sufficient cash funds to pay off its national debt.

Jefferson devised the Ordinances of 1784 and 1785 to survey, delineate, and allocate lands for development. Under these Ordinances, a gridded system of north-south and east-west divisions was laid across the unclaimed lands of the new territories and western states. The divisions of land, "townships", were 6 miles on each side; these were further subdivided into 36 units, "sections", each containing 640 acres.[23] These divisions would be measured and marked by surveyors upon the landscape. Surveyors would also draw and describe the significant features and resources (soils, timber, grass, water, and minerals) contained within those divisions on a plat map and in survey books. This information would be available to prospective homesteaders in public land offices to help to them make informed choices about lands on which they might file a claim.[24]

Not all settlers chose to file land claims for ownership at this time. Many chose to use the public domain which was still free and open to all who could control it by occupation. Wenceslao Felix and José Maria Mariscal ran a large cattle operation in the eastern portion of the Rincon valley during the 1890s (see Figure 2.1). They, in turn, sold their ranching improvements (not the land) to Miguel Escalante (uncle of the later homesteader). Escalante continued to run the cattle ranch and hired vaqueros, including nephew Miguel, to operate it. Miguel Escalante (elder) was in partnership with Albert Steinfeld, a prosperous Tucson entrepreneur, and also ran his own businesses including a slaughterhouse. While these cattle operations on the open public domain required less investment of time and money, their continued existence was risky. "Possession" required continuous occupation and still the land could be claimed at any time by other homesteaders.

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[21] Stein. 1990. Page 8.

[22] Hildegard Binder Johnson. 1976. *Order upon the Land. The US Rectangular Land Survey and the Upper Mississippi Country*. New York: Oxford University Press. Pages 39-46.

[23] *ibid.*

[24] See Philip E. Stoiber. 1973. "Use of the U.S. General Land Office Survey Notes for Investigating Vegetation Change in Southern Arizona." Master's Thesis. Department of Geography and Area Development, University of Arizona, Tucson, Arizona. These books and maps are still available today in local Bureau of Land Management offices and at the BLM/GLO web site, www.glorecords.blm.gov/. These documents often represent the earliest detailed descriptions of areas within the western United States.

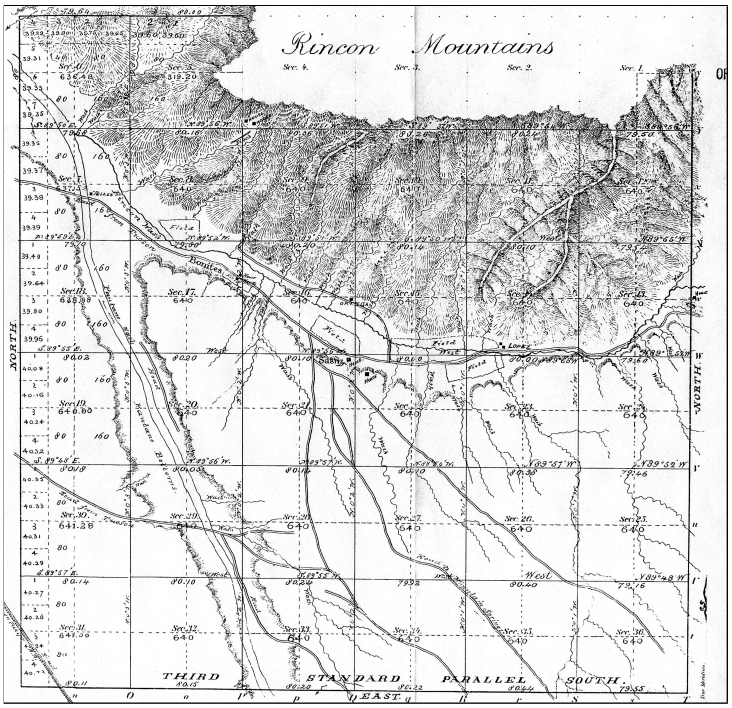

Figure 2.3: 1895 survey map of Township 15 South, Range 16 East by James H. Martineau showing the west end of the Rincon Valley. Rincon road traverses the Pantano Wash on the upper left and follows the creek floodplain. Homesteads (black squares), ditches and agricultural fields (irregular rectangles) are also indicated on map. Bureau of Land Management, Tucson Arizona.

2.3 Completing a Land Claim

The first Homestead Act established the regulatory mechanisms to begin the orderly process of dispensing public domain lands to individuals. The General Land Office (GLO) was charged with overseeing this dispensation. The agency hired surveyors to describe the land and administrators to collect fees and to record the homesteaders' progress as they completed their claims. GLO offices were located in the larger cities within each state including Tucson.

Before anyone could file a claim the land had to be formally surveyed. Theodore White conducted preliminary surveys in 1873 in the Rincon area; his surveys identified the Township and Range boundaries.[25] James Martineau later surveyed the section lines, wrote descriptions of and drew maps showing local resources for the Rincon valley in 1895 (Figures 2.3, 2.4).[26] Philip Contzen completed section surveys in 1897 and 1900 in the Tanque Verde

[25]White 1873a; b; c.

[26]James H. Martineau. 1893a. "Survey of Subdivision Lines within Township 15 South, Range 16 East, Gila and Salt River Meridian. Surveyor's Notebook No. 868 and 869." Bureau of Land Management Archives. Tucson, Arizona; James H. Martineau. 1893b. "Survey of the West Boundary of Township 15 South, Range 16 East, Gila and Salt River Meridian. Surveyor's Notebook No. 1543." Bureau of Land Management Archives. Tucson, Arizona; James H. Martineau. 1893c. "Survey of the West Boundary of Township 15 South, Range 17 East, Gila and Salt River Meridian. Surveyor's Notebook No. 1543." Bureau of Land Management Archives.

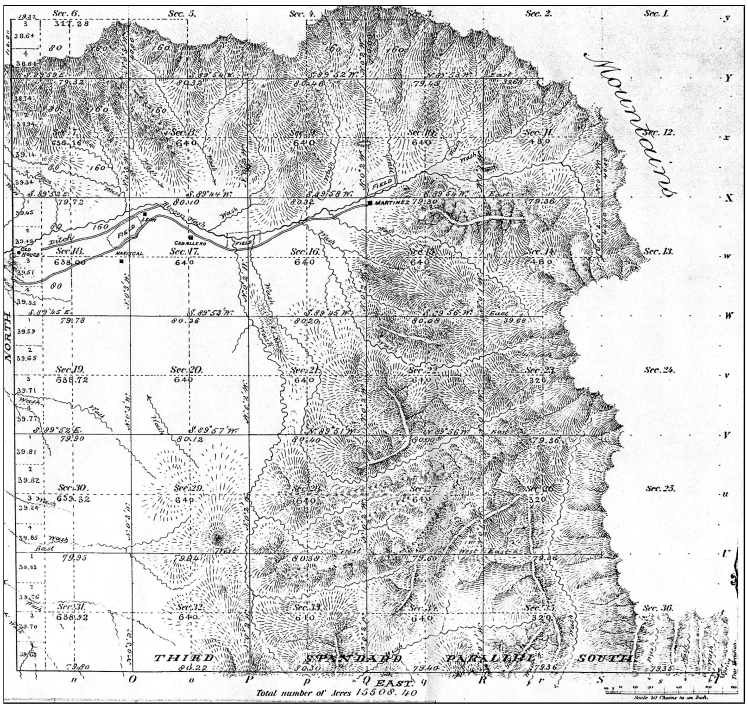

Figure 2.4: 1895 survey map of Township 15 South, Range 17 East by James H. Martineau showing the east end of the Rincon Valley. Note Rincon road follows the Creek floodplain. Homesteads, ditches and agricultural fields are also indicated on map. Bureau of Land Management, Tucson, Arizona.

area.[27] Prior to the publication of those final surveys, all settlers living in both valleys were, in reality, "squatters"; they had no formal ownership of their land. But by continuous residency, they protected their existing improvements – buildings, structures, farmed acreage – until the lands were surveyed and they were allowed to file formal homestead claims.[28]

Once the land had been surveyed, the Homestead Act permitted an individual (single male or head of a household, or unmarried or widowed female, above the age of 21) to claim as many as 160 acres or one quarter section. The individual had to be a citizen of United States. A recent immigrant was permitted to file a claim as long as he had also filed a declaration stating his intention to become a citizen in the near future. While

Tucson, Arizona; James H. Martineau. 1893d. "Survey of the Third Standard Parallel South through Range 16 East, Gila and Salt River Meridian. Surveyor's Notebook No. 1548." Bureau of Land Management Archives. Tucson, Arizona; James H. Martineau. 1893e. "Field Notes of the Survey of Township 15 South, Range 17 East, Gila and Salt River Meridian, Arizona." Bureau of Land Management Archives. Tucson, Arizona

[27] Contzen 1897; 1900.

[28] Stein. 1990. Page 5; Paul W. Gates. 1968. *History of Public Land Law Development*. Washington, DC: US Public Land Law Review Commission. Pages 244-247. The Homestead Act of 1862 allowed settlers on unsurveyed public lands the right of preemption – the right to make the first claim on lands the settlers had improved when those lands were finally surveyed. The Act of May 17, 1880 gave formal and legal recognition of the right of preemption on unsurveyed public lands.

most homesteaders who filed were men, a significant number of women had their own claims.[29] Some of these were widows; some were US citizens married to noncitizens; some were family members of recently deceased homesteaders. Many, however, initiated and completed their own claims without the support of men.

The law required that the claimant establish his residence upon the claim within six months of his filing and that he live there continuously for the next 3-5 years.[30] The homesteader, in addition to constructing his home, was expected to make numerous "improvements" upon the land. These improvements included producing agricultural crops as well as construction of wells for water, and barns, corrals, and fences for animals.

After five years of residency, the claimant offered "proof" of his labors before an officer of Pima County court. He had to prove that these improvements had indeed been made and that they were of sufficient value as to be considered a legitimate investment in the land. This proof came in the form of separate testimonies given by the homesteader and two additional witnesses. These witnesses were chosen for their familiarity with both the land and the claimant. Often they were neighbors, extended family members, or well-known and reputable citizens – successful businessmen, federal and city officials, and government surveyors. The presence of individuals of local renown was clearly meant to affirm the homesteader's good standing and the honesty of his statements.[31]

Prior to the homesteader's appearance in court, he was required to publicly announce in a local newspaper for five consecutive weeks the future date and place of the testimony, the location of his land claim, and the names of the homesteader and his witnesses.[32] This posting allowed members of the public to challenge a homesteader's testimony by providing refuting information if they disagreed with the claimant's statements. If a homesteader's testimony was deemed false or proof of his improvements was considered inadequate, the General Land Office could suspend, or even cancel, his claim. This opportunity for public verification and/or refutation appears to have kept most testimony relatively honest, if not mostly accurate. In only two cases out of 77 claims examined from the Rincon and Tanque Verde areas was proof challenged by local community members.[33]

2.4 Improvements and Uses of the Land

Homesteaders were required to show that they had improved the land with specific kinds of agricultural endeavors or physical development such as homes and infrastructure. In later years, Homestead Act amendments required that these accumulated improvements have a minimum monetary value.[34]

[29] Librada Leon, Paz Tellez de Ruiz, Crisanta L. de Allen, Gregoria Barcelo, Silveria M. de Tellez, Maria Jesus Eustis, Concepción Tellez Ruiz.

[30] Amendments to the Homestead Act gradually shortened the residency period.

[31] Mariano Samaniego, Sam Hughes, Philip Contzen, Pedro Pellon, Raphael Peyron, Wenceslao Felix, JosÃ© Maria Mariscal, Jake Meyer, William Miller, and William Power.

[32] Frequently these advertisements were posted in *The Tucson Citizen*, *The Arizona Daily Star*, *The Tucson Post* or *The Arizona Cattleman and Farmer*.

[33] Miguel Escalante, Bruno Lara.

[34] For the Stockraising Homestead Act of 1916 claimants were required to show total improvements whose value was equivalent to $1.25 for each acre claimed.

Figure 2.5: Plowing agricultural field for barley planting, c. 1913. Successful production of agricultural crops was a requirement for gaining title to Homestead lands. Photograph by Frederick Knipe. Courtesy of Henrietta Barassi.

Figure 2.6: Historic ditch still present in Rincon Valley. The ditch built by Esau Mills to carry water from upstream in the Rincon Creek to his Homestead further West. Photograph by author, 2004.

Cultivation of successive years of crops was a primary requirement for proof. The amount of land cultivated varied dramatically with location according to the availability of good soil and water. Emilio Carrillo in 1900 cultivated as little as two to three acres of land. Other homesteaders claimed they had cultivated up to 40 or 50 acres in crops (Figure 2.5).[35] Most of the larger cultivated fields were located in the lower portion of the Tanque Verde valley below its numerous springs. Some of the cultivated land was planted to "garden truck" (corn, beans, potatoes, onions, chiles, watermelons, pumpkins, and tobacco) and mostly used for family consumption. Fermin Cruz claimed that he cultivated 20 acres each year. In years with good rain, those harvests with produce greater than the family's needs were sold in Tucson. The majority of the cultivated land was planted to different types of cattle fodder (corn, sorghum, and barley). Some of this fed the family animals but more often these grains were sold in Tucson for cash. These crops raised enough money to pay for the labor involved in sowing and harvesting the fields. Antonio Córdova, son of Nestor Córdova, describes how his family farmed the land in the Tanque Verde valley.

> We had a few cattle, but mostly we farmed. We planted barley, chile, squash, watermelons, corn, tomatoes, beans, and even a little wheat. After the harvest, my father would come into town and sell the vegetables that we grew on our ranchito. My father had a wagon and the mule for coming into town. And what a mule that was! I remember that we used to have to hold the mule until my father was seated in the wagon – and then the mule would take off, and I don't think he would stop until he got into town! With the money that he made selling vegetables, my father would buy provisions. He would buy salt, sugar, wooden buckets of lard, flour, rice, kerosene, and bolts of cloth. We used the kerosene for our lamps. He would go to town about every six months, and when he returned he wouldn't think about town until the next harvest. It was an interesting life because it was very rustic, and we were so independent.
>
> We also used to plant a few furrows of tobacco. My grandfather was in charge of the tobacco. I can remember how he was always checking on the leaves to see if they were turning yellow. As you know, tobacco is quite a big plant – the large leaves are what are harvested. When the leaves begin to turn yellow, he would cut them. There was a little room made of saguaro ribs that was used for the curing. He would stack up the tobacco leaves, and he would place gunny sacks over them so that they would "sweat." After about two or three days, he would spread out the leaves so that they would dry. After the leaves would dry, he would shred the leaves, and the tobacco would be ready. I can remember our neighbors coming from all over for some tobacco. Everyone rolled his own – the finer inner husks of the corn were used for cigarette paper. They would dry the husks and cut them into the appropriate lengths for cigarettes. We didn't waste anything in those days.[36]

[35] There is no available mechanism to confirm or deny the accuracy of these larger cultivation claims but perusal of the land claim records would suggest that at least some of these cultivation claims might be exaggerated.

[36] Patricia Preciado Martin. 1996. "The Tanque Verde and Sabino Canyon. Interview with Antonio Cordova." *Images and Conversations: Mexican Americans Recall a Southwestern Past*. Tucson: University of Arizona

Accurate numbers of cattle and horses were rarely included in land claim records. Livestock numbers were probably always underreported due to fears of increased taxation. Farmers and ranchers created pastures to support the family's horses and milk cows (1-10). Wealthier ranchers maintained beef cattle (20-50) on the public domain and private lands claimed from the Stockraising Homestead Act in 1916. Those with access to adjacent Forest Service grazing lands could run even more cattle (50-500).[37]

Physical development of the land usually included houses, barns, wells, ditches, and fencing. Early settlers and ranchers build their houses and barns of locally-made adobe bricks. The houses were generally small – often one or two rooms – and used primarily for sleeping. Larger families would often build more than one dwelling. All structures were limited to one story. Flat roofs were supported by mesquite posts and covered in ocotillo, reeds and mud. Floors remained the natural dirt. Some houses were more elaborate. Ramona Benitez Franco lovingly described the house in which she grew up in the Rincon valley.

> My parents and my grandparents' ranch house was made of adobe. They made the houses themselves without a plan, and they were very similar. When my father made the adobes for our house, a big hole was left [in the ground], so that when it rained, it filled with water as if it were a pond! When you entered our house, there was a big hall and a very large kitchen with a fireplace to one side. The living room, which also had a fireplace, was on the other side of the hall, and in the back there were two bedrooms. From the wide hall you could pass out to the back yard, where there was another big ramada, and to one side of the ramada, attached to the house, was another room that was used as a storeroom.[38]

Cooking was often accomplished outdoors on wood stoves. Wells were hand-dug, shallow, and curbed with timber beams. These wells were used for drinking purposes only, not for irrigation. Numerous ditches in the Tanque Verde valley were constructed to bring water from the creek to cultivated fields.[39] Rincon valley settlers developed only a few ditches since water flowed only irregularly in the creek (Figure 2.6. Mills' ditch is located near Rincon creek in Figure 2.4). Ramona Benitez Franco describes the area outside of her parents' adobe house in the Rincon valley.

> Behind the house were a well and a windmill that pumped water and also the corral for the cows and the canoas (troughs), which were filled with water for the cows to drink. To one side of the well was the big tanque for the cattle, and the windmill would go all day and night, pouring water into that tank because my father had a lot of cattle. And also behind the house there was a flower garden. My oldest sister, Teresa – Yichi – had a green thumb; she had

Press. Page 15.

[37] James Converse, Rafael Carrillo, Frederic Knipe, Melville Haskell, Tom Mills, and Rukin Jelks

[38] Patricia Preciado Martin. 2004. "Ramona Benitez Franco." In: *Beloved Land: An Oral History of Mexican Americans in Southern Arizona*. Tucson: University of Arizona Press. Page 30.

[39] See Contzen map 1900.

> so many beautiful flowers! And close to the corral where we had the milk cows, Mother had a fence around an orchard where she had peach and apricot trees, and in the rows between the trees she grew corn, green beans, tomatoes, radishes, green chile, and chile de pajaro. If you wanted good chile, come to my mother and father's ranch![40]

Early corrals were built of mesquite posts and brush. In the 1890s, wire fencing came into use and was used mostly to protect small cultivated areas from invasion by cows and horses. By 1910, however, homesteaders were fencing all or most of their property to protect their grass resources as well.

Frank Escalante describes his home in the Rincon valley that his father homesteaded in 1919.

> The house I was born in was not like houses now. What people did was this. They would find a big mesquite. They would use cardboard and tin and make the walls and cover them with mud. And they would use saguaro ribs or ocotillo for the roof. That's the kind of home I was born in. I have a picture of it. They used to hang my cradle from a chain between the mesquite posts.
>
> The ranch life was all I knew as a child. We had cattle and we used to grow everything – wheat, barley, milo, oats. We raised our own food – corn, beans, chiles, lentils, watermelons, different kinds of vegetables. We even grew tobacco. My dad used to make his own cigars. We were self-sufficient. My mother made cheese from the milk. She used to dry food, too. She made beef jerky. The real kind – not the kind you find now that is dried in the oven. When we were children we used to help her collect the fruit from the saguaros and she would make jams and jellies. We had our own beehives and had honey. When the Depression came, we didn't even know it.
>
> We used to irrigate from the Pantano. When it rained we used to take the teams down there and load barrels of water. We would haul our drinking water from a well four miles away. We would filter the tadpoles out with a cloth. Then we would have good drinking water. For a refrigerator, we would stand up four poles and make shelves. My mom would hang gunny sacks on them. There was always a barrel of water there and every time we'd pass we'd sprinkle the gunny sacks. It was just a habit.
>
> Whatever crops we didn't use ourselves from the farm, we would take into town and sell. We used to take a load of wood also. We just loved to see the Pantano flood, because there was a lot of driftwood that would come down. We would pick it up out of the wash and load it in a wagon and sell it in town.[41]

Another major source of income from the land was lime. Limestone is a common outcrop along the southern slopes of the Rincon mountains. In the late 1800s as Tucson and

[40] Martin. 2004. Pages 30-31.

[41] Patricia Preciado Martin. 1996. "The Far East Side and the Rincons. Interview with Frank Escalante." In: *Images and Conversations: Mexican Americans Recall a Southwestern Past*. Tucson: University of Arizona Press. Pages 87, 89.

Fort Lowell began to develop, the need for lime in housing construction increased dramatically. Lime was generated by burning limestone in the oven-like spaces within the ground. "The men would dig a hole and fill it with rocks and wood. The wood would burn for a day or two. That's how they made lime. The hills were pocked with holes."[42] There were "11 kilns altogether in Rincon area because every ranch family had its own kiln."[43] Angel Benitez, Manuel Escalante (elder), José Ruiz, and Carmen Moreno each had their own limekiln. The lime kilns were closed in about 1920 by a court order. The transformation of limestone into lime required multiple cords of wood to maintain fires for an extended period of time. The hardwoods of palo verde and mesquite were considered most suitable for this slow-burning process. But in cutting down these trees across the southern slopes of the Rincon mountains, homesteaders were removing an important source of food for the cattle. Ranchers complained that the kiln fires were depleting the stock of bean pods that cattle needed for fodder during the summer months.[44] Remnants of these lime kilns still exist within the boundaries of Saguaro National Park and on private lands in the Rincon valley.

2.5 Changes and Continuing Challenges with the Homestead Acts

The Homestead acts were either amended or had multiple reincarnations as the US legislature struggled to perfect a system of public land disbursement that was both fair and immune to fraud.[45] In 1909 Congress passed the Enlarged Homestead Act.[46] Designed to encourage "dry farming", a new theory of cultivation of drought-tolerant crops in semi-desert environments, this law allowed a homesteader to claim larger parcels of land, up to 320 acres, to be planted to non-native grasses or other cattle fodder.[47] Later amendments decreased the residency requirements from five to three years and from the year-round residency to six months per year. Finally, in 1916, Congress enacted the Stockraising Homestead Act in recognition that the land in western states was more suitable for grazing than farming.

The agricultural requirements of the Homestead Act created great hardship for homesteaders when the requirements were incompatible with the more arid conditions of the southwestern deserts. Designed by congressional representatives from the eastern seaboard states, the requirements assumed an abundance of regular rainfall sufficient to support agricultural endeavor without the necessity of irrigation. John Wesley Powell succinctly pointed out the incongruity between the law and western climate and the conse-

[42] Charles Bowden. "The Escalante Era: 1880- 198?" *Tucson Citizen*. January 9, 1982. Arizona Historical Society Newspaper Clippings Collection. Tucson, Arizona.

[43] Kuehlthau, Margaret. "Limekilns in Rincon Area Played Key Role in Growth of Old Pueblo." *Tucson Daily Citizen*, July 24, 1969. Arizona Historical Society Newspaper Clippings Collection. Tucson, Arizona.

[44] *ibid.*

[45] Stein. 1990. Page 6; Wallace Stegner. 1982. *Beyond the 100th Meridian: John Wesley Powell and the Second Opening of the West*. New York: Penguin Books. Pages 221-22; Mary Ellen Lauver. 1938. "A History of the Use and Management of Forested Lands in Arizona, 1862-1936." Masters Thesis, Department of History, University of Arizona, Tucson, Arizona.

[46] Also known as the Dry Farming Homestead Act.

[47] R. W. Clothier. "Dry-Farming in the Arid Southwest." University of Arizona, Agricultural Experiment Station, Bulletin No. 70. Feb. 1, 1913. Tucson: University of Arizona.

quences facing homesteaders. Given that the average rainfall in states west of the 100th meridian was less than 20 inches per year, the land would not support an eastern style of agriculture. Powell accurately predicted that many homestead endeavors would be doomed to failure.[48]

Successful cultivation of crops in the Rincon valley was difficult due to variability in frequency of rainfalls as well as the amount of rainfall. Fields were usually planted in or near the floodplains of Rincon and Tanque Verde creeks and were dependent upon creek flow for irrigation. When rains produced sufficient flows, crops could be plentiful. When rains were insufficient, crops failed; and when rains were excessive, crops were washed away.[49] Information derived from Rincon valley land claim records indicates that as many as one in three years experienced drought conditions resulting in crop failures. For those homesteaders who possessed few reserves or alternate sources of cash, the loss of crops often meant that they were forced to relinquish their homesteads and seek other sources of income.[50]

The agricultural requirement had an additional consequence of artificially limiting homestead settlement to areas with access to surface water flows. Congressional drafters of the Homestead Act had calculated that one family (2 adults with numerous older children) could successfully till and harvest 160 acres of agricultural produce. That calculation assumed that most, if not all, of the claimed land was plowed for production. For the early homesteaders in southeastern Arizona, only those lands in or near floodplains or river bottoms were suitable for farming. Beyond those flood boundaries, poor soil quality and insufficient access to water made any agricultural endeavors problematical. Thus only a limited amount of land on each claim was available for cultivation despite its size. Most early settlers planted fields of only 5-20 acres. These homesteads were closely associated with springs, ephemeral washes, or creek bottoms. Later homesteads developed ditches to bring water to fields at greater distances from those water sources.[51]

In 1916, Congress finally recognized that most land in western states was not suitable for the kind of farming envisioned by Jefferson and the authors of the original Homestead acts. The Stockraising Homestead Act permitted a claimant to file on 640 acres of non-irrigable, non-timbered grasslands for the sole purpose of raising cattle. In order to assure that stockraising activities would not conflict with those of farming, Congress required that the US Geological Survey first identify those lands considered suitable for grazing. Unfortunately World War I delayed the USGS classification efforts and Congress was unwilling to provide sufficient funds. As a result, years passed before the US Geological Survey could complete its assessment of grazing lands. The first claims accepted under the Stockraising Homestead Act for lands in the Rincon valley occurred four years after its enactment.[52] General Land Office land claim records show a rapid expansion of settlement after 1920 away from the water courses as stockraising claims began to take up the

[48] Stegner. 1982. Pages 223-231.

[49] Emilio Carrillo.

[50] Martin. 2004. GLO claim records in BLM offices include numbers, dates, and locations of relinquished claims. Names associated with those failed efforts are available from the National Archives in Riverside, California.

[51] Paz Tellez de Ruiz and Esau Mills; Contzen map, 1900, and Martineau maps, 1895.

[52] Concepción and Nicholas Ruiz.

grasslands.

Even with the approval of grazing as a land-use and the increase in claimable acreage to 640 acres, the Stockraising Homestead Act was still inadequate to assure successful homesteading in the southwest. In 1917 an editorial in American Forests pointed out that this law, like the original Homestead Act, was based upon an environmental fallacy that would have serious consequences for both the western homesteader and the rancher still using the public domain.[53]

> Land of the character contemplated by this bill, will graze only one cow on from 10 to 40 acres, depending on the local conditions. The average capacity is perhaps 20 acres, giving a herd of 32 range cattle as the possibility from which to make a living. ...It is the judgment of stock raisers that fully 100 head of cattle are required to yield a competent living and this requires from four to 10 sections of grazing land. If these facts are true, the stock raising law is based on a fundamental economic error and only about one man in four of those who file on these homesteads and invest their time, health and capital in improvements can hope to win out, and then only by acquiring title to the lands of those who fail. But as these failures may not all prove up before quitting, an extended period of economic disturbance and adjustment will be inevitable, during which the present winter range [the public domain] for stock will be split up, fenced off and made inaccessible, to the destruction of the stock business as now conducted.

In the Rincon and Tanque Verde valleys, stockraising homesteaders had fewer failures than those who had been required to succeed in farming and more of them were able to prove up on their claims. Many, however, sold their lands after gaining title because they were still unable to earn a sufficient living from the sale of their cattle.

Numerous other compliance problems plagued homestead claimants. While these problems confronted both Anglo as well as Mexican Americans alike, the challenges for those who could not speak or read English were more severe. Requirements for completion of claims were often complex. Few settlers understood precisely what was required of them or when specific elements of the process were due without repeated written explanations from the General Land Office. Individual claim records show substantial confusion over payment of filing fees,[54] timing for filing of final proof,[55] and the completion of citizenship papers.[56]

Another requirement that presented real difficulty for many homesteaders was the duration of residency. Residency was originally set at five years and later reduced to three. Nevertheless the length of time required for full-time occupancy was onerous for many families. Homesteads were often far from population centers where most schools and

[53] Anonymous. 1917. "The Public Domain and the Stock-Raising Homestead Law." American Forestry, 23. Page 243.

[54] Antonio Salazar, Fermin Cruz, Francisco Contreras, Angel Colocia, Felipe Aguilar, Nestor Martinez, Santiago Villa.

[55] Paz Tellez de Ruiz, Andrea Maria Salcido, Raphael Carrillo, Antonio Carrillo, Fulgencio Molina.

[56] Santiago Villa.

jobs were located. The residency requirement forced families to split up during part of the year so that children could attend school in town.[57] Often spouses would live apart as one maintained a salaried job in Tucson and the other would stay behind to maintain the homestead.[58] These residency requirements became more flexible in time in order to accommodate more of the social and economic needs of homesteaders.

[57] Eduardo Carrillo.
[58] Miguel and Soledad Escalante.

CHAPTER 3

Federal Land Management

3.1 Early Grazing and the Public Domain

Settlers in the Southwest were dependent upon their livestock for their livelihood. Horses were the primary means of transportation and cattle provided either meat or milk. Prior to the 20th century, few ranchers provided additional feed for livestock; animals simply foraged for themselves on the open range. The grasses of the public domain, while owned by the federal government, were free for the taking for all who could use them.

Even before the area became part of United States, the rangelands of southeastern Arizona were recognized as a significant resource for raising livestock. Travelers, surveyors, and entrepreneurs wrote of those valleys filled with unused grasses "stirrup-high on a horse." These grasslands remained largely untapped due to Apache depredations on both men and their livestock. The reestablishment of Army encampments after the Civil War and the creation of the Chiricahua Indian Reservation in 1872 removed those fetters. Conditions for the exploitation of these grasses now became more favorable. By the early 1880s, the ranges were being rapidly filled by cattle from nearby western states such as Texas and Sonora, Mexico.[1] By the mid-1880s, all water sources and the surrounding ranges in southeastern Arizona had been claimed.[2] Conservative estimates of the number of cattle in Arizona show 30,000 head in 1870 and 507,000 in 1886.[3] Many experienced stockmen and observers expressed the fear that the ranges were dangerously overstocked.[4] A brief but powerful drought killed many cattle in the summer of 1885. The ranges were restocked immediately thereafter. But the drought of 1885 was only a precursor to the longer disaster that followed. During the summer of 1891 and the following years of 1892 and 1893, rains in southeastern Arizona failed. A significant portion of the native grasses died from drought; those that didn't were eaten down to bare dirt. By 1893, between 50 and 75% of the remaining cattle had died.[5]

Much has been written about the destruction of the public range, a classic example

[1] J. J. Wagoner. 1961. "Overstocking of the Ranges in Southern Arizona during the 1870s and 1880s." *Arizoniana*, 2: 23-27.

[2] Bert Haskett. 1935. "Early History of the Cattle Industry in Arizona." *Arizona Historical Review*, 6(4): 3-42; J. J. Wagoner. 1952. "The History of Cattle Industry in Southern Arizona, 1540-1940." University of Arizona Bulletin, Social Science Bulletin No. 20. University of Arizona, Tucson, Arizona. Page 44.

[3] Lauver. 1938. Page 145.

[4] *Southwestern Stockman*, 1885.

[5] Conrad Joseph Bahre and Marlyn L. Shelton. 1996. "Rangeland Destruction: Cattle and Drought in Southeastern Arizona at the Turn of the Century." *Journal of the Southwest*. 38(1): 1-22; Wagoner. 1961.

of the "Tragedy of the Commons" as defined by Garrett Hardin.[6] Since the public range was open to any and all, "ownership" of the land could only be assured by control of the resources. Graziers would file homestead claims on water sources and fill the surrounding public domain with as many cattle as they could afford. Complete control could only be accomplished when the grazier's cattle filled the valley "from mountaintop to mountaintop."[7] Those early stockmen reaped substantial profits as they maximized the number of cattle that consumed those free resources. "Ownership" however could only be maintained by a permanent presence. If a stockman moved his cattle to a different range to allow the grasses to recover, another owner would move in to take his place. Thus the range grasses had no rest period from herbivory; they were cropped before they had an opportunity to reproduce. A few stockmen recognized that the carrying capacity of the grasslands was being exceeded and permanent damage inflicted upon the rangelands. But none knew how to extricate themselves from the trap of "control through presence."[8] The productivity of the ranges decreased dramatically throughout the Southwest. Agricultural scientists in 1901 described entire ranges cropped down to bare dirt.[9]

3.2 First Federal Efforts to Protect Upland Ranges

At the end of the 19th century, there was a growing recognition that the natural resources of the United States were being seriously damaged by unregulated and excessive abuse. Timber in the forests and grasslands on the ranges of the public domain were being rapidly depleted through extensive cutting or by livestock overgrazing. Concern over exhausted timber supplies and destruction of upper elevation watersheds drove the federal government to set aside reservations of forested land and later create an agency to manage and regulate the use of those lands. Congress, in 1891, gave the president the power to identify areas of important natural resources and to create reservations that removed these lands from public access. Later, in 1897, the Forest Management Act created the statutory basis for management of those lands in order to 1) "preserve and protect the forest within the Reservation," 2) secure "favorable conditions of water flows," and 3) "furnish a continu-

[6] Garrett Hardin. 1968. *Science* 162: 1243-1248; see Conrad Joseph Bahre. 1991. *A Legacy of Change: Historic Human Impact on Vegetation in the Arizona Borderlands*. Tucson, Arizona: University of Arizona Press; Bahre and Shelton. 1996; Barnes, Will C. 1913. *Western Grazing Grounds and Forest Ranges; a History of the Live-stock Industry as Conducted on the Open Ranges of the Arid West* Chicago, Illinois: The Breeder's Gazette; Samuel T. Dana and Sally K. Fairfax. 1980. *Forest and Range Policy: its Development in United States*. New York: McGraw-Hill Book Company; Lauver. 1938; Roberts. 1963; Paul H. Roberts. 1965. *Them Were the Days*. San Antonio: Naylor; J. J. Thornber. 1910. "The Grazing Ranges of Arizona." *University of Arizona, Agricultural Experiment Station*, Bulletin No. 65. University of Arizona, Tucson, Arizona; Wagoner. 1952; Wagoner. 1961; John Wilson. 1995. *Islands in the Desert: A History of the Uplands of Southeastern Arizona*. Albuquerque: University of New Mexico Press; E. O. Wooten. 1922. "The Relation of Land Tenure to the Use of Arid Grazing Lands of the Southwestern United States." USDA Bulletin No. 1001, Washington, DC.

[7] Wooten. 1922; Harry. Heffner. 1960. "Reminiscences about Empire Ranch." Typed manuscript of Interview. #AZ021. Arizona Special Collections, University of Arizona. Tucson, Arizona.

[8] David Griffiths. 1904. "Range Investigations in Arizona." US Department of Agriculture, Bureau of Plant Industry, Bulletin No. 67. Washington DC: Government Printing Office.

[9] David Griffiths. 1901. "Range Improvements in Arizona." USDA Bureau of Plant Industry, Bulletin No. 4. Washington DC: General Printing Office.

ous supply of timber for the use and necessities of the people of United States."[10] The US Forest Service, was established in 1905 to manage those resources and regulate all uses on forest reservations. Abuse of the grasslands on the remaining public domain, however, continued unabated. No protection was afforded the remaining western grazing lands until Congress enacted the Taylor Grazing Act in 1934.

In southeastern Arizona, eleven national reserves were established between 1900 and 1907: the Santa Rita, Santa Catalina, Rincon, Whetstones, Huachuca, Tumacacori, Chiricahua, Mount Graham, Santa Theresa, Galiuro, and Peloncillo forests.[11] Due to the lack of accessible roads, timber resources in these reserves had seen little cutting.[12] Instead, grazing had always been the most important economic activity on these lands.[13] As in other western states, sheep, cattle and horses grazed over significant portions of these forest reserves.[14]

The Forest Service also recognized grazing, when carefully managed, could be compatible with its charge of protecting timber and water supplies. Albert Potter, the first Grazing Expert hired by the Forest Service, was sent to tour the forest resources in southeastern Arizona during the winter of 1901.[15] Potter assessed the conditions of the grazing resources in the forests and noted the history of damage that they had sustained over the past 30 years. He concluded that cattle need not be excluded from the grasslands in order for regeneration to occur. However he strongly recommended that their numbers not be increased and that access to the range should be controlled.[16]

In 1905 the Forest Service instituted a program of the range management to reduce the extent of overgrazing and regulate who had access to the National Forest grasslands. Forests were divided to range allotments. Graziers were allowed to apply for a permit to graze a specific number of cattle in a specified location. Since many of the forest ranges were overstocked, a preference system was established to determine who would receive a permit. Preference would be given first to stockmen who already used the range and who owned land adjacent to the forest; those graziers at a distance had a lesser priority. Preference would also be given to the small operator over the larger business. When reductions in the numbers of livestock were necessary to protect the health of the range, those reductions would be imposed on larger cattle operations and not the small owner. A fee was charge for each permit on a per-head basis to pay for the administration and management of the range program. Initially the homesteader was given free grazing for up

[10] Dana and Fairfax. 1980. Page 62.

[11] Ames. 1967; Harrison. 1972. Page 11.

[12] Lauver. 1938. Pages 52, 97. The only exception to this statement was the Chiricahua National Forest. Because of its proximity to the mining towns of Bisbee and Tombstone, a large percentage of the timber (30%) had already been cut over for fuel wood and logging. See Conrad Joseph Bahre. 1995. "Human Disturbance and Vegetation in Arizona's Chiricahua Mountains in 1902." *Desert Plants*. 11(4): 41-45; Conrad Joseph Bahre. 1998. "Late 19th Century Human Impact on the Wood Lands and Forests of Southeastern Arizona's Sky Islands." *Desert Plants*. 14(1): 8-21.

[13] Ames. 1967.

[14] James A. Young. 2000. "Range Research in the Far Western United States: the First Generation." *Journal of Range Management*. 53: 2-11.

[15] Roberts. 1963. Page 41.

[16] Albert F. Potter. 1902. "Report of the Examination of the Proposed Santa Rita Forest Reserve." Range Conditions in Arizona, 1900-1909, as Recorded by Various Observers in a Series of Miscellaneous Papers. Manuscript on file at Arizona Special Collections Library, University of Arizona. Tucson, Arizona.

to 10 animals without charge. Prior to the 1920s, the Forest Service managed the range as community allotments. These allotments were designed to operate like the Spanish ejido system where numerous owners would share the same resource and responsibilities.[17]

3.3 Forest Boundary Conflicts

Forest boundaries were usually made with careful deliberation. Forest surveyors tried to avoid including private lands within those boundaries. Elimination of private inholdings reduced ownership conflicts and issues of trespass. When the Santa Catalina and Rincon Forests were proclaimed in 1902 and 1907, respectively, the boundaries were chosen to exclude farming areas; national forest lands mostly covered areas that were steep, rocky, and had relatively poor soil quality.[18]

One homestead in the Rincon valley fell within the boundaries of the Rincon forest – that belonging to Jesus Maria Martinez. In such situations, the Forest Service would offer the homesteader either a nearby piece of property in exchange or cash for the value of the property as determined by its improvements. Martinez' homestead was located in the upper Rincon watershed and encompassed the confluence of the Madrona and Chiminea creeks. Although he had lived on the land for probably more than 30 years, he had only filed his claim in 1899. Martinez had built the house and corrals but he made no effort to prove up within the requisite time period (1904-1905).[19] According to Forest Service records, Martinez had left the property and had been living in Tucson. In 1907, Supervisor R. J. Selkirk chose the Martinez homestead as the site for the new Rincon Forest ranger station.[20] Selkirk's choice of location probably reflected the need for a reliable source of water. Martinez relinquished his claim in 1908. According to his son, Leonardo, Martinez refused to take anything from the Forest Service in exchange for his land.

> My father and mother lived at the ranch for many years. They had to leave the ranch because it was made part of Coronado National Forest. When they surveyed and made the boundary the majority of what he possessed – his homestead – fell into the national forest. You see, he was a Martinez. He had a Spanish name. Next to him were the Mills and below were others. But they had Anglo names and they didn't take the land away from them. When this happened my father said, "No! This is happening again. The same thing that happened to my grandparents and parents in California. Here we go again." So he resisted. My sister had the paper and they wanted him to fight, my father left the ranch. When the government took the ranch, they offered him money or another place, but he didn't want to have anything to do with it. They gave him, I think, $2000 for damages. He told him that they could keep it. He tore

[17] Larry S. Allen. 1989. "Livestock and the Coronado National Forest." *Rangelands*. 11(1): 14-20.

[18] In the early years of the forests these boundaries were reworked numerous times.

[19] Leon interviews 2000. The site fell within the National Forest boundary, recording and management of this homestead claim became the responsibility of the Forest Service. Thus there would be no GLO documentation for Martinez. The only available documentation resides in Coronado National Forest Service Homestead Archives.

[20] Coronado National Forest Homestead Records.

up the papers and he burned all the evidence because they had done the same thing to his parents in California, and it was a repetition.[21]

[21] Martin, Patricia Preciado. 1996. "The Rincons and Barrio Anita. Interview with Leonardo Martinez." In: *Images and Conversations: Mexican Americans Recall a Southwestern Past*. Tucson: University of Arizona Press. Page 31.

4.1 Grazing Management on National Forest Range

The Santa Catalina Forest Reserve was proclaimed in 1902. The Rincon Forest Reserve was proposed as an addition to the Santa Catalina in 1905 and approved in 1907 (Figure 4.1). Information regarding initial range conditions in the Rincon Forest Reserve has been difficult to obtain but Larry Allen, a grazing expert at Coronado National Forest, has written that "virtually every range on the Coronado was overstocked in 1908."[1] The Forest Service knew that the number of livestock on the Rincons exceeded the carrying capacity of those range resources; the number of livestock had to be reduced. Yet that reduction did not happen.[2] Cattle numbers actually increased – dramatically. It may be the Forest Service became better over time at counting the number of cattle present on the range; perhaps they simply allowed stockmen to carry more animals on ever-decreasing acreages. Like the damage wrought during the previous century, overstocking and overgrazing continued on the national forests despite the range regulations and management efforts by the federal agency.[3]

Historian Berle Clemensen estimated that 1200 head of cattle from the Tanque Verde ranches of Emilio Carrillo, William Oury, and Manuel Martinez foraged in the Rincon mountains before 1900.[4] In the Rincon valley, four large ranches including the Tellez families, Librada Leon, the Mills brothers, and José Maria Mariscal and Felix Wenceslao were running cattle in the mountain ranges.[5] It is likely that each ran a minimum of 100-200 head. At least 26 other homesteading or squatting families resided in both valleys at that time. Land claim records suggest that each family owned between 10-20 livestock. A con-

[1] Lauver 1938. Page 164. The Santa Catalina, Rincon, Santa Rita, and Whetstone forests in 1908 were assembled under the Coronado National Forest. Other sky island forests in Southeast Arizona were added later.

[2] Ames 1967.

[3] Determining the stocking levels on grazing allotments at any point in time is always challenging. Many early Forest Service records have been outsourced to distant archives, disposed of for lack of space, or consigned to inaccessible repositories. As a rule, ranchers never revealed accurate numbers of livestock in order to avoid paying taxes. In reality, they, too, could only generate best guesses on the number of branded animals in their possession. Like the rancher counts, the following numbers represent educated guesses derived from a variety of sources.

[4] Clemensen 1987. Page 67.

[5] Mariscal and Wenceslao were wealthy Tucson businessmen who maintained a large cattle ranch in the eastern half of the Rincon valley and employed many vaqueros to manage the cattle (Miguel Escalante; see also Roskruge map 1893). They apparently never filed homestead papers and the land was later claimed by others.

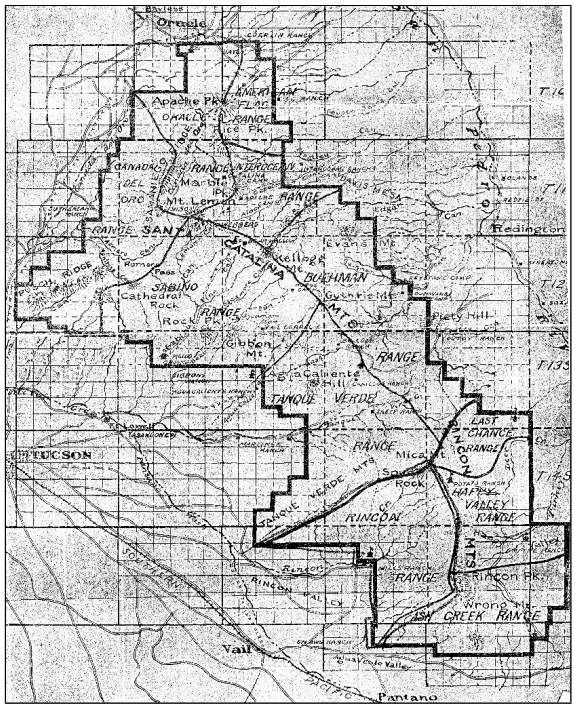

Figure 4.1: Coronado National Forest early grazing allotment map shows original Rincon district grazing allotments at southern end of the National Forest. 1916. Coronado National Forest Grazing Archives.

servative estimate suggests a total of 2500 local cattle were grazing on the western portion of the Rincon range at the time of national forest establishment in 1907.[6] Other Coronado Forest records corroborate these estimates.[7]

Grazing management information for the early years of the Coronado National Forest is not complete. Tomas Mills, the Tellez brothers, Eduardo Carrillo and Emilio Carrillo all had grazing permits at this time.[8] Their new USFS permits were for relatively small number of animals: Mills and Eduardo Carrillo were granted permits for 100; Emilio Carrillo was allowed 60.[9] Both Mills and Eduardo Carrillo pressed the agency to increase their permit limits suggesting that both knew they were running more cattle than the approved number.[10] Like the private lands in the valleys, there were still no fences separating allotments and cattle; livestock followed the available forage and water.

[6] An unknown number of cattle from southern ranches, such as the Empire, were also using the Rincon mountains for range. See Heffner 1960.

[7] See Chapter 2. "Issues and Events Affecting Range Management at Coronado National Forest and the Southwest Region."

[8] Clemensen 1987. Page 68. Saguaro National Park Grazing Archives, Western Archeological and Conservation Center, Coronado National Forest Grazing Archives, and Coronado National Forest Grazing Records at Riverside CA National Archives (hereafter Collected SNP Grazing Records). Eduardo Carrillo purchased Manuel Martinez' ranch in 1904. While Eduardo and Emilio Carrillo had the same last name, they were not related. Nonetheless, records often refer to them as brothers.

[9] Collected SNP Grazing Records. No information on the Tellez permits has been located.

[10] Apparently this was a frequent pattern of interaction between rancher and forest ranger. The rancher

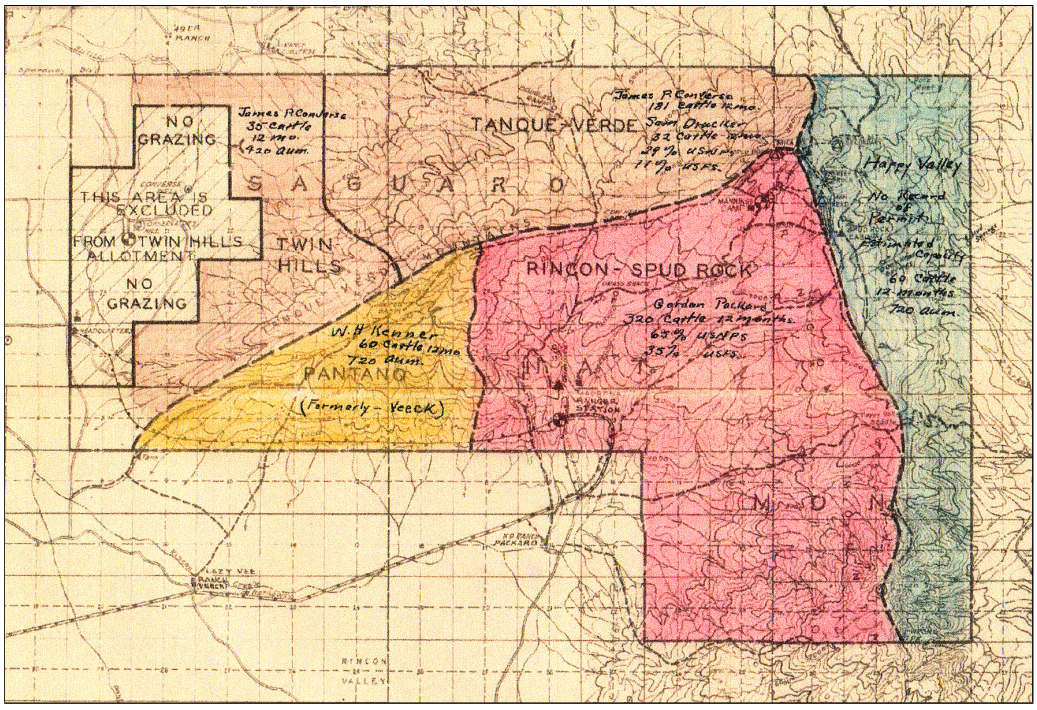

Figure 4.2: Saguaro National Monument grazing allotment map. 1957. Saguaro National Monument lands overlap five separate grazing allotments: Twin Hills and Pantano at the western end, Happy Valley to the East, and the Rincon and Tanque Verde allotments in the center. The lower foothills area known as the Cactus Forest is in the process of removal from the Twin Hills allotment. Final exclusion of cattle from prime saguaro area occurred in 1958. Saguaro National Park Grazing Archives.

With the US's entry into World War I, the Forest Service opened its ranges to supply more meat and wool for troops overseas and war-torn countries in Europe.[11] Mills expanded his herd to 580, Eduardo Carrillo to over 500, and Raphael Carrillo to 269. By the end of the war, the western Rincon ranges were in terrible condition, unable to support that number of animals. The animals too were in poor condition.[12] Drought and collapsed meat markets meant that animals could not be sold and were held over on forest ranges further denuding lands of vegetation.[13]

In 1920, Coronado National Forest reorganized its grazing allotments including the Rincon and Tanque Verde allotments. Out of the two large allotments on which many ranchers ran their cattle, the Forest Service carved smaller allotments that would now be limited to cattle belonging to one or two owners. The Twin Hills allotment was excised from the Tanque Verde and the Pantano and Spud Rock allotments from the Rincon. Frederick and Dorothy Knipe had purchased lands in both the west and east ends of the Rin-

would show that his allotment was actually carrying more animals and the forest ranger would increase his permit to that stocking level.

[11]Roberts. 1963. Page 119.

[12]Collected SNP Grazing Records.

[13]Roberts. 1963. Page 119.

con valley and were permitted for 188 head of cattle on what was then known as the Spud Rock grazing allotment. Later that year, the Knipes purchased Tomas Mills' ranch and recombined the Spud Rock and Rincon allotments. Jim McDonald had acquired the Tellez ranches in the Rincon valley and now ran 100 head of cattle on the Pantano allotment. On the shared Tanque Verde allotment, Eduardo and Raphael Carrillo were permitted for 169 and 269 head. H David Evans had 50 head on the Twin Hills allotment (Figure 4.2).[14] It was at this time that all other small ranchers and homesteaders, many of whom were Mexican-American, were formally excluded from forest range access. The community allotments were being phased out in favor of more "efficient management" of allotments by better organized, better financed stockmen.[15]

All of the permittees' ranches were situated adjacent to their forest allotments. This juxtaposition made cattle management more difficult for the agency. Since the southern Arizona forests were open year-round for grazing, cattle could move freely between private ranch and national forest lands, often remaining in the lowlands in the summers where water was more available and moving up into higher elevations in the winter. Rather than create a specific season when allotments were opened to livestock, the Forest Service defined this arrangement as "on-off" allotments. Based on the available forage on both private and allotment lands, the agency calculated the carrying capacity – the number of cows allowed to graze per year – for the entire area. Thus ranchers were allowed to run more cattle than their "permitted number" since during some portion of the year those cattle should be grazing on private lands. The percent of the theoretical "off" time was dependent on the amount of acreage under private ownership. In reality cattle never grazed the ranges evenly. Unregulated cattle movement created forage areas of greater and lesser utilization. Those areas with more assured water were more heavily grazed; whereas areas at a distance from water saw less utilization.[16]

Coronado Forest range reports contained frequent complaints of overuse in the lower foothills areas. In exchange for exclusive use of their "own" allotments, the Forest Service now demanded that these favored permittees invest in facilities to manage cattle distribution better and effect more even utilization of forage. Investments included salting at greater distances, constructing drift fences to separate allotments, building corrals and holding pens, and developing new stock watering tanks.[17]

The poor livestock markets during the 1920s in combination with the pressure to invest in their allotments may have been financially too challenging, even for these ranchers. With the exception of Eduardo Carrillo's Cebadilla ranch, all the Tanque Verde and Rincon ranches changed ownership during the 1920s. Tomas Mills sold the X9 to the Knipes who shortly thereafter sold both ranches to Melville Haskell and J Rukin Jelks. James Converse purchased Raphael Carrillo's ranch and allotment share as well as the Twin Hills allotment. It appears that despite lax management by forest rangers, Rincon and Tanque Verde

[14] Collected SNP Grazing Records; Cooperrider, C. K., and R. W. Hussey. 1924. "Range Appraisal Report for the Coronado National Forest." Coronado National Forest Archives. Tucson, Arizona.

[15] Allen. 1989.

[16] This utilization challenge remained unresolved until the 1950s when the Forest Service developed individual pastures through additional fencing and instituted management plans directing frequent cattle rotations among the different pastures.

[17] Collected SNP Grazing Records.

ranchers could not run enough cattle to make their livestock businesses economically sustainable.

4.2 "Del Rancho al Barrio:" The End of the Mexican-American Era[18]

Ethnic and economic changes were occurring with greater frequency during the 1910s and 1920s. Between 1916 and 1921 only one year was not a drought; 1920 and 1921 were very dry; many small ranchers did not produce sufficient calf crops to stay in business.[19] Numerous properties were changing hands. Small-scale homesteads and ranches that had been part of the Hispanic community for three generations were being sold to Anglo-Americans and consolidated into larger land holdings.[20]

The Stockraising Homestead Act of 1916 allowed cattle owners to claim 640 acres for the sole agricultural purpose of grazing. Land records in both the Tanque Verde and Rincon valleys show that the majority of claims filed under the Stockraising Homestead Act were entered by Anglo-Americans. The ethnic balance within both communities was beginning to shift away from its historic Mexican-American origins.

In the Rincon valley, Dorothy and Frederick Knipe had purchased the homestead of Juan José Saenz in 1911. They were the first non-Hispanic, non-homesteading family to move into the valley.[21] They later purchased three additional pieces of property: the Librada Leon ranch in 1917, the Tomas and Francesca Carrillo Mills ranch in 1924, and the homestead of one of the Escalantes sometime before 1929. The Knipes were responsible for assembling the ranch lands that later became the Rocking K in the western half of the Rincon valley and likewise expanding Mills' X9 ranchlands at the eastern end. The Knipes sold the first ranch to Melville Haskell in 1926 and the second to Rukin Jelks in 1929. Both Haskell and Jelks continued to augment their private ranchlands by purchasing additional surrounding properties.[22]

Silveria M. de Tellez had settled with her family in the Rincon valley in the early 1870s. Her husband died in 1890 but Silveria still managed the ranch by herself until she was 67 when she finally decided to put her homestead up for sale.[23] The rest of the Tellez family homesteads were purchased by Jim McDonald during the early 1920s.

Rafael Carrillo sold the Tanque Verde ranch to James Converse in 1928. Carrillo left ranching entirely and retired to Tucson.[24] He died four years later in 1932 at the age of 50.

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[18]The title comes from a history by Thomas Sheridan.1983. "Del Rancho al Barrio: the Mexican Legacy of Tucson." Tucson: Mexican Heritage Project, Arizona Historical Society. See also a later version in Sheridan. 1986. *Los Tucsonenses*. Tucson: University of Arizona Press.

[19]Wagoner. 1952. Page 57.

[20]The following documents are useful in understanding these transformations: Tucson Citizen, April 22, 1972 and January 4, 1979; *Arizona Daily Star*, November 2, 1997; Martin 1996; Riggenbach 1997.

[21]Bonnie Henry. "When Peace, Quiet and Western Neighborliness Ruled Rocking K." *Arizona Daily Star*, April 21, 1991. Arizona Historical Society Newspaper Clippings Collection. Tucson, Arizona; Anne J. Miller. 1993. "A Brief History of the X9 Ranch." Unpublished manuscript in author's possession.

[22]Miller. 1993.

[23]*Tucson Daily Citizen*, January 6, 1930. Arizona Historical Society Newspaper Clippings.

[24]Cornelius C. Smith, No date. "The Hunter." In: *Tanque Verde: the Story of a Frontier Ranch*, Tucson, Arizona. Privately published by author. Pages 102-116; George Mercedes. "Family Rounds up for Reunion." *Tucson Citizen*, November 16, 1987.

It is unclear why Carrillo left the ranching industry but reoccurring drought and declining cattle prices may have been causative factors.

Eduardo and Dolores Carrillo were the last Mexican-American ranchers to have access to a grazing permit in the Rincon mountains. When Eduardo Carrillo died in 1938, his widow, Maria Dolores Carrillo, continued to live on the ranch in the Tanque Verde valley and maintain their cattle business.[25] Within a few years, Dolores Carrillo sold the ranch. Armando Carrillo, grandson of Eduardo and Dolores, describes its transfer into Anglo-American hands.

> The area now called La Cebadilla Estates was purchased by Raymond Bidegan from Augustus Kiefer Mayer who bought it from Joe Hartsell. Hartsell purchased it from my grandmother in about 1945. The ranch went the way of other large land holdings in the Tucson Basin.[26]

Interviews with Mexican-Americans and their descendants who lived in the Tanque Verde and Rincon valley area illuminate those past lives, homes, and communities. Recorded voices describe the history of division between the more recently arrived Anglo-Americans and Spanish-speaking community.[27] There is a frequent refrain of resentment from the Mexican-American community against those newcomers who purchased lands rather than homesteading their own. This resentment appears to arise from two sources: first, from frequent examples of discrimination against Mexican-Americans and occasional criminal acts against individuals who often felt that they had little recourse to or protection from the law.[28] Older residents related how poorer homesteaders were cheated or duped out of their land by Anglo-Americans.

> It's happened before. You know out here from this mountain to that mountain, from the Rincons to the Catalinas used to be owned by Mexicans and what happened to all of them. I can name you names – the Estradas, the Andrades, the Vindiolas, the Lopez. I have a book that I can show you. It has the names of the old Mexican ranchers in this area and their brands. The Riesgos, the Benitez, the Telles, the Martinez, the Gallegos. The list goes on and on.
>
> And I can tell you what happened. I don't want to think that I'm prejudiced, but the facts are the facts. The rich have always stomped on the poor. I know some people who had more than 300 acres of land this side of the mountain. They worked for a rancher who told them that because they worked for him, he would pay the taxes on their land. And when he paid their taxes, he told them to get off the land. Just like that.
>
> My dad used to tell me some stories about how some of the people were said to have lost their land. For instance, the Arizona Rangers. You remember

[25] Jorga Riggenbach. 1997. "Armando Carrillo: La Cebadilla." In: *Agua Caliente Chronicles*. Tucson, Arizona: Raging Brook Press. Pages 55-61.

[26] *ibid.* Page 58.

[27] *ibid.*; Martin. 1996. "The Rincons and Barrio Anita. Interview with Leonardo Martinez.;" *Arizona Daily Star*. "Longtime Residents Still Love Tanque Verde." November 2, 1997.

[28] See Sheridan. 1986. Pages 71-74, 89-92.

> how famous they used to be? Well, it's said they had a little trick. Say first someone wanted a little ranch. He'd go up to the ranch and put hides in the corral and then accuse the man of rustling. My mom's dad used to live on the Leon's Ranch above Loma Alta where it happened. He knew a man it happened to. But the man was wise to what the Rangers were up to, and when he found he was surrounded he crawled away from the ranch. He went to my grandfather's to borrow a horse. He had to forfeit his land, but if he had stayed he would have been hanged.[29]

The second source of resentment grew from the pain of loss: loss of their home and livelihood, loss of their community and loss of their identity.

> I can't make it ranching. My dad, though, had this life until he died. He had cattle until the day he died. In fact, he was feeding them when he died. He died in 1967. He lived to be eighty-four years old. ... As I told you I stay here on the old place just because I'm sentimental. It's in my blood, I guess. I can't get used to the city life. I've had to sell some of my land to pay for hospital expenses. I've only got five acres left and I've only got 104 acres left of the land I've leased from the state. The government took 40 acres of my leased land for a dump. And now they've raised their fees on me. ... They've changed the leased land from grazing to commercial. I can't even graze the few cattle I have any more. .... I know they just want me out of here – they're trying to force me off. Look at all those houses out there. The developers want me out so they can have my land. ... All that land east of Kolb Road and south of Stella used to belong to the state. Look who's got it now. Developers. Look at that mess – all those houses across the wash. I'm surrounded now.[30]

Many Mexican-Americans lost their land through poverty or ill health.[31] Once gone, they realized that the real value of the land was not just physical but economic, social, and emotional. Without their land, they were no longer self-sufficient. They could no longer find comfort and sustenance in drawing water from their own well, find security in their own hand-built adobe home, or find peace in the shade of the enormous mesquites that lined the Tanque Verde and Rincon creeks.

> We sold the ranch in 1927 for $3,000. Can you imagine! All that land, the house, the well and the equipment, for $3,000! A lot of people sold their ranches that way. We were very poor in money, but rich in so many other ways. But we didn't know any better. The Americans would come and offer us what seemed like a lot of money and we would take it. Then we would end up with nothing – no land, no cattle, no money. We were already rich, but we didn't know it.

[29] Martin 1996 "The Far East Side and the Rincons. Interview with Frank Escalante." Pages 93, 95.
[30] *ibid.* Pages 91-93.
[31] Martin. 2004.

> Sometimes, when I'm feeling sentimental, I drive out on the Tanque Verde Loop Road and drive past the old ranch house that my father and I built. It is still standing. Part of the old fence that my mother and I put up is still standing also – you can still see some of the old posts. The old adobe house has been renovated. There is a gate there now. It is called the "Linda V." A family by the name of Johnson lives there now.[32]

Descendents from the original families still inhabit the Tanque Verde and Rincon valley areas but their numbers are gradually declining with the decades.[33] Evidence of their historic presence and influence is still found in small landscapes and places. Adobe ruins and private cemeteries are the most tangible remnants of that cultural and homesteading past (Figures 4.3, 4.4).

4.3 Arrival of Anglo-Americans

Frederick O. Knipe arrived at the Southern Pacific depot in Tucson on October 6, 1911. An established architect in the Midwest, he wanted to try his hand at ranching and escape Chicago's winters (Figure 4.5). Four days later, he had purchased Juan José Saenz' 80-acre homestead in the Rincon valley with its orchard and two-room adobe house for $800. Saenz' home sat on a rise overlooking the valley and the creek; Fred immediately fell in love with the area (Figures 4.6, 4.7).[34]

Saenz' home had been originally constructed in 1882, just two years after the arrival of the Southern Pacific railroad in Tucson. The railroad's arrival in Tucson had for the first time brought a wide array of previously unavailable building materials: brick, tin roof sheeting, and dimensioned lumber. Many of those materials were still out of the price range of most of the Mexican immigrants and homesteaders. The Saenz family made their own adobe blocks. Their structured had been limited in size by the span of the mesquite vigas that Saenz retrieved from the local environment. Neither could he afford exogenous roofing materials. His flat roof was covered with saguaro ribs or ocotillo branches and topped with mud.

Saenz' adobe structure was uninhabitable at the time of the Knipes' purchase, so Fred, his wife Dorothy, and their four children lived in a tent beneath an enormous hackberry tree near Rincon creek. During the following winter and spring, Fred rebuilt the adobe into a larger ranch house. The original adobe walls were unstable; during reconstruction, a portion of the house collapsed and required significant recementing of the blocks. Knipe expanded the house with a gabled tin roof, two bedrooms, a living room and a screened porch. It was the first home in the valley with a fire place and a poured concrete, instead of dirt, floor (Figure 4.8).[35]

[32] Patricia Preciado Martin. 1996. "The Tanque Verde and Sabino Canyon. Interview with Antonio Cordova." In: *Images and Conversations: Mexican Americans Recall a Southwestern Past*. Tucson: University of Arizona Press. Page 21.

[33] *Arizona Daily Star*. "Life in Chile Flats Just One Long Hunt for Water." December 27, 1969; *Tucson Citizen*. "Poverty Lives amid the Plenty." April 22, 1972; *Arizona Daily Star*. "Longtime Residents Still Love Tanque Verde." November 2, 1997.

[34] Henry. 1991.

[35] Henry. 1991; Knipe. 1998.

Figure 4.3: Private Hispanic cemeteries mark the locations of early communities in the Rincon and Tanque Verde valleys. Photograph by author, 2012.

Figure 4.4: Remains of adobe buildings and structures still stand as testament to the existence of historic Mexican American communities. Photograph by author, 2012.

Figure 4.5: Portrait of Frederick Knipe and family, 1915. Left to right are Dorothy Stoddard, Betty, Fred Jr., Fred Sr., Louise, and Ted. Youngest daughter, Paula, not yet born. Courtesy of Henrietta Barassi.

Saenz' orchard and agricultural field sat below the ranch house in the floodplain of the Rincon creek (Figure 2.5). The Saenz family had planted a large orchard of peach and apricot trees. The Knipes continued to care for the orchard and harvested fruit for many years (Figure 4.9). Fred also planted four to five acres of barley, beans, squash and corn. The family maintained milk cows and chickens and ran Mexican longhorn cattle on the open range and in the Rincon mountains.[36]

Knipe rebuilt and deepened Saenz' original well to 40 feet. He added a water storage tank and developed a burro-driven pumping system. He built a corral following the typical Mexican *retaque* construction: closely set, pairs of vertical mesquite posts that were filled with mesquite and juniper branches (Figure 4.10). Heating and cooking fuel came from the mesquite bosque in the Rincon floodplain.[37]

Like all of the Rincon valley inhabitants, Knipe had to be a jack-of-all-trades to survive in his ranching business. Unlike many of the later eastern businessmen-turned-ranchers, Knipe came with no outside financial backing beyond what he earned from the land. In order to make ends meet, Knipe hired on as a seasonal ranger at the Coronado National Forest. He served as a fire lookout and built the Grass Shack as a line camp in the Rincon mountains.[38] In 1916, he was sent to the Coconino NF before returning to work at the

[36] Henry. 1991.
[37] *ibid.*
[38] *ibid.*; George Wilson. 1957. "Fish, Game Surveyor Tells of Lure of Nature." No date, no source. Arizona

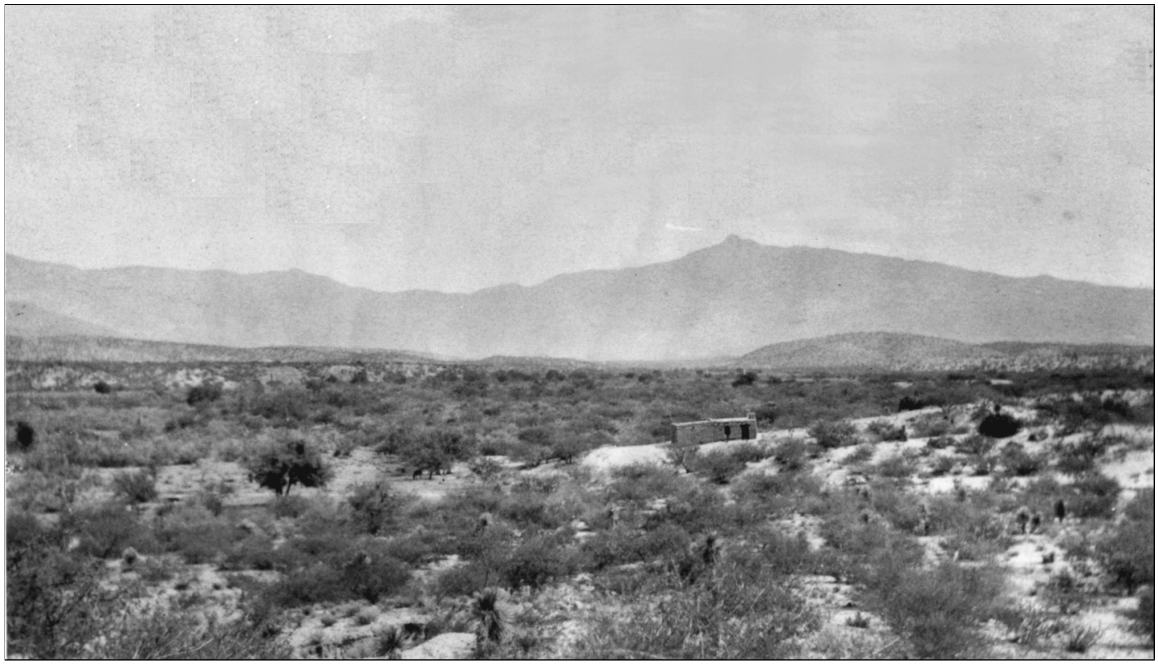

Figure 4.6: View of Saenz Homestead in Rincon Valley looking East from Rocking K Ranch. Rincon peak in the background. 1911. Photograph by Frederick Knipe. Courtesy of Henrietta Barassi.

Figure 4.7: View of Rincon Creek and Tanque Verde Ridge looking North from Rocking K Ranch. Photograph by Frederick Knipe. Courtesy of Henrietta Barassi.

Figure 4.8: Rincon Valley community gathers for Fourth of July celebration standing before Knipe rebuilt adobe home. 1915. Photograph by Frederick Knipe. Courtesy of Henrietta Barassi.

Figure 4.9: Dorothy Knipe in peach orchard below ranch house, c. 1912. Photograph by Frederick Knipe. Courtesy of Henrietta Barassi.

Chiricahua, Santa Rita and Tumacacori Forests.[39] Fred also continued working part-time as architect. Knipe reinvested the family earnings in additional parcels of ranchland in the Rincon valley. He purchased two neighboring properties and renamed his ranch the Bar FK. In 1917, he began to purchase homestead properties in eastern end of the valley where water sources were more predictable.[40]

When the Knipes moved to the Rincon area, both valleys contained a close-knit group of families; most had intermarried many times over.[41] At a distance of over 25 miles from the metropolis of Tucson, living in both valleys required both a strong sense of independence in its inhabitants as well as interdependence among its members. The Knipes were the only Anglo American family in the valley, yet they were accepted with open arms. Following the birth of the Knipe's fourth child, Fred Jr., in 1914, both Dorothy and baby were seriously ill for many months. The elder Benitez girls stayed with the family and cared for them during their recovery.[42] The Knipes, in turn, helped many of their neighbors and initiated many improvements for the community.

School was an important part of the community. The first school had been constructed in the Rincon valley in 1893. After the turn of the century, however, a new school was deemed necessary for the growing school-age population. In 1913, Fred and Dorothy Knipe purchased the adjacent Estevan Mendez homestead. Together Fred and other inhabitants rebuilt the one-room adobe structure into the new elementary school (Figure 4.11). The building included four windows on the north side to provide good lighting, a gabled tin roof, and wide pine boards to cover the dirt floor. The flagpole and the outhouse were included in the new additions.

> The recess chatter was bilingual, and never was heard a discouraging word. A full complement of the eight elementary grades was rare; the daily attendance was erratic and never exceeded thirty-four.[43]

Ramona Benitez Franco who was a few years older than Ted Knipe describes her impressions of that community school.

> For a time when I was growing up, Señorita Carmen Tellez was the teacher; she taught in her home on her parents' ranch. I think she must have gone to school in Tucson because she knew English. No one wanted to go out there to teach because it was so far from town. Then my father began to insist that there be a school out in the Rincon Valley, and he went around collecting signatures, and finally a school was built. It was about one mile from our house, and we would go to school in a horse-drawn buggy. One of the teachers that I had was

Historical Society Newspaper Clippings Collection. Tucson, Arizona.

[39] Ames. 1967.

[40] Diana Hadley. No Date. "National Register Nomination for the X9 Ranch." Unpublished manuscript in author's possession; Miller. 1993.

[41] Van Alstine and Campas; Tellez and Ruiz; Tellez and Rusk; Tellez and Saenz; Franco and Benitez; Barcelo and Rusk; Barcelo and Hughes; Lopez and Hughes; Mills and Carrillo; Moreno and Escalante; Haskell and Jelks.

[42] *ibid.*

[43] Knipe. 1998.

Figure 4.10: Cattle and cowboys in *retaque* corral below the Knipe ranch house at Bar FK ranch. 1914. Photograph by Frederick Knipe. Courtesy of Henrietta Barassi.

Figure 4.11: Rincon Valley school house recently constructed by Frederick Knipe and Rincon Valley community, c. 1916. Photograph by Frederick Knipe. Courtesy of Henrietta Barassi.

> named Ora McCannus. She and her mother lived for a time with us in a room on our ranch. They were so good – they were like family. Another teacher that I remember was named Mr. Phillips; he was very good also.[44]

The community later built an additional adobe structure to house any teacher who was willing to take the job. Like most teachers in rural environments, the Rincon schoolteachers rarely stayed for long – the living conditions were too primitive. According to Ted Knipe, the Rincon valley school building that he grew up in no longer exists.[45] A replacement school building was constructed on the north side of Rincon creek in 1935.[46] During the 1930s, Naomi Hathaway, wife of Charles Howard Hathaway, also taught at the second Rincon school.[47] The ruins of the third Rincon school still stand on the Rocking K ranch properties.

Community celebrations were frequently held at the Knipe family home. Fourth of July and New Year's holidays were always causes for a community-wide dance or baile. The concrete floor and Dorothy's piano were the primary draws. Other musicians came to fill out the accompaniment with guitar, violin and accordion. All the participants would wear their Sunday-best clothing and bring their tastiest potluck dish to share. The dancing would last from dusk until dawn (see Figure 15). On other holidays like Dia de San Juan, the celebrations were outdoors with the traditional horseracing in an unplowed field or on a straight stretch of road.[48]

[44] Martin. 2004. Pages 33-34.

[45] Knipe. 1998.

[46] Rubin Moreno. Interview with author. January 19, 2004. Tucson, Arizona.

[47] *Arizona Daily Star*. "Death Notice for Naomi Hathaway." February 16, 1996. Arizona Historical Society Newspaper Clippings Collection. Tucson, Arizona.

[48] Henry. 1991; Knipe. 1998.

CHAPTER 5

Ranching Near Federal Lands

5.1 Social, Cultural, and Environmental Changes: the Shift from Homesteads to Cattle Ranches

By the mid-1910s, most of the land adjoining the Rincon creek and the major arroyos within the valley had been claimed. In 1915 and 1916 the Hackett family, father John and son William, filed forest homestead claims on lands above the USFS Rincon Station.[1] Manuel Escalante filed the last claim on Rincon creek in 1916. With the outbreak of World War I and the subsequent involvement of United States in 1917 in the European theater, the value of beef rose dramatically throughout the Southwest because of the need to feed troops overseas.[2] Widespread interest in development of the cattle ranching industry grew as beef prices rose. Yet as long as Congress was still unwilling to revoke farming requirements as part of the land claim process, lands without access to water could not be homesteaded. In order to gain legal ownership of land and assemble larger ranches, stockmen had to purchase already patented lands. Frederick Knipe began buying additional pieces of property in eastern portion of the Rincon valley including Librada Leon's ranch in 1917, Tomas Mills' X9 ranch in 1924, and Manuel Escalante's property around that same time.[3] Other cattleman were also interested in purchasing land. James W. McDonald bought property immediately south and west of Knipe's Bar FK in 1918.[4] McDonald was running 100 head of cattle on the Pantano allotment in the Coronado National Forest in 1925.[5] The remaining public domain land within the valley – most of the land above the floodplain of the creek – continued as open, free range available to everyone's cattle and horses.

The Stockraising Homestead (SRH) Act passed in 1916 and grazing lands finally became available for homesteading in 1920. Nicholas and Concepción Ruiz were the first in the Rincon valley to make SRH claims on lands adjacent to their parents. As the elder children of José Ruiz and Paz Tellez de Ruiz, they had grown up in the Rincon community surrounded by the ranching relatives. They had already been running their cattle

[1] The Forest Homestead Act of 1906 allowed settlers to claim farmable lands within the national forests. It was primarily used by small ranchers and homesteaders to gain access to grazing allotments on forest lands. See Edwin Tucker. 1989. Interview with F Lee Kirby. In: *The Early Days: A Sourcebook of Southwestern Region History*. Book 1. Albuquerque, USDA Forest Service Southwestern Region, Cultural Resources Management Report, no. 7; see also Dana and Fairfax 1980. Pages 89-90, 102-104.

[2] Roberts. 1963. Page 119.

[3] Miller. 1993; Hadley. no date.

[4] *Tucson Daily Citizen*, "James McDonald Nomination Passes Senate." December 16, 1931. Arizona Historical Society Newspaper Clippings Collection. Tucson, Arizona; Coronado National Forest grazing allotment files. National Archives, Riverside California.

[5] Cooperrider and Hussey. 1924.

over those same lands for years. Between 1920 and 1930 almost all of the remaining lands within the Rincon valley were claimed under the Stockraising Homestead Act. With the exception of Nicholas, Concepción and José Maria Romero, all of these claimants were Anglo-American.

The Stockraising Homestead Act required only three years of residence – less if the claimant had military service time. Other SRH improvements were simpler and less physically demanding than earlier homesteading requirements. All constructed improvements had to benefit the stockraising activity. The primary difficulty in completing the requirements was the minimum investment of $600 in those improvements. At the onset of the Great Depression in 1929, these costs became onerous to many of those homesteaders.[6]

The initiation of the Stockraising Homestead Act coincided with the end of World War I. Many returning veterans had been disabled by mustard gas or infected with tuberculosis in the European trenches. Upon their return to the United States, these veterans were sent west to Arizona for recovery. Because of its dry climate, Tucson had become a primary destination for patients suffering from consumption since the late 1900s. Entire tent cities had been established in the desert beyond the boundaries of settlement areas to accommodate consumptives from all over the country. World War I veterans found the limited physical demands of the SRH requirements easy enough for them to accomplish while they regained their strength. Charles Howard Hathaway, Daniel Mahoney, Rebecca Christie, and George Thompson were all disabled from their exposure during the war; all came west for rest and recovery and began small-scale ranching on their 640-acre claims.[7] Most did not run their own cows but leased their grasslands to other larger ranching operators, primarily Melville Haskell. Many veterans later sold their lands after gaining title from the General Land Office. Only Charles Howard Hathaway stayed in the cattle business raising purebred Hereford cattle on his N Lazy H Ranch in the western portion of the Rincon valley.[8]

In 1926, Frederick Knipe sold the Bar FK Ranch to Melville Haskell. Knipe moved his 300 to 400 head of Hereford cattle to the eastern portion of the Rincon valley near the headwaters of Rincon creek. Knipe had already purchased 360 acres of land and was leasing the Rincon allotment from the US Forest Service as well as Arizona state trust land in section 16. Frederick Knipe built a new adobe house (approximately five rooms) on the north side of Rincon creek on this section 16 acreage. Dorothy and Frederick Knipe anticipated purchasing this property from the state but never finalized that purchase before their divorce in 1929. Following their divorce, the Knipes sold their private property and their accompanying leases to J Rukin Jelks.[9] Frederick Knipe returned to Tucson and his architectural career as a full-time partner with Henry O. Jaasted, well-known architect and Tucson mayor.

Melville Haskell arrived in Tucson in 1924 looking for a ranch to purchase. He found Jim McDonald's ranch in the western portion of the Rincon valley and purchased his 640

[6]Christie, Mahoney, and Thompson.

[7]Granger, Byrd H. 1979. *Tucson: The Way It Was*. Tucson Arizona: IBM.

[8]*Arizona Daily Star*. "C. H. Hathaway Cattleman, Dies." August 14, 1956. Arizona Historical Society Newspaper Clippings Collection. Tucson, Arizona.

[9]Hadley. no date; Miller. 1993; Coronado National Forest grazing allotment files. National Archives, Riverside California.

acres of private lands. With it, Haskell acquired McDonald's Pantano permit and allotment.[10] He also purchased and augmented McDonald's small herd of purebred Herefords.

Haskell was interested in improving the grazing and soil conditions on his recently purchased private lands. The Rincon valley was well known for its flash flooding during thunderstorms. In 1928, he contracted with Cornelius B. Brown, a Pima County agricultural agent at the University Agricultural Extension Agency, to develop a program to slow floodwaters of the Rincon creek across his lands, reduce erosion of soils within the floodplain, and, at the same time, develop suitable feed for his livestock. Over the next three years, under Brown's direction, Haskell graded over 600 acres in the Rincon floodplain and created long dikes to retard and spread out the waters of Rincon creek across the land. He then planted this area in black amber cane and Johnson grass. Both grasses are nonnatives and aggressive growers good at retaining soils. The grasses, when harvested, were used as feed for his livestock.[11] Whether Haskell's efforts afforded any long-term control of his soil and water on the Rincon Farm property is unknown.

The effects of overgrazing up to and through World War I and the drought of the early 1920s began to take their toll on the resources of the Rincon valley. Many early small ranchers decided to leave the valley to find more stable employment in the city of Tucson. A remarkable number of these ranchers became peace officers either in the Tucson office or as sheriffs and deputy sheriffs for Pima County. Esau Mills left the Rincon valley before the turn of the century. He began his police career as watchman for Southern Pacific railroad; he later served as deputy marshal and marshal prior to World War I and chief of police for Tucson afterwards.[12] Alberto Franco, adopted son of Tomas Mills, had a small ranch in eastern portion of the Rincon valley. He became chief detective for Tucson and later chief criminal investigator for Pima County.[13] Tomas Mills for many years was employed as US marshal in the Tucson courts. Later in retirement he worked as a merchant patrolman downtown. Jim McDonald, after he sold his ranch to Melville Haskell, was elected Pima County sheriff for two terms and was later appointed by President Hoover in 1931 to be collector of customs for Nogales.[14] This transition from rancher to peace officer seems to have occurred with unusual frequency in the Rincon valley. Perhaps it was a natural one for independent minded individuals used to spending long periods of time alone out on the range in order to protect their livestock and lands.

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[10] *Tucson Daily Citizen*, "James McDonald Nomination Passes Senate." December 16, 1931. Arizona Historical Society Newspaper Clippings Collection. Tucson, Arizona.

[11] Cornelius B. Brown. 1928. "Annual Report of the County Agricultural Agent." Pima County, Arizona. Arizona Historical Society Archives. Tucson Arizona; Cornelius B. Brown. 1929. "Annual Report of County Agricultural Agent." Pima County, Arizona. Arizona Historical Society Archives. Tucson Arizona; Cornelius B. Brown. 1931. "Annual Report of County Agricultural Agent." Pima County, Arizona. Arizona Historical Society Archives. Tucson Arizona. The system of dikes created by Haskell is visible in Soil Conservation Service aerial photographs taken of the valley in 1936.

[12] *Arizona Daily Star*. "Pioneer Tucsonan Claimed by Death." February 24, 1951. Arizona Historical Society Newspaper Clippings Collection. Tucson, Arizona.

[13] *Arizona Daily Star*. "Long Time Policeman Dies at 80." January 14, 1967. Arizona Historical Society Newspaper Clippings Collection. Tucson, Arizona.

[14] *Tucson Daily Citizen*, "James McDonald Nomination Passes Senate." December 16, 1931. Arizona Historical Society Newspaper Clippings Collection. Tucson, Arizona.

5.2 Horses Rather Than Cattle

The Great Depression challenged many of the ranching community in the Rincon valley. The suffering during this era was widespread for those who were dependent upon national industries for employment. More than 25% of adult males in Arizona were out of work by the early thirties.[15] Banking, commerce, and mining industries all collapsed during this time.[16] The Southern Pacific Railroad had laid off most of its workforce since little produce was moving. Beef prices had collapsed and the Midwest and Southwest were suffering through an extended drought that crippled both the farming and ranching industries.

As raising cattle became less economically viable, ranchers looked to other forms of livestock that might be more successful. Horse racing had always been an important form of entertainment in the Hispanic and American communities in Arizona. Racing originated in Europe and later expanded to the United States and Mexico. On the east coast, thoroughbred racing gained favor in the late 1800s. In the Southwest, however, the desired traits in most horses were not long distance speed but rather stamina, quickness, and agility in working cattle. In cattle country "good horses were as important to a successful ranch in operation as water and grass."[17] The typical southwestern quarter horse "was the one who could get the job done, roping wild cattle in the brush, moving herds up the Chisholm Trail and then racing against others of their own kind down the dusty streets of Kansas cow towns like Dodge City and Abilene."[18] Don Hedgepeth has opined that "quarter-mile horse racing was as much a part of the early West as quilting bees and barn raisings."[19]

Melville Hanna Haskell arrived in Tucson with a solid background in horse breeding and saw a real need to upgrade the quality of working ponies on his cattle ranch.[20] A wealthy descendent of the Hanna family, shipping magnates from Cleveland, Ohio, Haskell had grown up on a southern plantation in Georgia dedicated to raising and racing horses.[21] This, rather than producing cattle, was Haskell's true passion. He discovered a lifetime partner in the horse breeding and racing arena, when J. Rukin Jelks purchased the nearby X9 Ranch in 1929.[22]

Like Haskell, Jelks grew up on a southern plantation. Another victim of tuberculosis, he came to Tucson in 1919 to study animal husbandry at University of Arizona. He began improving the quarter horse breed in 1924. Horses in Arizona had been allowed to interbreed while they ran loose upon the range. Without proper breeding, the quality of the working range horse had declined significantly over the decades.[23] Jelks and Haskell

[15] Peter Booth. 1991. "Cactizonians. The Civilian Conservation Corps in Pima County, Arizona, 1933-1942." *Journal of Arizona History*. 32:291-332.

[16] William Collins. 1999. *The New Deal in Arizona*. Phoenix: Arizona State Parks Board. Page 25.

[17] Don Hedgepeth. 1990. *They Rode Good Horses*. Amarillo: American Quarter Horse Association. Page xi.

[18] *ibid.* Page xi.

[19] *ibid.* Page vi.

[20] Willard H. Porter. 1969. "Melville Haskell Designed Modern Quarter Racing." *The Quarter Horse Journal*. April: 40-41, 144, 146.

[21] *ibid.*

[22] The partnership was further cemented when Jelks married Melville's Haskell's sister, Mary, in 1930.

[23] *The Magazine Tucson*. "Horses, Horses. Horses – The Life and Love of J. Rukin Jelks." May 1949.

began buying quality horses from other parts of the country for their conformation, speed, and endurance.[24]

In addition to breeding horses, both Jelks and Haskell were interested in racing them. Jelks build his first oval racetrack in the Rincon creek wash on the old Leon property in the early 1930s.[25] Apparently this site incurred damage during flood season and was abandoned for a better location near Jelks' main ranch house which he renamed Casa Blanca.[26] Jelks and Haskell also raced quarter horses on a track on Rancho del Lago property near Vail.[27] But Haskell and Jelks wanted to expand their version of quarter horse racing beyond the confines of the Rincon valley. In the late 1930s, along with owner Robinson Locke, they built the Moltacqua Turf Club on Sabino Canyon Road at the site of the later historic Tack Room restaurant.[28] But even this site was too far out of town. Both men sold their properties in the Rincon valley in 1939. Haskell moved his breeding operation to the Rincon Stock Farm on East Fort Lowell. Jelks purchased property on River Road at the end of First Avenue for a new ranch and in 1943 began construction of the Rillito Racetrack. In 1945, Jelks and Haskell joined forces to establish the American Quarter Racing Association. The Association was assembled to develop standards and rules for quarter-mile racing and recordkeeping.[29]

5.3 The Taylor Grazing Act and the End of the Open Range

After 1920, almost all of the new settlers claiming land in the Rincon and Tanque Verde valleys were Anglo-American. The transition away from the original tightly interwoven, intermarried, and independent Mexican-American community was in full swing. By 1934, the entire Rincon valley had been claimed by individuals or allocated to the State Land Trust Department. In 1934, Congress passed the Taylor Grazing Act. In a single stroke of the pen this momentous law terminated two major land-use patterns that had existed in United States for almost 70 years. It put an end to homesteading and the dispensation of federal lands from the public domain to private individuals. The Taylor Grazing Act also put an end to the cattlemen's use of the public domain range that was free and open to all.

Almost all successful ranching operations were now dependent to some degree on additional grazing lands leased from the State Land Trust, US Forest, National Park Service, or from the newly established Department of Grazing (later Bureau of Land Management). Limited access to the small number of available grazing allotments on federal or state lands frustrated many smaller-scale ranchers. With free lands no longer available, the number of individual operations running more than a few head of stock continued to decline. By

[24] Porter. 1969.

[25] Remnants of the racetrack are visible in a 1936 Soil Conservation Service aerial photograph.

[26] After Jelks sold the Casablanca ranch in 1939 it was renamed with its original title, X9. The area is still referred to as the X9 today.

[27] Granger. 1979.

[28] Bonnie Henry. 1992. "Moltacqua and Rillito Race Tracks." In: *Another Tucson*. Tucson: *Arizona Daily Star*. Pages 195-197.

[29] *The Magazine Tucson* 1949; Porter. 1969; Denhardt. 1979. Pages 198-200; Riggenbach, Jorga. 1997. "Lynn Meyer Harris: Palo Verde Ranch." In: *Agua Caliente Chronicles*. Tucson, Arizona: Raging Brook Press. Pages 62-64.

the late 1930s and early 1940s, only the Rocking K and the X9 ranches in the Rincon valley and the Tanque Verde ranch and Joe Hartsell's ranch in the Tanque Verde valley were running large numbers of cattle. Long droughts during the 1940s stressed the patience and financial reserves of the remaining ranchers. Overgrazing, especially during drought, continued to damage the land. The carrying capacities of both private and federal lands continued to decrease over time.

6.1 The End of the Ranching Era: Rincon Valley

Following the sale of Haskell's and Jelks' ranching operations in 1939, the two larger Rincon ranches went through a series of owners in rapid succession. The subsequent owners had clearly better financial resources, but the natural resources in the valley were no longer sufficient to sustain livestock grazing. Melville Haskell sold his Rincon Ranch to Allison Armour of mid-west meat-packing heritage. Armour only owned the ranch for two years before selling it to Helen Lichtenstein, the last of the serious cattle ranching owners, in 1941. Drought drove the Coronado National Forest rangers to reduce the number of cattle permitted on the Pantano allotment from 85 to 60 head. From this time onward, no more than 60 head were permitted on the southern face the Rincons and for most of the next two decades, fewer than half that number were ever grazed there.[1]

Overgrazing on both public and private lands had removed grasses and enhanced the growth of unpalatable shrubs, cacti and poisonous plants. Both Lichtenstein and Haskell had lost valuable animals when their horses consumed the poisonous plants. It was a further indication of the declining in quality and productivity of the range after too many years of overgrazing.

Lichtenstein sold the ranch in 1946 to William and Eleanor Veeck, then owners of the Cleveland Indians baseball team. The Veecks leased the cattle operation to other ranch managers.[2] Four years later, the Veecks sold the Lazy Vee ranch to William H. Kenner. Kenner, a doctor, was interested in transforming the ranch, now called the Rocking K, into a sanitarium. Kenner grazed only a few cattle on the Pantano allotment during the winter/spring seasons. The remaining owners of the Rocking K including the Rincon valley Development Corp., Ranchlands Inc., and Joseph Rae held on to the private lands for investment purposes and potential residential development. Rae voluntarily relinquished the Pantano grazing permit in 1971. The Rocking K properties are now gradually undergoing residential development. The original Saenz/Knipe ranching structures still support a horseback riding operation.

The modern history of the X9 stayed closer to its ranching heritage only for a little longer. Yet the repeated and frequent turnovers were indicative that, given the available resources, the livestock business could not be economically viable. J. Rukin Jelks sold the X9 to Robert E. Chatfield-Taylor in the early 1940s. Chatfield-Taylor ran between 350 and almost 500 head of cattle on the Rincon allotment during his tenure. Chatfield-Taylor sold

[1] Collected SNP Grazing Records.

[2] Mark Stewart. "Bill Veeck: the Tucson Years." *Arizona Daily Star*, July 14, 1991.

the property and leases in 1948 to Gordon Packard, a retired IBM vice president. With this transfer of ownership, the Forest Service reduced the permitted stocking levels on the Rincon allotment. Packard was only allowed between 200 and 300 cattle but regularly exceeded his permit further overgrazing the range. Like Jelks and Haskell, Packard was less interested in livestock production and more focused on breeding quality Herefords and quarter horses.[3] Packard sold the X9 in 1955 to Henry Jackson, longtime California newspaper reporter, editor, and owner. Jackson greatly augmented the size of his private lands near the X9 by affecting an exchange with the US Forest Service for private inholdings in Kaibab National Forest. Under this arrangement Jackson acquired 2350 acres of adjacent lands in the Rincon allotment in 1961.[4]

During this time Jackson ran 400 head of cattle on those leased lands. Owners of the X9's private road had always permitted access to Saguaro National Monument visitors hiking the trails into the eastern half of Saguaro National Monument. In 1967, an unknown individual fired a shot at Jackson's daughter on the ranch and Jackson closed the road to all but Saguaro National Monument employees. With a declining income from livestock and a rising value in his private lands, Jackson voluntarily relinquished his lease on the Rincon grazing allotment in 1968. In 1971 he subdivided 4500 acres of the X9 Ranch into 36-acre parcels.[5] Jackson's abandonment of ranching marked the start of large-scale residential development and the end to most ranching activities in Rincon valley.

6.2 The End of the Ranching Era: Tanque Verde Valley

After the transfer of Eduardo Carrillo's La Cebadilla property, the ranch continued for another two decades as a working cattle business.[6] By the early 1970s, these lands too had been sold for residential development.

James Converse, by all accounts, was a unique individual: impulsive, generous, teller of tall tales, hunter and adventurer.[7] Converse ran cattle on both the Twin Hills and Tanque Verde allotments; he also ran the Tanque Verde Guest Ranch. According to Convers, the western Rincon allotments with their wide range of altitudes and forage condition provided some of the best yearlong grazing in Arizona. He was one of the few ranchers, who was – when he wanted to be – mindful of the limits of the forage resources on his two allotments. Converse was usually the first of the Rincon district ranchers to remove cattle and leave his allotments under nonuse during drought conditions. In some ways, he was at the forefront of sustainable grazing management practices. He was also the most actively opposed to monument administration and grazing management by the National Park Service. He cared little for the exquisite saguaro stand so important to park employees nor for visitor complaints about the declining aesthetic values of the park's landscapes.[8]

[3] *Arizona Daily Star*. "UA Supporter, Ex-Rancher Gordon Packard Dies at 66." April 13, 1971. Arizona Historical Society Newspaper Clippings Collection. Tucson, Arizona.

[4] Hadley. no date; Collected SNP Grazing Records.

[5] *Arizona Daily Star*. "Ex-Newspaperman, Rancher Henry Jackson Dies." November 28, 1986. Arizona Historical Society Newspaper Clippings Collection. Tucson, Arizona.

[6] La Cebadilla Estate website provides a brief but interesting summary of the Carrillo family history: cebadilla.org/lce2/pictures/History.pdf

[7] Smith. no date. "The Hunter." Pages 102-116. Collected SNP Grazing Records.

[8] Collected SNP Grazing Records.

Converse acquired the Tanque Verde allotment in 1928 and the Twin Hills in 1929. Like the other Anglo American ranchers, he also leased and purchased numerous parcels of state and private lands in order to maximize his access to local forage. His next task was to clear over 1000 head of wild cattle from the upper reaches of his two allotments.[9] With adequate precipitation, Converse could support over 300 head of cattle. But repeated drought conditions forced him to regularly reduce stocking levels below his permitted allowance. On average, Converse could carry his full allowance in only one year in five. Like the other district allotments, natural water sources were few and far between; well construction was uncertain and expensive. As a result, the lower ranges were often overused when higher elevations carried better grass.[10] By the early 1950s, severe erosion was occurring below the 4000' elevation, especially in the Saguaro National Monument Cactus Forest.[11]

As early as the 1920s, biologists were aware that cattle grazing threatened the superb stand of saguaros in the Twin Hills allotment.[12] Despite its degraded forage resources, James Converse continued to run cattle there until 1958 when the National Park Service arranged an exchange. The Park Service offered Converse and the three other permittees grazing rights in perpetuity to their Saguaro allotments in exchange for removal of Converse's cattle from the Cactus Forest.[13]

In 1957, Converse sold his cattle business and the Tanque Verde permit to Kenneth Kaecker; one year later he sold the guest ranch business as well. Like Converse and the other Rincon ranchers, Kaecker recognized soon thereafter that the Tanque Verde operation was too small and the forage resources insufficient to be financially successful. Within three years, Kaecker was trying to sell the ranch to another buyer or, alternatively, sell his grazing permit back to the National Park Service. While the Park Service had guaranteed his permit in perpetuity and was desperately interested in ending overgrazing within the monument, it was not willing to recognize the permit's financial value by purchasing it.

By the early 1970s, Kaecker was the last permittee to be running cattle on Saguaro National Monument land.[14] In 1973, the National Park Service decided to end grazing and terminate Kaecker's permit. The rancher sued for the loss of his guaranteed permit. In the absence of conclusive scientific evidence proving damage by cattle, the Park Service in 1978 agreed to settle out of court and pay Kaecker the value of his grazing permit.[15]

For over 100 years cattle grazing continued on the ranges under the Rincon mountains. For 75 of those years, that use was managed by the US Forest Service. The following

[9] Smith no date. "The Hunter." Page 103-104.

[10] Collected SNP Grazing Records.

[11] Saguaro National Monument Master Plan, 1952. Soil and Moisture Conservation Map. Saguaro National Park Archives.

[12] The history of protection and management of the Saguaro stand has been ably assembled by Marcus Burtner (2011) "Crowning the Queen of the Sonoran Desert. Tucson and Saguaro National Park. An Administration History." Saguaro National Park Archives.

[13] The three other permittees were Sam Drucker (other half of the Tanque Verde allotment), William Veeck of the Pantano permit, and Gordon Packard with the Rincon permit.

[14] After almost 35 years of shared grazing resources, Coronado National Forest in 1954 divided the Tanque Verde allotment into two components. The boundary line for Archie Meyer's (successor to Sam Drucker) permit no longer fell within national monument lands. Thus his permit guaranteeing perpetual access to national monument grazing lands was no longer valid.

[15] Collected SNP Grazing Records.

chapter examines the history of grazing management from the perspective of Coronado National Forest and the Southwest Region in Albuquerque, New Mexico. The primary purpose of this agency was to protect its natural resources and, at the same time, use them wisely and sustainably. The next chapter examines the question of why the Forest Service was unsuccessful in fulfilling that responsibility. The Forest Service consistently effected decisions that benefited homesteaders, ranchers, and livestock businesses in the short run rather than aggressively limit livestock numbers to protect its soil and forage resources. Like the homesteading and early ranching communities, economic and environmental, political and cultural factors influenced the agency's decisions and actions and limited its ability to make those better choices it might have made in the absence of those factors.

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Part III

Range Management from the Perspective of the Coronado National Forest and the Southwest Region

CHAPTER 1

Executive Summary

> No doubt the inability of these permittees to derive sufficient income from dry farming and a few head of cattle to provide themselves and their families with a living caused their failure. It has been realized for some time that the chances of settlers succeeding in that way are far from good, however, I think we will have to admit that the larger cattle outfits have also failed to put the business on a paying basis. In other words, the history of the industry and the Southwest seems to be one of losing money.[1]
>
> Regional Forester Frank Pooler to Coronado National Forest Supervisor Hugh Calkins. January 12, 1925.

> Grazing use has been the most difficult activity the Forest Service has had to administer, and one can rightly conclude that there is no permanent or wholly correct solution.[2]
>
> *Timeless Heritage: a History of the Forest Service in the Southwest*

Range management as pioneered by the US Forest Service attempts to balance forage production with sustainable levels of forage consumption by livestock for optimum meat production. Arthur Sampson, known as the father of range science, was one of the first to apply developing theories of ecology achieve both sustained yield and maximum production. Near the end of his long career in teaching and research, Sampson neatly distilled the essence of the field.

> Broadly considered, range management is the science and the art of procuring sustained forage crops, without jeopardy to the other resources of land uses.[3]

[1] Regional Forester Frank Pooler to Coronado National Forest Supervisor Hugh Calkins. January 12, 1925. "Ten-Year Permits." National Archives at College Park, College Park MD. Records of the US Forest Service, Record Group 95, Division of Range Management, General Correspondence 1905-1952, Region 3, Grazing Management – Annual Reports 1924-28, Preliminary Inventory 18, Entry 63, Box 401.

[2] Robert D Baker, Robert S Maxwell, Victor H Treat, and Henry C Dethloff. 1988. *Timeless Heritage: a History of the Forest Service in the Southwest.* US Department of Agriculture, Forest Service, FS-409. Page 96.

[3] Arthur Sampson. 1951. "Range Management Education." *Journal of Forestry* (July): 507-510.

Sampson was asserting that this discipline demanded a broad spectrum of skills and knowledge from the application of ecology to a mastery of communication and planning.

Practitioners of the field had to acquire a substantial background in soil, botanical, and animal sciences as well as a knowledge of the ecological interactions between those domains. Range science, the research end of the range management spectrum, was a highly applied field. Its purpose was to solve those problems immediately confronting the livestock industry and to make recommendations for improving management of forage and animals. Federal and state governments established numerous research and experiment stations throughout the West in the early decades of the 20th century to address those issues, the most pressing of which was developing methods that would restore public grasslands damaged by decades of unregulated overgrazing.

At the other end of the spectrum was the art of management – the administration of range resources and the users – both livestock and people. Using knowledge derived from science and experience with the landscape, managers were expected to determine available forage, develop suitable divisions within the range, and plan access for a specific number of cattle. Each of these decisions were to be made in accord with Forest Service policies of fairness and equity among users and support for the industry. Perhaps the most important skill for managers was an ability to communicate to stockmen the necessity of implementing the new recommendations to control grazing and protect resources from further damage. Indeed, since the beginning of the Forest Service's range management, convincing users that applying these practices was in their own best interest has been the greatest challenge for managers and administrators.

The impetus to develop a range management program originated from a growing abuse of western grasslands during the late 1800s. In 1905, the Forest Service was the first land agency to assume an active management role over a significant portion of those public resources. Early planners laid out three principles as the foundation of Forest Service range management. The first was protection and conservative use of grazing resources. The second was the permanent good of the livestock industry and the third was the protection of the homesteader against unfair competition on the range.[4] Thus the Forest Service defined for itself multiple roles in management: a protector of resources, a benefactor of the livestock industry, and a defender of the small operator. These three roles, as honorable, appropriate and democratic as they might have been, were, in reality, frequently in conflict. Administrators could not support the small homesteader without hurting larger ranch operations. They could not provide enough forage for all applicants without damaging range productivity. Indeed, the only eras of Forest Service administration when all constituents supported management was when all applicants possessed as much access as they desired. The greatest changes to grass communities and range productivity occurred when the agency felt obligated to provide for its users. Administrators were unable to communicate range science's new information to stockmen. Stockmen preferred instead to trust their own range intuition and experience. Social, economic, and political pressures ultimately swayed administrators to overlook their primary responsibility – protection of the natural resources – even after range science had informed them of the consequences.

[4]These principles were enshrined in Pinchot's *Use Book*, his collection of rules and regulations by which all forest employees were directed to operate.

One purpose of this chapter is to examine how Forest Service administrators balanced the art and science of range management in the Southwest and especially at Coronado National Forest. Existing literature on the history of range management at Coronado is limited – specific articles number fewer than fingers on one hand.[5] Recent searches to locate records documenting on-the-ground management actions and decisions have been generally unsuccessful. Thus the discovery at the National Archives of a small cache of correspondence between Coronado administrators, the Southwest regional office, and the Washington office offered a welcome opportunity to examine range management issues in the Southwest.

While these documents are not without voids (a number of important years are missing especially during World War I and World War II), the records span the first four decades of Coronado and Forest Service range administration from 1907 to 1948 and present opinions and attitudes of administrators as they defend each year's decisions. The collection contains annual reports and working plans and the associated correspondence. The documents provide a glimpse into the challenges confronting forest supervisors as they dealt with the contradictory responsibilities of maximizing grazing use and sustaining forage resources.

A second, and perhaps more important, purpose of this chapter is to provide a context for range management on national park units in the Southwest and, more precisely, for the history of cattle grazing in Saguaro National Park. Congress with the National Park Service's Organic Act of 1916 assigned to the US Forest Service the responsibility of administering grazing on park lands where stipulated by law or tradition. Later that same responsibility was assigned to the Bureau of Land Management (BLM) for those parks created from public domain lands. Both the BLM and the National Park Service adopted and adapted Forest Service practices, policies and regulations when they too began managing cattle grazing. During the first six decades of the park management, Coronado rangers managed cattle grazing at Saguaro. Illuminating their perspectives, their issues and challenges is key to understanding the early history of grazing management in the National Park Service. Many of the same issues that affected how forest rangers perceived cattle grazing, such as industry and political pressures, confronted BLM range managers as they administered grazing at Fort Bowie National Historic Site.

[5]Larry S Allen. 1989."Livestock and the Coronado National Forest." Rangelands 11: 14-20; Charles R Ames. 1967. "The History of the Forest Service." *The Smoke Signal*. The Tucson Corral of the Westerners. 16: 117-127; Diana Hadley. 2001. "Grazing the Southwest Borderlands: the Peloncillo-Animas District of the Coronado National Forest in Arizona and New Mexico, 1906-1996. In Christopher J Huggard and Arthur R Gomez (editors). *Forests under Fire. A Century of Ecosystem Mismanagement in the Southwest.* Tucson: University of Arizona Press. 93-132. There are a goodly number of published articles and books on the Southwest Region range management but few look at the Coronado National Forest administration in any detail. See Edwin Tucker. 1989. *The Early Days: A Sourcebook of Southwestern Region History.* Book 1. Albuquerque, USDA Forest Service Southwestern Region, Cultural Resources Management Report, no. 7. (www.foresthistory.org/ASPNET/Publications/region/3/early_days/1/sec6.htm) and Tucker. 1991. *The Early Days: A Sourcebook of Southwestern Region History.* Book 2. Albuquerque, USDA Forest Service Southwestern Region, Cultural Resources Management Report, no. 11 (www.foresthistory.org/ASPNET/Publications/region/3/early_days/2/index.htm); Baker *et al.* 1988; Paul H Roberts. 1963. *Hoof Prints on Forest Ranges. The Early Years of National Forest Range Administration.* San Antonio Texas: Naylor Company and Paul H Roberts. 1965. *Them Were the Days.* San Antonio Texas: Naylor Company.

CHAPTER **2**

Early Range History and National Forest Origins

Range management – the administration of the grassland resources and its users – originates with the federal government's early efforts to set aside tracts of land to protect the nation's most important natural resources (timber and water). The US Forest inherited these reservations in 1905. From the outset of its establishment, agency policies called for the "proper use" of rangelands. Out of a chaotic environment where competing users rushed to extract the maximum forage for their animals, the US Forest Service sought to create an orderly system of use of those resources, assure continuity of forage production, and provide access to all deserving graziers.[1]

The first national forest reserves to be created out of the public domain in southern Arizona were Mount Graham, Chiricahua, Santa Rita and Santa Catalina.[2] In 1905, the Transfer Act established the US Forest Service and transferred all reserves to the Department of Agriculture. In 1907, the Rincon district was added to the Santa Catalina Forest Reserve; together both districts became the Santa Catalina National Forest. In the following year, the Santa Catalina, Dragoon, and Santa Rita National Forests were consolidated under the aegis of the larger Coronado National Forest (CNF).[3] Over the next 10 years, Coronado gained four additional districts from the southern regions of Arizona and New Mexico.[4] From the outset of forest administration, the most complicated task for the Coronado supervisor was managing its grazing program.[5]

While most national forests contained fine stands of marketable timber, the southern forests of Arizona were set aside primarily to protect the watersheds below.[6] The primary drivers of forest reservation in the state were farmers and irrigation companies. Downstream agricultural communities railed against unregulated livestock grazing that removed vegetation cover and accelerated soil erosion on the upper foothills.[7] Soil move-

[1]Ronald B Hartzer and David A Clary. 1981. *Half a Century in Forest Conservation: a Biography and Oral History of Edward P Cliff.* Washington DC: US Department of Agriculture, Forest Service. Page 147.

[2]Royal S Kellogg. 1902. "Forest Conditions in Southern Arizona." *Forestry and Irrigation,* (December): 501-505.

[3]Anne Harrison. 1969. "The Santa Catalinas – a Description and History" Tucson Arizona: Coronado National Forest; Allen. 1989; Ames. 1967.

[4]These districts included the Huachuca, Chiricahua, Peloncillo, and Tumacacori National Forests. See Harrison 1969. Page 11.

[5]See Roberts' personal accounts as Forest Supervisor and Inspector of Grazing in the Arizona and New Mexico. "Grazing administration in the national forests in the early years presented more difficulties and absorbed more time and effort and all other activities combined." 1965. Page 113.

[6]Mary Ellen Lauver. 1938. "The History of the Use and Management of Forest Lands in Arizona, 1862-1963." Master's Thesis. University of Arizona, Tucson, Arizona. Page 97; Allen. 1989.

[7]Samuel J Holsinger. 1902. "The Boundary Line between the Desert and the Forest." *Forestry and Irrigation*,

ment and downstream deposition threatened newly constructed dams, irrigation canals, and water supplies for cities below the reserves.[8] But cattle grazing was (and still is) the single most widespread commercial use of western lands including national forests.[9] Congressional representatives of livestock-producing states proved to be a vocal and unified group especially when defending that industry. Federal administrators were unwilling to eliminate this preexisting use in the newly established forest reserves.[10] Administrators believed that they could protect the watersheds and at the same time rejuvenate the forest ranges through better control of stock numbers and cattle distribution.

2.1 Early History of Cattle Grazing in Southern Arizona

The foothills and intervening basins of southern Arizona have been grazed by cattle since the Spanish and Mexican land grants of the early 1800s. Following the United States' purchase of Mexican lands south of the Gila River, American ranchers and their cattle began to migrate into the region. Settlement and growth of the cattle industry remained largely suppressed due to continuing conflict with the Chiricahua Apache, a small band of Indians who threatened American lives and livelihoods and preyed on resources available in the landscape – including livestock.[11]

The return of the US military to the Southwest after the Civil War and the creation of the Chiricahua Indian Reservation in 1872 marked the beginning of the American cattle industry's expansion into all reaches of southern Arizona.[12] By the mid-1880s, ranges were fully stocked and all available natural waters had been claimed. Overgrazing combined with a series of droughts between 1885 and 1904 severely tested the range lands and the local industry. A lack of understanding of the regional variations in climatic conditions and seasonal precipitation led inexperienced ranchers to hold excessive numbers of cattle on the grasslands for too long. The presence of too many cattle removing too much vegeta-

(January): 21-27; RU Cooke and RW Reeves. 1976. Arroyos and Environmental Change in the American South-West. Oxford: Clarendon Press.

[8] William D Rowley. 1985. *US Forest Service Grazing and Range Lands: a History.* College Station: Texas A & M University Press. Page 46; Holsinger. 1902; Samuel P Hays. 1999. *Conservation and the Gospel of Efficiency: the Progressive Conservation Movement*, 1890-1920. University of Pittsburgh Press. Pages 22-26.

[9] Charles F Wilkinson and H Michael Anderson. 1987. *Land and Resource Planning in the National Forests.* Washington DC: Island Press. Page 91.

[10] *ibid.*; Hays 1999. Page 49; RR Hill in 1913 estimated that 70% of Arizona was valuable for grazing; 30% of that fell within Arizona national forests. See RR Hill. 1913. "Grazing Administration of the National Forests of Arizona." *American Forestry* 19 (9): 578-585.

[11] J Mark Kaib. 1998. "Fire History in Riparian Canyon Pine-Oak Forests and the Intervening Desert Grasslands of the Southwest Borderlands: A Dendroecological, Historical, and Cultural Inquiry." Master's Thesis, University of Arizona, Tucson Arizona; John P Wilson. 1995. *Islands in the Desert. A History of the Uplands of Southeastern Arizona.* Albuquerque: University of New Mexico Press. Pages 105-129, 188; Conrad Bahre. 1991. *A Legacy of Change. Historic Human Impact on Vegetation in the Arizona Borderlands.* Tucson: University of Arizona Press. Pages 30-35; Lauver. Page 29; Robin L Pinto. 2012. "The Past and Future of Fort Bowie National Historic Site. An Administrative History." Desert Southwest Cooperative Ecosystems Studies Unit and The University of Arizona. Pages 6-20.

[12] JJ Wagoner. 1952. "The History of the Cattle Industry in Southern Arizona." University of Arizona Bulletin, Social Science Bulletin no. 20. Tucson: University of Arizona Press; JJ Wagoner. 1961. "Overstocking of the Ranges in Southern Arizona in the 1870s and 1880s." *Arizoniana*, 2: 23-27.

tion under conditions of severe environmental stress has been correlated with widespread degradation of those early range resources.[13]

Most of these grasslands fell within the public domain – lands not yet taken up by homesteaders – that were available for grazing by anyone who could, by occupancy or force, exclude other ranchers and their cattle. During the late 1800s and early 1900s, the federal government was unwilling to restrict uses on the public domain in the belief that settlers might later claim homesteads and develop that land. But the lack of available water or predictable rainfall made achieving title to homestead lands unreasonably challenging and highly improbable.[14]

Thus the area remained open for the few who still saw value in the miles of unbroken grasslands. By settling on and controlling access to the few natural water sources, ranchers could essentially claim "ownership" of thousands of surrounding acres. In the absence of federal regulation of the land, ranchers themselves developed communally accepted codes of behavior regarding the management of land and cattle and an informal version of property rights, "Range Rights," to the lands they controlled. Many states in the West later enacted laws that confirmed these codes of behavior and property rights; in the absence of any superior federal legislation or court decisions, those state laws remained valid. But neither the ranchers' code nor state laws could confer right of property or ownership to federal lands.[15] As we shall see, ranchers' tenacious belief in the validity of these range rights regarding federal property and access to federal grazing land has continued long after the demise of the open range.

That absence of control and security of ownership gave anyone the opportunity to run his cattle on the open range, creating an unrelenting and intense competition for available forage. Many ranchers knew that by not leaving range grasses time to grow, produce and set seed, they threatened their own future resources. But when they removed their own cattle to allow vegetative growth and recovery, other stockmen would herd their animals onto the vacated range to consume the remaining forage.[16] This unceasing removal of all forage year after year contributed to lasting ecological changes in grassland communities and soil conditions throughout the Southwest. Garrett Hardin later described this unreg-

[13]Wagoner. 1961; Bahre. 1991. Pages 109-123; Conrad J Bahre and Marlyn L Shelton. 1996. "Rangeland Destruction: Cattle and Drought in Southeastern Arizona at the Turn of the Century." *Journal of the Southwest,* 38 (1): 1-22; David Griffiths. 1904. "Range Investigations in Arizona." US Department of Agriculture. Bureau of Plant Industry, Bulletin #67; Roberts. 1963. Page 15; Robin L Pinto. 2009. "The History of Ranching at Organ Pipe Cactus National Monument, Pima County, Arizona. A Thematic Context Statement." Desert Southwest Cooperative Ecosystems Studies Unit and The University of Arizona. Page 10; Pinto. 2012. Pages 31-33.

[14]Robin L Pinto. 2007. "History of Homestead Settlement and Cattle Ranching in the Rincon Valley." Unpublished document.

[15]Valerie Weeks Scott. 1967. "The Range Cattle Industry: its Effect on Western Land Law." *Montana Law Review,* 28: 155-183; Charles F Wilkinson. 1992. *Crossing the Next Meridian. Land, Water, and the Future of the West.* Washington DC: Island Press. Pages 75-113; Pinto. 2009. Pages 11-15; see also Karen R Merrill. 2002. *Public Lands and Political Meaning. Ranchers, the Government, and the Property between Them.* Berkeley California: University of California Press.

[16]Bahre. 1991. Pages 109-113; EO Wooten. 1922. "The Relation of Land Tenure to the Use of Arid Grazing Lands of the Southwestern United States." Washington DC:US Department of Agriculture Bulletin #1001; William Barnes. 1926. *The Story of the Range.* Washington DC, Government Printing Office. Page 8; William Barnes "Herds in the San Simon Valley; What Happened to the Promised Land of Arizona's Cattlemen" Pamphlet. University of Arizona Special Collections, Tucson Arizona; Bahre and Shelton. 1996.

ulated competition over common pool resources as the "Tragedy of the Commons."[17]

2.2 First Forest Observations

Albert F Potter, a rancher who had run both sheep and cattle outfits in Arizona, surveyed the grasslands and foothills of the Santa Rita ranges in 1902. He interviewed numerous local ranchers and recorded the changes that have occurred on the ranges.

> In the early days, or 25 years ago, the bottomlands along the [Santa Cruz] river were covered with grass and the river channel was quite narrow. When the heavy summer rains came and the floods from the mountains rushed down, the channel of the river was entirely too small to carry the water, and it spread out over the flats, flooding the entire valley. As the grass was eaten off of the valleys by vast herds of livestock, in many places being injured by overstocking and in other places dying out during drouths, the cutting away of the river banks increased until at the present time it rarely overflows, the channel being large enough to carry all of the floodwaters.[18]
>
> Previous to the drouth of 1891 and 1892, this range carried fully 25,000 head of cattle and horses and 5,000 sheep. A series of dry years, during which the losses of stock were very heavy, and at the same time a market with very low prices, discouraged the stockmen, many of whom sold out and retired from the business. At the present time, from the best information which I am able to obtain and from an inspection of the range, I judge that there are between 7,000 and 8,000 cattle, from 1,500 and 2,000 horses and about 4,000 sheep ranging upon the area in question.[19]

At the upper elevations of the forests, early visitors described open park-like landscapes beneath mature trees. Frequent burning by Native Americans had eliminated the lower-level brush and enhanced forage that supported game.[20] Both the Santa Catalina and Rincon forest reserves were well known as game refuges.[21] Land surveyor Samuel J Holsinger toured forest ranges throughout New Mexico and Arizona. In 1900 Holsinger examined the Santa Catalina Mountain. Like Albert Potter, Holsinger also interviewed ranchers and settlers living near the slopes and recorded the history of early land-use.

> [W]hen first invaded by the white man the forests were open, devoid of undergrowth, and consisted in the main of mature trees, with practically no forest cover. Instead of forest undergrowth, the ground was well set with perennial

[17] Hardin. 1968. "The Tragedy of the Commons." *Science* 162 (1): 243-248.

[18] Albert F Potter. 1902. "Report of the Examination of the Proposed Santa Rita Forest." In RH Forbes (editor) *Range Conditions in Arizona, 1900-1909 as Recorded by Various Observers in a Series of Miscellaneous Papers.* Page 10. University of Arizona Special Collections, Tucson, Arizona.

[19] *ibid.* Page 18.

[20] Holsinger. 1902.

[21] David E Brown (editor) with Neil Carmony, Harley Shaw, and WL Minckley. 2009. *Arizona Wildlife. The Territorial Years: 1863-1912.* Phoenix: Arizona Game and Fish Department. Pages 352-356.

> grasses and other herbage...It was not an uncommon thing for the early settlers to cut native hay in the pine forests and fill large government contracts at the different military posts. ...Where hundreds of tons of hay were cut under the actual spread of the forest trees during the sixties and seventies, there is not now enough grass on a thousand acres to keep in condition a family cow. Where were then running streams are now dry arroyos, and where were then living springs are now beds of silt and sand.[22]

The foothills and upper elevations of those mountain ranges that came to comprise the Coronado National Forest offered grazing alternatives to the overused areas in the intervening basins. In time, those too became badly overused. Removal of vegetation and trampling of the soil exacerbated water runoff and erosion; reduced water retention and storage in the soil threatened community water supplies downstream.[23]

2.3 Early Federal Grazing Administration

In 1891, Congress authorized the president to set aside large areas of forested land from the public domain as reserves.[24] The General Land Office (GLO) in the Interior Department, the only existing land agency, was assigned administrative responsibility for the reserves. Initially Congress gave the GLO no direction regarding their management. Few if any GLO employees possessed any knowledge of the resources or the conditions within the individual reserves or the activities taking place within them.[25] Six years later, Congress in the Forest Management Act declared that the purpose of these reserves was to protect valuable timber and watershed resources from abuse and degradation. It gave the secretary of the interior the authorization to regulate use and occupancy and to make rules and regulations governing that use.[26] At that time, Congress recognized neither range forage as a resource requiring protection nor livestock grazing as an approved use requiring management.[27]

Livestock grazing, especially sheep grazing, on forest reserves was highly controversial.[28] Many pointed a finger at livestock grazing as the greatest threat to the forests. Indeed, in 1894, the secretary of the interior sought to prohibit all grazing on the forest reserves. Albert Potter was sent as a representative of Arizona stockmen to Washington to plead with Gifford Pinchot, then head of the forestry division, to open the reserves to sheep grazing. Impressed with Potter's knowledge of the livestock industry, its people, and the range conditions throughout the Southwest, Pinchot hired Potter to act as liaison and later develop a branch of grazing within forestry. Potter began his federal employ-

[22] Holsinger. 1902.

[23] Rowley. 1985. Pages 19-20.

[24] Section 24 in the General Revision Act of 1891 marks the first step in conservation of natural resources on public lands. Paul W Gates. 1968. *History of Public Land Law Development.* Washington DC: Government Printing Office. Pages 565–566.

[25] Rowley. 1985. Page 22; Gates. 1968. Page 573.

[26] Gates. 1968. 569-570.

[27] Rowley. 1985. Pages 22–23.

[28] *ibid.* Page 27; Hays. 1999. Page 55.

ment making extensive surveys of proposed forest reserves in Arizona and the Southwest including Santa Rita and Chiricahua mountain ranges.[29]

With Potter's and Pinchot's recommendations, the General Land Office developed regulations to administer access to forage resources and manage range use on the reserves.[30] Early examiners documented that too many ranchers maintained too many head of livestock. The primary purpose of the regulations was to set upper boundaries on the number of users. A limited number of permits would be issued to stockmen. Those permits would restrict both numbers and type of stock to areas that did not threaten watersheds or harm timber.

Potter established preferences – a system of priority to determine who would receive a permit based upon the stockmen's history of past use and the location of their ranch lands. Those whose lands fell within the bounds of the reserve had the highest "preference" for a permit. Those who used the reserve but resided adjacent had a lower preference. Those living in the neighborhood were on the third tier. Owners of transient livestock who owned no nearby lands had the lowest preference. With each permit, the possessor was assigned a specific location – an allotment – on which to run his livestock.[31]

From the outset, the General Land Office asserted that the stockmen's right to grazing on the forest reserves had distinct limits. The General Land Office defined access to a grazing permit as a privilege – a privilege granted by the government. That permit would not be granted in perpetuity and could be withdrawn if the agency deemed its restriction necessary or the possessor did not follow the rules associated with that permit. These early GLO regulations and notions of government ownership of grazing permits and control of their allocation were adopted and further adapted by the new US Forest Service and other subsequent land management agencies that handled livestock including the National Park Service.[32]

In 1905, administration of the forest reserves passed from the Interior Department to Agriculture. The Transfer Act created the modern US Forest Service and Gifford Pinchot became its first Chief Forester.[33] Pinchot articulated and instituted the early policies of resource conservation in their original utilitarian form. Based on Jeremy Bentham's "principle of utility," Pinchot's philosophy developed, in part, from his experiences in managing timber tracts in European and private American forests. He believed that natural resource management based upon the best scientific knowledge at the time would ensure a continuing supply – a sustained yield – of those resources for the foreseeable future.[34] Despite the

[29]Roberts. 1963. Page 41; Conrad Bahre. 1998. "Late 19th Century Human Impacts on the Woodlands and Forests of Southeastern Arizona's Sky Islands." *Desert Plants*, 20: 8-21; Kellogg. 1902; Potter. 1902.

[30]Roberts. 1963. Pages 40-41; Rowley 1985. Pages 37-40.

[31]Rowley. 1985. Page 47; Roberts. 1963. Page 41.

[32]Rowley. 1985. Pages 41-54; Pinto 2009. Page 15.

[33]Gates. 1968. Pages 579-580.

[34]See JE de Steiguer. 1994. "Can Forestry Provide 'the Greatest Good of the Greatest Number'?" *Journal of Forestry*, 92(9): 22-25. Pinchot modified Bentham's principle to his own interpretation. In his 1905 letter to Secretary James Wilson, Pinchot expressed this philosophy in the phrase, "the greatest good of the greatest number in the long run." Hays. 1999. Pages 1-4, 122-146. Pinchot was not the only proponent of controlling "nature through natural resources for the direct benefit of mankind." Other conservationists, many from Theodore Roosevelt's administration, publicly advocated for this new progressive approach to efficient management of all natural resources. The federal government actively supported training and education for

absence of legislative language referring to grazing and grasslands, Pinchot interpreted the language of the Forest Management Act as granting his administration the authority to regulate the use of range resources.[35] Pinchot and Potter were convinced that the Forest Service could apply the same principles of scientific management to protect and maintain rangeland resources as those developed for timber.[36]

In a letter to Pinchot (and written by Pinchot), Secretary of Agriculture James Wilson outlined the larger responsibility of the new agency.

> [A]ll land is to be devoted to the most productive use for the permanent good of the whole people and not for the temporary benefits of individuals or companies. All the resources of the forest reserves are for use, and this use must be brought about in a thoroughly prompt and a business-like manner under such restrictions only as will ensure the permanence of these resources. . . . You will see to it that the water, wood, and forage of the reserves are conserved and wisely used for the benefit of the homebuilder, first of all, upon whom depends the best permanent use of lands and resources alike. The continued prosperity of the agricultural, lumbering, mining, and livestock interests is directly dependent upon a permanent and accessible supply of water, wood, and forage, as well as upon the presence and future use of these resources under businesslike regulations enforced with promptness, effectiveness, and common sense. [37]

It was Albert Potter, however, who became the principal architect of the national forest grazing system.[38] Before passage of the Transfer Act, Albert Potter and Secretary of Agriculture James Wilson met with western stock growers to develop additional policies regulating equity and fairness of access while still protecting forage resources. Many of these later policies came as recommendations from the ranchers themselves. Together they came to agreement on many important range management goals: that those ranchers with prior use would have priority to permits, that small stock owners and homesteaders would also be given preference, that any changes in grazing management such as reductions in stock numbers would be gradual and occur only after sufficient notice, that efforts at range protection and damage mitigation would happen before total exclusion of livestock, that all available forage resources would be fully used without incurring damage, and finally, that stockmen would have a voice during rule-making of resource management.[39]

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managers in Roosevelt's newly established resource agencies. Quote by WJ McGee in Hays. 1999. Page 124.

[35] Hays. 1999. Page 60; Gates. 1968. Page 569.

[36] William Rowley. 1984. "Privilege vs. Right. Livestock Grazing in US Government Forests." In Harold Steen (editor) *History of Sustained-Yield Forestry: a Symposium.* Santa Cruz California: Forest History Society. Pages 61-67.

[37] Quoted in Arthur W Sampson. 1923. *Range and Pasture Management.* New York: John Wiley and Sons. Page 18. Gifford Pinchot admits to writing this letter for Wilson and claims himself as the author of USFS philosophy and its earliest policy statement. See Gifford Pinchot. 1998. Breaking New Ground. Washington DC: Island Press. Page 261.

[38] Roberts. 1965. Page 114; Hays. 1999. Page 57.

[39] Roberts. 1963. Page 44.

2.4 Creating Southern Arizona Forest Reserves

In May 1900, Samuel J Holsinger, a special agent for the General Land Office, journeyed into the Santa Catalina range to survey the area for a potential forest reserve.[40] He concluded that the area had little farming or mineral potential but he was convinced that protection of the region was vital to conserve water supplies for the growing community of Tucson and agriculture in lower San Pedro River Valley. Holsinger noted that Agua Caliente and Tanque Verde Springs, and creeks from Ventana, Sabino, and Bear Canyons all supported agricultural enterprises downstream. These water sources, in turn, were fed by precipitation and runoff from the Santa Catalina range and its foothills. The range was already recognized by the Tucson community for its recreational opportunities – a good site for seasonal relief from the summer heat. Community support for establishing the reserve was widespread and included ranchers, university academics, physicians, settlers, and businessmen.[41] According to historian James Klein, Holsinger examined the Rincon mountain range as an important extension of the Santa Catalina range and recommended its inclusion in the forest reserve. However because the Rincon range was not been part of the original survey orders from the General Land Office, Holsinger did not include discussion of the Rincon range in his report.[42]

Two years later, Albert Potter and botanist Royal Kellogg were sent from Pinchot's Bureau of Forestry to Arizona to examine the Chiricahua and Santa Rita mountain ranges.[43] Potter's report on the Santa Rita range emphasized the importance of its grazing resources to the surrounding ranching communities. He described the condition of the Santa Rita ranges at that time.

> Many of the mountain sides have good growth of blue stem, bunch and grama grasses, in addition to a large variety of shrubs. In some sections the mountains appear to have been heavily grazed, and considerable damage done in cutting up the slopes with trails and browsing the young trees. The grass is eaten down very closely, although the gravelly soil still holds the roots.
>
> The section designated as foothills, which is located on the southern and eastern side of the reserve, is, generally speaking, a good grazing country, having abundant growth of curly mesquite and other grasses which stand grazing and will continue to furnish good annual crops of forage. At the present time, this section is grazed off very closely. To all appearances it is fully stocked with cattle and horses, and for the proper management of the reserve the number should not be allowed to increase until it has been demonstrated that the range

[40] James B Klein. 2008. "Preserving Our Western Natural and Historical Heritage: the Enduring Legacy of SJ Holsinger." *The Smoke Signal.* Tucson Corral of the Westerners. 84: 77-136. In addition to assessing forest reserves, Holsinger also evaluated culturally, historically, and scientifically important sites in the West that have been proposed to receive federal protection. For example, in 1900 Holsinger evaluated Casa Grande and recommended construction of a covering roof to protect the prehistoric structure from exposure to the elements.

[41] SJ Holsinger 1901. "Special Report. In the Matter of Proposed Santa Catalina Forest Reserve." National Archives. Washington DC.

[42] James B Klein. Personal communication.

[43] Bahre. 1998; Kellogg. 1902.

> is improving in character and not deteriorating. It may be necessary to decrease the number already on the reserve before any improvements can be made.

Potter was convinced that the grasslands would recuperate under proper range and cattle management. The nearby Empire Ranch had already experimented with fencing and reseeding. Potter hoped that by reducing stock numbers and controlling time of stock entry and distribution, the range could be returned to a more productive state.

> That the country will recuperate and improve under proper management, is clearly demonstrated in the little pastures which had been built by the stockmen. Misters [Edward] Vail and [Carroll] Gates fenced a pasture of about 500 acres of foothill lands and allowed it to rest for two years. It almost entirely regained its former grassy condition.
>
> In conclusion I would say that I do not think total exclusion of livestock from the reserve will be necessary; but restriction of numbers and proper management is needed, and to carry this out successfully it will be necessary to fence the reserve, or at least certain parts of it, for the reason that the surrounding country is heavily stocked and there is nothing with the exception of the part fenced by the [Southern Pacific] railroad, to prevent stock from entering the reserve at will whenever the seed is sufficiently improved to entice them.[44]

President Theodore Roosevelt heeded both Holsinger's and Potter's forest recommendations. On April 11, 1902, he established the Santa Rita and, two months later, on July 2, the Santa Catalina Reserves. Following Holsinger's supplemental recommendation, the General Land Office withdrew the Rincon Mountains from the public domain as a temporary reserve in 1905. Roosevelt added the Rincon range to the Santa Catalina National Forest on July 19, 1907.[45]

[44] Potter. 1902. Pages 18-24.

[45] See General Land Office Land Status Records at www.glorecords.blm.gov/details/LSR; Robin L Pinto. "General Land Office Documentation and Its Value in Studying Settlement in the Vail Region." Paper given at the Arizona Centennial Conference, April 2012. As far as can be determined from searches of national archive records, no additional examination of the range resources of the Rincon mountain was ever completed prior to its addition. Nor has any other documentation come to light. Under the National Forest Act of March 4, 1907 all forest reserves were reclassified as national forests.

CHAPTER 3

Early Range Management – the First Challenges

3.1 Early Range Investigations in Range Restoration and Carrying Capacity

Despite Pinchot's intention of applying scientific knowledge to range management, biological knowledge of the southwest deserts and grasslands just was in its infancy. Botanists had begun to theorize about the interrelationships between soils and plant communities and the effects of processes such as precipitation, herbivory and fire on those arid communities. Three research stations were established in the Tucson area at the turn of the century. In 1900, President William McKinley set aside land for the Arizona Agricultural Experimental Station for the purpose of studying the behavior of native and introduced grasses in range revegetation.[1] In 1903, the Carnegie Desert Botanical Laboratory was established on Tumamoc Hill west of Tucson to initiate the first studies of ecology in the desert southwest. In the same year, a portion of the Santa Rita Forest Reserve was enclosed by barbed wire to create the Santa Rita Experimental Range (SRER). Its purpose was to conduct research that would assist both ranchers and federal administrators to properly manage forage and livestock and develop methods and procedures to help restore damaged rangelands.[2]

Botanists and early resource managers already understood that continued overuse of grasses especially under drought conditions created widespread damage to soil and plant populations. These researchers were confronted by two very important questions in the early decades: first, how to encourage regrowth of grasses on devastated ranges and second how to accurately measure amounts of available forage in order to determine appropriate levels of stocking.[3] Arizona botanist David Griffiths, first at the Agriculture Experiment Station and later at SRER, investigated range reseeding and measurements of forage production by individual plant species.[4] JJ Thornber continued Griffiths' studies on range restoration and examined factors affecting plant distribution, regeneration and recovery from grazing. He also investigated different species of grasses, both native and non-native, to see which might best repopulate bare soils.[5] EO Wooten also measured rates of range

[1] JJ Thornber. 1910. "The Grazing Ranges of Arizona." University of Arizona Agricultural Experiment Station Bulletin #65. Page 246.

[2] Nathan Sayre. 2003. "Recognizing History in Range Ecology: 100 Years of Science and Management." In Mitchel P McClaran *et al.* (Technical coordinators) *Santa Rita Experimental Range: 100 Years (1903 to 2003) of Accomplishments and Contributions.* RMRS-P-30. Ogden Utah: US Department of Agriculture, Forest Service, Rocky Mountain Research Station. 1-15. Page 1.

[3] Sayer. 2003. Page 5.

[4] Griffiths. 1904.

[5] Thornber. 1910.

recovery on SRER ranges and how stocking conditions affected that recovery. Wooten confirmed that with extended rest overgrazed areas could return to early production levels, especially when grazing was light or eliminated altogether. Heavily grazed ranges took much longer to recover.[6] The researchers concluded that reseeding or replanting efforts on southern Arizona range was almost entirely futile. Efforts at reseeding were costly and without significant benefit. Introduced plants generally did not survive without artificial irrigation. All three concluded that the best method of restoring range came from careful husbanding of remaining forage resources, especially perennial bunch grasses. Recovery required three to five years and most regrowth would occur under higher precipitation regimes.[7] Thornber and Wooten both strongly advocated for fencing as a mechanism to gain control of cattle stocking numbers, allow degraded ranges to recover, and protect reserved forage during periods of drought.[8]

The researchers believed that the key to proper regulation of grazing would lie with an accurate calculation of the carrying capacity of each range. As historian Nathan Sayer has pointed out, "determining carrying capacities was central to the research of this period because it linked environmental and ecological factors to political and economic imperatives."[9] With that determination, managers could create appropriately sized grazing allotments and set reasonably safe permit limits. Likewise the ranching industry wanted predictability; its stability and financial success was dependent upon anticipated annual forage quantities and cattle production. Range and ranch values and rancher credit worthiness were all predicated on future estimates of livestock outcomes. Thus both federal range managers and the livestock industry needed to believe that the carrying capacity of a given range would be both readily measurable and static. Both forest managers and ranchers clung for decades to the hope that a stable measurement might be achieved. Yet repeated recalculations showed forage productivity continuing to decay. This decline created confusion and rising consternation as the Forest Service struggled to determine the appropriate and "proper use" on its ranges.

Inherent in the calculation of the carrying capacity of the particular area was a basic knowledge of local soils, climatic conditions, as well as the grass and forb populations, their individual values for cattle food, and their seasonality and rates of growth. All of these elements were essential to estimating the amount of fodder that could be produced on a seasonal or yearly basis.[10] Even as these measurements and observations were being assembled, the effects of climatic variability and the wide differences in the physical aspects of topography, elevation, and water availability would skew research conclusions. Griffiths doubted the concept of a carrying capacity could be accurately determined in southern Arizona. "To secure research information is a most difficult task in a region where the seasons, the altitude, the slope, and the rainfall are so variable."[11] Nonetheless, Grif-

[6] EO Wooten. 1916. "Carrying Capacity of Grazing Ranges in Southern Arizona." Professional Paper, Bulletin #367, Washington DC: US Department of Agriculture.

[7] Griffiths. 1904; Thornber. 1910; Wooten. 1916.

[8] Thornber. 1910; Wooten. 1922.

[9] Sayer. 2003. Page 5.

[10] Wooten 1916.

[11] Griffiths. 1904. Page 32; See also David Griffiths. 1910. "A Protected Stock Range in Arizona." Bulletin #177. Washington DC: US Department of Agriculture.

fiths offered a cautious calculation for southern Arizona of 50 acres per cow. Interestingly, in his calculations he intended that 50% of forage would be uneaten and an additional 33% to remain upon the ground for soil protection and selfseeding. Later he reduced that estimate to one cow per 100 acres.[12] Thornber was more optimistic; his carrying capacity estimates included 15-20 acres per cow on better ranges, 25-30 acres on heavily grazed areas, and 60-75 acres per cow at lower elevations where forage was scant. Like Griffiths, Thornber advocated that perennial grass ranges should only be moderately grazed and reserve forage available at all times to carry stock through dry spells.[13]

Botanist Frederic Clements, one of the preeminent proponents of plant succession, came to work at the Tucson Carnegie Lab and Santa Rita Experimental Range in 1917. Clements did not believe that a carrying capacity estimate should ever be interpreted as a static measurement. Like Griffiths, Clements recognized that the number of cattle supported on any given range was a function of past rainfall amounts. Ranchers and forest rangers should adjust their stocking numbers according to the previous year's precipitation, removing cattle when it was below average and adding more under wet regimes. For Clements, the history of the range's use was also an important factor in calculating capacity estimates. Long-term overgrazing as well as holding cattle on the range over the entire year affected the availability of future forage. Clements strongly recommended seasonal use and rotating cattle between fenced pastures to allow forage regrowth.[14] Between 1914 and 1957 at SRER, most of the research station was grazed continuously. It was only after 1957, that managers scheduled rest periods for individual pastures.[15]

Despite the best research efforts to develop methodologies for range management in Southern Arizona, none of these good ideas were implemented on local forest ranges until decades later. Ranchers, for their part, were unwilling to alter their traditional practices followed for the past three or four decades. In the absence of concrete evidence that different management might yield a financially better outcome, the stockmen refused to change. In the absence of detailed surveys, carrying capacities for individual ranges and allotments could not be determined. Unlike northern Arizona forests where winter snow allowed foresters to restrict cattle to seasonal use of the ranges, southern stockmen insisted that the topography, seasonal precipitation, and forage resources of CNF districts were amenable to year-long grazing. During the first decade, the Forest Service actively discouraged fencing. Most allotments, though assigned to individuals, were, in reality, communal. Any enclosed grazing area was viewed by the Forest Service as personal pasture; its use was charged at a much higher rate.[16] Coronado National Forest ranges received no rest from herbivory and no time to recover. Limited finances and manpower for both the Forest Service and ranchers prohibited any serious fence construction until the creation of the Civilian Conservation Corps in the 1930s. Thus stock not under permit remained on forest

[12]Griffiths. 1904. Page 32.

[13]Thornber. 1910. Page 304.

[14]Sayre. 2003. Page 6.

[15]George Ruyle. 2003. "Rangeland Livestock Production: Developing the Concept of Sustainability on the Santa Rita Experimental Range." In Mitchel P McClaran *et al.* (Technical coordinators) *Santa Rita Experimental Range: 100 Years (1903 to 2003) of Accomplishments and Contributions.* RMRS-P-30. Ogden Utah: US Department of Agriculture, Forest Service, Rocky Mountain Research Station. 34-47. Page 35.

[16]Tucker. 1989. Interview with F Lee Kirby.

lands overgrazing the ranges for at least another decade.[17]

Botanists had been asked to develop recommendations to manage rangeland and restore its resources. Early research had developed important information that would assist in accomplishing those objectives. It was now the job of Forest Service range managers to incorporate those recommendations into policy and regulations. That was the "art" of range management – persuading and encouraging permittees to change attitude and traditional use patterns in order to achieve Pinchot's ideal of "sustained yield." Thomas Alexander in his study on range science within the Intermountain Region (#4) believes the Forest Service employees accepted research results and recommendations enthusiastically. Despite that in-house acceptance, range managers were unable to persuade permittees of the long-term value of those different practices and implement botanist recommendations.[18] Nathan Sayre in his review of the history of the Santa Rita Experimental Range attempted to identify what difference SRER research made to Southwest ranges. Just as in the intermountain region, the transfer of better management practices from research station to range application was hard to discern.[19]

3.2 Range Administration at Coronado National Forest – the First Decade

When the reserves were transferred to the Department of Agriculture, Chief Forester Pinchot instituted a decentralized form of administration. He handed over to each supervisor the responsibility for administering his forest.[20] Thomas Meagher was appointed the first supervisor of the Santa Catalina reserve in 1905. He was immediately immersed in the process of taking control of and administering a landscape that he knew little about and that had not even been mapped.[21] Rangeland on the Coronado foothills was usable only during the winter due to a lack of dependable water sources. During the summer season, cattle would move down to lower elevations where water was more readily available often on non-forest lands.[22] Despite that seasonal variation, Coronado ranges were still considered appropriate for year-round grazing.[23] These ranges were known to be the most difficult to control animal distribution and amounts of forage utilization, and limit damage.[24] According to CNF range manager and historian Larry Allen, every range on the Coronado in 1905 was already overstocked.[25]

Meagher's first obligation was to assign preferences to all stockmen using the ranges. Stockmen were required to apply for a permit on which they recorded the number of animals in their possession grazing on forest land. The Forest Service required that all

[17] Edward Cliff Interview in Hartzer and Clary. 1981. Page 142.

[18] Thomas G Alexander. 1987. "From Rule of Thumb to Scientific Range Management: the Case of the Intermountain Region of the Forest Service." *The Western Historical Quarterly*, 18 (4): 409-428. Alexander states that those efforts did not succeed until the 1950s or 60s.

[19] Sayre. 2003. Page 12.

[20] Steen. 2004. Page 77.

[21] Roberts 1965. Page 6. The first USGS maps of Southern Arizona were made in 1916.

[22] These types of yearlong arrangements were known as "on-off" allotments.

[23] While snow fell at higher elevations in the Coronado National Forest, the terrain at elevation was much rougher and produced less forage. It was generally considered not usable acreage for grazing allotments.

[24] Edward Cliff Interview in Hartzer and Clary. 1981. Page 140.

[25] Allen 1989; Tucker. 1989. Interview with F Lee Kirby.

permittees own or have access to other grazing lands on which ranchers could run their cattle when they were not on forest range. This land – commensurate property – could be private, state leased, or public domain. Those whose lands fell within the forest were given first priority of use (Class A status), those with lands adjacent had second priority (Class B). Homesteaders were also given access to forest range. Those with 10 or less head of livestock could run their animals on the range for free. Small-scale ranchers with a few dozen head had access to communal allotments. Transient herders, usually sheep men, had the lowest priority.[26]

In 1906, the Forest Service imposed a forage fee calculated by the number of livestock grazing on forest land. But what if a significant portion of grazing animals had not been registered? Prior to the fee's initiation, Meagher wrote a letter to Pinchot requesting advice on how to account for excess (those belonging to a permittee beyond the permitted number) and trespass (unpermitted) stock.

> In almost all reserves there are a number of cattle and horses which graze without permit and by this class of stock I mean estrayed animals, stock belonging in the District distant from the Reserve. It is a common practice also for stockmen to give in a much smaller count to the County Assessor that he actually knows he owns, and we will have to same difficulty as the County Officer has in determining the actual number. Looking forward to this difficulty I thought it advisable to consult your office in due time and get your plans as to how to determine the actual number of stock ranging at large on the reserve ranges, where it is impossible to actually count the stock in a certain brand, shall I take the owner's count, or shall I make an estimate of the number from my knowledge of the stock business in this section of the range.[27]

Meagher's next task was to identify appropriate divisions by which grazing allotments – the permittees assigned grazing areas – could be delineated.[28] The boundaries of these allotments generally ran along natural divisions in the landscape such as creeks, range crests or spines. During the first two decades, no fences delimited access between allotments. While ranchers were assigned to certain regions, cattle moved freely, restricted only by their daily needs for water and forage. As a result, livestock often wandered great distances.[29] Boundaries between allotments, like those that separated the forests from private land or public domain, existed primarily on paper. Cattle belonging to stockmen without

[26] During the latter half of the 19th century, numerous sheep businesses operated in southern Arizona. As in many other ranges in the West, sheep operations were not looked upon kindly by cattle ranchers. By the end of the first decade of the 20th century, the Coronado National Forest was the center of the best cattle breeding country; most sheep operations had been bought out and there was little demand for sheep permits. In northern Arizona, numerous sheep operations continued to run animals on the forest ranges.

[27] Letter to Chief Forester Gifford Pinchot from Santa Catalina Forest Supervisor Thomas Meagher, July 29, 1905. Frederic Winn Papers in Tucker. 1989.

[28] Final delineations were not completed until 1912. US Forest Service. 1975. "Draft Environmental Statement, Santa Catalina Planning Unit, Coronado National Forest." Albuquerque NM: USDA, USFS, Southwestern Region. Page xxxiii.

[29] Interview with Ernesto León, April 7, 2000; 1989; Tucker. 1991. Interview with Gilbert Sykes. Pages 48-49; Potter. 1902.

grazing permits frequently wandered onto a forest allotment in trespass. If corralled during a round up, the owners would be charged a small fine, but only after their animals had consumed forage that had been purchased by the permitted rancher.

The number of cattle that Meagher assigned to each allotment during the early years of range management was merely a guess derived from the number of stock believed to be present in past years.[30]80 The real cattle number on any given range was highly questionable. Most ranchers had little idea of the actual quantity of stock within their possession. Animal counts occurred following roundups which, in the complicated terrain of the Coronado foothills, rarely gathered more than 75% of the number of head.[31] And, as Meagher already knew, ranchers rarely reported an accurate count of their livestock in order to evade paying higher taxes.[32]

No detailed range examinations of the forests or of the individual allotments were accomplished until a decade later. The carrying capacity – the number of cattle that could be supported by the available forage over the year – within each forest district and division was estimated by the number of animals that seemed to be supported at the time. Thus from the beginning of range administration, Supervisor Meagher was already severely hampered by his unfamiliarity with the history of his ranges, variations in forage quantity and quality, limited understanding of the real range condition and productivity potential, an absence of accurate cattle information, and an inability to control cattle movement.

At the end of each year, Meagher and his successors were expected to survey and assess the effects of grazing on all ranges at the end of the season.[33] The supervisors then filed an annual grazing report with the Washington office. These reports offer a remarkable, almost continuous picture of the local cattle industry. Supervisors recorded the year's weather patterns, managers' observations on range and cattle conditions, changes in physical improvements, livestock prices, and the financial condition of the permittees. In essence, these grazing reports became the first Forest Service efforts at land-use planning and land classification.[34] Meagher would inform the Chief Forester of the number of cattle present on the forest and propose a new total for the following year. The Chief Forester then granted Meagher a grazing "allowance" – an approval of the requested number of animals allowed on that forest. In 1908, eight regional offices were established as intermediaries between the local and Washington levels.[35] The Southwest Region was assigned to oversee all of the national forests in New Mexico and Arizona.[36] After that year,

[30]Baker *et al.* 1988. Page 95; Ames. 1967. As it turned out, those initial guesses greatly underestimated the actual number on the ranges.

[31]Roberts. 1963. Pages 120-121.

[32]James Jay Antle. 1992. "Grazing on Arizona's National Forests, 1891 – 1960: an Environmental History." Master's Thesis. Arizona State University, Phoenix, Arizona. Pages 68-69; Tucker. 1989. Interview with F Lee Kirby; Tucker. 1991. Interview with Gilbert Sykes; Roberts. 1963. Pages 66-67.

[33]Baker *et al.* 1988. Pages 96-97. Wilkinson and Anderson. 1987. Page 105.

[34]Rowley. 1985. Page 74.

[35]Between 1905 and 1930 all of the eight USFS subunits were called Districts; later their titles were changed to Regions. For purposes of clarity so that these early units are not confused with individual grazing districts (discrete areas containing a limited number of allotments within a forest), District 3 will be referred to as Region 3.

[36]At different times, the Region included portions of other states in the Southwest as well but most of the southwestern forests lay in either Arizona or New Mexico. See Figure 3 page 26 and Figure 4 page 35 in Baker

the supervisor submitted his request through the regional officer who then consolidated all proposed livestock numbers under the region's request. Thus the determination of all stocking numbers and estimates of next year's carrying capacity originated with each forest supervisor but were checked and approved by regional and Washington administrators.[37]

The primary purpose of establishing southern Arizona forests was to impose a management system that would bring overgrazing of the ranges under control. Despite the best efforts of managers and supervisors, that range control did not come to pass until decades later. The first 10 years primarily focused on establishing the administration and management procedures such as identifying range users, issuing permits, and collecting grazing fees.[38]

3.3 Management Challenges – Increasing Demand and Full Utilization

Theodore Roosevelt, mindful of the long history of conflict between struggling homesteaders and cattle barons, was a strong supporter in Thomas Jefferson's ideal American – the yeoman farmer. He approved of the Forest Service's policy to place the homesteader at a higher preference for forage range than the large cattle operator.[39] Congress too wished to attract new settlers to forested lands when it passed the Forest Homestead Act in 1906.[40] Small stockmen quickly recognized that the real asset of a forest homestead claim was not its 160 acres of rock-strewn farmland but its assured access to forest range. F Lee Kirby, a supervisor in the Southwest region, commented on the difficulty in dealing with forest homesteaders.

> [I]t was very obvious that many people wanted to get these homesteads in order to get control of the land for some purpose other than farming. The main thing is that the early-day policy had an intent to favor of the small operator. Many people obtained new beginner grazing permits on the basis of having a homestead; if they didn't have a homestead they couldn't get a permit; they couldn't qualify. That had quite a disrupting effect, too.[41]

Demand for forest range now vastly exceeded its supply. Applicants for homestead claims within the national forests peaked between 1909 and 1915.[42] Homesteaders, small-scale ranchers, and larger stock operators all wanted access to forest ranges. During this decade, the Forest Service was under constant pressure to open its already full ranges to qualified applicants.

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et al. 1988.

[37] Alexander. 1987.

[38] Roberts. 1963. Page 115. Ames. 1967.

[39] Rowley. 1985. Pages 61-62. Roberts. 1963. Pages 45-46.

[40] Gates. 1968. Pages 512-513.

[41] Tucker. 1989. Interview with F Lee Kirby.

[42] Patrick C West. 1982. *Natural Resource Bureaucracy and Rural Poverty: a Study in the Political Sociology of Natural Resources.* University of Michigan, School of Natural Resources, Natural Resources Sociology Research Lab, Monograph #2. Page 51.

Livestock numbers now permitted to enter forest ranges did not decline but actually rose substantially. On the Rincon district, livestock counts increased from 3000 cattle and 1000 goats in 1907 to 4500 cattle and 2000 goats in 1910.[43] On forest ranges in Arizona, cattle numbers increased from 235,946 in 1909 to 286,252 in 1916.[44] Livestock carried on all US forest ranges during the first decade increased by 50%.[45] There is little evidence that any reductions in the overall numbers of livestock were actually accomplished during these years. Any reductions in trespass stock that might have been made during this era were overwhelmed by the expanding numbers of approved permittees and their livestock.[46]

Any observer of such data would question why the promised control of the ranges did not come to pass; indeed why did such substantial increases continue. Historian Nancy Langston has suggested that the USFS, by declaring itself a supporter and protector of the homesteader and his opportunity to equal access of public resources, set itself up for long-term failure in its range management program.[47] In its desire for fairness and support for the homesteader, the Forest Service instituted a policy of redistribution. As more homesteaders and settlers with their livestock made claims inside and adjacent to forest ranges, forest administrators believed that they were obligated to provide additional forage. Permitted stock numbers belonging to larger operators would be cut in order to assure sufficient grazing resources for small operators. Paul Roberts, a range examiner in the Southwest, describes how painful for supervisors to follow this policy of redistribution.

> The job of apportioning grazing privileges and providing range for even small numbers of livestock for new settlers, of necessity through reductions in permitted numbers of larger owners, was for the most part a grim business and not without heartaches for both the stockmen and forest officials."[48]

In reality, supervisors were reluctant to make few if any cuts to the larger operators – especially when those operators were the strongest advocates and supporters of the newly established agency. By 1912, Albert Potter realized that providing forest homesteaders with land and forage was creating increasing instability among forest users. Redistribution reductions would never be able to provide sufficient forage for all homesteaders and new applicants.[49] Rather than limiting new applications, forest supervisors instead turned to administrative solutions to overstocking; they focused on directing permittees and their livestock to specified areas of range in order to maximize animal distribution and forage utilization. Some forest acreage was known to be underutilized or not accessible. If cattle

[43] National Archives at College Park, College Park MD. Records of the US Forest Service, Record Group 95, Division of Range Management, General Correspondence 1905-1952, Grazing Allowances, Region 3, 1907-1912, Coronado National Forest Allowances, Preliminary Inventory 18, Entry 63, Box 10. Hereafter NARA MD RG 95 DRM R3 CNF 1907-12. PI 18 E 63 B 10.

[44] Baker *et al.* 1988. Page 98.

[45] Rowley. 1985. Page 93.

[46] Part of that increase in permitted cattle came from better counting techniques by more experienced rangers. Rangers, when they learned the real number of cattle a permittee was running, would simply add the increase to his permit and charge a higher fee.

[47] Nancy Langston. 1995. *Forest Dreams, Forest Nightmares. The Paradox of Old Growth in the Inland West.* Seattle: University of Washington Press. Pages 205, 209-210; Rowley. 1985. Pages 63, 94.

[48] Roberts. 1965. Page 117.

[49] Roberts. 1965. Pages 117-119.

could be enticed into those areas, the Forest Service could accommodate the new applicants.

Supervisors were also expected to adhere to another range management policy – that of full utilization. In 1905, Albert Potter and other grazing experts had agreed with livestock association representatives "that the forage resources of the national forests would be used to the fullest extent consistent with good management..."[50] Both stockmen and range experts knew that overgrazing contributed to the degradation of the ranges. But Potter strongly believed that under sound management procedures such as improved stock handling and distribution of animals, forest ranges could provide more forage without resorting to reductions in animal numbers.[51] Full forage utilization was part of that management planning.

In his memoirs, John Clouston, a range specialist on the Umatilla National Forest in Oregon, commented on the Forest Service's early attitude towards forage utilization. "Not only this region but the whole Forest Service, was permeated with misconceptions of the degree of use under which forage plants could survive."[52] Stockmen and range managers believed that livestock could consume 100% of the above-ground vegetation each year without causing long-term damage to individual plants and the range as a whole. The root systems of forage plants held all stored nutrients; as long as those roots remained intact, heavily grazed plants would still regrow the same amount of forage in the following season.[53] Like Clouston, others later came to the same conclusion.

> [W]e didn't really know how much grazing some of our ranges could stand. There was overoptimism about how much utilization plants could absorb and still retain their vigor. By the mid-1930s we knew a great deal more about grazing capacity than we'd ever known before. The knowledge has increased many fold even since then.[54]

It was the responsibility of each supervisor to make sure that forage on each range was fully utilized. If available forage was not applied toward livestock production, supervisors were expected to increase permitted stock numbers and alter the distribution of those animals so that all ranges were equally grazed. Regional memoranda repeatedly exhorted supervisors to build drift fences and develop more watering sites in order to improve distribution and utilization.[55] Thus not only were more stock permitted to graze on forest ranges during Coronado National Forest's first decade but those animals were encouraged to remove all available forage each year.

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[50] Roberts. 1963. Page 44.

[51] *ibid.* Page 98.

[52] Clouston is quoted in Langston. 1995. Page 216.

[53] *ibid.* Even scientists at the Santa Rita Experimental Range stocked pastures to achieve 100% utilization in the 1920s and early 30s. See Ruyle. 2003. Page 42.

[54] Edward Cliff Interview in Hartzer and Clary. 1981. Page 148.

[55] Memoranda from Regional Forest Officers to Coronado National Forest Supervisors, 1912, 1913, 1914. National Archives at College Park, College Park MD. Records of the US Forest Service, Record Group 95, Division of Range Management, General Correspondence 1905-1952, Region 3, Working Plans – Grazing, Coronado National Forest, 1912-18, Preliminary Inventory 18, Entry 63, Box 174. Hereafter NARA MD RG 95 DRM R3 CNF 1912-18. PI 18 E 63 B 174.

During the early 1910s, Forest Service articles and publications trumpeted the success of its range management policies. Administrators congratulated themselves that their actions had secured protected range for small owners, improved the distribution of cattle on allocated allotments, and, as shown by its growing stock numbers, had actually increased the carrying capacity of the range – between 15-30%![56] In 1913, Albert Potter asserted at a conference of forest administrators that, "with the assistance and cooperation of the stockmen a system of range management has been built up, under which a vegetative cover of valuable forage plants is rapidly extending over denuded lands and replacing worthless weeds. The carrying capacity of the forests is increasing each year. "[I]n no instance has a change in method advocated by the Forest Service failed to justify itself by increased returns to the stockgrower."[57] Arthur Sampson likewise effused over the Forest Service's apparent progress. He hypothesized, "[I]f one may judge from the remarkable advancement made in a little more than a decade, the restoration of the [forest] lands to their original productiveness is only a matter of time."[58]

Clearly forest ranges were carrying more and more animals. This "increasing productivity" had been offered to stockmen as a future benefit that would follow from proper management, an inducement to support the Forest Service's proposed range management program. Without this apparent increasing capacity on its ranges, the Forest Service would have lost the support of its supporters and constituents. This false sense of accomplishment deluded the Forest Service into believing that its management actions had significantly changed the calculus of forage consumption on its ranges. Unbeknownst to management proponents, the Southwest was enjoying the results of a relatively wet decade.[59] In reality, ranges simply carried an above-average quantity of forage.

3.4 Estimating Carrying Capacity – Easy to Describe, Hard to Get It Right

In 1908, Albert Potter penned instructions for the Forest Service's Use Book on how to balance annual stock numbers with the year's forage production – estimating carrying capacity. An accurate determination required close observation of the land, its water resources, the different types of forage, grass and forb species, climate conditions, stock type and methods of handling, and last, but not least, a "consideration of the interests involved."[60] Thus the annual assessment of a particular range was not just a measurement of physical and biological resources. It was also complicated by those political factors that would arise from any recommended changes in stocking rates. Potter was tactfully warning range managers that deviation from past calculations would probably be challenged by users.

[56] Albert Potter. 1914 "Improvements in Range Conditions." *American Forestry*, 20: 1910-1917; RR Hill. 1913; Anonymous. 1914 "Grazing for 11 Million: Livestock Increases on National Forests." *American Forestry*, 20: 436-437; Lauver. 1938. Page 164; Gates 1968. Page 511; Langston. 1995. Page 205.

[57] Roberts. 1963. Page 113.

[58] Sampson. 1923. Page 28.

[59] Hadley. 2001. Page 127; Mitchel P McClaran. 2003. "A Century of Vegetation Change on the Santa Rita Experimental Range." In Mitchel P McClaran et al. (Technical coordinators) *Santa Rita Experimental Range: 100 Years (1903 to 2003) of Accomplishments and Contributions.* RMRS-P-30. Ogden Utah: US Department of Agriculture, Forest Service, Rocky Mountain Research Station, 16-33. Page 18.

[60] Rowley. 1985. Pages 69-72, quote from page 69.

In fairness to Albert Potter, he understood that a carrying capacity estimate was not a static datum. From his long years as a sheep and cattle rancher, he had experienced just how much forage production could vary from year to year as it responded to drought, freezing temperatures, and delayed precipitation.[61] Nonetheless his, as well as other forest administrators', statements to the public and to forest rangers seemed to suggest otherwise.

While Forest Service publicity expounded on the benefits of range management in the Southwest, supervisors were still challenged by varying climatic conditions and the absence of essential range production information. Forest rangers were expected to investigate grazing use on each range annually in order to improve cattle distribution, make recommendations to permittees on additions of drift fences, salting sites, and water development, and confirm that the estimated carrying capacities were still appropriate.[62] However estimating the carrying capacity of each range was beyond the skill level of many employees. Forest rangers did not have the time to evaluate each range individually. Nor did they have the training and or long-term experience in the Southwest to accurately read the changes occurring in those desert grassland landscapes. Many rangers had just joined the agency and recently been assigned to the Southwest. It is likely that the grasslands of close-cropped plants that rangers frequently saw before them were interpreted as a normal ecological state.[63]

By mid-1910s, the early guesses of how many cattle southwestern ranges could carry were now seen to be overly optimistic. From 1914 to 1916, Supervisor Selkirk noted in his annual grazing reports that more areas of the Coronado were becoming overgrazed and needed multiple seasons of rest. He was, however, unwilling to admit that the ranges were depleted or that permanent damage was being done. Nonetheless, he repeatedly pressed his supervisor, Regional Forester Arthur Ringland, to assign the range survey team to assess Coronado ranges and develop more accurate estimates for each area.[64]

In addition to the lack of information, CNF administrators continued to be deluged with requests for homestead sites on forest land. Now during this second decade, the number of those claims was reaching an all-time high. Acting Regional Forester Kavanagh wrote to the Chief Forester in support of Selkirk's request for more accurate range information.

> The administration of the Coronado Forest is confronted at present with the necessity of providing for quite a number of new settlers who are filing and agricultural lands within and adjacent to the forest. Since the available range is already in demand, it is urgent that the supervisor have accurate data on the carrying capacity of the different forage types, the range that may be used to a

[61] Roberts. 1963. Page 108.

[62] Baker at al. 1988. Pages 96-97; RR Hill. 1913; Coronado National Forest Annual Grazing Reports and Working Plans for Years 1915, 1916, 1917. NARA MD RG 95 DRM R3 CNF 1912-18. PI 18 E 63 B 174.

[63] Langston. 1999. Page 211.

[64] Coronado National Forest Supervisor Robert J Selkirk. Annual Grazing Reports and Working Plans. NARA MD RG 95 DRM R3 CNF 1912-18. PI 18 E 63 B 174.

> fuller degree, and changes that should be made to secure full and even use of the forage.[65]

Under the newly established Office of Grazing, Director James Jardine initiated a program to survey ranges throughout the national forests. The range reconnaissance was designed to collect descriptive physical and biological information on each range and evaluate its condition. The larger purpose of the surveys was to find a simple and reliable method to determine the carrying capacity of each range and track whether its condition was improving or deteriorating.[66] The Forest Service recognized that the detailed range reconnaissance could not be accomplished by the average ranger.[67] Each reconnaissance required months of work and significant expertise to evaluate and quantify the various forage and range elements. In 1911, the Forest Service assembled its first reconnaissance team to evaluate the Coconino National Forest. However, with fewer than 40 full-time examiners employed by the agency, range studies at all national forests proceeded very slowly.[68] In 1916, the first range reconnaissance surveys were completed on the Coronado National Forest and covered the Huachuca, Tumacacori, and Santa Rita districts.[69] Others were planned for the rest of Coronado National Forest ranges but the entry of the United States into World War I brought all survey efforts to halt for many years.[70]

The data gathered during these surveys was intended to provide supervisors with a legitimate justification to reduce stocking levels on many ranges. However not all supervisors were willing to confront the social and political consequences that often followed stock reductions.[71] Supervisors lived within the same communities as their permittees. They depended upon those individuals for mutual assistance both on the forest and off. Wealthy stock owners with connections to powerful congressional representatives could make trouble for supervisors as well as regional and Washington administrators.[72]

Paul Roberts, one of those early range examiners, admitted years later that these first carrying capacity estimates, like the range capacity guesses before, had been overly generous especially for the arid southwestern ranges.[73]

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[65] Acting Regional Forester EN Kavanagh to Chief Forester Henry Graves, January 12, 1916. Annual Working Plan for 1916. NARA MD RG 95 DRM R3 CNF 1912-1918. PI 18 E 63 B 174.

[66] Rowley. 1984.

[67] Roberts. 1963. Pages 115-116; Review of Grazing Reconnaissance Conference in District Forester's Office, December 9, 1914. National Archives at College Park, College Park MD. Records of the US Forest Service, Record Group 95, Division of Range Management, General Correspondence 1905-1952, Grazing Studies Reconnaissance, Region 3, 1910-1915, Preliminary Inventory 18, Entry 63, Box 148. Hereafter NARA MD RG 95 DRM R3 1910-1915. PI 18 E 63 B 148.

[68] Rowley. 1985. Page 111. For further discussions of planning range reconnaissance surveys in the Southwest, see extensive correspondence in NARA MD RG 95 DRM R3 1910-1915. PI 18 E 63 B 148.

[69] Roberts. 1965. Page 23.

[70] Roberts. 1963. Pages 115-116.

[71] Baker et al 1988. Page 96; Antle. 1992. Page 75; Tucker. 1991. Interview with Roger Morris.

[72] Alexander. 1987; Rowley. 1984. Page 61.

[73] Roberts. 1963. Page 116.

4.1 Interference from National and World Events in Range Management and Planning

The advent of World War I in April 1917 brought even more pressures on the US Forest Service and its young program of range management. For the next two years, the demand for all meat products increased dramatically. American troops fighting abroad and later European populations devastated by conflict required most beef supplies to be redirected to supporting that war effort. The Forest Service was requested to do its part by increasing the livestock production on federal ranges. In July, the Arizona Daily Star reported that "grazing areas of the forests will be extended to the narrowest margin of conservation, and, if possible, room will be made for more than double the head of cattle feeding on the forest reserves."[1] The Secretary of Agriculture issued instructions to waive grazing permit regulations. Permitted stockmen were allowed to increase their herds dramatically. The Forest Service granted additional range access to many new permittees and their animals. These extra stock would be carried under temporary permits that, in theory, would last until the end of the war.[2] Range surveyors combed the forests for areas of extra forage.[3] The federal government made low-cost loans available to ranchers to buy more stock. At the same time, trespass stock on forest lands also increased dramatically. Supervisors knew that they were exceeding even the optimistic estimates of grazing capacity.[4] Nonetheless administrators argued that their forests could tolerate this increased load since the forage productivity on the ranges was still rising.[5]

When the signing of the armistice ended the war, demand for beef dropped precipitously and prices followed. Ranchers could not sell their cattle and had no place to keep them other than on forest range land. In 1919, 367,000 cattle and horses were held on Arizona national forests, an increase of almost 100,000 more animals than were present five years earlier.[6] Coronado National Forest carried more ranchers (100 permittees) and carried more animals (15,000 cattle) on its ranges during the next few years than ever before

[1] Arizona Daily Star, July 11, 1917 in Tucker. 1991.

[2] Rowley. 1985. Page 112-114; Roberts. 1963. Page 119.

[3] Roberts. 1965. Page 37.

[4] Roberts. 1963. Page 119; Daniel R Mortensen. 1978 "The Deterioration of Forest Grazing Lands: a Wider Context for the Effects of World War I." Journal of *Forest History*, October: 224-225.

[5] Rowley. 1985. Page 115; records from the Bureau of Agricultural Economics state that over 600,000 head of cattle were added to all of Arizona ranges during the war years. See Antle. 1992. Page 88.

[6] Baker *et al.* 1988. Page 98.

or since.[7] Forest supervisors were reluctant to complicate the ranchers' misery by forcing sales of unwanted stock. Instead they allowed excess animals to remain under temporary permits.[8] The severe drought in 1920-1921, the beef market's collapse, and outstanding pre-war loans forced many small stockmen to sell their homesteads and ranch lands to larger and better financed operators.[9]

National forest administrators also struggled with the postwar consequences. The world crisis together with the American patriotic response trapped forest managers in an administrative quandary. Ranges were overstocked. A multiyear depression kept both excess stock and annual natural increase on the land consuming remnant forage already damaged by drought. Yet while the Forest Service were protecting their permittees temporarily, the resources that supported them were being further degraded. Supervisor Calkins in 1922 estimated that 75,000 acres in the Coronado National Forests were badly overgrazed but "without serious damage." By delaying stock reductions, the Forest Service contributed significantly to the long-term degradation of its ranges.[10] Forest historian Paul Roberts reflected on how much those decisions set range management back. "But the War came along and the War disrupted everything. If it hadn't been for the War, I think we'd have been pretty well off by the middle of the Twenties."[11]

4.2 Industry Pushback to Forest Service Cuts and Fees

By 1924, the Southwest Region was beginning to recover. It had eliminated most additional stock under temporary permit and enforced significant cuts in livestock numbers. Coronado National Forest livestock under permit dropped by 27% from 55,000 to less than 40,000; the number of permittees correspondingly decreased 32% from 355 to 240. On the Rincon district the estimated carrying capacity was 4000 head per year. Its stock numbers were still too high at 4052. Supervisor Hugh Calkins believed that if he reduced livestock numbers to the "conservative" level of 3800, the ranges might begin to recover. Calkins also struggled with the added forage loss to trespass stock. Most of the district's boundaries remained unfenced. With few funds available from the Region or Washington office, Calkins pressed his permittees to invest in their own stock water development and fence

[7] Coronado National Forest Supervisor Hugh Calkins, November 11, 1922. Annual Working Plan for 1923. National Archives at College Park, College Park MD. Records of the US Forest Service, Record Group 95, Division of Range Management, General Correspondence 1905-1952, Region 3, Grazing Management – Annual Reports 1919-23, Preliminary Inventory 18, Entry 63, Box 402. Hereafter NARA MD RG 95 DRM R3 AR 1919-23. PI 18 E 63 B 402

[8] Coronado National Forest Grazing Records. NARA Riverside RG95 Grazing Records; Roberts. 1963. Pages 121-122.

[9] Pinto. 2007; Coronado National Forest Supervisor Hugh Calkins to Regional Forester Frank Pooler, October 30, 1923. Working Plan for 1924 and November 12, 1924. Working Plan for 1925. NARA MD RG 95 DRM R3 AR 1919-23. PI 18 E 63 B 402 and National Archives at College Park, College Park MD. Records of the US Forest Service, Record Group 95, Division of Range Management, General Correspondence 1905-1952, Region 3, Grazing Management – Annual Reports 1924-28, Preliminary Inventory 18, Entry 63, Box 401. Hereafter NARA MD RG 95 DRM R3 AR 1924-28. PI 18 E 63 B 401.

[10] Roberts. 1963. Page 122; Coronado National Forest Supervisor Hugh Calkins, November 11, 1922. Annual Working Plan for 1923. NARA MD RG 95 DRM R3 AR 1919-23. PI 18 E 63 B 402.

[11] Tucker. 1989. Interview with Paul H Roberts.

additions.[12]

Following on the dual catastrophes of drought and depression, the added costs for improvements and cuts to stock numbers angered many western stockmen. In 1925, Fen S Hildreth, spokesman for the National Forest Permittees' Association, wrote to President Calvin Coolidge and Secretary of Agriculture William Jardine to protest a proposed second round of cuts. Frank Pooler had assumed the position of regional forester at the nadir of the depression. Now that the economy was improving, Pooler wished to pursue the needed reductions and eliminate 37,000 cattle and 77,000 sheep (approximately 29% of stocking levels) from Southwest ranges. When Pooler defended the proposed cuts as "being in the interest of forest range and watershed conservation," Hildreth called Pooler's reductions "absurd;" he disputed "that the requirement is necessary or that a real emergency exists." Hildreth warned that such cuts, if effected, would ruin the grazing industry in the Southwest. "If the outfits are to be continually reduced in number and that reduction is so great that it places the herds below an economic unit, ... then they might as well be removed from the forests." Secretary Jardine responded by sending Chief Forester William Greeley to arbitrate the disagreement.[13] The result of Greeley's visit was that stock numbers in the region remained constant for the remainder of the 10-year term.[14]

The US Forest Service had consistently set its grazing fees well below prices charged on state and private grazing lands. Under pressure from Congress to increase its revenues and bring fees more in line with commercial prices, the Forest Service now proposed to raise fees on its stockmen. Livestock associations and western congressional representatives loudly challenged that proposal. Karen Merrill argues that the political explosion that followed the Forest Service's proposed fee increase had less to do with actual charges for cattle forage. Rather the conflict stemmed from a growing division between the livestock associations and the agency over who should control national forest lands and who should define the private property rights so closely associated with grazing on those lands.[15]

The Forest Service's signature policy of giving preference to those possessing commensurate property – sufficient lands to support cattle when they were not grazing forest range – inevitably linked the privilege of that grazing to the private ranch. The Forest Service tied its permit even more closely to the ranch by agreeing to transfer that permit to every successive purchaser of the ranch. Both banks and ranchers calculated the market value of that permit from allowed stock numbers and forage quality and added that value to the sale price of the ranch. In 1916, forest grazing privileges were known to increase the sale

[12]Coronado National Forest Supervisor Hugh Calkins to Regional Forester Frank Pooler, October 30, 1923. Annual Working Plan for 1924. NARA MD RG 95 DRM R3 AR 1919-23. PI 18 E 63 B 402.

[13]Letter from Fen S Hildreth, Secretary of the National Forest Permittees' Association to Secretary of Agriculture William Jardine, February 12, 1925. National Archives at College Park, College Park MD. Records of the US Forest Service, Record Group 95, Grazing Cooperation Region 3, General Cooperation National Forest Permittees Association, 1923-1925. Preliminary Inventory 18, Entry 63, Box 199.

[14]Regional Forester Philip Woodhead to Chief Forester Lyle Watts, January 28, 1946. "Annual Grazing Management Report." Included graph showing comparison of estimated grazing capacities and cattle numbers allowed to graze in Region 3 from 1926-1946. National Archives at College Park, College Park MD. Records of the US Forest Service, Record Group 95, Division of Range Management, General Correspondence 1905-1952, Region 3, Grazing Management – Annual Reports 1945-48, Preliminary Inventory 18, Entry 63, Box 399. Hereafter NARA MD RG 95 DRM R3 AR 1945-48. PI 18 E 63 B 399.

[15]Merrill. 2002. Chapter 3. Pages 67-102.

values of associated ranches upwards of 33%.[16] From the outset of the Forest Service permitting system, ranchers believed that they "owned" their permits and their allotments, despite the agency's continued insistence that that their permit and its grazing access was a revocable privilege and carried no guaranteed property right.[17]

The agency's collective policies and actions were affecting the stockman's perceived value of his permit and his home ranch in three ways. First, because of its policy to provide equal access to range for new homesteaders, the Forest Service imposed a 10% reduction in permitted stock with each ranch sale and transfer to a new owner. Each transfer reduction lowered the value of the stockman's permit and thus his ranch. Second, the agency understood that it had the legal authority to protect its public lands from overuse. With each recalculation of the carrying capacity of an allotment, the agency reduced a rancher's stocking numbers and his earning power. Third, the Forest Service believed that it possessed the administrative authority to set grazing fees and recapture the value of public forage. By increasing livestock fees, the agency raised the rancher's annual costs on forest lands. Each agency decision unintentionally decreased the property value of the associated ranchlands and operation. During the early years of World War I when prices and demand for beef were both high, the stockmen had been willing to accept a small fee increase. But now under continuing conditions of economic and environmental stress, when the Forest Service proposed a much larger fee increase, the livestock industry rebelled.

In 1925, the Senate Subcommittee on Public Lands led by Robert Stanfield of Oregon and other western senators opened an investigation allegedly into the fee controversy. The investigation rapidly expanded into a detailed examination of Forest Service administration and its grazing policies. The public lands committee traveled throughout Western states holding meetings with stockmen and generating substantial negative publicity against Forest Service policies. The committee and livestock association leaders demanded numerous changes that would reduce the authority of the agency to manage the national forests, increase the ability of the stockmen to influence and determine grazing regulations, and grant permittees significant and permanent rights to grazing access.[18] After a year of traveling, Stanfield finally introduced a grazing bill in 1926. The Stanfield bill proposed to recognize grazing as an equal and legitimate use of national forest lands and give ranchers authority to determine levels of stocking and grazing fees. It would have created significant property rights in grazing permits by making them freely transferable on open markets and directly inheritable from the permittees.[19] While the Stanfield bill was never enacted, stockmen did gain concessions to some grazing policies. Secretary of Agriculture William Jardine extended the 5-year grazing permits to a 10-year duration and minimized any new distribution of grazing preferences to create a more stable business environment for current permit holders.[20]

For the first time, livestock associations had collectively challenged Forest Service ad-

[16] Rowley. 1985. Page 90.

[17] Rowley. 1985. Page 89. In *Light v. United States* 220 US 523 (1911), the Supreme Court agreed with the US Forest Service that permit holders had no vested right to the use of public lands. See Wilkinson and Anderson. 1987. 105-106.

[18] Merrill. 2002. Pages 89-90; Rowley. 1985. Page 129.

[19] West. 1982. Page 63; Merrill. 2002. Page 99.

[20] Merrill. 2002. Page 99.

ministration policies. After struggling with economic instability and drought, stockmen rebelled against what they felt to be arbitrary and authoritarian decisions that further threatened their livelihood.[21] The industry learned that with backing of its political representatives, it could make a federal agency bend to its will. It would take that same strategy of manipulation and use it later against the Forest Service and the new Grazing Service in 1940.

4.3 Shifting Constituencies and Range Investment

During the second half of the 1920s, there was a distinct shift in the Forest Service's attitude toward its two types of permittees. While it had historically provided support and opportunity for homesteaders, the agency now realized that providing small agricultural sites and assuring them sufficient forage was an administrative nightmare on a fully stocked forest. Community allotments were often established on larger ranges where livestock belonging to numerous small operators or homesteaders could be grazed together. The arrangement was useful when demand for allotments was great and where natural divisions on rangelands were few. This communal form of usage was based on the early Spanish tradition of the "ejido." However, management of these allotments had significant disadvantages. Consensus among the numerous stock owners was difficult to achieve – a constant headache for range managers. Few owners were willing to invest in improvements when the benefits devolved to so many. Community efforts to place salt on the range, construct drift fences, and develop water sources were rare. Control of animals, especially for improving breed stock, was almost impossible.[22] In 1923, Coronado National Forest began to eliminate these communal arrangements. Administrators preferred to divide the range into smaller components and assign allotments to individual large stock operators.[23]

Supervisors preferred to deal with a smaller number of the large stock operators. In the eyes of forest managers, these stockman were more educated, better funded, more responsive to Forest Service regulations, and more interested in managing their livestock business efficiently. Chief of Grazing Will Barnes in 1921 referred to both types of permittees and made clear his preference in a speech before the National Wool Growers Association.

> Primarily, of course, the struggling settler should be given every opportunity to build himself up in livestock as an additional source of income to his little farm. I am sure we would be going against the general public sentiment in this manner if we refused to recognize the claims of these men up to a certain limit . . . It goes without saying that the large owners are more interested in their stock and the use of the range, and give their stock far closer supervision

[21] Merrill. 2002. Page 100.

[22] Allen. 1989.

[23] Saguaro National Monument Grazing Records. Western Archaeological and Conservation Center (WACC), Tucson, Arizona; Allen 1989; Pinto. 2007; CK Cooperrider and RW Hussey. 1924. "Range Appraisal Report for the Coronado National Forest." Coronado National Forest Archives, Coronado National Forest Office, Tucson, Arizona. Unlike most of the small stock operators associated with the Rincon District who were Hispanic or Mexican in origin, all of the permittees granted individual allotments were Anglo-American.

> than do the little men, obey our regulations much more willingly, and in every way make what may be considered ideal users of National Forest range.[24]

Chief Forester William Greeley, two years later, was even more direct in his support for large operators. In order to improve efficiency of management and production on forest ranges, Greeley saw the established ranching enterprise as a critical component in his developing business model. The "efficient live-stock unit – as a business enterprise – should, I believe, become more and more the key-point in the grazing management of the national forests, including the ranch property and equipment needed to supply public range allotments. The government should encourage such well-established and well-equipped livestock enterprises."[25]

Part of the Forest Service's effort to support and stabilize these larger operations came in the form of the new 10-year permit. The extended permit, like many other changes in forest policy, created both benefits and difficulties for the Forest Service. The stockmen received a guaranteed use of range for a known number of animals for a specified duration. As a result, stockmen were more likely to obtain loans on range investments and were more willing to invest their labor and money in physical improvements. Considered highly desirable by stockmen for their predictability, the Forest Service used the term permit as incentive for stockmen to fulfill needed improvements or changes in range management. In the absence of those expected investments, stockmen would only be offered a yearly permit. For the Forest Service, the term permits simplified administration in the field and in the office.[26] Grazing adjustments in general and stocking numbers in particular could now be directed to the more precise level of the individual allotment rather than across an entire range.[27] Permittees could also now be held accountable for necessary improvements such as fencing and water development and, more importantly, for the condition of the range on their allotment.

But the term permits created later problems in perceptions of property rights among the stockmen and made future administrative changes more difficult. Sociologist Patrick West suggests that by giving greater longevity to grazing permits, the agency encouraged stockmen to believe that their temporary privilege had become a permanent right of access to public resources. The extended permit made it less likely that the agency could impose redistributions in stocking numbers or allotment readjustments for newcomers.[28] The lack of flexibility for redistribution shortly became much more serious with the onset of the Great Depression and an ever-growing demand for range access.

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[24] Quoted in Merrill. 2002. Page 71.

[25] Quoted in Merrill. 2002. Page 80.

[26] Baker *et al.* 1988. Pages 96-97; Coronado National Forest Supervisor Fred Winn to Regional Forester Frank Pooler, January 4, 1930. Coronado National Forest Annual Grazing Report. National Archives at College Park, College Park MD. Records of the US Forest Service, Record Group 95, Division of Range Management, General Correspondence 1905-1952, Region 3, Grazing Management – Annual Reports 1924-28, Preliminary Inventory 18, Entry 63, Box 401. Hereafter NARA MD RG 95 DRM R3 AR 1924-28. PI 18 E 63 B 401.

[27] Regional Forester Frank Pooler to Chief Forester Robert Y Stuart, February 16, 1932. Region 3 Grazing Report for 1931. National Archives at College Park, College Park MD. Records of the US Forest Service, Record Group 95, Division of Range Management, General Correspondence 1905-1952, Region 3, Grazing Management – Annual Reports 1929-44, Preliminary Inventory 18, Entry 63, Box 400. Hereafter NARA MD RG 95 DRM R3 AR 1929-44. PI 18 E 63 B 400.

[28] West. 1982. Page 60; Merrill. 2002. Page 80.

Unlike forest administrators, Chief Forester William Greeley was reluctant to allow permittees to build range improvements. He saw private construction of improvements as creating a sense of ownership over public lands – much like private improvements on a homestead imparted title to a claim on the public domain.[29] Supervisors, however, saw range improvements in a very different light. Supervisors believed that fence construction was the single most important investment to restore range quality, improve stock distribution, and reduce trespass across forest boundaries and between allotments. Without federal funding to develop improvements, supervisors chose to pressure stockmen with better finances and more available labor to build fences on "their" allotments. In order to reduce overgrazing of the ranges within their districts, supervisors needed to persuade permittees that they had a legitimate self interest in that long-term effort. Supporting that perception of range ownership by stockmen was an essential element in the supervisor's toolbox to enhance good management. Commenting on the many miles of boundary, division and allotment fences constructed during the 1927 season, Regional Forester Frank Pooler proudly stated, "Many of our permittees view their range as a permanent basis for their operations and [recognize] that the benefits of better range management will accrue to themselves."[30]

4.4 Renewed Efforts – Range Assessments and Range Management Control

In 1925, Frederic Winn became the new supervisor of Coronado National Forest. Winn was unlike most previous foresters – debonair, educated, painter, and writer – who nonetheless was a consummate diplomat and communed easily with stockmen. He joined the Southwest Region in 1907 and served as supervisor of the Apache and Gila Forests before moving to the Coronado.[31]

Winn was different from his Coronado predecessors. He regularly questioned traditionally held beliefs by managers. He knew that even when estimated carrying capacities were regularly recalculated, they were unlikely to be accurate for any length of time. Estimations did not account for unanticipated temperature and precipitation patterns or economic events. Winn believed that the Southwest might be undergoing change in its climate patterns and that this change could alter the range carrying capacity. He recognized that stocking rates and the assumptions in those calculations did not guarantee appropriate utilization across forest ranges. As a result, Supervisor Winn was much more cautious when stocking his ranges. He consistently maintained a large buffer between his approved allowances and the numbers of livestock he permitted on Coronado forests. Despite the fact that many of his year-long allotments were the most difficult to properly stock, Coronado ranges were consistently judged to be in better condition than almost all other Southwest region forests.

During the second half of the 1920s, stocking numbers continued to fall on the Coronado National Forest to 38,000 by 1927. However 10% of Coronado ranges were still under permitted nonuse – a status for degraded ranges where most or all cattle were removed for

[29] Merrill. 2002. Page 79.

[30] Regional Forester Frank Pooler to Chief Forester William Greeley, No date Available. Region 3 Grazing Report for 1927. NARA MD RG 95 DRM R3 AR 1924-28. PI 18 E 63 B 401.

[31] Baker *et al.* Pages 50-51; Roberts. 1965. Page 38.

a number of years to allow restoration of vegetation.[32] Many areas were overgrazed but others saw too little use. Winn saw cattle distribution as the major problem confronting management of Coronado ranges. In order to maintain expected productivity levels and at the same time allow restoration of overgrazed areas, he needed to redistribute more cattle to those underutilized parts. The supervisor enthused over the new construction of fences and water developments that would gradually bring better control over cattle movement and range utilization.[33]

It was the same refrain that had been sung by Supervisors Selkirk and Calkins. Like his predecessors, Fred Winn complained of inadequate distribution of animals throughout his tenure as supervisor until he retired in 1942. Each supervisor kept searching for an active management solution that did not involve removing livestock and might still fix the problem of overgrazing.

Since reseeding had never been a viable option for restoration of southern Arizona ranges, salting was seen as the next easiest solution. Permittees were instructed to set salt blocks away from well-used areas in order to entice cattle to travel further for more abundant forage. Forest managers expressed great frustration when ranchers did not follow those requirements. Many ranchers did not believe that salting would improve utilization and were unwilling to expend either the money or the labor.[34] Any range "recovery" on the Coronado would depend upon permanent forms of improvement: fencing and water development. Now as the majority of permittees began to manage their own allotments and construct improvements, supervisors claimed to be seeing better management and better distribution on the ranges.[35]

Range investigations continued after World War I throughout the Southwest and were producing more and better information on range conditions, shifts in plant populations, physical aspects, and estimated carrying capacities. Now that many permittees were actively fencing their allotments, Forest Service required management plans to be developed on each individual allotment. With this detailed range documentation, administrators hoped that stocking numbers and seasonal opening and closing dates could be more closely correlated with individual range conditions.[36]

New range reconnaissance surveys showed that previous carrying capacity estimates were still excessive; stocking numbers had to be reduced. But as the carrying capacity and stocking numbers dropped, the Southwest region came under pressure from the Washington office to keep permitted numbers up.[37] Regional Forester Pooler repeatedly insisted to the Chief Forester that stocking numbers were as close to the estimated carrying capacities

[32]The Forest Service granted permittees an option to place their allotments under "nonuse" for a period of up to three years.

[33]Coronado National Forest Supervisor Fred Winn to Regional Forester Frank Pooler, November 28, 1927. Annual Grazing Report. NARA MD RG 95 DRM R3 AR 1924-28. PI 18 E 63 B 401.

[34]Coronado National Forest grazing records, NARA Riverside.

[35]Regional Forester Frank Pooler to Chief Forester William Greeley, no date available. Region 3 Grazing Report for 1927. NARA MD RG 95 DRM R3 AR 1924-28. PI 18 E 63 B 401.

[36]Roberts. 1963. Page 138; Coronado National Forest Supervisor Fred Winn to Regional Forester Frank Pooler, November 28, 1927. Annual Grazing Report. NARA MD RG 95 DRM R3 AR 1924-28. PI 18 E 63 B 401.

[37]Nancy Langston argues that Region 6 supervisors were under intense pressure to meet output estimates. The approved authorization numbers from Washington DC were seen as the required number to stock rather than the maximum to be permitted under best conditions. See Langston. 1995. Page 217.

as possible and even sometimes exceeded them.

> As previously mentioned, it will be seen that our grazing allowances more nearly approach estimated carrying capacities and that the latter are being revised in accordance with changed conditions, better actual use records, and more reconnaissance data *etc.*.

Despite drought conditions in the region, stocking numbers were only 5% less than that year's estimated carrying capacity.[38] Pooler went further to assuage Washington concerns by comparing livestock production efficiency data from 1909 and 1929. He claimed that the present forest ranges were producing more beef and mutton per acre than 20 years earlier. Range managers calculated that 40.7 acres were required to sustain one cow in 1909 whereas it took only 37.8 acres in 1929.[39]

But onset of the Great Depression challenged everyone's optimistic outlooks for continuing range and industry recovery. Economic collapse now enveloped Arizona and the rest of the country.

[38]Regional Forester Frank Pooler to Chief Forester William Greeley, January 25, 1929. Region 3 Annual Grazing Report. NARA MD RG 95 DRM R3 AR 1924-28. PI 18 E 63 B 401.

[39]Regional Forester Frank Pooler to Chief Forester William Greeley, November 21, 1929. Region 3 Annual Grazing Report. NARA MD RG 95 DRM R3 AR 1924-28. PI 18 E 63 B 401.

CHAPTER 5

Changing Attitudes

5.1 Depression and Drought – Again

Winn reported to Pooler in 1930 that fences and stock water tanks were still being added on the Coronado. He hoped that the estimated carrying capacities of the allotments would increase with time. Nonetheless he warned that there was little unused range available for new permit applicants.

> The distribution of grazing privileges has just about reached the proper limit to consistently meet economic and practical administration requirements. There are many ranges on which the distribution policy has been carried too far. Closure of the entire forest to new applicants on all ranges ... would, I believe, be an excellent policy for the next five years.

Winn was concerned that stock numbers were already very close to the estimated carrying capacities leaving little buffer for future distribution, protection for forage productivity, and availability during drought conditions.[1]

By the end of 1930, Arizona was well into the economic doldrums of the Depression. Demand for beef declined significantly; cattle prices also dropped.[2] Ranchers had few alternative choices for forage for their cattle. Stockraising homesteads claimed in the 1920s had eliminated or broken up most of public domain in southern Arizona. What little public range was left was in very poor condition.[3] Predictably, demand for new forest permits rose sharply. Coronado Supervisor Fred Winn recorded over 700 requests for new permits and almost 500 for increased stocking levels from existing permit holders. With no additional forage on the ranges, Winn had to refuse all requests.[4]

As more ranges were now fenced and brought under personal control, management of overgrazed areas shifted to controlling stock numbers on individual allotments. Problems associated with the year-long grazing pattern now became more site-specific and obvious. Despite their title, year-long allotments had seasonal aspects to the grazing patterns. Like the French long lot, Coronado allotments were oriented upslope to provide a variety of elevations and forage options. Cattle would migrate into the upper elevations on forest

[1] Coronado National Forest Supervisor Frederic Winn to Regional Forester Frank Pooler, January 4, 1930. 5-Year Report. NARA MD RG 95 DRM R3 AR 1929-44. PI 18 E 63 B 400.

[2] JJ Wagoner. 1952. Page 59.

[3] Gates. 1968. Pages 519 – 522; Pinto. 2007.

[4] Regional Forester Frank Pooler to Chief Forester Robert Y Stuart, February 3, 1931. Annual Grazing Report for 1930. NARA MD RG 95 DRM R3 AR 1929-44. PI 18 E 63 B 400.

land during the winter when water was more available. However lower elevation ranges contains most of the natural watering sites. Cattle lingered in these grasslands especially when conditions were drier than normal. Thus the lower portions of allotments received much heavier and more continuous use.[5]

Theoretically, during the summer season, livestock would graze on the rancher's commensurate property. This commensurate property generally consisted of private lands and/or leased state lands. For those ranches adjacent to forest land, the grazing permit was termed an "on-off" arrangement. In most cases, there was no boundary fencing; livestock moved freely between private and public lands. Ranchers with access to larger amounts of commensurate property were allowed to run more cattle than their permit listed. A rancher who possessed a permit for 100 cows might be allowed to run 200 head year-long. Forest managers assumed that either all livestock would forage on the permittee's private land for six months or, more likely, the cattle would be appropriately distributed, 50% grazing year-long on private land and 50% on public land. But if all 200 head were collected from forest range during a roundup, the rancher could not be charged for having stock in excess of his permit. In reality, cattle would concentrate in areas of better forage and water supplies and repeatedly overgraze those portions of the allotment and leave other areas less frequently used. Managers and supervisors had hoped that fencing and additional water development would reduce overgrazing and improve distribution. In the long run, the improvements shifted the same problem from the large-scale of open ranges to the smaller scale of the newly bounded allotment. Regional Forester Frank Pooler, in his 1931 grazing report, wrote that two thirds of his forest supervisors complained that controlling numbers of cattle across the year-long ranges was their major headache; obtaining good management on the on-off ranges followed close behind.[6]

As the Great Depression continued, administrators faced renewed pressure to reopen forests to more livestock, just as during World War I and afterwards. On Southwest region's ranges, the estimated carrying capacity for 1931 was 3.02 M cattle and horse months (AUMs).[7] The total number of cattle months of grazing that Pooler approved was 2.8 M AUMs. Pooler was reserving a forage buffer amounting to 8% of that year's estimated production. Chief Forester Robert Y Stuart worried that too much grass would not be consumed and therefore wasted. In his reply, Pooler tried to explain why his stock numbers did not match the region's grazing capacity.

> I note that you want a statement showing the extent to which we may reasonably expect to reach the carrying capacity estimates and when. The reply

[5] Similar conditions existed in Region 4. Supervisors complained about the difficulty of managing grazing patterns especially during drought. See Thomas G Alexander. 1987.

[6] Regional Forester Frank Pooler to Chief Forester Robert Y Stuart, February 16, 1932. Annual Grazing Report for 1931. NARA MD RG 95 DRM R3 AR 1929-44. PI 18 E 63 B 400.

[7] *ibid.* The US Forest Service made a shift during the early 1930s from animal numbers to AUMs in counting and range estimations. An AUM – animal unit month – was the average amount of forage that one cow-calf pair might consume in one month. Five sheep or goats were equivalent to one cow. Some of the region's ranges were only open to grazing for a specific and limited number of months. Thus one cannot automatically assume that the number of animal unit months divided by 12 months yields the precise number of cattle on the range. Cattle months of forage consumed was a more accurate estimation of total utilization and grazing capacity than simply a livestock head count, especially when some permits allowed extra livestock on the ranges during summer months.

> to that question involves the uncertainty of carrying capacity estimates. Our estimates are under constant study with considerable revisions every year due to more complete and accurate information, including reconnaissance data, to more effective actual control of stock, to better seasonal use, more uniform utilization of forage and other improved management practices and two more complete and reliable actual use records. ... We have made much progress toward getting authorizations to conform with carrying capacity estimates during the past few years. Undoubtedly further adjustments along that line will be necessary. We have been able to employ authorized nonuse in a way that has brought the actual use of our ranges well within their carrying capacities with few exceptions.

Pooler hoped to allay Stuart's concerns over forage "going to waste." If Pooler included the number of cattle that would have been grazing on ranges now closed for rest and recovery, the permitted livestock numbers would be equivalent to those calculated by the estimated carrying capacity.[8]

The Pooler-Stuart exchange raises another major problem in the calculations of forest range carrying capacities. Areas of nonuse – damaged ranges that no longer carried a sufficient number of animals to make their use economically feasible – were gradually increasing over time. The Forest Service believed that once these areas had been rested for a few years the same number of animals could be returned to utilize them. It was now becoming obvious in many locations on the Coronado National Forest and across the Southwest region that the productivity of these ranges in nonuse had been substantially, and perhaps permanently, altered. They were not recovering and their carrying capacities were now significantly less than their original estimates had been. This growing amount of range in nonuse, like the ever declining carrying capacities, was the proverbial "canary in the coal mine;" the forage resources in southwestern forests were worn out from continuous overuse. Already 21% of ranges within the region were deemed overgrazed.[9]

5.2 Pressures for Redistributions

Later that year, Regional Forester Pooler wrote to his 14 supervisors to let them know that the 10-year term permits would be ending in two years (1934). If reductions in cattle stocking numbers to further protect the ranges were going to be made at the start of the new 10-year term, the supervisors needed to begin planning for those reductions and warn the permittees in advance. Pooler hoped that in their continuing range investigations, the supervisors might be able to find and allocate some additional forage to support the deluge of new permit requests.

> Very likely opportunities will be had in many places through foreclosure proceedings, transfers of grazing privileges, etc., to gain and hold slack between now and the beginning of the 1935 grazing year which may be used to

[8] *ibid.*
[9] *ibid.*

> meet the demands of the small owner and of the beginner without the necessity of distribution cuts.[10]

Regional foresters and supervisors took their obligation to provide access to the public grazing ranges to all legitimate applicants seriously. The two Forest Service policies of providing a sustainable resource for the dependent industry and dividing that resource into smaller pieces to give equal access to all legitimate applicants placed forest managers between a rock and a hard place. With little unused range, Pooler did not wish to cut the larger outfits below an already lowered break-even point.

> We must not lose to the Forest Service the range management benefits of stabilization under the 10-year permit plan, but on the other hand, we must not ignore the fact that throughout the 10-year period there has been developing and insistent demand for some redistribution of grazing opportunities. Our problem then is to work out the apparent conflict in a way that will be equitable alike to the large stockman with his heavy investments and to the settler with his real problem of dependencies.[11]

It was, of course, the resource that suffered in the end. As retired Chief Forester Edward Cliff remarked in a later interview, "The Forest Service strongly believed in this principle of getting more equitable distribution, and probably pushed it at the expense of making reductions needed to get proper range protection."[12] Stocking numbers on all forests were at or above carrying capacity estimates. Further reductions were postponed until 1934 when additional reconnaissance and investigations could be completed.[13] By the middle of 1933, the Southwest was entering another extended drought.

5.3 Changes during the New Deal and Administrative Transfers

Drought and Depression combined to push Congress to finally enact legislation designed to regulate and manage the remaining grazing ranges of the public domain. In 1934, the Taylor Grazing Act was passed; President Franklin Roosevelt withdrew 142 Million acres from settlement essentially ending any further opportunities for citizens to file homestead claims.

One of the small benefits arising from the Depression was the absence of holdovers on the ranges. After WWI, unsold livestock had been held on forest ranges for many years. Now during this Depression, the levels of cash circulating in the economy were very low. Ranchers were willing to sell their animals even at low prices. Pooler's relief was palpable in his annual report. The federal Drought Relief Program in 1934 also eased the burden on forest ranges by purchasing thousands of livestock during the driest portion of

[10] Memo to Forest Supervisors from Southwest Regional Forester Frank Pooler, August 24, 1932. NARA MD RG 95 DRM R3 AR 1929-44. PI 18 E 63 B 400.

[11] *ibid.*

[12] Edward Cliff Interview in Hartzer and Clary. 1981. Page 147. Despite the agency's appetite for redistribution, Secretary of Agriculture Charles Brannan ordered an end to the policy in 1951.

[13] Regional Forester Frank Pooler to Chief Forester Robert Y Stuart, February 9, 1934. Annual Grazing Report for 1933. NARA MD RG 95 DRM R3 AR 1929-44. PI 18 E 63 B 400.

this very dry decade. The program removed unsalable cattle from forest ranges and paid many ranchers to cull the weakest animals in their herds. It kept many desperate ranchers from bankruptcy.[14] Another Depression "benefit" came with the initiation of the New Deal work programs. Civilian Conservation Corps and Work Projects Administration employees constructed hundreds of miles of boundary, division and allotment fences and hundreds of watering sites on CNF ranges.[15] Supervisor Fred Winn wryly commented on his increased work load while managing eleven new CCC camps in 1933, "You can't see the woods for the re-forestation camps," and described his office as a "devil's cauldron" of activity.[16]

Another event that occurred at this frenetic period that passed with little notice or fanfare was the establishment of Saguaro National Monument in March 1933.[17] Excised from the Rincon grazing district, President Hoover and Monument advocates had planned that it would remain under administration of the Forest Service and Supervisor Fred Winn.[18] Despite its title, no changes in grazing management were anticipated with the new designation.[19] So it was a surprise to Forest Service managers three months later when they learned that President Franklin Roosevelt had transferred administration of Saguaro and all other national monuments to the National Park Service.[20] The ranchers who ran cattle within the Monument's boundary feared that the Park Service would eliminate or alter their grazing permits. However, Supervisor Winn confirmed for his permittees that the Park Service would continue grazing access on Monument lands.

> Since the National Park Service now has jurisdiction of the Saguaro National Monument which embraces a large area on the Rincon division of this forest and has agreed to permit continued grazing use by existing permittees it appears that possibly there is to be some cooperative agreement between the two branches of the departments which will provide for administration of the grazing use on this area by the Forest Service. The permittees have been advised by the representative of the National Park Service that their grazing preferences will be unmolested so long as they retain their ownership and they also infer that grazing on the area will continue to be administered by the Forest Service.[21]

[14]Coronado National Forest Supervisor Fred Winn to Regional Forester Frank Pooler, January 31, 1935. Annual Grazing Report; Regional Forester Frank Pooler to Chief Forester Ferdinand SIlcox, February 10, 1936. NARA MD RG 95 DRM R3 AR 1929-44. PI 18 E 63 B 400.

[15]Baker *et al.* 1988. Page 95.

[16]Coronado Bulletin. 1933. Arizona Historical Society Library, Tucson, Arizona; See also Peter McMillan Booth. 1991. "The Civilian Conservation Corps in Arizona, 1933-1942." Master's Thesis, University of Arizona, Tucson, Arizona; William Gillespie. 2007. "Summary of Depression-Era Sites and Facilities on the Coronado National Forest in Southeastern Arizona." Coronado National Forest Pamphlet. Tucson, Arizona.

[17]Proclamation No. 2032, 47 Stat. 2557 (March 1, 1933).

[18]See Marcus Burtner. 2011. "Crowning the Queen of the Sonoran Desert: Tucson and Saguaro National Park. An Administrative History" for a detailed history of how and why the monument was established. Unpublished document. Saguaro National Park Archives.

[19]*Coronado Bulletin.* March 10, 1933. Arizona Historical Society Library, Tucson, Arizona.

[20]Executive Order 6166 (June 10, 1933).

[21]Coronado National Forest Supervisor Frederic Winn to Regional Forester Frank Pooler, January 31, 1935. Annual Grazing Report for 1934. NARA MD RG 95 DRM R3 AR 1929-44. PI 18 E 63 B 400.

5.4 Lost Opportunities

Pooler was increasingly worried that even though grazing use in most of the forests in the region was below each year's estimated carrying capacities, substantial areas of overgrazing were appearing. The number and amount of nonuse areas continued to grow and few were showing recovery. Between 1926 and 1932, Coronado National Forest had reduced its stocking levels by more than 15,000 AUMs. The Southwest region had made protective reductions of almost 20%; more would be necessary to bring the forests into alignment with the newly reduced carrying capacities. While 96% of the Coronado National Forest ranges were in good condition, many others were not. On the Crook National Forest, 50% of its ranges were overgrazed, on the Prescott 46%, on the Carson and Sitgreaves 30%.[22] The trends in range recovery that forest administrators had hoped for that decade were not materializing; indeed they were moving in the wrong direction – still.

Numerous difficulties pressed Regional Forester Pooler on all sides. Most rangers could now see that the productivity and quality of range forage were changing. Scientific assessments of range condition and estimated carrying capacities were being recalculated with alarming frequency. While everyone in the Southwest knew that range under drought conditions supported fewer livestock, Pooler and his foresters believed they had been conservatively stocking their ranges; they should have been protected from degradation during drought. Did the declines in range condition suggest that "full utilization" was inaccurate? If so, what was the appropriate level to maintain forage productivity? It was clear that future reductions have to be achieved at the end of the 10-year permit term. What then was the proper stocking number to achieve the appropriate utilization? Pooler did not want to impose additional reductions in the middle of the term; changes only added to the instability of the industry during this highly stressful decade. As a public representative, Pooler also felt that it was his responsibility to provide for local ranchers, local communities and the grazing industry that depended upon the sustained production of resources from the national forests. Political representatives and administrative superiors continued to press for maximizing forage use and livestock production. As a public representative under the Roosevelt administration, Pooler also wished to support the social policies of the New Deal and provide greater economic opportunity to those without forest access.[23] With so much suffering throughout the country, these issues were more acute and the consequences were more painful during this decade than at any other time.

> The economic crisis combined with the drought in the decade drove scientists and policymakers alike into defensive positions. Policymakers sought ways to ease economic hardship. This meant permitting stock numbers to remain high in the face of drought.[24]

Yet, all of these tensions and conflicting problems had been present for previous Forest Service administrations throughout the past 30 years. One of the earliest and strongest

[22]Regional Forester Frank Pooler to Chief Forester Robert Y Stuart, February 2, 1933. Annual Grazing Report for 1932. NARA MD RG 95 DRM R3 AR 1929-44. PI 18 E 63 B 400.

[23]Rowley. 1985. Page 160.

[24]William Rowley. 1999. "Historical Considerations in the Development of Range Science." In *Forest and Wildlife Science in America; a History.* Durham: North Carolina. Forest History Society. Pages 230-260.

principles of the Forest Service was to support its constituents, their communities, and the livestock industry.[25] Yet the agency was unable to do so and, at the same time, enforce its most important policy – the protection of its resource. The agency deluded itself that it could provide a sustainable yield a range forage for so many applicants under all climatic and economic conditions. The agency deluded itself that "proper management" could overcome the ever-increasing consequences of overstocking. The agency overestimated its ability to transfer range science information and better management practices to those who were primarily interested in maintaining traditional patterns and maximizing their short-term rate of return. Agency confidence in both science and management had blinded multiple administrations to ongoing range damage and the need for stock reductions. William Rowley, one of the most articulate historians of range management at the Forest Service, poignantly describes the inadequate decisions and actions by range administrators during this decade as "lost opportunities."[26]

5.5 No Longer Full Utilization

Historian Nancy Langston has argued that a shift occurred during this decade in managers' comprehension the limits of forage resiliency and recovery. "By the 1930s, supervisors could finally see ecological damage. The damage had been apparent for three decades; what changed was the supervisors' perspectives. As the faith of managers in full utilization declined, ecological signs that had been invisible became obvious." Langston suggests that this agency enlightenment paralleled the nation's recognition of widespread damage wrought upon landscapes throughout the West. Uncontrolled grazing on the public domain had devastated midwestern grasslands and denuded millions of acres. These denuded acres now prone to soil erosion contributed to flooding of downstream communities. Dry farming methods and inappropriate homestead laws had led to the disastrous Dust Bowl and the loss of millions of tons of topsoil.[27] Many in the Forest Service now began to appreciate the importance of soil protection and preservation.[28] Within the range science community, the belief that 100% utilization of annual forage production was appropriate was now changing.[29]

Early range research had documented that year-long grazing at heavy stocking levels altered range composition and reduced forage production. On the northern Arizona forests, research focused on controlling range damage through better seasonal utilization. But because southern Arizona ranges were stocked year-long, most studies at the nearby Santa Rita Experimental Range centered on proper stocking levels and techniques for measuring utilization.[30] Results from experiments during the early 1930s suggested that "con-

[25] Pinchot's Use Book refers to "the best permanent good of the livestock industry through proper care and improvement of the grazing lands" as being the second-most important result for grazing management. Baker *et al.* 1988. Page 93.

[26] Rowley. 1985. Pages 147-172.

[27] Anonymous. 1947. "Range Management Breeches – Who is Big Enough to Wear Them?" *Journal of Forestry*, 45 (July): 469-470.

[28] Edward Cliff Interview in Hartzer and Clary. 1981. Page 148.

[29] Langston. 1995. Page 228; see also Rowley. 1999.

[30] Ruyle. 2003. Pages 41-42.

servative grazing" – leaving approximately 15% of forage production ungrazed – was essential for vegetative maintenance and regrowth.

In 1937, range examiner Lloyd Wall and ecologist Ed Crafts from SRER (then called Southwestern Forest and Range Experiment Station) toured every national forest in the Southwest region in order to develop a method for measuring utilization.[31] The two researchers suggested a larger context for range utilization needed to include other range resources such as watersheds, recreation, wildlife, timber, and, most especially, soils. Crafts and Wall identified those plant species commonly found on forest ranges and were highly palatable to cattle. Those would be the grasses that livestock consumed first and therefore would be the most sensitive indicators of forage consumed. By averaging remaining above-ground biomass of these species, any range manager or stockman could accurately measure the level of utilization within a given range. Crafts and Wall also developed guidelines on each species regarding the amount of biomass that should remain unconsumed at the end of each grazing season or year. The researchers concluded that on year-long ranges, proper utilization at the end of the grazing year (late spring) should find 50% of the original plant material extant with many fruiting stems and stolons intact. Crafts and Wall warned that an additional 15-20% should be kept as a drought reserve since in the Southwest one year in five would be faced by periodic drought.[32] By the mid-1940s, many range managers were in agreement with Crafts and Wall and recommending that 50-75% of palatable species should remain at the end of the grazing season.[33]

This utilization level, however, was not only hard to measure but hard to achieve. Even scientists at the Santa Rita Experimental Range were unable to consistently control forage consumption by cattle to achieve these recommended levels until the 1950s.[34] On forest allotments, adherence to these "conservative" stocking levels remained unrealized even as late as the 1970s.[35]

As economic pressures from the Depression eased in the latter half of the decade, all administrators from Washington down to forest supervisors knew that a concerted effort was needed to reduce stocking levels.[36] Permitted AUMs between 1936 and 1938 declined by 171,000 cattle months from 3.17M to 3.00M, approximately 17%. The amount of area of

[31]Regional Forester Frank Pooler to Chief Forester Ferdinand Silcox, March 10, 1938. Annual Grazing Report for 1937. NARA MD RG 95 DRM R3 AR 1929-44. PI 18 E 63 B 400.

[32]EC Crafts and LA Wall. Note #25 "Tentative Range Utilization Standards." Research Notes Southwestern Forest and Range Experiment Station, Tucson Arizona. February 1938; RS Campbell and EC Crafts. Note #26. "Tentative Range Utilization Standards for Black Grama." Research Notes Southwestern Forest and Range Experiment Station, Tucson Arizona. February 1938.

[33]Matt Culley. 1937. Note #4. "An Economic Study Business on Southwestern Semi Desert Range." Southwestern Forest and Range Experiment Station Research Notes. Southwestern Forest and Range Experiment Station, Tucson Arizona; R H Canfield. 1943. "What is Conservative Grazing?" *The Cattleman,* (May): 16, 18; see also Franklin J Crider. 1945. "Three Introduced Love Grasses for Soil Conservation." US Department of Agriculture Circular #730. Washington DC: US Department of Agriculture. Pages 1-90. By the 1950s, research in grass growth and development had convincingly shown that any removal by grazing of more than 40% stopped root and correspondingly further plant development. See Franklin J Crider. 1955. "Root-Growth Stoppage Resulting from Defoliation of Grass." Technical Bulletin #1102. Washington DC: US Department of Agriculture.

[34]Ruyle. 2003. Page 42.

[35]Baker *et al.* 1998. Pages 102–103. Saguaro National Park Grazing Records. WACC.

[36]Edward Cliff Interview in Hartzer and Clary. 1981. Page 149; Langston. 1995. Page 233.

nonuse remained essentially the same, approximately 8%. The percent of understocking (the difference between estimated grazing capacity and the number of cattle months) rose from 6.1% in 1936 to 11.3% in 1938. Regional Forester Pooler was pleased that the Southwest forests were now bringing their stocking numbers down and he proposed additional reductions for the following year in order to provide an added protection buffer to the ongoing drought. On the Coronado National Forest, stocking levels were 7% below the annual predicted carrying capacity. While stocking levels were achieving a steady rate of decline, estimates of carrying capacities were almost stationary.[37]

Chief of Range Management Walt Dutton wrote to Pooler to ask why he needed more reductions if he was maintaining such a large buffer between estimated carrying capacity and the permitted stocking number.

> [E]ven if the indicated reductions would put the Region's range stocking on a satisfactory basis, it is difficult to reconcile a reported surplus capacity of 415,000 cattle months with a statement that protection reductions of 8700 cattle and 13,000 sheep are needed. ...Our frank opinion, based on observations during the past 3 years is that range conditions in Region 3 do not support the estimates shown in your annual report. It will therefore be appreciated if you will reconsider the grazing capacities reported.[38]

This communication appears to be one of the first intercessions in the Region's range planning by a Washington administrator. Dutton had recently taken over the position of chief of range management. He now challenged what he saw as a complacent pattern of administration within Forest Service range management. The annual range capacity estimates gave administrators an upper limit for stocking. As long as permitted levels stayed below that limit, administrators did not need to question the validity of their capacity calculations nor did they need to seriously examine the real range condition and its rapidly declining productivity. Like forest administrators, range examiners were reluctant to document the real changes occurring on the range or to accept that their calculations of forage availability and annual utilization might be unrealistic.

Pooler had indeed recognized that was a "sleeping problem." Estimates of carrying capacities from most Southwest forests during those three years had declined less than 1%. "It has been realized for several years that are grazing capacity data by Forests does not reflect the true situation. However, in most instances the figures are based upon range survey data and we have hesitated to make arbitrary adjustments downward or upward as the case may be, preferring to keep the stocking well under the grazing capacity without disturbing the figures."[39]

Watershed protection was also gaining attention. Erosion posed a serious problem throughout the region. A 1940 assessment of Region 3 identified 25% of range lands (4.8 M

[37]Regional Forester Frank Pooler to Chief Forester Ferdinand Silcox, February 7, 1939. Annual Grazing Report for 1938. NARA MD RG 95 DRM R3 AR 1929-44. PI 18 E 63 B 400.

[38]Memo to Regional Forester Frank Pooler from Walt L Dutton, Chief of Division of Range Management, March 22, 1939. NARA MD RG 95 DRM R3 AR 1929-44. PI 18 E 63 B 400.

[39]Memo to Walt L Dutton Chief Division of Range Management from Regional Forester Frank Pooler, April 3, 1939. NARA MD RG 95 DRM R3 AR 1929-44. PI 18 E 63 B 400.

of 20.5 M acres) in a serious state of erosion. The southwestern forests were facing "a watershed rehabilitation job of major proportions." The report noted that too few officers had demonstrated any concern for erosion; many assumed that nothing could be done to affect it.[40]

In the early 1940s, range examiners using improved field study methods had arrived at much more conservative estimates of carrying capacity.[41] By 1943, regional estimates had been revised downward 15%. In his annual report, Pooler stated that despite the assessments he believed that regional capacity estimates were still 20% too high. "Many, many allotments are not satisfactory under present use – to say nothing of what conditions would be if 464,000 cattle months of authorized non-use were restored."[42] Bringing the actual stocking numbers down to match the new lower estimates of range capacity proved to be much more difficult. Some progress had been achieved before 1941 but, with the advent of World War II, stock reductions within the region essentially ceased.[43] Just like during the 1910s and 20s, as the agency attempted to correct stocking levels on its overcrowded ranges, national events and political grandstanding now intervened.

[40] Baker *et al.* 1988. Page 63.

[41] Rowley. 1985. Page 182. Rowley does not elaborate on what specific changes to field study methods gave more accurate estimates.

[42] Regional Forester Frank Pooler to Chief Forester Earle Clapp, January 19, 1943. Annual Grazing Report for 1942. NARA MD RG 95 DRM R3 AR 1929-44. PI 18 E 63 B 400.

[43] Regional Forester Philip Woodhead to Chief Forester Lyle Watts, January 28, 1946. Annual Grazing management report contains a graph showing comparison of estimated grazing capacities and cattle numbers allowed to graze in Region 3 from 1926-1946. NARA MD RG 95 DRM R3 AR 1945-48. PI 18 E 63 B 399.

CHAPTER 6

New Resolutions – Ongoing Challenges

6.1 Politics and War – Again

In 1940, Senator Patrick McCarran of Nevada initiated what became a multi-year-long investigation of the Grazing Service, the newly established federal agency created to manage grazing on the public domain. Just as Senator Stanfield had done in the 1920s, McCarran's Public Lands Committee held hearings throughout western states to scrutinize range management policies. The investigation rapidly expanded to include examination of the US Forest Service.[1] While the focus on the Forest Service was brief and ultimately without serious consequences, the McCarran investigation allowed the livestock industry to flex its political muscle and to publicize its long-held desire to transfer public grazing lands to the Western states. With the prospect of war looming ever closer, stockmen now clamored to reopen the national forests to additional livestock. Badly burned during World War I by temporary increases, both Chief Forester Earle Clapp and his successor, Lyle Watts, refused to admit additional stock on forest ranges. Total livestock grazing on Southwest forests held steady throughout most of World War II at 2.7 million AUMs.[2]

The Southwest was not the only region asked to explain its carrying capacity numbers. Chief of Range Management Walt Dutton demanded that other regions bring range capacity estimates in line with their range conditions. The Intermountain region's estimates had also been "frozen." Regional administrators had been either unwilling to admit to unsatisfactory range conditions or were simply looking to Washington for approval to begin corrective action. But it appears that Washington administrators were also "gun-shy" of overtly pressing for stock reductions. Beyond pointing out errors in statistics and assumptions, Dutton allowed regional officers to solve their own problems as they saw fit.[3] Everyone seemed to be waiting for someone else to make the first move; everyone was fearful of arousing the livestock industry and its political grandstanding representatives at this moment in time.[4]

Between 1938 and 1946, range examiners on the Coronado National Forest lowered their estimates of carrying capacity by more than 100,000 AUMs.[5] At the end of the war,

[1] Rowley. 1985. Pages 173–178.

[2] Regional Forester Philip Woodhead to Chief Forester Lyle Watts, January 28, 1946. Annual Grazing Management Report. Graph showing comparison of estimated grazing capacities and cattle numbers allowed to graze in Region 3 from 1926-1946. NARA MD RG 95 DRM R3 AR 1945-48. PI 18 E 63 B 399.

[3] Rowley. 1985. Page 185.

[4] *ibid.* Pages 201–202.

[5] Regional Forester Philip Woodhead to Chief Forester Lyle Watts, January 28, 1946. Annual Grazing Report for 1945. NARA MD RG 95 DRM R3 AR 1945-48. PI 18 E 63 B 399.

actual stocking numbers also began to decline, ultimately matching the reevaluated annual estimates. In 1945, range examiners from Washington toured the Southwest region and surveyed conditions on every forest. The inspection documented improvements on some Coronado National Forest allotments. However, overall, the assessment was highly critical of ongoing overstocking and overgrazing throughout the region. The examiners recommended immediate reductions. Because administrators had not imposed sufficient reductions in the past, the needed cuts would now be widespread and much more painful for all. Despite the radically reassessed range capacity estimates, examiners stated that "the field organization as a whole is still not sufficiently realistic in sizing up range conditions."[6]

6.2 Livestock Reductions, Rancher Reactions

Reducing stocking numbers was never easy. Supervisors who moved too fast, effected too much change over too short a period of time, and angered too many stockmen were often sacrificed for more amenable administrators. F Lee Kirby, supervisor on the Tonto National Forest from 1935 to 1946, had made great advances in improving range conditions. He instituted educational programs for the stockmen and experimented with large exclosure plots to illustrate the advantages of soil and forage protection. One article in American Forests hailed Kirby as the "nation's Number One crusader for grass restoration."[7] But Kirby pushed stock reductions faster than ranchers were willing to accommodate. In 1944, larger stock outfits protested Kirby's proposed reductions to Regional Forester Frank Pooler. Despite Pooler's defense of his forest supervisor, Kirby was transferred out of the Southwest to the Washington office shortly thereafter.[8]

A third congressional public lands committee led by Wyoming representative, Frank Barrett, began its own investigation in 1946 into the growing stock reductions on national forests. Like the two previous investigations, Barrett's committee was intent upon exposing federal "wrongdoing." It challenged the Forest Service's authority to make what ranchers called unwarranted cuts without taking into account the economic consequences to stockmen.[9]

The continuing reductions spurred anger and reaction throughout the livestock community. In a well-publicized uprising that paralleled Barrett's investigations, a joint committee of livestock associations proposed to privatize all federal grazing lands in the West from the public domain, national forests, and national parks and monuments.[10] The com-

[6] Baker *et al.* Pages 101–102. Quote from Earl Loveridge and Edward Cliff. 1946. General Integrating Inspection Report, Region 3.

[7] Oren Arnold. 1944. "Emergency in Grass!" *American Forests* (June): 280-283.

[8] Adam Sowards. 2000. "Administrative Trials, Environmental Consequences, and the Use of History in Arizona's Tonto National Forest, 1926-1996." *Western Historical Quarterly,* 31 (2): 188-214. For another perspective in this struggle, see Antle. 1992. Pages 119-124. See also Paul Hirt. 1994. *A Conspiracy of Optimism. Management of the National Forests Since World War Two.* Lincoln: University of Nebraska Press. Pages 99-101, 295.

[9] Rowley. 1985. Pages 203-208.

[10] Karen Merrill suggests that the proposed US Forest Service stock reductions occurring at the same time as the renewal of 10-year permits engendered the Joint Livestock Committee on Public Lands proposal. 2002. Pages 196-198.

mittee argued that the national grazing lands were the foundation of the livestock industry. Instead of being controlled by federal agencies, the lands should be sold to those ranchers who use them. The conflict became sensationalized as the "Great Land Grab" in the writings of historian and journalist, Bernard DeVoto. The proposal engendered an equally visceral and widespread response against both Barrett's Public Lands and the Joint Livestock committees from the conservation community led by DeVoto. They countered that the nation's public lands belonged to the public – not to a select subset of users.[11] The backlash from the general public, states and even local livestock associations cut short the Joint Livestock Committee's efforts. Nonetheless, this plan to transfer public grazing lands out of federal control and into private ownership has never wholly left the stage. It resurfaces whenever the livestock industry feels threatened by fee increases, additional regulations, or cuts in stocking levels.[12]

After two years of travel and numerous public hearings, Representative Frank Barrett's Public Lands Subcommittee presented a series of six recommendations to Secretary of Agriculture Anderson Clinton to change Forest Service policies. Only one recommendation seriously challenged the agency's authority. The committee called for a 3-year moratorium on further stock reductions; it argued that the proposed reductions would create a scarcity of beef and substantially higher prices. Clinton rejected this recommendation on the grounds that he was already convinced that "overgrazed conditions on many national forests [were] too serious from the standpoint of watersheds and forage to brook the delay." Clinton further defended the continuing reductions. Not only were they essential to protecting public resources, but they would also be in the best interest of the industry. "The policy of stocking the ranges only to their capacity will contribute most in the long run to the stability of the world meat supply and agricultural production."[13]

6.3 Continuing Change, Continuing Challenges

During most of the 1950s, southern Arizona and New Mexico suffered from an extended drought that devastated the cattle industry.[14] Carrying capacity estimates and stocking rates both continued to decline though stocking numbers remained at higher levels than grazing capacity estimates.[15]

[11]Matthew Pearce. "Shoveling the West into America's Rivers: the Portrayal of Ranchers as Anti-Conservationists during the 'Great Land Grab' of 1946-47." Paper presented at the American Society of Environmental Historians conference, Phoenix, Arizona, April 2011; Bernard DeVoto. 1947. "The West against Itself." *Harper's Magazine* (January): 1-13; Bernard DeVoto. 1948. "Sacred Cows and Public Lands." *Harper's Magazine* (July): 44-55; retired chief forester Edward Cliff recounts that range managers in Region 4 were feeding DeVoto information in order to counteract the building resistance among stockmen to further stock reductions. Edward Cliff Interview in Hartzer and Clary. 1981. Pages 158-159.

[12]Karen Merrill argues that stockmen claimed to possess property rights in those national grazing lands by virtue of their history of occupation, their monetary and physical investments in the land, and by the value-laden linkages between their private ranches and the Forest Service's permit system. See Merrill. 2002. Public Lands and Political Meaning. Ranchers, the Government, and the Property between Them.

[13]Anonymous. 1948. "The Secretary Stands Firm!" *American Forests* (February): 61.

[14]Southwest National Monument Monthly Reports for Saguaro National Monument. WACC, Tucson Arizona; Hadley. 2001.

[15]Allen. 1989.

In 1951 range conservationist, Kenneth Parker, introduced a relatively simple, repeatable methodology to evaluate range condition and determine any change or trend in that condition. The evaluation included data on both soils and vegetation. Range examiners recorded vegetation composition, density, and vigor and soil exposure and stability. Field data were taken from points along fixed transects. Large-scale change was recorded and monitored from prominent photographic points. By collecting quantitative and qualitative data with a method that was easily repeatable, range managers could now develop their own record of range history in numerical, photographic and cartographic formats. Range scores would indicate whether conditions were improving, stationery, or declining under current management and stocking levels. Developed on the Coronado ranges, Parker's 3-step method was adopted and employed for multiple decades throughout the Southwest.[16] Nonetheless, the new method aroused an industry-wide response from stockmen who feared that change in the methodology of range assessment implied a radical reduction in carrying capacity estimates despite the agency's insistence that the measurements only indicated trends in utilization.[17]

Shortly thereafter, the issue of private rights in Forest Service permits rose up again in 1952. A Republican president had been voted in with a Republican Congress. Both strongly supported a land policy that favored range users' private rights over federal agency bureaucratic control. Republican congressman Wesley D'Ewart from Montana along with Wyoming's Frank Barrett introduced the Uniform Federal Grazing act in 1953 that would equalize permits among all federal agencies. Like regulations governing the Bureau of Land Management permits, D'Ewart's bill would guarantee continuation of grazing permits and the right of transfer. It would also subject Forest Service administrative decisions to court review. In essence, it would grant to stockmen a vested right in their grazing permits.[18] D'Ewart' bill made little headway under the avalanche of criticism from conservationists and Bernard DeVoto.[19]

Edward Crafts, now Assistant Chief Forester, noted that the livestock industry lost significant standing with Forest Service administration after the D'Ewart bill. The legal recognition of other range uses, especially the rapidly developing interest in recreation, under the Multiple Use - Sustained Yield Act in 1960 caused cattle grazing to fall even further behind in importance and political standing.[20]

Other advances in grazing management were made during the 1950s and 60s. Research at the Santa Rita Experimental Range examined timing of seasonal grazing, comparisons of seasonal versus year-long grazing, utilization levels, and deferred-rotation systems. The recommended utilization level gradually declined to a much more conservative 40-45%. George Ruyle in his history of forage and livestock studies at SRER noted that range experiment results were not always conclusive. Interpretations even from long-term experi-

[16]George Ruyle and Judith Dyess. 2010. "Rangeland Monitoring and the Parker 3-Step Method: Overview, Perspectives, and Current Applications." Arizona Cooperative Extension, University of Arizona College of Agriculture and Life Sciences. (August): 1-10. cals.arizona.edu/pubs/natresources/az1525.pdf; Baker *et al.* 1988. Page 100. Range assessments on Saguaro National Monument grazing allotments in the 1970s still utilized Parker's 3-step method. Saguaro National Park Grazing Records, WACC.

[17]Rowley 1985. Pages 217-221.

[18]Steen 2004. Pages 275-277; Rowley 1985. Pages 221-223; Hirt. 1994. Pages 125-126.

[19]Rowley 1985. Page 222.

[20]Hirt. 1994. Pages 125-127.

ments could be confounded by starting range condition and plant composition, variations in precipitation, elevation differences, and extended droughts.[21]

At the end of the 1950s, Forest Service range management again shifted its focus away from stock reductions and back to active management: intensive cattle management on allotments and additional range improvements in order to maintain a high forage capacity. Again the agency was reluctant to bring livestock use down to range capacity; instead the intent was to improve capacity to accommodate present levels of use.[22]

Persuading Coronado permittees, however, to alter their management practices on their allotments remained a persistent challenge for range managers. A range inspection in 1964 criticized range staff for allowing permittees to retain "old-fashioned" management styles. Examiners pointed to the differences in range conditions under Santa Rita Experimental Range utilization rates at 40% with a rest-rotation system versus Coronado permittee grazing habits of 80% utilization on a year-long basis.[23]

In 1975, much of Santa Catalina ranges were in poor condition and 42% of all Coronado allotments were still overstocked. Capacity was exceeded by 73,000 AUMs.[24] With the rapid expansion of Tucson's urban environment in the late 1960s and early 70s, half of Santa Catalina district's 21 allotments had been eliminated. Competition between cattle and wildlife for forage was already a problem especially in riparian areas.[25] Remaining permittees were given the option to invest in more capital intensive range improvements in exchange for a higher stocking rate or make fewer improvements with a correspondingly lower stocking level. Most permittees chose to reduce their cattle numbers and limit investment.[26] Coronado Forest initiated a grazing plan to bring its approved permitted numbers down to its estimated grazing capacity. By 1986, ranges were beginning to improve; only 16% were in unsatisfactory condition. Through a combination of better management, stock reductions, and improvements, Larry Allen, a range conservationist with Coronado, expected that capacity and cattle numbers would come into balance by 1993; the Forest intended to keep all ranges in satisfactory condition thereafter.[27]

[21] Ruyle. 2003.

[22] Hirt. 1994. Pages 97-99, 210-202; Allen. 1989; Rowley. 1985. Pages 234-237; Hadley 2001. Page 124.

[23] Baker *et al.* 1988. Pages 102-103.

[24] US Forest Service, Southwestern Region. 1986. "Summary of the Coronado National Forest Environmental Impact Statement and Forest Plan." Tucson Arizona: Coronado National Forest. Page 16.

[25] US Forest Service. 1975. "Draft Environmental Statement, Santa Catalina Planning Unit, Coronado National Forest." Albuquerque NM: USDA, USFS, Southwestern Region. Page xxxii, 9.

[26] Allen. 1989.

[27] *ibid.*

CHAPTER 7

Coronado National Forest Today

7.1 Modern Range Management

Over the last two decades, range management at Coronado National Forest has become much more highly prescribed. The philosophy of ecosystem management – management with a dual focus of restoring the health, productivity and biodiversity of public lands and simultaneously sustaining appropriate human uses – has been embraced by the Forest Service.[1] The Forest Chief wrote, in 1992, "An ecological approach will be used to achieve the multiple-use management of the National Forests and Grasslands. It means we must blend the needs of the people and environment values in such a way that the National Forests and Grasslands represent diverse, healthy, productive, and sustainable ecosystems."[2] Environmental laws enacted during the 1960s and 70s drove the Forest Service to manage for entire landscapes rather than simply addressing individual resources. Those laws are now rigorously impressed on management as interest groups through the courts have held all federal land agencies to those legislative directives. The combination of these laws now 1) opens Coronado National Forest decisions and actions to public participation and scrutiny, 2) compels grazing management to protect other forest resources, 3) requires long-term plans and inventory and monitoring efforts, and 4) demands a detailed assessment of environmental impacts and alternatives of any agency activity. Perhaps the greatest restriction on management goals comes from the Endangered Species Act of 1973 which requires that all federal actions account for and protect individual organisms as well as their habitat.[3]

[1] Robert Keiter. 1996. "Toward Legitimizing Ecosystem Management on the Public Domain." *Ecological Applications*, 6 (3): 727-730; Robert C Szaro, William T. Sexton, and Charles R. Malone. 1998. "The Emergence of Ecosystem Management as a Tool for Meeting People's Needs and Sustaining Ecosystems," *Landscape and Urban Planning*, 40: 1-7; Peter F. Brussard, J. Michael Reed, and C. Richard Tracy. 1998. "Ecosystem Management: What Is It Really?" *Landscape and Urban Planning*, 40: 9-20.

[2] Greg Super and Gary Elsner. 1993. "The Human Dimension of National Forest Ecosystem Management," Presented to The Conference on Sustainable Ecological Systems, Flagstaff, Arizona, July 1993.

[3] The Multiple Use-Sustained Yield Act of 1960 recognized multiple forest values equally including recreation, range, timber, watershed, and wildlife and, in principle, imposed the requirement to balance use with capacity. The National Environmental Policy Act of 1969 required public and other agency participation and commentary in Forest Service planning development activities and, equally importantly, required a detailed environmental impact statement assessing the consequences of multiple action options. The Endangered Species Act of 1973 imposed restraints on all decisions and actions that adversely affected either individuals of listed species or their habitats. The Forest and Range Land Renewable Resources Planning Act of 1974 required the agency to inventory the range resources and monitor their productivity on regular basis. The Federal Land Policy and Management Act of 1976 requires development of allotment management plans and allows the agency to modify grazing permits and stock numbers and prescribe seasonal use. The National

Grazing is now practiced on a much more conservative basis. On many Coronado allotments, cattle have strictly limited access to specific months, usually summer and winter seasons. Many allotments are divided into enclosed pastures between which animals are rotated and that allow extended periods of rest. Management goals have been established to restore range lands to a moderately high ecological condition while keeping grazing intensities to light or moderate levels (30-45% utilization). Rest periods cover the growing season and allow for plant recovery, increases in plant vigor, and biomass accumulation for soil retention and wildlife cover. Utilization of allotments is monitored regularly. Adaptive management allows for adjustment of animal numbers, and grazing duration and intensity is directly related to allotment productivity and range and climate conditions.[4]

7.2 Summary

> I used to point out that this type of change is very gradual, kind of like growing old. You always feel about the same as you did yesterday, and pretty much the same as you did a year ago, but by golly there comes a time when you don't feel like you did 40 years ago. A lot has happened and in some cases the cause of deterioration is separated from the effect by 30 or 40 years.[5]
>
> F. Lee Kirby

The original purpose of southwestern forest reserves was to protect and ensure future water and timber supplies. However after the establishment of the US Forest Service at the turn of the 20th century, utilization rather than protection became the driving mantra for range management. That original purpose was rapidly subsumed by the need to provide a substantial supply of forage for the livestock industry. Thus, from its initiation, the administration at Coronado National Forest was intent upon maximizing continued extraction rather than restoration of damaged range.

Modifying Jeremy Bentham's "principle of utility," first Chief Forester Gifford Pinchot penned what became the central philosophy of all US Forest Service management: "the greatest good of the greatest number in the long run." There was an economic and social necessity to believe that Pinchot's promise of scientific management of range resources could resolve the historic problems of the livestock industry. The Forest Service range management division had been founded on the belief that extraction of forage resources

Forest Management Act of 1976 requires the agency to identify lands suitable for grazing, assess range condition, and plan for restoration of areas in unsatisfactory condition for both livestock and wildlife. The Public Range Lands Improvement Act of 1978 requires improvement of range condition, public and other agency participation in allotment planning and incentives for permittees to improve range condition. See Wilkinson and Anderson. 1987. Pages 29-45, 108-116.

[4]Santa Catalina Ranger District, Coronado National Forest. 2008. "Environmental Assessment: Santa Catalina Mountains Allotments Analysis. Samaniego Ridge, Canada Del Oro, American Flag, Interocean, Finley Springs, Redington Pass and Bellota Allotments." Tucson Arizona: USDA, USFS, Coronado National Forest; Santa Catalina Ranger District, Coronado National Forest. 2008. "Environmental Assessment: Last Chance, Barney, Fresno, Happy Valley, Cumero, Keith, Rock Pile, Rincon and Agua Verity Allotments." Tucson Arizona: USDA, USFS, Coronado National Forest.

[5]Tucker. 1989. Interview with F Lee Kirby

through livestock was an economically important and sustainable enterprise and that the regulation of forage use would not only protect the resource from injury but would add materially to the economies of Western communities. Following the era of insecurity and competition on the public domain, the livestock industry needed a predictable and protected source of forage. Many components of Western communities such as banks and other businesses dependent on the livestock industry were also desirous of that stabilizing regulation.

At the same time, progressive attitudes encouraged continued expansion of land use and development across the unpopulated West. A philosophical desire for equity in opportunity kept the image of the homesteader as rightful heir to those resources alight. The Forest Service dedicated itself to providing for both the homesteader and the industry. The task, while admirable, was almost impossible to accomplish given the finite and, indeed declining, resource. As a result, the benefits to one constituent often derived from losses to the other. Later as such progressive notions of equity waned and were replaced by issues of economic efficiency, the agency shifted its focus of support to the larger, more financially stable livestock enterprise.

Administrators at all levels acknowledged that livestock management on Southwest forests was one of the most intractable challenges. Retired Chief Forester Edward Cliff in 1981 recounted the difficulties involved in that management: a region exposed to severe climate conditions and frequent fluctuations in precipitation and drought; an entrenched pattern of year-long cattle occupation that limited range control, stock enumeration, and overgrazing at lower elevations; and a ranch community unwilling to adopt enlightened methods of management.

From its outset, administrators and managers were instructed in no uncertain terms to maximize production of forage and livestock for as many range users on a long-term basis. In the process of following Pinchot's guiding standard, forest administrators, ranchers, and range scientists believed that achieving that greatest good involved full utilization – that removal of 100% of annual forage production was a sustainable level of extraction. The fear of wasting resources was far stronger than the desire to restore them. Despite some early misgivings, range managers clung to that fiction for two decades before research and range (indeed region-wide) degradation impressed a new level of understanding. Yet six decades passed before managers through improvements and stock reductions could gain sufficient animal control and reduce utilization to recommended levels.

In following Pinchot's economic and social directives, range examiners and researchers sought to predict the amount of forage production. Results from experiments at research stations and reconnaissance investigations on forests would provide estimates of range capacities and inform and, in theory, justify administrative decisions to limit range access. For the first two decades, those calculations were unavailable for Coronado and other Southwest forests. In reality, livestock access and permit availability were based on user expectations and economic necessity. Later range capacity estimates were influenced by social and ecological biases; examiners did not wish to impose financial hardship on suffering stockmen by lowering estimates too far or too fast. Nor did they wish to confirm what many probably suspected – that range degradation and loss of productivity were both increasing. Thus estimates continued to be recalculated but still remained "overly generous" for decades.

Without fences to control access, livestock numbers were mere guesstimates. Large amounts of trespass cattle outside of permits and excess animals beyond permitted numbers made range counts impossible. Determination of "proper stocking" levels was entirely dependent on a crude, overall visual assessment of the range. Beyond the obligatory statements to note the state of the range, supervisors asserted management progress in their annual reports by animal condition and market prices. Range managers were regularly subjected directly and indirectly to social and political pressure to open forest ranges to more livestock. Direct pressure came from social ostracizing or threats from users. Indirect pressure came from Washington administration who exhorted supervisors to raise stocking levels at carrying capacity or from political representatives who threatened to alter agency funding or regulatory authority. Whatever their own opinions on range stocking levels might be, supervisors were surrounded by others all of whom were urging greater utilization. In the absence of accurate measurements of changing productivity, few spoke up for the need to reserve forage for soil protection or range restoration.

Historical grazing patterns in the Southwest also interfered with regulating forage consumption and proper distribution. Without seasonal limitations, stockmen grazed their animals on Coronado ranges year-long. Lower elevation forage received greater utilization. Range condition often remained in a poor state in those areas and trends rarely showed improvement. Coronado administrators were unable to dissuade stockmen from their traditional use patterns of unrestricted access throughout the year. As a consequence forage productivity declined and areas of nonuse increased.

Probably the most challenging and unpredictable issues facing supervisors were economic and environmental events – depression and drought. Both might persist for multiple years. Both caused cattle prices to fall. Ranchers fearful of selling at a loss would hold increasing numbers of animals on home and forest ranges waiting for prices to rebound. As livestock accumulated, forage would be overgrazed, setting range recovery even further behind. Even without grazing pressure, upwards of 90% of important forage populations might succumb during severe droughts. As rangeland on public domain lands deteriorated under extended environmental stress, demand for forest allotments rose dramatically. When both events occurred simultaneously as happened after World War I, administrators would choose to sacrifice range resources rather than exacerbate the financial difficulties of their constituents. War had the opposite effect on markets, generally increasing demand for beef and increasing livestock values. Demand for range allotments would swell then too and the chorus of voices to expand stocking numbers would rise to a crescendo.

With each setback to range condition, administrators responded in one of two ways. Stock reductions were designed to bring the animal numbers down to a new (and usually lower) calculated carrying capacity. But these agency-driven reductions were always vigorously opposed by permittees. Ranchers refused to recognize recalculated carrying capacities or any other research result that suggested a needed to reduce stocking levels. Supported by local associations and emboldened by audacious political representatives, ranchers challenged the authority of the Forest Service when they believed that agency actions impinged on their livelihoods and property rights. An easier response for administrators – one that encountered much less resistance – was the path of active management on the range. Instead administrators would encourage, cajole, or demand greater

investment in improvements on range allotments. When funds were available, the agency would also devoted significant time and money to building fences, dams and stock tanks. These improvements were designed to spread cattle into the most distant sectors of the range and increase utilization of all available forage. Managers believed that with these improvements they were increasing the capacity of the range without further jeopardizing its condition. At the same time, they avoided further conflicts with permittees.

Causes for the continued overgrazing and declining range conditions under Forest Service management are clearly complex. Ultimately they lie within the history of resource perception and the value and purpose of forest ranges. Range forage was largely viewed by the agency as a means to a specific end; the means was livestock production, the end was industry stability and economic growth of western communities. Some have blamed agency mismanagement on inadequate or belated scientific information. On the contrary, research results were available for all who were willing to incorporate the recommendations. Range scientists themselves either could not or did not apply the results to their own grazing programs. Ranchers who stood to profit most from the benefits of better management were reluctant to abandon tradition. Range managers either could not or did not incorporate those better management practices into their own administration policies; they were unable or unwilling to persuade permittees to change. Each was convinced that maximizing the human benefits – forage utilization and thereby livestock production – was the overarching objective. All agreed that the resource required protection and restoration. But protection and restoration were only relevant in as much as they assisted in maintaining or augmenting sustained outputs. Over the long run, forage protection was last in Pinchot's guiding directive and always last on everyone's list of management objectives. As a result, it rarely, if ever, received the management attention that it deserved. That the grasslands had real significance for other forest values such as wildlife habitat, soil stability, or water supplies was not deemed pertinent to range management decision-making until decades later. Not until well after the 1960s when multiple environmental laws required a more balanced accounting and consideration of those other values did the Forest Service make gains in range restoration.

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Part IV

Cattle Grazing at Saguaro National Park: its Management and Ecological Consequences

CHAPTER 1

The Lay of the Land[1]

1.1 Introduction

Cattle grazing at Saguaro National Monument severely limited park administration and management of its natural resources during the first four decades. Grazing throughout the western portion of the monument threatened the integrity of the ecosystem that supported the monument's signature cactus. In addition, the ranching community and its supporters threatened monument's continued existence within the National Park System. Unfortunate promises and political compromises limited management options until 1974 when monument employees took the proverbial "bull by the horns" and decided to terminate that use.[2] Cattle, largely uncontrolled in their grazing patterns, extensively affected soil and vegetation resources. Plant communities were permanently altered from what is believed to have been their historic composition. This executive summary of the history of grazing presents a brief overview of the political, social, cultural, & scientific factors that affected range and park management and the efforts to document the long-term consequences of cattle grazing in Saguaro National Park.

1.2 Range Management on the Rincon Mountain District

The history of cattle grazing on the western slopes of the Rincon Mountain District spans more than 100 years from the early 1870s to the early 1980s. For much of those 10 decades, the actual management of those cattle varied between lax and nonexistent. Livestock were largely left to follow the grass and water resources and moved at will between the valley floors along the Tanque Verde and Rincon creeks and the upper reaches of the grasslands within the Rincon Mountain District (∼3000′ – 5500′). The majority of that use was concentrated at lower elevations where water was more readily available.

The cattle owners, until the mid-1920s, were small-scale ranchers, mostly homesteaders, who had settled around the Tanque Verde and Rincon creeks. Each ran 25-100 head of cattle on the communal public domain and the foothills of the Rincon Forest. Even in these early decades, forage and watering sites were limited. It is unlikely that the rangelands between the Tanque Verde Creek at its northern end and the Agua Verde Creek at

[1] This executive summary was submitted in conjunction with the Desert Southwest Cooperative Ecosystem Studies Unit of the National Park Service and School of Natural Resources and the Environment as partial fulfillment of contract #H1200050003. June 6, 2013.

[2] It required an additional decade to remove the last of the wild cattle from the upper elevations of the park.

the southern end ever sustained more than 2500 head of cattle. Following the droughts and the decline of the livestock market in the early 1920s, many of those homesteads were bought up and consolidated into larger ranch holdings.

Cattle wandered the range year-long until rounded up at spring or fall rodeos. Then they would be branded and a portion of the herd sold to marketers. Prior to the 1930s, most livestock were retained on the range until adulthood at 2-3 years of age. Following the droughts of the 1920s, cattlemen shifted to breeding operations; they would sell yearlings and retained bulls and breeding cows with calves. Later in the 1950s, ranchers begin to experiment with high-intensity grazing holding large numbers of animals on the range for short periods of time and only during specific seasons.

Cattle numbers on the ranges fluctuated depending on the demand from local and/or national markets and on the conditions of the grasslands. During multiple year-long droughts in the 1880s and 1890s, stockmen, with nowhere else to move their starving cattle, left excessive numbers on already depleted ranges. The cattle consumed any remaining forage and caused extensive damage to grassland resources. A significant portion (50-75%) of livestock died from starvation or thirst. Economic recessions, such as the crash of 1907, reduced demand for beef whereupon large numbers of animals would again be held on the ranges for extended periods of time.

The concept of range management emerged with the establishment of the US Forest Service in 1905, the Rincon Forest Reserve in 1907, and the Santa Rita Experimental Range Research Station in 1903. Across the country, forest reserves were created primarily to protect timber and water resources. In the Southwest, these reserves were instead proclaimed to protect ranges from overgrazing.

In 1908, the Santa Catalina National Forest supervisor outlined the boundaries of six grazing allotments within the Rincon Mountain District – two on the western side and four on the eastern side. These allotments were generally defined by geographical boundaries such as the edges of watersheds (see Figure 4.1). Individuals of social standing who possessed large amounts of deeded land and who had financial resources to lease additional state grazing lands were most likely to receive grazing permits. On each allotment, one (or sometimes two) permittees were granted access for a specified number of livestock.

Thomas Mills was a Pima County Sheriff and, later, US Marshall. He ran a large cattle ranch at the eastern end of the Rincon Valley. In 1908, Mills was granted a permit for the Rincon allotment that covered more than 36,500 acres. In the upper reaches of the Tanque Verde Valley, Eduardo Carrillo and Emilio Carrillo (not related), both respected leaders of the Hispanic community and large landowners, shared the communal Tanque Verde allotment that covered 40,000 acres. Over time, the US Forest Service, under pressure to open the Rincon District to more stockmen, began to divide these larger allotments into smaller pieces. In 1920, from these two original allotments, three smaller allotments, the Twin Hills, the Pantano, and the Spud Rock, were excised.

In practice, however, permit preferences that restricted specified cattle numbers to defined areas were almost meaningless. While cattle were annually collected for branding and sale, roundups in rough and rocky areas like the Rincon District rarely gathered more than an estimated 75% of the animals on range. Thus the numbers that utilized the range were generally unknown – ranchers could only guess at the quantity of animals under their brand. In addition, ranchers historically refused to admit to an accurate number of

animals actually owned. Ranchers regularly ran more cattle on their allotments that they were permitted – according to some reports, upwards of twice their preference numbers.

While the Forest Service restricted the permittee to a specific number of animals on his range, nearby small ranchers and homesteaders were often granted limited access to the same allotment to graze a small number (10) of exempt animals. Those exemption privileges for small homesteaders were later eliminated in 1923. The absence of boundary and drift fences also meant that cattle numbers on the Rincon District allotments remained relatively uncontrolled. The majority of cattle would stay within a given watershed if forage and water were adequate. If however resources were insufficient, cows would often travel up to 20 or 30 miles in their search for something better. In the 1930s, the Civilian Conservation Corps provided the necessary manpower to finally enclose many allotments with barbed-wire. Other boundary fences were constructed by ranchers under pressure from the Forest Service to exclude unpermitted livestock.

Even with enclosures, there was still little control over cattle movement or the grazing numbers. The permittees' base ranches with their deeded and leased lands lay immediately outside the boundaries of the forest allotments. Grazing permits for each of these allotments were called "on-off" arrangements. Cattle were expected to use private lands a specified percentage of the grazing year and the park and forest range the rest. The allotment permit prescribed the average number of cattle that would be on the forest allotment throughout the year. Thus a rancher ran a significantly larger number of cattle than the number prescribed on his permit depending on his amount of "off" land. The rancher's cattle could move daily or seasonally between the "on" and "off" lands in search of good forage and available water. As a result, the most attractive areas were often severely overgrazed.

1.3 Political Battles for Control of Saguaro National Monument

The transfer of the administration of Saguaro National Monument (SNM) from the US Forest Service to the National Park Service in 1933 caused great consternation to the nearby ranchers. The Park Service was known to be less supportive of long-term grazing use than the US Forest Service and the permittees who held Rincon and Tanque Verde permits feared the impending loss of their range access. These outspoken ranchers deftly manipulated both public opinion and political representatives in order to protect their business investments and continued access to forage on the Rincon Mountain District.

The ranchers persuaded the powerful Arizona senator, Carl Hayden, to repeatedly introduce legislation that would have returned almost 80% of the new Monument (the lands above and East of the Cactus Forest) to the administration of Coronado National Forest. In exchange for the Park Service's agreement to this diminution, the Monument would receive congressional funds to purchase the remaining private in-holdings within the Cactus Forest. For 15 years, the Park Service refused to acquiesce to this reduction. Congress never approved Hayden's proposed legislation.

This continuing administrative uncertainty over the grazing lands in the Monument created an additional conundrum for Superintendent Frank Pinkley. The sole NPS grazing policy in place at this time required that grazing permits terminate at the death of the permittee or the transfer of the ranch to a new owner. If Monument lands were going to

be returned to Forest Service administration, Pinkley did not wish to terminate that use. Thus in an unusual precedent, he agreed that with each sale of the dependent ranches he would transfer the permits to the new owners. While justifiable at the moment, Pinkley's decision extended the Monument's grazing situation for many decades.

In the late 1940s, out of frustration with this land-for-control stalemate, the Park Service threatened to abandon Saguaro National Monument entirely. Local businesses and organizations became alarmed at the potential loss of tourism dollars and stepped in to resolve the impasse between the ranchers and the Park Service. The primary challenge lay in the fact that the most spectacular stands of saguaro cacti fell across a crazy patchwork of private, state lease, and University of Arizona lands. At the crux of this impasse was one man, James Converse, who held a grazing lease on University lands within the Cactus Forest. University administrators were willing to transfer its lands to NPS if, and only if, Converse would agree to relinquish his grazing lease. James Converse would relinquish that lease if, and only if, the Park Service agreed to guarantee of access in perpetuity for the four grazing permits covering the monument's western rangelands.

In March 1950, Associate NPS Director Arthur Demaray sent written statements to the two holders of the Tanque Verde permits, Sam Drucker and James Converse, the holder of the Pantano permit, William Veeck, and the holder of the Rincon permit, Gordon Packard, informing them that their permits would continue in perpetuity until voluntarily relinquished. In exchange, James Converse abandoned his claim in the Cactus Forest. Over the next 20 years, the Park Service effected exchanges for State and University lands and purchased all remaining private in-holdings (with the exception of section 8 T14S R16E). Possession of Cactus Forest lands finally allowed the Park Service to construct the visitor center and administration headquarters. At last, in 1958, the Park Service fenced the Cactus Forest area and eliminated livestock from the prime saguaro stands in the monument.

While this foothills area could now begin a slow recovery from 80 years of cattle foraging, the rest of the monument uplands (which also contained important saguaro stands) continued to be grazed. The exchange of the Cactus Forest for the promise of an indefinite continuance of grazing was, in many ways, a devil's bargain for the Monument managers.

In 1935, the Park Service had signed an agreement with the US Forest Service that Coronado Forest rangers would administer grazing permits and manage cattle and range lands on Monument lands. As a consequence of this arrangement, Monument employees had a few responsibilities toward and much reduced contact with allotment ranchers. While Monument custodians and later superintendents were required to approve all permits and transfers, they generally deferred to the Forest Service district ranger's decisions and assessments. Demaray's 1950 agreement with the ranchers now put Monument managers at a further disadvantage; these managers could scarcely argue for needed reductions in cattle numbers when their associate director had promised perpetual access.

CHAPTER 2

Grazing Resolution

2.1 Early Saguaro Research

In the late 1920s, University of Arizona president and, Homer Shantz, and, later, the Park Service in the 1930s had expressed concern over the absence of saguaro regeneration. Both Shantz and NPS believed that the presence of cattle was a primary factor in this lack of regeneration through a variety of mechanisms including soil disturbance, trampling, erosion, and removal of nurse plants. Shantz had invested University funds to purchase homestead claims, state land grazing leases as well as deeded lands in Cactus Forest in order to protect what he believed to be the most spectacular stands of saguaros. Shantz strongly lobbied the Park Service to establish a national monument to provide further protection to these cacti. At the same time, park managers were also concerned about a significant loss of many of the largest and most magnificent saguaros in the same area. These older cacti were dying of an apparent bacterial infection that caused the plants to rot and collapse. Indeed, the bacteriologists predicted that this central saguaro forest might disappear entirely by the mid-1970s if the infection was not arrested.

Thus, SNM's saguaro population was declining rapidly due to two separate and distinct causes. However, for reasons that still remain unclear, for the next two decades scientific investigation into this decline focused only on the bacterial necrosis. While the Park Service expressed continued concern over the effects of cattle grazing on those of saguaros and the surrounding vegetation, no research was initiated until the early 1960s. Indeed, the first impetus to study the effects of cattle grazing emerged from academia rather than any effort initiated by Saguaro National Monument or the National Park Service.

No documentation has elucidated the reasons why that research focus remained so single-minded. Yet one may still speculate on why the effects of grazing on saguaros were not investigated. First, the National Park Service had but one expert trained in evaluating rangelands and cattle management; he was assigned to cover the entire Southwest and Western regions. Second, because of the apparent legislative requirements[1] and administrative directive to maintain grazing on the monument, the Park Service felt it could do little to ameliorate or terminate that grazing. And third, the political and social cards were, at that time, stacked against the Park Service. During the 1940s and 50s, powerful western senators had repeatedly investigated the Bureau of Land Management and US Forest Ser-

[1] PROCLAMATION 2031 ESTABLISHING SAGUARO NATIONAL MONUMENT, MARCH 1, 1933. "The reservation made by this proclamation is not intended to prevent the use of the lands now within the Coronado National Forest for national-forest purposes under the proclamation establishing the Coronado National Forest, and the two reservations shall both be effective on the land withdrawn."

Figure 2.1: Vegetation at Saguaro National Monument on northwestern foothills of Tanque Verde Ridge, elevation 3200 feet. Area was protected from livestock grazing since 1958. Vegetation includes foothill paloverde, ocotillo, limberbush, and prickly pear cactus. Conspicuous ground-cover of perennial grasses includes bush-muhly, Arizona cottontop, slender grama and sideoats grama. Photograph taken by Warren Steenbergh May 22, 1969.

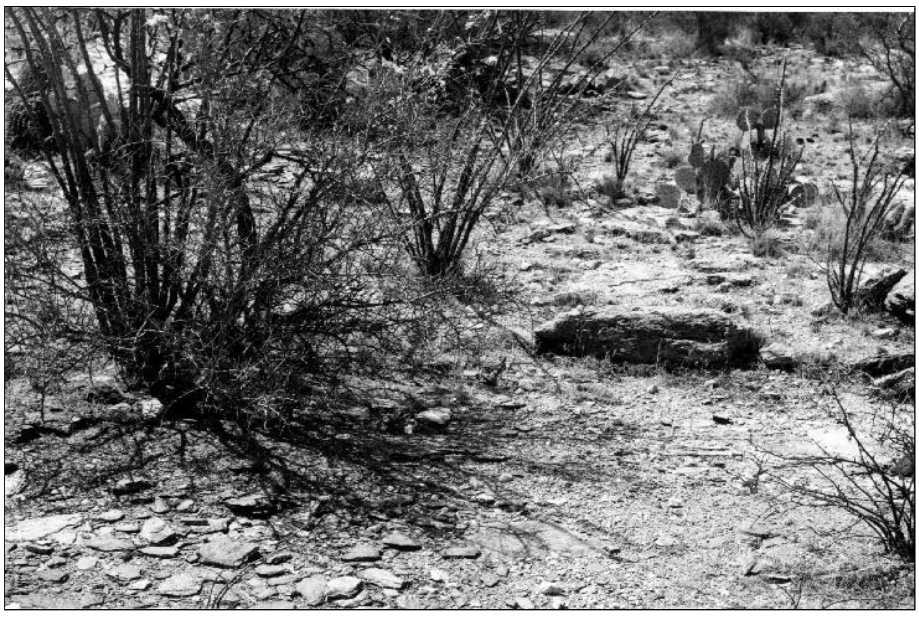

Figure 2.2: Area of vegetation then currently grazed by livestock and subject to continuous grazing for almost 100 years. Site was 25 feet south of upper photo. Plant species same as in upper photo though grasses grazed to height of 1 inch were not identifiable; density and cover appeared reduced. Photograph taken by Warren Steenbergh May 22, 1969.

vice when both agencies tried to control overgrazing on their own rangelands. Initiating a scientific study on the detrimental effects of cattle grazing on federal lands would have been political suicide. Public opinion through the 1950s still supported cattle raising as an important industry in Arizona. Many believed that its stability should take precedence over tourism and environmental protection.

However, public attitudes, especially in states without powerful livestock associations, regarding environmental protection of public lands and the responsibilities of federal agencies to implement and enforce that protection were beginning to change.

In the 1950s, the Monument initiated a controversial program to propagate and reforest saguaros in areas frequented by the visiting public. While the propagation efforts failed miserably, the attempt did encourage an effort to study why some saguaros survived and others did not.

Three significant events occurred during the early 1960s that shifted Monument research away from bacterial necrosis and toward the issue of cattle grazing. In 1963, the National Academy of Sciences Advisory Committee on Natural History Research in the National Parks chaired by eminent biologist William Robbins reported that the very integrity of national parks was severely threatened by the lack of adequate research on park unit ecosystems. The report recommended that the Department of the Interior provide immediate funding to develop research staff and to support research in mitigating threats to that integrity. Secretary Stewart Udall initiated funding efforts that year. In 1964, Saguaro National Monument and Organ Pipe Cactus National Monument jointly hired biologist Warren "Scotty" Steenbergh to oversee outside research and accomplish his own projects. Shortly after his arrival at Saguaro, Steenbergh with University of Arizona scientist, Charles Lowe, began a long-term project to study the entire ecology of the saguaro from germination to death.

In 1961, the third important event was the initiation of a two-year study at Saguaro National Monument by three nationally known ecologists, William Niering, Richard Whittaker, and the aforementioned Charles Lowe to examine the physical and biological factors affecting the survival of the Monument's saguaro population. The resulting paper was published in the prestigious journal *Science* in 1963 and identified numerous factors but it highlighted the effects of cattle grazing. Immediately, the Park Service and Department of the Interior were deluged with letters demanding reasons why the government was permitting cattle grazing in a national park. Both Whittaker and Niering wrote regularly to Park Service and Interior administrators for two years demanding that grazing at Saguaro be terminated. They asserted that both agencies had failed in their highest legal responsibility to protect the natural resources of the monument.

The fallout from the public and academic uproar and Niering and Whittaker's letters stimulated an internal resolve among Monument and Southwest region staff to wrest control of cattle grazing from the US Forest Service. In the past, Forest Service grazing permits had been issued on a 10-year arrangement; the most recent term permits were set to expire at the end of 1965. Any proposed reductions in preference numbers had to be announced at least one year in advance. Apparently, the Washington office was still unwilling to assume control of grazing management or challenge allotment preferences. The Coronado National Forest renewed the Rincon permits for another 10-year term. Instead, Saguaro National Park managers turned to University of Arizona biologists and range manage-

ment scientists to conduct a grazing study at the Monument. However, no one was willing to undertake such a study.

The pressure to terminate cattle grazing at Saguaro National Monument now came from two different sources.

In the 1940s and early 1950s, an extended drought severely stressed the natural resources of Saguaro National Monument. Watering sites and springs dried up; rangelands were grazed down to stubble. Most ranchers reduced their stocking levels; some removed their cattle entirely from their allotments in order to allow the grasses to recover. Since that drought event, the Pantano allotment had intermittently been in non-use status. This small area contained the least available forage and was the most prone to overgrazing. In 1961, the Pantano permit was sold to the Rincon Valley Development Corporation. Active grazing on the allotment was drastically reduced and, in 1967, was eliminated altogether. Joseph Rae, the Pantano permit holder, and Henry Jackson, the Rincon permittee, had already begun intensive discussions regarding residential development of their private land holdings. Apparently for both land owners, the financial costs of raising cattle on the foothills of Saguaro National Monument now outweighed the returns. Other uses of their private lands appeared more lucrative. In December 1967, Jackson voluntarily relinquished his grazing permit for the Rincon allotment. Rae, with a little more encouragement from Coronado and Monument managers, agreed to relinquish his Pantano permit in 1971. Thus only Kenneth Kaecker's Tanque Verde allotment was still actively grazed on the western side of Saguaro National Monument. Outwardly Kaecker was adamantly opposed to relinquishing his permit. In reality, he was hoping that the Park Service would buy him out. But the federal government refused to recognize a monetary value for his grazing permit. The federal government has always deemed a grazing permit to be a revocable privilege and not an object to be possessed[2].

Saguaro National Monument and Organ Pipe Cactus National Monument (ORPI) had both struggled with intractable grazing management problems. Scotty Steenbergh's position expanded in 1967 from park naturalist to research biologist. Steenbergh now advised ORPI managers regarding the Gray family's ranching activities and the biological consequences of their cattle grazing on park resources. Just as Associate Director Demaray had promised to maintain Saguaro grazing permits in perpetuity, he had also made a similar statement to the Gray family in 1941. That promise had equally restricted ORPI managers in their ability to protect the park's vegetation from overgrazing.

After many attempts to terminate grazing at ORPI, Secretary Udall asked for a legal ruling on the validity of Demaray's promise. Interior Solicitor Frank Barry responded that no one in the Interior Department (including the Park Service) possessed the authority to make any contract that vested a private right in public lands. Indeed, Udall as secretary was derelict in his responsibilities to protect national park resources if he did not terminate any use shown to damage those resources.

With that legal opinion in hand, the Park Service terminated the Grays' grazing permit in 1968. That same legal opinion now gave Saguaro managers the authority to move to eliminate Kaecker's cattle from the Monument.

[2]Unlike the ranchers and their bankers who look at a grazing permit as part of the real estate of a working ranch

In 1974, the Park Service terminated its cooperative agreement with the US Forest Service to manage grazing at Saguaro. Saguaro managers now assumed administration of the Monument's portion of the Tanque Verde allotment. They notified Kaecker of their plan to remove all cattle from the Monument upon the expiration of his current permit on December 31, 1975.

2.2 Final Impetus for Research: Kaecker's Legal Challenge

In March 1976, Kenneth Kaecker filed a lawsuit against Saguaro National Monument to retain his grazing permit. The Park Service knew that if it was to present a successful defense to Kaecker's lawsuit, it would have to document damages to Monument vegetation caused by cattle grazing. Steenbergh and Lowe were just finishing their first treatise on the ecology of the saguaro that year.[3] Steenbergh, as the Monument's research biologist, knew more about the vegetation of the grazing landscape than any other scientist. Although Steenbergh was now based at the University of Arizona as leader of the new Cooperative Park Studies Unit, Superintendent Bill Lukens turned to him to provide the first baseline data that described the present condition of both soil and vegetation. With this baseline data in hand, future researchers would be able to compare those resources now under active grazing with future conditions after termination.

In late March 1976, Steenbergh established five pairs of study plots on the Monument portion of the Tanque Verde allotment. Nine of those plots fell within the actively grazed area. A single plot fell within the Cactus Forest from which cattle had been excluded 18 years earlier. These pairs were meant to provide two comparable sites from each of the five principal vegetation types found on the allotment. These plots were not meant as paired sites that specifically contrasted grazed with ungrazed areas. Steenbergh recorded data on species presence, density, and crown cover. He also documented each plot with numerous photographs. Steenbergh's research project was designed to provide baseline information for a continuing study that would be reevaluated every 3 to 5 years. Unfortunately Steenbergh never returned to continue his research.

Eight years later in 1984, L Susan Anderson resampled 4 of the 10 plots and found a significant increase in grass and palatable shrub density and cover. She attributed the observed changes to release from grazing as well as an above-normal precipitation history during those intervening years.

Thirty years later in 2005, Don Swann and Andy Hubbard rediscovered Steenbergh's original baseline data. They returned to remeasure those 10 plots in 2007. The results of those measurements were mixed; shrub and grass cover and density had increased, but the same measurements for trees showed a decrease. Within those intervening years, wildfire had also burned over the now historic allotment further altering the landscape and vegetation with its own signature.

Steenbergh's grazing report was written as a defense for the Park Service in its lawsuit with Kenneth Kaecker. Steenbergh described in detail the threat that grazing livestock

[3] Warren F Steenbergh and Charles Lowe. 1976. Ecology of the Saguaro. I. The Role of Freezing Weather on a Warm-Desert Plant Population. Pages 49-92. In: Research in the Parks. National Park Service Symposium Series #1. Washington DC: US Government Printing Office.

posed not only to the signature plant for which the Monument had been established but to the ecology of the entire Monument. His words have often been quoted in subsequent documents and it is worthwhile to do so again here.

> The Monument contains the last remaining example in the southwestern United States of a natural continuum of warm-desert to mountain-forest plant and animal associations essentially unaltered by the intrusion of public roads, associated developments, and related uses. The singular rarity of that resource clearly indicates the importance of maintaining the integrity of natural associations and ecological relationships within Saguaro National Monument. That integrity has not been maintained – and cannot be maintained – in the presence of grazing livestock. Livestock grazing precludes full effectiveness of management programs required to restore and maintain the basic natural ecological processes responsible for the evolution and maintenance of representative biotic communities within the Monument.

Steenbergh summarized his 12 years of studying the landscape of Saguaro National Monument.

> Livestock grazing is completely incompatible with the purposes for which the Saguaro National Monument was established, and is a use in direct conflict with the establishing proclamation which states that '...the National Monument hereby established shall be the dominant reservation and any use of the land which interferes with the preservation or protection as the National Monument is hereby forbidden.' Cattle grazing exerts a powerful degrading impact on the natural resources of Saguaro National Monument. The impact of cattle grazing is currently intensified by continuing extreme drought conditions. Immediate relief from livestock grazing pressure is essential to prevent further long-term damage to the natural environment.[4]

2.3 Epilogue

Kenneth Kaecker removed the last of his cattle from Saguaro National Monument in May 1978. His lawsuit against the National Park Service for damages from the loss of his grazing permit dragged on until February 1982. The suit was finally resolved in and out-of-court settlement. The National Park Service agreed to pay Kaecker $183,000 – in essence the value of his lost permit. Whether Warren Steenbergh's written report was insufficient evidence or Arthur Demaray's written guarantee of grazing access in perpetuity was irrefutable is unknown. Because the suit was settled out of court, no documentation exists that ascribes purpose or blame to that payment.

[4]Warren Steenberg. "Ecological Impact of Livestock Grazing at Saguaro National Monument." April 9, 1967. Cooperative National Park Resources Studies Unit.

References

Warren F Steenbergh and Charles Lowe. 1976. "Ecology of the Saguaro. I. The Role of Freezing Weather on a Warm-Desert Plant Population." Pages 49-92. In: *Research in the Parks. National Park Service Symposium Series #1.* Washington DC: US Government Printing Office.

Warren Steenberg. "Ecological Impact of Livestock Grazing at Saguaro National Monument." April 9, 1967. Cooperative National Park Resources Studies Unit.

Part V

The History of Ranching at Organ Pipe Cactus National Monument

CHAPTER 1

Executive Summary[1]

> Whatever happens, the story is one of the collision between common good and individual freedom. It will recur as wilderness continues to shrink under the pressure of growing civilization.[2]
>
> Ben Cole

The purpose of this document is to provide background and context to the history of actions taken and decisions made at Organ Pipe Cactus National Monument (ORPI) between 1937 and 1980. This context has been written to inform the preservation of historic structures and ranch features that make up the desert vernacular architecture at the Monument and to facilitate development of a thematic historic ranch interpretation and tour program. Foremost among the early ranch structures are those leased or controlled by the Gray family: Bates Well Ranch, Dos Lomitas Ranch, Gachado and Pozo Salado Line Camps, Dowling Well and other ranch-related objects that form the framework for interpreting cattle ranching on Organ Pipe Cactus National Monument lands. The historic buildings and ranch features of the Gray Ranch are cultural resources now over 50 years old and were listed on the National Register of Historic Places in 1994. The overall periods of significance are listed as 1900 – 1924 and 1925 – 1949. As structures and features related to the early beginnings of cattle ranching on the Sonoran Desert, the buildings, sandwich corral fences, windmills, and other defining features are being repaired and rehabilitated for use in interpretation of the history of the Gray family and the long battle with Organ Pipe Cactus National Monument over cattle grazing rights.

Cattle were first brought to the southwest as a moveable food source by Francisco Vasquez de Coronado in A.D. 1540 when he explored the region that later became part of Arizona. The husbanding of cattle for the purpose of maintaining a permanent source of meat was first introduced to Pima Indian populations along the RÃo Sonoyta by Jesuit Father Eusebio Kino in 1699. Numerous ranching operations both north and south of what was later designated the International Boundary continued through the 1930s. The success

[1] This Thematic Context Statement was submitted in 2009 in partial fulfillment of the Architectural Documentation for the Dos Lomitas and Gachado Line Camp Project in conjunction with the Desert Southwest Cooperative Ecosystem Studies Unit of the National Park Service, and with the Heritage Conservation Program at the College of Architecture and Landscape Architecture, The University of Arizona.

[2] Ben Cole, "Shades of Earlier Era Fall on Sonora," *The Arizona Republic*, February 20, 1966. Carl Hayden Archives (CHA), Manuscript #1, Box 284, Folder 4, Arizona Collection, Hayden Library, Arizona State University, Tempe, Arizona.

of these cattle operations fluctuated with the ebb and flow of mining activities in the region and with rainfall variation.

Robert Lee (Bob) Gray and his family settled in the Sonoyta Valley north of the International Boundary in 1919. He had purchased improvements, wells, water rights, and cattle belonging to Lon Blankenship. Robert Lee Gray and three sons, Henry, Jack, and Robert Louis, expanded their control over the desert landscape by purchasing or leasing all other properties and improvements south of Ajo. In 1937 President Franklin Delano Roosevelt set aside 330,000 acres as a national monument to protect the population of organ pipe cactus found primarily in this region of the southwest.

The National Park Service allowed the Grays to graze cattle on Monument land under a lifetime permit arranged in 1941. The National Park Service also allowed JosÃ© Juan Orosco, a Sand Papago, living at Quitobaquito to run 100 head of cattle in the southwest portion of the Monument. That permit was terminated upon his death in 1947.

The Grays built numerous ranching structures and water facilities throughout the monument, including Pozo Salado and Gachado Line Camps. The Grays also built and/or lived in four homes at Bates Well, Alamo Canyon, Dos Lomitas and Dowling Well.

Consequences of long-term overgrazing drove the National Park Service to attempt to buy out the Gray ranching operation in 1966. The Department of the Interior terminated the Gray partnership grazing permit in 1968. The three Gray sons continued to run cattle on Monument lands without a permit until the death of the last member of the partnership in 1976. The last of the Gray cattle were removed from National Monument lands in 1978.

CHAPTER **2**

A Thematic Introduction

For most of us in the modern world, ranching and cattle-raising have been compartmentalized to private and state trust lands, national forest allotments, and Indian reservations. It is difficult for many visitors to believe that the National Park Service, the protector of wilderness and untrammeled open spaces, could have allowed a traditional and destructive use as cattle grazing to occur within its protective boundaries.[1]

The sheer longevity of grazing at Organ Pipe Cactus National Monument boggles the mind. For almost 40 years the Gray family ran cattle across a national monument with apparently little to no interference from the federal agency. These cattle consumed and destroyed delicate desert vegetation, denuded enormous areas of plant life, wore trails still in existence today, and created huge regions where top soils were lost to wind and water. Even though cattle were removed from the landscape more than 30 years ago, arid environments are slow to recover and damage is still visible in many areas.

To the casual visitor, the notion that this activity was tolerated for so long raises a plethora of questions. Why did the Grays choose to run cattle in a largely desert environment where there was so little grass? Why did the Grays run so many cattle that they damaged the landscape on which their continued livelihood depended? Why did they not care for their cattle and the natural resources during frequent times of drought and famine? How could the Grays operate with such immunity when they continually ignored Park Service regulations? Did Park Service employees understand the extent of the ecological damage being wrought by livestock? Why didn't the Park Service put a halt to this destruction of their own environment that they had sworn to preserve? Why were the Grays "cheated" out of their payment for their property when the federal government had promised to buy them out? This document is intended to clarify the answers to these questions.

The issues in this struggle – social, political, cultural, and environmental – were complex and deeply interwoven throughout this history. The central role is played by the Gray cattle – a cross of Hereford and Brahman breeds that essentially ran wild over 350 square miles of southwestern desert shrub. But there were many more actors in this long-running play: two generations of Grays; 10 generations of Organ Pipe superintendents; seven National Park Service directors; six Arizona delegates to Congress; five secretaries of the Interior; and one president wrestled with this ongoing problem over a time span of four decades. The Grays' and National Park Service's joint occupation of Organ Pipe is

[1] Grazing is still permitted in 31 park units according to 2006 documentation. Managing agencies of national monuments established under the Antiquities Act of 1904 were required to allow many traditional land uses to continue during the lifetime of the permittee or until the sale of the operation.

a story long and rife with conflict. It was an uneasy relationship between two unwilling bedfellows; each of whom wished the other would leave – and soon! Unfortunately for both parties, neither one would give in.

Much of the conflict in this story originates from changing values and attitudes about the land itself and the accepted uses of that land and its resources. Because the story spans such a long period of time, repercussions from those social, political and cultural changes continued to reverberate throughout the lives of the Gray family members, government officials, and National Park Service staff. For the Grays, the first change was a shift in ranching patterns away from running cattle across open range to a more controlled management of animals, land, soil, water, and grass. When the Gray family left Texas in 1912, this tradition of open range ranching was rapidly dying. They moved westward through New Mexico, eastern Arizona and finally settled in the Sonoyta Valley in the southwestern corner of the state in 1920. Patriarch Bob Gray was always looking for grasslands unclaimed by agencies or people and uncluttered by other ranch units. By purchasing ranch structures and numerous wells along the US-Mexico border the Grays controlled an enormous area with little interference from other ranchers. The large number of sons willing to participate in the cattle operation (originally five but later three) gave the Gray family power in numbers well beyond most other ranching families in the area. They continued to expand their domain by leasing or purchasing improvements (but not land) south of the town of Ajo down to the International Boundary. By the late 1930s, the Grays were running cattle across the entire region that was about to become Organ Pipe Cactus National Monument.

But this pattern of squatting on the land and control of water was old, left over from the days of early settlement of the open ranges in the West. As ranges became more populated with people and livestock, it became necessary to protect those resources essential to a ranching operation with outright ownership of land. Ranchers accomplished this by homesteading and gaining title to those parcels. The Grays, however, could not be bothered with this process. When those homestead opportunities were eliminated in 1934, the Grays were left without a land base to justify their presence and continued use of the range.[2] To compensate for this lack of titled land, the Grays persuaded the National Park Service through Senator Carl Hayden to grant them a lifetime grazing permit. With the long-term backing of one of the most powerful senators in Congress, the Gray family was assured of almost exclusive access to the grazing resources at Organ Pipe Cactus National Monument.

Changing state law over control of water represented another cultural shift to which the Grays did not adapt well. Prior to 1919, control and ownership of surface water was determined by continued use. Underground water especially that obtained from wells was controlled solely by ownership of the surrounding land. Once Organ Pipe Cactus National Monument had been established, the National Park Service became the sole proprietor of the land and all its subsurface waters. Those "waters" that the Gray family thought they had purchased from previous ranchers granted them ownership only of the man-made structures – not the water itself.

[2]Robert Louis Gray did ultimately gain title to a homestead that included 160 acres around the Dowling Ranch in 1951.

Upon the death of the last member of the partnership, all Gray ranching structures became the property of the National Park Service by virtue of being within national monument boundary. Many have complained that the federal government cheated the Grays by not paying them the rightful value to their properties, their water, and grazing rights. But the legal battle over financial restitution was not quite so clear. They owned no land until 1951 when Bobby gained title to 160 acres. The Grays paid significantly less for their annual grazing permit than many surrounding ranchers who leased State, Indian, or Forest Service lands and received use of approximately 330,000 acres, an enormous grazing acreage while owning little or no deeded land. On the other hand, the Gray ranchers were never allowed to fully develop the Monument property in ways that would maximize the total use of all available grass and browse. Nonetheless, the Grays probably grazed an average of 1200 head of cattle or more in and around Organ Pipe lands with little or no interference for almost 40 years. The struggle and ultimate demise of the Gray family and their ranching operation could be the stuff of Greek tragedy. They represented a tradition and culture which could no longer function in a rapidly developing world and population. Public attitudes about traditional uses on federal lands were also changing. In the 1960s and 70s, ranching and mining were seen less as beneficial enterprises and more as an environmental degradation of lands that belonged to all citizens. The Grays were some of the last members of the community to recognize these shifting public values. Even in these farthest desert reaches of southwestern United States, cattlemen were no longer law unto themselves and the land was no longer free for the taking.

2.1 Organ Pipe Cactus National Monument Political and Environmental Setting

Organ Pipe Cactus National Monument encompasses more than 330,000 acres in southwestern Pima County, Arizona. Topography of the Monument is defined by Basin and Range variation typical of much of the Southwest. The Monument is divided by two major mountain ranges and a lower set of hills that trend Northwest-Southeast. The highest elevation is in the Ajo Mountains at the eastern boundary at 4808 feet. The basins are relatively low-lying desert. Their vegetation type is Sonoran warm desert scrub. Heat, drought, and freezing temperatures are primary factors that determine plant distributions. Temperatures range from below 20Â°F during winter nights to above 115Â° on summer days. Rainfall is biseasonal and averages 11.5 inches but the variation from average may be more important than the mathematical calculation. Extended droughts from failure of seasonal rains occur frequently. The Monument contains a small number of perennial water sources such as the well-known Quitobaquito Springs. The springs are located at the base of the mountain ranges. Small water retention basins, tinajas, at upper elevations hold winter or summer rainfall for extended periods of time.[3] Most present-day water sources are man-made, constructed for the historic cattle grazing industry.

Unlike the historic lush grasslands of southeastern Arizona, the plant populations in the region west of the Ajo Mountains were not immediately recognized as suitable for

[3]Richard Stephen Felger, Bill Broyles, Michael Wilson, Gary Nabhan, and Dale S Turner, "Six Grand Reserves, One Grand Desert," in *Dry Borders: Great Natural Reserves of the Sonoran Desert*, ed. Richard Stephen Felger and Bill Broyles (Salt Lake City: University of Utah Press, 2007), 3-26.

cattle grazing. The cattle industry developed later there than in all other grazing lands in Arizona. Most range assessments have defined the Monument's vegetation collection as sparse scrub rather than the native grasses normally associated with grazing. Significant rain events, however, produce immediate and substantial growth of both scrub vegetation and grasses. Grazing was finally terminated on Monument lands in 1976 and the last cattle were removed in 1978.

Organ Pipe Cactus National Monument was the second of numerous federal reservations in southwestern Arizona. The Papago (now the Tohono O'odham) Indian Reservation was created in 1918. The Indian Reservation lies east of the Monument and shares a common boundary of the Ajo Mountain Range. Organ Pipe Cactus National Monument was established in 1937 by Franklin Delano Roosevelt for the purpose of protecting the unusual population of organ pipe cactus. The Monument was designated a UNESCO Man and Biosphere Reserve in 1976. A significant portion of the Monument was set aside two years later as wilderness. Cabeza Prieta Game Range (now the Cabeza Prieta National Wildlife Refuge) was created in 1939 to protect pronghorn antelope and bighorn sheep populations and lies immediately west and north of the Monument. The southern boundary of the Monument is delineated by the International border with Mexico; the border was formally established in 1854 when Congress ratified the Gadsden Purchase. The southern border roughly parallels the RÃo Sonoyta which flows east to west a few miles further south. North of the Monument lies the historic mining community of Ajo. Mining enthusiasts have explored the Ajo region for mineral resources since the mid-1800s.

CHAPTER 3

Early Ranching in the Southwest and Arizona

The introduction of cattle to the United States and the Southwest began with Christopher Columbus on his second voyage to the New World in 1493. Columbus was believed to have brought cattle from the Canary Islands to Hispaniola as a developable food source.[1] Colonizers spread cattle to other islands in the Caribbean and finally to Central America in 1510 and Mexico by 1521.

During the late 1700s and early 1800s, the government of New Spain offered large tracts of land in PimerÃa Alta (the region settled by the northern Pima Indians south of the Gila River and north of the RÃo Magdalena) to communities and family groups who would settle and develop those border regions. The government's primary interest was to encourage new mining ventures. Cattle-raising was considered a secondary use of the land yet essential to sustaining the new settlers.[2] Numerous land grants were established in the Sulphur Springs, San Pedro, Santa Cruz, and Sonoita River valleys.[3] This early era of settlement was relatively peaceful. The Spanish government had agreed to provide the local Apache tribes with food and alcohol as long as they refrained from harassing the new settlers. The new Mexican government, after a decade of revolution and overthrow of the Spanish regime, was unable to provide the same level of military and financial support for the region. The Apache tribes without subsistence support returned to their more traditional patterns of raiding. The early settlements within the land grants were rapidly abandoned along with the livestock. Bert Haskett has estimated that there may have been as many as 100,000 abandoned head of cattle on the ranges of southeastern Arizona.[4] It is likely that most of these animals were slaughtered by the Chiricahua Apache as food during the subsequent 30 years.

In 1846, the United States declared war upon an unstable Mexican government and, two years later, exacted the territory north of the Gila River as spoils of war. In that same year, gold was discovered in the California hills. A frantic rush across the continent ensued as thousands of individuals hoped to partake of the putative riches of the mines and the miners. In a parallel rush to feed the miners, cowboys trailed large herds of cattle from

[1] John E. Rouse, *The Criollo: Spanish Cattle in the Americas* (Norman: University of Oklahoma Press, 1977). The Rouse document is an excellent source of history of the introduction of cattle to the New World. See also William S. Collins, "Cattle Ranching in Arizona: 1848 – 1950," Phoenix: Arizona State Historic Preservation Office, 1996.

[2] Bert Haskett, "Early History of the Cattle Industry in Arizona," *Arizona Historical Review*, 6, no. 4 (1935):3–42.

[3] The Sonoita River is a tributary of the Santa Cruz River in southeastern Arizona. It is different from the RÃo Sonoyta in Sonora Mexico.

[4] Haskett, "Early History of the Cattle Industry in Arizona," p. 7.

Texas through Arizona and on into California. Cattle in Texas could be purchased for as little as $3 – $15 per head and sold in 1849 for as much as $300 – $500. By 1855, those prices had declined to $6 – $7 per head but the movement of large numbers of cattle along westward trails continued into the 1870s.[5] Most cattle drovers followed the Gila River across Arizona to cross the Colorado River at Yuma.[6] During these journeys, alert individuals – cowboys, surveyors, and explorers – recognized the valuable grass resources that had been largely unused and unclaimed in central and southern portions of the territory. Many made a mental note to return later and settle in the region.[7] The journey for cattle drovers as well as gold seekers across southern Arizona was not without considerable risk of theft and slaughter especially from Apache or Sand Papago raiding parties.[8] One of the first Anglo-Americans to visit the Gila River region was Tom Childs, Sr. Childs had passed through in 1848 while driving horses to California. He returned to settle near Gila Bend where he collected stray cattle abandoned from other California-bound drives.[9] In 1854, the United States acquired from Mexico almost 30,000 square miles of territory south of the Gila River through the Gadsden Purchase. With this addition, the region encompassing Organ Pipe Cactus National Monument was appended to lands that later became the state of Arizona. The first permanent Anglo-American military attachment arrived in Tucson in 1856 to take charge of the area. Some of the early settlers to the region included William S. Oury, Pete Kitchen, and Andrew Dorsey.[10] Upon the outbreak of the Civil War in 1861, all American military forces were withdrawn from the western regions. Their withdrawal left the remaining inhabitants without any defense beyond their own resources. Few ranchers survived the subsequent incessant raiding by the Apache who destroyed buildings and livestock and slaughtered residents. Andrew Dorsey moved further southwest to Quitobaquito, perhaps to avoid the expanded raiding of the Chiricahua Apache. Tom Childs, Sr. abandoned his ranch during the Civil War to enlist in the Southern forces. He returned to the ranch at the end of hostilities.[11]

3.1 The Growth of the Cattle Industry in the Southwest

With the conclusion of the Civil War, the federal government engaged in a concerted effort to resolve the Indian conflicts in the Southwest either through agreements and/or forced resettlement on designated reservations. Many military camps and forts were re-occupied and new ones established throughout Arizona to assure control of Indian populations and

[5] J. J. Wagoner, "History of the Cattle Industry in Southern Arizona, 1540 – 1940", *University of Arizona Social Science Bulletin*, no. 20 (1952) p. 30.

[6] Haskett, "Early History of the Cattle Industry in Arizona," pp. 6–7.

[7] *ibid.*, pp. 10–11, 16–17.

[8] *ibid.*, p. 10; Charles A. Cook, "A Documentation of the Arizona PapaguerÃa with Special Reference to the Organ Pipe Cactus National Monument," 1967. Unpublished document at the Western Archaeological and Conservation Center, Tucson, Arizona, pp. 173–176; Jerome Greene, "Historic Resource Study. Organ Pipe Cactus National Monument, Arizona," Denver Service Center, Historic Preservation Division, National Park Service and US Department of the Interior, 1977, pp. 21–22.

[9] Bill Hoy, "Don Tomas and Tomasito: The Childs' Family Legacy in Southern Arizona," *Journal of Arizona History*, Spring (1999) p. 2–3.

[10] Wagoner, "History of the Cattle Industry in Southern Arizona," p. 30.

[11] Hoy, "Don Tomas and Tomasito," pp. 4–5.

protect the rapidly increasing number of territorial residents. The number of troops in Arizona grew rapidly from a few hundred to almost 6000.[12] By 1870, most Indian tribes had acquiesced to settlement on reservation lands. General O.O. Howard signed one of the last agreements with the Chiricahua Apache in 1872 on the understanding that they would reside upon designated lands in the Sulphur Springs Valley in southeastern Arizona. The final settlement of these tribes was a multiple boon to the cattle industry throughout the Southwest and especially in southern Arizona. Not only were ranchers and their livestock afforded an improved measure of safety, but the large numbers of military personnel and sedentary Indians created an increased demand for beef. Ranchers such as Henry Clay Hooker, Randolph Tully and Estevan Ochoa who had secured early access to grass, land and water were offered substantial government contracts for regular deliveries of cattle. In addition to local sources of meat, midwestern ranchers continued to drive cattle from Texas ranges to Arizona until 1872.[13]

By the 1870s, the ranges in Texas had become overcrowded. Numerous returning Civil War veterans chose to head westward with their herds to seek out the newly available and relatively safe grasslands in southern Arizona. Brannick Riggs and his family journeyed from Texas in 1872 to settle on unclaimed lands in the Sulphur Springs Valley.[14] Henry Clay Hooker and his partner, Hooper, drove four herds from Texas totaling 15,500 animals during 1872.[15] Drought in California further added to Arizona's cattle population as western ranchers drove their herds east to escape parched conditions.[16] By the end of the 1870s, Arizona's grasslands had seen a 20-fold increase in the number of grazing cattle.[17] 1880 marked the completion of the Southern Pacific Railroad line through Arizona. Now territorial ranchers were no longer dependent upon local markets or the hazardous, month-long cattle drives to sell their beef. Cattle could be shipped to California in a matter of days and to other railroad connections that would bring their produce to eastern markets. Most knowledgeable observers agreed that by the early 1880s Arizona's ranges, like those in Texas, had become fully stocked; all available surface waters had been claimed.[18]

Southern Arizona's overcrowded ranges were beginning to show signs of vegetation damage. Some forward-thinking ranchers began to experiment with improving their yield on each cow rather than simply increasing their numbers upon the land. Most cattle in Arizona at this time were descendents of the original Criollo or longhorn from Spain and the Canary Islands. The longhorn was welladapted to the arid conditions of the Southwest. This breed had remarkable stamina, could survive under drought conditions, and tolerate long-distance travel. However, the animal was long and lanky; the little meat that it carried was tough and not very palatable. Northern European or British breeds were much

[12]Haskett, "Early History of the Cattle Industry in Arizona," p. 18.

[13]Wagoner, "History of the Cattle Industry in Southern Arizona," p. 36.

[14]Richard J. Morrissey, "Early Range Cattle Industry in Arizona," *Agricultural History*, 24, no.3 (1950): p. 153; Wagoner, "History of the Cattle Industry in Southern Arizona, 1540–1940," pp. 52–53.

[15]Haskett, "Early History of the Cattle Industry in Arizona," pp. 23–31; Wagoner, "History of the Cattle Industry in Southern Arizona," p. 36.

[16]Wagoner, "History of the Cattle Industry in Southern Arizona," p. 38.

[17]J. J. Wagoner, "Overstocking the Ranges in Southern Arizona during the 1870's and 1880's," *Arizoniana*, 2 (1961):23–27.

[18]Haskett, "Early History of the Cattle Industry in Arizona", p. 35; Wagoner. "History of the Cattle Industry in Southern Arizona," p. 44.

stockier in form but less well-adapted to desert environments. Henry Clay Hooker of the Sierra Bonita ranch began to import bulls from different English breeds – Durham, Devon, and Hereford – and crossed them with his native cattle. He and others soon recognized that the Herefordlonghorn cross produced much better meat and had earlier maturation and prolific reproduction.[19] Cattle with Hereford bloodlines produced more meat per cow but were not as desert-hardy as the original longhorn. In general these new crosses would require more intensive management and resource development than the Criollo descendents.[20]

Another change in ranch management introduced into Arizona at this time was water development. Most natural water sites had already been claimed and protected; still there was insufficient water with which to supply those livestock already on the range. Larger cattle companies began to develop artificial water sources in the form of wells. Steam, as well as wind-driven, pumps brought water to the surface to be transported to nearby stock tanks. By creating additional water sources in new locations, grasslands that had been previously unavailable could now be opened up to additional grazing.[21]

Successful breeding, increased importation of cattle, and the development of additional water resources all led to a saturation of local markets and, subsequently, a necessity to move stock off the southern Arizona ranges and out of the region to California, Kansas, and additional markets in the East. Many were shipped by railroad but some larger companies still found it economical to drive their herds along the traditional trails.[22] Nonetheless, most ranchers were still holding too many cattle on Arizona's ranges.

As the quality of range vegetation deteriorated under continuous grazing pressure, cattle ceased to put on weight. In order to bring cattle up to sufficient weight and development, cattle companies began transporting their three-year-old steers from Arizona's southern ranges north to the Salt River Valley to be fattened before slaughter. Sites in Phoenix grew alfalfa and cottonseed to feed the incoming steers.[23] Buyers from the Midwest also began taking Arizona steers to Kansas and Montana for finishing prior to market.[24]

3.2 The End of the Open Range Ranching System

The collapse of the era of open range ranching began in the Midwest in the 1870s. A series of summer droughts and harsh winter blizzards began to inflict severe losses on cattle ranchers in Utah, Colorado, and Nebraska. The winter of 1886 – 87, one of the most severe on record, brought bitter winds and driving blizzards from Montana down through Texas. Estimates of cattle mortality from winter storms across the plains were as high as 60 – 90

[19] Haskett, "Early History of the Cattle Industry in Arizona," p. 37; Wagoner, "History of the Cattle Industry in Southern Arizona," pp. 50–51.

[20] Terry G. Jordan, *North American Cattle-Ranching Frontiers: Origins, Diffusion, and Differentiation* (Albuquerque: University of New Mexico Press, 1993), pp. 267–274.

[21] Wagoner, "History of the Cattle Industry in Southern Arizona," pp. 52–54.

[22] Morrissey, "Early Range Cattle Industry in Arizona," pp. 154–155.

[23] *ibid.*, pp. 48–49.

[24] *ibid.*, p. 154.

percent. The terrible winter weather continued in the Rocky Mountain regions in 1889 – 1890 killing up to 95 percent of the range cattle.[25]

In Arizona, the summer rains failed in 1891 marking the beginning of an extended drought. By all accounts, Arizona ranges were drastically overstocked. Cattle prices had dropped during the previous years because of saturated markets. Many ranchers held onto their older cattle in hopes of better prices later.[26] Cattle counts of 721,000 for the territory were vast underestimates; knowledgeable ranchers believed that the cattle numbers were closer to 1.5 million.[27] Most of these animals were located on the southern grasslands in Pima and Cochise counties.

Again the rains again failed through the summer of 1892. Grass had practically disappeared from the ranges; water sources had dried up; and the cattle began to die. In the fall, ranchers shipped thousands of head out of the state to Texas, Kansas, California, Nevada, and even Oregon. Because of depressed prices and starvation conditions few buyers were interested in these exports. The rains did not return until July 1893. Estimates of mortality of the remaining cattle varied from a conservative 50 percent to a more probable 75 percent. Arizona Governor L. C. Hughes opined in his 1893 annual report for the state that if the rains had not returned, any remaining cattle would have succumbed within two months.[28]

The horrific consequences of this extended drought were seared into the minds of the surviving cattle ranchers. Collectively, the industry from the Midwest through Texas and Arizona made significant changes toward more conservative range and cattle management. The primary shift in management was the acknowledged importance of long-term investment in both land and cattle in order to reduce future risks during subsequent droughts. Terry Jordan has described this shift away from the "Texas style of ranching" in which cattle were left primarily to fend for themselves throughout the year until roundup to a more capital and labor intensive operation.[29]

First and foremost was the change in cattle management away from retaining livestock on the range until full growth at two or three years of age to a cow-calf breeding operation. Only breeding cows and bulls were retained. Calves were shipped out to feeder lots at either six months or one year of age. Holding animals for longer periods of time only overstocked the range and damaged the grasses. Ranchers continued to invest in better breeding in order to produce more beef for the same acreage of land. Ranchers also increased the number of employees in order to handle stock more frequently and to improve herd docility.

Wise investment in both land and soil was also deemed essential. More ranchers developed artificial water sources such as pumped wells and man-made stock tanks or retention basins. Ranchers also dedicated well-watered lands to growing winter feed such as hay and barley. Other physical improvements involved development of fenced pastures. Cat-

[25]Jordan, *North American Cattle-Ranching Frontiers*, pp. 237–238.

[26]Wagoner, "History of the Cattle Industry in Southern Arizona," p. 53.

[27]Haskett, "Early History of the Cattle Industry in Arizona," pp. 41–42.

[28]Haskett, "Early History of the Cattle Industry in Arizona," p. 42; Wagoner, "Overstocking the Ranges in Southern Arizona," pp. 25–26.

[29]Wagoner, "Overstocking the Ranges in Southern Arizona," p. 27; Jordan, *North American Cattle-Ranching Frontiers*, pp. 267–300.

tle grazing could be focused for limited periods of time; later cattle would be removed to give grasses time to rest and regenerate. By protecting the health of their resources ranchers also reduced the rate of soil erosion and subsequent soil loss.[30]

While most of the ranching industry made these cultural shifts away from the open range style of ranching, some resisted the new management practices. Terry Jordan has noted that many of these old-style Texans left the region for more open spaces in southwestern Arizona and Chihuahua, Mexico after the turn of the century.[31]

3.3 Environmental Consequences of Drought and Overgrazing

The drought of 1891 – 1893 was coincident with a number of long-term environmental changes in the landscapes of southern Arizona. Whether these changes were a direct response to overgrazing and other human-caused factors or were simply indicative of a shift in climatic patterns in the greater Southwest has been a topic of discussion by environmental historians for decades.[32] A major change noted by all ranchers was the general decline in native grass populations. Under continuous overgrazing, perennial populations decreased with a corresponding rise in annual grass, shrub, and cactus populations.[33] The resulting plant species available for grazing were much less palatable or nutritious than those present in the pre-Civil War grasslands. A second change was a dramatic downcutting in many of the larger rivers in southern Arizona. This downcutting began in the 1880s and, in a span of less than two decades, had changed water table levels significantly. Downcutting and entrenchment occurred in the San Pedro, Santa Cruz, San Simon, and Aravaipa Rivers and Whitewater Draw.[34] Similar changes occurred to the RÃo Sonoyta after a dramatic rainstorm in 1891. Floodwaters eroded the river channel to a depth of 20 feet overnight. The surrounding farm fields dependent upon the shallow water table were permanently de-watered. The town of old Sonoyta had to be abandoned; new Sonoyta was relocated further downstream at its present location.[35]

The environmental changes coincident with overgrazing of the grasslands during this extended drought were rapid and dramatic. Excessive numbers of cattle continuously grazing on the range for years had interrupted grass reproduction cycles. Grasses had no opportunity to mature and set seed for reproduction. During the drought, cattle desperate for food removed all grass material down to, and sometimes including, the root

[30]Wagoner, "Overstocking the Ranges in Southern Arizona," pp. 26–27.

[31]Jordan, *North American Cattle-Ranching Frontiers*, p. 238.

[32]Conrad Bahre presents an excellent summary of these arguments and their respective supporters in Chapter 3 of his 1991 publication *A Legacy of Change: Historic Human Impact on Vegetation of the Arizona Border Lands* (Tucson: University of Arizona Press); Raymond M. Turner, Robert H. Webb, Janice E. Bowers, and James Rodney Hastings. *The Changing Mile Revisited: an Ecological Study of Vegetation Change with Time in the Lower Mile of an Arid and Semiarid Region* (Tucson: University of Arizona Press, 2003) is another important contribution that summarizes the available data and arguments.

[33]James W. Toumey, "Overstocking the Range," *Bulletin of the University of Arizona Agricultural Experiment Station*, no.2 (1891).

[34]R. U. Cooke and R. W. Reeves, *Arroyos and Environmental Change in the American Southwest*, (Oxford: Clarendon Press, 1976), p. 94.

[35]Wilton Hoy, "Sonoyta and Santa Domingo: A Story of Two Sonoran Towns and the River That Ran by," *Journal of Arizona History*, 31, no. 2 (1990):117–140.

system. Left with insufficient biomass, the grasses could not regenerate during the following years even after the rains returned.[36] Cattle in their search for water wore deep trails alongside and into the water courses. In the absence of grasses and other vegetation to hold topsoil in place, dry summer winds removed significant amounts of humus and soil. Rainwaters moved more rapidly over the valley floors hastening soil movement and ultimately initiating gullying along the stream banks. Rapidly flowing streams carrying heavy loads of sediment scoured clean any remaining vegetation. As the riverbeds were deepened by the rushing waters, groundwater table levels also declined as water flowed out of the surrounding soils. The drop in water tables caused vegetation desiccation and loss and further enhanced erosion near riparian areas. The combined loss of topsoil and near-surface groundwater meant that few plants would regrow in those disturbed regions, thus allowing erosional processes to continue.[37]

[36]Toumey, "Overstocking the Range."

[37]J. J. Thornber, "The Grazing Ranges of Arizona," *Bulletin of the University of Arizona Agricultural Experiment Station*, no. 65 (1910), p. 335; R.U. Cooke and R.W. Reeves, *Arroyos and Environmental Change*.

CHAPTER 4

The History of the Public Domain and Range Rights

The development of ranching and the settlement in the West is intimately associated with the history of the public domain. The public domain was composed of land unclaimed by any individual that was "owned" and controlled by the federal government. Most of the public domain was located in the western portion of the continent. These lands included millions of square miles of federal lands acquired through treaties, purchases, war retribution, and concessions primarily during the half-century between Thomas Jefferson's acquisition of the Louisiana Territories in 1803 and James Gadsden's purchase of southern Arizona and New Mexico in 1853.[1] The story of the federal management, or lack thereof, of these lands sets much of the boundary conditions for the history of ranching in the West. This was especially true for those lands that fell within Organ Pipe Cactus National Monument. Homestead claims, federal reservations, and notions of "Range Rights" strongly influenced the struggle between the Gray family and the National Park Service.

The story of that management begins shortly after the conclusion of the Revolutionary War when British lands west of the Appalachian Mountain range became available to the new Confederation of States. The fledgling Confederation was deeply in debt, not only for financial loans from France, but for the salaries of the thousands of soldiers who had fought to obtain that independence. The Confederation (and later Congress) recognized that it could use those newly added land as payment to enlisted soldiers as well as to raise cash through land sales to pay off its debt to France.

Thomas Jefferson proposed to the Continental Congress a national land system, a program whereby available lands would be surveyed and recorded to encourage orderly sales and settlement.[2] The land would be divided into areas called *townships*, each 6 miles on the side, with the boundaries oriented to the cardinal points. Townships were further divided into 36 one-mile by one-mile units called sections, each of which contained 640 acres. Some of this demarcated land was given to previously enlisted men; the rest was auctioned off for cash. Surveyors not only measured and marked boundaries but also wrote extensive descriptions detailing the soils, grasses, timber, and minerals contained within each township. Maps and the accompanying descriptions were available to the public. To oversee and record the sale and dispensation of parcels of land, Congress later created the General Land Office in 1812. Registrars and recorders were hired to assist prospective homestead-

[1] See Chapter 1, James Muhn and Hanson R. Stuart, *Opportunity and Challenge: the Story of BLM* (US Department of the Interior, Bureau of Land Management, 1988).

[2] This national land system was called the Land Ordinance of 1785. A good history of this land division is presented by Hildegard Binder Johnson, *Order upon the Land: the US Rectangular Land Survey and the Upper Mississippi Country* (New York: Oxford University Press, 1976).

ers with identifying available lands, and filing and completing land claims.

4.1 Dispensing Public Lands: the Homestead Acts

Legislators recognized that substantial economic benefits would arise from the transfer of these public lands to private hands. Lands in private ownership would be developed and improved generating local produce for sustenance and economic activity for the area. Taxation of these lands would bring in revenues to local and state governments, revenues which could be reinvested locally in schools, roads, or other needed infrastructure. Unclaimed public lands were often abused and stripped of their natural resources by squatters – generally short-term inhabitants – who were less interested in building homes or establishing communities. These lands would have no investments made upon them nor would they contribute to local revenues.[3]

In 1862, Congress passed the Homestead Act. This law was intended to provide a regulated system by which the federal government could rapidly transfer agricultural lands to individuals interested in farming. The Homestead Act allowed farmers to claim 160 acres in exchange for small fees and a substantial investment of labor to improve that land. A homesteader was expected to build a house for his family, dig a well for water, husband animals, and produce crops within a time period of 3 – 5 years. If the claimant could verify these accomplishments, he would be granted title to the land by the General Land Office. This system of land dispensation was designed by congressional members in eastern states where soils were fertile and rainfall rarely insufficient for traditional forms of agriculture. The system, however, was inappropriate and its requirements untenable for the arid landscapes west of the 100th meridian. Grassland soils were too nutrient-poor to support agricultural crops and the unpredictable rainfall frequently meant a failure of a season's investments in labor and seed. In Arizona, less than one half of homesteading efforts were successful.[4]

Congressional legislators subsequently offered numerous band-aids to the 1862 Homestead Act in hopes of moderating those difficulties faced by settlers on arid lands. None were successful until finally in 1916 Congress passed the Stockraising Homestead Act as an alternative better adapted to the southwestern region.[5] For the first time, cattle-raising was approved as a legitimate form of agricultural enterprise; the production of crops was no longer a requirement to gain title to the land. The Stockraising Homestead Act increased the permissible land claim from 160 to 640 acres, a full section. However, even this fourfold increase in acreage was inadequate for many homesteaders to become functionally independent, self-sustaining agriculturalists.

While grasses were often a large component of plant communities of the Southwest, their biomass production was limited by infrequent or insufficient rainfalls. Thus the number of cattle supported on southwestern grasslands was substantially less than in eastern

[3]Paul W. Gates, "American Land Policy and the Taylor Grazing Act," *Land Policy Circular*, October, (1935):15–37.

[4]Pat H. Stein, "Homesteading in Arizona, 1862–1940: a Guide to Studying, Evaluating, and Preserving Historic Homesteads." Phoenix, Arizona State Historic Preservation Office, 1990.

[5]See Paul Gates' monumental and unsurpassed work *History of Public Land Law Development* (Washington, DC: U.S. Public Land Law Review Commission, 1968) for details of these variations on the Homestead Act.

states where rainfall was more predictable and plentiful. Shortly after the passage of the Stockraising Homestead Act, an unsigned letter was submitted to the journal of American Forestry. The letter laid out in print the glaring flaws within the act and predicted dire consequences in the future.

> But here comes the rub. Land which cannot be irrigated, lying in arid regions and not capable of dry farming, in other words, land of the character contemplated by this bill, will graze only one cow on from 10 to 40 acres, depending on the local conditions. The average capacity is perhaps 20 acres, giving a herd of 32 range cattle as the possibility from which to make a living.
>
> It is the judgment of stock raisers that fully 100 head of cattle are required to yield a competent living and this requires from four to 10 sections of grazing land. If these facts are true, the stockraising law is based on a fundamental economic error and only about one man in from four to 10 of those who file on these homesteads and invest their time, health and capital in improvements can hope to win out, and then only by acquiring title to the lands of those who fail.[6]

The letter writer makes the point that was already well-known to all ranchers in the West – to make "a competent living" a rancher needed to run more than 100 head of cattle. The land allotment from the Stockraising Homestead Act would, on average, provide only 20 percent of the area necessary to feed those cattle.[7] Thus a significant number of homesteaders were likely to fail without access to other lands.

In addition to the Homestead and Stockraising Acts, there were numerous other congressional laws which permitted the dispensation of public lands including the Desert Lands Act, the Timber Culture Act, and the Mineral Lands Act. All were greatly misused by ranchers through fraudulent claims to gain access to additional lands.[8] Yet even with these opportunities to gain title to more land, most ranchers still could not obtain sufficient amounts of land to run a large enough herd to be financially independent. Most small ranchers and homesteaders could not afford to buy land. Instead they turned to the unclaimed public domain to support the rest of their cattle.

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[6] Anonymous, "The Public Domain and the Stock-Raising Homestead Law," *American Forestry*, 23 (1917):243.

[7] Wagoner, "History of the Cattle Industry in Southern Arizona," p. 63. Wagoner suggests that four sections or 2560 acres was the minimum acreage needed to support 100 cows. This quantity of land had been strongly advocated by John Wesley Powell in his "Report on the Lands of the Arid Region" in 1878. See Wallace Stegner *Beyond the 100th Meridian: John Wesley Powell and the Second Opening of the West* (New York: Penguin Books, 1982), pp. 223–231.

[8] There is a long list of works by authors enumerating the extent of fraudulent land claims employed by less than scrupulous individuals. Paul W. Gates' work, *History of Public Land Law Development*, is the most complete and scholarly researched effort to document the history and consequences of public land laws. Other good sources include J. J. Wagoner, "History of the Cattle Industry in Southern Arizona, 1540–1940;" Charles Wilkinson, *Crossing the Next Meridian. Land, Water, and the Future of the West* (Washington, DC: Island Press, 1992); Pat Stein, "Homesteading in Arizona, 1862–1940: a Guide to Studying, Evaluating, and Preserving Historic Homesteads;" William S. Collins, "Cattle Ranching in Arizona: 1848–1950;" Karen Merrill, Public Lands and Political Meaning: Ranchers, the Government and the Property between Them (Berkeley: University of California, 2002; and Valerie Weeks Scott, "The Range Cattle Industry: Its Effect on Western Land Law," *Montana Law Review*, 28 (1966-1967):155–183.

4.2 The Public Domain: Free Land for the Taking

Almost every rancher in the West was dependent upon the resources of the public domain. Most of these lands were seen as too dry for farming and contained few timber or mineral resources to attract other users. Their primary economic value lay in the grasses they produced. Karen Merrill has suggested that the federal government chose not to actively manage these lands and left them unhindered by rules or regulations in the hope that they might still be claimed by individuals for homesteads. But the scarcity of water made these lands relatively unattractive to most homesteaders. The grasslands of the public domain were essentially ignored as they had little financial value.[9] The federal government had little desire or reason to restrict livestock use. Ranchers saw this lack of interest in management as tacit permission to utilize the grass resources of the public domain for free.[10] The public domain was thus available to any cowboy who set his cows upon the land. As the value of beef arose after the Civil War, more ranchers wanted to take advantage of those "free" resources to develop their own cattle herds.[11]

4.3 The Code of the West and Range Rights

In the absence of federal laws regulating the use of the grasslands, ranchers developed their own community rules and codes of conduct to control access and to set priorities for use.[12] Historian Walter Prescott Webb in 1931 described this agreement for control of access thusly:

> The cattle kingdom was a world within itself, with a culture all its own, which though of brief duration, was complete and self-satisfying. The cattle kingdom worked out its own means and methods of utilization; it formulated its own law, called the code of the West, and did it largely upon extra-legal grounds.[13]

These rules were often created and enforced by the most powerful (i.e. often the early arrivals) within the ranching community and supported by local livestock associations. The primary mechanism for establishing control over access to grass was to control the access to water. Ranchers used homestead claims to secure title to lands immediately surrounding water sources; often they located their base ranch at those water sites. A Colorado rancher in 1879 described the method of establishing control over his grasslands in a statement before the Public Lands Commission.

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[9] Merrill, *Public Lands and Political Meaning*, p. 26.

[10] Wilkinson, *Crossing the Next Meridian*, p. 85; Charles F. Wilkinson, a legal scholar, offers a broad history of land laws and federal policies as they affected ranchers in the West in his chapter on "The Rancher's Code."

[11] Richard White, "Animals and Enterprise," in *Oxford History of American West*, ed. Clyde A. Milner II, Carol A. O'Connor, and Martha Sandweiss (New York: Oxford University Press, 1994), pp. 252– 256.

[12] See Valerie Weeks Scott, "The Range Cattle Industry: Its Effect on Western Land Law," for an excellent discussion of the social arrangements established by ranchers to manage these open resources and control access to them.

[13] Walter Prescott Webb, *The Great Plains* (Lincoln: University of Nebraska Press, 1931), p. 206.

> Wherever there is any water there is a ranch. On my own ranch (320 acres) I have 2 miles of running water; that accounts for my ranch being where it is. The next water from me in one direction is 23 miles; now no man can have a ranch between these two places. I have control of the grass, the same as though I owned it. ... Six miles east of me, there is another ranch, for there is water at that place. ... Water accounts for nine-tenths of the population in the West on ranches.[14]

Few cattle would travel more than a few miles from water each day. Thus by protecting a relatively small area that contained the essential water source, a rancher could exclude other livestock from hundreds or even thousands of acres of adjacent grasslands.[15] The ranching code evolved to assert that ownership of water was equivalent to an unquestioned control of the grasses within the watershed. This "ownership" was the essence of a rancher's "Range Rights:" an extralegal division of land and resources backed by community approval and tacit agreement. Range rights were also granted to a rancher who bought cattle that were already grazing a particular area. The purchase of animals on the range gave the new rancher access to that share of the grass resources.[16] The acceptance or rejection of a newcomer on to a range was often determined by the local cattle association. If it wished to exclude a cattleman from the range, the association could make life very unpleasant by denying him use of normally communal assets such as corrals, participation in local roundups, or protection from rustlers.[17]

Range rights were also established by priority of arrival; the first individual could claim an unused portion of the range by publicizing his claim in a newspaper.[18] Yet he could only hold that claim by continuous possession either through use or habitation of that site. If his possession was challenged in federal court, the plaintiff would only be able to formally defend that amount of land defined by his homestead claim or title.[19]

From this pattern of historic use and occupancy of the public domain, livestock owners generated a self-sustained notion of right of land "ownership." This idea of "ownership" was supported by social rules of use, codes of conduct, and communal recognition of that possession.[20] In some locations, those rules of use, patterns of conduct, and "ownership" of the land were recognized by state laws. As long as the federal government chose not to exert its own control through legislation over the public domain, those state laws held valid. But state law could not create a right of property or ownership on federal land.

As long as the federal government was uninterested in managing the public domain or utilizing the land for other purposes, then cattle associations and the accepted codes of conduct were generally sufficient to regulate access to those resources for the benefit of

[14] As quoted in Ernest Staples Osgood, *The Day of the Cattleman* (Minneapolis: University of Minnesota Press, 1929), p. 184.
[15] Wilkinson, *Crossing the Next Meridian*, p. 83.
[16] Scott, "The Range Cattle Industry," pp. 162–163.
[17] *ibid.*, p. 166.
[18] *ibid.*, pp. 163–164.
[19] *ibid.*, pp. 164–165.
[20] Merrill, *Public Lands and Political Meaning*, p. 10.

those already residing upon the land. In essence, the federal government was granting an "implied license" for ranchers to use the land.[21]

Despite the codes of conduct, community rules, and associations, there was little desire among the ranching community to protect the grasslands from overuse. Indeed, the combined aspects of "free" grass and the demand from an ever-increasing number of users meant that the grasses were continuously and historically overgrazed. If any rancher moved his cattle elsewhere in an attempt to give "his" grasses time to rest and reproduce, he found his rangeland occupied by someone else's animals rapidly consuming the remaining available biomass. In this oversubscribed and competitive environment, range rights or ownership of the range existed only by continuous occupation. Demand for grass and an absence of legal possession of the land created a state of constant vigilance by rancher and employees in defense of their occupied land.

4.4 Early Federal Land Reservations from the Public Domain

The federal government's disinterest in managing the resources of the public domain began to change in the late nineteenth century. Concern over the abuse of grass and timber was voiced by many influential scholars and conservationists. Forests, unregulated by law or overseers, were indiscriminately stripped of timber. Clearcutting created problems of erosion, soil loss, and flooding of communities downstream of those timbered regions. The federal government first asserted its right to manage these lands when it enacted two laws that gave the president the power to withdraw land from the public domain. The first law was the 1891 General Appropriations Act which allowed the sitting US president to set aside forested lands. The second, the Antiquities Act of 1906, again gave the president additional powers to establish national monuments and protect scientifically or archaeologically important sites.

In addition to giving the president the power to reserve lands from the public domain, Congress went further and created agencies that would actively protect federal reservations from despoilment. Theodore Roosevelt, when he became president in 1901, added his voice to the public outrage against the abuse of western grasslands. At the urging of Roosevelt, Congress created the United States Forest Service in 1905. The first Chief Forester, Gifford Pinchot, instituted the first grazing regulations to stem overgrazing and resulting soil loss on national forest lands. The primary purpose of Pinchot's grazing regulations was to limit the number of cattle utilizing the grasslands. He created a permit system that granted access to national forest lands for certain livestock owners and a specified number of cows. This permit was considered a privilege for each permittee. This permit could be revoked if the permittee did not follow the rules of use. It did not guarantee a "right" of access for the livestock owner, nor was it transferable to another allotment applicant (except by US Forest Service agreement), nor was it meant to have any cash value that could affect the sale price of the home ranch.[22]

[21] Wilkinson, Crossing the Next Meridian, p. 88.

[22] See Merrill, *Public Lands and Political Meaning*, pp. 60–66; Glen O. Robinson, *The Forest Service: a Study in Public Land Management* (Baltimore: Johns Hopkins University Press, 1975), pp. 199–223; Samuel Trask Dana and Sally K. Fairfax, *Forest and Range Policy: Its Development in the United States* (New York: McGraw-Hill Book Co., 1980), pp. 69–97 for good summaries of the US Forest Service history of grazing policies.

Since 1864 Congress had intermittently reserved significant sites and landscapes from the public domain. In 1916, Congress established the agency of the National Park Service to oversee and protect those landscapes. The Park Service allowed grazing to continue in many early parks and most national monuments. The same grazing regulations and permit system that had been created by the US Forest Service were employed by the National Park Service.[23]

As important and precedent-setting as these federal regulations to protect against overgrazing were, the regulations only provided protection to national forest and national park lands, not the rest of the public domain. It would be another three decades in the midst of the Great Depression, horrifying dust storms in the Midwest, and an extended drought across most western states before Congress was willing enact the Taylor Grazing Act in 1934 to manage the resources of the remaining public domain.

Many early federal reservations were taken from the public domain. These reserves cut into lands previously "possessed" by ranchers. Forest Service and Park Service rules, permit regulations, and fees were an affront to those who had developed their ranching enterprises on lands that had been formally free for the taking. For the first time ranchers felt the need to assert what they saw as their property right to someone other than another cattle owner.

This notion of range rights, the right of "ownership" through historic use and community acceptance was strongly held by most ranchers in the West and especially by those who occupied lands in the Organ Pipe region. The entire Gray family had been steeped in the tradition that water control and occupancy yielded the right of ownership of the land. The arrival of the National Park Service with its claim to Organ Pipe Cactus National Monument and later the withdrawal of Cabeza Prieta Game Refuge lands by the Bureau of Sport Fisheries and Wildlife[24] created a significant threat to the previous freedom by which the Grays had run their cattle operations. The continuing struggle for ownership and control of the land and its resources between the Grays and other federal agencies originates from this extralegal tradition of range rights.

[23] Many of the early national monuments that were carved from US Forest Service lands continued to maintain the historic grazing allotments. Many of allotments within these national monuments were contiguous with those on Forest Service lands outside the national monument boundaries. Often these allotments and grazing permits continued under US Forest Service management since few National Park Service employees had any range management expertise.

[24] The Bureau of Sport Fisheries and Wildlife was the predecessor to the Fish and Wildlife Service.

CHAPTER 5

Early Settlement and Land Use in the Monument Region

Father Eusebio Francisco Kino is generally acknowledged as the first European to introduce livestock to PimerÃa Alta.[1] Kino, a Jesuit missionary, had been assigned by the Catholic Church in 1691 to bring Christianity to local Indian tribes. On his missionary travels he would bring gifts of livestock and seed. Kino taught the local populations how to care for and husband their livestock as well as to grow a wide variety of old world crops.

> The work which Father Kino did as ranchman, or stockman, would alone stamp him as an unusual businessman and make him worthy of remembrance. He was easily the cattle king of his day and region. From the small outfit supplied him by the older missions to the east and south, within 15 years he established the beginnings of ranching in the valleys of the Santa Cruz, the San Pedro, and the Sonoita. The stock-raising industry of nearly 20 places on the modern map owes its beginnings on a considerable scale to this indefatigable man.[2]

In 1699, Kino brought 36 head of cattle to San Marcelo del Sonoytag, a Papago Indian community situated along the RÃo Sonora. Herbert Bolton has translated Kino's original description of the area from his memoirs.

> This post and rancherÃa of San Marcelo is the best there is on this coast. It has fertile land, with irrigation ditches for good crops, water which runs all of the year, good pasture for cattle, and everything necessary for a good settlement, for it has very near here more than a thousand souls, and many more in its environs ....[3]

Upon his return in 1701, Kino encouraged the San Marcelo settlement to build a small mission.[4] At this time, Kino proudly recorded in his memoir that his gift of livestock had already reproduced to 80 head in number.[5]

[1]For further details of Father Kino's history, see Herbert E. Bolton, *Kino's Historical Memoir of Pimería Alta*. Volume 1 (Cleveland: Arthur H. Clark Co, 1919) pp. 49–65, 255–256, and 280–281; as well as William K. Hartmann, *Desert Heart: Chronicles of the Sonoran Desert* (Tucson: Fisher Books, 1989), pp. 47–57.

[2]Herbert E. Bolton, *Padre on Horseback* (San Francisco: Sonora Press, 1932), p. 64.

[3]Bolton, *Kino's Historical Memoir*, p. 255.

[4]Kirk Bryan, "The Papago Country. A Geographic, Geologic, and Hydrologic Reconnaissance with a Guide to Desert Watering Places." Department of the Interior, US Geological Survey WaterSupply Paper No. 499, 1925, p. 425.

[5]Bolton, *Kino's Historical Memoir*, p. 280.

Surrounded by the great Sonoran Desert and dependent upon the briefly flowing RÃo Sonoyta, the town of Sonoyta for the next 250 years continued to exist as a small-scale farming and ranching community much as it did during Father Kino's time. Numerous others small settlements of Papagos and Mexicans in the RÃo Sonoyta region flowered briefly and disappeared again during this period. Each community was dependent upon a nearby source of water, a small number of cattle, and local crops. Santa Domingo, Dowling, and Quitobaquito all fell into this category.[6]

In 1846, the United States declared war on Mexico. After cessation of fighting in 1848, Mexico signed the Treaty of Guadalupe Hidalgo and transferred possession to the United States almost two-thirds of its prewar territory. This territory included the future states of California, Nevada, Utah, Texas and parts of Colorado, Kansas, Montana, Oklahoma, New Mexico and Arizona. The southern boundary of the region was delineated by the Gila River. Shortly thereafter, gold was discovered in the hills of California. Thousands of adventurers rushed to the west coast seeking their own share of mineral wealth. Transcontinental travel was still arduous especially during the winter when deep snows blanketed the Continental Divide. Despite the enormity of the United States' newly acquired territory, the region still did not extend far enough south to build a railroad line that would be free of snow during the entire year. Surveyors had already ascertained that the valley of the Gila River was impassable by railroad. In 1854, the United States purchased from the government of Mexico an additional 30,000 square miles; this purchase completed the territorial boundaries of the future states of New Mexico and Arizona including the lands encompassing Organ Pipe Cactus National Monument.

The town of Sonoyta garnered a brief prominence during the height of the gold rush. For westward travelers, the town was the last guaranteed source of water and supplies on Camino del Diablo, the dreaded desert route that led westward to California. This route was clearly the shortest and most direct from the southern regions but it was highly dangerous for those unprepared to travel an extended distance without water. Hundreds of adventurers stopped briefly in Sonoyta before they began their journey across the sands toward Yuma and the Colorado River.[7]

Many of these early explorers and travelers passing through on their way to California recognize the possibility of valuable mineral resources in the mountain ranges north of Sonoyta. In the 1850s, prospectors were exploring the Ajo region for gold, silver and copper.[8] A number of claims were developed in the 1880s by both Mexican and American miners at the Victoria Mine in the Sonoyta Mountains and at the Growler Mine in the northern portion of Organ Pipe near Growler Pass. The Growler Mine yielded enough

[6]W.J. McGee, "The Old Yuma Trail," *National Geographic Magazine*, 12, no. 3 (1901):103–107 and 12 no. 4 (1901):129–143; Roy Appleman and Russell Jones, "Blankenship Ranch. Historic Structures Report, Organ Pipe Cactus National Monument, Arizona." Office of Archaeology and Historic Preservation. US Department of the Interior and National Park Service, 1969, p. 9; Greene, "Historic Resource Study. Organ Pipe Cactus National Monument, Arizona," pp. 21–30; Bill Hoy, *Dry Hope: Settlement of Sonoyta and Ajo* (unpublished manuscript in possession of the author); Hoy, "Sonoyta and Santa Domingo."

[7]Bryan, "The Papago Country," p. 415; Greene, "Historic Resource Study," p. 27.

[8]Chris Huggard, "A Revised History of Mining in Organ Pipe Cactus National Monument," 1998. Draft. ORPI Natural Resource Library; Forrest R. Rickard, *Exploring, Mining, Leaching and Concentrating of Copper Ores As Related to the Development of Ajo, Arizona* (Privately published, 1996). Copy available at University of Arizona Library; Greene, "Historic Resource Study," p. 50–56.

minerals to support a small community at Bates Well in the early 1900s.[9] These and other numerous small mining claims were worked on and off through the nineteenth and twentieth century.

In 1916, Colonel John Greenway purchased most of the outstanding mining claims in Ajo and established the New Cornelia Mining Company. A spur railroad was extended from the settlement at Gila Bend to connect the town of Ajo to the transcontinental line of the Southern Pacific Railroad. This linkage finally gave Ajo miners easier access to the smelter in Douglas, Arizona. Under Greenway's leadership mining operations in Ajo went from small-scale to industrial levels of activity. The population of Ajo began to grow by leaps and bounds. The presence of these miners and their families created a growing demand for reliable food sources, especially meat. As the fortunes of the mines in the Organ Pipe and Ajo regions rose and fell, so did the demand for beef and cattle in the area.[10]

5.1 Anglo-American Ranchers during the Early 1900s

Cattle-raising along the RÃo Sonoyta continued on a relatively small scale; most of the Papago and Mexican inhabitants were traditional farmers; they raised a limited number of cattle and farmed small plots of land for their own consumption.[11] In the Organ Pipe region, at the turn of the century, there were as yet no federal reservations and no homesteads; the land was open and still part of the unclaimed public domain. Grass and scrub browse were free to all who wished to run cattle. The first large-scale ranching enterprises were started by Anglo-Americans. Tom Childs, Sr. had returned to his ranch five miles below Gila Bend in 1870.[12] His son, Tom Childs, Jr., began his own cattle operation in 1908, 10 miles north of the Ajo mine. Tom Jr. ran his cattle on the ranges between Gila Bend and the border with Mexico.[13] John Cameron, a schoolmate of Tom Childs, Jr., owned a ranch in Agua Caliente and ran his cattle from the Gila River south to the International Boundary and beyond. In 1916, he opened a meat market in Ajo; later he sold the market to Tom Childs, Jr. in order to focus on ranching. Cameron's ranch was known as the second largest in the Ajo area; the largest belonged to Tom Childs, Jr.[14] Bill Hoy notes that Cameron was running cattle in the Valley of the Ajo during the 1930s.[15] Both Cameron and Childs had grazing leases on the Cabeza Prieta Grazing Range in the early 1940s. Child's lease was canceled by the Air Force when the land became a gunnery range. Cameron, however, kept his lease on the east side of the Growler Range and north of the Monument at least through 1965.[16]

Early mining operations at the Bates Well site petered out sometime after 1910. Reuben (Rube) Daniels acquired the mining area from a man named W.B. Bates before 1912 and

[9] Greene, "Historic Resource Study," p. 53.
[10] *ibid.*, p. 52; Cook, "A Documentation of the Arizona PapaguerÃa," p. 294.
[11] Hoy, *Dry Hope*, pp. 58–59; Cook, "A Documentation of the Arizona PapaguerÃa," p. 276.
[12] Hoy, "Don Tomas and Tomasito," p. 5.
[13] Hoy, *Dry Hope*, p. 127; Cook, "A Documentation of the Arizona PapaguerÃa," p. 291.
[14] Charles J. Gaetjens, *Ajo Arizona: the People and the Legends* (Ajo: Hershell Eversole, 1993), p. 38.
[15] Hoy, *Dry Hope*, pp. 130–131.
[16] Sue Rutman, "Selected Sonoran Pronghorn Notes." Assembled from Cabeza Prieta Game Refuge Quarterly Reports from the Fish and Wildlife Service, 2001. Unpublished manuscript in possession of the author.

began running large numbers of cattle on the range around the Growler and Bates Mountains. Daniels apparently dug both the old Daniels Well and the Cherioni Well in 1912 to provide water for his cattle. Later, in 1916, Daniels dug the Cipriano Well.[17] Five years later, Sam and John McDaniel acquired Reuben's developments and 1000 head of cattle for $17,000. During the winter and the spring of 1917, the rains failed and approximately 300 cattle died. The following summer rains provided good grasses to fatten the remaining cattle and the McDaniel brothers sold the entire herd at a profit. They later purchased a smaller number of cattle with better breeding and maintained the ranching operation until 1922 when the rains again failed. Again the McDaniel brothers sold the entire second herd and then sold the Bates Well ranch back to Reuben. Daniels ran cattle for a couple of years more and then, before he died in 1925 or 1926, he persuaded the McDaniels to take over the Bates Well ranch a second time.[18] Sam McDaniel stated that he and his brother never ran cattle at Bates Well again. Instead the McDaniel brothers bought the Blair ranch at Gunsight and the resident cattle belonging to Birdie Miller.[19] In 1927, the Ajo Copper News reported that the McDaniel brothers shipped eight carloads of cattle from Ajo to Yuma.[20] Seven years later, John McDaniel leased, and then in 1935 sold, the Bates Well ranch improvements to Henry Gray. The Bates Well was strategically a good ranch site as its natural range extended 15 miles in each direction.[21] The Grazing Service, an early incarnation of the Bureau of Land Management, had not yet become active in the state and ranchers defined their own ranges according to their "ownership" or control of cattle watering sites.[22]

Birdie Del Miller's parents, the Blairs, established a ranch in 1909 in Gunsight, northeast of the Monument region. In 1913, Birdie married Bill Miller and the two moved to Dripping Springs on the east side of the Puerto Blanco Mountains; together they began running cattle in the Valley of the Ajo. Dripping Springs did not provide sufficient water so they moved across the valley to Alamo Canyon and built a home in 1914. Birdie described the Alamo as a good ranch site with a more reliable water source. The Millers wished to protect what they saw as their own range from Papago Reservation cattle; they built a fence from Kuakatch Pass across Kuakatch Wash to the Gunsight Hills. The Millers also built a 10-mile fence from Estes Canyon in the Ajo Range westward across to Dripping Springs in order to stop Mexican cattle from trespassing into their range.[23] By 1918, the Millers were running 600 head of cattle.[24] The Millers moved their ranching headquarters to Walls Well in Kuakatch Pass and homesteaded 320 acres in the early 1920s. In

[17] Bryan, "The Papago Country," p. 169

[18] Letter to Superintendent James M. Eden from S. E. McDaniel, September 29, 1956. ORPI Grazing Archives (ORPI-GA).

[19] E. M. McDaniel, "Letter to Editor" *Ajo Copper News*, March 22, 1953. Document in Possession of Author.

[20] *Ajo Copper News*, April 23, 1927.

[21] Memo to SW Regional Director from Custodian William R. Supernaugh, January 4, 1946. ORPIGA.

[22] The Yuma District was established in November 1937.

[23] The construction and maintenance of fencing on public domain land was expressly forbidden in 1885 by Congress. Violations of up to $1000 could be imposed. However that the law was not very successful as there were a few to enforce it and as was likely in this case, the Anglo-American ranchers in the area would have supported the fencing. See Scott, "The Range Cattle Industry," pp. 169–171; Wilkinson, *Crossing the Next Meridian*, pp. 86–87; Dana and Fairfax, *Forest and Range Policy*, p. 49

[24] Greene, "Historic Resource Study," p. 58.

1928, Birdie and Bill Miller divorced and sold their cattle.[25] Birdie leased the Alamo site in the 1920s to Henry Gray. She later leased the Walls Well site in the 1930s to the Grays who were expanding their ranching operations to make use of the available grasses in the northern region.

James Havins with his sons, Hank and Ed, ran cattle near the southwestern corner of Organ Pipe in what later became Cabeza Prieta Grazing Range in the 1930s. There they developed a ranch called the "Needmore."[26] Following the establishment of Cabeza Prieta Game Range, the Havins also leased land for grazing with a permit for 500 head. That lease was later canceled when the US Air Force commandeered the land for gunnery and bombing range during World War II. The Havins continued to run their cattle on the eastern half of the Cabeza Prieta Game Range through the 1960s despite an absence of grazing permit.[27]

Lon Blankenship and his family moved to the international border region near Sonoyta probably in 1914 or shortly before. He developed numerous water resources on the range and ran a significant number of cattle in the area (300 – 400 head). In the absence of fencing along the international border, his cattle probably ranged from the Sonoyta River north and west for many miles. Blankenship is credited with developing the Gachado Well, the Blankenship Well in 1917, and the Cement Tank. In addition, he was described as gaining controlling access to the Aguajita Spring on the east side of the Quitobaquito Hills, the Dowling Well, constructed in the 1890s for milling purposes, and Wild Horse Tank, or tinaja, a natural water hole, north of the Diablo Mountains which was later modified to hold more water.[28]

The Grays when they arrived in 1920 were by no means the only ranching family in the Ajo-Organ Pipe region. There were at least five other cattle operations in the area during the decade after 1910. The Grays, however, developed one of the largest, if not the largest, cattle operation within a few years of their arrival in the Sonoyta Valley.

[25] *Ajo Copper News*, July 7, 1927.

[26] Ed Havins and Margaret Ross. Interview with Sue Rutman, ORPI Plant Ecologist, November 11, 1999, p. 38. Document in Possession of Author; Gaetjens, *Ajo Arizona*, p. 16.

[27] Rutman, "Selected Sonoran Pronghorn Notes."

[28] Water Rights Affidavit, January 10, 1952. ORPI-GA; Appleman and Jones, "Blankenship Ranch," pp. 19–25; Water Source Reports, July 1968. ORPI Natural Resource Library.

CHAPTER 6

The Arrival of the Gray Family in Organ Pipe

6.1 Robert Lee Gray and the Gray Family History

Robert Lee was the patriarch of the Gray family and later head of the Gray Ranching Partnership.[1] He was well known throughout southwestern Arizona and northern Sonora for his fearlessness, his astute cattle business acumen, and his prodigious consumption of alcohol. He drove himself and his sons, who later became his partners, hard in their ranching enterprise, working long hours and days without rest. He was known for his domineering attitude and occasional violent outbursts toward his family. Other family members could not tolerate living with him and eventually all but his wife, Sallie, moved away from the Dos Lomitas ranch to other habitations.[2]

After many years of moving his family throughout the Southwest, Bob Gray, at the age of 45, finally settled in the Sonoyta Valley in 1920. As his son, Abe, described it, Bob Gray had "itchy feet."[3] He never stayed in one location for longer than five or six years, and often only one or two. He was a man who was clearly looking for a different environment than what was available to him across most of the Southwest. He appeared to have successful ranch businesses in western Texas and again in eastern Arizona and still he kept moving. There is little documented information about why he chose to move further and further west and to finally settle in western Pima County in the place his son, Abe, described as the "end of the road."[4] Historian Terry Jordan has suggested that a small cadre of Texas cowmen left Texas for western Arizona at the beginning of the twentieth century looking for the last of the open range uncluttered by homestead claims and federal reservations.[5] Perhaps Bob Gray thought that he had found that freedom of space and freedom

[1]The history of the Gray family before their arrival in Organ Pipe Cactus National Monument has been largely documented through oral histories. Hundreds of pp. of conversations with the second generation have been recorded, taped, and transcribed by Organ Pipe rangers and historians. This section is largely taken from those transcriptions and a superb summary of the Gray family history distilled by Sue Rutman, NPS Plant Ecologist at Organ Pipe ("History of the Gray Family at Organ Pipe Cactus National Monument." Unpublished manuscript in possession of the author.) Homestead documentation can be found in the General Land Office records from Arizona and New Mexico from the Bureau of Land Management website, http://www.glorecords.blm/gov Like most oral histories recorded decades after the events, recollected dates and other information do not always agree with written records.

[2]Bobby, Ralph, Henry, and Abe Gray, Interview at Dowling Ranch with Joyce Kelso, ORPI Seasonal Park Aide. January 1975. Document in Possession of Author; Ralph Gray, Interview with Dorothy Havins, Hank Havins, and Ed Havins with Sue Rutman, Plant Ecologist. 1983. Document in Possession of Author; Havins and Ross Interview, 1999, p. 19.

[3]Bobby, Ralph, Henry and Abe Gray Interview, p. 28.

[4]*ibid.*

[5]Jordan, *North American Cattle-Ranching Frontiers*, p. 238.

from restrictions when he arrived in the Sonoyta Valley. Those freedoms, however, did not last long, even at the end of the road.

Robert Lee Gray was born in Little Rock, Arkansas in 1875. He disliked the hard labor on his father's farm and ran away to Texas at an early age. By 1892 he was already a seasoned cowhand. He married the daughter of a San Angelo cattle rancher, Sara (Sallie) Amanda Cope, in the mid 1890s. During the next 17 years, Bob sired nine children. We can follow the Gray family travels through Texas, New Mexico, and Arizona from the birth records of his offspring. First child, Henry David, was born in 1897 in El Paso; the second, Abe, in Sterling City in 1898; and the third, Margaret, in Fort Stockton in 1900.[6] Probably until the family's arrival in Fort Stockton, Bob was working as a hired cow hand. Despite being landless, Bob, nevertheless, was developing his own herd of cattle as he and his growing family moved from ranch to ranch across western Texas.

In 1900, Bob Gray sold all of his cattle and purchased an extensive sheep ranch outside of Fort Stockton. The ranch contained between 4500 and 4800 acres of land – a fairly substantial holding for a first-time ranch owner.[7] After six years, he sold the sheep and the ranch and moved the family to Grandfalls in West Texas. The Gray family stayed in that location for an additional six years.

Finally, in 1912, Bob and Sallie and their eight children left Texas for good. Ralph Gray later expressed great sadness about their departure. It was their father's decision alone to leave Texas. Ralph opined that they should have instead moved east to San Angelo rather than west to Arizona. Yet Ralph agreed that Arizona had a much better climate for raising cattle than Texas because of reduced tick infestations.[8]

For three months, the family traveled in a covered wagon trailing 50 head of cattle to the region just west of the New Mexico border. Bob Gray bought the Triangle Ranch near San Simon, Arizona. In November 1912, the last Gray child, Robert Louis (Bobby), was born at the Triangle Ranch. But their stay in San Simon was short. Within a year, the Grays had left Arizona and traveled to Tucumcari in northeastern New Mexico. Ralph suggested that locoweed poisoning of their good horses was the reason for their departure from San Simon.[9] General Land Office homestead records indicate that Bob Gray homesteaded two parcels of land in Quay County, New Mexico. He ultimately gained title to those 200 acres of land in 1914 and 1915.[10] Like San Simon, the stay in New Mexico was short; Abe Gray describes this sojourn in the Gray brothers' interview in 1975. "We went to New Mexico again. Then we went up to that old mine and then turned around, went back to Benson, Arizona."[11]

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[6] Birth records for Henry and Abe Gray differ from their interview statements. See Bobby, Ralph, Henry and Abe Gray Interview, p. 1. Margaret died a few years later of typhoid.

[7] Henry Gray describes Bob as owning eight sections "all the state would allow at the time." Bobby, Ralph, Henry and Abe Gray Interview, p. 29. Homesteaders could gain title to as much as 4500 acres in the state of Texas.

[8] Ralph Gray Interview, p. 3.

[9] *ibid.*, p. 4. Locoweed poisoning was also the reason for their rapid departure from New Mexico the following year.

[10] General Land Office Records of Homestead Title for Robert L. Gray. Accession #401061. 160 acres. Title transferred April 27, 1914; accession #487606. 40 acres. August 23, 1915.

[11] Bobby, Ralph, Henry and Abe Gray Interview, p. 2. This is the only recorded family reference to their move to New Mexico. Abe's statement about the "mine" has not been connected to any other information

The Grays returned to Arizona in 1914 or 1915. With earnings from the sale of the New Mexico homestead, Bob Gray acquired acreage in French Joe Canyon on the east side of the Whetstone Mountains. Bob Gray purchased a second ranch in the San Rafael Valley. While he, Henry, and Abe tended most of the cattle in Benson, Bob sent Sallie with the younger children to San Rafael to be educated at the local elementary school.[12] During this time, Bob filed on a third homestead parcel of 329 acres in French Joe Canyon to which he gained title in 1919.[13] Both the San Rafael and French Joe Canyon ranches were apparently financially successful. But Henry had a life-threatening altercation with a neighbor in the same watershed.[14] Bob Gray decided that it was time to move the family and business further west again. While visiting Tucson, Bob saw an advertisement for the Rattlesnake Ranch in Sonoyta Valley. He sold the French Joe Canyon and San Rafael ranches and purchased the Rattlesnake Ranch from Lon Blankenship in 1919 for $5,000.[15]

It took a full year to move the family household. In 1920 Bob, Henry and Ralph drove 250 head of cattle and a few saddle horses from Benson to the new ranch.[16] Abe drove Sallie and the younger children in a newly purchased Model T Ford. Later in June of that year, the remaining thousand head of cattle were shipped by rail from Benson to Ajo.[17]

6.2 Legal Complexities of the Grays' Purchase of the Blankenship Property

> *In southwestern Arizona back then, on fringes forgotten by government rules, a settler just rode into a site he liked and bought out a rancher or miner living there, or he simply squatted on an unoccupied site, dug a well, and turned the cows loose. He paid little mind to matters of land deeds and homestead rights.*[18]

In 1919, Robert Lee Gray purchased from Lon Blankenship the physical structures and buildings, 400 head of cattle, and what Bob Gray believed were the rights to a series of water sites that Blankenship had previously developed or purchased. For $5,000, this purchase included the original ranch house, the well and corrals that had probably been built in 1917 by Lon Blankenship himself. The purchase also included the Gachado Well and Cement Tank also constructed by Blankenship, and the Dowling Ranch and Well. Blankenship apparently claimed ownership of Aguajita Spring which was included in the sale to Bob Gray.[19]

It is important to note early on in this discourse that this transaction did not include any land. None of the previous settlers, including Blankenship, actually owned the land. The process of homesteading – filing a formal claim for a specific property with the General

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regarding family history.

[12] Bobby, Ralph, Henry and Abe Gray Interview, p. 3.

[13] General Land Office Records of Homestead Title for Robert L. Gray. Accession #714701. 329 acres. Title transferred October 23, 1919.

[14] Ralph Gray Interview, pp. 5–11.

[15] Robert Louis (Bobby) Gray, "Ranching History," Interview with two unnamed Interviewers on ORPI Staff, p. 23. January 1972. Document in Possession of Author; Ralph Gray Interview, p. 4.

[16] *Ajo Copper News*, May 22, 1920, p. 6.

[17] *ibid.*, June 26, 1920, p. 5.

[18] Hoy, *Dry Hope*, p. 126.

[19] Rutman, "A History of the Gray Family."

Land Office and living on that property for a specified period of time – was the primary mode for settlers to gain ownership of a parcel of land.[20] Prior to making a formal claim, the land had to be surveyed to establish the township and range delineations, and the locations of section lines within. At the time of Bob Gray's purchase, this region was still part of the unsurveyed public domain.[21] Blankenship and his predecessors as well as Bob Gray and his family, merely squatted upon the land. By their continued presence the Grays were able to exclude others from that land. Indeed, no one else could have claimed (homesteaded) it while the family inhabited the area. But that habitation gave no formal title of ownership to Bob Gray.[22] The absence of this title would cause the Gray family significant problems later on.

"Ownership" of water rights and the assumed transfer of title from the Blankenship sale created legal complications as well. With the possible exception of one water source, the Grays did not actually purchase the water rights listed in the sale. Western water law, based on the notion of Prior Appropriation, recognized claims to any free-flowing, surface water as long as no one else had laid previous claim to that water. Ownership of this surface water depended upon two important aspects: 1) the water had to be diverted from its original flow (e.g. to a stock tank) and 2) it had to be appropriated for a "beneficial" use such as irrigation of crops, mining, or domestic use (including livestock watering).[23] Unlike the riparian water laws recognized in states east of the Mississippi, western water law separated ownership of surface waters from the lands that sat beneath them. Thus the owner of the streambed was not necessarily the owner of the water that flowed through it, if another individual had laid claim to that water earlier.

When Bob Gray purchased Blankenship's holdings in 1919, subsurface or ground waters percolating through the soil could not be claimed separately from the surrounding land. In 1904, Arizona territorial Supreme Court had ruled that all subsurface waters belonged to the land and to the land owner.[24] Thus the Grays could purchase and hold a water right for Aguajita Spring as free-flowing surface water as long as they diverted it for a beneficial use. But well water (groundwater) could only be claimed by the land owner. Since the Grays did not actually own the land holding the wells, they could only possess the structures that gave them access to subsurface waters.

Another unclear aspect relating to these water claims was the date of transaction. The mechanisms for laying claim to and establishing ownership of water in Arizona were changing as state law evolved from "possession by use" to a more complex "filing and notification" procedure. The sons of Bob Gray in later interviews all state that he purchased

[20] Stein, "Homesteading in Arizona;" Scott, "The Range Cattle Industry."

[21] The first formal surveys of the Organ Pipe region were completed in 1934. General homesteading of this region would have then been opened to the public. A number of previous sites for both mining and homesteading had been surveyed and entered into GLO files earlier; surveys of these claims, however, would have been privately paid for. Regional surveys were funded by the Department of the Interior.

[22] Scott, "The Range Cattle Industry," p. 163.

[23] For a thorough discussion of western water law, see Wilkinson, *Crossing the Next Meridian*, Chapter 6, pp. 219–292. For a chronology of legal and judicial decisions affecting Arizona water law, see Tim Henley, "Groundwater Resources of the Lower Colorado Region." http://www.colorado.edu/nrlc/publications

[24] *Howard v. Perrin*. 1904. See Charles Wayne Slocum, "The Adequacy of Arizona's Ground-Water Law." Master Thesis, Tucson: University of Arizona, 1972.

these improvements from Lon Blankenship in 1919.[25] That date of transfer is critical because, on June 12, 1919, the Arizona Legislature enacted the Public Water Code. The code required that all subsequent water claimants had to obtain a water rights permit and file it with the Arizona State Land Department before the water right could be validated. Prior to that date, the owner simply had to use the water and post a notice of the claim at its location. Thus, if the Gray family had purchased the improvements and posted its claims prior to the date of June 12, 1919, they would "own" the water right to Aguajita Spring. If they had purchased and laid claim to the spring after that date, the Grays would have had to obtain a permit from the State Land Department.[26] Both the issues of land ownership and water rights resurface frequently throughout the history of the Grays' ranching operations especially in the latter years of the grazing conflict when the Park Service attempted to "buy out" the Gray family grazing permit and their possessions.

6.3 Gray Family Establishes Control of Grazing Lands in the Monument Region

The Gray family of 10 moved into Blankenship's two-room adobe building in 1920.[27] The family included five members above the age of 17: Robert Lee and his wife, Sallie; Henry, age 22; Abe, age 21; Ralph, age 17; Emma Lee, age 15; Mary Ethel, age 13; Jack, age 10; Beryl, age unknown; and Robert Louis, age 7.[28] In addition to purchasing Lon Blankenship's 400 head of cattle, the Grays had brought with them 1250 cattle and over 100 horses.

Within the Sonoyta Valley surrounding the Dos Lomitas ranch, Bob Gray controlled all of the watering sites east of Quitobaquito Spring and north of RÃo Sonoyta at the International Boundary. The Grays' grazing range was bounded on the east by the Ajo Range. This mountain range separated the Gray cattle operations from the Papago (later called the Tohono O'odham) Reservation that had been established in 1918. The western edge was less well defined by the Sonoyta Range. A barbed wire fence across the southern reach of the Valley of the Ajo had been erected by Bill Miller in 1914 and created a northern boundary to the Grays' grazing. Despite the natural and man-made barriers, however, Mexican and American horses and cattle, as well as feral burros, wandered relatively freely north and south of the International Boundary in search of grass and water. Livestock movement was limited only by significant escarpments and by distance from water.

As they came of age the older Gray sons, Henry, Ralph, and Abe, felt the need to move out of the small ranch house and establish their own spheres of influence. Ralph moved to Ajo in 1920 and secured a job at the copper mine. Ralph was accompanied by Sallie Gray to keep house and care for the younger children who were enrolled in the Ajo school. Henry and Abe moved to the Gachado Line Camp and lived there until the late 1920s. Abe married Bartola Ortega, a Sonoyta woman, and moved across the border to run his

[25] Attorney Elmer C. Coker in numerous letters to the Arizona State Land Department stated that the Grays purchased these water rights from Blankenship before 1917 or 1919 so that he could lend support to their claim of use prior to establishment of the Public Water Code.

[26] The Gray family first filed water rights claims on their wells and springs in 1950.

[27] Blankenship's original ranch house was demolished in a flood in 1924 or 1925. The Gray family built their own ranch house called Dos Lomitas and the one-room Gachado Line Camp during the following year (Rutman, "A History of the Gray Family").

[28] Rutman, "A History of the Gray Family."

own cattle operation. Now under the controlling hand of patriarch, Bob, and the energies of first son, Henry, the Gray family ranching operation began to expand.[29] As Jack and Robert Louis (Bobby) Gray grew older, they joined the ranching enterprise. Bob, Henry, Jack and Bobby each owned their own cattle. Following the establishment of Organ Pipe Cactus National Monument, the men managed the range and ran the cattle collectively.[30]

In 1928, Henry rented the Alamo Ranch in the northern Ajo Range from Birdie Miller. He later purchased the building with its improvements and well. At the same time, Bob Gray purchased Williams Spring in the southwest portion of Quitobaquito Hills.[31] Henry constructed the cement retaining wall at Wild Horse Tank in the Diablo Mountains between 1928 and 1934. Ralph Gray dug the Red Tanks Well in 1932. Finally, in 1934, Henry arranged with John T. McDaniel to lease the unused Bates Well water and range south of the Growler Mountains. In 1935, Henry purchased McDaniel's ranch house, well, and associated improvements.[32] The Grays also rented the ranges associated with Birdie Miller's ranch in the northeast portion and the Armenta Ranch in the northcentral portion of the Monument region. With these new acquisitions came access to Walls Well at Kuakatch, Dripping Springs in the Puerto Blanco Mountains, and Bonita and Pozo Nuevo Wells on the Aguajita Wash. Hocker Well and Quitobaquito Spring and Pond provided water in the southwest quadrant. In 1942, Henry constructed the Pozo Salado Well nearby.[33]

By leasing, buying, and developing these water sources as well as the associated ranch structures, the Gray family established complete control of the range within and beyond the region of Organ Pipe Cactus National Monument without owning a single acre of land. Cattle belonging to other neighboring ranchers, such as James Havins and family to the west, John Cameron and Tom Childs to the north and numerous Mexican ranchers to the south, also grazed in the same area; there was little fencing to retard their movement. The Grays, however, were acknowledged by all as the dominant ranching operation. Indeed the Grays' business had become one of the largest cattle operations in Arizona.[34]

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[29] *ibid.*

[30] Ralph Gray appears to have drifted in and out of the Gray ranching operations. Ralph's name appears on early National Park Service grazing permits. Jerome Greene stated that Ralph sold his interest in the ranching operation to Bobby in 1943, married, and moved to Calexico, California (Greene, "Historic Resource Study," p. 59). Ralph returns briefly and occupies the Dos Lomitas ranch following the death of Robert Lee Gray in 1962.

[31] There is disagreement in the ORPI Grazing Archives as to the date of the Williams Spring acquisition. Some documents indicate that the spring was acquired in 1919 along with the Blankenship purchases. Others give this later date of acquisition.

[32] "Deed of Sale," July 18, 1935. Henry Gray Archives (HGA), Box 3, Folder 1. Western Archaeological and Conservation Center, Tucson, Arizona; Water Source Reports, July 1968. OPRI Library Archives.

[33] Water Source Reports, July 1968, ORPI Natural Resource Library.

[34] January 27, 1971. Draft of news story by David Rees, to be aired January 28, 1971 on NBC radio and television. ORPI-GA.

CHAPTER 7

"Object of Scientific Interest:" The Creation of Organ Pipe Cactus National Monument

In 1906, Congress passed one of the most significant pieces of legislation for the future development of the National Park Service and to landscape preservation efforts in the United States.[1] On June 8, President Theodore Roosevelt signed into law "An Act for Preservation of American Antiquities."[2] The importance of this act lay in the power that it gave the president to set aside specific parcels of land from the public domain for preservation. Congress granted this power to a single individual because it realized that writing protection legislation for each individual site was time-consuming and cumbersome. The primary focus of the Antiquities Act, as its title suggests, was to protect small archaeological sites from looting and destruction. A second purpose allowed the president to set aside "objects of scientific interest." With an earlier act written in 1891, Congress had given the president the power to reserve large areas of forested lands in order to protect their timber and water resources for future use.[3] Roosevelt, one of the first and certainly one of the greatest conservation presidents in US history, had already begun to make use of this Forest Reserve Act to create national forests throughout the western states.[4] He recognized immediately that the Antiquities Act now gave him the means by which he could not only protect the prehistoric ruins of Mesa Verde but also unusual geological features such as the volcanic plug known as the Devils Tower. With Devils Tower, Roosevelt took the phrase, "object of scientific interest," and translated it to "natural wonder."[5] The designers of the Antiquities Act did not wish to give the president an entirely free hand and therefore had restricted the amount of land to be set aside as the "smallest area compatible with proper care and management." Almost immediately, President Roosevelt, never known for his restraint, pushed the intended boundaries of the Antiquities Act by reserving more than 800,000 acres of land to protect the region of the Grand Canyon in Arizona.[6] Roosevelt

[1] Hal Rothman, *America's National Monuments. The Politics of Preservation* (Lawrence: University Press of Kansas, 1994), p. xi. Rothman's work is an in-depth look at the history, as well as application, of the Antiquities Act with a focus on the establishment and development of national monuments in the southwestern region of the United States.

[2] 34 Stat. 225, 16 USC 431–433.

[3] Dana and Fairfax, *Forest and Range Policy*; Robinson, *The Forest Service*

[4] Samuel Hays, *Conservation and the Gospel of Efficiency; the Progressive Conservation Movement, 1890 – 1920* (Cambridge: Harvard University Press, 1959).

[5] Rothman, *America's National Monuments*, pp. 52–71.

[6] David Harmon, Francis P. McManamon, and Dwight T. Pitcaithley, "Introduction: the Importance of the Antiquities Act," in *The Antiquities Act. A Century of American Archaeology, Historic Preservation, and Nature Conservation*, ed. Harmon David, Francis P. McManamon, and Dwight T. Pitcaithley (Tucson: University of Arizona Press, 2006), p. 8.

had set multiple precedents for other presidents to follow in the number of national monuments that he set aside, the wide range of types of sites that he chose, and the sheer size of the parcels he reserved for the protection of each monument.

The Southwest was littered with prehistoric sites that cried out for protection. Within the first 20 years of the Antiquities Act, Roosevelt and his successors set aside 25 prehistoric or historic sites, most of which lay in the southwestern region. But there was a growing recognition within the Park Service that the Antiquities Act with its opportunity to protect "scientific objects" and other geological oddities could also be valuable to reserve large areas of land. These larger areas could be used to protect rare or unusual plant communities. Park Service planners began to examine the different desert environments of the Southwest.[7]

Roger Toll, superintendent of Rocky Mountain National Park and the primary inspector of proposed parks in the West, was dispatched to survey southern Arizona and California in February 1932 and to assess three desert regions as "representative areas," areas with highly unusual plant communities. Toll looked specifically in locations in the southwest that contained organ pipe cactus, joshua trees, and saguaro cactus. On a second tour during the following year, he recommended the establishment of a national monument to protect the organ pipe cactus as well as one for the saguaro.[8] Toll's recommendations for Organ Pipe Cactus National Monument were strongly supported in the form of resolutions from the Pima County Supervisors, the Ajo Chamber of Commerce, and the Tucson Natural History Association, a private group of scientists from southern Arizona.[9] Copies of these resolutions were sent to Representative Isabella Greenway and Senators Henry Ashurst and Carl Hayden. They, in turn, sent them on to the National Park Service.[10] T. D. Mallery, President of the Tucson Natural History Association, went further and pressed Ashurst, Hayden, and Greenway to take the lead and introduce legislation in both houses of Congress to establish Organ Pipe Cactus National Monument immediately.[11]

There was, of course, considerable opposition to the Monument's proposal from powerful voices such as Arizona Governor WP Hunt and from numerous land use associations including the Arizona Small Mine Owners, the Arizona Wool Growers, the Arizona Cattle Growers, the Yuma Valley Rod and Gun Club, and the Yuma County Board of Su-

[7]Rothman, *America's National Monuments*, p. 93–96, 170–172; Ronald F. Lee, "Origins of the Antiquity Act," in *The Antiquities Act. A Century of American Archaeology, Historic Preservation, and Nature Conservation*, ed. David Harmon, Francis P. McManamon, and Dwight T. Pitcaithley (Tucson: University of Arizona Press, 2006), pp. 31–32.

[8]Surveyor General Frank Hitchcock, owner of the *Tucson Citizen* newspaper, on his own impetus, traveled to Washington, DC to personally persuade President Herbert Hoover to establish Saguaro National Monument. Hoover agreed and Saguaro became the first national monument established to protect a desert plant community in March 1933. Hoover's successor, President Franklin Delano Roosevelt, created the second and third monuments to protect plant communities: Joshua Tree National Monument in August 1936 and Organ Pipe Cactus National Monument in April 1937.

[9]Rothman, *America's National Monuments*, p. 155; James M. Eden, "A History of Organ Pipe Cactus National Monument, Arizona," 1956, pp. 12–13. ORPI Natural Resource Library.

[10]Eden, "A History of Organ Pipe Cactus National Monument," p. 15; Letter to Senator Carl T. Hayden from President of Tucson Natural History Society T. D. Mallery, CHA, Manuscript #1, Box 607, Folder 1, Arizona Collection, Hayden Library, Arizona State University, Tempe, Arizona.

[11]Letter to Senator Carl Hayden from T. D. Mallery, February 14, 1934. CHA, Manuscript #1, Box 607, Folder 1.

pervisors.[12] The Grays were well aware of the interest expressed by the National Park Service and the proposal for a national monument south of Ajo. Some family members were present at a scientific survey of the proposed Monument area in 1937.[13] To date, no record has been found of the Grays objecting to the proposed Monument or contacting their legislative representatives at this early stage in the negotiations.

Isabella Greenway, a democrat, had been the first woman elected to represent Arizona in Washington. Because of her strong connection to the Ajo community, she was an enthusiastic supporter of the proposed Monument.[14] She responded to the Pima County Supervisors' letter of support, "You have no idea how directly to my heart this project goes as for many years I have been driving between our home (in Ajo) and Tucson and felt that this should be done."[15] Greenway, in turn, wrote to National Park Service Director Arno Cammerer and pressed him to move forward with a proposal.[16]

Arizona Senator Carl T. Hayden was less enthusiastic about the proposal. Like Greenway, he had received the same supporting recommendations regarding its establishment and dutifully forwarded those documents to the Secretary of the Interior. He chose not to include, however, any personal opinion on the issue.

Hayden had been advised by the National Park Service director that he would be briefed on the establishment issues for the proposed Monument, both pro and con, prior to any final decision. This, the Park Service forgot to do. Senator Hayden learned of the establishment of Organ Pipe Cactus National Monument on April 13, 1937 from an article in the local newspaper.[17] By this unfortunate omission, the Park Service made a very serious error which cost the trust and goodwill of a very powerful senator who was not only Arizona's senatorial representative but who also controlled the funding for the Department of the Interior and the National Park Service.

7.1 Senator Carl Hayden and His Influence on Organ Pipe Cactus National Monument

Carl Trumbull Hayden was born in 1877. He was raised at his father's ferry landing and grist mill site on the banks of the Salt River in the frontier community of Tempe. The young Carl showed both intelligence and oratorical skill.[18] He saw himself as destined for the political stage and, when a freshman at Stanford University, declared himself to

[12]Felger, Richard Stephen, Bill Broyles, Michael Wilson, Gary Nabhan, and Dale S Turner, "Six Grand Reserves, One Grand Desert," in *Dry Borders: Great Natural Reserves of the Sonoran Desert*, ed. Richard Stephen Felger and Bill Broyles (Salt Lake City: University of Utah Press, 2007), pp. 8–9.

[13]Tad Nichols, "Afield with Scientists," in *Dry Borders: Great Natural Reserves of the Sonoran Desert*, ed. Richard Stephen Felger and Bill Broyles (Salt Lake City: University of Utah Press, 2007), p. 87.

[14]Isabella Greenway had been married to John Greenway, the general manager of the New Cornelia Copper Company. They lived in Ajo from 1923 until his death in 1926. She continued to maintain her home and connections in Ajo for many years afterwards (Kristie Miller, *Isabella Greenway: an Enterprising Woman* (Tucson: University of Arizona Press, 2004).

[15]Quoted in Brenna Lauren Lissoway, "An Administrative History of Organ Pipe Cactus National Monument: the First Thirty Years, 1937–1967." Masters Thesis, Arizona State University, 2004, pp.

[16]Miller, *Isabella Greenway: an Enterprising Woman*, p. 212.

[17]Letter to Albert Long from Senator Carl T. Hayden, February 13, 1940. CHA, Box 607, Folder 1.

[18]Ross R. Rice, *Carl Hayden. Builder of the American West* (Lanham, University Press of America, 1994), pp. 15–30.

be a "Professional School Politician."[19] Upon his father's death in 1900 Hayden returned to Tempe to run the family flour milling business and immediately became active in local Democratic politics. He was elected to the position of Maricopa County Sheriff in 1906. Later in 1912, when Arizona was finally granted statehood, Hayden became Arizona's first voting member of the US House of Representatives.[20] Hayden was repeatedly reelected to the House before he decided to run for the Senate in 1927. There he continued as Arizona's staunch advocate and highly influential senator for the next 42 years until his retirement in 1969 at the age of 91.

Carl Hayden was committed to developing his new state from the moment he arrived in Washington. He saw the proper development of Arizona's natural resources as crucial to its future growth and financial stability. Water development was paramount in this arid environment; Hayden, more than any other individual, was responsible for securing the state's fair share of Colorado River water. In his last term as senator, Carl Hayden secured the federal authorization for the Central Arizona Project, a canal to bring water from the Colorado River to Phoenix and Tucson and assure of the future growth and development of the state.[21]

Water resources were essential for the growth of irrigated farming in Arizona. Hayden worked hard to provide opportunities for other industries including ranching. Hayden was a Progressive Democrat; he believed that the nation's national resources should be utilized in order to support human use and economic growth. As biographer Ross Rice has noted, Hayden "was not a champion of maintaining the environment in its natural state."[22]

Carl Hayden was not averse to the establishment of national parks and monuments. He was supportive of those federal reservations that encouraged Arizona's nascent tourism industry but he was less enthusiastic when those reservations restricted the use of valuable natural resources. In 1913, during Hayden's first full term as an Arizona representative, he voted to approve construction of a dam in the Hetch Hetchy Valley within Yosemite National Park in order to assure the city of San Francisco of an adequate supply of drinking water.[23] In 1916, the year the National Park Service was established to protect federally preserved lands, Representative Carl Hayden offered a bill to the House to raise the Grand Canyon from national monument to national park status. Hayden's bill did not pass that year. A subsequent bill introduced in 1918 by Arizona Senator Henry Ashurst contained a new amendment added by Hayden. The amendment permitted future dams to be built within the National Park in order to generate hydropower, electricity for revenues "when consistent with the primary purpose of said park."[24] Hayden's amendment created a precedent for water development within the national parks. The congressional decision to approve water development within federally preserved land-

[19] *ibid.*, p. 27.

[20] *ibid.*, pp. 30–38.

[21] August, Jack. "Carl Hayden. Perspectives on a Century." Carl Hayden Biofile, Arizona Historical Society, Tucson, Arizona; Rice, *Carl Hayden*, see chapters 7, 8, and 9.

[22] Rice, *Carl Hayden*, p. 75.

[23] John Ise, *Our National Park Policy. A Critical History* (Baltimore: Johns Hopkins Press, 1961), p. 91; Rice, Carl Hayden, pp. 46–47.

[24] Quoted in Rice, *Carl Hayden*, p. 45.

scapes set the stage during the 1950s for subsequent dam proposals in Dinosaur National Monument and in Grand Canyon National Park.[25]

Hayden was elected to the Senate in 1927; he was assigned to the Appropriation Committee, and more importantly to the subcommittee overseeing funding for the Department of the Interior. In 1933, Carl Hayden became chairman of the appropriation subcommittee. This chairmanship put Hayden in an immensely powerful position to control funding for agencies, programs, and projects within the Interior Department including the National Park Service.

When Carl Hayden learned of Organ Pipe's establishment in the local newspaper, he was exceedingly upset. Hayden let the Park Service know, in no uncertain terms, that no future national monument

would ever be permitted in Arizona without his full knowledge, agreement, and approval.[26] Soon thereafter, Carl Hayden began receiving complaints from Ajo mining constituents regarding the loss of valuable mining opportunities on Organ Pipe lands. Albert Long, chairman of the Ajo Small Mine Operators Association, claimed that the restrictions against new mining claims on Monument lands had eliminated potentially valuable minerals sites. Long complained that no adequate mineral surveys had been completed prior to the Monument's establishment and that the total acreage enclosed within Monument boundaries was unreasonably and excessively large to protect one single plant type.[27]

This extended correspondence prompted Hayden to write to Arno Cammerer, then National Park Service Director. Hayden let Cammerer know that he was very unhappy with the entire process of the Monument's establishment. He challenged the Park Service to justify what appeared to be a lack of adequate assessment of both mineral resources within the boundaries of the Monument as well as a level of local hostility towards the Monument's establishment. Hayden then demanded that the Director furnish him with a summary of Park Service procedures for assessment of those resources prior to withdrawal from the public domain. He went on to remind Cammerer of the reason for his unhappiness and distrust of the Park Service activities.

> I believe that the time has come when you must make a complete factual statement of your procedure in establishing the Organ Pipe Cactus National Monument. You will recall that such monument was established without the knowledge or consent of any member of the Arizona Congressional Delegation, and, therefore, I am just as much in the dark as Mr. Long is.[28]

Cammerer's summary of the National Park Service assessment apparently mollified Senator Hayden but not Albert Long. Long and others of the Arizona Small Mine Oper-

[25]Hal K. Rothman, *Saving the Planet. The American Response to the Environment in the Twentieth Century* (Chicago: Ivan R. Dee, 2000); Mark W.T. Harvey, *A Symbol of Wilderness: Echo Park and the American Conservation Movement* (Albuquerque: University of New Mexico Press, 1994).

[26]Letter to Dean and Director of the College of Mines and Engineering G. Monte Butler, University of Arizona, from Senator Carl T. Hayden, August 3, 1939. CHA, Box 607, Folder 1.

[27]See the series of letters between Albert Long, Chairman of the Ajo Small Mine Operators Association and Senator Carl T. Hayden between September 1939 and June 1941. CHA, Box 607, Folder 1.

[28]Letter to NPS Director Arno Cammerer from Senator Carl Hayden, February 6, 1940. CHA, Box 607, Folder 1.

ators Association continued to stress in later letters to Senator Hayden that the amount of land withdrawn was too large and that the Monument should be re-opened to further mineral exploration.[29] On the latter point, Hayden was in agreement with Albert Long; Hayden demanded from the Park Service and the US Geological Service (USGS) a geological survey to determine whether or not valuable mineral resources were present.[30] Before the USGS had completed its survey, Hayden introduced S. 4083 to the US Senate to reopen the Monument to mining.[31] Hayden's bill did not pass in its first attempt and the USGS survey showed that there was little potential for valuable mineral reserves within the Monument boundaries. Nonetheless, Hayden reintroduced his bill the following year. The incipient war in Europe and the pressure to develop all available mineral resources meant that Hayden's second bill passed with little opposition and no objection from President Franklin Delano Roosevelt.[32]

While this correspondence relates specifically to mining issues within the Monument, it is indicative of Hayden's attitude toward the Park Service in general and Organ Pipe in particular. Throughout Hayden's long (1912 – 1969) political career, he consistently put natural resource development ahead of landscape preservation. From another perspective, Hayden was extremely loyal to his Arizona constituents. If he could create an environment that enhanced their economic opportunities, Hayden did not hesitate to do so. Hayden was not a vindictive man and it is unlikely that Hayden would extract retribution from the Park Service for their omission to keep him informed. Nonetheless, he continued to demand protection for his constituents long after Organ Pipe's establishment. Hayden's displeasure at the Park Service actions, his general disapproval of any reservation restricting Arizona economic development, and his position as Chairman of the Department of the Interior Appropriations meant that all future interactions with Senator Carl Hayden by the Park Service had to be handled with diplomacy and great delicacy.

At the same time, that the Park Service was attempting to resolve the problems with Albert Long and the Ajo Small Mine Operators Association, issues of cattle grazing on Monument lands were also causing friction between Senator Carl Hayden and the Park Service.

7.2 A National Monument versus Existing Land-Use Rights

Frank Pinkley came to the Southwest after contracting tuberculosis. He was lured by the General Land Office in 1901 to become the caretaker for the Casa Grande Ruins Reservation in Casa Grande, Arizona. Pinkley, with his boundless enthusiasm and energy, dedicated himself to learning about and protecting archaeological and architectural ruins throughout the southwestern United States and northern Sonora. In 1918, Casa Grande Reservation and Pinkley were both transferred to the National Park Service. The Park Ser-

[29] Letter to Albert Long from Senator Carl Hayden, March 12, 1940; Letter to Carl Hayden from Albert Long, April 17, 1940. CHA, Box 607, Folder 1.

[30] Letter to Albert Long from Senator Carl Hayden, April 22, 1940. CHA, Box 607, Folder 1; Letter to Senator Carl Hayden from Acting NPS Director Arthur E Demaray, May 13, 1940. ORPI-GA.

[31] Letter to Albert Long from Senator Carl Hayden, June 6, 1940. CHA, Box 607, Folder 1.

[32] Lissoway, "An Administrative History of Organ Pipe Cactus National Monument," pp. 59–60.

vice recognized in Frank Pinkley a remarkable administrative talent.[33] By the early 1920s, the National Park Service had accumulated 13 national monuments within the Southwest region and needed someone to oversee their protection and management. Pinkley was appointed in 1923 to the position of Southwestern National Monument Superintendent.[34] Pinkley suffered from a chronic lack of support from the Park Service. His custodians were underpaid, underfunded, and understaffed. Nonetheless, there was a great esprit de corps within the Southwestern National Monument group. Pinkley inspired intense devotion both to himself and to the group from all employees; his custodians affectionately called him "The Boss." With the establishment of Organ Pipe in 1937, Pinkley acquired his 27th monument under his supervision.

The National Park Service was created in 1916; its stated goal was to protect its landscapes in such a manner as to leave them "unimpaired for the enjoyment of future generations." When land was reserved for a national park, existing land uses were often abolished, private lands bought out, and settlers moved elsewhere. The Park Service often tried to return the land to what it believed was a "primitive" state. Often to the detriment of cultural resources, eliminating evidence of previous human habitation was an important component of that restoration.

In 1933, President Roosevelt transferred all national monuments to the administration of the National Park Service.[35] However, in the eyes of the Park Service monuments were considered "secondclass sites."[36] National monuments according to the Antiquities Act were deemed as a less restrictive reservation that would be more accommodating to prior settlers. Private lands were often allowed to exist within boundaries. Important land uses were permitted to continue. Since monuments were often carved out of federal reservations or the public domain, grazing was one of the most common traditional land uses accommodated within the southwestern monuments.

President Roosevelt's proclamation for Organ Pipe recognized all previous land use activities.

> Now, therefore, I, Franklin D. Roosevelt, president of the United States of America, under and by virtue of the authority vested in me by section 2 of the act of June 8, 1906, ... do proclaim subject to existing rights, the following-described lands in Arizona are hereby reserved from all forms of appropriation under the public-land laws and set apart as Organ Pipe Cactus National Monument...[37]

Thus all valid claims and active uses of the land had to be formally recognized by the Park Service. Any user had to be granted continued access. Typically the National Park Service issued a revocable permit to the user on the understanding that it was permanent,

[33] Rothman, *America's National Monuments*, pp. 108–116.

[34] *ibid.*, pp. 120–122.

[35] Prior to 1933 national monuments were administered by a number of agencies. In addition to the Department of the Interior, both the War Department and the Department of Agriculture managed numerous monuments.

[36] Rothman, *America's National Monuments*, pp. 89–118.

[37] US Federal Register, April 16, 1937, Volume 2: Number 73.

renewable and would be reissued regularly throughout the lifetime of the individual or until the ranch or cattle were sold. At that time, the permitted land use would be terminated forever.

The acceptance of prior land uses, however, within a national monument presented the custodian with potential conflicts and headaches. If the land use in question was not damaging to the environment, there would be few problems. If the permitted use did cause damage, where did the responsibility of the Park Service and the site manager lie then? According to traditional pattern of resolution, the custodian and the Park Service could not eliminate that use until the death of the user.

7.3 The First Attempt to Eliminate Grazing from Organ Pipe

With the creation of Organ Pipe Cactus National Monument, the Gray family's grazing operation was recognized as a historic land use. This grazing activity had been noted earlier by many of the Park Service employees and scientists who surveyed the lands for potential reservation. Forrest Shreve, head of the Tucson Botanical Laboratory of the Carnegie Institute, in 1933 had stated that the Gray family should be allowed to continue grazing their cattle.[38]

In 1937, the Monument had been excised from lands that were still recognized as the public domain. Three years earlier, Congress passed and President Franklin Delano Roosevelt signed into law the Taylor Grazing Act. This Act created a grazing system by which unclaimed lands could be reserved for grazing cattle. These lands would be managed by the newly established Grazing Service. In November 1934, President Roosevelt formally withdrew 173 million acres of land. Much of this would be later designated for specific grazing districts but in southwestern Arizona these districts had not yet been established.

On April 25, 1935, Secretary of the Interior Harold Ickes approved a memorandum of understanding between the Grazing Service and the National Park Service that future grazing allotments would not affect proposed but not yet proclaimed parks and monuments, including Organ Pipe Cactus National Monument.[39] Shortly after the Monument's creation, the Park Service proposed to eliminate grazing from Organ Pipe.[40] No clear explanation has yet been presented to justify why the Park Service made this proposal. Perhaps the Park Service chose to ignore the tradition of accommodating historic land uses

[38] Lissoway, "An Administrative History of Organ Pipe Cactus National Monument," p. 24; Nichols, "Afield with Scientists," p. 87.

[39] Clifford Presnall, "Outline: Grazing History in Organ Pipe Cactus National Monument," April 16, 1941. ORPI-GA.

[40] Lissoway, "An Administrative History of Organ Pipe Cactus National Monument," pp. 70–71. Since the Grays owned no base lands, the Park Service may have believed that the family members were not entitled to a grazing permit. Access to permits for grazing land on federal reserves in the national forests, parks and later on grazing districts was usually restricted to those ranchers who possessed privately owned base ranch lands. At this time none of the Gray family members had filed any claims to land under the Homestead Act. In the desert regions of the Southwest, however, "ownership" and/or control of water sites was recognized as granting legitimacy to a ranching operation equal to ownership of base land (see Merrill, *Public Lands and Political Meaning*, p. 157). Thus because the Grays controlled most of the water sites within the boundary of the monument, they could justify their use of the grazing lands as legitimate settlers not just temporary squatters.

and instead relied upon Ickes' memorandum of understanding to justify elimination. Today, it seems almost inconceivable that the Park Service, having recently angered Senator Hayden for failing to notify him of the Monument's establishment, would believe that the Senator would agree to terminate grazing, an approved land use.

Naturally Bob Gray was alarmed; the proposal clearly threatened his livelihood and investments of the past 18 years. Through local lawyer, A. C. Netherlin, Gray protested to Senator Carl Hayden that his grazing operation was a historic land use and that the grasslands now within the Monument boundary were a critical part of his ranching operations.[41] Hayden was now confronted with an example of the primary reason that he did not support reservations of national parks and monuments. Here was the Park Service attempting to terminate a legitimate activity in a region that was already struggling from drought and economic depression. On August 25, 1937, the Senator demanded that the Secretary of the Interior grant a permit to the Gray family to continue cattle grazing on Monument lands.[42]

In order to justify its proposed termination of grazing, the Park Service ordered a vegetation study to be completed by Southwestern National Monument Wildlife Technician, W. B. McDougall. McDougall surveyed vegetation throughout the Monument and assessed the effects of grazing on that vegetation. He noted that the vegetation around Bates Well was already badly overgrazed. McDougall went on to describe in detail the unique vegetation from the region.

> All of the plants growing within this area are adapted to the extreme aridity that exists here. They have to be in order to survive. They are delicately adapted to their environment, and any change in the environment, such as the introduction of domestic animals, would result disastrously to these plants.

He concluded that the purpose of the Monument was to protect this vegetation.

> The area is entirely unsuited for grazing purposes and, at best, could support only a very small number of domestic animals... The area should never have been opened for the grazing of domestic animals because (a) the scarcity of both food and water, it is not in any sense adapted to grazing and (b) the presence of domestic animals in the area modify (sic) the environment and eventually destroy the very thing for which the monument was established.[43]

[41] Clifford Presnall, "Outline: Grazing History in Organ Pipe Cactus National Monument," April 16, 1941. ORPI-GA. In addition to practicing law in Ajo, A. C. Netherlin ran his own cattle south of Ajo (see Rutman, "Selected Sonoran Pronghorn Notes") and had mining claims within the monument. (See Richard H. Begeman and Jimmy D. Taylor, "A Brief History of Important Mines and Prospects in Organ Pipe Cactus National Monument," February 20, 1967. ORPI Natural Resource Library).

[42] Much of the early (1932–1941) documentation involving correspondence and decision-making regarding grazing activity is absent from Organ Pipe Grazing Archives. Brief references to these early actions can be found in the "Organ Pipe Cactus Grazing History," a document which was periodically updated throughout the grazing era and is located in the grazing files. The final version is dated November 30, 1976. ORPI-GA.

[43] Quoted in Memo to the Secretary of the Interior Stuart L. Udall from Solicitor Frank M. Barry, April 4, 1968. ORPI-GA.

Acting Director Arthur E. Demaray forwarded McDougall's report to Senator Hayden and reiterated McDougall's recommendation to exclude cattle from the Monument. Demaray also added that the Park Service supported that recommendation.[44] Hayden would not accept this conclusion from the Park Service. He suggested that the agency needed to study the situation further so that the Grays could continue to utilize the grazing lands within the Monument.[45]

7.4 A Grazing Agreement and the First Permit

In Ajo, local opposition to the Monument was growing. A petition signed by 200 citizens called for the Monument's relocation further west.[46] Under pressure from both Hayden and Ajo residents, Superintendent Frank Pinkley recommended that the Park Service issue a lifetime grazing permit to Bob Gray.

> ... I feel that there is no question that grazing permits as a matter of justice, should be issued to Mr. Robert L. Gray and certain relatives of his, forming a group, who have unquestionably been deriving their livelihood from grazing cattle on the lands now within the boundaries of Organ Pipe Cactus National Monument. Such permits should, I feel, permit no increase over the numbers of cattle previously grazed within the area ....[47]

Based on Pima County tax records and Ralph Gray's assertion that the family owned 500 head of livestock, Pinkley issued a grazing permit for 550 head in August 1938 at a nominal fee of $10. Pinkley wrote to Carl Hayden and stated that the Grays "could run that many (about 500 cattle) there indefinitely at that rate, but that they would probably not be allowed to sell the brand and range; they would have to sell off the cattle and quit sometime before the last of them died."[48] This first permit was issued to Robert Lee Gray alone, but all subsequent permits included his sons' names (Ralph, Bobby, Jack, Henry) on the grazing agreement.[49] The recognition by the Park Service of a permit for a "partnership," a family, multi-generational organization, was highly unusual, if not unique. Most grazing permits were given to single individuals. The Park Service had now created a renewable contract with more than one rancher for more than one lifetime.

As was the case for the rest of his Southwestern National Monuments, Pinkley was provided with an inadequate amount of funding for Organ Pipe. For two years Pinkley

[44] *ibid.*

[45] "Organ Pipe Grazing History," November 30, 1976. See Reference for November 26, 1937. ORPI-GA.

[46] *ibid.* See reference for January 30, 1938; Lissoway, "An Administrative History of Organ Pipe Cactus National Monument," p. 71.

[47] Quote from Memo to Secretary of the Interior Stewart Udall from NPS Director George Hartzog Jr., July 10, 1964. ORPI-GA.

[48] Clifford Presnall, "Outline: Grazing History in Organ Pipe Cactus National Monument," April 16, 1941. See reference for August 17, 1938. ORPI-GA.

[49] Lissoway, "An Administrative History of Organ Pipe Cactus National Monument," p. 71; Clifford Presnall, "Outline: Grazing History in Organ Pipe Cactus National Monument," April 16, 1941. See references for May 12, 1938; August 17, 1938; August 29, 1938. ORPI-GA. Unlike other family members, Ralph Gray left the Gray Partnership and the area in 1943. He moved to Calexico, California.

had insufficient funds to hire a custodian. The absence of a Park Service representative on the ground made management difficult, especially for issues that required careful study.[50] Finally, in October 1939, William Supernaugh began his job as Organ Pipe's first custodian. From the moment of his arrival, Supernaugh was placed in the intermediary position in the conflict between the Gray family on one side and the Park Service on the other.

[50] Lissoway, "An Administrative History of Organ Pipe Cactus National Monument," p. 28.

CHAPTER 8

The Gray Struggle for Land Ownership

The Gray family migrated to the Ajo region in the summer of 1920. They had purchased ranch improvements belonging to Lon Blankenship and settled into the homesite in the Sonoyta Valley immediately north of the international border. The Papago Indian Reservation situated east of the Sierra de Santa Rosa and the Ajo Range had been set aside in 1918. The landscape between the border and Ajo and west of the Papago Reservation remained unsurveyed, open to ranching or squatting. A number of small properties within the area had been claimed under General Mining Law of 1872.[1] In the early 1930s, the General Land Office finally sent surveyors to measure and map the region.

The General Land Office was created by Congress in 1812 and given the responsibility to supervise and manage all aspects relating to the public lands of the United States. During most of its history, however, the General Land Office's primary occupation was to dispense parcels of land from the public domain to citizens of the United States according to Homestead, Mining, and Timber laws.[2] Prior to a completed survey, individuals could live on the land as squatters. Their continued residency precluded anyone else from making a claim to that property. Once the land had been surveyed, those individuals living on the land could file their own claim in order to gain a formal title of ownership.[3]

It is highly unlikely that the Gray family members were oblivious to the proposed legal changes in public domain management and regulation that were swirling across southwestern Arizona at this time. Throughout Herbert Hoover's presidency, there had been an extensive debate about the federal government's role in managing the public domain. Since the end of the Civil War, these unclaimed and unregulated lands had been used by ranchers as free grasslands. The federal government had placed few, if any, restrictions on the use on these lands as it wished to encourage additional homestead claims. However those cattle and sheep ranchers who had access to this resource abused the land by severely overgrazing it. The issue of continuing abuse and environmental damage remained unresolved until Franklin D. Roosevelt's presidency.[4] A trilogy of disasters: an extended drought throughout the West, a series of enormous dust storms that removed millions of tons of topsoil, and an unprecedented economic depression drove the 73rd Congress to

[1] Begeman and Taylor, "A Brief History of Important Mines and Prospects;" Huggard, "A Revised History of Mining in Organ Pipe Cactus National Monument."

[2] Muhn and Stuart, *Opportunity and Challenge*

[3] Stein, "Homesteading in Arizona."

[4] Merrill, *Public Lands and Political Meaning*, pp. 103–168. Merrill offers an extensive discussion on the 130-year history of the controversy over the public domain. She proposes that those who used the grasslands, the ranchers, and those who managed the grasslands, the federal government, each saw themselves as "owning" (and therefore having the right to control) the land.

pass the Taylor Grazing Act on June 28, 1934. Its consequences for ranchers across the West were twofold: the Act created the Grazing Service and a regulated system of grazing use and division of land. The second consequence occurred on November 26, 1934, five months later when President Roosevelt withdrew most of the remaining public lands from homesteading. Any land which had not been settled upon prior to that date was no longer available for claim.

Despite the activity of the land surveyors or Roosevelt's land withdrawal of the public domain, the Grays apparently did nothing to secure title to the lands they had lived on or to protect their ranching enterprise. Perhaps they felt that the ownership of structures and control of waters in the area was sufficient to prevent any other individual from interfering in their interests.

It is likely that the Gray sons, Henry, Ralph, Jack, and Bobby, could have still filed Stockraising Homestead claims at the time of Roosevelt's withdrawal. All were over the legal age of 21. Since all of them were running cattle upon the land, they would have simply needed to show ownership of a habitable structure that they had lived in for a limited period of time. Henry could have purchased Birdie del Miller's home in Alamo Canyon that he had leased for a number of years. Bobby began working at the Ajo mines in 1933 but he could have claimed prior residency somewhere on the ranch. We do not know where Jack and Ralph were living at this time, but they were probably somewhere in the Sonoyta Valley. Robert Lee Gray was living at Dos Lomitas. Having previously gained titles to homestead land in New Mexico and elsewhere in Arizona, Bob appears to have been no longer eligible to file for additional claims of land.[5] Any one of his sons, however, could have made a successful claim to his father's homesite and thereby gained title to the family property. The fact that none of them did, suggests that Robert Lee refused to grant to any of his offspring the right to file a claim.

Nor did any of the Grays make an active effort to protect their holdings when the National Park Service became interested in the proposed Monument lands later. As stated earlier, the Grays were clearly aware of the presence of scientists and Park Service employees who were assessing the landscape for inclusion in the park system.[6]

8.1 Rejection of Gray Family Homestead Applications

For reasons as yet undiscovered, Jack, Henry, and Bob Gray decided in 1939 to file homestead claims on lands that had already been withdrawn in 1934 for the Grazing Service and in 1937 for the Park Service. Jack made the first homestead claim in January for 160 acres of land around the Gachado Line Camp. The site included the farm fields where the family had regularly planted corn and truck produce.[7] The land also included the one-room structure built as a line camp, a crude shelter used by ranch hands for protection in bad weather or for temporary accommodations when working cattle far from the homesite. Abe and Henry Gray had lived in the structure during the mid-1920s. Jack claimed habi-

[5] "Petition for the Exercise of Supervisory Authority." Letter to Bob Gray, Henry Gray, and Jack Gray from Assistant Secretary of the Interior Oscar L. Chapman, September 9, 1941. HGA. Box 3, Folder 7.

[6] Nichols, "Afield with Scientists," p. 87.

[7] Rutman, "History of the Gray Family."

tation at the line camp from July 1, 1924 and responsibility for a series of improvements valued at over $5,000.[8]

Many homestead claims, especially those filed after the Taylor Grazing Act, were inspected for verification. A field investigator visited the site in March 1939 and reported,

> a one-room house in bad condition built of secondhand corrugated iron; the house had no window, a dirt floor, and a wooden shutter for a door; ...he found farming implements stored in the house, but no furniture, cooking utensils or bedding of any kind; ... the house was not habitable ... and there were no signs around the house indicating that it had ever been occupied... [9]

Jack's homestead claim was rejected in June 1939 for a lack of evidence of residency.[10]

In April 1939, Bob Gray filed an application to purchase a parcel of land that included Dos Lomitas Ranch house.[11] The reader will recall that Gray purchased the livestock, range improvements, and original ranch house from Lon Blankenship in 1919. The original purchase did not include title to the land on which those structures sat. Bob Gray applied to purchase the property using the argument that he was due title to the land under the Color of Title Act. This act permitted a settler to claim property if he had lived upon the land for more than 20 years and made improvements in good faith believing that he was in possession of a valid title to the land. The "Color of Title" refers to the title document which may appear valid but, in reality, is legally defective. Under the Color of Title Act, the government will recognize a settler's "ownership" of the land if he can show title or a claim of title. The Acting Assistant Commissioner of the General Land Office rejected Bob Gray's application in March 1940 stating that the bill of sale from Lon Blankenship for the range improvements and ranch home was insufficient evidence of title to the land.[12] In his appeal, Bob Gray tried to show that in purchasing Blankenship's improvements, and

[8] It is unlikely that Jack inhabited the single-room structure at the same time as his two older brothers (see Rutman, "History of the Gray Family"); he was 15 at the time and living in Ajo and going to school. The date chosen for habitation, however, is highly interesting. The family claimed that the Gachado Line Camp was built at the same time as the Dos Lomitas Ranch house. The date of habitation may actually indicate a date of completed construction for Gachado as well as Dos Lomitas.

[9] * This early description has significant differences from later ones of Gachado. See Appleman, Roy and Russell Jones. 1969. "Blankenship Ranch. Historic Structures Report, Organ Pipe Cactus National Monument, Arizona." Office of Archaeology and Historic Preservation. US Department of Interior and National Park Service, pages 4142.

[10] "Petition for the Exercise of Supervisory Authority." Letter to Bob Gray, Henry Gray, and Jack Gray from Assistant Secretary of the Interior Oscar L. Chapman, September 9, 1941. HGA. Box 3, Folder 7.

[11] Oscar Chapman, Assistant Secretary of the Interior, stated that Bob Gray was not eligible to file homestead claim on the land because he had already claimed 530 acres of property in Quay County, New Mexico and in the western portion of the Whetstone Mountains in Cochise County, Arizona (see "Petition" referenced above). Searches of the General Land Office records at the BLM website (www.glorecords.blm.gov/PatentSearch) turned up three previous claims by Robert L. Gray. In theory all homesteaders after 1916 could claim up to 640 acres per person. Thus Bob Gray, if he had made no additional land claims elsewhere, should have been able to claim another 110 acres under the Stock Raising Homestead Act of 1916. The reason why he didn't has not yet been discovered; perhaps he had made claims for an additional 110 acres elsewhere.

[12] "Petition for the Exercise of Supervisory Authority." Letter to Bob Gray, Henry Gray, and Jack Gray from Oscar L. Chapman Assistant Secretary of the Interior, September 9, 1941. HGA. Box 3, Folder 7.

by living on the land and continually improving his property for 20 years, he should have been due "title" to the land. That appeal was rejected on December 31, 1940 by reason that Gray did not possess any document indicating title to the land and that "naked exclusive possession of the lands for the required period" (of time) did not grant a right to purchase under the Color of Title Act.[13]

On July 18, 1935, Henry Gray purchased the Bates Well home and range improvements from John T. McDaniel. The purchase agreement was written with the understanding that McDaniel would file a homestead claim on the property and then sell the completed title to Henry Gray.[14] Unfortunately J. T. McDaniel did not file the homestead application until January 1937. McDaniel's application was canceled by the General Land Office in June 1940 for unknown reasons.

Henry then attempted to file his own homestead claim on the Bates Well property in December 1940. This application was rejected on the grounds that Henry had not established residency prior to Roosevelt's November 1934 withdrawal of public domain lands or prior to the federal reservation of land for Organ Pipe Cactus National Monument. Henry argued in his appeal that the purchase of improvements and structures from the original settler and entryman gave him a vested right to the land.[15] In earlier years, the General Land Office would have recognized a second homestead settler and his subsequent claim. The federal government, however, had already made two intervening land withdrawals. Those withdrawals terminated any opportunity to connect his homestead claim to McDaniel's earlier one. Henry's appeal was rejected on May 6, 1941.[16]

While it is likely that the Grays had legal advice (probably from local lawyer, A. C. Netherlin) during these homestead applications, the consecutive rejections of all three applications clearly stunned the members of the Gray family. The Grays controlled access to the waters across the Monument, but the absence of any privately owned property weakened their bargaining position with the National Park Service and thereby threatened the long-term viability of their ranching enterprise.[17] That same absence threatened to undermine their argument of ownership of any non-surface waters as well.

Until this time, the Grays had received an annual permit from the Park Service to graze their cattle on the Monument. The Grays however had no formal agreement (other than Pinkley's previously written letter to Senator Hayden) that assured them of future access to the Monument's grasslands. Probably through the advice of fellow members of the Arizona Cattle Growers Association, Robert Lee Gray contacted Attorney Elmer C. Coker in Phoenix to persuade him to take up the family's case of rejected homestead applica-

[13] *ibid.* The fact that Robert Lee Gray did not make a claim until 1939, 20 years after his initial settlement, may indicate that he saw the Color of Title Act with its 20-year requirement of residency as his best hope for gaining access to the land in fee simple.

[14] "Bill of Sale for Bates Well Ranch." HGA, Box 3, Folder 1. It was necessary that J. T. McDaniel file for the homestead claim, instead of Henry Gray, since McDaniel had been living at Bates Well at the time of Franklin Delano Roosevelt's withdrawal of public domain lands in November 1934.

[15] See Memo to Organ Pipe Superintendent from SW Regional Director Thomas J. Allen, August 17, 1962. ORPI Homestead Files, Cultural Resources Research Library, Organ Pipe Cactus National Monument.

[16] "Petition for the Exercise of Supervisory Authority." Letter to Bob Gray, Henry Gray, and Jack Gray from Assistant Secretary of the Interior Oscar L. Chapman, September 9, 1941. HGA. Box 3, Folder 7.

[17] The lack of private property also posed a significant threat to the Gray family members when applying to the Grazing Service for additional allotments of grazing lands.

tions and to give them legal advice regarding their negotiations with the National Park Service.[18] This relationship with Attorney Coker acting as advisor to and advocate for the Grays lasted for the next 35 years until the death of Bobby Gray in 1976. Coker's knowledge of water and land law and his political connections with Arizona delegations at state and federal levels were crucial to the long-term success of the Gray ranching operation. Without Coker's unwavering support and advice, it is highly unlikely that the Gray ranching enterprise would have continued for as long as it did.

8.2 Attorney Elmer Carroll Coker

Elmer Coker was born in Florence, Arizona in 1909. He grew up in a rural environment and during his youth worked on several cattle ranches as well as the San Carlos dam project. His father, Elmer W., was a lawyer with a passion for politics. Following his father's footsteps, Elmer received his law degree in 1934 from the University of Arizona and soon became "an influential authority on state land laws as well as water rights and water laws."[19] Coker opened his first law office in Florence in rooms borrowed from Attorney Ernest McFarland. He became Arizona's Assistant Attorney General representing the State Land Department and the State Water Department in 1935 and later the Special Assistant Attorney General in 1937 through 1957 representing the state in land and water litigation before the Department of the Interior. His attorney position in state government provided immediate contacts with members of Arizona's state and federal legislators including Carl Hayden. In 1973 he argued and won a water rights case, Bonelli Cattle Company v. State of Arizona, before the US Supreme Court. In his private practice Coker "specialized in land laws and regulations by different agencies and the State Land Department, and in water rights. Many of his clients were ACGA (Arizona Cattle Growers Association) members."[20] Coker enlisted in the Army Air Corps in October 1941 and served until November 1946 when he returned to his legal practice in Phoenix.

When the Grays enlisted the assistance of Attorney Elmer Coker, they had received the last rejection from their homestead appeals. Coker immediately directed his advocacy for the Grays in multiple directions to both congressional and executive branches of the federal government. He wrote to both Arizona Senators Ernest McFarland and Carl Hayden for their assistance in his appeals to the Secretary of the Interior.[21] Coker wrote to the Secretary of the Interior in hopes that he might grant the Grays administrative relief from the loss of their homestead appeals. Coker described in his petition to the Secretary how Jack, Henry, and Bob Gray had settled upon the land, invested labor and money to improve the land and, in good faith, attempted to establish their homes. Oscar Chapman, Assistant Secretary of the Interior, responded that although the circumstances for Jack, Henry, and Bob Gray were different, in all three cases, the claimants had acquired no legal or equitable right to the requested lands. There were no grounds upon which the Secretary could grant

[18] Letter to Senator Carl Hayden from Attorney Elmer C. Coker, December 4, 1946. ORPI-GA.

[19] Richard G. Schaus, "Arizona Heritage. Elmer Carroll Coker. 1909–1977." *Arizona Cattlegrowers Outlook*, December 1977: 12.

[20] *ibid.*, p. 12.

[21] "Petition for the Exercise of Supervisory Authority." Letter to Bob Gray, Henry Gray, and Jack Gray from Assistant Secretary of the Interior Oscar L. Chapman, September 9, 1941. HGA. Box 3,Folder 7.

relief. Chapman stated that "the Department ... cannot dispose of parcels of the public domain in any other manner than by the conditions described by the statutes. ... (I)t cannot grant relief on a claim which is based on an alleged right denied by law."[22] Chapman went on to say that in the case of Bob Gray,

> "He had had the benefit of a free use of the land and apparently knew that he had no valid claim thereto as no attempt was made to assert or perfect any rights he may have had until his unauthorized use of the land was interrupted by the reservation ...."[23]

The presumptive attitudes shown by the Gray family and, secondarily by Attorney Elmer Coker, that continued residency and use of the public lands should grant an inherent right of possession to the user were historically common to western ranching communities prior to the Taylor Grazing Act. In moving further and further west into the Arizona desert in 1919, Bob Gray intentionally sought out lands that few others would want or, as he had hoped, would care about.[24] For 15 years in the Sonoyta Valley the Gray family experienced no rules or regulation except those communally agreed upon by the ranching community. As Chapman wrote, the Grays had the use of hundreds of square miles of grasslands at no cost. Their control of watering sites gave them what they perceived as a "range right" to those lands.[25] But now, the federal government, after 75 years of leaving the public lands essentially unregulated, had decided to exert control and management of those lands. That control came in the form of withdrawal of public lands from free use and the loss of opportunity to transfer land from the public domain to private ownership. Additional federal controls over lands came with an increasing number of reservations of land for national park units, game refuges, and military sites.[26] The landscape that the Grays had once seen as unfettered and unregulated was now severely restricted by federal agencies on all sides. These changes in federal regulation and management of lands created conflicts between those who are unwilling or unable to recognize the new rules and those who had to apply them. The Grays, by their inability or unwillingness to accept these changes in federal land regulations and to work with the homestead laws in a timely and responsible fashion, had put the future of their ranching enterprise in jeopardy.

Chapman's negative response to the Grays' petition for administrative relief terminated any further hope that Jack, Henry, or Bob could gain access to privately owned lands within the Monument.[27] His letter was not, however, completely without succor. Chapman reminded the Grays that the Park Service had granted an annual grazing permit to

[22] *ibid.*

[23] *ibid.*

[24] Jordan, *North American Cattle-Ranching Frontiers*, p. 238; Merrill, *Public Lands and Political Meaning*, pp. 16–36.

[25] Scott, "The Range Cattle Industry," pp. 155–156; Wilkinson, *Crossing the Next Meridian*, pp. 82–94.

[26] Michelle K. Berry, "Cow Talk: Ecology, Culture, and Power in the Intermountain West Range Cattle Industry, 1945–1965." Ph.D. Diss. Tucson: University of Arizona, 2005, pp. 53–68; Cabeza Prieta Game Refuge was set aside in 1939; the Lukeville (later the Barry Goldwater) Bombing Range was reserved in 1941.

[27] Robert Louis (Bobby) Gray later filed a homestead claim and received title to 157 acres at the Dowling Ranch west of Lukeville in 1950. The claim had been initially rejected for lack of evidence of habitation at the site prior to President Roosevelt's withdrawal of land in November 1934. Attorney Coker obtained affidavits from surrounding neighbors swearing that Bobby had been living out the site prior to that date. The validity

the Gray co-partnership to graze 550 head of cattle on Monument lands. He concluded his response with this statement.

> "It is believed that the granting of permission to make such use of the lands in question will prevent any hardship that may result from a denial of alleged rights to acquire title there to."[28]

8.3 Attorney Coker Secures Assurance of Lifetime Grazing Permit

Attorney Elmer Coker needed to move rapidly. He had enlisted in the Army Air Corps and was scheduled to depart for active service in October 1941. Assistant Secretary of the Interior Oscar Chapman had denied any chance of appeal of the Grays' homestead applications. Chapman had however offered one glimmer of hope in his final statement in the form of the National Park Service grazing permit and Elmer Coker seized upon that suggestion. Superintendent Frank Pinkley had stated in 1938 to Senator Carl Hayden that "the Grays could run that many (cattle) indefinitely until last of the Grays died."[29] If Attorney Coker could secure assurances from the National Park Service of a lifetime grazing permit, it would be of little consequence that the Grays did not possess title to private lands. They would not need land titles to be considered a legitimate operation. Their future grazing opportunities would be secure in an exclusive and guaranteed access to the grasslands of Organ Pipe Cactus National Monument.

Elmer Coker pressed both Senator Ernest McFarland and Carl Hayden to persuade the National Park Service to compensate the Grays for the denial by the Department of the Interior of their homestead claims with relief in the form of a lifetime grazing permit. "It appears that the only relief that the Grays can obtain is through a permit from the National Park Service." This, the Park Service was apparently willing to grant.[30] Within one month Acting Director Arthur Demaray responded to Senator Hayden with a promise of the lifetime grazing permit to the Gray family members.[31]

Demaray appears to have had either poor legal advice or little understanding of Interior grazing regulations, or perhaps, both. Demaray had no authority to grant a grazing permit different from the standard annually issued, revocable agreement. The power to establish these agreements was granted by Congress only to the Secretary of the Interior; the National Park Service could only administer what the Secretary of the Interior had approved. Indeed Demaray had no right to make promises to any private individual regarding federal resources of the Monument.[32]

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of those affidavits was challenged by the Park Service but later abandoned when no countervailing evidence stronger than the affidavits was available.

[28] "Petition for the Exercise of Supervisory Authority." Letter to Bob Gray, Henry Gray, and Jack Gray from Assistant Secretary of the Interior Oscar L. Chapman, September 9, 1941. HGA. Box 3, Folder 7.

[29] Clifford Presnall, "Outline: Grazing History in Organ Pipe Cactus National Monument," April 16, 1941. See reference for August 17, 1938. ORPI-GA.

[30] Letter to Senator Carl Hayden from Attorney Elmer Coker, September 19, 1941. ORPI-GA.

[31] Letter to Senator Carl Hayden from Acting Director Arthur Demaray, October 10, 1941. ORPIGA.

[32] Memo to the Secretary of the Interior Stuart L. Udall, from Solicitor Frank M. Barry, April 4, 1968. ORPI-GA.

The consequences of Acting Director Demaray's statements to Senator Hayden would continue to play out for the next 35 years. Shackled by this promise, the National Park Service believed that it had no recourse but to continue to approve annual grazing permits to the Grays despite extensive evidence of damage to vegetative and soil resources across the Monument. Because of top-down format of the National Park Service organization, few in the administration above the regional level were concerned for the landscapes of a small monument in the western desert. Not until native son and Arizona representative Stewart Udall was elevated to the position of Secretary of the Interior in 1961, was anyone in Washington either sufficiently knowledgeable about the conflict or politically powerful enough to challenge Senator Hayden and the historic misstatement by Arthur Demaray. Even with that knowledge, neither the National Park Service nor the Department of the Interior was willing to challenge the sanctity of Demaray's promise despite its inappropriateness, his lack of authority to make it, and the environmental consequences.

Why did Demaray agree to a lifetime permit? There are many reasons to question why he would take such extraordinary action as to grant this type of permit to a partnership rather than one individual, to multiple generations instead of one lifetime, and to provide a guarantee in perpetuity and negate the standard revocability of a National Park Service grazing permit. Demaray felt pressured to acquiesce to Senator Hayden's demands. In his promise to Carl Hayden, Demaray was only confirming what Superintendent Frank Pinkley had already suggested should happen. As assistant to Director Cammerer, Demaray had watched the diplomatic dancing with Hayden during the previous four years. Demaray was probably wary of Hayden and his power over future National Park Service appropriations. Perhaps the greatest reason for acquiescence was that Demaray knew that, at the time of writing his October 1941 letter to Hayden, Congress was about to vote on Hayden's proposal, S. 260, to re-open Organ Pipe Cactus National Monument to mineral extraction.[33] Thus, any form of appeasement of Senator Carl Hayden that might enhance the standing of the Monument would have been deemed important if not necessary.

[33]Lissoway, "An Administrative History of Organ Pipe Cactus National Monument," pp. 59–60.

CHAPTER 9

Grazing at Organ Pipe: Environmental and Political Conflict

This chapter describes part of the middle period of cattle grazing at Organ Pipe Cactus National Monument. It illustrates the depth of the conflict between the Park Service, its employees, and the Gray family. The intensity of that conflict rose and fell with the annual variation in rainfall and drought. In years of good rain, the desert produced sufficient grasses and scrub browse across the Monument. In times of drought, these food sources were not only reduced but their distribution also became uneven; grasses and browse were consumed close to the point of obliteration. Under severe conditions, cattle consumed anything edible including trees and cacti. Water sources were few and far between on Monument lands and cattle had to travel greater distances between food and water. Cattle wore deep trails and initiated soil erosion over wide areas of the Monument in their daily journeys between both necessities.

When the severity of a drought increased, the anxiety levels of Monument employees rose dramatically as they watched the environmental damage continue. Cows in a starved and weakened condition brought only low prices on the beef market. Under drought conditions, Gray family members refused to sell their cattle; they hoped the animals would endure the stressful conditions until the following year when they could be sold at a higher price. The Grays' decision to keep their livestock on the range often meant that many cattle died during extended droughts. Another consequence of this decision was that greater numbers of animals were retained for longer periods of time on Monument lands. These greater numbers increased the rate of destruction of vegetation. Plants were not only stressed by drought but also excessively grazed and trampled by desperate animals. When the Grays did not accomplish the required annual roundup and sale, they were in violation of their grazing permit conditions by holding too many animals on Monument lands. This situation occurred repeatedly, especially during the unusually dry years following 1942.

The primary source of information for the next two chapters comes from the Organ Pipe Cactus National Monument grazing archives. These papers include memos from rangers and superintendents, reports from field technicians, and responses from the regional and director's offices. A smaller secondary source of information with a different perspective comes from a limited number of records in the Carl Hayden Archives at Arizona State University. A third source of information is from the Henry Gray Archives located at the Western Archaeological and Conservation Center in Tucson, Arizona. This collection of documents contains copies of letters sent by Attorney Elmer C. Coker to the Grays, National Park Service employees, or congressional representatives. Coker's letters provide insight into the grazing controversy from the Grays' perspective. Data regarding

rainfall come from recorded comments in memoranda, Southwestern Monument Monthly Reports, or monthly precipitation records from Ajo.

9.1 Park Service Research at Organ Pipe

The purpose of President Roosevelt's proclamation establishing Organ Pipe Cactus National Monument on April 13, 1937 was to protect the rugged landscape, its desert vegetation, and more specifically, the organ pipe cactus. However in his proclamation Roosevelt also granted the continuation of all existing land uses, including grazing (but excepting mining). The National Park Service at the time had little or no information about the effects of cattle on southwestern Arizona soils and scrub desert vegetation. Substantial range research had been carried out on carrying capacities of desert grasslands in the southeastern quadrant of Arizona, but few if any range or vegetation scientists had ever visited these lower deserts of the Ajo region.[1]

Shortly after Organ Pipe's establishment, Acting Director A. E. Demaray ordered Regional Wildlife Technician W. B. McDougall to assess the Monument vegetation and its potential for supporting cattle. McDougall concluded that the Park Service should eliminate the cattle from Monument lands as, in his opinion, the environment could not produce sufficient forage.[2]

McDougall revisited the Monument in April 1938 and reported that the range was in good condition. He did point out that overgrazing was evident around water sources at Bates Well Ranch. Likewise, A. A. Nichol, a range scientist at the University of Arizona, visited in July 1939 and reported a "good forage reserve" over the Monument.[3] Historic precipitation measurements from the nearby town of Ajo indicate that winter rains were well above mean values during the last two years of the 1930s. At the same time, Ben Nelson, a US Forest Service range scientist from the Santa Rita Experimental Range, conducted a survey of grazing in the Gila River drainage north of Ajo. He compared the Gila range with that of the Monument and concluded that vegetation at Organ Pipe was insufficient to support a commercial grazing operation.[4]

McDougall returned again for a third visit in October 1940 to ascertain the effects of the proposed AjoSonoyta highway on resident wildlife. In his report he remarked that erecting a stock-proof boundary fence around the Monument would be critical for the preservation of the Monument's vegetation and essential to stop the incursion of wild horses and burros from Mexico.[5] McDougall believed that because of its unusual vegetation and outstanding variety of wildlife species, the Monument ought to be raised to the status of a national park. He returned in February 1941 to produce another special report

[1]The Santa Rita Experimental Range in the Santa Rita foothills south of Tucson had been established by the federal government in 1903 to conduct research in range management and range conditions.

[2]Quoted in Memo to the Secretary of the Interior Stuart L. Udall from Solicitor Frank M. Barry, April 4, 1968. ORPI-GA.

[3]Memo from Wildlife Biologist Clifford Presnall, April 20, 1941. ORPI-GA.

[4]Memo to files from Hugh M. Miller, January 9, 1941, ORPI-GA; see also Lissoway, "An Administrative History of Organ Pipe Cactus National Monument," p. 73.

[5]W. B. McDougall, "Special Report: Roads and Wildlife at Organ Pipe Cactus National Monument," November 1940. ORPI Natural Resource Library.

to support that nomination. He warned that the presence of the Gray cattle would require additional watering holes in order to reduce overgrazing and provide sufficient water for both wildlife as well as cattle. He noted that the western foothills in Alamo Canyon and along the Ajo Mountains were considerably overgrazed.[6]

All of the aforementioned reports and assessments comment on the availability of good forage across the southwestern region. Ajo precipitation records confirm that winter rains continued to fall well above mean levels through the winter of 1941. For the next 20 years, however, those seasonal rainfalls would average below the mean.

9.2 Conflicts over Cattle Permit Numbers

Ralph Gray had told Frank Pinkley in 1938 that the family owned not more than 550 head of livestock. Correspondingly, Pinkley had approved that number for grazing on the Monument in April 1939.[7] In December 1939, Henry Gray asserted to Park Service employees that Ralph's estimate did not represent the real number of cattle on the range. He demanded that the allowable permit number be increased to 1250.[8] The Park Service was now faced with a multifaceted dilemma. Should they agree to Henry's assertion that 1250 was the number of head present in 1937 even though they had approved only 550? Did Henry's assertion of 1250 represent the real number on the range in 1940? Was that number sustainable or would an increased number of allowable cattle damage the vegetation the Monument was established to protect? Clearly none of these questions could be accurately answered without an actual count of the cattle within Monument boundaries.[9] Pinkley pressed his newly appointed custodian, William Supernaugh, to make that headcount during a cattle roundup as soon as possible.

Traditionally cattle roundups were made in the spring to collect yearling steers and non-breeding cows for sale. The new calf crop for that year would be branded at the same time. This form of roundup worked well in relatively open ranges. Additional cowboys would be hired temporarily or neighboring ranches would pool their manpower to scour the area and bring together everyone's animals for branding and sale. The Grays, however, managed their ranching operations very differently from other southern Arizona ranches. Gray family members, instead, kept their steers until three or four years of age. They believed that cattle developed more slowly in the sparse environment of the lower desert. Thus, they reasoned that their animals needed to be held on the range longer to produce a larger animal and to make a sufficient rate of return for their ranching labors. Gray roundup operations were also highly unusual. Low cowboy populations in southwestern Arizona meant that few were available to assist in the roundup. The dense desert scrub made finding and extricating cattle extremely difficult. The Grays could only depend upon family members, and occasionally a few friends, to accomplish their annual

[6] W. B. McDougall, "Special Report: Notes on Organ Pipe Cactus National Monument," March 1941. ORPI Natural Resource Library.

[7] Clifford Presnall, "Outline: Grazing History in Organ Pipe Cactus National Monument," April 16, 1941. See reference for August 17, 1938. ORPI-GA.

[8] Memo to Superintendent Frank Pinkley from Custodian Supernaugh, December 30, 1939. ORPIGA.

[9] Memo to Custodian Supernaugh from Superintendent Frank Pinkley, January 11, 1940. ORPI-GA.

task.[10] The months of May and June in the Organ Pipe region are notorious for little or no rainfall. When the tinajas (natural pools), seeps, and the dirt stock tanks on the range dry up, thirsty cattle will travel long distances in the cooler hours of the night to drink at the man-made wells and water troughs. The Grays built corrals around these troughs and used the water as an attractant to bring the cattle to them instead of retrieving them from the landscape. Cattle would enter the corral through a spring-loaded trigger gate. The trapped cows would be counted, branded, and those of the appropriate age and condition separated for sale.[11] The success of the roundup operation and the cattle count was therefore dependent upon precipitation. If winter rains lasted too long or summer rains came too early, the cattle were no longer desperate for water and would remain out in the brush. Supernaugh and other Park employees sometimes assisted Gray family members during the long nights of the roundups as they tried to complete their estimates of herd numbers.

Frank Pinkley unexpectedly passed away in February 1940. His sudden death threw the Southwestern National Monument group and the ongoing discourse on grazing permit numbers into serious confusion. Much of Pinkley's discussions and agreements on grazing had been on a face-to-face basis with the Grays or in letters written to Senator Carl Hayden. No one else in the Park Service administration had been privy to those discussions or knew the details of what Pinkley had promised.[12] From this uncertainty, there ensued a flurry of studies at both the local and regional levels to track down all written information, collate the documents, and establish a history of grazing actions and agreements at the Monument.

This effort to record these discussions and events was remarkably fortuitous; the reconstruction of this history in parallel with the ongoing struggles with the Gray family initiated a program among most subsequent Organ Pipe custodians and regional officers to retain a significant amount of records of correspondence and interactions relating to the grazing conflict. The extent of this on-site retention of documentation during this era was highly unusual for a southwestern monument. The consequence of Pinkley's lack of record keeping and the Park Service's scramble has provided researchers interested in the history of Organ Pipe with a gold mine of information that is still collected in one location.[13]

Probably because of this flurry of documentation activity, Custodian Supernaugh was unable to make the spring cattle count in 1940. During the following year, spring rains continued late into the season; scrub vegetation was lush and the cattle had no need to venture out of the desert. Again Supernaugh was unable to make an estimate of the number of livestock owned by the Grays. In the absence of any accurate information the Park Service could only reissue its old grazing permit for 550 head at a fee of $10.

In October 1941, Acting Director A. E. Demaray at the urging of Senator Carl Hayden promised the Gray family a lifetime permit. Custodian Supernaugh at Organ Pipe and the

[10] Bobby Gray Interview; Ralph Gray Interview.

[11] Memo to SW Regional Director Minor R. Tillotson from Regional Forester Harold M. Ratcliff, May 10, 1945. ORPI-GA; Rutman, "A History of the Gray Family."

[12] Memo to Files from Southwestern National Monuments Assistant Superintendent Charles A. Richey, December 20, 1941; Memo to SW Regional Director from Southwestern National Monuments Acting Superintendent, January 23, 1942. ORPI-GA.

[13] This grazing history has been assembled and organized by Sue Rutman, ORPI Plant Ecologist, and entitled the Organ Pipe Cactus National Monument (ORPI) Grazing Archive. It is located in the Cultural Resources Research Library, Organ Pipe Cactus National Monument.

southwest regional office in Santa Fe, New Mexico now had their hands tied even more tightly by promises given out from Washington, DC. Whatever decision on cattle numbers was approved would continue for the remaining lifetimes of the Gray sons, the youngest of whom was only 29 years old. The accuracy of Supernaugh's count and his estimation of cattle numbers that were present in 1938 became even more important.

Finally, in late spring 1942, conditions were sufficiently dry to force Gray cattle to seek out man-made water sources. Supernaugh spent two nights at each of six sites (Bates Well, Alamo Canyon, Rincon Spring, Dowling Well, Dos Lomitas Ranch, and Miller Ranch) to count most of the Gray cattle. He estimated a total of 1673 adult cattle – more than three times the permitted number – were on Monument lands at that time. Of those, the Grays sold 227 steers. Supernaugh calculated that between 1000 and 1100 head of Gray livestock had grazed Monument land in 1938.[14] Since Monument vegetation had appeared to tolerate Gray cattle grazing with little damage, Supernaugh recommended 1050 as the appropriate number of cattle for the future permit.[15] In July 1942, the Grays were issued a grazing permit for 1050 head of cattle. No one in the Park Service could have predicted how great the difference in carrying capacity of the scrub desert vegetation would be between the relatively wet years leading up to 1942 and the dry years that followed.

9.3 Fencing off the Monument

The Park Service was beginning to realize that it had two grazing issues to confront if it was going to protect the landscape of Organ Pipe Cactus National Monument. The first was keeping closer track of both numbers and effects of the Gray family cattle. The second was eliminating uninvited livestock from Monument lands. While no formal counts of trespass stock had been made, observers and range scientists had noted that horses and burros wandering North and East from Mexico almost doubled the number of domestic animals on Monument lands. The presence of these trespass animals would later weaken the Park Service's argument that the Gray cattle were the major cause of damage to Monument vegetation. A logical response to this dilemma was to erect fencing along all of the Monument boundaries. However accomplishing this task was far from easy because of the chronic shortage of funds and labor allotted the Park Service during and after the World War II years.

Shortly after Supernaugh completed his cattle count, the Park Service sent a soil conservationist and geologist to study the potential development of additional water sources for both livestock and wildlife. The Park Service reasoned that by developing new sources of water and opening previously ungrazed areas to the cattle, the remaining vegetation could be rested. The soil conservationist noted in his memorandum that the areas within three to four miles of existing waterholes were "severely overgrazed." He also reported that overgrazing was partially due to "an estimated 1000 head of wild burros and horses coming up from Mexico." These unrestricted animals were essentially doubling the number of livestock that competed with Monument wildlife and the Gray cattle for fodder.

[14]Memo to SW Regional Director Minor R. Tillotson from Regional Soil Conservationist, June 24, 1942. ORPI-GA.

[15]Memo to Acting Superintendent from Custodian William R. Supernaugh, May 28, 1942. ORPIGA.

The soil conservationist recommended that fencing these animals out of the Monument was the only means to reestablishing Monument desert vegetation and to cut down on the already noted accelerated erosion.[16]

Construction of Organ Pipe's first boundary fence began in 1939 and 1940. Using labor from the Civilian Conservation Corps camp, DG-38, the National Park and Grazing Service erected 14 miles of fence along the northern boundary of the Monument from the Growler Mountains across the Valley of the Ajo to the Monument's northeast corner. The fence essentially closed off access to both wood cutters and unpermitted cattle from the North. Unfortunately, opportunities for materials and inexpensive labor disappeared as the country began to prepare for war. It was almost four years later before additional resources became available to continue the boundary fence project.[17] On the eastern side, the Monument is geologically delineated by the ridgeline of the Ajo Range. This ridgeline became the dividing boundary between Organ Pipe Cactus National Monument and the Papago Reservation to the East. Upper slopes of this ridgeline are so steep as to be essentially inaccessible to most livestock. The few passes through which cattle could move were fenced by the Bureau of Indian affairs in 1944.[18]

Following the attack on Pearl Harbor and the entry by the United States into World War II, funds for the National Park Service were drastically curtailed and reallocated to the War Department. Monies and construction materials for nonessential projects were essentially unavailable for another three years. In 1943, another federal agency, the Soil Conservation Service, offered to assist the Monument in constructing a small amount of fencing along the International Boundary.[19] The second fencing project stalled shortly after its initiation, again apparently for the lack of funds. Those monies finally became available in the spring of 1946 and a portion of the southern border fence (probably from the Sonoyta Mountains west to the middle of La Abra Plain) was built using Papago Indian labor.[20] In the following year, Monument employees shifted focus to restrict livestock access from its southwestern corner northward to the San Cristobal wash.[21] During the late fall of 1947, workmen completed the remaining southern boundary fence to the southwest corner.[22]

The eastern portion of the International Boundary from the US Customs House at Lukeville to the southeastern corner at the Santa Rosa Range had previously been fenced by Bob Gray. This fence had deteriorated over time and by August 1947 the line east of the Dos Lomitas Ranch had collapsed leaving the southeastern portion of the Monument open to trespass stock.[23] Not until 1963, was the southeastern fencing completed and the Monument fully enclosed.[24]

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[16] Memo to SW Regional Director Minor R. Tillotson from Regional Soil Conservationist, June 24, 1942. ORPI-GA.

[17] Southwestern Monument Monthly Reports, May 1939; November 1939; December 1939; February 1940; March 1940. Western Archaeological and Conservation Center, National Park Service, Tucson, Arizona.

[18] *ibid.*, December 1944.

[19] *ibid.*, December 1943; January 1944. It appears that some fencing was erected at this time but Acting Custodian Bates Wilson does not record the final amount completed.

[20] *ibid.*, March-June 1946.

[21] *ibid.*, April-July 1947.

[22] *ibid.*, October-December 1947.

[23] Memo to SW Regional Director from Custodian William R. Supernaugh, August 26, 1947, ORPIGA.

[24] Robert L. Schultz, "Forage Resource Inventory of the Organ Pipe Cactus National Monument. Narrative

In January 1950, the Park Service hired five men including Ed Havins, a local rancher and close friend of the Gray family, to continue fencing the western boundary. By March, the men had completed nine miles. Four more miles remained to close that edge when the project was again interrupted due to the loss of funding.[25] While the Monument still remained exposed to trespass animals at numerous places along the boundaries, the seasonal influx of horses, burros, and cattle dramatically decreased. The construction of the western boundary fence was seen by park employees as highly beneficial because it kept most trespass animals outside Monument lands. The fence, however, created problems for Henry Gray as it prohibited his cattle from moving to the grasslands and water offered on the Cabeza Prieta Wildlife Refuge. That conflict will be covered more thoroughly in a later section.

9.4 The Years of Drought: 1943 to 1947

In July 1942, Harold M. Ratcliff was assigned as the NPS Southwest Region's ecologist.[26] The Park Service until this time had been dependent upon rangers from either the US Forest or Grazing Service to evaluate Monument vegetation. Those grazing specialists tended to be more interested in maximizing the carrying capacity of the range than protecting the natural resources. Now Organ Pipe had its own biology specialist to survey the state of vegetation according to Park Service criteria. The regional office considered an accurate assessment at Organ Pipe to be Ratcliff 's highest priority and directed him to make a field trip before visiting any other park.

When Ratcliff arrived in September, the landscape had not seen any rain since April. He realized that the variable weather conditions and plant responses made estimation of a single carrying capacity calculation for Monument forage almost impossible.

> During periods of rainy weather and good moisture conditions the grasses and other herbaceous plants spring up almost over-night, furnishing a great deal of forage for cattle. Then as the weather becomes drier the grasses and other plants gradually disappear, leaving only browse species for cattle to eat.[27]

Ratcliff reported that during the summer drought the cattle were traveling up to eight or 10 miles for water and that all vegetation had been overgrazed within 6 miles of Monument stock tanks. Ratcliff recommended that more stock tanks should be constructed to improve cattle distribution and to relieve the grazing pressure on old watering areas. The evidence for the large number of trespass livestock could be seen from the numerous "trails leading into the Monument from across the internationalboundary ... on all the drainages ...."[28] Given the number of Gray cattle as well as trespass stock, he estimated

Report for the National Park Service," U.S. Department of the Interior, Bureau of Land Management. February 15, 1966. ORPI Natural Resource Library.

[25] Southwestern Monument Monthly Reports January-March 1950; Havins and Ross Interview, p. 35.

[26] Memo to SW Regional Director from Southwestern National Monuments Acting Superintendent, August 14, 1942. ORPI-GA.

[27] Memo to SW Regional Director from Ecologist Harold M. Ratcliff, September 23, 1942. ORPIGA.

[28] *ibid.*

the range to be at capacity and no further increase should be allowed. He concluded that three animals per section was the carrying capacity for dry years. He recommended development of three more stock tanks in addition to improving existing watering sites in Rincon Spring, Wildhorse Tank, Cement Tank, and in the canyon south of Bates Well but warned that the water improvements should follow construction of fence along the International Boundary. For without the boundary fence, the new waters would only attract more trespass livestock onto Monument lands.

While Custodian Supernaugh was pressuring the Gray family to reduce their cattle herd down to the number agreed in 1942, the Secretary of the Interior was pressuring the National Park Service to augment the number of livestock on all Interior lands in order to increase food and fiber supplies for the war effort.[29] Director Drury was able to protect most park units by expanding grazing only in a limited number of locations where cattle were already permitted and that had the resources to tolerate that expansion. Fortunately Organ Pipe was not asked to increase its stocking capacity and it had no new ranges in which to expand.

The Gray family received a copy of their new grazing permit in March 1943. This permit was the first to include a trespass clause stating that any cattle present on the Monument in excess of the permitted number would be charged at a higher rate.[30] By including this clause in the grazing agreement the Park Service hoped that the Grays would keep their cattle numbers to the upper limit of 1050. This clause turned out to be a two-edged sword for the Park Service. The Grays were also required to make an annual count. But to ensure the accuracy of the count, and thereby the effectiveness of the clause, Monument employees had to participate in the roundup. At three nights at each of nine watering holes, the roundup required more than a month's labor for two men, an exceptionally large and expensive commitment by the Park Service.

By May 1943, the Monument and the Gray cattle had struggled through more than 12 months without any real rain. Acting Custodian Bates Wilson stated that the Gray cattle "look like cross cut saws turned upside down. At a distance it is hard to distinguish between a cow and a dead saguaro."[31] The extended drought was wreaking havoc upon the Gray cattle. With little forage or water across the Monument, the cattle were too weak to survive a roundup and transport to market.[32] By the end of the summer more than 300 head had succumbed to drought. Southwestern National Monument Superintendent Charles Richey agreed with Acting Custodian Bates Wilson that the Grays should postpone their roundup and count until the cattle were in better shape.[33]

Despite their release from that year's annual roundup, the Grays were still unhappy with the changes in the new agreement. The fee for the first 550 head of cattle had been

[29] Memo to Secretary of the Interior Harold L. Ickes from NPS Director Newton B. Drury, February 15, 1943. ORPI-GA.

[30] Memo to Southwestern National Monuments Superintendent from Acting Custodian Bates Wilson, May 5, 1943. ORPI-GA. This trespass clause was standard in all Forest Service grazing agreements, after which National Park Service permits had been patterned.

[31] Southwestern National Monument Monthly Reports, January 1943.

[32] Memo to Superintendent Southwestern National Monument Charles Richey from Acting Custodian Bates Wilson, May 5, 1943. ORPI-GA.

[33] Memo to Acting Custodian Bates Wilson from Southwestern National Monument Acting Superintendent Charles Richey, May 10, 1943. ORPI-GA.

increased to match that charged by the US Grazing Service. Senior member Robert Lee Gray complained that the Park Service was reneging on the promise by Superintendent Frank Pinkley to Senator Carl Hayden that their permit would continue through their lifetime.[34]

In 1938, Frank Pinkley had promised that the Grays could graze their 550 head of cattle for $10 per year. Pinkley was then contending with a hostile population in the Ajo community who disapproved of a federal agency usurping their free use of what they considered "their grazing lands."[35] This hostility did not arise simply from the sudden reservation of Organ Pipe lands for the National Park Service in 1937. Three years earlier Congress under the Taylor Grazing Act had withdrawn all remaining grazing lands from public use. In November 1937, the Yuma Grazing District, including the Ajo region, had been established. Now all ranchers had to apply for permits and pay annual fees for the use of lands that had been previously free and open to all. In order to soothe the angry elements, Superintendent Pinkley had offered the Gray family essentially free grazing for their 550 head of cattle.

The Grays' complaint over the fee change was legitimate. They had received assurances from Acting Director Demaray in 1941 that the permit would remain unchanged through the lifetimes of the Gray family members. Then in 1943, Demaray changed his mind arguing that all permittees with grazing agreements under the Department of the Interior should be charged the same fees for the same number of head.[36]

Harold Ratcliff, recently appointed arbiter of all grazing permits in the southwestern region, reacted angrily to the Grays' complaint against the higher fees. He charged the Grays with intentionally holding three times the approved number of cattle on the range in the hopes that they might elude an accurate accounting. He described the Grays as "desert cattlemen" who

> run all the range can carry in good years in the hope that during unfavorable seasons such as the last winter and present summer season, enough (cattle) will survive the drought and lack of feed that (ranchers) can make up the difference in good years.[37]

Ratcliff warned Southwest Regional Director Minor Tillotson that if the Park Service did not stand firm on their rules and regulations with the ranchers, "it would only lead to further misunderstandings and might tempt the Grays to again increase the number of cattle under permit."[38]

Ratcliff 's words were remarkably prescient. During the next 30 years, the Gray family would repeatedly evade the rules and regulations set down by the Park Service. The Gray family members did not hesitate to use their social and political connections to deflect Park

[34] Memo to Superintendent Charles Richey from Acting Custodian Bates Wilson, July 20, 1943. ORPI-GA.

[35] Memo to SW Regional Director Minor R. Tillotson from Southwestern National Monument Acting Superintendent Charles Richey, January 23, 1942. ORPI-GA.

[36] See memo to SW Regional Director Minor R. Tillotson from Richard Begeman, August 18, 1965; see reference February 26, 1942. ORPI-GA.

[37] Memo to SW Regional Director Minor R. Tillotson from Ecologist Harold M. Ratcliff, July 24, 1943. ORPI-GA.

[38] *ibid.*

Service ire for ignoring permit rules. Despite the inclusion of the trespass clause charging higher fees for excess cattle, the Grays regularly ran more cattle than the permit allowed, and the Park Service never once imposed an additional fee.

The Park Service was still fearful of the power wielded by the senior senator from Arizona. One month after Ratcliff 's angry outburst, Regional Director Tillotson sent a confidential memo advising Director Drury that he should not oppose the Gray family's complaint due to the imminent arrival of Senator Pat McCarran.[39] McCarran, another powerful senator from Nevada and head of the subcommittee on public lands, was strongly opposed to be federal administration's control of grazing lands.[40] The Senator was touring western states and holding hearings over proposed fee increases for grazing allotments on Grazing and Forest Service lands. Noted in western newspapers for their incendiary nature, the hearings provided McCarran with a bully pulpit to stir local emotions and showcase ranchers protesting government fees and controls.[41] McCarran was scheduled to hold hearings in Arizona later in the fall. Tillotson had little desire to attract the McCarran spotlight by imposing fee increases on a well-known ranching family befriended by Carl Hayden. The Park Service finally agreed to maintain the original fee of $10 for the first 550 head and set the fees for the final 500 head comparable to those of the Grazing Service.

The drought of 1943 had forced the Grays to think seriously about the lack of water sources on Monument lands. They had requested an expansion in the number of stock tanks in order to improve distribution of cattle and to lessen the grazing intensity in the areas such as Bates Well, the most heavily used water source in the Monument. It was Park Service policy to construct any improvements such as wells or fences that were deemed essential to protecting the natural resources.[42] The Park Service recognized that it needed to provide water sources for cattle although it was loathe to improve the range so much that ranchers would be encouraged to run more cattle over the same allotment. Ecologist Ratcliff returned to Organ Pipe in May 1945 to re-examine the range and to review available water sources. Many of the old tanks constructed by Lon Blankenship and the Grays in the earlier part of the century had filled with silt and no longer held water after rain events. He suggested that the Park Service excavate these old tanks to make them usable again for cattle.[43]

Conditions had been particularly dry that spring. Ratcliff expressed concern that many plants in the southern region were now showing signs of trampling and breakage by cattle in their search for fodder. This damage was especially evident in the Alamo Canyon. The canyon had become a very popular site for campers and picnickers at Organ Pipe because of its easy accessibility and beautiful vegetation. Now for the first time conflicts over different uses were developing between increasingly desperate cattle and the grow-

[39] Memo for the NPS Director from SW Regional Director Minor R. Tillotson, August 24, 1943. ORPI-GA.

[40] McCarran's opposition to government controls arose from the fact that 85 percent of land in Nevada was federally owned and much of that was grassland.

[41] Merrill, *Public Lands and Political Meaning*, pp. 181–192.

[42] Confidential memo to Acting Custodian Bates Wilson from Southwestern National Monument Superintendent Charles Richey, May 4, 1943. ORPI-GA.

[43] Memo to SW Regional Director Minor R. Tillotson from NPS Ecologist Harold M. Ratcliff, May 10, 1945. ORPI-GA.

ing numbers of visitors, both of whom sought green growth.[44] Ratcliff opined this conflict would continue to grow as long as grazing was permitted at Organ Pipe.

Ratcliff had been observing landscapes in the southwestern monuments now for three years. He understood the extent of damage that grazing could inflict upon different vegetation types under these extended drought conditions. Ratcliff stated that permanent damage to vegetation had already occurred in Saguaro National Monument because too many cattle were seeking too little grass. He warned that the landscape at Saguaro should be viewed as a harbinger of what would happen at Organ Pipe if overgrazing was not curtailed.

The construction of fences along the southern and western boundaries of the Monument had already been determined to be critical to stop the flow of trespass livestock and reduce the overgrazing on the Monument. Fencing was even more essential to stop Mexican horses now infected with durine, a disease from waterborne parasite, from moving northward into the Monument and spreading the disease. In his 1945 report, Ratcliff went even further in his final recommendations; he made the highly radical assertion that the only way to protect Monument vegetation would be to fully terminate all livestock grazing.

> The best solution seems to be that of buying the outfit lock, stock, and barrel, and to clear up such use in one sweep. It might take several thousand dollars to complete the deal but it would save an area of the finest desert flora from becoming depleted to the point where we have neither cactus nor desert vegetation left.[45]

Perhaps Ratcliff 's recommendation was too extreme at this time; perhaps without evidence of extensive damage throughout the Monument Park Service administrators did not take his recommendation seriously. But no record has been found in the Organ Pipe grazing archives of any commentary on Ratcliff 's recommendation.

Ratcliff returned to Organ Pipe 10 months later in the early spring of 1946. The fall and winter rains of 1945 had failed almost completely. The spring flower show was nonexistent and drought was again the uppermost in the minds of Organ Pipe employees.[46] The director of the southwest region, Minor Tillotson, accompanied Ratcliff on the spring survey to view the vegetation conditions himself. Ratcliff 's March report was even more explicit in its descriptions of the damage to Monument vegetation by desperate cattle. He detailed the effects on numerous species of plants in different locations and summarized the overall consequences.

> The forage conditions are not too good – there has been very little rain during the past year and the cattle are forced to utilize browse species entirely.

[44] The conflict over use was further complicated as Jack Gray was leasing a house and well from Birdie Miller located in Alamo Canyon. The Grays believed that they should not have to share the area with monument visitors. Memo to SW Regional Director Minor Tillotson from Custodian William Supernaugh, December 20, 1946. ORPI-GA.

[45] *ibid.*

[46] Southwestern National Monument Monthly Reports, March 1946.

> Cattle damage appears to be increasing due to prolonged dry weather and is very conspicuous especially at Alamo Canyon, Dowling Well, and in certain sections along the western side of the monument. ... This increase is no doubt due to the lack of moisture since 1942 which was my first trip into the area in which followed a very favorable year in 1941, therefore the combination of continued drought and heavy grazing is becoming more and more noticeable.[47]

Ratcliff was concerned that his previous estimate of the carrying capacity of the Monument of three head per section had been too high. However, in order to make a more accurate estimate of the carrying capacity, a count of the Gray cattle was necessary. Despite the requirement of an annual roundup and count as part of their grazing permit, the Grays had done neither during the last three years. Ratcliff knew that he had insufficient manpower to count multiple sites at the same time; without that manpower, any estimate by Park Service employees would be inaccurate. Ratcliff reiterated his previous assertion that the Park Service must eliminate all livestock "at the earliest possible date. The damage is increasing and will continue until we get the stock out." He finished with a new warning regarding the soils at Organ Pipe,

> ... the loss of ground cover which increases with every season will no doubt result in fewer and fewer new (saguaros and other cacti) being able to survive. The topsoil over most of Organ Pipe Cactus has not yet washed away as it has at Saguaro (National Monument) but if heavy grazing use continues erosion by wind and water will increase.[48]

The drought deepened further and cattle were dying across the Monument. Henry Gray hauled water to different areas of the Monument. The Grays cut down palo verde trees that carried mistletoe and burned spines off cholla to provide food for their cattle. They claimed they had no money to buy hay. Custodian Supernaugh despaired of protecting the Monument vegetation.

> Due to the long period of drouth in this section conditions have become so bad that we are now being damaged beyond recovery. ... We have been trying to handle this without any fuss but with their cattle dying around them, they pay no attention to any regulations. Any resort to legal action at this time would bring severe criticism on the service ... .[49]

Supernaugh's only suggestion was for Ratcliff to reevaluate the Monument carrying capacity and adjust the grazing permit accordingly.

Ratcliff 's fourth report, written in July 1946, pulled no punches about the continuing drought and concomitant destruction of vegetation. He estimated that at least 500 cattle

[47] Memo to SW Regional Director Minor R. Tillotson from Regional Forester Harold M. Ratcliff, March 1, 1946. ORPI-GA.

[48] *ibid.* Extensive trampling by cattle at Saguaro National Monument had been partly blamed for the absence of new Saguaro recruits.

[49] Memo to SW Regional Director Minor R. Tillotson from Custodian William R. Supernaugh, June 12, 1946. ORPI-GA.

had died.[50] Cows were traveling as far as 20 miles to find water. When they laid down, they never got up again. Still the Grays refused to remove cattle from the range. They had received offers to buy, but, because the cattle were little more than skin and bone, the Grays refused to sell them at a loss. Instead, they held the cattle on the range in the vain hope that they might survive the drought. Ratcliff estimated that the Grays' financial loss from the deaths of so many cows had already cost them more than $18,000.[51]

Ratcliff documented that there was almost no forage left on the ground in the Monument. Areas around Gachado, Bates and Dowling Wells were no more than dust bowls extending outward for two to four miles. He supported all of these assertions with photographs of vegetation damage and cattle carcasses. The fencing in the southwestern corner of the Monument and along the International Boundary was still incomplete. More than 1000 head of trespass stock were estimated to be still present on Monument lands. Ratcliff pointed out that until the trespass stock was eliminated, the Grays had a legitimate complaint against the Park Service for not protecting their allotment.[52]

Nevertheless, Ratcliff argued that the Grays' grazing permit should be canceled for two reasons. The Grays had shown little regard for park values from their destruction of Monument vegetation and they owned no land either within or near the Monument and therefore had no legal right to a grazing permit.[53]

Based on the area of vegetated land within the Monument (excluding portions of steep mountain ranges) and a carrying capacity estimate of two cows per section, Ratcliff calculated that the number of permitted head on the Monument should be reduced from 1050 to 714. He recognized that this change would require much communication with Arizona legislators. In conclusion he reiterated, "Every effort should be made to purchase their holdings and terminate this permit as soon as possible if we are to protect the area from complete destruction."[54]

The difficulties of managing the Gray cattle during the extended drought had now risen for the first time to the attention of the Washington office.[55] Southwest Regional Director Minor Tillotson forwarded Ratcliff 's special report to Acting Director Hillory Tolson with an accompanying memorandum of his own. Tillotson had seen the destruction caused by cattle and was concerned for the Monument resources, but he also recognized the bind that the early promises to Senator Hayden had put the National Park Service in. Tillotson wrote in his memo that he knew of "no equitable arrangement that could be made for the elimination of this stock which would not involve purchase of all the Gray interests and holdings."[56] But the federal government had never before purchased a grazing permit. Such an action would be neither simple nor straightforward. Since the Grays owned

[50] By the end of the summer, when the rains finally fell, Supernaugh estimated that more than 700 cows had died.

[51] Harold M. Ratcliff, "Special Report. Organ Pipe Cactus National Monument. Grazing Damage," July 2, 1946. ORPI-GA.

[52] *ibid.*

[53] *ibid.*

[54] *ibid.*, p. 6.

[55] The "Washington" office had been relocated to Chicago for the duration of World War II and had not yet returned to the District of Colombia.

[56] Memo to Acting NPS Director Hillory Tolson from SW Regional Director Minor R. Tillotson, July 11, 1946. ORPI-GA.

no land, the government could only purchase their cattle, their built structures, and the grazing permit itself. Buying back the grazing permit would set a dangerous precedent in the West. The government had defined any federal permit as a privilege – not a right that had monetary value associated with it. A buy-back of the Gray grazing permit would set a federally approved value to a federal privilege for the first time. Nonetheless, Tillotson put his support behind Ratcliff 's suggestion to buy out the Gray operation. He suggested that legislation and funds be sought to accomplish that task. He enclosed an additional copy of the special report for Senator Hayden's review.

Acting Director Tolson sent the copy of Ratcliff 's special report to Senator Carl Hayden. He informed Hayden that the Park Service was working on fencing the southern boundary and was developing a plan to eliminate trespass stock. Tolson strongly supported Radcliff 's proposal to reduce the Gray permit limit. He suggested that the Park Service lower the permit further to the original 550 head. As Tolson stated,

> The serious losses, lack of management and cooperation by the Grays, and the serious deterioration of the range seemed to make such a course inevitable. We are convinced that the range cannot stand any larger number than this. We are also forced to require reasonable compliance with the normal conditions of the grazing permit which is similar to the requirements of all such permits on grazing land.[57]

Tolson's communication represented the first time that the Park Service had brought to Carl Hayden's attention its difficulty in achieving cooperation from the Grays. Tolson included the veiled warning that the Grays must comply with the rules and requirements for their grazing permit just as with all other permittees with federal allotments (or risk losing their permit).[58]

Acting Director Tolson did not believe that the Gray grazing permit could be eliminated at any time in the near future. He also thought it unlikely that the Park Service would be able to raise the funds to buy out the operation. Minor Tillotson, who had a remarkable grasp of the legal complexities involved in federal grazing permits and the legislative remedies associated with them, offered an alternative scenario to resolve the impasse. He suggested that if the Secretary of the Interior canceled the Grays' grazing permit for noncompliance, the Arizona delegation could introduce legislation into the US House and Senate for an appropriations bill to provide funding for the relief of the Gray family for their financial losses from the permit cancellation.[59] This same suggestion was

[57] Letter to US Senator Carl Hayden from Acting NPS Director Hillory A. Tolson, July 30, 1946. ORPI-GA.

[58] It is unfortunate that so few examples of Hayden's return communications exist in the Hayden files. Apparently he almost never kept copies of his correspondence (or removed them prior to donating the documents). These missives may exist in National Park Service files in the National Archives at College Park, Maryland but this author has been unable to view that collection. As a result throughout this history Carl Hayden appears as a ghostly image —- almost always silent, yet clearly affecting actions and arrangements among the different participating individuals.

[59] Memo to Acting Director Hillory Tolson from SW Regional Director Minor R. Tillotson, August 2, 1946. ORPI-GA.

proposed 20 years later as most likely to succeed by Secretary of the Interior Stewart Udall and his brother, US Representative Morris Udall.[60]

Senator Carl Hayden probably never answered Acting Director Tolson's letter. It is likely, however, that Hayden forwarded a copy of Tolson's letter and the report to the Gray family to warn them of the jeopardy regarding their grazing agreement.[61] The Grays responded to this threat by refusing to speak to or meet with Organ Pipe employees. In order to resolve the impasse, Director Drury proposed that Tillotson escort Senators Carl Hayden and Ernest McFarland to the Monument and meet with the Grays.[62] Unfortunately, Nan Hayden, Carl Hayden's wife, had recently suffered a debilitating stroke and the senator was unwilling to leave her side for any length of time.[63] Hayden never did make his visit to Organ Pipe. Perhaps if he had been able to view the destruction at the Monument and speak with both parties, he might have been able to mediate a viable solution to the crisis.

9.5 Elmer Coker's Return

In late October 1946, Attorney Elmer C. Coker returned from active duty with the Air Force. He was immediately rehired by the Grays as their adviser and advocate for all negotiations with the National Park Service as well as other federal and state agencies associated with land, water and cattle. During the years that Coker was in Europe, Henry had acted as the spokesman for the Gray family. Henry was a complex individual, clearly the brightest member of his family, but highly volatile. He was a talented cowman, who, even after a near fatal incident left his left arm crippled, still worked his ranch every day of his life until his death at 79.[64] Henry had a number of long-term relationships with women, but remained unmarried. He sired one daughter with whom he maintained an affectionate correspondence; he supported her financially through school and long afterwards. Henry also took in and supported other Gray family members when they were in trouble.[65] He cared deeply about protecting wildlife in the desert; Henry volunteered as the game warden for the area for many years. Yet he felt little compunction to protect his cattle from the devastating effects of the drought.[66] Unfortunately Henry, as the family spokesman, was limited by his lack of skill in communication; his conversations with Or-

[60] Despite support from the entire Arizona delegation, the appropriations bill for relief of the Gray family never passed either chamber because of the overwhelming concern that doing so would set the precedence referred to by Tillotson.

[61] While a copy of this letter was never found in the Henry Gray Archives (he did not save many papers until the 1950s), there is ample evidence in later folders that Hayden regularly passed on copies of correspondence from the National Park Service. Indeed the National Park Service made use of this known conduit for indirectly warning the Grays of their lack of cooperation.

[62] Memo to SW Regional Director Minor R. Tillotson from NPS Director Newton Drury, September 24, 1946. ORPI-GA.

[63] Memo to NPS Director Drury from SW Regional Director Minor R. Tillotson, October 21, 1946. ORPI-GA.

[64] Rutman, "A History of the Gray Family."

[65] See Personal Correspondence, Boxes 5 and 6, in the Henry Gray Archives, Western Archaeological and Conservation Center, Tucson AZ.

[66] Mary Nell Gray, Interview with Bill Broyles. November 24, 1987, p. 10. Document in Possession of Author. Henry built temporary stock tanks to provide water for his cattle during the 1946 drought but would not spend money to buy forage or sell cattle to prevent their deaths.

gan Pipe employees, especially Custodian William Supernaugh, were frequently terse and less than productive.

With the return of Coker, the tenor of the Gray relationship with the Park Service changed. From now, on the relationship was much less between family member and custodian; instead Coker communicated with the regional or Washington officials and, later, members of the Secretary of the Interior's staff. He frequently brought in outside range appraisers to provide evidence to support his clients' perspectives. Coker as a legal advocate was aggressive and often employed offensive tactics in his negotiations. Perhaps because of his court room training, he saw the Park Service as an adversary to be bested. He used his considerable writing skills in communications with Arizona legislative delegates to insinuate an "us-against-the-enemy (the Park Service)" relationship.

Elmer Coker immediately took charge of the situation and hired a team of range specialists to examine conditions at Organ Pipe Cactus National Monument. Their report, completed in November 1946, was written from a single drive-through on Monument roads.[67] Coker then wrote a long and confidential letter to Senator Hayden informing him of a planned meeting with Acting Director Hillary Tolson and laying out Coker's perspective of the history of the conflict between the Grays and the Park Service. Coker deflected blame for the conflict away from the Grays and laid it at the feet of Custodian Supernaugh.

> I wish to state frankly that I feel that the Gray family, have been guilty of certain indiscretions, not intentionally, but just because they have had no one to counsel or advise them ... . It is my frank opinion that most of the difficulties that have arisen here, in respect to cooperation, arises from personalities between the Gray family and the present custodian, Supernaugh. I firmly, believe that all of this trouble would have been prevented if there had been a custodian like Frank Pinkley to have counseled and advised these people, and offered helpful suggestions, rather than not speaking to them, but instead writing reports to his superiors.[68]

Coker laid larger blame on the Park Service for not imposing a range management program on the Grays. Coker referred to the range specialists' report and asserted that their review of the Monument range concluded that the carrying capacity at Organ Pipe was three head per section, not two. He then accused Acting Director Tolson of cutting the permit limit back to 550 without any consideration for his clients' welfare.

> Notwithstanding his (Radcliff 's) recommendations (from the July 1946 report), made under the most unfavorable conditions that perhaps ever existed in this area, Tolson arbitrarily states in his letter (see endnote 57) to you that he is going to cut the permitted allotment down to 550 head. To me, this is some

[67] The range conditions were significantly different from those at the end of the extended drought. Large rain events had occurred in August. (Ran Bone, C. F. Dierking, and Volney M. Douglas. "Organ Pipe Cactus National Monument. Report on Land Use Conditions." November 30, 1946. Attachment to letter to Acting NPS Director Hillory A. Tolson from Elmer C. Coker, December 10, 1946. ORPI-GA).

[68] Letter to Senator Carl T. Hayden from Attorney Elmer C. Coker, December 4, 1946. CHA, Box 201, Folder 16.

> more of our autocratic, bureaucratic methods of government. ... The Gray family cannot exist under the allotment of 550 head of cattle. There is, according to the appraisers, no justification whatsoever for such an arbitrary decision.[69]

Coker finished his letter by warning that if he was not "successful in obtaining Mr. Tolson's reasonable consideration of the problem," Coker would have to call upon Senator Hayden for his assistance.

Coker flew to Chicago and met with Tolson on December 11, 1946. Coker stated that the Grays were being unjustly accused of noncompliance and damaging the Monument. He said they had been willing to cooperate with Supernaugh but that the custodian had never been present to discuss grazing with the family or to propose counting cattle. Coker submitted to Tolson a copy of the specialists' appraisal report and a "Proposed Grazing Land Management Plan" written by the Grays and Coker. In their management plan, the Grays requested that the Park Service develop additional water sources and fence the remaining portions of the International Boundary. As suggested in the appraisal report, the Grays and Coker proposed that the cattle be shifted annually between eastern and western portions of the Monument in order to give each half a rest for the duration of the year. The Grays promised that they would permit the Park Service to build a campsite in Alamo Canyon one mile from Jack Gray's leased home and provide water if the Park Service built piping to carry it. The Grays also pledged that they would cooperate with the Park Service to make their annual count each spring and keep a tally book of cattle bought and sold.[70]

Tolson countered Coker's statements saying that the Park Service officials had tried repeatedly to contact the family and assist in their roundup activities, that the Park Service had been building fences with any monies that were available, and that they had already developed additional waters for Gray cattle.[71] Tolson asked what assurances the Park Service would have from the Grays that they might change their attitudes toward compliance and cooperation. Coker replied that the Grays had recognized that they needed to manage their operations better and under a single manager. The Grays promised that they would create a formal partnership and offer one individual as the legal representative to that partnership.

Hillary Tolson asserted that under conditions of extreme drought, the Park Service had the right to require a reduction in the number of permitted stock. Coker countered that that decision should be made by committee consisting of a Gray family member, a Park Service representative and an outside observer. Tolson curtly responded, "The Service must be the final judge concerning the protection of its own property ...."[72]

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[69] *ibid.*

[70] Memo to SW Regional Director Minor Tillotson from Acting Director Hillory Tolson, December 17, 1946. See also attached documents "Proposed Grazing Land Management Plan;" "Report on Land Use Conditions;" and Letter to Acting NPS Director Hillory Tolson from Attorney Elmer Coker, December 10, 1946. ORPI-GA.

[71] Tolson did not elaborate on which waters he was referring to. Water records at Organ Pipe Cactus National Monument do not indicate that any additional sources had been recently constructed.

[72] Memo to SW Regional Director Minor Tillotson from Acting Director Hillory Tolson, December 17, 1946. ORPI-GA.

At the conclusion of their meeting, Hillary Tolson told Coker that he would defer the final decision whether or not to reduce the permit number to Regional Director Minor Tillotson. Tolson wrote afterwards to Tillotson to make his own opinions clear.

> I feel that you will concur in the desire of the Service to avoid, if possible, any public hearing that might be insisted upon by Senator Hayden, Senator McFarland, or Senator McCarran if the Service should go ahead with the reduction to 550 head for the combined outfit, particularly in view of their promise to improve their grazing management and Mr. Coker's promise to make every effort to see that they fulfill such an agreement.[73]

Regional Director Minor Tillotson agreed to maintain the Gray cattle number at 1050 and to consider construction of three new water tanks as well as to upgrade existing ones. The Grays formed a legal partnership and offered Robert Louis (Bobby) Gray as its representative. Despite the presence of Attorney Coker as adviser, the quality of communication between the Grays and the Park Service, especially Custodian Supernaugh, did not improve. The Grays fought any change to their grazing permit, avoided interacting with Supernaugh, and evaded Park officials' efforts to participate in annual counts.[74] Supernaugh clearly expressed his weariness of the constant struggle with the Grays when he concluded a March 1947 memo to the regional director,

> With all this we seem to have lost ground on the grazing instead of gaining anything.[75]

Supernaugh continued as custodian until 1954. His subsequent replacements, with few exceptions, struggled with less hostility but the same passive resistance and active noncompliance from the Grays.[76]

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[73] *ibid.*

[74] Memo to SW Regional Director Minor Tillotson from Custodian William R. Supernaugh, March 2, 1947; letter to Acting SW Regional Director E. T. Scoyen from Attorney Elmer C. Coker, March 7, 1947; Memo to SW Regional Director Minor Tillotson from Custodian William R. Supernaugh, March 19, 1947. ORPI-GA.

[75] Memo to SW Regional Director Minor Tillotson from Custodian William Supernaugh, March 19, 1947. ORPI-GA.

[76] For the Gray family attitudes about custodians and superintendents see Mary Nell Gray Interview, pp. 6, 8.

CHAPTER **10**

Conflict over Water

The story of ranching in the Organ Pipe Cactus area has been the story largely of men-drilled wells. And it has remained that to this day.[1]

Water is critical to any cattle operation and control of water in the Southwest gives one control of the land. Prior to the establishment of the Monument, the Grays, by their control of most of the water sources in the region, were acknowledged as the dominant ranchers. They had purchased all of the water structures from those willing to sell. By 1953, some 25 water sources – some enhanced seeps or tanks, some wells – existed within the Monument boundaries. Since the Monument was established in 1937, Henry had constructed the Bonita Well in the southwestern quadrant north of the La Abra Plain. In 1939, Ralph and Bobby had dug the Red Tank Well. But the flow was insufficient to water cattle. In 1943, Henry reconstructed Pozo Salado.[2]

The droughts of 1943 and 1946 impressed upon the Grays the need for more reliable water sources at lesser intervals across the Monument. The drought had also illustrated the need to fence the boundaries of the Monument in order to stop trespass livestock from wandering into the Monument. By 1943, the trespass stock of feral burros and Mexican horses and cattle were as numerous as the Grays' permitted cows. Monument vegetation was supporting twice the number of head as the Park Service had originally intended. Finally, the fencing along the southwestern boundary, portions of the northern boundary, and most of the International Border was beginning to curtail unwanted cattle. But while fences stopped the influx of outside stock, they also restricted the Gray cattle from accessing other water sources off Monument lands. The Gray cattle were almost entirely dependent upon those sources found in Organ Pipe.

Attorney Coker and Assistant Director Tolson had agreed in December 1946 that construction of three new charcos was important for both the preservation of Monument vegetation and the survival of Gray cattle.[3] The Grays had recently signed a new grazing permit in the spring of 1947 when Tolson noted that the permit did not include a clause affirming the reservation of all water rights to the federal government. Normally the Park Service used the US Forest Service grazing agreement as a template for its own permits. The Forest Service allowed cattle ranchers to construct water tanks in order to improve their allotted ranges. The Forest Service however retained the rights to any waters devel-

[1] Appleman and Jones, "Blankenship Ranch," p. 18

[2] "Water Source Report," July 1968. ORPI Natural Resource Library.

[3] The proposed new tanks were to be located in Alamo Canyon, on the west side of the monument, and north of the Dos Lomitas ranch.

oped since those waters originated from federal lands.[4] Given the difficulty in getting the Gray family members' signatures on the present permit, Tolson thought that it would be better not to rock the boat again and, instead, to reintroduce the water rights clause in a later permit. This decision was unfortunate as Arizona case law regarding water rights was about to undergo a radical upheaval, at least temporarily, during the next five years.

Ratcliff reported in June 1948 that the new western boundary fence had made a significant improvement in keeping trespass stock out of the Monument. He recommended that replacing Bob Gray's old fence from the Custom House at Lukeville eastward along the southern boundary would eliminate the last major point of influx of trespass stock.[5] The spring and summer of 1950 were very dry at Organ Pipe. By the end of the year, only 3.4 inches of rain had fallen.[6]

10.1 Groundwater and the *Bristor v. Cheatham* Cases

At this time, an important groundwater case, Bristor v. Cheatham, was working its way through the Arizona courts. Bristor and Cheatham were two adjacent land owners; both dependent upon their wells for water. Bristor had used water from his well for domestic purposes: his home and a few cattle. Cheatham, a cotton farmer, had recently drilled a much deeper well to irrigate fields three miles distant from his home. As Cheatham removed groundwater from his well, he created a zone of depression in the water table within the surrounding soils. The waters that had been beneath Bristor's land were now flowing toward Cheatham's and being removed by his bigger pumps. Cheatham withdrew so much water that he caused Bristor's well to go dry. This same scenario was playing out in farming communities all over the state. Recently-developed, powerful pumps were now capable of removing groundwater faster and to much greater depths. The new pumps expanded agricultural opportunities throughout Arizona's arid environments but this large-scale agriculture also required enormous quantities of groundwater.

In 1904, the Arizona Territorial Supreme Court had ruled in Howard v. Perrin that ownership of groundwater was strictly tied to the surrounding land from which it was drawn.[7] The use of surface water was regulated by priority of claim. Groundwater had no such regulation and could not be claimed by prior right. The ruling of Howard v. Perrin gave no protection to previously established users. The absence of any management regulation now created situations where competing users raced to remove their own groundwater with larger pumps before their neighbors did. Because surface and groundwater were governed by different legal standards and rules, numerous conflicts had arisen where the two types of waters overlapped. Legal experts were closely watching as the Bris-

[4]Memo to SW Regional Director Minor Tillotson from Assistant NPS Director Hillory Tolson, April 11, 1947. ORPI-GA.

[5]Memo to Regional Forester from Forester Harold M. Ratcliff, June 18, 1948. ORPI-GA.

[6]Southwestern National Monument Monthly Reports, March, April, December 1950.

[7]For further information on the history of Arizona water law with respect to groundwater see: Jeffrey S. Ashley and Zachary Smith, *Groundwater Management in the West* (Lincoln: University of Nebraska Press, 1999), pp. 187–206; Theodore Steinberg, *Slide Mountain. Folly of Owning Nature* (Berkeley: University of California Press, 1996), p. 101; Robert B. Fleming and Kenneth E. Foster, "Alternatives for Groundwater Law Change in Arizona," *Water Resources Bulletin*, February 15, no.1 (1979):198–205; Slocum, "The Adequacy of Arizona's Ground-Water Law."

tor v. Cheatham worked its way up to the State Supreme Court in the hopes that 50 years of differing water doctrines might be resolved.

Attorney Elmer Coker was also watching Bristor v. Cheatham. If the Arizona State Supreme Court ruled that indeed groundwater was appropriable, and therefore belonged to the earliest documented user (or whomever had purchased that water from the earliest user), then the Grays, not the Park Service, would own the water rights to many of the wells within the Monument.

10.2 The Struggle over Water Rights

In June 1950, the Grays filed applications with the State Land Department to claim water rights on seven wells and springs.[8] The Grays claimed that the waters from each of these wells originated from springs (only two did) and that they had purchased these water sources from the original owners.[9] By stating that the well waters originated from springs, Coker and the Grays hoped that the State Land Department would grant ownership by virtue that surface waters (springs) were appropriable. The Grays also stated that the first claims to these water sources were made prior to 1919. Water claims originating prior to 1919 were unregulated by the state. At that time the "owner" had only to post a notice locally describing the claim and its use. After 1919, water claimants were required to file a formal claim with the State Land Department.[10] By stating historic use, the Grays were able to explain why no claim had been filed earlier and that their claim should have priority over that of the National Park Service. Coker persuaded Birdie Del Miller to simultaneously file a claim on her well water in Alamo Canyon that Jack Gray was presently leasing from her. If she was granted title to her water, the Grays would certainly be at the head of the line to purchase that title.

The Park Service had two possible responses to the Grays' water rights applications. The first was to file protests with the State Land Department. The Park Service argued that the Grays and Del Miller were attempting to usurp rights associated with the land set aside by presidential proclamation in 1937. The Park Service also asserted that these claims had been made for groundwaters and were therefore not appropriable. The second option for the Park Service was to cancel the Grays' five-year permit and rewrite it with a new clause clearly asserting federal ownership of all waters either created by the permittees or found within the Monument. Instead, the Service chose to wait until the old permit expired.[11] At the end of 1951, the Park Service sent the Grays a copy of the new permit that included this water rights clause.

The new permit gave permission to the Grays to use and maintain all waters for grazing purposes but the permit reserved the right to any titles for waters developed or found within the Monument boundary. Coker and the Grays objected strongly to this new clause. As Coker wrote to Southwest Regional Director Tillotson,

[8] Memo to SW Regional Director from Assistant NPS Director Arthur Demaray, September 21, 1950. ORPI-GA.

[9] The two springs that were considered appropriable were Aguajita and Williams Springs.

[10] Despite its name, the State Land Department, as the only agency that maintained statewide information on natural resources, acted at this time as the registrar and recorder for water claims and titles.

[11] Memo to SW Regional Director from Assistant Director Arthur Demaray, September 21, 1950. ORPI-GA.

> The proposed permit, as it now stands, is in effect a quit-claim deed from the Gray family to the United States for waters which they acquired prior to 1919 and have continuously used and placed to a beneficial use since said time.[12]

If the Grays signed the grazing agreement, they were, in essence, giving over any rights to those waters that they had controlled for more than 25 years. Those water rights titles were important to the Grays. For all except Bobby (who had successfully proven up on a homestead claim), those titles were their only possible claim to any form of real estate.[13] The only other properties owned by Bob, Jack, and Henry were their built structures (homes, corrals, fences) and cattle. If they gained title to one third of all waters in the Monument, the Grays would be in a much stronger position to bargain with the Park Service.

But the Park Service refused to eliminate the clause perfecting all water rights and the Grays refused to sign the grazing agreement. The struggle over water at Organ Pipe came to a standstill.[14]

Attorney Coker, Bobby Gray, and Regional Director Minor Tillotson met to discuss the impasse on January 22, 1952.[15] Tillotson argued that the Grays had no reason to file claims for title as the family had exclusive use to the waters on the Monument. Coker countered that the Grays were filing claims because of the possibility that the land within the Monument might someday be returned to the public domain.[16] Despite the assertion by Tillotson that the water rights clause in the grazing agreement applied retroactively to all waters in the Monument, the Grays and Coker refused to withdraw their applications for title.

The Grays and Attorney Coker had a very strong reason for not signing onto the new water clause. Ten days earlier, the Arizona State Supreme Court had reversed 50 years of previous case and statutory law. The court had decided that Bristor had a prior claim to his well water and that all groundwater should be subject to prior appropriation law. An enormous outcry against this ruling was already rolling across the state. Irrigators dependent upon large quantities of groundwater felt threatened with the loss of their investments in land and equipment.[17] In less than 40 days after its original decision, the State Supreme Court granted a rehearing of Bristor v. Cheatham. All groundwater claims across the state were put on hold for a full year while the court reassessed its earlier ruling.

Another family had been living on Organ Pipe lands. JosÃ© Juan Orosco, a Sand Papago, and his family had lived in the Quitobaquito region since before the turn of the century. The Park Service had given him permission to remain on that land and allowed him to run a small cattle operation of 100 cows. The Park Service chose not to extend his

[12] Letter to SW Regional Director Minor Tillotson from Attorney Elmer Coker, December 27, 1951. ORPI-GA.

[13] Bobby had received a final certificate to his homestead claim at Dowling Ranch west of Lukeville in July 1951. ORPI-GA.

[14] Memo to NPS Director from SW Regional Director Minor Tillotson, January 11, 1952. ORPIGA.

[15] Memo to NPS Director from SW Regional Director Minor Tillotson, January 22, 1952. ORPIGA.

[16] In 1949 the Ajo Chamber of Commerce and Arizona Representative Patton had been agitating to upgrade the status of Organ Pipe to national park. See Lissoway, "An Administrative History of Organ Pipe Cactus National Monument," p. 65.

[17] Ashley and Smith, *Groundwater Management in the West*, p. 192.

grazing permit after JosÃ© Juan's death in 1946 and ultimately purchased his property from his son in 1954. While the Grays were trying to perpetuate their control over water sources and old wells, they were augmenting the number of wells under that control. In the fall of 1952, the Grays purchased JosÃ© Juan Orosco's well, Pozo Nuevo, in the southwestern portion of the Monument, from his son, Jim Orosco. The well, originally hand dug by JosÃ© Juan in 1908, was shallow and often went dry under drought conditions. But its purchase allowed the Grays to extend their cattle range into that southwestern corner.[18]

The Arizona Supreme Court announced its second decision on Bristor v. Cheatham in March 1953. While still finding for Bristor, the court reversed its reasoning stating that the use of groundwater on fields three miles away was not beneficial for the land from which it came. The justices chose not to rule on whether appropriation law should apply to groundwater. Thus the court had reaffirmed that Arizona groundwater should continue to be regulated under the common law doctrine, that all nonpercolating groundwater still belonged to the land.

The State Supreme Court decision meant that the federal government still owned all of the groundwaters within the Monument. As long as the State Land Department did not agree with the Grays' assertion that water from their wells arose from surface flow, most of the applications would not be approved. Despite the court's ruling, the Grays and Attorney Coker still refused to withdraw their applications for water rights titles. Perhaps they hoped that another court case challenging Arizona's irrational separation of surface water and groundwater would resurface in the near future.

10.3 Unapproved Water Development

The winter of 1952 – 1953 was very dry and the rains during the following spring were less than normal. Despite extensive recommendations from ecologists and grazing experts, the Park Service made no improvements to existing water sources nor did they develop any new ones. After a terrific thunderstorm in August 1951, Henry Gray lost the use of one of his two wells at the Bates Well Ranch. This well was crucial in supplying water for a large number of Henry's cattle. Henry decided to take the deteriorating water problem into his own hands in July 1953. Without notifying Superintendent Supernaugh, he began digging two replacement wells: one adjacent to the original Bates Well and one next to the old Orosco hand-dug well. By the regulations set down in the grazing agreement, the Park Service had to pre-approve any new improvements, including water development, under a special permit. Supernaugh immediately served Henry with a notice to desist from any further unauthorized construction.[19]

With this latest action by Henry, Superintendent Supernaugh had come to the end of his rope in his dealings with the Gray family. Supernaugh wrote a memorandum to the regional office proposing that the Park Service cancel the Grays' permit. No response to his proposal has been found in the Organ Pipe grazing archives. Six months later, Harold Ratcliff sent a memorandum relaying Supernaugh's request for a response to his unanswered proposal. The annual fee for grazing on Organ Pipe lands was now due. Supernaugh

[18] "Water Source Report," July 1968. ORPI Natural Resource Library.

[19] Letter to Henry Gray from Superintendent William Supernaugh, July 25, 1953. ORPI-GA.

believed that if he accepted the fee, the Grays would know that they had again escaped punishment for defying Park Service regulations.[20]

Hugh Miller, Assistant Regional Director, finally replied to Supernaugh. Miller suggested that Supernaugh again warn the Grays that their well drilling without prior permission was a violation of the grazing agreement and remind them that they needed to sign the special use permit. Miller concluded his letter with the apparently contradictory statements,

> We are developing a strong belief that the Service must adopt a more positive attitude in dealing with the permittees. Compliance with the entirely proper terms of the grazing permit represents not cooperation, but a legal requirement. Organ Pipe Cactus National Monument is not the Grays' Ranch, though their attitude seems to regard it as such."[21]

With this insipid response from the regional office, Supernaugh had come to the end of his rope in dealing with Park Service bureaucracy at Organ Pipe Cactus National Monument as well. He responded with a blistering letter to the regional director saying that Miller's memorandum "answers nothing as far as our problem here is concerned." He reiterated that the Park Service must deal directly with the Grays' violation of their agreement.

> Before this office can take much further action, we want some positive answers to the following questions so that we will be assured that we will or will not have Service support.
>
> The notice of violation was given on July 25, 1953. Should they be notified that their permit is being canceled and they must renegotiate a new permit?"
>
> The grazing fee is now due and if they offer to pay, should this be accepted? It would seem that if we accept the fee, we would be admitting no violation.[22]

For years, the Park Service had allowed the Gray Partnership to evade or ignore the Service's own regulations. For years, the Park Service had bent over backwards to cover up those violations in the hopes that the Grays' attitude regarding compliance might change. After 15 years of playing the front man for an institution that would not defend its own rules, Supernaugh resigned. He left Organ Pipe to become superintendent at Platte National Park in southern Oklahoma.

The Organ Pipe grazing controversy again rose to the attention of the Washington office. Park Service Director Conrad Wirth had been corresponding with Senator Hayden over the purchase of the Orosco property within the Monument; the two had developed a comfortable rapport during this exchange.[23] Director Wirth decided to write to Hayden

[20] Memo to Regional Forester from Forester Harold M. Ratcliff, January 26, 1954. ORPI-GA.

[21] Memo to Superintendent Supernaugh from Assistant SW Regional Director Hugh Miller, February 10, 1954. ORPI-GA.

[22] Memo to SW Regional Director Minor Tillotson from Superintendent William Supernaugh, February 14, 1954. ORPI-GA.

[23] See correspondence between NPS Director Conrad L. Wirth and Senator Carl T. Hayden from December 4, 1952 to January 6, 1954. CHA, Box 201, Folder 16.

on the problem of the Grays. He laid out the extent of the Grays' violations and their incidents of noncompliance. Director Wirth knew that the Grays' attorney, Elmer Coker, had communicated repeatedly to Hayden to pressure the Park Service to modify regulations in the grazing permit. Now Wirth used Senator Hayden to put pressure on the Grays to comply. Wirth presented the important aspects of the permit to Hayden: 1) that it provided the Park Service with the right to regulate stock numbers and fees according to a variable carrying capacity, 2) that the Grays were required to complete an annual count, and 3) that all improvements had to be made only with advance permission. "The permit specifically did not confer exclusive use of the land."[24] Wirth continued by enumerating the Gray violations.

> Since almost the date when Mr. Gray signed the first permit, the members of the partnership and Mr. Coker have disregarded the terms relating to range improvements; have filed personal claims to groundwater; have dug additional wells at their pleasure without prescribed written permission; and have refused to sign any permits which have been offered to validate their unauthorized actions.[25]

Director Wirth warned that he would give the Grays 30 days to comply with the terms of their grazing permit and to sign a required special use permits or face revocation of their permit. He concluded his letter by asking Hayden if he had any suggestions to resolve the conflict.

Hayden replied that he would warn Coker of the contemplated action and suggest that Coker prod the Gray family into compliance.[26] Coker responded to Hayden with thanks for the warning, but hinted darkly that this Park Service action was taken in retaliation for the Grays' attempts to perfect their water rights titles.[27] Despite Hayden's warning, the Grays and Attorney Coker chose to ignore demands to sign the special use permit. On August 24, 1954, the Washington office finally recommended cancellation of the Gray grazing permit.[28]

Superintendent Supernaugh had been replaced that month by James Eden. Eden was an amiable fellow who was less interested in insisting that the Grays strictly adhere to Park Service rules. As a result he was much more successful in reducing conflict and achieving cooperation from the Grays. In his first meeting with family representative Bobby Gray, James Eden secured immediate agreement to sign the special use permits for the additional wells. Eden reported that the Grays were "interested in starting with a clean slate with me and working cooperatively with us for the benefit of all concerned."[29]

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[24] Letter to Senator Carl T. Hayden from NPS Director Conrad Wirth, April 2, 1954. CHA, Box 201, Folder 16.

[25] *ibid.*

[26] Letter to NPS Director Conrad Wirth from Senator Carl T. Hayden, April 5, 1954. CHA, Box 201, Folder 16.

[27] Letter to Senator Carl Hayden from Attorney Elmer Coker, April 19, 1954. CHA, Box 201, Folder 16.

[28] Memo to SW Regional Director from Acting Assistant NPS Director Harry Langley, August 24, 1954. ORPI-GA.

[29] Memo to SW Regional Director Minor Tillotson from Superintendent James Eden, September 10, 1954. ORPI-GA.

The overnight change in attitude by the Gray family was remarkable. Perhaps the Grays finally realized that they must comply with Park Service regulations in order to stay in business. Perhaps the warning from Carl Hayden suggested that they might be losing his support. Perhaps the relationship between Superintendent Supernaugh and the Grays had deteriorated to such an extent that the family could no longer bring themselves to agree with any of his requests regardless of their rectitude. The amicable relationship with James Eden, however, did not survive his departure three years later in 1959. A sequence of droughts in the early 1960s re-aggravated the same old tensions and problems between the Park Service and the Gray family.

In October 1957, the State Land Commissioner rejected all but two of the Grays and Birdie Del Miller's applications for title to water rights in the Monument. Six claims for wells were rejected for reasons that groundwaters were not appropriable.[30] Claims for the two existing springs, Williams and Aguajita, were later approved. The rejection of the Grays' applications for title meant that the last of their hopes for ownership of any form of real estate had been dashed. All the Gray family members had left to them was their cattle, a few ranch structures, and their grazing permit.

The Park Service continued to refuse the Grays permission to develop new water sources within the Monument. This decision meant that areas of vegetation damaged by overgrazing, trampling, and soil erosion had no opportunity to recover. Many of those areas still show signs of damage today.[31] That decision did have one positive result in that other portions of the Monument without water were not exposed to cattle.

It is unfortunate that so little trust existed between the Grays and the Park Service. Perhaps if the relationship had been more positive and the dialogue more open, the Park Service might have been willing to permit development of additional water sources. As the severity of droughts deepened during the 1960s, the Grays responded by locating portable tanks throughout the Monument. Henry took advantage of one of the last unfenced boundaries in the northwest corner of the Monument to water his cattle illegally at the Cabeza Prieta Game Refuge's JosÃ© Juan Charco. This action brought Henry and the rest of the Gray family into legal conflict with another federal agency, the Bureau of Sport Fisheries and Wildlife (US Fish and Wildlife). The action also brought the Park Service/Gray Partnership conflict to the attention of the new Secretary of the Interior, Stewart L. Udall.

[30] "Rejecting Applications" from Obed M. Lassen, State Land Commissioner, October 3, 1957. HGA, Box 3, Folder 1. While titles to the springs were granted to the Grays, their value was nonexistent. Since the grazing permit would never be transferred to anyone else, no rancher and his cattle would have access to either of those waters.

[31] Rutman, "An Assessment of Accelerated Erosion and Its Management at Organ Pipe Cactus National Monument," August 1996. ORPI Natural Resource Library.

CHAPTER 11

Grazing on Cabeza Prieta Game Range

While one portion of the conflict shifted eastward to Washington, DC, another portion migrated westward towards the Cabeza Prieta Game Range. During the 1920s and 1930s when the Grays were expanding their ranching operations into the northern and western portions of the Monument lands, little of the western region was fenced. When Henry bought J. T. McDaniel's improvements, he shifted his center of operation from Alamo Canyon to the Bates Well Ranch. From there Henry's cattle could roam as far west as the availability of water and food would permit. The grazing lands west of Bates Well were shared by other ranchers from the Ajo area including John Cameron, Tom Childs, and James Havins as well as those from south of the border.

The Cabeza Prieta Game Range was set aside by Franklin Delano Roosevelt in 1939 primarily to protect desert bighorn sheep and pronghorn antelope. Initially its administration was managed jointly by the Division of Grazing (later Bureau of Land Management) and the Bureau of Sport Fisheries and Wildlife.[1] Like the national monuments, pre-existing uses on the Game Range such as grazing and mining were allowed to continue.[2] In 1941, the refuge was incorporated into the Lukeville Bombing Range, a large tract of land set aside for the Air Force for air-to-air and air-to-ground practice.[3] The Air Force then became the managing agency. With the exception of a small strip west of Ajo, most of the refuge was withdrawn from grazing access in 1942 and 1943.[4] At the end of World War II, the bombing range became inactive until 1950. Some grazing leases were temporarily reinstated and then withdrawn again in 1951.[5] Needless to say, this withdrawal and then partial reinstatement of grazing opportunities caused a great deal of confusion for many ranchers. Many believed that the bombing practice would cease permanently after the end of World War II and that access to the western grasslands would soon be reinstated.

[1] Edward H. Saxton, "Saving the Desert Bighorns," *Desert Magazine*, Spring (1978):16-18.

[2] Rutman, "Selected Sonoran Pronghorn Notes;" Saxton, "Saving the Desert Bighorns," Felger, Richard Stephen, Bill Broyles, Michael Wilson, Gary Nabhan, and Dale S Turner, "Six Grand Reserves, One Grand Desert," Chapter 1, pp. 3–17.

[3] http://cabezaprieta.org/refuge_history.php

[4] Rutman, "Selected Sonoran Pronghorn Notes," 1942A; 1943C. Document in Possession of Author; Letter to Representative Stuart L. Udall from Bureau of Land Management Acting Director Earl J. Thomas, March 25, 1957. ORPI-GA.

[5] Letter to Hank Havins from Deputy for Installations Lewis E. Turner, Department of Air Force, April 20, 1965, CHA, Box 823, Folder 4.

11.1 Henry Gray's Cattle on Cabeza Prieta Game Range

Like other nearby ranchers, Henry Gray ran his cattle on Game Range lands before and after its establishment.[6] Other ranchers had been granted grazing permits through the Division of Grazing because of their priority of use on the range.[7] Henry, with his purchase of the Bates Well improvements in 1935, was a relative newcomer to the Growler Valley Range. In addition, Henry's watering sites were all on Monument lands and, as a result, despite his proximity to the Cabeza Prieta Game Range, Henry was never given a permit for a grazing allotment.[8]

After the end of World War II, construction materials had again become available within the United States. Organ Pipe Cactus National Monument, in concert with the International Boundary Commission, and later the Soil and Moisture Control program under the Soil Conservation Service, began to construct cattle fences around the periphery of the Monument. An outbreak of Hoof and Mouth disease in Mexico made completion of the southern fence the first priority.[9] When Custodian William Supernaugh began to plan for construction of the western boundary fence, Henry realized that his cattle would no longer have access to the range in the Growler Valley.[10] In December 1945, he prodded Howard Smith, a public land adviser who had worked with Attorney Elmer Coker, to request assistance from Senator Hayden to resolve this dilemma. Gray and Smith offered the suggestion that if Organ Pipe Cactus National Monument enlarged its boundary three miles further west, the resulting expansion would solve all of Henry Gray's grazing problems.[11] Senator Carl Hayden forwarded Howard Smith's letter to the NPS Director Newton Drury. Drury responded that Gray need not be concerned as the northwestern portion of the fencing project was of low priority (fewer trespass cattle came from that direction) and would not be completed within the near future.[12] The letter clearly indicates that Henry was using the range well beyond the Monument boundary without the appropriate permit from the Division of Grazing.

In 1941, when the Air Force created the bombing range, its primary focus was to train pilots for combat in the European and Pacific theaters; it had little concern for cattle that might have strayed upon the land. Bureau of Sport Fisheries and Wildlife managers, on the other hand, were responsible for protecting the endangered game animals and the resources necessary for their survival. They recognized that errant cattle were competing with the pronghorn antelope and bighorn sheep for limited forage. However, game refuge

[6]Letter from Public Land Adviser Howard J. Smith to Senator Carl Hayden, November 20, 1945. HGA, Box 1, Folder 1.

[7]Memo to Custodian William R. Supernaugh from Assistant SW Regional Director Charles A. Richey, December 18, 1943. ORPI-GA.

[8]Letter from Public Land Adviser Howard J. Smith to Senator Carl Hayden, November 20, 1945. HGA, Box 1, Folder 1; Memo to SW Regional Director from Custodian William R. Supernaugh, January 4, 1946. ORPI-GA.

[9]Southwestern Monthly Monument Reports, January 1947.

[10]Access to those grazing lands at this point in time was important to Henry Gray as winter rains were well below normal and forage was probably scarce on monument lands.

[11]Letter from Public Land Adviser Howard J. Smith to Senator Carl Hayden, November 20, 1945. HGA, Box 1, Folder 1.

[12]Letter to Senator Carl Hayden from NPS Director Newton Drury, December 7, 1945. CHA, Box 201, Folder 16.

managers without administrative authority could do nothing to stop the trespass cattle. They were frequently frustrated in their desire to remove livestock; their appeals to the Air Force for citations against grazing trespassers fell upon distracted ears. In 1953, game managers began to keep records of trespass livestock and increasingly to press the Air Force commanders to demand that unpermitted ranchers remove their livestock from the game range.[13]

Numerous unpermitted ranchers including Jim Havins, Angel Monréal, and Alton Netherlin were using Cabeza Prieta Game Range. Many had developed unauthorized water sites. Jim Havins was ordered to desist from drilling a well in Chinaman Flat.[14] Finally, in September 1954, the Air Force threatened the unpermitted ranchers with the charge of trespass. All but Netherlin, Havins, and MonrÃ©al complied; these three were served injunctions in January 1955. In that year, fencing between Organ Pipe and Cabeza Prieta was finally completed. The only opening between the Monument and the game range was a locked gate across the Bates Well Road. Range managers began keeping specific records of trespass by Henry's cattle in 1956. Norman Simmons, the refuge manager, was frustrated and angry over the continuing incursions of Henry's cattle into the game refuge. Simmons recorded in his notes in 1958,

> Henry Gray's cattle, some 40 to 80 head, have been running in the Growler Valley, watering at our tanks, despite our work on fences, gates etc. ... This problem will only be solved when Gray dies and his grazing lease on the adjacent Organ Pipe Cactus National Monument is thereby extinguished.[15]

In February 1962, Henry requested from Simmons a special permit to build a cattle corral and loading shute near JosÃ© Juan Charco, a stock tank immediately west of the Organ Pipe Monument boundary. Henry insinuated that he needed to collect those cattle which had been using the refuge for grazing for his annual roundup. Simmons demurred and said that the Air Force was the agency to which Henry should send his request.[16] Almost immediately, Henry was served with a formal notice of trespass by the Air Force and given until June 1 to remove his cattle. He was warned that any future trespass would be deemed a criminal offense.[17] Attorney Elmer Coker sent an appeal for assistance to Senator Barry Goldwater.[18] Coker hoped that Goldwater, as a former Air Force pilot, might be able to persuade the Air Force to open that portion of the refuge to grazing. Goldwater responded that the agency now responsible for managing grazing on the range was the

[13] Rutman, "Selected Sonoran Pronghorn Notes," 1953B, 1954D, 1955A.

[14] *ibid.* 1951, 1952B, 1953A.

[15] *ibid.* 1958C.

[16] Letter to Henry Gray from Cabeza Prieta Refuge Manager Norman M. Simmons, February 21, 1962. HGA, Box 1, Folder 2.

[17] Letter to Henry Gray from Colonel Bingham F. Kleine, US Air Force, March 27, 1962. HGA, Box 1, Folder 2.

[18] Letter to Senator Harry Goldwater from Attorney Elmer C. Coker, August 20, 1962. HGA, Box 1, Folder 2.

Arizona Game and Fish. That agency opposed the use of refuge land by cattle and refused to consider re-opening the range.[19]

In September 1962, Henry requested from Acting Superintendent Duane Graf permission to dig a well near JosÃ© Juan Charco but within the boundaries of the Monument. JosÃ© Juan Charco sat immediately west of the Bates Well Road and gate separating the Monument and refuge. For years, it had been the only reliable watering source in Growler Valley west of the Bates Mountains. During the drought of that year, other wells within the western portion of the Monument were producing insufficient water for the Gray cattle and Henry was hauling water into the area. The Park Service refused his request for a new well. As Southwest Regional Director Thomas Allen commented, "New development such as this would add to the problem of eliminating grazing at the Monument."[20]

Despite the threat of criminal proceeding, cattle belonging to both Henry Gray and Jim Havins continued to trespass on the refuge. That year, Henry, using a key to the gate across the Bates Well Road, began locking open the gate in order to give his cattle access to JosÃ© Juan Charco. Gray was sent a warning letter by the US Attorney in Arizona in late 1962. Attorney Coker replied that it was James Havins who "deliberately ran some cattle onto the gunnery range" insinuating that Henry Gray was not at fault. Gray's cattle were only on the range "because of fences ... let down by Mexican immigrants or washed away by heavy floods...."[21] A few months later in February 1963, Henry hired a drilling rig to construct a well inside the refuge boundary. He was sent a notice of cease and desist which, following consultation with Coker, he finally acceded to.[22]

In the spring of 1964, over 300 of Henry's cattle were grazing on the eastern portion of Cabeza Prieta. Manager Norman Simmons organized a roundup of Henry's cattle in order to quantify the extent of his trespass. But at the last minute, the Deputy County Attorney threatened to arrest any refuge personnel who touched Henry's cattle. The standoff was broken only when Henry Gray agreed to sign an affidavit affirming that the trespass cattle belonged to him.[23] The US Attorney formally served the Gray family with a trespass complaint.

11.2 *USA v. Gray Family*

Attorney Elmer Coker planned his defense of the Grays around the argument of continued historic use of the waters of JosÃ© Juan Charco. He wished to show that the Grays and their range predecessors had been using the water prior to the refuge land withdrawal in 1939. Coker spent the next two months tracking down descendents of the original builders of JosÃ© Juan Charco in order to buy the stock tank and show the court that the Grays

[19] Letter to Attorney Elmer C. Coker from Senator Barry Goldwater, August 27, 1962. HGA, Box 1, Folder 2. Both Goldwater and Coker served in the Air Force during World War II. The bombing range was later named after Goldwater in 1986.

[20] Memo to SW Regional Director from Acting Superintendent Duane Graf, September 16, 1962; Memo to Acting Superintendent Duane Graf from SW Regional Director Thomas Allen, September 24, 1962. ORPI-GA.

[21] Letter to US Attorney Carl A Muencke from Attorney Elmer C. Coker, January 4, 1963. HGA, Box 1, Folder 3.

[22] Rutman, "Selected Sonoran Pronghorn Notes," 1962C–1963B.

[23] Rutman, "Selected Sonoran Pronghorn Notes," 1964.

had legal possession. Coker reasoned that with a quitclaim deed in hand he might justify his counterclaim that the Grays had a valid right to the grasslands of the refuge and a continued right of access to JosÃ© Juan Charco.[24] Common knowledge affirmed that the original charco had been deepened by JosÃ© Juan Orosco and Reuben Daniels. If the tank had been built prior to 1919, the Grays could claim that they had purchased a legitimate water right established prior to the Public Water Code of 1919. In January 1965, Henry persuaded the son of JosÃ© Juan Orosco and the daughters of Reuben Daniels to sign quitclaim deeds drawn up by Coker and give "ownership" of the stock tank to the Grays.[25]

The trespass case of *USA v. Gray Family* was heard in federal court on February 2, 1965. US District Judge John C. Bowen found that the Grays had no vested right to either the water in JosÃ© Juan Charco or the forage of the refuge.[26] Three days later the judge instated a preliminary injunction against the Gray family cattle trespassing on the refuge.

The US District Court injunction now presented a considerable problem for the Gray family. Because of low cattle prices during the spring of 1964, the Grays had chosen to forgo their annual roundup and sale.[27] At the time of the court injunction, the Grays possessed 300 – 500 cattle more than were allowed on Organ Pipe lands. The injunction demanded that the Grays remove these additional cattle from the refuge land before May 15.[28] Coker requested that the Park Service temporarily allow the Grays to bring these cattle onto Organ Pipe lands. The Park Service refused.[29] The difficulty for the Grays was where to put these additional cattle? They did not wish to sell them because of low market values yet they had no immediate access to any other grazing lands on which to hold them until beef prices improved.

Elmer Coker described his clients' dilemma in a personal letter to Senator Carl Hayden's Administrative Assistant, Edward Davis. Never one to forgo a dramatization of the situation when he needed his protector's assistance, Coker claimed that the Santa Fe regional office was looking for any excuse to justify cancellation of the Grays' lifetime permit – just the statement that would arouse Senator Hayden as a challenge to his desire to protect the Gray family. Coker hinted darkly of

> a conspiracy going on between the Regional Office of the National Park Service and the Fish and Wildlife Service to see that the Grays are put in the position where they are in violation of their grazing permit leading up to can-

[24]Letter to Robert Louis Gray and Henry D. Gray from Elmer C. Coker, December 16, 1964. HGA, Box 1, Folder 4.

[25]Letter to Henry Gray from Elmer C. Coker, January 7, 1965. HGA, Box 1, Folder 6.

[26]Rutman, "Selected Sonoran Pronghorn Notes," 1965; Letter to Edward Davis, assistant to Senator Carl Hayden, from Attorney Elmer C. Coker, February 25, 1965. HGA, Box 1, Folder 7. *USA v. Robert Gray et al.* "Finding of Fact and Conclusion of Law," and "Decree of Preliminary Injunction," February 5, 1965. No. Civ. 1938, Tucson. HGA, Box 1, Folder 7.

[27]Memo to NPS Director from SW Regional Director Daniel B. Beard, October 5, 1964; Letter to Superintendent Duane Graf from Robert Louis Gray, October 22, 1964. ORPI-GA.

[28]Memo to NPS Director from SW Regional Director Daniel D. Beard, January 19, 1965. ORPIGA; Letter to Edward M. Davis, Assistant to Senator Carl Hayden from Elmer C. Coker, February 25, 1965. HGA, Box 1, Folder 7.

[29]Memo to NPS Director from SW Regional Director Daniel Beard, March 8, 1965. ORPI-GA.

> cellation of the same. ... I cannot prove it but there is something going on that we cannot put our fingers on.[30]

Coker asserted that the "injunction is impossible to comply with because of the range conditions in the area" and asked Senator Hayden to provide

> some administrative relief toward the development of new water sources in the general area or to let them (the Fish and Wildlife Service) continue to allow the Grays to graze their cattle on the eastern portion of the Cabeza Prieta Game Range and water their cattle at JosÃ© Juan Tank.[31]

Henry's legal confrontation with refuge managers, Air Force commanders, and US court judges was significant. It made public for all to see, including the Arizona Congressional Delegation and the Department of the Interior, the nature and extent of the difficulties that federal land managers faced in dealing with the Grays. The trespass case exposed the Gray family's willingness to flaunt the laws of the state and agreements with federal agencies, and to damage federal property. The Grays' trespass case also illustrated to all administrative levels within the National Park Service that these difficulties in dealing with the Gray family would never lessen. Until the Grays and their cattle were removed from the Monument, there would be little opportunity to restore the vegetation of Organ Pipe. Watching refuge managers struggle with the lack of cooperation and outright hostility from the Gray Partnership confirmed for Organ Pipe employees the futility of their past struggles. They were more determined than ever to exert control over grazing operations, restrict further water development, and ultimately eliminate that destructive activity entirely from the Monument.

[30] Letter to Edward Davis from Attorney Elmer Coker, February 25, 1965. HGA, Box 1, Folder 7.
[31] *ibid.*

CHAPTER 12

The Beginning of the End: the Last Battle over Water

The long-running battle between the Grays and Organ Pipe employees and the National Park Service returned to the issue of water for a second round. This time the argument was not over who owned the water but rather how much should be made available to the Gray cattle. Range experts and, indeed, all participants agreed that additional water sources would distribute the ravages of overgrazing and soil erosion more evenly across the landscape. But the addition of stock tanks also improved the quality of the range for cattle. The Park Service feared that improvement would encourage the Grays to increase their cattle numbers beyond their permitted limit.

The lack of cooperation from the Grays and their non-compliance with regulations convinced employees at Organ Pipe, administrators at the southwest regional office, and, finally, those in the director's office in Washington that the Park Service must deny any additional water development within Monument boundaries. This decision was not an easy one for the Park Service. It meant that not only would overgrazed areas incur more damage, conflicts at water sites between visitors and desperate cows would increase, and more cattle would die during droughts. Park administrators hoped that the decision would ultimately force the Grays to agree to a buyout of their operations or persuade the Department of the Interior to nullify their grazing permit.

The spring-summer drought of 1961 was severe.[1] The Grays were hauling both water and hay to their herds and selling those animals that were in good enough condition. Automobile collisions with cows looking for water along the Ajo-Sonoyta highway were increasing. The high cost of fencing out cattle from the highway led the regional office to again propose a buyout of the Gray operation.[2] But the Grays, especially Bobby, were still unwilling to consider any form of buyout of their land or properties.

12.1 The Death of Robert Lee Gray

The drought of the spring-summer of 1962 was almost as bad as the year before.[3] Its misery was interrupted, however, when family patriarch, Robert Lee Gray, at the age of 89, had a serious fall. After a brief stay in hospital, Bob Gray passed away July 14, 1962.[4] His death now created a challenge of how to interpret Park Service grazing policy in this situation. Acting Director Arthur Demaray had promised that the Grays' business would

[1] Memo to SW Regional Director Daniel Beard from Superintendent Monte Fitch, May 16, 1961. ORPI-GA.
[2] Memo to SW Regional Director Daniel Beard from NPS Director Conrad Wirth, June 18, 1963. ORPI-GA.
[3] Southwestern National Monument Monthly Reports, August 1962.
[4] Rutman, "A History of the Gray Family."

be protected with a lifetime permit.[5] The question for the Park Service was "How does Bob Gray's death affect a grazing permit issued to a family partnership?" Superintendent James B. Felton wrote that the long-standing NPS administrative policy was to terminate cattle grazing with the death of a permittee. It followed that with the loss of one of four partners, the number of permitted head should be decreased by 25 percent. In 1946 Acting Director Hillory Tolson had approved Attorney Coker's argument that 1050 head were necessary to support four (Jack, Bobby, Henry, and Bob) families. If one member was removed, then the number of cattle necessary to support the remaining three families should decrease by 262.[6] Acting Southwest Regional Director George Miller concurred and added that since grazing permits were not inheritable, Bob Gray's interest in the Gray partnership permit could not pass to his surviving heirs/partners. Director Conrad Wirth agreed with both the superintendent and the regional office. "The grazing permit issued to the Gray partnership is a privilege – not an interest. It cannot be inherited by the surviving partners."[7]

Just when Organ Pipe employees thought the Park Service had approved a reduction in the Grays' grazing permit to 788 head, the Monument received a phone call on June 19, 1963 from the regional office. The phone call relayed a message from the office of the Secretary of the Interior. It directed Monument employees to cease efforts to reduce permit numbers and, instead, focus on the elimination of cattle grazing.[8] This phone call apparently marked the moment when Stewart L. Udall became actively engaged in the Organ Pipe grazing controversy.

12.2 Stewart Udall Enters the Grazing Controversy

When Secretary Udall took on the issue of the Gray family/Organ Pipe grazing controversy, the focus of activity and decision-making largely moved away from the landscape of southwestern Arizona towards Washington as individuals from both the executive and congressional branches became involved. Between 1963 and 1974 a series of plans were developed in Washington, DC to resolve the conflict and to terminate grazing at Organ Pipe; none were successful. As the years passed, the Grays and employees at Organ Pipe became increasingly frustrated by the action in Washington and the absence of any resolution to the conflict.

In 1961, President John F. Kennedy appointed Stewart L. Udall as his Secretary of the Interior. Udall had grown up in a large Mormon family on a farm in St. John, Arizona. After serving in World War II, he received a law degree from the University of Arizona in 1948 and established a legal practice in Tucson. In 1954, Udall ran for election to Arizona's

[5]Letter to Senator Carl Hayden from Acting NPS Director Arthur Demaray, October 10, 1941. ORPI-GA.

[6]Memo to SW Regional Director Daniel Beard from Superintendent James Felton, February 20, 1963. ORPI-GA.

[7]Memo to SW Regional Director Daniel Beard from NPS Director Conrad Wirth, June 18, 1963. ORPI-GA.

[8]This information, transmitted verbally, was apparently never formally documented. Its reference has been found in a chronology of "Organ Pipe Cactus National Monument Grazing History" compiled by Regional Chief of Resource Management and Visitor Protection Thomas Williams as part of a memo to SW Regional Director from Acting Chief Park Ranger Richard Begeman, August 18, 1965. ORPI-GA. While the reference has never been confirmed elsewhere, an obvious shift in the topics of correspondence does occur in memos in the ORPI Grazing Archives at this time.

second Congressional District seat and won. As a western Democrat, Udall strongly supported natural resource development, especially water development, in Arizona.[9] Stewart backed the construction of dams at Echo Canyon in Dinosaur National Monument and later at Glen Canyon on the Colorado River. Udall saw reclamation projects, especially the Colorado River Storage Project, as critical components to the modernization of the West.[10]

He was also passionate about preserving the scenic beauty in Arizona and other western states. During his tenure as secretary, Udall authored a well-received book on environmental conservation and preservation efforts in United States entitled The Quiet Crisis.[11] Under Presidents Kennedy and Johnson, Udall pushed hard to set aside and enlarge a number of national parks such as Cape Cod National Seashore, Canyonlands National Park, Fire Island National Seashore, Ozark National Scenic Riverway, Assateague Island and Indiana Dunes National Seashores.[12] Historian Thomas Smith has written that Udall saw himself as following in the footsteps of the great Secretary of the Interior, Harold Ickes, who with President Franklin Roosevelt was famous for his contributions to conservation. Udall hoped that by serving under Kennedy, and later Johnson, Udall and his presidents might leave an equally great legacy in the history of conservation.[13] Udall was much admired for his goodhearted enthusiasm but often ridiculed for his impulsive statements, lack of maturity or administrative skills.[14]

While living in Tucson, Udall had visited Organ Pipe Cactus National Monument and come to know the Sonoran desert well. As the representative of the southwestern corner of Arizona, Udall was concerned about the Monument's continuing degradation. He had made an early attempt to alleviate the destruction of vegetation and resolve the grazing issue. Udall later related that effort in an interview in 1997.

> I ran into a serious problem, because Senator Hayden, who was the senior member, the most powerful member of the Congressional delegation, he insisted on this, on leaving the cattle in. When he made a commitment of that kind, I found in other matters, even though 40 years had passed, he kept his word. That was his view.[15]

The issue of landscape-scale damage in Organ Pipe was again brought to Secretary Udall's attention in March 1962 when the Advisory Board on the National Parks, Historic Sites, Buildings and Monuments sent him a resolution stating that mining in the Monu-

[9] Thomas G. Smith, "John Kennedy, Stewart Udall and the New Conservation Frontier," *Pacific Historical Review*, 64, no. 3 (1995): 329–362.

[10] James Michael Bailey, "The Politics of Dunes, Redwoods, and Dams: Arizona's 'Brothers Udall' and America's National Parklands, 1961–1969." PhD. Diss. Arizona State University, 1999, pp. 195–232.

[11] Stewart L. Udall, *The Quiet Crisis* (New York: Holt, Rinehart and Winston, 1963).

[12] Smith, "John Kennedy, Stewart Udall and the New Conservation Frontier," p. 360.

[13] *ibid.*, pp. 335–336.

[14] *ibid.*, pp. 342–343; Martin Melosi, "Lyndon Johnson and Environmental Policy," in *The Johnson Years: Vietnam, the Environment, and Science*, Volume 2, ed. Robert A. Divine (Lawrence: University of Kansas Press, 1987), 113-149.

[15] Stewart Udall Interview with Jack Loeffler, May 3, 1997. Stewart L. Udall Papers, Manuscript #372, Box 237, Folder 5, Special Collections Library, University of Arizona, Tucson AZ. No date was given for Udall's attempted intervention but the effort was probably in 1957.

ment was causing irreparable and intensive damage.[16] The preliminary analysis showed that both grazing and mining at Organ Pipe were issues that needed further study. The board suggested that without the elimination of those uses, the entire purpose of the Monument would require reevaluation.

Within a month of the Secretary's June 19, 1963 telephone message, NPS Director Conrad Wirth sent to Stewart Udall a memorandum describing the extent of the problems that the Gray cattle were causing at Organ Pipe.

> It has been repeatedly pointed out by qualified Range Ecologists that livestock grazing is detrimental to the native vegetation which exists in delicate plants in the arid desert environment. During the dry summer months starving cattle are driven to eating anything in order to exist. During unusually dry years starvation losses have been heavy. Cattle are a nuisance in the camp grounds, around the Visitor Center and residential area, a hazard on park roads and destructive to the few springs and seepage areas available to them for water. Cattle grazing and the use of waterholes is in direct competition with native wildlife including deer, antelope, and the desert bighorn.[17]

Clearly sensing an opportunity ripe for change, Conrad Wirth proposed that grazing be terminated at Organ Pipe within the year. The question yet to be answered was, "How?" But apparently Secretary Udall was not ready to actively intervene at Organ Pipe as Director Wirth had suggested. Udall later informed the Park Service that Wirth's proposal had not been approved in its present form.[18] No reason for this denial was given, nor was any alternative strategy offered by the Department of the Interior at this time.[19]

That year Attorney Coker filed probate papers for the estate of Robert Lee and Sallie Amanda Gray. In those papers Coker listed the transfer of properties to the Gray sons including Robert Lee's interests in both the seven claims to water rights and the grazing permit.[20] Out of courtesy, Coker sent copies of the probate documents to Superintendent James Felton.[21] Listing claims to titles in other non-related legal documents was a common ruse by lawyers to create apparent validity. Clearly, Coker was trying to assert the continued existence of Robert Lee's interest in the grazing permit as well as the legality of the Grays' water rights claims by including them in the probate papers. Felton thanked Coker

[16] "US Department of the Interior, Office of the Secretary News Release." January 7, 1966. Morris K. Udall Papers (MKUA), Manuscript #325, Box 172, Folder 10, Special Collections Library, University of Arizona.

[17] The Wirth quote is referenced in another memo to Secretary of the Interior Udall from Solicitor Frank Barry, April 5, 1968. ORPI-GA.

[18] Memo to SW Regional Director Daniel Beard from Assistant Director Jackson Price, December 16, 1963. ORPI-GA.

[19] Conflicts between Secretary of the Interior Stewart Udall and NPS Director Conrad Wirth were well known. See Smith, "John Kennedy, Stewart Udall and the New Conservation Frontier,"p. 342. NPS Director Wirth resigned shortly after this exchange.

[20] When a ranch with an active permit was sold, BLM and USFS routinely transferred the permit to the new buyer. While the federal government claimed that the grazing permits had no monetary value, both lending institutions and ranchers recognized that BLM and USFS permits significantly influenced the value of ranches on the market.

[21] Letter to Superintendent James Felton from Attorney Elmer Coker, June 20, 1963. ORPI-GA.

for his consideration but stated, "... the government is under no obligation to consider agreements contained in probate instruments in the administration of grazing here."[22]

12.3 A Growing Interest in Ecological Management and Environmentalism

Notions of ecology and ecological preservation were shifting inside and outside of the National Park Service during the 1960s. During the late 1950s and early 1960s under the Mission 66 program for park redevelopment, a small but vocal minority were loudly protesting the dramatic expansions in recreational facilities and the growing visitor impacts on the ecologies within the park units.[23] In 1963, at the urging of Secretary of the Interior Udall, committees under well-known ecologists, Starker Leopold and William Robbins, produced reports that exposed a general lack of scientific understanding in resource management throughout the National Park Service.[24]

Outside of the Park Service, debates in environmental groups and the public at large were growing more vociferous over uncontrolled development, ecological degradation, and the loss of open space. The environmental movement, as Hal Rothman has described it, was a major upheaval that reached across the entire United States with its social, political, and cultural associations. Intermingled with reformist efforts to address the turmoil of the Vietnam War and social inequities in gender and race, the environmental movement caused many to question the activities of traditional land use organizations and their patterns of management.[25] The National Park Service, as the lone federal standard-bearer for preservation of wilderness, came under severe criticism when the public deemed that its protection efforts inadequate.

Researchers at academic institutions were concerned about the long-term effects of grazing, especially on federal lands considered valuable by the public. Three ecologists, W. A. Niering, R. H. Whittaker, and C. H. Lowe, studied the influence of overgrazing, climate, soils, and rodent populations on the survival and reproduction in the giant saguaro cactus populations in Saguaro National Monument. Their paper was published in Science in October 1963.[26] A decade earlier this research probably would not have garnered any notice by the general public or the media. Now the paper's conclusions, that overgrazing was a major cause of decline of saguaro populations, made banner headlines in the Tucson Daily Star.[27] Niering sent a copy of the publication to Stewart Udall. His accompanying letter accused the National Park Service and the Department of the Interior of ignoring

[22] Letter to Attorney Elmer Coker from Superintendent James Felton, June 25, 1963. ORPI-GA.

[23] Richard West Sellars, *Preserving Nature in the National Parks. A History* (New Haven: Yale University Press, 1997). See Chapter 6 "Science and the Struggle for Bureaucratic Power: the Leopold Era, 1963–1981, pp. 204–266.

[24] A. Starker Leopold et al. "Wildlife Management in the National Parks" in *Transactions of the Twenty–eighth North American Wildlife and Natural Resource Conference*, ed. James B. Trerethen (Washington, DC: Wildlife Management Institute, 1963); National Academy of Sciences, National Research Council, "A Report by the Advisory Committee to the National Park Service on Research," August 1, 1963. http://www.nps.gov/history/history/online_books/anps/a

[25] Rothman, *Saving the Planet*, see Chapter 5, "The Rise of Environmentalism," pp. 108–130.

[26] W.A. Niering, R.H. Whittaker, and C.H. Lowe, "The Saguaro: a Population in Relation to Environment," *Science*, 142, no. 3588 (1963):15–28.

[27] "Saguaro Plight Traced to Beef Overgrazing," *Tucson Daily Star*, October 9, 1963.

their internal data illustrating the extent of damage. Niering warned that this damage having occurred over long periods of time had already begun to permanently alter the desert ecology within Saguaro National Monument.

Individuals also had begun to speak up; they roundly criticize federal land managers who allowed traditional land users, such as ranchers and miners, to despoil valuable public lands. Public anger over environmental degradation increased with each passing year during the 1960s and 1970s. Visitors wrote letters to employees at Organ Pipe to express their anger and dismay at the abuse of their public lands. Traditional land users were often taken unawares by this relatively rapid shift in attitude over public land use. They were stunned to find themselves no longer considered important and respected taxpayers. Organ Pipe employees hoped that this increasingly vocal contingent of scientists and environmental activists might become valuable allies in their efforts to eliminate grazing. They did not hesitate to forward copies of letters to the regional and Washington offices.

12.4 The Struggle for Access to Water at the Western Boundary

The year of 1963, unlike many of the others in the early 60s, had good rain. By spring 1964, the Grays had a fine calf crop. But they chose not to round up and sell their cattle as the market prices for beef were extremely low. Organ Pipe employees estimated that the Grays were running 300 – 500 head above their permit limit. Southwest Regional Director Daniel Beard demanded that the Grays immediately hold a roundup, complete a head count, and remove any cattle in excess. Beard informed Director George Hartzog that he intended to exercise, for the first time, the trespass clause and assess damages for any cattle above the prescribed limit.[28] He concluded his letter with a statement, "We expect you will support us." Claiming that fall rains had scattered the cattle into the bush and no suitable buyer could be found, the Grays refused to hold the prescribed roundup and sale.[29]

In January 1965, the Grays were formally charged with trespass on the Cabeza Prieta Game Range and one month later served an injunction by the US District Court to remove their cattle by May 15. Most of the excess 300 – 500 head of cattle had grazed on the game range and used JosÃ© Juan Charco, the refuge's eastern-most stock tank. Even if the Park Service permitted the trespass cattle back onto the Monument, the Grays knew that there was insufficient water within the enclosed western half to support those animals. To make matters worse, the winter and spring rains were again below normal. As the date for removal of all cattle from the game range approached, the Grays were desperate to find a water source for the animals. The Park Service again refused to permit any new water development on Monument lands. Attorney Elmer Coker offered to bargain with Superintendent Felton. In exchange for Felton's and the Park Service's support to build a short, fenced corridor between the Monument's west boundary and the refuge's JosÃ© Juan Charco, the Grays would give up all claims to water titles on both Organ Pipe and Cabeza Prieta lands.[30] The response from the regional office was swift and unambiguous.

[28] Memo to NPS Director George Hartzog from SW Regional Director Daniel Beard, October 5, 1964. ORPIGA.

[29] Letter to Acting Superintendent Duane Graf from Robert Louis Gray, October 22, 1964. ORPIGA.

[30] This conversation dated February 19, 1965 is recorded in the chronology of the "Organ Pipe Cactus National Monument Grazing History" written by Regional Chief of Resource Management and Visitor Protection

> We will not consider any further improvements of water sources for grazing nor will we grant any increase in the allowable number of animals. ... As for negotiating with the Grays for their imagined water rights, we are opposed to it on the grounds that our "left-handed" implication that they have any vestige of rights for which we might negotiate would strengthen their case. We must assume that they have no rights – merely the privilege of using land, forage, and water.[31]

The Grays continued their appeals to the US District Attorney and the Bureau of Sport Fisheries and Wildlife to alter the rapidly approaching deadline of the May 15 injunction.[32] On May 4, Coker was informed that the date for the injunction stood as written. The Grays began to round up cattle and sell them as fast as possible. Coker flew to Washington the next day to meet with the Park Service's Chief of Resource Management and Visitor Protection Harthon Bill. He hoped for relief from the Washington level since none was forthcoming from the Monument and regional office. Coker stated that the Grays could not possibly remove so many cattle in such a short period of time. He also claimed that even after animals were herded back onto Monument lands, the cattle would, in their desperation to return to water in the refuge's JosÃ© Juan Charco, break down the boundary fence. Coker pressed Harthon Bill for permission to construct a well near the western boundary. After the meeting Bill recommended again that Director Hartzog deny any new water developments.

> ... (I)t is my opinion based on the management of the area resources for the purposes intended in the creation of the Monument, we should resist any attempts to assure perpetuation of grazing.[33]

The Washington office had finally and solidly coalesced around the understanding that grazing was detrimental to the environment at Organ Pipe and that resisting any new water development was essential to the elimination of that grazing. Underlying that conclusion was the belief that the Grays could never be trusted to properly manage their cattle in such a manner that might preserve Monument resources.

As the 1965 drought continued, Gray cattle created other problems for Monument employees. Animals desperately seeking water became inventive by necessity. Gray cattle ventured into the Organ Pipe campground and they learned to open water taps. When Organ Pipe employees replaced the handles with spring-loaded types, the cattle simply broke the riser pipes and drank from the gushing water spouts. Visitors repeatedly complained about cattle noises, trampled property, and unsightly droppings.[34]

As Park Service members at all levels had converged on the need to "hang tough" against the Grays, the regional and Washington offices jointly crafted a response to the

Thomas Williams, August 18, 1965. ORPI-GA.

[31] Memo to NPS Director Hartzog from SW Regional Director Daniel Beard, March 8, 1965. ORPI-GA.

[32] Letter to Assistant US Attorney Jo Ann Diamos from Attorney Elmer Coker, April 6, 1965. ORPI-GA.

[33] Memo to Assistant NPS Director of Operations from Chief of Resource Management and Visitor Protection Harthon Bill, May 6, 1965. ORPI-GA.

[34] Memo to Chief Ranger Duane Graf from Seasonal Park Ranger Bob Ellis, April 30, 1965; Memo 124 to SW Regional Director Daniel Beard from Superintendent James Felton, June 4. 1965. ORPI-GA.

Grays' request for additional water development. All knew that this document, accompanied by Attorney Coker's rebuttal, would be copied immediately and distributed to offices in the upper levels of executive and legislative branches. After numerous iterations, the new Organ Pipe superintendent, Foy Young, sent the response. The letter notified the Grays that the Park Service had refused to permit any further water developments within the Monument.

> Development of additional livestock-watering facilities would, contrary to this basic management objective (i.e. preservation and protection of Sonoran Desert vegetation for future generations), widen the sphere of livestock influence and result in additional damage to important and ecologically fragile desert vegetation, accelerate soil erosion and further increase competition between native wildlife species and livestock.

Young punctuated his explanation with the statement, "The Gray family grazing privileges at the monument have reached a limit beyond which we cannot proceed."[35]

Frustrated with Superintendent Young's denial of water development, Attorney Coker chose to ignore the lower echelons of Park Service administration. Instead he went straight to the highest levels in the Department of the Interior. In a three-pronged counterattack against the Monument, Coker wrote to NPS Director George Hartzog, Senator Carl Hayden, and Assistant Secretary of the Interior Orren Beatty. He complained to Director Hartzog that Young's denial was "unreasonable and harsh." He denied that cattle caused damage to any cactus species. He denied that the Grays were at fault for any limit. This conflict was "caused solely by circumstances beyond the control of the Gray family, such as poor market conditions and an inability to find buyers for their cattle during the past two years, and of course the Court's preliminary injunction ...."[36] Not knowing that Young's letter had been crafted in Washington, Coker appealed to Hartzog to overturn the decision to prohibit new water development. Coker asserted to Assistant Secretary Beatty that "the Park Service ... is trying to do indirectly what they cannot do directly – cancel the permit by refusing to provide watering facilities to water the livestock permitted to graze on the monument." Coker requested that Beatty "take a personal interest in this matter and ... see that relief is promptly granted."[37]

Similarly, Coker reminded Carl Hayden of his continued protection of the Gray ranching family. They and other ranchers had settled the region at the turn of the century and had been using these lands for more than 50 years – long before the arrival of the Park Service. "I am sure that you will render all aid possible in seeing that this grave injustice denying the development of watering facilities on the western portion of the monument will not be permitted."[38]

Regional Director Daniel Beard rebutted Coker's attempt to deflect blame from the Grays and he appealed to Director Hartzog to stand fast against the pressures from the Senator and the Department of the Interior.

[35] Letter to Attorney Elmer Coker from Superintendent Foy Young, June 23, 1965. HGA, Box 1, Folder 8.

[36] Letter to NPS Director George Hartzog from Attorney Elmer Coker, July 23, 1965. HGA, Box 1, Folder 8.

[37] Letter to Assistant Secretary of the Interior Orren Beatty from Attorney Elmer Coker, July 23, 1965. HGA, Box 1, Folder 8.

[38] Letter to Senator Carl T. Hayden from Attorney Elmer Coker, July 23, 1965. HGA, Box 1, Folder 8.

> Mr. Coker's emphatic denial that a limit has been reached is not for consideration. It is our limit that has been reached. The market, the lack of cattle buyers, and the court's determination of the Grays' trespass operations on the game range are not our concern.[39]

[39] Memo to NPS Director George Hartzog from SW Regional Director Daniel Beard, August 11, 1965. ORPI-GA.

Coker lobbied other influential people in Washington. Expecting hard questions from members of the Arizona Congressional Delegation, the director's office requested all maps and historical data that would support Superintendent Young's decision.[1] One of those data was a dramatic increase in the number of car accidents and human injuries caused by collisions with Gray cattle along the Ajo-Sonoyta highway. Between 1963 and 1965, cattle had been involved in 31 car accidents with nine injuries and one fatality.[2]

Human safety had become a major concern in the park units during the 1960s.[3] This recent sequence of interactions with cattle on the highway raised alarms at the Washington level. The office requested an estimate of the cost to exclude the Gray cattle from the corridor.[4] The estimated cost was sufficiently high to initiate a lengthy discussion on the possibility of buying out the Gray ranching operation.

In October 1964, the southwest regional office completed a confidential internal document, known as the "Jones Report." The report recommended combining the lands in both Organ Pipe Cactus National Monument and Cabeza Prieta Game Range to create the Sonoran Desert National Park.[5] With such a change in park status, the Department of the Interior could terminate all non-approved historic uses in both units including hunting, mining, and grazing. The proposed buyout of the Grays' operation and change in status dovetailed neatly into Secretary of the Interior Stewart Udall's developing plan to eliminate grazing and mining at Organ Pipe Cactus National Monument.[6]

Following the injunction against the Grays for trespassing, Organ Pipe rangers conducted a cattle count in June 1965. The rangers estimated that the Grays had been running close to 1375 head on the Monument and the game range.[7] By August, the Grays had sold 777 cows and yearlings.[8] The Park Service decided that a detailed inventory of Monument

[1]Memo to Superintendent Foy Young from Acting SW Regional Director George Miller, August 13, 1965. ORPI-GA.

[2]Memo to SW Regional Director Daniel Beard from Acting Chief Park Ranger Richard Begeman, August 18, 1965. ORPI-GA.

[3]Sellars, *Preserving Nature in the National Parks*, pp. 208–209.

[4]Memo to NPS Director George Hartzog from Assistant SW Regional Director George Miller, September 29, 1965. ORPI-GA.

[5]Lissoway, "An Administrative History of Organ Pipe Cactus National Monument," p. 137; See also "Excerpts from Confidential Report: Proposed Sonoran Desert National Park." No Date. MKUA, Manuscript #325, Box 172, Folder 10, Special Collections Library, University of Arizona, Tucson, Arizona.

[6]Lissoway, "An Administrative History of Organ Pipe Cactus National Monument," p. 137; Memo to SW Regional Director Daniel Beard from Superintendent Foy Young, September 23, 1965. ORPI-GA.

[7]Memo to SW Regional Director Daniel Beard from Superintendent Foy Young, June 24, 1965. ORPI-GA.

[8]Memo to Superintendent Foy Young from Acting Chief Ranger Richard A. Goodman, August 21, 1965.

forage resources would be essential to justify any future reduction of cattle numbers or elimination of grazing altogether. The Service contracted with the Bureau of Land Management to assess grazing resources and report on the carrying capacities according to different vegetative regions across the Monument.[9]

In September 1965, a conference was held for all park superintendents in Tennessee. Secretary Stewart Udall was invited as the keynote speaker. Udall intentionally sought out Superintendent Foy Young to discuss the grazing problem at Organ Pipe and the proposal for the Sonoran Desert National Park. Udall requested from Young as much accurate and detailed information on the damage to natural features caused by grazing. Stewart Udall was gathering his arguments to push forward his plan for the Sonoran Desert National Park.[10]

At the same time, Udall appointed John Carver to the position of Under Secretary. Udall assigned to Carver the task of resolving the grazing conflict at Organ Pipe. Attorney Coker flew to Washington to meet with Carver on September 20, 1965 and to argue for further water development. Rumors of the proposed Sonoran Desert National Park had already leaked to the grazing community. Coker was aware of the proposal but felt sure that such a change in status would not affect his clients' business.[11] Indeed, Coker reminded Carver of Acting Director Hillory Tolson's promise to Senator Hayden in 1946 that even if the status of the Monument were to be changed to a national park, the Grays' grazing permit would remain unaffected.[12] Believing that he had eliminated the threat of the loss of the grazing permit, Coker returned to argue the necessity of further water development on Monument lands and to deny that the Grays had ever intentionally violated conditions of their permit. But Carver and the Department of the Interior were no longer interested in the logic of better cattle distribution or the details of the Grays' violation of their grazing permit. The decision to terminate the Grays' operation at the Monument had already been made.

Unaware of this sea change in purpose and attitude at the Park Service and the Department of the Interior, Coker wrote to the Gray brothers describing his meeting with Carver.

> He (Carver) assured me that in the event the Park Service ... should make charges about any breach of the conditions of your permit ... he would give me full opportunity to answer the Park Service and meet them face to face over the issues that might be raised. As you recall, every time a charge has been made about you violating your grazing permit, when we meet with them face to face

ORPI-GA.

[9] Memorandum of Agreement between National Park Service and Bureau of Land Management regarding Forage Resource Inventory. August 26, 1965. ORPI-GA.

[10] Memo to SW Regional Director Daniel Beard from Superintendent Foy Young, September 23, 1965. ORPI-GA.

[11] Letter to Under Secretary John Carver from Attorney Elmer Coker, October 4, 1965. HGA, Box 1, Folder 9.

[12] *ibid.*; See also telegram from Acting NPS Director Hillory Tolson to Senator Carl Hayden, December 11, 1946. ORPI-GA.

the charges generally vanish into thin air.[13]

Director George Hartzog in a memo to Secretary Stewart Udall presented an extensive summary of the long-term damages to the Monument done by grazing. Trampling and foraging around 22 water sites had denuded those regions of grasses and shrubs and initiated extensive soil erosion. These watering sites and the Grays' camps and corrals were unnatural eyesores in an otherwise uninterrupted wilderness. The cattle cause damage to government and visitor properties and represented a serious safety hazard to drivers on the Ajo-Sonoita highway.[14]

Stewart Udall was now ready to move forward with his plan for the Sonoran Desert National Park. It is at this moment the House Representative Morris Udall, Stewart's younger brother, stepped forward to actively participate in the Organ Pipe conflict.

13.1 Mo Udall Proposes H.R. 11695

In 1961, Stewart Udall had just won reelection to his fourth term in office when he was appointed to the position of Secretary of the Interior. In taking charge of Interior, Udall left vacant his seat in the House of Representatives. The state of Arizona held a special election in May 1961 for the seat. Morris K. Udall, Stewart's younger brother, won by a very small margin and became Arizona's newest congressional representative.[15]

Mo Udall was, in many ways, like his older brother. He participated in World War II, received a law degree at the University of Arizona, and practiced law in Tucson. He replaced his brother in Arizona's second congressional district seat in 1961 and remained in that position for the next 30 years until a fall from Parkinson's disease forced his retirement in 1991. Mo Udall ran for the Democratic nomination for president but lost in 1976 to Jimmy Carter. Like his brother, Mo Udall, sat on the House Committee for Interior and Insular Affairs. Later, in 1977, he became chairman. Throughout his 30 years in office, Mo Udall had a strong interest in supporting the National Park Service and, especially, Organ Pipe Cactus National Monument.[16]

Despite denials of 'Udall teamwork' between the executive and legislative branches, it was quite clear that the placements of the Democratic Secretary and the junior Representative in positions of power provided Organ Pipe with a critical window of opportunity to initiate change.[17] There is little written documentation to confirm the extent of the Udalls' working together. However the results of their combined efforts on behalf of Organ Pipe give this idea of teamwork great weight.

Brenna Lissoway states that both Morris and Stewart Udall were involved in crafting the formal proposal to create the Sonoran Desert National Park submitted to Director

[13] Letter to Henry, Jack, and Robert Louis Gray from Attorney Elmer Coker, October 18, 1965. HGA, Box 1, Folder 10.

[14] NPS Director George Hartzog's memo to Secretary of the Interior Stewart Udall dated October 1965, was described in detail in another memorandum to Secretary Udall from Department of the Interior Solicitor Frank Barry, April 5, 1968. ORPI-GA.

[15] Donald W. Carson and James W. Johnson, *Mo: The Life and Times of Morris K. Udall* (Tucson: University of Arizona Press, 2001), pp. 58–59.

[16] *ibid.*, pp. 160–183.

[17] "Udall Brothers Interior Team" *Roll Call*, 7 (February 7, 1962):6.

George Hartzog in May 1965.[18] Mo and Stewart hoped that by directing the spotlight on this region of the Southwest, the beauty and uniqueness of the Sonoran Desert would persuade environmental and national park support groups to press Congress for the park level designation. Unlike most new park additions, the creation of the Sonoran Desert National Park should be relatively easy. Few private lands or titles complicated its assembly and most of the land was already owned by the federal government.[19]

Morris Udall was given the task of developing local, state, and national support for the proposed park. Udall believed that submitting the park proposal as a bill to Congress was a useful way of testing the public interest as well as developing support. Udall submitted the proposal as a formal bill, H.R. 11695, to the House of Representatives on October 20, 1965 and then again in 1967 as H.R. 1409.

Udall received only lukewarm responses in either support or opposition. Supporters included the Ajo Chamber of Commerce and the Desert Protection Council. Those opposed were primarily associated with the gun community; they were upset at the potential loss of hunting opportunities on the game range. Other federal agencies, especially the Bureau of Sport Fisheries and Wildlife, thought that opening Cabeza Prieta up to large numbers of visitors traveling through the desert would be detrimental to the endangered populations of bighorn sheep and pronghorn antelope that the refuge was trying to protect. Unfortunately, neither H.R. 11695 nor H.R. 1409 had support from Arizona Senator Goldwater or Paul Fannin who replaced him and, consequently, never advanced to committee. Some environmental supporters speculated at that time that there was just insufficient enthusiasm for the idea of preserving wilderness in the desert.[20]

Mo Udall's bill galvanized Senator Carl Hayden into action to defend the Grays' ranching interests. He wrote to Under Secretary Carver to remind him of Hayden's longstanding interest in the Gray family. Hayden insisted that the Grays' desire for additional water development was a perfectly reasonable request. The main purpose of Hayden's letter, however, was to offer assistance to the Department of the Interior in achieving a resolution that would be "fair and equitable to both the Gray family and the National Park Service ...."[21]

13.2 Stewart Udall Tightens the Noose

The Park Service and the Department of the Interior remained unmoved by the Grays' and Attorney Coker's pleas for new watering facilities. The summer drought of 1965 continued through the end of December. Denied access to any new permanent water features the Grays set out small, movable water tanks especially in unwatered areas such as the western boundary of the Monument. Not only were these tanks prohibited by conditions

[18] Lissoway, "An Administrative History of Organ Pipe Cactus National Monument," p. 137.

[19] Transcript of speech entitled "A National Park for the Sonoran Desert" given by Morris K. Udall to RÃo Grande Chapter of Sierra Club meeting in Santa Fe New Mexico, November 1966. MKUA, Manuscript File #325. Special Collections Library, University of Arizona, Tucson, Arizona. Box 172, Folder 10.

[20] Lissoway, "An Administrative History of Organ Pipe Cactus National Monument," pp. 138–140; "News Release from Morris K. Udall Office." October 20, 1965, and typescript of Morris K. Udall "Notes on Sonoran Desert National Park," Undated. MKUA, Box 172, Folder 10.

[21] Letter to Under Secretary John Carver from Senator Carl Hayden, November 9, 1965. A preliminary draft of this letter, dated October 21, 1965, was sent to Attorney Elmer Coker for editing. CHA, Box 283, Folder 4.

in the grazing permit but they opened grasslands that had been previously inaccessible to the Gray cattle because of their lack of water.[22] Superintendent Foy Young informed Robert Louis Gray that such tanks had not been permitted and demanded that they be removed within the month.[23]

In January 1966, Secretary Stewart Udall formally began his offensive against grazing at Organ Pipe Cactus National Monument. On January 7, he announced to the press that he was endorsing his brother, Mo's, bill to re-create Cabeza Prieta and Organ Pipe into a national park.[24] On January 14, Secretary Udall made another public announcement. At the end of the existing grazing agreement in December, the Department of the Interior would reduce the number of permitted cattle on Organ Pipe lands from the present 1050 to the original 550.[25]

The Department of the Interior had begun to tighten the noose around the Grays. Since the death of Robert Lee Gray, Stewart Udall and the Interior Department had been lining up what they saw as the critical components and arguments to eliminate grazing at the Monument. Udall's announcement of a reduction in permitted numbers was designed to elicit a single response from the Grays – the accusation that Interior was trying to ruin the Grays, that the ranching business for three brothers could not be economically viable on a permit of only 550 head. And cry foul, they did. Coker and the Grays pressed friends and acquaintances to write members of the Arizona Congressional Delegation and the Department of the Interior to request relief from Udall's unfair ruling.[26] Coker wrote to Bill Davis, Executive Secretary Arizona Cattle Growers Association,

> We need all the help we can get to stop this arbitrary cut. Senator Carl Hayden is hopping mad about this and one of the Gray partners and I intend to go back to Washington on February 7 to see if we can't prevent this cut. Such a cut will put the Gray Family out of business in the Organ Pipe National Monument. Carl Hayden needs all the backing and support that he can get and I would appreciate it if the (Arizona Cattle Growers) Association could write a very strong letter to Carl Hayden and to the rest of our Congressional Delegation protesting this cut.[27]

[22] Memo to SW Regional Director Daniel Beard from Superintendent Foy Young, December 3, 1965; Memo to NPS Director George Hartzog from Acting SW Regional Director George Miller, December 10, 1965; Memo to SW Regional Director Daniel Beard from Assistant NPS Director Howard Baker, December 15, 1965. ORPI-GA.

[23] Letter to Robert Louis Gray from Superintendent Foy Young, December 22, 1965. ORPI-GA.

[24] "Udall Endorses Proposal to Combine Organ Pipe Cactus National Monument and Cabeza Prieta Game Range As Sonoran Desert National Park." U. S. Department of the Interior, Office of Secretary Press Release. January 7, 1966. Morris K. Udall Files, Box 172, Folder 10.

[25] Letter to Ed Davis, Assistant to Senator Carl Hayden, from Attorney Elmer Coker, January 15, 1966; See draft of press announcement "Interior Department to Reduce Grazing at Organ Pipe Cactus National Monument Area"; and unidentified Tucson newspaper clipping "Grazing to Be Reduced in Organ Pipe Country." CHA, Box 283, Folder 4.

[26] See letters to Arizona Congressional Delegation Members from Attorney Coker, January 27, 1966. HGA, Box 1, Folder 11; see numerous letters to Senator Carl Hayden in CHA, Box 283, Folder 4.

[27] Letter to Executive Secretary Arizona Cattle Growers Association Bill Davis from Attorney Elmer Coker, January 27, 1966. HGA, Box 1, Folder 11.

By reducing the Grays' permit number, the Department of the Interior drove the Grays and Coker to the bargaining table, ostensibly to argue against the reduction in cattle numbers. The Grays' bargaining position was already weak for many reasons: the threat of the future permit cut, their history of noncompliance and disregard for Park Service regulations, and long-term evidence of overgrazing. If the Interior Department had eliminated the permit outright, the hue and cry across the western states would have been deafening. In bringing the Grays to the Washington meeting, Under Secretary of the Interior John Carver could prepare them privately for the later prospect of elimination of grazing.

Bobby Gray and Elmer Coker flew to Washington in early February 1966 to meet with Carver. The meeting also included Ed Davis, Administrative Assistant to Senator Hayden, and NPS Deputy Assistant Director of Operations Harthon Bill. Carver informed Coker and Gray that the pending Bureau of Land Management report on the forage resource inventory would be out shortly. The report and its recommendations would be reviewed by management in both BLM and NPS. Carver suggested that the group would meet again in April to discuss its findings. In the meantime, he recommended that, in view of the declining value to their grazing permit, the Grays should examine alternatives to their operations at Organ Pipe. Carver stated that the primary topic for discussion at the April meeting would be those alternatives. In unsubtle language, Carver was informing the Grays that the end of their grazing operations at Organ Pipe was rapidly approaching.

When the BLM forage inventory report was published in March, its conclusions and recommendations surprised no one. The five range scientists found that almost every location on the Monument was either heavily or severely overgrazed, that cacti and mesquite were replacing desert shrubs and grasses, and that soil erosion was widespread. The scientists concluded that the Monument vegetation would only consistently support 314 cattle on a year-round basis.[28]

Deputy Assistant Director of Operations Harthon Bill personally took a copy of the BLM report to Senator Hayden's office.[29] He informed Hayden's assistants that the results of the report supported the Department of the Interior and Park Service's intentions to terminate grazing at the Monument. He assured Hayden's assistants that the Park Service was interested in resolving its 1941 commitment to the Grays in a fair and equitable manner while protecting the Monument resources.[30] Senator Hayden was now 88 years old and within two years of retiring from the US Senate; he had served the people of Arizona for more than 54 years. His commitment to protect the ranching business of this one family had been a constant challenge over the last 28 years. Knowing that his ability to provide that protection would end shortly, Hayden desired deeply to assure the creation of a lasting solution to this ongoing controversy.[31] Both the Park Service and Stewart Udall knew that without Hayden's approval, any proposal to terminate grazing at the Monument would never succeed.

[28]Schultz, "Forage Resource Inventory of the Organ Pipe Cactus National Monument."

[29]Senator Hayden was in Arizona recuperating from surgery.

[30]Memo to Under Secretary of the Interior from Assistant NPS Director Howard Baker, March 9, 1966. ORPI-GA; see also letter to Secretary of the Interior from Senator Carl Hayden, February 19, 1966. HGA, Box 1, Folder 11.

[31]Letter to Secretary of the Interior Stewart Udall from Senator Carl Hayden, February 19, 1966. HGA, Box 1, Folder 11.

When Secretary Udall announced to the press that cattle numbers at Organ Pipe would be reduced by half, he also publicly stated that the Park Service would be giving much closer supervision to issues of grazing and range management. Udall wanted a grazing management plan created to provide information for and give teeth to the conditions in the grazing permit. He requested that the Monument hire a ranger experienced in the supervision of grazing operations.[32]

One month earlier, Organ Pipe had received a scathing assessment of its management, or lack thereof, of grazing. Managers from the Bureau of Land Management and Sport Fisheries and Wildlife adjacent lands had criticized Organ Pipe employees for allowing their range conditions "to deteriorate from bad in 1946 to disgraceful." They pointed out that the Park Service had made no effort to press for trespass charges even when the Grays exceeded their permit limit for many years. They accused the Park Service of allowing the Grays to evade regulations and conditions of their permit without consequence. The Grays, these managers stated, had "no right to abuse the land, either public or private." It was the fault of the Park Service for allowing that abuse to continue.[33]

The regional office offered to appoint one of Organ Pipe's own rangers, Richard Begeman, to the position of range manager. Begeman had grown up on ranches and was experienced in handling cattle but had little expertise in scientific studies or assessments.[34] Southwest Regional Director Daniel Beard pointed out that no funds were available to bring in more technically qualified individuals or to implement the activities desired by the Secretary of the Interior.

While all desired better management of forage resources at Organ Pipe, few individuals including Arizona-born and raised Secretary Udall, understood the enormous difficulties created by local vegetation and terrain in achieving that end. Without additional funds or manpower allocated, there was little that Organ Pipe employees could do differently. Nor could the NPS Washington office provide any additional financial assistance. Many in the Park Service believed that those investments in improved range management efforts and field studies were now no longer necessary. A resolution to the conflict with the Grays and the termination of all cattle grazing was clearly near at hand.[35] Soon the Gray cattle would be removed and vegetation at the Monument could begin its slow recovery.

13.3 A Purchase Agreement?

Henry, Jack, and Bobby Gray, Attorney Coker and Under Secretary John Carver met again in Phoenix in early April 1966. The purpose of the meeting according to the Park Service was to explore ways in which grazing at Organ Pipe could be terminated.[36] The Grays and Attorney Elmer Coker, however, saw the meeting as an opportunity to rearrange their

[32]Memo to SW Regional Director Daniel Beard from Assistant NPS Director of Operations Howard Baker, January 8, 1966. ORPI-GA.

[33]Memo to Superintendent Foy Young from Chief Naturalist Victor Jackson, November 24, 1965. ORPI-GA.

[34]Memo to NPS Director George Hartzog from SW Regional Director Daniel Beard, March 4, 1966; Memo to Superintendent Foy Young from Assistant Chief Ranger Richard Begeman, January 25, 1966. ORPI-GA.

[35]Memo to SW Regional Director Daniel Beard from Assistant NPS Director Howard Baker, April 12, 1966. ORPI-GA.

[36]Memo to SW Regional Director Daniel Beard from Superintendent Foy Young, April 6, 1966. ORPI-GA.

lifetime permit into a different, and perhaps better, agreement. Coker offered four possible scenarios generated by the Gray brothers. The first was an outright grant of six sections of Organ Pipe land sufficiently irrigated to generate pasture. The second was land elsewhere in the Southwest with a similar acreage and carrying capacity. The third was a guaranteed 20-year permit at Organ Pipe with watering facilities to carry 1500 head of cattle. The fourth was an outright sale of ranch operations with a value equal to $500 for each of 1050 head of cattle. Carver replied that the first three options were not possible due to physical limitations of the environment, limits of the Interior Department's authority to distribute land, and Interior Department policy decisions. He stated that the fourth option was both possible and preferable.[37]

The group gathered for a third meeting on June 22 at which Attorney Coker presented two independent appraisals that included evaluations of the Grays' grazing permit, their ranch structures, and Bobby Grays' 160-acre homestead property. The appraisals concluded values of $499,000 and $407,250. Carver replied with a final offer of $360,000. Coker balked at the lower figure. Carver warned that he would not be in his position much longer and that his successor was much less sympathetic to the Grays' situation. Ultimately, the Grays agreed to accept Carver's offer; they signed purchase option papers at the end of August 1966.[38]

Almost as soon as the details of the agreement became known, others in the Park Service and the Department of the Interior began to raise objections.[39] The primary concern for all was the proposed "purchase" of the Grays' federal grazing permit. As stated earlier, the federal government viewed a permit as a valueless privilege allotted to a chosen few. Banks, cattlemen, and landowners, however, recognized grazing permits as having significant value. Those permits increased sale prices of ranches or tracts of land by well-known amounts. The federal government by offering a specific price for its own grazing permit would be dismantling a prime aspect of its grazing policy that it had held for more than 60 years.

The Bureau of the Budget also balked at allocating federal funds to buy out a federal permit.[40] Associate Solicitor Bernard Meyer argued that the price of the Gray operations did not have to rest upon the value of its grazing permit. Meyer suggested that Bobby Grays' homestead valuation could be much higher than the initial appraisers had determined. Based on an earlier US Court of Appeals takings decision, private parcels surrounded by federal lands with a grazing permit were much more valuable than those without this association.[41] The Park Service had the Gray operations reappraised on this

[37] Memo to Under Secretary of the Interior from Acting NPS Director A. Clark Stratton, May 11, 1966. ORPI-GA.

[38] Confidential memo to Congressman Morris Udall from Administrative Assistant Roger Lewis, no date. Morris Udall Papers Box 180, Folder 10; letter to Henry, Jack, and Robert Louis Gray from Attorney Elmer Coker, July 8, 1966; letter to John Carver from Attorney Elmer Coker, August 31, 1966. HGA Box 1, Folder 14. John Carver resigned in September 1966 from the Department of the Interior to become head of the Federal Power Commission.

[39] Memo to NPS Director George Hartzog from Deputy Assistant NPS Director of Operations Harthon Bill, August 23, 1966. ORPI-GA.

[40] The Bureau of the Budget was the predecessor to the Office of Management and Budget.

[41] Memo to Director of Office of the Budget from NPS Director George Hartzog, December 23, 1966. Morris Udall Papers, Box 180, Folder 10. See *U.S. v. Jaramillo*, 190 F2d 300, June 21, 1951.

different basis of evaluation in early October.[42]

On the belief that the legal and policy issues underlying the purchase of the Gray operations had been resolved, Stewart and Mo Udall on October 18, 1966 held a joint press conference to announce the settlement with the Gray family and the severance of their grazing lease rights. Two major papers in Arizona, The Arizona Republic and The Arizona Daily Star, printed slightly different interpretations of the Udalls' remarks at the press conference. The Republic simply stated that a settlement had concluded with "a severance of (the Grays') grazing lease rights." The settlement would give "the government clear title to the land ...." The Star in straightforward language titled its article, "US Buys Organ Pipe Grazing Leases." The two articles provided almost no details about the process of acquisition except to say that the settlement removed a major obstacle to the future establishment of the Sonoran Desert National Park.[43]

Unfortunately, neither the Gray ranching reappraisal nor the Udalls' press statements quieted fears that the Department of the Interior was establishing the first financial valuation of a federal grazing privilege. The Udalls' statements also gave the public impression that the settlement had been sanctioned and approved at all levels within the federal government. This was not true. Funds for the purchase had not yet been approved. The Udalls had now created a major public perception problem for themselves. They had promised to pay the Gray family for their ranch operations but they had no monies in hand to do so.

[42]Memo to Director of the Bureau of Outdoor Recreation from Acting NPS Director Howard Baker, October 7, 1966. ORPI-GA.

[43]"Grazing Lease Ended In Organ Pipe Park," *The Arizona Republic*, October 19, 1966; "U.S. Buys Organ Pipe Grazing Leases," *The Arizona Daily Star*, October 19, 1966. ORPI-GA.

CHAPTER 14

The Last Hurrah

Congressman Mo Udall wrote Attorney Elmer Coker in September 1966 to congratulate him on completion of the purchase agreement. Both Udall and Coker believed that they had finally achieved a major victory in the battle to resolve the long-term grazing conflict at Organ Pipe. Udall promised Coker that he would continue to assist the process of the settlement.

> I spoke to John Carver who will be leaving the Interior Department shortly and he is extremely anxious to have the matter closed and the money paid before the end of 1966. I have pledged to ride hurd (sic) on the situation and keep the final paperwork moving forward.[1]

Like Carl Hayden so many years earlier, Mo Udall believed that it was his obligation as representative of southwestern Arizona to protect the Gray family and bring this conflict to a close. Little did he realize that he would be involved for another eight years.

But the monies for the purchase agreement were not forthcoming. The Vietnam War was escalating along with the cost of the war effort. The Bureau of the Budget, and more specifically the House Subcommittee on Appropriations, refused to entertain any expenditure for a federal grazing permit. Despite Interior's reappraisal of the Gray property without a value for the grazing permit, everyone involved knew that component was hidden in the high cost of the settlement.[2] The Gray brothers were growing older; none were in good health. Henry Gray was 70, Jack 58, and Bobby 55. The House Subcommittee came to the conclusion that "time would take care of the situation."[3]

In the meantime, the Grays had not reduced their herd to 550 as demanded by Secretary of the Interior Stewart Udall. Indeed, they were again running better than 200 – 400 more cattle than their permitted number.[4] Deputy Director Harthon Bill warned Attorney Coker that the Grays must bring the size of the herd down. If the Grays, already known for their noncompliance, were seen still flaunting Department of the Interior regulations, few would be willing to view their settlement in a favorable light.[5]

[1] Letter to Attorney Elmer Coker from Congressman Morris Udall, September 2, 1966. HGA, Box 1, Folder 14.

[2] Letter to Under Secretary of the Interior Charles Luce from Chairman of the Subcommittee on Interior and Related Agencies Julia Butler Hansen, March 27, 1967. Morris Udall Papers, Box 180, Folder 6.

[3] Memo to Congressman Morris Udall from Administrative Assistant Roger Lewis, June 13, 1967. Morris Udall Papers, Box 172, Folder 10.

[4] Memo to Superintendent Foy Young from Assistant Chief Park Ranger Richard Begeman, August 8, 1967. ORPI-GA.

[5] Letter to Attorney Elmer Coker from Deputy NPS Director Harthon Bill, May 11, 1967. ORPIGA.

14.1 The Purchase Agreement Fails over Grazing Rights

Mo Udall expended many long hours persuading the House Subcommittee to approve purchase funds. Just at the moment he thought he had finally succeeded, brother Stewart Udall changed his mind and refused to endorse payment.[6] Two documents had recently crossed Secretary Udall's desk within a month of each other. The contents of these two documents led the Secretary to believe that the purchase of the Gray properties would create more harm than good for the Department of the Interior.[7]

Edward Crafts, Director of the Bureau of Outdoor Recreation, sent the first document to Udall in March 1968.[8] Crafts had worked as a range researcher for the Forest Service and later as its spokesman. He was well versed in the long history of the management of grazing permits. He had been on the front lines during the battles to change a federal grazing permit from a privilege to a conveyable property right.[9] Because of his experience and background in the Forest Service, Udall requested that Crafts send him a memorandum outlining that history of permit management and detailing his own recommendations to resolve the Gray/Organ Pipe conflict.

Crafts wrote an extensive history of the US Forest Service grazing issues and finished his memo with two important conclusions. He warned Udall that everyone knew about the hidden payment for the grazing permit and that opponents of federal grazing programs were eagerly awaiting his political misstep.

> Under range conditions in that area, the cattle must come off if the Monument is to be preserved. In retrospect, it is greatly to be regretted that the National Park Service has continued to renew these permits all these years and no Director of the Park Service nor any Secretary of the Interior Department had the courage to take the action available to him. Search as I can, I can find no persuasive rationale or special situation in this case other than the letter of Mr. Demaray's which give any valid basis for paying the Grays for relinquishment of grazing privileges. They do not hold grazing "rights" in the sense that they have a property interest in the Federal lands. Payment as proposed in the reprogramming proposal you have before you camouflages this issue and would set an undesirable precedent causing great difficulty for the Bureau of Land Management and the Forest Service.
>
> I know that the livestock associations are cognizant of this case and are watching it closely. They expect to cite this as a precedent if acted upon favor-

[6] Letter to Edward Crafts from Morris Udall, June 23, 1969. Morris Udall Papers, Box 180, Folder 7; Memo to Attorney Elmer Coker from Morris Udall, February 8, 1968. ORPI-GA.

[7] These two documents are perhaps the most important papers associated with the history of Organ Pipe grazing conflict. They sit second only behind Acting NPS Director Demaray's letter to Senator Carl Hayden on October 10, 1941 in clarifying issues and affecting the final course of this story.

[8] The Bureau of Outdoor Recreation was a newly created agency within the Department of the Interior.

[9] Bernard DeVoto, "Conservation: down and on the Way out," in *DeVoto's West: History, Conservation, and the Public Good*, ed. Edward K. Mueller (Athens: Swallow Press/Ohio University Press, 2005), 237–253. The original article was published in *Harper's Magazine* in August 1954.

ably.[10]

He also warned Stewart Udall of the personal consequences that would result from his decision to purchase the Gray operations. Mo Udall later admitted that Crafts' memo had convinced the Secretary to withdraw his support from the purchase agreement.[11] Crafts' following words clearly touched a sensitive spot in Stewart Udall.

> I can assure you that if this action is taken, – and when it becomes understood and spread across the country as it undoubtedly will, – your reputation and that of your brother will be severely tarnished, if not destroyed. I do not believe I am overemphasizing because I lived through, personally, the bitterness (of the permit battles in the Forest Service) of 15 years ago.[12]

Crafts offered a number of alternative methods to provide compensation for the Grays but that would not undo the history of federal permit policy. The one most attractive to Secretary Udall, which he later presented to Senator Carl Hayden, was the introduction of a private bill for relief of the three Gray brothers.[13]

A second critical memorandum for Secretary Udall was written shortly after Crafts' memo by Interior Solicitor Frank Barry. In his memo Barry laid out the history of events and decisions in the Organ Pipe grazing case since establishment of the Monument.[14] The Solicitor reviewed the legal aspects of Acting Director Arthur Demaray's promise to Senator Hayden of a lifetime grazing permit for the Gray family. This October 1941 document had been the legal and moral threat that all superintendents, regional directors, and Washington bureaucrats had feared for the past 25 years because of the potential political consequences from Senator Hayden if any dared to suggest termination of the permit.[15] Solicitor Barry reminded Udall that the Secretary of the Interior's primary responsibility was to preserve the natural resources of Organ Pipe Cactus National Monument.

> Indeed, considering ... the undeniable fact that any further grazing will result in its damage or destruction, it may be said that continuing to permit grazing is an abuse of the Secretary's discretion and therefore illegal.

Barry went on to explain that,

> Neither the Secretary's subordinate, nor the Secretary himself, could make a contract which violated a directive of Congress... Mr. Demaray could not

[10] Memo to Secretary of the Interior Stewart Udall from Director of Bureau of Outdoor Recreation Edward Crafts, March 19, 1968. Morris Udall Papers, Box 180, Folder 6.

[11] Letter to Edward Crafts from Congressman Morris Udall, June 23, 1969. Morris Udall Papers, Box 180, Folder 7.

[12] Memo to Secretary of the Interior Stewart Udall from Director of Bureau of Outdoor Recreation Edward Crafts, March 19, 1968. Morris Udall Papers, Box 180, Folder 6.

[13] *ibid.*

[14] Memo to Secretary of the Interior Stewart Udall from Solicitor Frank Barry, April 5, 1968. ORPI-GA.

[15] The reader will recall that Carl Hayden chaired the Senate Subcommittee on Appropriations for the Interior Department and therefore controlled all funds allocated to Interior and the National Park Service.

> vest an unlawful private estate (a guaranteed lifetime permit) in the monument which the Secretary was estopped to deny.[16]

Thus Demaray's promise to Carl Hayden had been unlawful. Demaray had neither the authority to make that contract nor was it legal under the laws of Congress since the Secretary of the Interior can terminate any contract at any time. Barry stated that Udall had the right to terminate the Grays' contract for two reasons: first, because of the extensive damage done to the land and second, because of the Grays' numerous breaches of the conditions of the permit. With respect to the proposed purchase of the Gray operations, the Solicitor concluded that the Grays were "not entitled to any compensation upon the termination of the grazing privileges" because those privileges were all revocable. He added that when the permit was terminated, no adjacency value could be included in the appraisal of Bobby Grays' homestead property since that condition would be no longer present.[17]

With Crafts' and Barry's memos, Secretary Udall finally understood the complexities of the historic grazing rights argument. Fortunately, Udall stepped back from the edge of that quagmire in time. For the first time in 25 years, Organ Pipe Cactus National Monument was freed from the shadows of Acting Director Demaray and Senator Carl Hayden. With Demaray's historic promise in proper perspective and Carl Hayden's retirement imminent, Interior and Park Service could hope to begin the process of terminating the grazing and, finally, restoring Organ Pipe's vegetation resources.

14.2 Carl Hayden Steps Forward One More Time

While the Udalls understood that Interior's purchase of the Grays' properties was no longer appropriate, they both believed that the federal government still had a moral obligation to provide compensation for the Grays.[18] The Secretary handed over that task to his brother, Congressman Mo Udall and to Senator Carl Hayden. Hayden submitted S. 3837 on July 17 late in the second session of the 90th Congress.[19]

S. 3837 was a private bill for the relief for the Gray brothers and requested $292,000 for damages for the reason that the federal government had refused to renew their grazing permit. The compensation listed in the bill was calculated from the values of Bobby's homestead land and of the Grays' improvements. It made no mention of payments for a grazing permit – only damages from its loss.

Prior to Hayden's submission of a private relief bill to the Senate, Secretary Udall announced that the grazing permit would terminate at the end of December 1968.[20] Udall's announcement appears, at face value, to be a cruel punishment of the Grays by Interior.

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[16] Memo to Secretary of the Interior Stewart Udall from Solicitor Frank Barry, April 5, 1968. ORPI-GA.

[17] *ibid.*

[18] Letter to Edward Crafts from Congressman Morris Udall, June 23, 1969. Morris Udall Papers, Box 180, Folder 7.

[19] Memo to Congressman Morris Udall from unnamed source, May 31, 1968. Morris Udall Papers, Box 180, Folder 6.

[20] Memo to NPS Director George Hartzog from Under Secretary David Black, June 13, 1968. ORPI-GA.

However, termination of the Grays' permit was essential to the success of Hayden's legislation. Relief bills could only be approved if they provided relief for a pre-existing loss.[21] Unfortunately, Hayden's bill for relief became stuck in the legislative log-jam that so often occurred at the end of a congressional session and never emerged from committee.[22]

The Gray brothers were now without a purchase agreement or any legislatively-derived relief. They were also without a grazing contract. The absence of the latter apparently bothered them not a whit. The Grays continued to run their cattle on Organ Pipe lands without a formal permit and without any payment of fees.[23] The Grays showed little concern about their noncompliance with Park Service demands. From the Grays' perspective, the federal government had cheated them. The Interior Department offered to buy them out and the Grays had negotiated the sale of their property in good faith. The government then reneged on its purchase contract and, in the end, had the gall to terminate their lifetime grazing permit with no recompense whatsoever.[24]

The end of 1968 was a political watershed for the country and Arizona. Carl Hayden, age 91, was retiring after serving the state for 57 years. Lyndon Johnson had refused renomination for the presidency and Stewart Udall's days as Interior Secretary were numbered. Throughout the executive and legislative branches of government, Republicans had been voted in and Democrats voted out. The Vietnam War had made everyone unhappy.

Stewart Udall knew that he had only a few months left to bring his desire for a grand park unit in southwestern Arizona to fruition. Mo Udall's proposals for the Sonoran Desert National Park, a combined Organ Pipe and Cabeza Prieta, had received no support from the Senate; both bills, H.R. 11695 and H.R. 1407, had died without hearings.

The Udalls decided to change tactics. Instead of legislation to create a national park, perhaps they could persuade President Lyndon Johnson to use the Antiquities Act to create a new national monument. In July, Secretary Udall pressed Johnson to set aside seven million acres of land. Such an enormous package of proposed national monuments was "designed to appeal to the immense ego of LBJ."[25] One proposal was for the Sonoran Desert National Monument. This Monument did not include Organ Pipe but instead Cabeza Prieta Game Range and adjacent Bureau of Land Management properties. Udall's new plan was to establish two national monuments side by side.[26] But Johnson, on his last day of his presidency, chose to protect only 300,000 acres of land instead of the recommended seven million; none of these were in Arizona. Stewart Udall believed that Johnson "needed to show Udall that he (Johnson) was still in control."[27] Others have suggested that Johnson,

[21]Letter to Congressman Morris Udall from E. P. Hilton, December 10, 1968; letter to E. P. Hilton from Congressman Morris Udall, December 17, 1968. Morris Udall Papers, Box 172, Folder 10.

[22]Letter to President Lyndon Johnson from Arizona Supreme Court Chief Justice Ernest McFarland, January 9, 1969. Morris Udall Papers, Box 180, Folder 7.

[23]Memo to NPS Director George Hartzog from SW Regional Director Frank Kowski, November 12, 1968. ORPI-GA.

[24]David Rees, "Backs to the Wall, Gray Brothers Fight Interior Dept," *Pay Dirt* February 24, 1969. Morris Udall Papers, Box 172, Folder 10; David Rees, "Brothers State Government Won't Pay $300,000 Lease," *The Arizona Republic*, August 26, 1970. ORPI-GA.

[25]John Crevelli, "The Final Act of the Greatest Conservation President," *Prologue*, 12 (1980):173– 193.

[26]Proposal for "Sonoran Desert National Monument." September 16, 1968. Morris Udall Papers, Box 172, Folder 10.

[27]Stewart L. Udall, "Sonoran Desert National Park," interview with Jack Loeffler, May 3, 1997. Stewart L.

exhausted from racial and military conflict during his presidency, did not wish to invite any more controversy into his life. LBJ set aside only those parcels that would anger the least number of constituents.[28]

Senator Carl Hayden's legislation had failed and despite termination of their permit, the Grays refused to clear their cattle off the range. The Park Service prepared to set in motion a series of legal actions to hasten the departure of those cattle. NPS Acting Director Harthon Bill wrote to the regional office that Gray cattle on the Monument after January 1, 1969 would be in violation of trespass. He recommended the regional office and Superintendent Matt Ryan should meet with the US Attorney in Arizona to develop procedures for taking the Grays to court.[29] Acting Director Bill also gave Congressman Udall notice of the legal arrangements that the Park Service was now preparing.[30] Udall immediately forwarded the letter to Elmer Coker.

Alarmed at the potential legal action threatening the Grays, Attorney Coker contacted former Senator, and now Arizona Supreme Court Chief Justice, Ernest McFarland, to intercede at the highest level for the Grays. Judge McFarland wrote to President Johnson, already in his last few days in office.[31] McFarland requested that the Grays' permit be extended for one year in order to allow the legislative efforts by the Arizona delegation to come to fruition. It seems that Johnson did intervene. While the Grays did not get an extension of their permit, the Park Service did cease to speak of trespass charges – at least for one year.[32]

14.3 The Arizona Congressional Delegation vs. the Interior Department

Coker wrote to Mo Udall to ask how he and the Grays should proceed since Carl Hayden's legislation had failed. With Hayden out of the picture, Mo Udall now assumed the mantle of protector of the Grays' interests. Udall suggested that Coker contact Senators Barry Goldwater and Paul Fannin and together they might introduce a series of relief bills in 1969.[33]

In the first month of the 91st session, Mo Udall introduced H.R. 5799; Sam Steiger H.R. 7162; John Rhodes H.R. 7150, and in the Senate, Fannin and Goldwater co-wrote S. 1168.

Udall Papers, Special Collections Library, University of Arizona, Manuscript File #372, Box 237. Also in *Dry Borders: Great Natural Reserves of the Sonoran Desert*, ed. Felger, Richard Stephen and Bill Broyles (Salt Lake City: University of Utah Press, 2007), pp. 533–536; See also Rees, "Backs to the Wall, Gray Brothers Fight Interior Dept," Morris Udall Papers, Box 172, Folder 10.

[28] Crevelli, "The Final Act of the Greatest Conservation President," p. 191. Still others believe that President Johnson acted in retribution for Congressman Mo Udall's October 1967 speech against the Vietnam War and Johnson's policies.

[29] Memo to SW Regional Director Frank Kowski from Acting NPS Director Harthon Bill, December 4, 1968. ORPI-GA.

[30] Letter to Congressman Morris Udall from Acting NPS Director Harthon Bill, December 17, 1968. ORPI-GA.

[31] Letter to President Lyndon Johnson from Arizona Supreme Court Chief Justice Ernest McFarland, January 9, 1969. Morris Udall Papers, Box 180, Folder 7.

[32] Letter to Superintendent Roy Allen from Attorney Elmer Coker, September 25, 1975. HGA, Box 1, Folder 24.

[33] Letter to Attorney Elmer Coker from Congressman Morris Udall, December 9, 1968. Morris Udall Papers, Box 172, Folder 10.

All were relief bills for the Gray family for remuneration for their canceled grazing permit.[34] Surely one of them would find its way out of committee! Attorney Elmer Coker now began a four-year process of playing the Park Service off against Arizona congressional delegates. Coker would press the delegation to repeatedly reintroduce legislation to offer monetary relief or to reestablish the Grays' grazing permit. While the delegation was submitting bills or waiting for a committee hearing, Coker used that legislative process as an excuse to insist that the Park Service postpone any decisions regarding removal of the Gray cattle.[35]

The new Interior Department under President Nixon was asked to comment on the Arizona delegates' bills for relief; it refused to endorse any of them.[36] Its arguments against endorsement essentially followed those written earlier by Solicitor Frank Barry.[37] The Secretary had the right to terminate any permit and recompense for a revocable privilege was not federal policy. Why the Interior Department in 1970 changed positions and chose not to support a resolution of the Gray problem is not yet fully understood at this time. Perhaps the new administration that had not yet struggled with the ongoing issues may not have felt the necessity to resolve personal histories or to honor previous federal commitments.

The Interior's lack of endorsement for relief legislation left the Arizona delegation, especially Mo Udall, in difficult straits. The submission of the relief bills prompted Edward Crafts, now in retirement, to write Mo Udall and include a copy of his memo originally written for Stewart.

> What bothers me however, is the precedent that (the relief bill) would set by paying a permittee on Federal lands for the loss of his grazing permit. This of course is what the Forest Service and the Bureau of Land Management have successfully opposed for a great many years, but what livestock interests have always wanted. I am sure that the latter would feel that your bill if enacted would constitute a precedent for future claims for compensation for loss of grazing permits on Federal lands. The bill would tend to convert a grazing privilege on government land into a private property right.
>
> It may be that you introduced this bill without serious thought of it getting passed. If so I fully understand it. However should it start to move, I hope you

[34] Letter to Chairman of Interior and Insular Affairs Committee Wayne Aspinall from Congressman Morris Udall, February 20, 1969. Morris Udall Papers, Box 180, Folder 6.

[35] Letter to Congressman Mo Udall from Attorney Elmer Coker, January 16, 1969. Morris Udall Papers, Box 180, Folder 10; letter to SW Regional Director Frank Kowski from Attorney Elmer Coker, April 23, 1971. ORPI-GA; memo to NPS Director George Hartzog from Assistant Director of Park Support Services Monte Fitch, May 24, 1971. ORPI-GA; letter to SW Regional Director Frank Kowski from Attorney Elmer Coker December 28, 1971. HGA, Box 1, Folder 20; letter to Deputy Assistant Secretary of the Interior Orme Lewis from Senator Paul Fannin, Congressman Morris Udall, Congressman Sam Steiger, Congressman John Rhodes, and Senator Barry Goldwater, January 20, 1972. HGA, Box 1, Folder 21.

[36] Letter to Chairman Wayne Aspinall from Acting Secretary of the Interior Russell Train, January 28, 1970. Morris Udall Papers, Box 180, Folder 6.

[37] Memo to the Secretary of the Interior Stuart L. Udall, from Solicitor Frank M. Barry, April 4, 1968. ORPI-GA.

> will take the time to read my memorandum and give it such consideration as you think proper.[38]

Mo Udall's thoughtful response to Crafts' letter was indicative of the difficult needle that he and the members of the Arizona delegation were trying to thread. They needed to preserve federal interests and still protect their constituents caught in conflicts not of their own making.

> The Gray family has always had powerful political protectors including Senator Hayden and because this was in my district I did not wish to be any more difficult with their problems than I had to, while not surrendering my own conscience and judgment on the matter.
>
> It always seemed to me that they did have one basic fact in their favor: that certain representations were made to them which, for better or worse, they did in good faith rely upon. Therefore, my aim has been to see if some way could be found to have the federal government assume some kind of moral obligation to make their transition a little less damaging, while at the same time not establishing the dangerous kind of precedent which you fear.
>
> Let me make it very clear that I think it would be very unwise and extremely bad policy if the Congress or the executive branch ever permitted the cattle industry to convert grazing privileges into private property rights. If we come down to a simple test between this principle of overriding importance and justice to the Grays, I would have to go against the Grays. I have been groping for some kind of a solution along the lines I have outlined above.[39]

Neither the Udalls nor the Arizona delegates ever found that suitable way by which they could accomplish both.

[38] Letter to Congressman Morris Udall from Edward Crafts, June 10, 1969. Morris Udall Papers, Box 18, Folder 7.

[39] Letter to Edward Crafts from Congressman Morris Udall, June 23, 1969. Morris Udall Papers Box 180, Folder 7.

CHAPTER 15

Epilogue

All of the Gray relief bills of 1969 failed to progress through their respective houses – primarily due to opposition from the Department of the Interior. Park Service administrators began to press the Grays to begin removal of their livestock.[1]

Coker wrote to the delegation in 1971 to ask them to reintroduce legislation for the Grays.[2] Coker agreed that legislation linking payment to a terminated permit was likely to fail. Instead, he suggested that in this round their legislation should override the Secretary of the Interior's termination, guarantee the Grays' lifetime permit, and recognize the Grays' water and grazing rights.[3] Park Service officials and representatives for Arizona delegates came together to discuss Coker's new proposal in Senator Paul Fannin's office on May 20, 1971. Administrative Assistant Terry Bracey described the meeting in a memo to Congressman Udall.

> The meeting had the air of a wake: everyone was smiling, firendly (sic), and sympathetic, but no one had one solid suggestion on how the Gray's (sic) grazing permit might be resurrected.
>
> Coker felt that the only chance was to introduce legislation that would reaffirm a life term grazing agreement made to Senator Hayden by Sec. Ickes. While that agreement has no legal standing, it might be strong enough to get a Senate Hearing, and Hayden would testify.
>
> I'm sure we can get the rest of the delegation to introduce this bill if you will. It doesn't have a prayer, but it would be a last shot, and give Coker something to show the Gray's (sic).
>
> Roger (Lewis, Udall's Administrative Assistant) thinks Coker is looking for a way out, and I got that impression too. If you introduce this bill, it should get a blistering report in short order from the Interior depart. At that point, we could draft a delegation letter telling Coker this is the end of the road.[4]

Udall agreed to submit Coker's proposed bill (H.R. 8755) with John Rhodes and Sam Steiger as cosignators. Senators Paul Fannin and Barry Goldwater chose to submit a dif-

[1] Letter to Robert Louis Gray from SW Regional Director Frank Kowski, November 16, 1970. ORPI-GA.

[2] Letter to Senator Paul Fannin, Senator Barry Goldwater, Congressman Morris Udall, Congressman Sam Steiger, and Congressman John Rhodes from Attorney Elmer Coker, April 23, 1971. ORPI-GA.

[3] Letter to Senator Paul Fannin, Senator Barry Goldwater, Congressman Morris Udall, Congressman Sam Steiger, and Congressman John Rhodes from Attorney Elmer Coker, May 10, 1971. ORPI-GA.

[4] Memo to Congressman Morris Udall from Administrative Assistant Terrence Bracey, undated. Morris Udall Papers, Box 180, Folder 11. See also memo to NPS Director George Hartzog from Assistant Director of Park Support Services Monte Fitch, May 24, 1971. ORPI-GA.

ferent bill. S. 2326 would require the Secretary of the Interior to purchase any private lands or existing grazing and water rights and permanently extinguish all grazing on the Monument.[5]

The Park Service and the Department of the Interior vehemently opposed both 1971 relief bills.[6] Again, neither piece of legislation ever came to a vote. Again, the Grays were warned to remove their cattle from Organ Pipe lands before the end of 1971. In January 1972, the Park Service began legal action against the Gray Partnership.[7]

Coker, warned that legal action by the Park Service was impending, wrote letters of desperation to the Arizona congressional delegates.[8] Coker implored the delegates to request that the Secretary of the Interior postpone any action to remove the Grays in hopes that the 1971 relief legislation might still be acted upon. The tone of Coker's letters became increasingly vehement and angry over what he saw as the mistreatment of the Grays. He accused Interior employees of making "outright falsehoods" about the Grays in their adverse reports on the relief legislation. He finished his letters to the delegation with the warning that Henry Gray had recently suffered a heart attack and any future "action by the Interior Department could cause him (Henry) to suffer a set-back or even perhaps bring on his death." Like a good lawyer, Coker was adept at creating in his letters an atmosphere of "us vs. them" in the hope that he might arouse his readers' ire (or sympathy) and encourage them to act for the benefit of his clients. As in this particular case, he was largely successful.[9]

On September 8, 1972, the United States filed suit in US District Court alleging trespass on Organ Pipe lands by the Gray cattle and suing for "undetermined damages."[10] While the suit brought the Grays' trespass into the public realm, it also had the disadvantage that the Park Service could no longer attempt to remove the Gray cattle without jeopardizing the outcome of its case.

Coker again wrote to plead that the Arizona delegates submit new relief legislation. This time, however, Coker argued that he would use the legislation justify his argument that the court had no jurisdiction while congressional legislation was pending.[11] Udall along with Rhodes and Steiger were willing to assist but Senators Paul Fannin and Barry Goldwater were adamant that all legislative efforts had failed and that the courts were now the appropriate place for the resolution of the conflict.[12]

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[5]Letter to Elmer Coker from Fannin Legislative Assistant James Musgrove, June 28, 1971. ORPIGA.

[6]Memo to Legislative Counsel from NPS Deputy Director Thomas Flynn, No Date (Approximately mid-September 1971). ORPI-GA.

[7]Memo to Regional Field Solicitor from Acting SW Regional Director Theodore Thompson, December 16, 1971. ORPI-GA.

[8]Letters to Senator Barry Goldwater, Senator Paul Fannin, Congressman Morris Udall, Congressman Sam Steiger, and Congressman John Rhodes, from Attorney Elmer Coker December 22, 1971. HGA, Box 1, Folder 20.

[9]Letter to Deputy Assistant Secretary Orme Lewis from Senator Paul Fannin, Senator Barry Goldwater, Congressman John Rhodes, Congressman Morris Udall, and Congressman Sam Steiger, January 20, 1972. HGA, Box 1, Folder 21.

[10]"U.S. Sues Rancher Brothers," *The Arizona Republic*, September 9, 1972. HGA, Box 1, Folder 21.

[11]Letter to Congressmen Morris Udall, Sam Steiger, John Rhodes and Senators Barry Goldwater and Paul Fannin from Attorney Elmer Coker, January 15, 1973. HGA, Box 1, Folder 22. Memo to Congressman Morris Udall from Administrative Assistant Terrence Bracey, February 6, 1973.

[12]Congressmen Udall, Steiger, and Rhodes submitted H.R. 11653 on November 28, 1973. The bill would

Shortly after Congressman Udall and others submitted their last relief bill, H.R. 11653, the Department of the Interior announced a proposal to set aside a significant portion of Organ Pipe lands as wilderness.[13] The Interior's proposal and the relief bill by Udall, Steiger, and Rhodes were obviously at odds with each other: the Monument could not maintain grazing on lands that had been defined as wilderness. The question was which piece of legislation would ultimately win out? In the same year, Senators Paul Fannin and Barry Goldwater introduced legislation to ban mining in Organ Pipe 35 years after Carl Hayden's legislation had reopened its use.[14] Finally, it seemed that all the pieces of the preservation puzzle at Organ Pipe were coming together.

Coker had submitted to the district court a motion to dismiss the suit against the Grays on the grounds that congressional legislation was pending and would affect the outcome of the suit. Coker tried to argue using an earlier judicial decision that the pending legislation made the issue "the exclusive jurisdiction of the Congress."[15] In June 1974, Judge Walter Craig denied Coker's motion as absurd.

> There is nothing in (that) opinion which supports the position that a court's jurisdiction is restricted on matters otherwise within its cognizance when the Congress has legislation pending before it which might otherwise render the legislation moot.[16]

In November 1974, Congressman Mo Udall announced his candidacy for president of the United States.[17] From that moment on, and Udall's focus was in a different arena well above and beyond the intractable issues surrounding the Grays and Organ Pipe Cactus National Monument. Attorney Coker wrote to Congressman Sam Steiger to request that he replace Udall in the leadership role among the Arizona legislators and persuade the others to reintroduce another relief bill. Steiger's reply, if ever made, has not yet been found in any files. The chapter on the Arizona delegates' efforts to resolve grazing at Organ Pipe Cactus National Monument had come to a close. Everyone knew that the Grays were aging fast and that the National Park Service's lawsuit against the Grays would probably be the last word on the 37-year-long clash of wills and cultures.

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again guarantee a lifetime permit for the Grays. Henry Gray Archives, Box 1, Folder 22; letter to Attorney Elmer Coker from Senator Paul Fannin, February 7, 1974. Henry Gray Archives, Box 1, Folder 23; letter to Congressman Sam Steiger from Attorney Elmer Coker, January 29, 1974. Henry Gray Archives, Box 1, Folder 23.

[13] "Wilderness Plan Would Make Little Change at Organ Pipe." *Ajo Copper News*, January 10, 1974; "Organ Pipe Wild-Area Talk Planned." *The Arizona Republic*, February 9, 1974. Henry Gray Archives, Box 1, Folder 23.

[14] "Proposals for Wilderness in Blue, Organ Pipe Hit." *Tucson Daily Citizen*, March 7, 1975. Morris Udall Papers, Box 203, Folder 1. Legislation banning all mining was approved in 1976.

[15] *U.S. v. Gray Partnership et al.* No. Civ-72-491 Phoenix WEC, June 10, 1974. Henry Gray Archives, Box 1, Folder 23. The case that Attorney Coker and Judge Craig referred to was U.S. vs. Darby, 312 U.S. 100 (1941).

[16] *ibid.*

[17] Letter to Congressman Sam Steiger from Attorney Elmer Coker, November 25, 1974. Henry Gray Archives, Box 1, Folder 23.

15.1 The Death of the Grays

On December 19, 1974, Jack Gray died of a self-inflicted gunshot wound. Jack had been burdened by a series of heart attacks starting in the early 1960s. Since that time he had been unable to participate in the hard labor of running cattle. Jack was 65 years old at his death.

Bobby Gray had been unwell since 1970. A heart condition exhausted him, especially during the heat of the summer. In 1975, he suffered a severe heart attack. In October of that year, Henry Gray had open heart surgery. On September 19, 1976, Henry Gray at age 79 died of a heart attack. Two months later, on November 19, Bobby, age 64, passed away, also from a heart attack.[18] Attorney Elmer Coker passed away in his home in Phoenix one year later on October 15, 1977 at age 68.[19]

Bobby Gray, prior to his death, had written to Superintendent Roy Allen to voice his opinion on the Organ Pipe Wilderness proposal. His letter is one of only a handful of documents written by the Grays that expressed their views of the events and changes that occurred in their lifetimes across their landscape. The writer spoke of his sadness for the loss of the way of life that he knew. The traditional uses were being eliminated and the traditional users forced out.

> The voices of the local people, mainly mining and cattle people, who have lived on and worked this desert area for nearly a lifetime, are being silenced by those who only recently have discovered the charm of the desert. The miners and ranchers are the ones who gave the names to the Alamo, Williams Spring, Dripping Spring, Bull Pasture, Victoria Mine and most other places of interest.
>
> The grazing legislation must be allowed to be the determining factor of when grazing will be eliminated. If the two ranchers left lose the case before the courts, our government should buy up the deeded land and state least land within the monument. The grazers are willing to sell and once active ranchers should not be forced to shrivel up on their deeded and state leased land with no roads in or out.[20]

15.2 The Final Elimination of Grazing

Following Judge Craig's denial of Coker's motion to dismiss, the lawsuit against the Grays lay dormant for almost 2 years.[21] In February 1976, Attorney Coker offered to settle the lawsuit by accepting a five-year grazing permit from the Park Service with forgiveness

[18]Rutman. No date. "A History of the Gray Family at Organ Pipe Cactus National Monument." ORPI Library Archives.

[19]Schaus, Richard G. 1977. "Arizona Heritage. Elmer Carroll Coker. 1909-1977." *Arizona Cattlegrowers Outlook*, December: 12-13.

[20]Letter to Superintendent Roy Allen from Robert Louis Gray, September 16, 1975. Henry Gray Archives, Box 1, Folder 24.

[21]Letter to Southwest Representative for the Wilderness Society Dave Foreman from Regional Director Howard Chapman, January 28, 1976. ORPI Grazing Archives.

of all past fees accumulated since the termination date.[22] The Park Service responded that Coker's offer was "totally unacceptable" and requested instead that the US Attorney move the case forward onto the calendar for trial.[23] In all likelihood, Coker's offer was merely another ploy to delay the progress of the lawsuit and to buy the Gray brothers more time before their eviction. William Collins has written that Judge Craig allowed the trial date to slip repeatedly.[24] While this information has not yet been corroborated elsewhere, such procedural delays certainly fit the pattern of Attorney Elmer Coker's legal style and courtroom manipulations.

After the death of the last of the Grays, the National Park Service became the owner of all property and structures on federal land. Bobby Gray's Dowling ranch and homestead were sold to a private investor and ultimately all structures were removed.[25] The property was later purchased by the Park Service. The claims for water wells on federal lands that the Grays had made in the 1950s were denied on the grounds that all subsurface waters were possessed by the land owner. The two real springs, Aguajita and Williams, were legitimately claimed by the Grays. But without a grazing permit, no one had a right of access to the water and therefore their use and sale value were negligible.[26] The executor of the Grays' estates hired Jeff Cameron to capture and remove all cattle and feral livestock. When Cameron finished in 1978, he had removed over 1700 head of cattle.[27]

The trespass lawsuit against the Grays had still not been closed in 1980. In its original filing, the Park Service had left open the option of claiming damages against the Grays. Damages to park structures and costs for grazing management were calculated at approximately $50,000.[28] The Park Service agreed to drop the lawsuit and all claims for damages if the executor canceled all of the Grays' claims for grazing or water rights.[29] This the executor did.

The damages to the natural resources of Monument were immeasurable. As early as the 1940s, the Park Service, in conjunction with the Soil Conservation Service, was working to stop erosion in the loss of soil and vegetation. Unfortunately none of those early efforts could correct the damage caused by the presence of cattle. Real restoration of the Monument lands could not begin until the cattle had been removed. Organ Pipe Plant Ecologist, Sue Rutman, succinctly described the longterm consequences of continued grazing at the Monument.

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[22]Letter to NPS Director Gary Everhardt from Attorney-Advisor Sharon Alexander, February 11, 1976. ORPI Grazing Archives.

[23]Memo to Attorney-Advisor Sharon Alexander from Acting Associate Director Raymond Freeman, February 24, 1976. ORPI Grazing Archives.

[24]Collins, William S. 1996. "Cattle Ranching in Arizona: 1848-1950." Multiple Property Nomination. Arizona State Historic Preservation Office, Phoenix, Arizona, section E, page 58.

[25]Rutman. No date. "A History of the Gray Family at Organ Pipe Cactus National Monument." ORPI Library Archives.

[26]Memo to Field Solicitor from Acting Regional Director John Davis, January 11, 1977. ORPI Grazing Archives.

[27]Broyles, Bill and George Huey. 1997. *Organ Pipe Cactus National Monument: Where Edges Meet*. Southwest Parks and Monuments Association, Tucson, Arizona, page 53.

[28]Memo to Regional Director from General Superintendent of the Southern Arizona Group John Clay, May 19, 1976. ORPI Grazing Archives.

[29]Letter to US Attorney Michael Hawkins from Department of Interior Solicitor Ralph Mihan, May 28, 1980. ORPI Grazing Archives.

Overgrazing caused the loss of irreplaceable soil resources and the long-term imbalance of this desert ecosystem. If the practice had been stopped before serious resource damage had occurred, we may not have spent countless amounts of time and money on engineering 'solutions.' In retrospect the National Park Service and the public continue to pay for the reluctance to stop overgrazing. It is a message that resonates through the decades.[30]

[30]Rutman, Sue. 1997. "Dirt Is NOT Cheap." *Bajada* 5(2): 14; see also Rutman. 1997. "Dirt Is Not Cheap: Livestock Grazing and a Legacy of Accelerated Soil Erosion on Organ Pipe Cactus National Monument, Arizona." Unpublished document. https://www.law.asu.edu/Portals/20/Files/confs/rangeland1997/Soil%20-%202%20Rutman.pdf

CHAPTER 16

Summary of Important Themes from the Ranching Era

16.1 The Gray Family

The role of the family is central to the history of ranching at Organ Pipe. The controlling hand of patriarch Robert Lee Gray and the strong bond among the four male members gave the ranching partnership its powerful voice and longevity. That strength was illustrated repeatedly in the unified work ethic to maintain and develop what they believed was their ranch. Despite deep streaks of stubbornness and independence in each member, the Grays presented a unified front when the partnership was challenged. That family unity was also illustrated in the shared cultural beliefs regarding ranching, range management, and grazing and water rights.

16.2 The Ranching Institution

The importance of ranching as a social and political institution and its ultimate decline provide the primary undercurrents that run through the conflicts between the Park Service and the Gray family. In the 1930s, traditional land users such as the Grays and their western contemporaries such as Attorney Elmer Coker and Senator Carl Hayden held sway because of ranching's economic and social prominence. A single ranch family could and did command grazing concessions from the National Park Service. In the 1960s, the political strength of the ranching industry waned, and the environmental community and the National Park Service gained public support and political clout.

16.3 A Dying Ranching Form

The Gray ranching operation represented the last vestige of an early ranching pattern – open range cattle-raising. Fleeing Texas, New Mexico, and then eastern Arizona, the Grays transported this already historic tradition with them on their own migration to the farthest reaches of the grazing world. The Organ Pipe region, largely ignored as too arid to support cattle, was essentially unclaimed north of the International Boundary. But the environment was so forage-poor that it could only support that size of ranching operation during periods of high precipitation. When the climatic conditions became too dry, shrub and grasses were permanently transformed under continued grazing pressure, just as vegetation in Texas and eastern Arizona had been earlier.

16.4 Political Decisions and Repercussions

The history of ranching at Organ Pipe was shaped and altered by numerous federal policies and decisions from both the executive and legislative branches. The Taylor Grazing Act and President Franklin Roosevelt's creations of the Monument and Game Range permanently shifted the landscape from one of public domain to federal reservations managed by Department of the Interior agencies. Those decisions also removed the opportunity for Henry and Jack Gray to successfully file a homestead claim for title to their own land. Carl Hayden's private agreement with the National Park Service perpetuated grazing for more than 35 years. Without his protection, this land use might have been eliminated much earlier. The definition of the grazing agreement between a federal agency and a rancher as a "privilege" and not a "right" reverberated throughout this conflict until the death of the last Gray. Arizona congressional legislators for 15 years endeavored unsuccessfully behind the scenes and later on the front lines with legislation to effect closure in this long-running battle.

State law also added to the Gray/Organ Pipe conflict. Arizona state legislators were reluctant to resolve artificially separated concepts of surface and groundwater. Differences between statutory law and State Supreme Court decisions over groundwater prolonged another wrestling match between the Grays and the Park Service for the ownership of well waters across the Monument.

16.5 Changes within the Landscape

The vegetation of the Sonoyta Valley was a prime consideration for Robert Lee Gray when he bought the Blankenship improvements. Even though the landscape in 1919 was by no means pristine, it was verdant enough to draw Gray from the rich grasslands of the San Rafael Valley to the Sonoyta region. Likewise, the unusual vegetation excited Park Service and scientific communities when they surveyed the region for inclusion in the park system. Early vegetative studies showed few sites with evidence of grazing. The climate and the landscape shifted into an apparently drier period during the 1940s - 1960s. Evidence of vegetation damage and change from cattle grazing became increasingly obvious. These changes coincided with a rise in environmental values and ethics and finally, aroused the public's ire. The response of the National Park Service was to extinguish the grazing permit and, ultimately, eliminate all livestock from Monument lands.

16.6 Buildings Reflect Ranch Culture and Environment

The Gray structures and buildings at Organ Pipe are the physical expressions of the bare necessities for a ranching community. They are also illustrative of the use of natural and man-made resources from the local environment, a form of desert vernacular architecture of the Sonoran Desert. To manage cattle across 350 square miles of desert required a wide dispersal of equipment and manpower. Line camps, corrals, watering facilities, and ranch houses were spread across Organ Pipe and out to its four corners. Ranch house sites were chosen for their proximity to dependable waters that were plentiful enough to support both cattle and humans. Most buildings and structures were created prior to 1937.

Structures on the Gray ranches were built with a notion of frugality that few today would understand. Money for materials was not always available. The Grays' income from the sale of cattle arrived only once, perhaps twice, each year – and sometimes not at all. Structures were built with resources that were found on site: mesquite trunks, saguaro and organ pipe cactus ribs, grass and reeds, and mud. When non-natural, reusable materials were available for little or no cost, those resources were utilized too, including cement, corrugated iron, railroad ties, and asphalt. Comfort was not a value that was rated highly among the male members of the Gray family. Most buildings had few amenities and were designed for functionality in the desert environment.

Sources and Acknowledgements

The majority of historical information used in this report comes from primary sources: National Park Service reports, letters and memos; letters from the Grays' Attorney Elmer Coker; memos from Arizona Congressional delegates; and oral histories from Gray family members themselves. All of these primary resources are located in southern Arizona and can be found at the Cultural Resources Research Library and the Natural Resources Library at Organ Pipe Cactus National Monument; Special Collections at the University of Arizona and the Western Archaeological and Conservation Center, both located in Tucson; and the Hayden Library at Arizona State University in Tempe. Additional documents regarding federal agencies and actions are most certainly available in the National Archives at College Park, Maryland. That information, however, was beyond the reach of this report.

Other sources were utilized in the assembly of information on personal histories, early ranching in Sonora and Arizona and on the history of social and cultural attitudes within the ranching communities. Valerie Weeks Scott's article "The Range Cattle Industry", Charles Wilkinson's book Crossing the Next Meridian, and Karen Merrill's book *Public Lands and Political Meaning* give excellent information on the political and legal history of ranching culture and the evolution of grazing rights. Excellent summaries of cattle grazing and the ranching industry in Arizona have already been produced. Jay Wagoner's books and articles including "History of the Cattle Industry in Southern Arizona, 1540 – 1940" and "Overstocking the Ranges in Southern Arizona during the 1870s and 1880s" primarily cover the southeastern region of the state and are still unequaled in their value to historians. Deputy State Historic Preservation Officer William Collins' "Cattle Ranching in Arizona" is an outstanding survey of the industry's history across entire state as well as a useful summary of the economic value of ranching during the first half of the twentieth century. Two excellent histories of the Monument were produced by Roy Appleman and Russell Jones, "Blankenship Ranch, Historic Structures Report," and Jerome Greene, "Historic Resource Study of Organ Pipe Cactus National Monument." Brenna Lissoway's "Administrative History of Organ Pipe Cactus National Monument" covers its first 30 years and is quite thorough. Retired Organ Pipe Ranger, Wilton "Bill" Hoy's descriptions of figures and places in the Ajo area in his published articles and unpublished histories add depth and color to this story. Most of his writings can be found in the Organ Pipe Cactus National Monument library. But no one has a better understanding of the Gray family, their culture, and the consequences of their 60 years of existence at Organ Pipe than Plant

Ecologist Sue Rutman. From her interviews with old timers and retired park employees and her transcriptions of old scratchy interview tapes, she has produced an in-depth, but as yet unpublished, history of the Gray family members. This context report leans heavily on her cultural study.

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Part VI

Ranching and Grazing at Fort Bowie National Historic Site

CHAPTER 1

Regional History: Cattle Ranching, Mining, and the Town of Bowie[1]

1.1 Early Mexican and Anglo-American Ranching in Southeastern Arizona

Cattle were brought to the Apache Pass region during the late 1700s when the Spanish military and missionaries began to move into Pimerìa Alta.[2] The Basin and Range environment that later became southeastern Arizona was well known for its lush grasslands (Figure 1.1). Following independence from Spain, Mexican settlers established land grants in the San Bernardino Valley in 1821 and the Agua Prieta Valley in 1836 to raise cattle on those essentially untouched grasslands. Other land grants were established during the 1820s in the Santa Cruz, San Pedro, Babocomari, and San Rafael Valleys and also maintained large herds. Settlers raised cattle to support the region's presidios, missions, settled Indian populations, and mining communities.[3] Historian James Officer states that 4000 head of cattle were moved into the San Bernardino Valley south of the Chiricahua Mountain Range at that time.[4] Civil unrest in Sonora initiated the withdrawal of most military troops as well as the federal funding that supported and pacified Indian tribes. Increasingly frequent Apache raiding caused the abandonment of settlements in the mid-1830s. By the beginning of the Mexican-American war in 1846, most grantees had left the region. Some moved to Tucson to reside under the protection of the last presidio.[5] Many livestock were abandoned to roam the open grasslands.

In 1846, Lieutenant Colonel Philip St. George Cooke led a battalion of Mormon Volunteers through the San Bernardino, San Pedro, and San Rafael Valleys. In a now famous incident called the "Battle of the Bulls," the Mormon Battalion encountered herds of these abandoned and now wild cattle, some of which the troops literally had to fight off.[6] Large

[1]This administrative history was completed under Cooperative Agreement No. 1248-00-002 in conjunction with the Desert Southwest Cooperative Ecosystem Studies Unit of the National Park Service, and with the Heritage Conservation Program at the College of Architecture and Landscape Architecture, The University of Arizona.

[2] Pimerìa Alta encompassed the Mexican state of Sonora in the region south of the Gila River. James E Officer, Mardith Schuetz-Miller, and Bernard L Fontana. *The Pimerìa Alta Missions and More*. Tucson AZ: Southwest Mission Research Center, 1996; Ray Mattison. "Early Spanish and Mexican Settlements in Arizona." *New Mexico Historical Review* 21, no.4 (1946) 273-327; James Officer *Hispanic Arizona. 1536-1856*. Tucson: University of Arizona Press, 1989. Pages 97-115; Bert Haskett. 1935. "The Early History of Cattle Industry in Arizona." *Arizona Historical Review* 6 (1935) 3-49.

[3] Spanish and Mexican land grants generally began at approximately 17,000 acres. Some were much larger.

[4] Officer. 1989. Pages 106-108; Mattison. 1946. Pages 310-313.

[5] Officer. 1989. Pages 110-114, 148-149.

[6] Officer. 1989. Pages 195-197; J.J. Wagoner. *The History of Cattle Industry in Southern Arizona, 1540-*

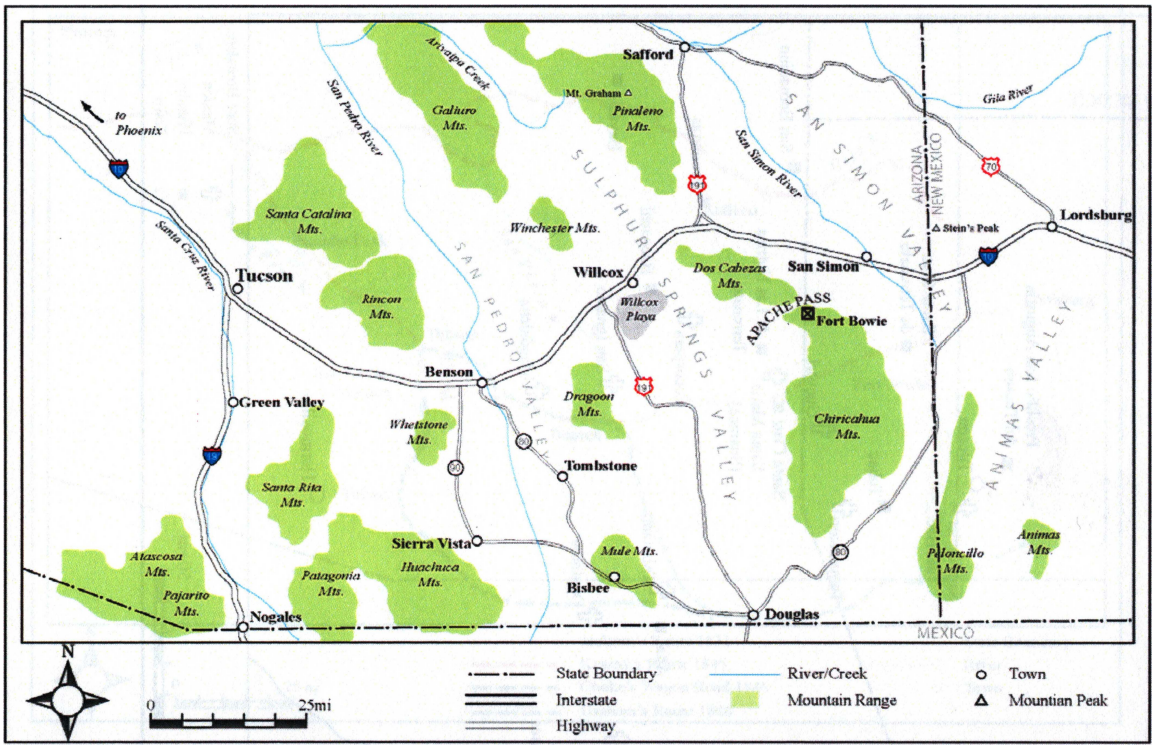

Figure 1.1: Regional map of Southeast Arizona and Southwest New Mexico showing basin-and-range complex. NB: the modern Interstate Highway I-10 closely follows the Southern Pacific (now Union Pacific) Railroad corridor. From Farnsworth 2009.

herds were seen near the San Bernardino land grant in 1849. Boundary Commissioner John R Bartlett in 1851 estimated that 40,000 head were still roaming the Babocomari Valley.[7] Within a few years, however, these herds containing thousands of head had disappeared from the area. Cattle drivers traveling between Texas and California in the mid-1850s did not report encounters with any of these herds. Larry Christiansen has hypothesized that Apaches considered female cows more delectable and selectively reduced the herds to a nonreproductive status. The remaining animals were harvested by Mexicans or died of old age.[8]

While an active ranching industry in the region was all but eliminated during the decades between 1830 and 1870, there was still a significant movement of cattle into and out of the area. Midwestern stockmen were driving animals westward to California to feed the explosive growth in the mining industries and the communities that support them. Cattle were trailed north of the Chiricahua Mountain Range as well as through Apache

*1940.*University of Arizona Bulletin, Social Science Bulletin 20. Tucson: University of Arizona, 1952, Page 28; Larry Christiansen. "The Extinction of Wild Cattle in Southern Arizona." *Journal of Arizona History* 29, no.1 (1988) 89-100.

[7] Officer. 1989. Page 224; Wagoner. 1952. Page 25.

[8] Christiansen. 1988. Page 98.

Pass.[9] Emigrants also brought small herds with them *en route* to settling in California. In 1854, Congress approved the Gadsden Purchase and appended a narrow strip of land south of the Gila River to the territories of Arizona and New Mexico. Anglo-Americans began moving themselves and their cattle into southeastern Arizona to establish their own ranches. Most of these settlers chose the Santa Cruz, Babocomari, and Sonoita Valleys, areas with good water, grass, and military protection.[10]

The withdrawal of American troops during its own Civil War left newly established ranches exposed to Apache and Mexican outlaw depredations. The return of American troops after 1865 and the establishment of numerous military encampments across southern Arizona initiated a second wave of stockmen to the area. Henry Clay Hooker had recently arrived to Arizona from California. From 1868 to 1874, Hooker supplied beef to the American Army and to Indian reservations, including the Chiricahua Apache Reservation in the southern Sulphur Springs Valley. In 1873, he established the Sierra Bonita Ranch in the northern portion of Sulphur Springs Valley.[11] In 1876, Hooker and business partner, JM Barney, were again supplying beef to Camp Bowie and other Army posts.

Many of these early ranching enterprises were still fairly small in size. Historian Tom Sheridan states that until 1877 Arizona ranchers had difficulty supplying sufficient quantities of beef to feed both Army troops and Native Americans residing on reservations.[12] With the termination of the Chiricahua Reservation in 1876, the Sulphur Springs Valley was opened to mineral prospecting and mining. By the 1880s, the burgeoning settlements in Bisbee and Tombstone also demanded beef.[13]

Other early ranchers to the region were Louis Prue and Brannick Riggs and his family in 1879. Prue settled below the mouth of Bonita Canyon while the Riggs family homesteaded further west in Sulphur Springs Valley. John Slaughter purchased the Arizona portion of the San Bernardino land grant in 1884. All three had beef contracts with Fort Bowie at one time or another until the Fort's closure a decade later.[14] Other homesteaders and ranchers who settled in the Apache Pass and Fort Bowie region included Emma and Neil Erickson, Joseph and Maggie Schaeffer, and Ja Hu and Pauline Stafford.

Even in the early 1880s, the grasslands in these valleys were still in good condition. Will Barnes, a prospective stockman and future grazing supervisor for the US Forest Service, described the landscape of the San Simon Valley when he visited in 1882.

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[9] Wagoner. 1952. Pages 28-30; William S Collins. *Cattle Ranching in Arizona: 1848-1950*. Phoenix AZ: Arizona State Historic Preservation Office, 1996. Page 16.

[10] Wagoner. 1952. Pages 31-32; Conrad Bahre. *A Legacy of Change: Historic Human Impact on Vegetation of the Arizona Borderlands*. Tucson: University of Arizona Press, 1991. Page 115.

[11] Wagoner. 1952. Pages 33-34, 43; Collins. 1996. Page 61, note 54; Lynn R Bailey. *Henry Clay Hooker and the Sierra Bonita*. Tucson AZ: Westernlore Press, 1998. Pages 50-60.

[12] Thomas Sheridan. *Arizona: a History.* Tucson: University of Arizona Press, 1995. Page 130.

[13] Bailey. 1998. Pages 61-62.

[14] John Casey Riggs and Jeanette Riggs Roll. *Our El Dorado*. Private Publication by Jeanette Riggs Roll, Dos Cabezas AZ, 1957. Pages 16-20. Arizona Historical Society; Lysa Wegman-French. 2006. "Chiricahua National Monument: Faraway Ranch Special History Study." Intermountain Cultural Resources Management, Professional Paper No. 72. Santa Fe NM: Cultural Resources Division, Intermountain Region, National Park Service, USDI, 2006. Chiricahua Cultural Resource Files. Page 39; Richard Y Murray. 1951. "The History of Fort Bowie." MA Thesis, Department of History, University of Arizona, 1951. Page 163; interview with Tina Thompson, Resource Management Staff Chiricahua National Monument. November 11, 2005.

> The meadows were covered with soft lush grasses, almost untouched by animals except for the horses and mules of an occasional traveler and the deer and antelope that came to the stream for a drink. Everywhere on the more open areas those fine stock grasses, black, blue and hairy gramas, grew luxuriantly. Here and there along the wash were tracts of alkali land on which sacaton touched my stirrups ...[15]

The Southern Pacific Railroad, the long awaited southern transcontinental line, was constructed between 1879 and 1881.[16] Its presence in southern Arizona greatly enhanced the ranching as well as other local industries. The arrival of the rail line led to the establishment of the towns of Willcox, Bowie, and San Simon.[17] Prior to the railroad, movement of cattle into and out of Arizona was limited to challenging and risky cattle drives during which head could be lost to floods, rustlers, stampedes, and Indians. Southern Pacific now provided stockmen with a quick, relatively inexpensive, and safe method of rapidly transporting their produce to the national beef markets in Kansas City, St. Louis, and Chicago.[18] The railroad also offered an easy opportunity to move cattle rapidly from drought-afflicted regions in California and Texas to the open, relatively unused, and unclaimed ranges in southeastern Arizona.

The Southern Pacific Railroad Company also introduced homesteaders to lands available for claim near Apache Pass. Both small-scale ranchers and large-scale cattle companies contributed to the rapid growth in livestock population in the Sulphur Springs and San Simon Valleys in the 1880s. Cattle companies in the Sulphur Springs Valley included the Chiricahua Cattle Company at Turkey Creek established in 1885, the Erie Cattle Company at Whitewater Draw established in 1883, and Hooker's Sierra Bonita Land and Cattle Company in 1887. East of the Chiricahua Mountain Range, the San Simon Cattle and Canal Company was established in 1885.[19]

Cattle numbers in Arizona increased from 136,000 in 1882, to 655,000 in 1885, and finally to 928,000 in 1890.[20] More than 10% of the livestock in the state were located in Cochise County and most of those were found in the Sulphur Springs Valley. By 1885, all available natural water sources have been claimed and the ranges in Sulphur Springs were fully stocked.[21]

During the summer of 1885, little rain fell. The grasses were badly overgrazed and ranchers incurred heavy mortality of livestock throughout the range. Stockmen believed that this climatic event was an aberration and continued to maintain too many cattle on the

[15] Will C Barnes. "Herds in San Simon Valley." *American Forests* (October 1936) 456.

[16] The Southern Pacific Railroad Company became part of the Union Pacific Company in 1996.

[17] Willcox would later become the biggest cattle shipping point in the Southwest. See David F. Myrick. *Railroads of Arizona, Volume 1: the Southern Roads.* Berkeley CA: Howell-North Books, 1975. Page 60.

[18] Wagoner. 1952. Pages 45-46.

[19] Wagoner. 1952. Pages 47-48; Lynn R Bailey. *"We'll All Wear Silk Hats." The Erie and Chiricahua Cattle Companies and the Rise of Corporate Ranching in Sulfur Spring Valley of Arizona, 1883-1909.* Tucson AZ: Westernlore Press, 1994. Pages 25-29. San Simon Cattle and Canal Company Papers, Hardin-Simmons University, Abilene, Texas.

[20] Collins. 1996. Page 14. These cattle numbers were assembled from tax documents. By all accounts, the true numbers of livestock on the ranges were significantly greater.

[21] Bahre. 1991. Pages 114-118; Wagoner. 1952. Page 42-44.

range when the rains returned. Starting in the summer of 1891, a second and more severe drought gripped southeastern Arizona and lasted for two full years.[22] The denudation of the grasslands was extensive and cattle mortality was estimated to have been between 50-75%.[23] For the next 11 years, precipitation was below average.[24] By 1901, the chief botanist of the Arizona Experiment Station, DA Griffiths, commented that the destruction of the southeastern Arizona ranges was so complete that it was "beyond the conception of those not familiar with the character of precipitation, configuration of the land, composition of the soils and the habits of forage plants in the region."[25]

Coincident with the second drought episode of 1891-1893 were a number of environmental changes noted by astute observers and early range botanists. Whether these changes were a direct or indirect response to overgrazing and other human-caused impacts or were simply associated with a long-term shift in climate patterns in the Southwest has been, and still is, a topic of discussion among ecologists and environmental historians.[26] Ranchers noted plant community changes; perennial grasses were replaced by annuals. Other plants including cacti, mesquite, and other shrubs were increasing in frequency and crowding out grasses. The loss of ground cover and excessive trampling by cattle initiated widespread erosion and loss of top-soils. Down-cutting and entrenchment occurred in most major watercourses like the San Simon, Santa Cruz, and San Pedro Rivers and caused a dewatering of soils and drying of surface seeps and cienegas.[27]

Ranchers and stockmen responded by changing their cattle and range management in order to reduce their risk of similar catastrophes during subsequent droughts. Land management changes included drilling wells and building stock tanks to provide additional water. Management of livestock became much more intensive. Cattle management involved augmenting desirable traits in livestock. Ranchers crossbred Hereford and Angus bulls, animals that carried more meat per head, with their desert-adapted Mexican stock. Ranchers also sold male cattle at younger ages rather than retaining all livestock until fully grown. Thus, southern Arizona ranges became devoted to breeding livestock. With few exceptions, ranches evolved into cow-calf operations.[28]

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[22] Wagoner. 1952. Page 45.

[23] Haskett. 1935. Pages 41-42.; JJ Wagoner. 1961. "Overstocking of the Ranges in Southern Arizona during the 1870s and 1880s." *Arizoniana* 2 (1961) 23-27.

[24] Conrad J Bahre and Marilyn L Shelton. "Rangeland Destruction: Cattle and Drought in Southeastern Arizona at the Turn of the Century." *Journal of the Southwest* 38, no. 1 (Spring 1996): 1-22.

[25] David Griffiths. 1901. "Range Improvements in Arizona." USDA Bureau of Plant Industry, Bulletin 4. Washington, DC: Government Printing Office, 1901. Page 9.

[26] Conrad Bahre presents an excellent summary of these arguments and their respective supporters in Chapter 3 of his 1991 publication *A Legacy of Change: Historic Human Impact on Vegetation of the Arizona Border Lands* Tucson: University of Arizona Press. See also Raymond M Turner, Robert H Webb, Janice E Bowers, and James Rodney Hastings.*The Changing Mile Revisited: an Ecological Study of Vegetation Change with Time in the Lower Mile of an Arid and Semiarid Region.* Tucson: University of Arizona Press, 2003.

[27] Bahre and Shelton. 1996; Barnes. 1936; Ronald U. Cooke and Richard W. Reeves. *The Arroyos and Environmental Change in the American Southwest.* Oxford: Clarendon Press, 1976.

[28] Wagoner. Pages 47-50; Robin L Pinto. 2009. "The History of Ranching at Organ Pipe Cactus National Monument. Pima County, Arizona. A Thematic Context Statement." Tucson AZ: University of Arizona and Desert Southwest Cooperative Ecosystems Studies Unit, 2009. Page 42. Organ Pipe Cactus National Monument Files.

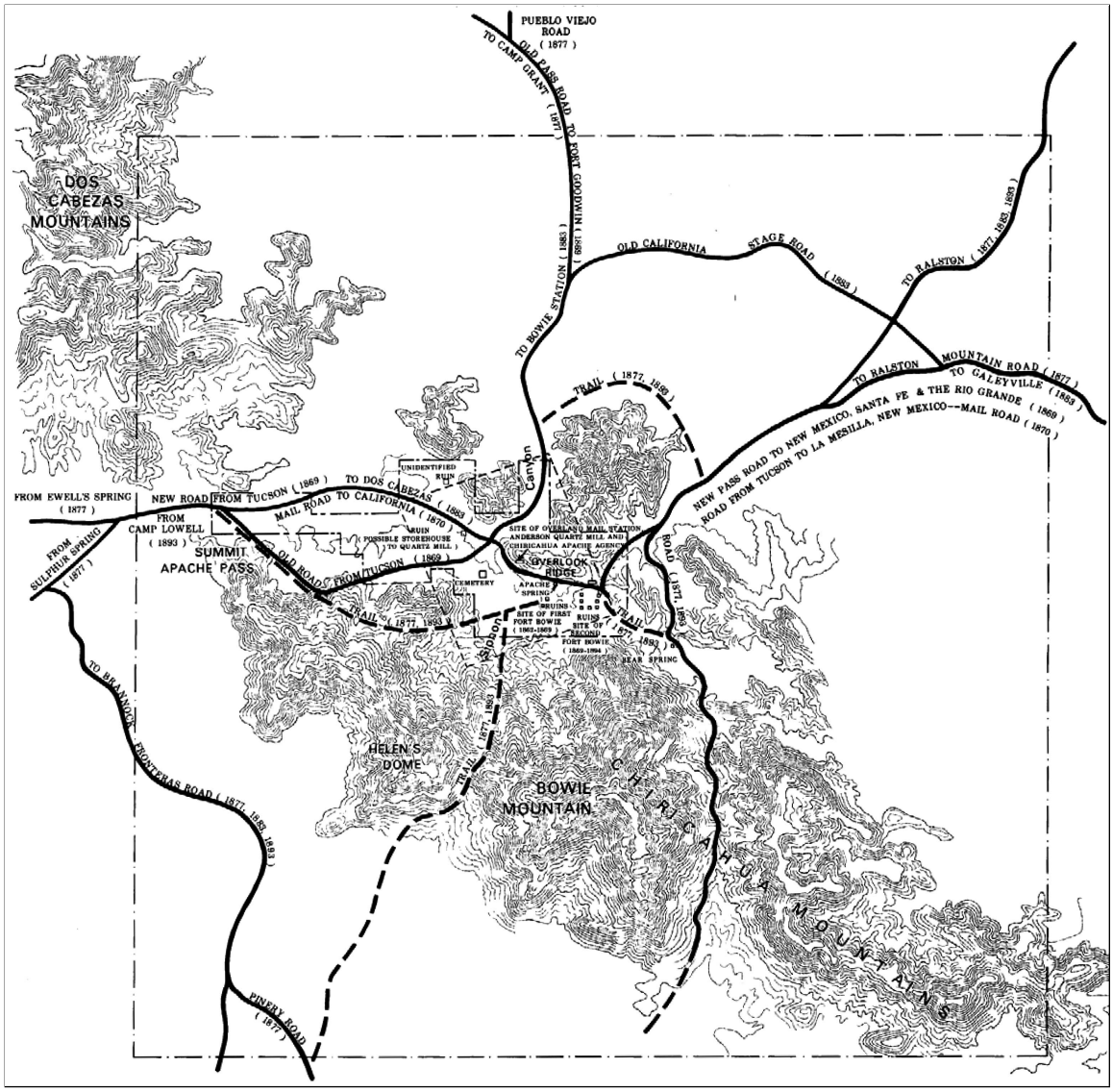

Figure 1.2: Map illustrates Fort Bowie's first (small square) and second reservation boundaries with historic roads and trails. From Greene 1980.

1.2 Settlement and Ranching in Apache Pass

Settlement and formal homestead claims in Apache Pass were delayed by a series of government reservations. An area of approximately one square mile was withdrawn around the first fort in the mid-1860s.[29] Camp Bowie was formally surveyed in 1869 and declared a federal reservation in 1870 with a total of 768 acres. The establishment of the Chiricahua Indian Reservation in 1872 was the second land withdrawal; this reservation encompassed all of the Dragoon, Chiricahua, and Peloncillo Mountain Ranges, the upper Sulphur Springs and much of the San Simon Valley.[30] The Indian Reservation was eliminated four years later. In 1877, the federal government enlarged Fort Bowie's reservation to almost 20,000 acres covering all of Apache Pass and including portions of townships 14S28E, 14S29E, 15S28E, and15S29E (Figure 1.2). This last reservation essentially prohibited settlement in Apache Pass until 1894 when the US Army abandoned Fort Bowie.[31]

Prior to 1894, most settlers squatted on lands beyond the Fort boundaries. Joseph and Maggie Schaeffer built a home and ran cattle immediately west of Apache Pass. Joseph also worked as a plasterer at Fort Bowie.[32]

After Fort Bowie's closure, many of the surrounding settlers dismantled the Fort's wooden buildings and structures reusing roofs, doors, windows, and flooring.[33] James Dickson, "a master of many things such as blacksmithing, carpentry, (and) masonry" removed a significant portion of the Commanding Officers Quarters which he reused in his construction of the Bear Spring Ranch house.[34] A group of miners were living in the Officers Quarters in 1896 and working claims in the area.[35] Shortly after 1900, Tom Riggs, son of Brannick Riggs, lived in one of the restored buildings at the second Fort and ran his cattle throughout Apache Pass. Riggs later moved two miles northeast of the Fort below Bear Gulch and built his own house.[36] Like Dickson, Riggs used wood remnants from Fort Bowie buildings to construct his new home.[37] Joseph Schaeffer's daughter, Anna, married Joel Lawhon, a cowboy who worked for Brannick Riggs and later the San Simon Cattle Company. Together they developed the HYL Ranch in Goodwin Canyon in 1896 on land within the abandoned Fort boundary (Figure 1.3). Thus, most of the cattle that grazed

[29] Jerome Greene. 1980. "Historic Structure Report, Historical Data Section. Fort Bowie: Its Physical Evolution, 1862-1894. Fort Bowie National Historic Site." Denver: Branch of Historic Preservation, Pacific Northwestern/Western Team, NPS, July 1980. Fort Bowie Files.

[30] With the exception of the Fort itself.

[31] Jerome Greene. 1980. Even though formally part of the public domain, the land within the Fort Bowie military reservation was not available for claim or purchase until 1911 when it was finally resurveyed.

[32] Riggs and Riggs Roll. 1957; Interview with Josephine Moseley by EF Schaaf. 1972, AV 0222, Arizona Historical Society, Tucson. The family name has been variously spelled as Shafer, Shaffer, Schafer, and Schaefer.

[33] Robert Utley. "Historical Report on Fort Bowie." Santa Fe NM: Region III Office, National Park Service, 1958. Pages 88-89. National Park Service Library; Letter to Richard Murray from Nellie Merwin, March 9, 1965. Fort Bowie Files; Logan, Alice. 1989. "A Bit of Bowie's Surrounding History." 1989. Places-Arizona-Bowie. Ephemera Files. Arizona Historical Society, Tucson.

[34] Logan. 1989; "National Register of Historic Places Nomination for Bear Spring House, Guardhouse, and Spring." Fort Bowie Files.

[35] *Sulphur Valley News*, Tuesday, December 8, 1896, Vol. III, No. 37, Willcox, Arizona. Fort Bowie Files.

[36] Riggs and Riggs Roll. 1957. Pages 29-31.

[37] Letter to Kennith [sic] Cooper Owner of the Bear Spring Ranch from Jack Kaiser. June 30, 1987. Fort Bowie Files.

Figure 1.3: Joel and Anna Lawhon at the HYL Ranch. No Date. Photograph courtesy of Josie Lawhon Moseley. Fort Bowie National Historic Archives.

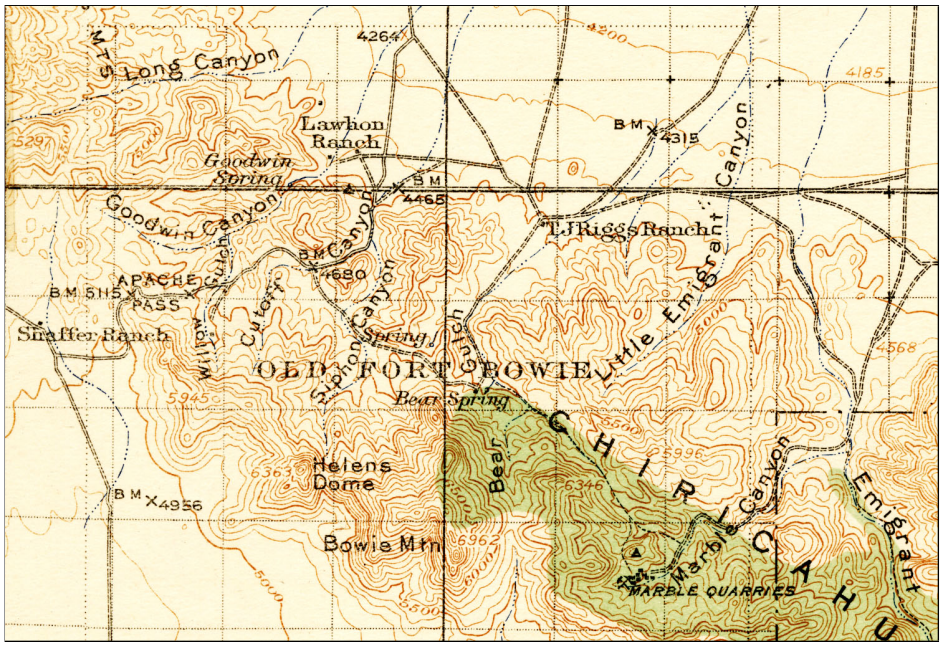

Figure 1.4: Detail from 1916 US Geological Survey San Simon Quadrant map showing ranches of Joseph and Maggie Schaffer, Joel and Anna Lawhon, TJ and Anna Mae Stafford Riggs and John Kerr's marble quarry. University of Arizona Special Collections Archives.

Fort Bowie lands belonged to the Schaeffer and Riggs families. These settlers and ranchers were squatting on lands which could not be formally claimed until Apache Pass was surveyed by the General Land Office in 1909 and put up for auction in June 1911 (Figure 1.4).[38]

During and after the auction of Fort Bowie land, Tom Riggs, James Dickson, Joel Lawhon, Anna Lawhon, William Schaeffer (Anna Lawhon's brother), John C Riggs (Tom Riggs' brother), the Riggs Cattle Company (the Riggs family corporation) and John Kerr bought land for cash. Of the lands that fell within the present Fort Bowie National Historic Site, Tom Riggs and the Riggs Cattle Company together purchased 240 acres in section 12 T15S R28E. Anna Lawhon later purchased 20 acres in section 3. John Kerr purchased lands for his Siena Placer Mine including 10 acres in section 1.[39]

Joel and Anna Schaeffer Lawhon and the Riggs Cattle Company continued to purchase grazing lands and water sources in and around Apache Pass. None of their additional purchases fell within the future Fort Bowie National Historic Site.

Tom Riggs probably acquired the northern portion of the Riggs Cattle Company's section 12 landholdings in 1922. Riggs passed away in 1926 and his widow, Anna Mae Stafford Riggs, married Joseph Schaeffer, son of the original Joseph Schaeffer and brother of adjacent land owner, Anna Schaeffer Lawhon.[40] Joseph and Anna Mae Schaeffer sold the future Fort Bowie lands and ranch to TD Shown in 1949. Shown sold to AL Stansberry in 1954; Stansberry later sold to Earl Neel in 1958.[41]

James Dickson's widow, Hester, sold the Bear Spring Ranch and lands to Levy C Knape in the early 1920s.[42] It appears that Knape purchased the 160 acre parcel in the south half of section 12 from the Riggs Cattle Company probably in 1922. Earl Neel purchased the Bear Springs Ranch from Knape's widow in 1959 thereby consolidating all private base ranchlands northeast of Fort Bowie National Historic Site.

[38] "Historic Site Is to Be Sold." *Prospector,* May 15, 1910. "Cochise Fort Sold." *Prospector*, June 21, 1911.

[39] Riggs and Riggs Roll. 1957. Pages 93-95; the Riggs Cattle Company (RCC) was started in 1904 by Brannick and eight children including Tom and John. It lasted until 1922 when all of its assets were sold. RCC purchased N1/2SE1/4, SE1/4NW1/4, SW1/4NW1/4, and SW1/4SE1/4. Tom Riggs purchased the SE1/4SE1/4. John Kerr filed a mining patent on the third private land parcel SE1/4NE1/4SW1/4 in section 1 that was later sold to Anna Lawhon.

[40] Riggs and Riggs Roll. 1957. Pages 93-95; Opal Cooke Interview by Emil Schaaf, June 8, 1971, Arizona Historical Society, Tucson; Mary Dee Kipp. "A Daughter of Pioneers." *Arizona Catalog* (August 1946) 4-7.

[41] Letter to Richard Y Murray from Charles Jackson Pioneer Title and Trust Co. Bisbee, Arizona, January 8, 1965. Fort Bowie Files.

[42] Logan. 1989.

CHAPTER **2**

Arrival of the National Park Service to Authorization, 1935-1964

Since the mid-1930s, the National Park Service was the primary driver of the movement to preserve and protect Fort Bowie's ruins and the landscape of Apache Pass. During those periods of time when the Park Service had neither the manpower nor funds to affect its plans, the resources of Apache Pass were managed by local ranchers. Joe and Anna Mae Riggs Schaeffer and LC Knape were running cattle near the second Fort and in Bear Gulch; Anna Lawhon managed cattle on the HYL north of Willow Gulch and Siphon Canyon; and members of the Riggs' family controlled most of the land and range west of Apache Pass.

By the start of the 1930s, Arizona was beginning to feel the pinch of the Great Depression already afflicting much of the rest of the country. Agricultural industries in the state had suffered from drought conditions since the mid-1920s. The Southern Pacific Railroad and Phelps Dodge Mining companies had laid off workers. In 1932, Franklin D Roosevelt was elected by a landslide on the promise that he would bring a "New Deal" to the country. Roosevelt had proposed to put unemployed laborers back to work by restoring natural resources and building new infrastructure. Roosevelt's first New Deal program, the Civilian Conservation Corps (CCC), dispersed companies of young men across the country to restore and rebuild rural environments. Many CCC camps were established to build new parks and monuments. These construction programs were designed and managed by National Park Service employees on county, state, and national park lands.

Horace Albright took the reins of the National Park Service in 1929 when its first director, Stephen Mather, retired. Mather's vision for his newly created agency had been to assemble and protect some of the most stunning landscapes across the United States. Albright, however, wished to augment that original vision by including historic sites. In 1933, Albright persuaded not only his superior, Secretary of the Interior Harold Ickes, but President Roosevelt as well, of the importance of protecting the nation's prized historic sites. In Albright's opinion, the National Park Service was the only agency that could plan for their development and interpret those sites to the general public. On August 10, 1933, Roosevelt transferred all War Department military sites, battlefields, and cemeteries to the National Park Service. Roosevelt also included all national monuments that had been previously administered by the US Forest Service. Barry Mackintosh has elaborated on the significance of that transfer for the Park Service.

> The reorganization of August 10, 1933 was arguably the most significant event in the evolution of the National Park System. There was now a single system of federal park lands, truly national in scope, embracing historic as well as natural places. The Service's major involvement with historic sites held limitless potential for the System's further growth. Unlike the War Department,

> the Service was not constrained to focus on military history but could see areas representing all aspects of America's past.[1]

In 1934, the Park Service proposed, and Ickes approved, the Historic American Buildings Survey to assemble an archive of descriptions, drawings, and photographs of national architectural treasures. At the same time, Ickes enthusiastically supported another bill moving through the Legislature. On August 21, 1935, President Roosevelt signed Historic Sites Act into law. The Act authorized the National Park Service to survey and research historic sites, buildings, and objects. With its new legislative mandate in hand, the Park Service assembled a cadre of energetic, young professional historians and architects. Within two years of the Act's establishment, the historians assigned to the survey were inundated with proposed sites. It became obvious that a nationwide comparison survey was needed in order to better evaluate the importance and significance of each of the proposed historic sites. Like many other programs in the 1930s, the Historic Sites Act was funded with New Deal monies. These funds often ebbed and flowed with economic fluctuations. However, with the onset of World War II, funding for research and labor for the survey was redirected to the war effort.[2] While the Act did not fulfill its grand promise of preservation and planning during the 1930s and '40s, it did set the stage for the first serious efforts of planning for and protecting Fort Bowie's ruins and the landscape of Apache Pass.[3]

2.1 The National Park Service in Southeastern Arizona

Frank Pinkley journeyed to the Southwest in hopes of curing his tuberculosis. Under the combined influences of the warm sun and dry climate, Pinkley recovered from his lung infection and soon landed a job in 1901 as the first custodian to watch over the prehistoric adobe ruins at Casa Grande, Arizona. Fascinated with the architectural aspects of his charge, Pinkley became a self-taught expert in his field of prehistoric and historic adobe architecture. He traveled widely throughout the southwestern United States and northern regions of Sonora, Mexico to study adobe buildings and ruins. In 1918, Casa Grande Reservation and Pinkley were both transferred to the National Park Service. The Park Service recognized in Frank Pinkley a remarkable administrative talent. By the early 1920s, the Park Service had accumulated 13 national monuments within the southwest region and needed someone to oversee their protection and management. Pinkley was appointed in 1923 to the position of Southwestern National Monument Superintendent to oversee all of those small park units (Figure 2.1).[4]

The transfer of Chiricahua National Monument from Forest Service to Park Service administration in 1933 brought the ruins of historic Fort Bowie and the landscape of Apache Pass into Pinkley's closer scrutiny. Pinkley had regularly visited and photographed

[1] Barry Mackintosh. 1991. *The National Parks: Shaping the System*. Washington, DC: History Division, NPS, USDI, 1991, page 24.

[2] Charles B Hosmer *Preservation Comes of Age: from Williamsburg to the National Trust, 1926-1949*. Volumes 1 & 2. Charlottesville VA: University Press of Virginia, 1981. Pages 562-577.

[3] William J Murtaugh. *Keeping Time. The History and Theory of Preservation in America*. Hoboken NJ: John Wiley & Sons, 2006. Pages 43-46.

[4] Hal Rothman. *America's National Monuments. The Politics of Preservation*. Lawrence: University of Kansas Press, 1989. Pages 108-116.

the adobe ruins of Fort Bowie as early as 1932. With the enactment of the Historic Sites legislation, many important ruins and buildings in Arizona were being assessed for nomination to the survey. During the fall of 1935, Pinkley brought Arthur Woodward, Assistant Chief of the Museum Division of the Park Service, to view the ruins of Fort Bowie.[5] He also brought with him George Grant, the National Park Service photographer.[6]

Figure 2.1: Frank Pinkley, Superintendent of Southwest National Monuments, in 1934 at SWNM Office in Casa Grande AZ. Western Archæological and Conservation Center Archives.

Neil Erickson, owner of the Faraway Ranch near Chiricahua National Monument, accompanied the Park Service representatives and provided a first-hand account of the history of the Fort and the landscape. Erickson had served in Arizona as a sergeant in the 4th Cavalry during the Apache campaigns in the 1880s. Neil was often assigned to deliver supplies and mail to Fort Bowie. His future wife, Emma Peterson, had run the boarding house at Fort Bowie in 1886. The Ericksons' first daughter, Lillian, was born at Fort Bowie's hospital in 1888. In 1909, Neil, then a forest ranger at Chiricahua National Forest, had been assigned to assist the survey of the now-closed military reservation prior to sale of the land.[7] Neil's account, the essentially unaltered landscape, and the ghostly ruins of the two forts clearly whetted Pinkley's appetite for the site and his excitement to include Fort Bowie in the national survey. At that meeting, George Grant photographed Neil Erickson standing in the midst of the ruins of the Commanding Officers Quarters. The elderly Erickson, age 76 and two years before his death, is dressed in his old forest ranger attire (Figure 2.2). The visit and its resulting image represent both

[5] Bernard L Fontana. "Forward." In Buford Pickens (Ed.) *The Missions of Northern Sonora: a 1935 Field Documentation*. Tucson: University of Arizona Press, 1993. Page xvii.

[6] Woodward and Grant in the fall of 1935 were part of a team of architectural researchers traveling to Sonora, Mexico to study and document the historic missions established by Jesuit Missionary Eusebio Kino. See Buford Pickens (Ed.) *The Missions of Northern Sonora*.

[7] Lysa Wegman-French. "Chiricahua National Monument: Faraway Ranch Special History Study." Intermountain Cultural Resources Management, Professional Paper No. 72. Santa Fe NM: Cultural Resources Division, Intermountain Region, National Park Service, USDI, 2006. Chiricahua Cultural Resource Files. See chapters 1 and 2 "Overview" and "Federal Presence in the West." Pages 7-66.

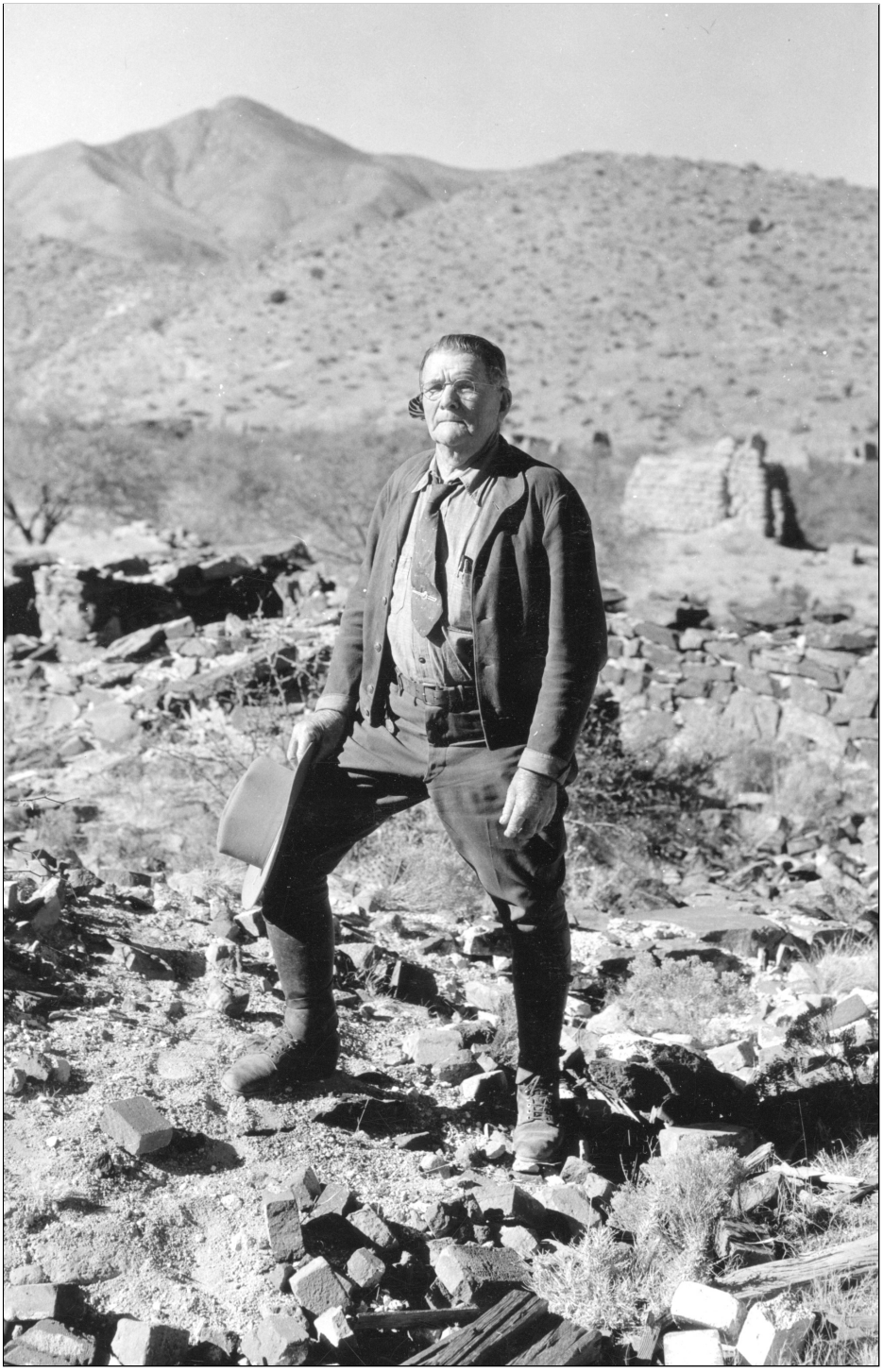

Figure 2.2: Neil Erickson: Soldier in the US Army 4th Cavalry, Ranger in US Forest Service at Chiricahua National Forest, and Owner of the Faraway Ranch in Bonita Canyon. Erickson stands amidst ruins of the Commanding Officers Quarters at Old Fort Bowie in 1935. Photograph by George Grant. Western Archæological and Conservation Center Archives.

an opening and closing: a closing of the historic era of military campaigns and Apache conflicts, its remnants in tatters, and an opening, a beginning of Fort Bowie's rebirth as a national historic site permanently protected under the ægis of the National Park Service.

A year later in January 1937, Pinkley advanced his idea to create a national monument around Fort Bowie's ruins. He sent Park Service regional planners and local Civilian Conservation Corps supervisors to examine the site. Despite a collective dismay over the shambles of the ruined structures, Planner RO Collins was enthusiastic about the Fort's acquisition. He envisioned expanding the boundaries of Chiricahua National Monument northward to include the landscape of Fort Bowie. CCC Inspector Richard Sias, however, was less enthused. He reported that the proposed addition would be impractical and difficult to develop given the distance from any population center, its present inaccessibility, and the financial and engineering challenges of constructing a suitable access road.[8]

The visit by National Park Service officials to investigate Fort Bowie's acquisition aroused an immediate response from local communities. Still in the depths of the Great Depression, local officials enthusiastically supported any possibility of federal investment in their region. RE Souers, Superintendent of the Warren Arizona schools, wrote to endorse Frank Pinkley's proposal to create a national monument.[9] Other local officials lost no time in writing to Arizona Senator Carl Hayden and House Representative John Murdock in the hopes that the congressmen might also encourage the Park Service to develop Fort Bowie.[10] Now with the support of local communities and Arizona congressmen, Pinkley hired history student, Henry Woods, in 1938 to develop a synopsis of Fort Bowie's participation in the Apache campaigns, its development, and history of events that occurred in Apache Pass.[11]

With the passage of the Historic Sites Act in 1935 and the subsequent (albeit brief) rush of New Deal funds to support historical research, hundreds of sites were being proposed to the Park Service for study. Historian and Acting Assistant Director Verne Chatelain defined a historic site "as a place where man and nature have conspired to produce some result of notable importance in the history of the human race."[12] Chatelain described two types of historic sites that the Park Service was interested in acquiring. The first would be an area of settlement where permanent remains and material objects were available. The second might be a site where human interaction with the landscape had only been temporal, such as in a battle site. Fort Bowie fell into both categories of interest. By August 1937, Fort Bowie was on a list of proposed sites. Because of Senator Hayden's special interest in the ruins, Acting Assistant Director Chatelain requested that Regional Historian Aubrey

[8] Daily Travel Reports from R.O. Collins SWMA Assistant and Richard Sias CCC Inspector, January 18, 1973. History Division Planning Files, National Park Service, Washington Office. Sias's observations were clearly astute; Park planners were struggling with those very issues 30 years later.

[9] Robert M Utley "Background Statement on Proposed Fort Bowie National Historic Site, Arizona," Santa Fe NM: Southwest Regional Office, National Park Service, July 1962. Fort Bowie Files.

[10] Memo to Region III Director from Acting Assistant Director, August 23, 1937; Letter to Representatives John Murdock from Director Arno Cammerer, August 30, 1937. History Division Planning Files, National Park Service, Washington Office.

[11] Henry Woods. "Special Report Covering the Proposed Fort Bowie National Monument." Santa Fe NM: Region III Office, NPS, June 1939. Fort Bowie Files.

[12] Verne Chatelain. "Archæological and Historic Sites Objectives." *American Planning and Civic Annual* (1936) 39-43.

Neasham give Fort Bowie a priority rating for any future site investigation.[13] Despite enthusiasm at both local and national levels, Congress provided no funding for the proposed investigations and further cutbacks in New Deal programs in 1937 put most site research on hold.[14]

2.2 First Site Surveys and Proposals

Despite a lack of funding for research, enthusiasm to preserve Fort Bowie as a unit of the National Park Service continued at all levels. Finally, in June 1939 Acting Regional Director Hillary Tolson was given permission by Associate Director A.E. Demaray to formally investigate Fort Bowie. Demaray warned Tolson, however, that it was unlikely during this era of austerity that President Roosevelt would authorize acquisition of any future sites.[15]

Together with Aubrey Neasham, a well-respected historian from Region III, Tolson authored a special report on Fort Bowie analyzing its history and possibilities for interpretation. They concluded that the site was representative of numerous national themes and should be considered of major importance for the Historic Sites Survey. Fort Bowie would fall under the theme of "Westward Expansion" as the Fort and its military inhabitants had been established to protect travelers on their way to California and recent settlers in the territory of Arizona. The Fort was also thematically representative of "The War between the States," "Commerce and Industry," and "Travel and Communication." Tolson and Neasham proposed that Fort Bowie be established as a national monument by presidential proclamation and that a Civilian Conservation Corps camp be assigned to develop an appropriate road, stabilize the ruins, and construct administrative buildings. In the same report, Jerome Miller, Region III Landscape Architect, recommended that the monument's boundaries be limited to the plateau around the second Fort and the Triangular Valley containing the Cemetery and the first Fort (Figure 2.3). A final section of the report included information on the land status within the proposed boundaries.[16]

Approximately 110 acres of the proposed site were under private ownership by ranchers Joe Schaeffer and LC Knape. The remaining 1310 acres were public domain lands managed by the newly established Division of Grazing. Both Schaeffer and Knape were

[13] Memo to Region III Office from Verne Chatelain Acting Assistant Director, August 23, 1937. History Division Planning Files, National Park Service, Washington Office. Senator Carl Hayden was deeply interested in Fort Bowie's development for personal reasons as well as his desire to see his state recognized by the National Park Service. Hayden in his younger days had completed research on the life of Colonel George Washington Bowie for whom the Fort was originally named. His father, Carl Trumbull Hayden, had traversed Apache Pass in the first Butterfield stagecoach in 1858 prior to Fort Bowie's establishment. Letter to the Conrad Wirth NPS Director from Senator Carl Hayden, July 3, 1958. Fort Bowie Files; Utley. 2004. Page 65.

[14] Hosmer. 1981. Pages 592-597.

[15] Memo to Region III Director from Acting Director, June 15, 1939. History Division Planning Files, National Park Service, Washington Office. See also Barry Mackintosh. 1985. *The Historic Sites Surveyed and National Historic Landmarks Program: a History.* Washington, DC: History Division, NPS, USDI, 1985. Pages 20-21.

[16] "Special Report Covering the Proposed Fort Bowie National Monument." Santa Fe NM: Region III Office, June 1939. Fort Bowie Files.

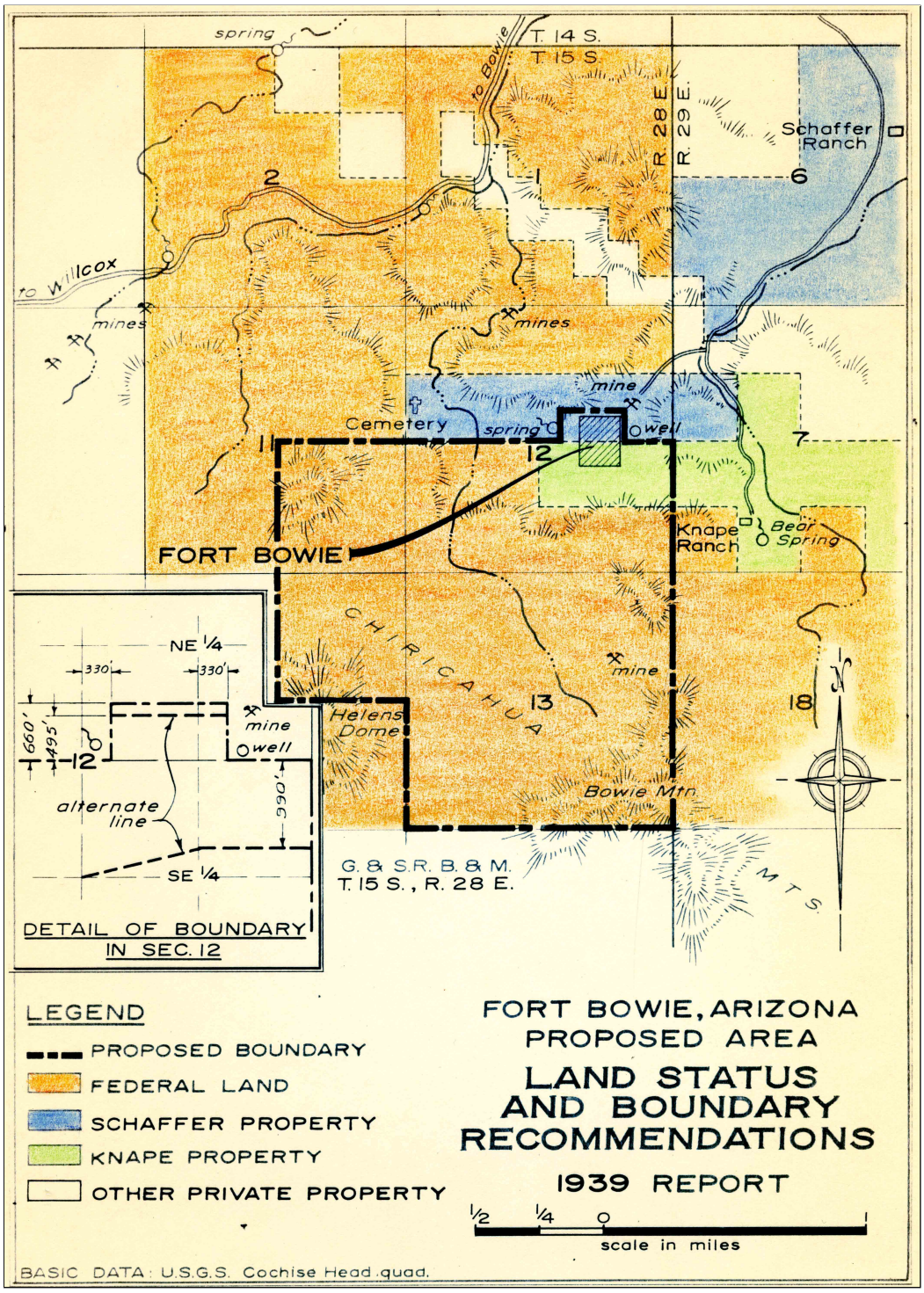

Figure 2.3: Map illustrates proposed Fort Bowie National Monument in 1939. From "Special Report Covering the Proposed Fort Bowie National Monument," 1939.
Western Archæological and Conservation Center Archives.

running cattle under a communal grazing lease covering the proposed lands.[17] Acquisition would be further complicated by the presence of two springs (Apache and Mine Tunnel) and a dormant but potentially operable graphite mine. Both Schaeffer and Knape had expressed a willingness to exchange their private lands for other public grazing lands nearby.

Hillory Tolson's report and recommendation to establish Fort Bowie was submitted to the National Park System Advisory Board's meeting the following year in October 1940. Director Newton Drury informed Tolson that the board found the site "extremely interesting" but postponed any further action until Fort Bowie and other historic frontier sites in the Southwest could be evaluated together and compared for their significance and feasibility. The Park Service promised that a survey of frontier posts would be completed within the year.[18]

Historian Robert Utley has written that this was a critical moment in Fort Bowie's road to establishment.[19] However, as the possibility of the United States' entrance into the conflict in Europe loomed ever greater, only the most exceptional historic sites and buildings were being considered for future inclusion into the National Park System; Forts Laramie and Union were the only sites actively investigated by the Park Service. Fort Bowie, while deemed "extremely interesting," was not in that league.

The Bowie Chamber of Commerce, however, would not let go of what it saw as a potential source of federal dollars. W.I. Welker pressed both Senator Hayden and Representative Murdock to use their positions on Park Service subcommittees to move Fort Bowie higher onto the selection list. Hayden and Murdock annually requested information and updates on Fort Bowie's status. In spite of the Arizona congressmen's repeated inquiries, the comparative survey remained dormant as the United States focused on the war effort in Europe and the Pacific. Finally, in March 1942, President Roosevelt informed Secretary Ickes and the National Park Service that no new areas would be considered for establishment during the duration of the war. From that moment on, all men and money were directed toward the war effort and protecting all existing sites "against the hazards of war."[20] Following another prodding missive from Senator Hayden, Chief Historian Ronald Lee reviewed the history of the Fort Bowie project with Director Drury in 1944. Lee recommended Fort Bowie as one of the most worthy sites in the Southwest along with Forts Union and Davis. He finished with the suggestion that when the National Park Service did acquire Fort Bowie, it "might be preserved simply as ruins and, hence, at a lesser cost to the taxpayer."[21]

[17] District grazing allotments under the Division of Grazing (the precursor to the Bureau of Land Management) had been recently established in 1936 and 1937. Schaeffer and Knape shared the Knape Community Allotment that was later renamed the Apache Spring Allotment, J Estes, BLM Range Specialist, Safford Arizona, Personal Communication.

[18] Memo to Region III Director from Newton Drury NPS Director, November 1, 1940. Fort Bowie Files; Memo to Hillory Tolson Region III Director from Newton Drury NPS Director, December 2, 1940. History Division Planning Files, National Park Service, Washington Office.

[19] Robert M Utley. "Background Statement on Proposed Fort Bowie National Historic Site, Arizona," Santa Fe NM: Southwest Regional Office, National Park Service, July 1962. Fort Bowie Files.

[20] Mackintosh. 1985. Pages 21-22; letter to Senator Carl Hayden from Hillory Tolson Acting NPS Director, May 9, 1942, History Division Planning Files, National Park Service, Washington Office.

[21] Memo to Newton Drury NPS Director from Ronald Lee Chief Historian, March 30, 1944. History Divi-

Even after the conclusion of World War II, the Washington office was reluctant to restart the process of investigation and acquisition of historic forts. The Advisory Board in March 1946 again postponed action on Fort Bowie.[22] Chief Historian Ronald Lee attempted to reinstate the Historic Sites Survey in the late 1940s but was unable to secure funding from Congress and the Budget Bureau.[23]

Region III administrators continued to agitate to restart Fort Bowie's investigation. Both Regional Director Minor Tillotson and Assistant Regional Director Hugh Miller were eager to add Fort Bowie to Region III park units. Finally, in 1951, Assistant Director Conrad Wirth gave Tillotson approval to make discreet inquiries concerning the status of local interest and the attitudes of the relevant landowners prior to making a full investigation and presentation to the National Park System Advisory Board. Assistant Regional Director Hugh Miller who had been Frank Pinkley's Assistant Superintendent during the previous 1930s investigation warned that such inquiries only served to arouse the hopes of the local communities. Miller asserted that the Advisory Board, with the 1939 report already in its possession, had sufficient information to make a recommendation regarding Fort Bowie's acquisition.[24] Interest in any investigation of Fort Bowie again returned to dormancy for another two years.

In 1952, the Advisory Board suggested a comparative study of military posts in the Southwest. Regional Historian John O Littleton was dispatched the following year to survey sites from Kansas to Texas and Arkansas to Arizona. Of the 66 military posts assessed, Littleton recommended three as deserving of further study and research. These three were chosen for their associations with major transportation routes, significant conflicts in military history, and their architectural remains. Forts Union in New Mexico, Davis in Texas, and Bowie in Arizona were singled out as worthy of further investigation by the National Park Service and the Advisory Board.[25] Again, because of a lack of funding, Littleton's recommendations were not pursued further.

Conrad Wirth has described in in his memoir, *Parks, Politics, and the People*, how the national parks suffered for 15 years for lack of adequate funding – first from diversions for the war effort in Europe and the Pacific, and later, for another decade, from diversions supporting the Cold War and the Grants-in-Aid to nations devastated by earlier conflicts.[26] Shortly after his appointment as director in 1951, Wirth proposed a massive 10-year renewal program entitled "Mission 66" to rehabilitate the National Park Service's dilapidated infrastructure and develop new facilities at all park units in order to accommodate the explosive growth in tourism. A small piece of this program's funding was

sion Planning Files, National Park Service, Washington Office.

[22] Memo from Hugh M Miller Assistant Region III Director to Minor R Tillotson Region III Director, January 15, 1951. History Division Planning Files, National Park Service, Washington Office.

[23] Mackintosh. 1985. Page 28.

[24] Memo to Newton Drury NPS Director from Minor R Tillotson Region III Director, January 16, 1951; Memo to Minor R Tillotson Region III Director from Conrad Wirth Assistant NPS Director, February 15, 1951, History Division Planning Files, National Park Service, Washington Office; memo to Newton Drury NPS Director from Hugh Miller Assistant Region III Director, April 15, 1951, Fort Bowie Files.

[25] John O Littleton. "Frontier Military Posts of the Southwest Area." Santa Fe, NM: National Park Service, Region III, November 1953. National Park Service Library.

[26] Conrad Wirth. *Parks, Politics, and the People*. Norman: University of Oklahoma Press, 1980. Page 234.

directed specifically to complete the unfinished Historic Sites Survey.[27]

The restart of the Historic Sites Survey excited citizens throughout the state of Arizona. Senator Hayden and newly elected Representative Stewart Udall enthusiastically reiterated their support for Fort Bowie's acquisition. Hugh Miller, now the Region III Director, requested approval to update the 1939 study and submit the final report to the National Park System Advisory Board. The initial investigation committee met at Fort Bowie in April 1957 and included Park Planning Specialist Leslie Arnberger, Chiricahua Superintendent Forrest Benson, Regional Chief of Interpretation Erik Reed, Chief of Recreation and Resource Planning William Bowen, and Landscape Architect Milton Malcolm. Two members of the Bowie Chamber of Commerce, Douglas Welker and Lauren Scott, accompanied the team. The team concluded that in the absence of any existing buildings, interpretation would largely be dependent upon the skills of park guides and quality of museum exhibits. The team suggested that either partial or complete reconstruction of buildings might be necessary for visitors to visualize the Fort's layout and historic architecture. The team was also excited to learn that documentation had already been collected and analyzed in a recently completed Master's thesis.[28] While some historic sites might be administered by a newly created State Parks Association, the team believed that the organization would never be able to provide proper funding, administration, or expertise to protect the site and its ruins.[29] The committee proposed a slightly smaller area than originally recommended in the 1939 report. The 1957 boundaries included the first and second forts, the Cemetery, Apache and Mine Tunnel Springs, and the Butterfield Stage Station. The site, however, was still complicated by numerous mineral and grazing leases, and pre-existing water and mineral rights (Figure 2.4). Early indications were that new rancher and land owner, AL Stansberry, was not well disposed to selling his private lands to any federal agency.[30]

Despite the challenges confronting federal acquisition of the enclosed private lands, William Bowen and Erik Reed enthused that Fort Bowie was one of the few outposts established as a strategic location to protect the surrounding community rather than a supply base for the military, as Forts Union and Davis had been. Both Bowen and Reed believed the site to be of outstanding national historical significance.[31]

2.3 Early Planning Missteps

In October 1957, Robert Utley was hired as the Region III Historian. His first assigned task was to formally investigate and document the significance of Fort Bowie (Figure 2.5).[32] Ut-

[27] Mackintosh. 1985. Page 33.

[28] Richard Y Murray. 1951. "The History of Fort Bowie." MA Thesis, Department of History, University of Arizona, 1951.

[29] Arizona State Parks Association had been created in 1957.

[30] Stansberry had lost private lands to the federal government on Mount Graham during the 1930s when they were apparently taken by eminent domain. He remained permanently averse to any dealings with the National Park Service.

[31] Leslie Arnberger. 1957. "Field Investigation Report. Fort Bowie, Arizona." Santa Fe, NM: Region III Office, NPS, 1957. Western Archæological and Conservation Center Library.

[32] Robert M Utley. 2004. *Custer and Me. A Historian's Memoir*. Norman: University of Oklahoma Press, 2004. Pages 65-67.

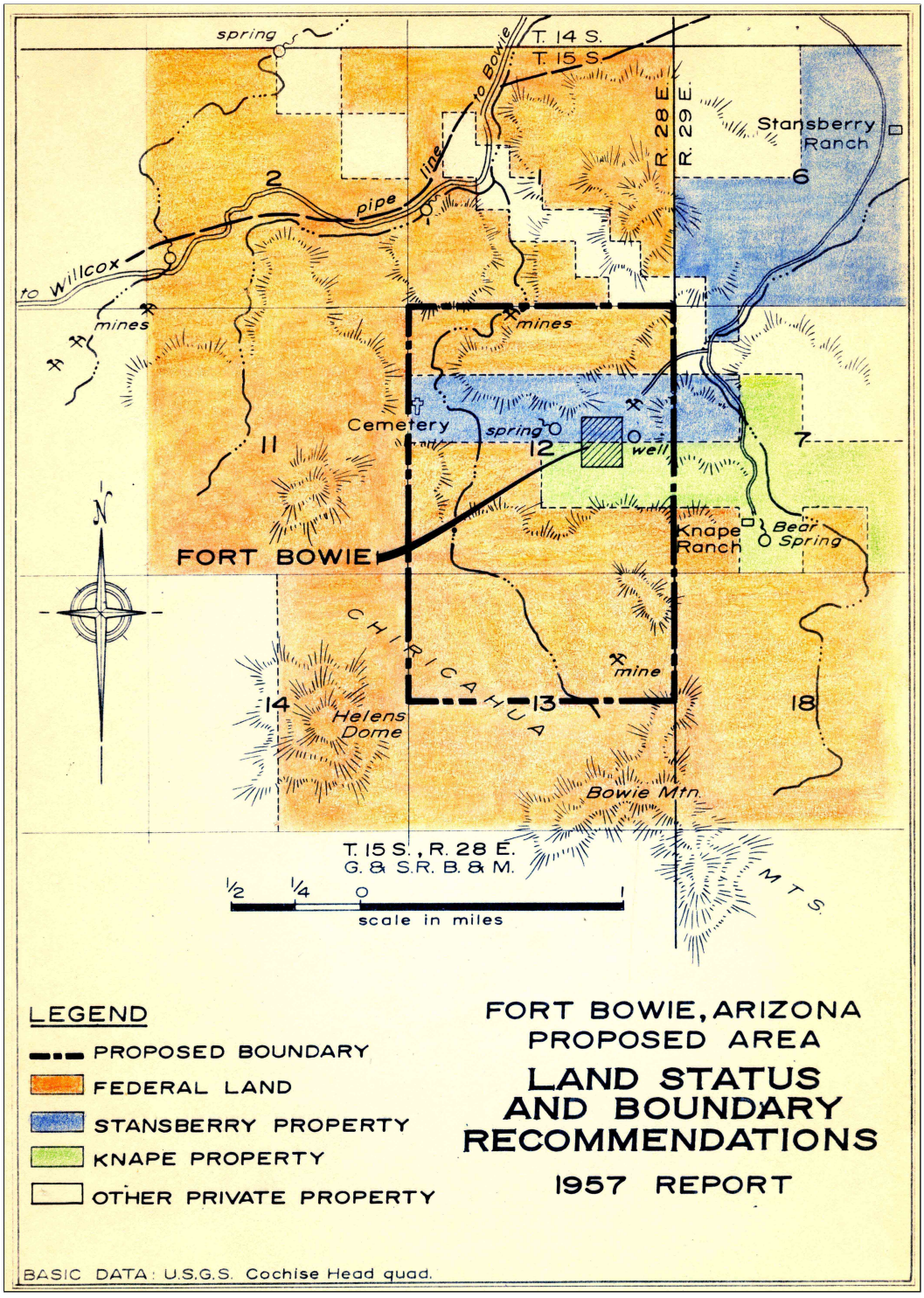

Figure 2.4: Map shows proposed area for Fort Bowie NHS including 1st and 2nd Forts, the Cemetery, and Apache Spring but excludes Stage Station and most of Butterfield Trail in 1957. From Arnberger 1957.

Figure 2.5: Region III Division of Interpretation c. 1959. Standing L-R: Zorro Bradley (archæologist), Robert Utley (historian), Al Schroeder (archæologist), Natt Dodge (biologist), Davy Jones (planner). Sitting Center: Erik Reed (division chief). On floor at right: Charlie Steen (archæologist). Others unknown. Photograph courtesy of Robert Utley.

ley's "Historical Narrative" which accompanied Fort Bowie's Field Investigation Report provided the first detailed accounting of the important events that took place in Apache Pass, their significance in relation to the extended Apache conflict, and the personalities of the participants. Meanwhile, both Richard Murray, author of a Master's thesis on the history of Fort Bowie, and Lauren Scott, Chairman of the Bowie Chamber of Commerce, personally devoted themselves to Fort Bowie's establishment. They wrote numerous letters to Park Service officials, Senators Hayden and Goldwater, and Representatives Udall and Rhodes. They also prodded the Douglas, Tucson, and Tombstone Chambers of Commerce into writing congressional representatives and park officials.[33]

The proposed creation of a national monument containing Fort Bowie's ruins was viewed with suspicion, and indeed hostility, by many of the affected land owners. LC Knape, the owner of the land containing the southern half of the second fort ruins, in-

[33] Memo to Hugh M Miller Region III Director from Ben Thompson Acting NPS Director, September 12, 1957. History Division Planning Files, National Park Service, Washington Office; Robert Utley "Background Statement." See also Richard Murray Correspondence Folders. Fort Bowie Files.

formed Planner Leslie Arnberger and Historian Robert Utley that he, Knape, had not liked the 1939 study's proposed boundaries and stated furthermore, "The only way they will get my land is through a judge."[34]

In April 1958, the National Park System Advisory Board concluded that Fort Bowie possessed "exceptional value as illustrating and commemorating the history of the United States."[35] With the favorable recommendation from the Advisory Board, Regional Director Hugh Miller was eager to proceed with the introduction of enabling legislation in Congress and protection of the lands now proposed for the new national monument. He wrote to Director Conrad Wirth concerning what he believed would be the appropriate sequence of actions.

> You are, of course, familiar with the problems of land ownership and use that will have to be resolved before the area can be accorded national monument status. However, *we believe these matters would be more susceptible to resolution following, rather than before, the introduction of legislation* (emphasis added) which would further stimulate public interest . . .[36]

Miller wished to move forward quickly on legislation. Likewise, Senators Barry Goldwater and Carl Hayden were both eager to introduce a bill to authorize Fort Bowie's establishment. With the impending legislation, it became important for the Park Service to protect the public lands within the proposed boundaries from opportunistic land or mineral claims. Such claims would only further complicate any future acquisitions. Miller wrote to the Arizona Supervisor of the Bureau of Land Management to request a withdrawal of those lands from any future mineral leasing, homesteading, or mining claims.[37] This request for land withdrawal would not preclude any existing authorized uses such as LC Knape's or Earl Neel's grazing leases.[38]

In an unfortunate lapse in judgment, the Region III Office made little or no effort to communicate these planning actions to the ranchers who owned the critical private lands and leased adjacent BLM allotments. Park Service representatives had included members of the local Bowie Chamber of Commerce and congressional representatives in planning discussions, but not the ranchers. When LC Knape and Earl Neel learned that BLM land withdrawals were proposed for their grazing allotments, they misconstrued the announcement to mean that the Park Service was eliminating portions of their grazing lands. Equally unfortunate in timing, Senator Goldwater simultaneously announced his bill, S 4131, for the establishment of Fort Bowie National Historic Site. Senator Goldwater's bill (which had been written by Park Service officials) suggested that the future historic

[34] Memo to William Bowen Region III Chief of Recreation Resources from Leslie Arnberger Region III Chief of Park System Planning, December 17, 1957. Fort Bowie Files.

[35] Letter to Senator Carl Hayden from Conrad Wirth NPS Director, May 8, 1958. Fort Bowie Files.

[36] Memo to Conrad Wirth NPS Director from Hugh Miller Region III Director, May 14, 1958. Fort Bowie Files.

[37] Memo to Arizona State Supervisor of Bureau of Land Management from Hugh Miller Region III Director, July 3, 1958. Fort Bowie Files.

[38] Earl Neel had recently purchased AL Stansberry's ranchlands and grazing lease in 1958.

site encompass up to 1000 acres.[39] Before these announcements, the ranchers had been uncertain as to what affect the proposed Park unit would have on their lands and their livelihoods. Now they were convinced that the Park Service was intent upon "destroying their ranches." Both ranchers hired lawyers and took their grievances to Goldwater and Assistant Secretary of the Interior Roger Ernst.[40]

LC Knape wrote to Regional Planner Leslie Arnberger and accused him of deceptive practices.

> You told me a small area was all you wanted…Now we have your withdrawal #018981 for 720 acres in three separate tracts which completely wrecks my ranch and cuts the owner of the Shafer Ranch (Mr. Neal [sic]) off from a portion of his range.
>
> Mr. Scott [Secretary of the Bowie Chamber of Commerce] and the Bowie Chamber of Commerce repeatedly told me that about 40 acres was all you wanted.
>
> Mr. Neal [sic] and I have had to hire a law firm to protect us.
>
> Now if you will withdraw your application for withdrawal there might be a chance to come to an agreement. Otherwise ther [sic] is none.[41]

Regional Director Miller immediately responded to LC Knape. He tried to explain the effects of the proposed land withdrawal on the two BLM grazing allotments: that only future uses would be excluded. The only effect of the proposed NHS on grazing operations would be to exclude cattle from a small area around the ruins and future visitor center. Miller elaborated on the necessity for the national historic site to encompass more than the 40 acres that included the ruins themselves. Park Service development would require a museum, office building, residences, maintenance area, parking lots, roads and trails to accommodate the anticipated public.[42]

It remains unclear whether Miller's letter of appeasement softened any of the ranchers' aggrieved feelings. It is likely, however, that his explanation regarding the extent of future development and associated influx of "thousands of visitors" did little to allay the ranchers' fears that their cattle operations were without threat. From the archival record, Miller's letter appears to be the first formal communication between the National Park Service and the ranchers. This unfortunate oversight in communication had the effect of creating an atmosphere of suspicion and distrust of the Park Service that would significantly retard all future planning and development.

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[39] Senator Barry Goldwater. "A Bill to Establish Fort Bowie National Historic Site in the State of Arizona, and for Other Purposes," July 15, 1958.

[40] Letter to Roger Ernst Assistant Secretary of the Interior from Guy Anderson Attorney, November 3, 1958. Fort Bowie Files.

[41] Letter to Leslie Arnberger Region III Planner from LC Knape, July 25, 1958. Fort Bowie Files; See also Letter from Arch Scott to Hugh Miller Region III Director, July 15, 1958. Fort Bowie Files; Memo to Senator Goldwater from Roger Ernst Assistant Secretary of the Interior, August 1, 1958, Fort Bowie Files.

[42] Letter to Arch B Scott Secretary Bowie Chamber of Commerce from Hugh Miller Region III Director, July 23, 1958; Letter to LC Knape from Hugh Miller Region III Director, July 30, 1958. Fort Bowie Files.

Figure 2.6: National Park Service planners and historians in 1966. L-R in front: Roy Appleman (Washington historian), Tom Moran (Southwest Region landscape architect), Bill Brown (Southwest Region historian), Robert Utley (Washington chief historian), two unknowns, Bill Bowen (Western Office of Design and Construction chief). Behind L-R: Volney Westley (Southwest Region planner), unknown, Bill Kreuger (Superintendent Golden Spike), Glenn Hendricks (Western Office of Design and Construction assistant chief of master planning). Photograph courtesy of Robert Utley.

2.4 A Need for Outdoor Archives Study

As a result of Historian Robert Utley's detailed historical research, park planners recognized that the simple rectangular boundary, as suggested in the 1958 Field Investigation Report, might not include all of the important historic sites in Apache Pass.[43] Miller recommended that a preliminary master planning study be made in order to develop more

[43] Most of the land west of Ohio has been surveyed and divided using rectangular arrangements and delineations called townships and ranges and further divided into 36 one-mile square sections. A consequence of this arrangement was that all lands in Arizona were described and dispensed in units defined by right angles. Thus rather than drawing a boundary according to landscape elements such as ridgelines, peaks, and waterways, the Park Service had originally chosen the simplest combination of section (640 acres) and half-section (320 acres) units that included the two forts, Apache Spring, and the cemetery.

appropriate delineations.[44]

Herb Kahler, Chief Historian, and Roy Appleman, Chief of Interpretation in the Washington office, traveled to Fort Bowie to view the proposed historic site for the first time (Figure 2.6). Appalled by the inappropriate boundary that did not include the Butterfield Stage Station, the Indian Agency, the Bascom Affair Site, and much of the Butterfield Trail through Apache Pass, Appleman ordered another restudy of the historic site and its associated events. Robert Utley, in his memoir, summarized the resulting problem that this restudy engendered.

> The discomfiture arose not only from the rejection of the [Region's] first effort but from the prospect of reopening a contentious issue. Old LC Knape, whose cattle had grazed among the Fort's ruins since 1919, firmly (and probably rightly) declared, "Cows and people don't mix." Except for the Fort itself, however, which Knape owned, all the cows in the area grazed on public land. The ranchers opposed any park at all, and the Bureau of Land Management, reluctant to surrender any of its kingdom, sided with them. But if there had to be a park, it must be as small as politically possible.
>
> So no one welcomed my project.[45]

The Washington office, however, believed that the size of the proposed historic site should be greatly expanded. Not only should Apache Pass which lay 2.5 miles west of the ruins be included but the entire east-west valley north of Helen's Dome and Bowie Mountain as well as Bear Spring Ranch. The new site would encompass 3,400 acres instead of the 1,000 proposed in Goldwater's legislation; 1,460 of those acres would come from private lands. In a report justifying the change in requested lands, Roy Appleman correctly pointed out that increased acreage would give the National Park Service control of the scenic viewshed in all directions and provide for inclusion of any additional historic sites within the area that might come to light after congressional establishment. Appleman further averred that most of the land was public domain with little commercial or agricultural value.[46]

On the heels of the most recent difficulties with Apache Pass landowners, Hugh Miller and the Region III Office were horrified by Washington's plan for expansion of the historic site.

> We believe it would be most unfortunate for this Service to submit the report as now drafted on the Fort Bowie legislation. As you know, there has already been considerable unrest among the local interests regarding the 1000-acre proposal contained in the present bill. To attempt to more than triple the size of the area would result in the collapse of the entire project. While we are

[44] Memo to Conrad Wirth NPS Director from Hugh Miller Region III Director, May 14, 1958. Fort Bowie Files.

[45] Utley. 2004. Pages 66-67.

[46] Draft Memo to Legislative Counsel Office of the Solicitor Department of the Interior from Hillory Tolson Associate NPS Director, No Date. (other documents refer to this memo as dated August 29, 1958.) This memo also included an undated addendum report from Roy Appleman Chief of Interpretation entitled "Data Relevant to Boundary Study Program, Fort Bowie National Historic Site." Fort Bowie Files.

> sure that Mr. Appleman's comments, on which the proposed report is based, are well-intentioned and have some merit, they are simply not practical when considered in the light of local factors and attitudes.
>
> The acquisition of large tracts of land, including public land, for park purposes is becoming more and more difficult in the Southwest. This is very much the situation in southeastern Arizona where some of the most important cattle interests in the State are located. While most of the additional land proposed for inclusion within the boundaries of the Fort Bowie National Historic Site by Mr. Appleman may not look like much and may be public domain, the fact remains that it is all under grazing permit and there is every indication that any attempt now to withdraw these lands would meet with organized opposition of the Cattlemen's Association,[47] an extremely influential group politically.[48]

Historian Utley, who participated in Miller's response to Appleman's report, noted that the summit which defined the western edge of Apache Pass was less relevant to the story of Fort Bowie than other parts of the site.

> What made Apache Pass one of the few feasible emigrant routes was the water in Apache Springs. Water drew travelers through the Pass; water occasioned the numerous historical events that occurred there; and water thus gave to the Pass its primary importance.[49]

2.5 Bringing Ranchers to the Planning Table

Thankfully, the Washington office agreed with Miller's and Utley's plea to retain the original 1000-acre limitation. But the office pressed Miller to restudy the proposed site and determine how to include all of the known historically significant locations within what now appeared to be a regrettably restricted area.[50] More importantly, Park Service representatives sat down with ranchers Earl Neel, owner of the Schaeffer/Riggs Ranch northeast of the ruins; LC Knape, owner of the Bear Springs Ranch to the East; and Sam and Josie Lawhon Moseley, owners of the HYL Ranch north of the Fort in January 1959. All three ran cattle on grazing allotments that overlapped with the proposed historic site.[51] The ranchers had feared that the establishment of the historic site would cut them off from

[47] Miller was referring to the politically powerful Arizona Cattlegrowers Association with which many federal, state, and local legislative members, including Senator Carl Hayden, were associated.

[48] Memo to Conrad Wirth NPS Director from Hugh Miller Region III Director, September 22, 1958. Fort Bowie Files.

[49] Ibid.

[50] Memo to Hugh Miller Region III Director from Conrad Wirth NPS Director, November 18, 1958. History Division Planning Files, National Park Service, Washington Office. Thus far, a survey of numerous archives has failed to yield any documentation that might explain the original choice of 1000 acres as an appropriate size for the National Historic Site. The limitation first appeared in the first draft of Goldwater's original Senate bill submitted in July 1958. The original choice of this acreage was never correlated with an appraisal that included all of the historically significant sites within Apache Pass.

[51] Utley. "Background Statement," July 1962. Fort Bowie Files; Memo to William Bowen Region III Chief of Recreation Resource Planning from Hugh Miller Region III Director, February 4, 1959. Fort Bowie Files; Redraft of Letter to Roger Ernst Assistant Secretary of the Interior from Roy Appleman Chief of Interpretation, March 30, 1959. History Department Planning Files, National Park Service, Washington Office.

Figure 2.7: Barry Goldwater, US Senator, in 1962. Goldwater shepherded Fort Bowie's establishment legislation through the Senate from 1958 to 1964. Photo by Marion S. Trikosko.

their grazing allotments and, potentially, their essential watering sites. Chief of Interpretation Roy Appleman stated that the Park Service had no intention of interfering in ranchers' grazing rights and leases. He proposed that once Historian Utley had located all of the critical sites within the Pass, Park representatives would consult with the ranchers and, together, they would determine the boundaries of the new park. Appleman insisted that the Park Service wished to inflict the least harm to the ranchers and their grazing operations. Park Service officials were now clearly aware of the effects that their lack of communication had on the ranchers. From then on, the Regional Office worked diligently to keep the ranchers informed of all activities and involved in the planning processes.

Shortly after the meeting, Senator Goldwater reintroduced the Fort Bowie authorization bill in February 1959 (Figure 2.7).[52] The Park Service, still awaiting results of Utley's site identification restudy, recommended to the Senate committee that no action be taken on the bill until completion of the boundary determination.[53]

With a completed site identification report and the drawing of proposed boundaries, Regional Planner Leslie Arnberger, Historian Robert Utley, Landscape Architect Jerome Miller, and Assistant Regional Director Harthon Bill met with the three ranch families in July 1959.[54] LC Knape remained adamantly against the proposal, whereas Earl Neel and Sam and Josie Moseley were much more supportive of the Park's establishment.[55] Myron Allen, Safford Grazing District Supervisor, was also present at this meeting and proposed that the Bureau of Land Management continue to administer the two grazing allotments that overlapped the historic site. This suggestion was strongly supported by the

[52] S. 939 was introduced February 4, 1959.

[53] Memo to Hugh Miller Region III Director from Herb Kahler Chief Historian, April 1, 1959; Utley, "Background Statement," July 1962. Fort Bowie Files.

[54] Robert Utley. "Supplementary Report on Fort Bowie, Arizona: Site Identification Study," Santa Fe NM: Region III Office, National Park Service, April 1959; memo to William Bowen Region III Chief Division of Recreation and Resource Planning from Leslie Arnberger Region III Chief Park Service Planning, July 24, 1959. Fort Bowie Files.

[55] Indeed, Sam Moseley was a member of the Bowie Chamber of Commerce committee that had been lobbying for the National Historic Site's establishment.

three ranchers.[56]

After the meeting, Park Service officials submitted a written report to the landowners elaborating on the issues they had discussed. They reiterated that Goldwater's bill would not force the ranchers to sell land or have any effect on their water or grazing rights. Details of fencing and grazing use would be determined by mutual agreement at a later date. The proposed operations at the historic site were generally described for the ranchers and included stabilization of the ruins, construction of an entrance road, a visitor center and museum, foot trails, employee residences, headquarters and a utility area. No overnight accommodations were planned. Fenced portions would be confined only to those areas with high visitor use. The remaining portions of the park would continue unfenced. Cattle watering facilities would be unaffected except perhaps to relocate stock tanks into less sensitive sites.[57]

Figure 2.8: Stewart Udall (left), Secretary of the Interior, and Mo Udall, US House of Representatives. Both supported Fort Bowie's establishment by introducing House bills identical to Senator Goldwater's. The legislation finally passed and was signed by President Lyndon Baines Johnson on August 30, 1964. AP Photo.

Despite the progress achieved in the July meeting with the ranchers, negotiations for the Fort Bowie lands were again thrown into doubt one week later when LC Knape unexpectedly died. In the absence of any possible agreement to purchase the most important section containing the Fort ruins, the National Park Service again recommended that no action be taken on Senator Barry Goldwater's authorization bill.[58] In December 1959, Earl Neel purchased all of the private lands and the BLM grazing permit in LC Knape's estate. On February 9, 1960, Neel and the Moseleys wrote to Senator Goldwater stating that they no longer opposed the withdrawal of Bureau of Land Management lands. Neel and the Moseleys hoped that Goldwater's bill could now move forward for

[56] Apparently this arrangement with the Bureau of Land Management to manage grazing allotments within national park units had a precedent on recreational lands but not in a national historic site. The US Forest Service regularly administered grazing on national park and monument lands.

[57] "Proposal for the Preservation of Fort Bowie, Arizona." Santa Fe NM: Region III Office, August 1959. Western Archæological and Conservation Center Library. As stated in the report, Park Service officials offered to amend Goldwater's bill to include language similar to the legislation authorizing Coronado National Memorial in 1941. The language guaranteed the continuation of cattle grazing and cattle movement as long as they did not interfere with recreational development. For reasons yet unknown, those proposed changes to the Goldwater bill were never made.

[58] Memo to William Bowen Region III Chief of Recreation Resource Planning from Leslie Arnberger Region III Chief of Park System Planning, August 19, 1959. Fort Bowie Files.

consideration.[59]

2.6 Four More Years to Authorization

On March 8, 1960, the Department of the Interior recommended enactment of Senator Goldwater's bill. Arizona Representative Stewart Udall introduced an identical companion bill, HR 11876, in the house on April 21. Both bills were heard in committee and Goldwater's bill was passed by the Senate. Udall's bill, while reported favorably to the House, was blocked from vote by Harold R Gross of Iowa, a staunch fiscal conservative who regularly opposed proposals for new parks.[60]

Even though Fort Bowie and Apache Pass had not yet achieved federal authorization, the area was recognized by the National Park Service and the Department of the Interior on December 19, 1960 as a national historic landmark. The purpose of the designation was to publicize the results of the Historic Sites Survey and formally recognize and celebrate those sites deemed to possess "exceptional value." Fort Bowie was recognized along with Bent's Old Fort, Fort Larned, Fort Davis, and Fort Smith, all of which had yet to become part of the National Park System. In a letter to Secretary of the Interior Fred Seaton, Barry Goldwater, clearly irritated by this unexpected action, remarked that given the continuing difficulties of achieving authorization of Fort Bowie, the landmark nomination only served to cause agitation among the landowners and those detractors who wished to prevent the Historic Site's establishment.[61]

Arizona congressmen were determined to see Fort Bowie established as a national park unit. Barry Goldwater introduced S 55 and Representative Mo Udall, who replaced his brother, Stewart, when he became Secretary of the Interior in the Kennedy administration, introduced HR 7258 in 1961 (Figure 2.8). Neither bill was acted upon. Both were carried forward into the following year. In August 1962, the Senate passed Goldwater's bill but, again, the House bill did not come up for a vote.[62]

Both bills were reintroduced in 1963 by Goldwater and Udall as S 91 and HR 946. Finally, after positive consideration by both Interior and Insular Affairs committees, both houses of Congress passed the Fort Bowie authorization bill and President Johnson signed into law on August 30, 1964 (see Appendix A).

Fort Bowie's authorization was loosely written; the bill left most arrangements to be negotiated by the Park Service at a later date. The Act authorized the Department of the

[59] Letter to Senator Barry Goldwater from Sam Moseley, Josie Moseley, and Earl Neel, February 9, 1960. Fort Bowie Files.

[60] Utley, "Background Statement," July 1962; letter to Richard Murray from Robert Utley Region III Historian, January 24, 1961. Fort Bowie Files.

[61] Letter to Fred Seaton Secretary of the Interior from Senator Barry Goldwater, December 22, 1960; letter to Senator Barry Goldwater from George Abbott Assistant Secretary of the Interior, January 9, 1961. Fort Bowie Files. Mackintosh. 1985. Pages 37-41, 46-48. At the time of this initial designation, no landmark boundary was assigned to proposed site. Indeed, none of the early landmarks had defined boundaries. The first landmark boundary was established in 1970 when a National Register of Historic Places was submitted for the NHS and *still* matches the original 970-acre Park boundary.

[62] Letter to Sam and Josie Moseley from Leslie Arnberger Assistant Southwest Region Director, January 29, 1963; Memo to Director Conrad Wirth from Thomas J Allen Southwest Region Director, January 23, 1963. Fort Bowie Files.

Interior to initiate the process of creating the historic site. When all essential private lands had been negotiated for and purchased, the secretary would formally announce the establishment of Fort Bowie National Historic Site in the *Federal Register* (see Appendix D).

The legislation limited the size of the site to 1000 acres and the cost of land acquisition and park development to $550,000. Both restrictions would create challenges for developing and administering the National Historic Site in the future. Unsurprisingly, the cost of open land in Southeast Arizona continued to rise. While the uneven terrain within Apache Pass offered spectacular viewing opportunities from Overlook Ridge, it left little space for facility development and increased the proposed engineering costs to transport visitors into and around the site.

The most important stipulation of the act was the requirement that the Secretary of the Interior and the National Park Service protect Apache Pass and the ruins of Fort Bowie "for preservation as the Fort Bowie National Historic Site, the site, and remaining historic structures of old Fort Bowie ..."[63] Those legislative phrases defined the focus of later cultural resource protection efforts: first, in the choice of preservation of the ruins over restoration or reconstruction, and, second, in the decision to preserve the remaining adobe and stone masonry fabric by the best means possible.

[63] PL 88-510. "An Act to Establish Fort Bowie National Historic Site in the State of Arizona, and for Other Purposes." Fort Bowie Files.

CHAPTER 3

Cattle Grazing and Resource Management

> The area's non-conforming use [cattle] are [sic] not likely to go away without severe – and unwise – measures; thus we'll continue to operate around cows improving on the problem when feasible . . .
>
> Bill Hoy, Fort Bowie Ranger-in-Charge

No greater burden was imposed upon Fort Bowie's management of its natural resources than the 1964 congressionally-approved agreement to retain cattle grazing as a commercial use. Portions of the historic site overlapped two active Bureau of Land Management allotments. Livestock had been grazed in Apache Pass from the 1860s up to and beyond Park authorization. That use did not come without consequences to its physical and biological resources. Researchers now believe that grazing has altered the historic plant communities, encouraged invasion of exotic species, altered soil structures, and accelerated erosion (Figure 3.1). The activities of cattle threatened the Fort's cultural resources by toppling and trampling adobe ruins. Unfortunately, the lack of funding and grazing management experience to document and monitor that damage and the absence of legal advice and administrative support to terminate that use left Fort Bowie staff believing they had little ability to alter those ongoing damages. Fort Bowie managers finally eliminated cattle from its landscape in 2001. More than three decades of grazing on the NHS lands might have been reduced if adequate and timely support from Regional and Washington offices had been provided.

Cattle grazing, under the Organic Act of 1916, had been allowed for all national parks except Yellowstone.[1] The Secretary of the Interior would authorize the US Forest Service (USFS) to administer that grazing in park units adjacent to Forest Service grazing lands.[2]

[0] Draft Fort Bowie National Resource Management Plan enclosed in memo to Mike Eames, March 17, 1974. Fort Bowie Files.

[1] "The Secretary of the Interior may, under such rules and regulations and on such terms as he may prescribe, grant the privilege to graze livestock within any national park, monument, or reservation herein referred to *when in his judgment such use is not detrimental to the primary purpose for which such park, monument, or reservation was created* (emphasis added) . . ." Section 3, (39 Stat. 535), 16 U.S.C. 1,3,9a,460 1-6a(e), 462(k); C.F.R. Title 36 Chpt. I, (Pt 1-199).

[2] . . . [T]he director shall, under the direction of the Secretary of the Interior, have the supervision, management, and control of the several national parks and national monuments which are now under the jurisdiction of the Department of the Interior . . . Provided, That in the supervision, management, and control of national monuments contiguous to national forests the Secretary of Agriculture may cooperate with said National Park Service to such extent as may be requested by the Secretary of the Interior. Section 2, Ibid. Thus many of the Southeastern Arizona Park such as Saguaro, Chiricahua, and Tonto National Monuments, and Coronado

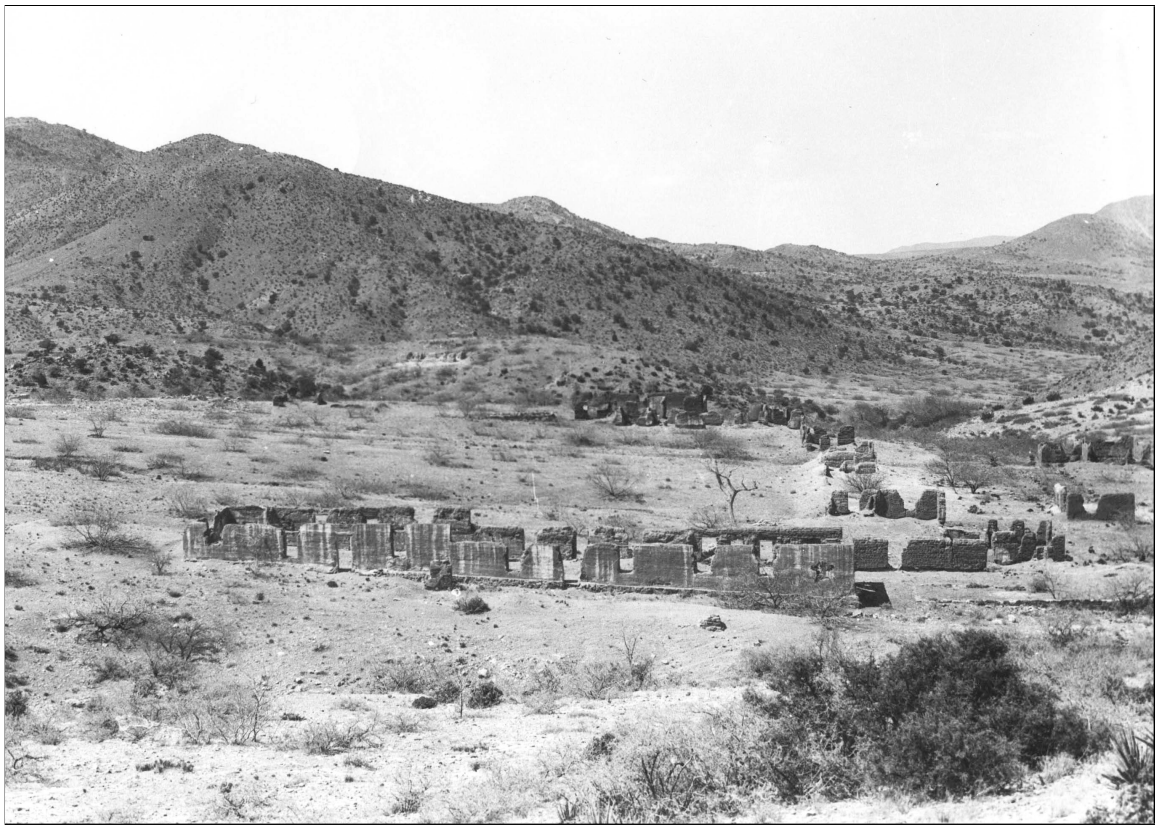

Figure 3.1: View of second Fort (near ground), first Fort (mid-ground on left), and Apache Pass (in distance on right) in 1926. Note the almost total absence of vegetation on parade ground. Photograph by Weatherill 1926. Fort Bowie National Historic Archives.

In theory, National Park Service employees were hired to manage people while Forest Service employees were trained to manage various uses of natural resources, such as grazing, timber harvesting, and mining. A similar arrangement with the Bureau of Land Management was later established in the 1940s when park lands were created from public domain. However, that arrangement had been only infrequently utilized.[3] The BLM had managed grazing at Lake Mead National Recreation Area and at Grand Canyon National Park. Under the agency's direction, these Park lands were managed for grazing with the purpose of maximizing the commercial use of those natural resources. The agency had never before managed grazing at a national historic site.[4]

This arrangement between NPS and BLM and USFS was advantageous for park em-

National Memorial all had permitted cattle grazing that was managed by Coronado National Forest.

[3] An agreement between the Grazing Service (an early precursor agency to the BLM) and the National Park Service was drawn up in 1940 to manage national park grazing lands originating from the public domain. Memo to Dave Moore Superintendent Chiricahua and Fort Bowie from R Clay Cunningham General Superintendent SOAR, April 24, 1989. Chiricahua Natural Resource Files.

[4] Memo to the Associate Director of Park System Management from John H Davis Acting Region III Director, August 19, 1976. Chiricahua Natural Resource Files.

ployees who were relieved of land use management and free to pursue different tasks such as interpretation and management of people and other resources of the park. The arrangement created a critical disconnect, however, between the park manager and his care of the natural resources under his purview. Park employees were hired with little or no training or knowledge to manage that use. It appeared to those employees that, with the insertion of an additional land management agency, they had little control over those aspects of the park. This division of responsibilities over the same land units created significant problems for almost all western national parks and monuments where grazing was permitted.[5]Those difficulties did not lessen until the National Park Service in the 1980s began to hire its own resource managers experienced in grazing.

3.1 Early Agreements

On February 9, 1960, Sam and Josie Moseley and Earl Neel signed a letter to Senator Barry Goldwater stating that they, as the remaining private property owners, were willing to sell the necessary parcels to the Park Service. The owners conditioned the agreement with the stipulation that "grazing would continue to be administered by the Bureau of Land Management except in those portions of the historic site devoted to public use and interpretation ..."[6] This agreement was confirmed the following week by Regional Director George Miller that BLM would administer grazing and that the Park Service would only exclude cattle from the historic ruins and from areas used by the general public.[7] These two documents set forth the Park Service commitments that were later formalized in legislative hearings and reports.[8]

With the Moseley/Neel agreement in hand, Goldwater was now willing to move Fort Bowie's authorization bill forward. Representative Mo Udall introduced an identical bill into the House. Roger Ernst, Assistant Secretary of the Interior, wrote in his report supporting the bill that any water rights or use of waters from Apache Spring for grazing purposes would not be affected.[9] At the June 9, 1964 Senate subcommittee meeting on public lands, Jackson Price, Acting NPS Director, testified that grazing agreements with the BLM were rare, however the Park Service felt that, in the case of Fort Bowie, allowing the continuation of grazing was "acceptable and necessary."[10]

It is important to note here that the final legislative wording in Goldwater's and Udall's bill to establish Fort Bowie National Historic Site included no requirement to maintain

[5]Robin L Pinto. 2009. "The History of Ranching at Organ Pipe Cactus National Monument. Pima County, Arizona. A Thematic Context Statement." Tucson AZ: University of Arizona and Desert Southwest Cooperative Ecosystems Studies Unit, 2009.

[6] Letter to Senator Barry Goldwater from Josie Moseley, Sam Moseley, and Earl Neel. February 9, 1960. Fort Bowie Files.

[7] Memorandum to Conrad Wirth NPS Director from George Miller Acting Region III Director, February 16, 1960. Fort Bowie Files.

[8] William Lukens and William Brown "A Survey of Fort Bowie Management and Visitors' Needs." May 1, 1971. Fort Bowie Files.

[9] "Hearing before the Subcommittee on Public Lands of the Committee on Interior and Insular Affairs to Authorize Establishment of the Fort Bowie National Historic Site in the State of Arizona and for Other Purposes," May 9, 1960.

[10] "Fort Bowie, Arizona. Hearing before the Subcommittee on Public Lands of the Committee on Interior and Insular Affairs," US Senate. 88th Congress, Second Session on S-91. May 29, 1964. Fort Bowie Files.

grazing within the Park.[11] The bill does however authorize the Secretary of the Interior to make any agreements necessary to procure the historic site. This absence of specific statutory directive relating to grazing later becomes important in the final decision in justifying termination of that grazing at the NHS (see Appendix A).

The actual establishment of Fort Bowie National Historic Site was dependent upon the purchase of all private property parcels. Earl Neel's 240-acre parcel was acquired in 1966, and following that acquisition, the Park Service erected a fence around the ruins of the second Fort in April 1967. Later in 1968, additional exclosures were constructed for the ruins of the first Fort, the Fort Cemetery, the Hospital ruins, and the Stage Station.[12] Of the 1000 acres finally acquired for Fort Bowie, only 35 excluded cattle during these early years.

Two Moseley parcels totaling 30 acres were finally acquired in 1967. With this last purchase completed, Assistant Secretary of the Interior Harrison Loesch published in the *Federal Register* the official withdrawal of Fort Bowie lands from all forms of appropriation. The withdrawal notice further added that grazing "will be administered by the Bureau of Land Management in cooperation with the National Park Service, *so long as it is compatible with uses to which the lands are designated*" (emphasis added) (see Appendix B).[13]

3.2 Complexities of Joint Management

Bill Hoy was hired as Fort Bowie's first permanent ranger in the spring of 1971. Bill Lukens had recently taken over as Chiricahua and Fort Bowie Superintendent. Both had come from parks where cattle were permitted to graze (Hoy from Organ Pipe Cactus National Monument and Lukens from Gila Cliff Dwellings National Monument) but neither had been involved in the management of those livestock. Under the 1960 agreement with the Moseleys and Neel, Hoy and Lukens knew that the Park Service could protect the ruins and visitor areas with fencing; they also knew that NPS had no rights to the waters from Apache Spring. But they had little other guidance regarding management of the historic grazed lands.

Both were concerned for the condition of the grasslands in Apache Pass and uncertain as to what responsibilities they, as park representatives, were to assume in the grazing management. Both were also uncertain as to what restrictions had been imposed upon the Park Service by the congressional documentation and legislative authorization of Fort Bowie. For example, the Park Service had purchased 270 acres of private land; those lands were no longer part of the grazing allotments. Did the Park Service have the right to restrict grazing on those lands? More importantly, did the Park Service have the authority to alter grazing permits if Park employees found that cattle were affecting natural resources on the historic site?[14] Lukens and Hoy met with BLM personnel in Safford, Arizona in

[11] Public Law 88-510. August 30, 1964. Fort Bowie Files.

[12] Fort Bowie Monthly Reports, 1965-1969. Fort Bowie Files.

[13] Public Land Order 4983; Arizona 035187. *Federal Register* Volume 36 (2): 61. January 5, 1971. Fort Bowie Files.

[14] Memo to General Superintendent SOAR from Bill Lukens Superintendent Chiricahua and Fort Bowie, June 24, 1971. Chiricahua Natural Resource Files; "A Survey of Fort Bowie Management and Visitors' Needs" Bill Lukens Superintendent Chiricahua and Fort Bowie and Bill Brown Interpretive Specialist SOAR, May 1,

June 1971 to begin to work out individual responsibilities for each of the two agencies.

The information that Lukens and Hoy gleaned from the BLM meeting was less than encouraging. Two grazing allotments covered Fort Bowie lands. BLM representatives could tell Hoy and Lukens little about the grazing resources on the allotments that they had just inherited. No resource survey had ever been accomplished. Without that information, no range management plan had been formulated. BLM personnel had no time to regularly assess grazing use on the allotments. BLM personnel would survey some of the range each year and determine a grazing level from the brief visual assessment.[15] Permits were reissued to the same individual for the same number of livestock simply by precedent of historic use. Indeed, range managers hoped that Park Service employees might accomplish the necessary range assessments. BLM personnel welcomed any research that would permit them to enforce grazing restrictions more stringently.[16] Thus, Fort Bowie's first managers began their tenure with little or no information regarding past cattle management or its influence on the landscape of Apache Pass.

Nonetheless, Lukens continued to express to BLM managers his concerns over the poor condition of Fort Bowie's range and the necessity of improving that condition. Lukens wrote to BLM district manager William Earp in August 1971.

> At Fort Bowie National Historic Site, the maintenance of a stable natural setting is as important as the preservation of the man-made historic setting. It is also a key to the preservation of the historic objects. It was only because the area offered man the type of environment adaptable and beneficial to his use that the area became an important place in history of this country. In our interpretation of the area the natural setting becomes even more important than the historic. We must therefore preserve the natural setting to the highest degree possible recognizing the legislative commitments established in the act authorizing the establishment of the area.[17]

An extended drought had gripped the Southwest during the past four years. Superintendent Lukens felt that the overgrazed conditions at the Fort justified adjustments to the grazing permits. Lukens wanted a study to accurately determine the carrying capacity of the existing range. He also wanted to initiate a soil-moisture conservation program to combat erosion issues already present at the site and requested that BLM permit fees be used to cover the expense of that program.[18]

Lukens drafted a memorandum of agreement in order to better coordinate the objectives and responsibilities for both the Safford BLM office and Fort Bowie. The agreement declared that the BLM would administer grazing in cooperation with the National Park

1971. Fort Bowie Files.

[15] "Natural Resources Management Plan. Fort Bowie National Historic Site, Arizona." NPS, DOI. June 1974. Fort Bowie Files.

[16] Memo to General Superintendent SOAR from Bill Lukens Superintendent Chiricahua and Fort Bowie, June 24, 1971. Chiricahua Natural Resource Files.

[17] Letter to William Earp Safford District Manager BLM from Bill Lukens Superintendent Chiricahua and Fort Bowie, August 10, 1971. Chiricahua Natural Resource Files.

[18] Ibid.

Service "so long as it is compatible with uses to which the lands are to be dedicated."[19] Lukens's inclusion of the original Public Land Order phrase was critical in defining a strategic boundary in the relationship between the BLM and the NPS. In the absence of any legislative directive regarding grazing management, the Public Land Order confirmed Fort Bowie's obligation to eliminate grazing if the Park Service documented a deleterious effect on the natural and cultural resources within the Park.[20] The memorandum of agreement stated that no change in livestock numbers or transfer of permits would occur without the concurrence of NPS and that both agencies must meet to jointly review the annually issued permit. Lukens also included a requirement that the BLM and NPS conduct a study to assess the grazing capacity of the land at least once every 10 years. BLM personnel essentially agreed with Lukens's draft but dropped the requirement for the repeated carrying capacity studies, perhaps because the BLM could not guarantee the availability of funds and personnel to accomplish them.[21] No permit fees for grazing on Park Service lands were ever returned to Fort Bowie or NPS.[22] Apparently all fees were used by BLM to maintain structural improvements on grazing lands rather than invest in condition assessments.

3.3 A Lack of Range Resource Information

Superintendent Bill Lukens and Ranger Bill Hoy continued to worry about the effects of grazing on Fort Bowie's vegetation and the potential conflict between cattle and the unwary Park visitors. Beginning in 1974 with Fort Bowie's first Natural Resource Management Plan, proposals to study the impacts of cattle and grazing on visitors and vegetation were submitted repeatedly for funding. These grazing proposals were always listed as the number one priority for natural resource research at the Park. However, 20 years elapsed before the first grazing proposal was finally funded.[23]

The issues of grazing management were complicated by the fact that the historic site overlapped portions of two separate allotments. The western half and two small northern pieces of Fort Bowie were part of the Silverstrike allotment, a mixture of BLM and private lands belonging to Josie and Sam Moseley of the HYL Ranch. In 1974, the Silverstrike allotment covered 10,885 acres; 380 acres of which comprised Fort Bowie lands. The Silverstrike was permitted to carry 135 head of cattle year-long and had no internal pasture divisions. The eastern half of Fort Bowie, with the exception of 50 acres protecting the ruins, was part of the Apache Spring allotment permitted to Cardon Investments. This allotment covered 6,210 acres, 590 of which were included in Fort Bowie. The Apache Spring allotment was permitted for 200 head but only for a six-month interval from November

[19] Ibid. with enclosed memorandum of agreement draft. Public Land Order #4983 "Authorizing the Withdrawal of Public Lands for Fort Bowie National Historic Site." *Federal Register* Volume 36, no. 2 (January 5, 1971) 61. Fort Bowie Files.

[20] Memo to Alan Cox Superintendent Chiricahua and Fort Bowie from Arthur Arguedas Field Solicitor Southwest Region, January 6, 1997. Chiricahua Natural Resource Files.

[21] Letter to William Earp Safford District Manager BLM from Bill Lukens Superintendent Chiricahua and Fort Bowie, August 10, 1971. Chiricahua Natural Resource Files.

[22] Larry Ludwig Fort Bowie Historian, Personal Communication.

[23] "Natural Resources Management Plan. Fort Bowie National Historic Site, Arizona." NPS, DOI, June 1974. Fort Bowie Files.

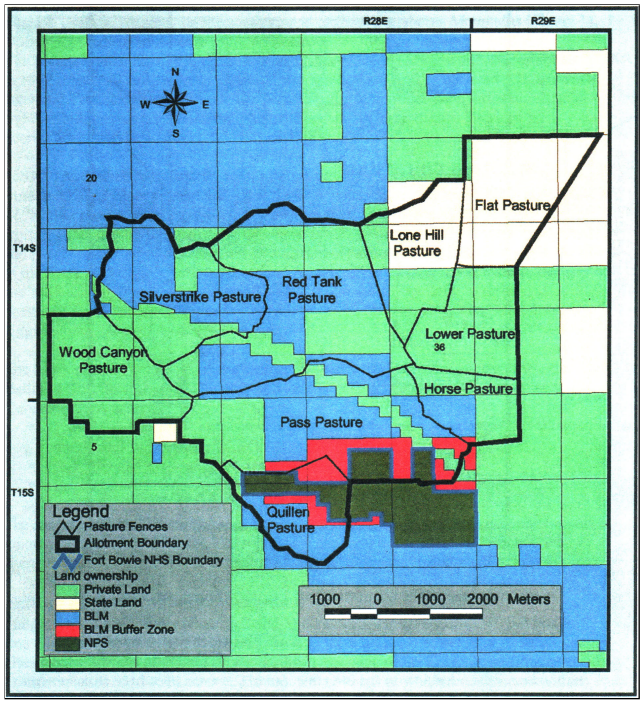

Figure 3.2: Plan of Silverstrike allotment. This allotment overlapped the northern and western portions of the NHS until 2001 when cattle grazing was eliminated from the Park. From Ruyle 2001.

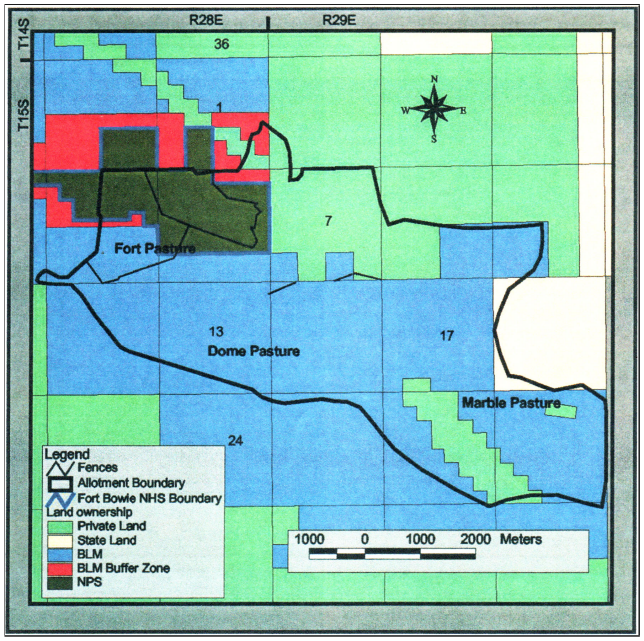

Figure 3.3: Plan of Apache Springs allotment. This allotment overlapped the southeastern portion of the NHS until 2001 when cattle grazing was finally eliminated from the Park. From Ruyle 2001.

through April. Cattle were rotated between several internal pastures during the interval (Figures 3.2 and 3.3).[24]

The passage of the National Environmental Policy Act in 1970 prompted the Bureau of Land Management to begin assessment of grazing lands under its jurisdiction. The BLM initially produced a single programmatic environmental impact statement that reviewed grazing on all lands without any details of specific areas. Challenged in court by the Natural Resource Defense Council, the BLM finally agreed to complete environmental impact statements for each district.[25] At the same time, Congress finally passed the Federal Land Planning and Management Act in 1976, now considered BLM's Organic Act. Under the act, BLM was required to inventory resources on all of its public lands. The law also required the agency to prepare allotment management plans for each permit. While both of these new directives were highly costly for the agency, they were accompanied by new funds that greatly expanded the personnel and expertise within the Bureau of Land Management.

In 1978, the Safford office produced a report entitled "Livestock Grazing in the Upper Gila-San Simon Grazing Area," the first comprehensive assessment of grazing in the region.[26] Two years later, the Safford office completed its first grazing management plan for the Silverstrike allotment.[27]

The Silverstrike Allotment Management Plan summarized range conditions and laid out prescriptions for new infrastructure investments by the Moseleys to improve forage and to stem soil losses. The plan confirmed that the range was in poor to fair condition, especially in the canyon bottoms and valley floors. It also identified areas of moderate levels of erosion. While the Moseleys had already voluntarily decreased the number of cattle from 135 to 120, range managers needed to further evaluate the range condition before determining a final carrying capacity. The plan prescribed that the Moseleys install fencing within the allotment to create five pastures (three large and two small) and initiate a rest-rotation pattern in which each of the large pastures would be rested every third year.[28]

While these statutory and judicially imposed requirements initiated beneficial modifications in the grazing management of Fort Bowie's allotments, no detailed study of the effects of grazing on the ecosystem of Apache Pass or long-term monitoring of its natural resources were planned.

For the National Park Service, 1978 was a year that brought much attention to threats that challenged the integrity of its natural resources. Clearcutting of forests upslope of Redwood National Park had caused extensive erosion damage and soil loss within Park lands below. Congress passed the Redwood National Park Expansion Act which required the Park Service to confront all external issues that affected the resources within its units.

[24] Letter to Bill Hoy Fort Bowie Ranger-in-Charge from Joseph Patti Jr San Simon Area Manager BLM, July 12, 1974. Fort Bowie Files.

[25] James R. Skillen. *The Nation's Largest Landlord: the Bureau of Land Management in the American West*. Lawrence: University of Kansas Press, 2009. Pages 98-100, 107-108.

[26] Letter to William Earp Safford District Manager BLM from Bruce Kilgore Associate Western Regional Director Resource Management and Planning, January 3, 1977. Chiricahua Natural Resource Files.

[27] Silverstrike Allotment Number 5143. Allotment Management Plan. BLM Safford San Simon Resource Area, April 17, 1979. Chiricahua Natural Resource Files.

[28] Ibid.

A survey conducted by the nonprofit National Parks and Conservation Association in the same year documented a wide variety of external threats to many parks across the country.[29] In 1979, Congress demanded that the National Park Service accomplish its own study of conditions within its parks. A questionnaire was sent to all superintendents and asked them to identify and describe not only threats from external activities or issues but internal ones caused by management actions or visitor use.[30] The report that summarized the survey's findings was entitled "The State of the Parks – 1980." Historian Richard Sellers has succinctly described that report.

> In truth, the Park Service had not realized the variety or magnitude of the threats – an indication of the deficiency of its research programs. Seventy-five percent of the threats, the report stated, were "*inadequately documented*." And "very few" parks had the baseline information "needed to permit identification of incremental changes" that could be affecting the integrity of the natural resources . . . The document concluded with an admission that the Service's scientific resource management efforts were "completely inadequate to cope effectively" with the many problems affecting the parks' resources.[31]

When Superintendent Ted Scott submitted his response to the questionnaire, he stated that Fort Bowie NHS had no "adequate planning documents such as a natural resource management plan." He warned that "very little information is available concerning the extent of the potential threats to the natural resources of Fort Bowie." Scott identified grazing as the number one problem affecting the resources of the historic site. "The effect that these cattle are having on the vegetative, cultural and wildlife resources are [sic] not known but visual estimations indicate that they may be quite profound. Research is urgently needed to determine the effects of cattle movement and feeding on the natural and cultural resources of Fort Bowie."[32]

3.4 Changes in Natural Resource Management at NPS and Fort Bowie

A positive result of the survey on threats was a commitment of funding to complete resource management plans for each park unit. A second benefit came from the development of a natural resource management training program to educate employees with biological backgrounds further in areas of ecological management and environmental law. A third benefit was an increase in natural resource research funding and staff hiring.[33]

[29] The NPCA survey was entitled "NPCA Adjacent Lands Survey: No Park Is an Island." *National Parks and Conservation Magazine* 53 (March 1979) 4-9, and (April 1979) 4-7.

[30] Richard W. Sellars. *Preserving Nature in the National Parks. A History.* New Haven CN: Yale University Press, 1997. Pages 262-265.

[31] Ibid. Pages 263-264.

[32] Memo to NPS Director from Ted R Scott Superintendent Chiricahua and Fort Bowie, November 30, 1979, with enclosed report "Chiricahua National Monument and Fort Bowie National Historic Site. Threats to the Parks. Additional Explanation for Threat Levels," November 1979. Fort Bowie Files.

[33] Janet A McDonnell. "Reassessing the National Park Service and the National Park System." *George Wright Forum* 25, no. 2 (2008) 6-14; Roland H Wauer. "Natural Resource Management – Trend or Fad?" *George Wright Forum* 4, no. 1 (1984) 24-28; interview with Alan Whalon Superintendent Chiricahua and Fort Bowie, March 13, 2006.

Figure 3.4: Cattle damage to remnant adobe wall in 1980. Photograph by Bill Hoy. Fort Bowie National Historic Site Archives.

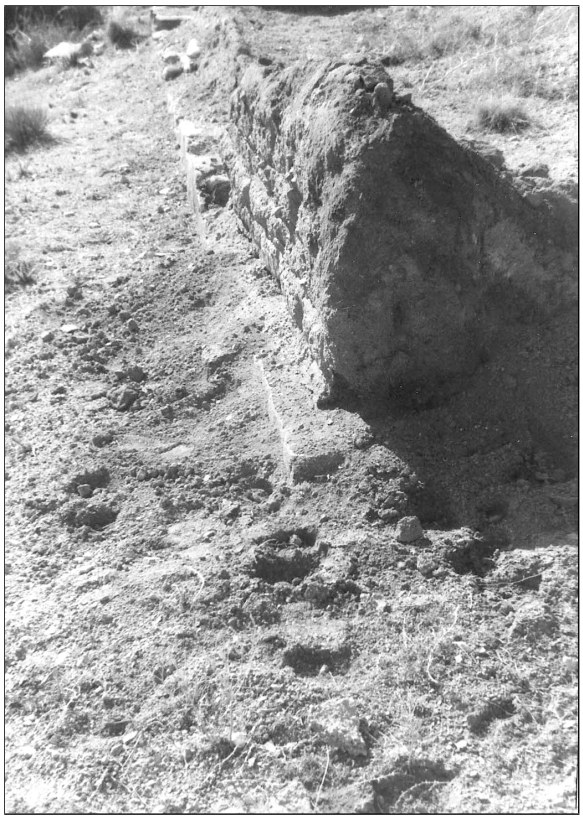

Figure 3.5: Evidence of cattle trampling adobe ruin in 1980. Photograph by Bill Hoy. Fort Bowie National Historic Site Archives.

While Fort Bowie still did not receive additional funding for vegetation monitoring and range assessment studies, both Chiricahua and Fort Bowie began to expand their abilities to deal with natural resource issues. In 1982, Fort Bowie was given the go-ahead to prepare its first natural and cultural resources management plan. In 1988, Fort Bowie and Chiricahua hired their first natural resource specialist, Dick Anderson.

Ranger-in-Charge Bill Hoy had not been trained in vegetation monitoring or range assessment. He did have extensive experience as an interpretation specialist and, at Fort Bowie, was a primary point of contact for most visitors at the Park. Even if the Park did not receive funding to monitor plant communities, Hoy began to record historic and natural resource problems as well as visitor complaints associated with cattle. Starting in 1980, he documented visitor experiences with cattle on the trails. While no visitors had actual physical contact from the animals, many were threatened by cows or bulls; others, frightened of the imposing animals, refused to confront them or venture further down the Park's entrance trail. Hoy also documented the damage caused by cattle to cultural resources. Cows frequently knocked down exclusion fences and entered the Fort ruins. Cattle stepped on or leaned against adobe ruin walls further degrading the fragile remains and even knocking entire segments down. Ranger Hoy documented with photographs well-worn cattle trails throughout the Fort, piles of cow manure around interpretive areas, and fresh hoof prints on and around the adobe ruins (Figures 3.4 and 3.5).[34]

In the 1982 Natural Resource Management Plan, Fort Bowie and Chiricahua employees enumerated for the first time in a public document the damage and problems that livestock were causing. The plan stated that while cattle must be accommodated by prior agreement, "Fort Bowie is primarily a historic site. ... Therefore, the use of the site by cattle must clearly be secondary in importance to the overall objective of the park management which is perpetuation and protection of the cultural and natural resources."[35]

The plan also stated that the detrimental effects of livestock at Fort Bowie were not because of grazing *per se* "as much as an absence of sound management recommendations on the part of the Park Service."[36] The plan acknowledged that BLM had managed grazing adequately to match its own goals and objectives of maximum use. The Park Service, however, as a co-manager of grazing had not determined what the appropriate limits should be in order to protect the cultural and natural resources for which the NHS had been established. "The Park Service permits grazing at Fort Bowie, therefore it should permit grazing of types and intensities that would protect the resource. If this is done, cattle could be permitted to graze in the future under meaningful management direction."[37]

The plan proposed expanding the area from which cattle are excluded to encompass all visitor use areas such as access trails, as well as all significant historic sites and ruins. This effort would eliminate an additional 200 acres (250 acres in total) from grazing. The plan also proposed a study to determine what level of grazing would be appropriate to maintain both cultural and natural resources at the Park.[38] The following year, Superin-

[34] Folder "Cattle Problems" in Fort Bowie Files.

[35] "Natural and Cultural Resource Management Plan. Fort Bowie National Historic Site." June 1982. Page 5. Western Archæological and Conservation Center Library.

[36] Ibid. Page 11.

[37] Ibid.

[38] Ibid. Pages 11, 12.

tendent Ted Scott again submitted a proposal to determine the causes and the extent of damage to vegetation and soils at Fort Bowie.[39] Again, that critical need to assess Fort Bowie's natural resources remained unfunded.

In 1983, the National Park Service published new regulations governing livestock grazing in national park units. Prior to 1983, superintendents had the authority to issue special permits that allowed grazing on park lands. The new Park Service regulations now prohibited grazing entirely, except under three special conditions: 1) where authorized by federal statute, 2) where the right was reserved when the land was acquired, or 3) where grazing was considered an essential part of a recreational activity or historic scene.[40]

3.5 Fort Bowie Managers Begin to Exert Physical Control

Fort Bowie staff produced a second Natural and Cultural Resource Management Plan in 1986. Again, the plan identified grazing as the major problem confronting managers and repeated the statement that "cattle grazing must be considered of secondary importance in the future if the resource is to be protected and maintained." Fort Bowie staff now made an even stronger assertion; "legally, there is no directive that permits the use of a Park System area by cattle in a manner that results in the destruction of the area or that is inconsistent with the basic purposes for which the area has been designated."[41] The plan reiterated the proposed reduction in annual cattle use and exclusion of all cattle from historic resource and visitor use areas.

Fort Bowie and Chiricahua rangers Scott Sticha and Rod Suarez met with BLM district managers in April 1987 to discuss Fort Bowie's continuing resource challenges arising from cattle. Cattle were still causing damage to the historic ruins when they periodically broke down exclusion fences. Visitors continued to complain about perceived threats from cattle. The consensus solution among NPS and BLM personnel was to construct additional fencing to eliminate all cattle from those 250 acres in the south eastern portion of the Park heavily used by visitors.[42]

A major shift in the administrative attention to Fort Bowie's grazing problems began in 1986 when Paul Thompson became the new Ranger-in-Charge and Kathy Davis arrived in Phoenix at the Southern Arizona Office (SOAR). Davis was the first natural resource specialist in the region with livestock experience. Davis was able to provide critical advice and assistance both in vegetation and grazing management. She was also successful in writing grants for research funds for Fort Bowie's natural resource projects. As a result of Davis's efforts, Fort Bowie was finally funded in 1989 to erect fencing to exclude cattle from historic and high visitor use areas.[43]

[39] "Research Impacts of Cattle Grazing on Natural Resources (Vegetation and Soils) and Cultural Resources." Proposal submitted for FY 1983. Fort Bowie Files.

[40] Memo to Alan Cox Superintendent Chiricahua and Fort Bowie from Arthur Arguedas Department of the Interior, Field Solicitor Southwest Region, January 6, 1997. Chiricahua Natural Resource Files.

[41] "Natural and Cultural Resources Management Plan. Fort Bowie National Historic Site, Arizona." NPS, USDI, 1986. Pages 4-5. Western Archæological and Conservation Center Library.

[42] Memo to Dave E Moore Superintendent Chiricahua and Fort Bowie from Scott Sticha Fort Bowie Acting Ranger-in-Charge, April 30, 1987. Chiricahua Natural Resource Files.

[43] Phone Interview with Kathy Davis Superintendent Montezuma Castle, January 12, 2012.

3.6 Investigations into Legal Rights of Exclusion

Now with the presence of Natural Resource Specialist Dick Anderson at Chiricahua and Fort Bowie, Kathy Davis at SOAR, and Dave E Moore as Superintendent, the momentum to resolve the grazing issue began to build.[44] Dave Moore immediately initiated discussions with BLM managers regarding reductions in AUMs and fencing out cattle from visitor areas.[45]

In 1989, Moore requested advice from the Southern Arizona Office regarding the legality of and authority for grazing at Fort Bowie.[46] Robert C Reyes, Park Operations Specialist, responded that the authority for grazing management rested in two locations: first, with the BLM through the Park Service's 1916 Organic Act which permitted the Park Service to cooperate with other agencies, and second, with the Fort Bowie-BLM interagency agreement. Reyes reminded Superintendent Moore of the Park Service's statement to the Public Lands Subcommittee in 1963 that grazing would be permitted to continue within the Park except in visitor areas. Reyes apparently looked no further beyond authority for grazing management. He did not examine or elaborate on what rights and responsibilities Fort Bowie or the Park Service had to *terminate* grazing on Park lands.

Fort Bowie did become more active in the management of cattle at the NHS. In 1990, Superintendent Moore requested that no salt licks be placed on Fort Bowie lands. Moore hoped that by limiting the number of sites where cattle congregated there would be less trampling of vegetation and soil erosion. He also requested that NPS personnel be included in the establishment of all monitoring plots at Fort Bowie.[47] Moore's replacement in 1991, Acting Superintendent William Tweed, requested copies of all BLM grazing management records and the results of all monitoring data accomplished by the agency.[48] Fort Bowie managers were now becoming actively involved in controlling grazing on these historic site lands.

Carol Kruse arrived in 1991 to replace William Tweed. While her background and training were in interpretation, Kruse was strongly committed to natural resource protection at

[44] David E Moore became superintendent at Chiricahua and Fort Bowie in early April 1987. Moore had worked previously at Great Basin National Park, where as superintendent he had had experience dealing with ranchers and grazing issues.

[45] Memo to Regional Director from David E Moore Superintendent Chiricahua and Fort Bowie, January 7, 1988. Chiricahua Natural Resource Files.

[46] Memo to David E Moore Superintendent Chiricahua and Fort Bowie from R Clay Cunningham General Superintendent SOAR, April 24, 1989. Chiricahua Natural Resource Files.

[47] Letter to Kim McReynolds Safford District Range Conservationist BLM from Dave E Moore Superintendent Chiricahua and Fort Bowie, March 13, 1990. Chiricahua Natural Resource Files. Salt licks, blocks of salt usually combined with vitamins and other important minerals, have been traditionally set out on range lands for cattle. Since they are attractive to cattle, the salt licks are frequently set out at a distance from water sources, often in grazing areas that get little use. The purpose is to more evenly distribute grazing throughout the entire range. Those salted areas, if not changed regularly frequently became damaged by extensive trampling. In 1990 in the Apache Spring allotment, BLM had established side-by-side monitoring plots inside and outside of Fort Bowie's exclusion fence to correlate vegetation growth with precipitation amounts.

[48] Letter to Ray Brady Safford District Manager BLM from William Tweed Acting Superintendent Chiricahua and Fort Bowie, August 21, 1991; Letter to William Tweed Acting Superintendent Chiricahua and Fort Bowie from Vernon L Saline San Simon Area Manager BLM, September 17, 1991. Chiricahua Natural Resource Files.

Chiricahua and Fort Bowie.[49]

In 1993, BLM revised the Silverstrike Allotment Management Plan. The agency also proposed a temporary increase in the permitted number of cattle from 99 to 124 that would graze on the allotment year-round. In the opinion of the BLM range conservationists, the increase in AUMs would "have an insignificant effect on the vegetation resource of Park Service lands."[50] Kruse and Fort Bowie managers strongly objected to the increase stating that "insufficient monitoring plots exist to draw this or any other conclusion."[51] Nonetheless, the temporary increase was approved on a trial five-year basis.[52]

The increase in AUMs on the Silverstrike allotment was proposed concurrent with another revision of Fort Bowie's Resource Management Plan. Like all previous resource management plans, grazing was identified as the primary threat to Fort Bowie natural resources. Now, in response to a requirement that all parks supporting livestock develop grazing management plans, Fort Bowie again requested funding to assess the condition of the grasslands and develop its own range management plan.[53] The proposed plan would initiate a monitoring program, inventory vegetation, and develop grazing alternatives and recommendations. With a range management plan in hand, natural resource staff would be able to write an environmental assessment for grazing and, finally, develop a set of specific use conditions to protect cultural and natural resources at Fort Bowie.[54]

In 1994, George Ruyle, Agricultural Extension Agent and Professor at the University of Arizona, was hired to complete a range inventory and management alternatives for Fort Bowie National Historic Site.[55] Ruyle established four monitoring plots on both Silverstrike and Apache Spring allotments in 1995. For the first time, in the 30 years since authorization, research to assess grazing was being conducted at Fort Bowie. More importantly, this research was not guided by management objectives and goals to maximize range utilization and/or beef production. The inventory and monitoring marked the first steps in Fort Bowie's effort to assume responsibility for managing grazing according to Park Service standards and objectives.

In early 1996, Fort Bowie and Chiricahua staff met with Rob Eaton, Department of the Interior Field Solicitor from Santa Fe, New Mexico. In Eaton's opinion, grazing use on Fort Bowie lands should have been terminated following the first transfers of the base ranches associated with the permits.[56] Thus, grazing at Fort Bowie lands within the Apache Spring allotment should have ended in 1970 when Earl Neel sold his ranch to HC Tovrea. Likewise, grazing should have been eliminated from Fort Bowie lands within the Silverstrike

[49] Phone Interview with Kathy Davis Superintendent Montezuma Castle, January 12, 2012.

[50] Quote in memo to Kim McReynolds Range Conservationist BLM Safford Office from Carol Kruse Superintendent Chiricahua and Fort Bowie, August 23 1993. Chiricahua Natural Resource Files.

[51] Ibid.

[52] "Silverstrike Allotment Management Plan," 1993. Chiricahua Natural Resource Files.

[53] "National Park Service Management Policies." 1988.

[54] Email from Kathy Davis Natural Resources Specialist SOAR to Chris Andress Chief of Ranger Activities WASO, December 11, 1995 and forwarded to Carol Kruse Superintendent Chiricahua and Fort Bowie. Chiricahua Natural Resource Files.

[55] George B. Ruyle. "Inventory, Grazing Management Alternatives and Vegetation Monitoring for Fort Bowie National Historic Site." Phoenix AZ: Southern Arizona Group, 1996. Chiricahua Natural Resource Files.

[56] Larry Ludwig Fort Bowie Historian, Personal Communication. March 2, 2012.

allotment when Sam and Josie Moseley sold the HYL to MS MacCollum in 1978.[57] Fort Bowie and Chiricahua management agreed that total elimination of grazing from Park lands was now the appropriate goal.[58]

Superintendent Carol Kruse made a formal request for a Solicitor's Opinion regarding whether grazing should continue on Fort Bowie lands.[59] Kruse stated that Fort Bowie's legislative history indicated the congressional intent to allow grazing following the Park's establishment. However, no specific information was included delimiting the duration of that use. Kruse suggested that the privileges associated with the two grazing permits should have existed only until the initial transfer of ownership of each ranch. She noted that the HYL ranch owner, Jim Warne, the present holder of both the Silverstrike and Apache Spring grazing permits, had recently placed the ranch on the market; Kruse suggested that this impending transfer might present a fortuitous opportunity to terminate grazing at Fort Bowie.[60]

Arthur Arguedas, Field Solicitor at the Santa Fe Southwest Regional Office, responded to Kruse's request.[61] He noted that the 1960 agreement between the original landowners and the NPS to continue grazing was never memorialized in legislation. Arguedas also pointed out that while the Public Land Order #4983 in 1971 recognized BLM's administration of grazing, that use was only permitted as long as it was compatible with the preservation of the natural and cultural resources of the Park. Arguedas's third point was that the most recent NPS regulations governing livestock prohibited all grazing on park lands except when authorized by legislation, required by reserved right from a land acquisition, or necessary to maintain a historic scene. Arguedas opined that the NPS grazing regulations of 1983 superseded the Public Land Order of 1971. Since Fort Bowie fit none of the three exceptions that permitted livestock, grazing should be prohibited. Arguedas supported that opinion with a parallel argument that if the Park Service determined that grazing was no longer compatible with the purpose of the Park, then Public Land Order #4983 no longer authorized that use.

3.7 Termination of Cattle Grazing at Fort Bowie NHS

Fort Bowie now had formal confirmation of its legal authority to terminate grazing. Larry Ludwig, Fort Bowie's Unit Manager, met with Dick Eastman, the new owner of the HYL

[57] In early national park units created from public domain, national forest, or BLM lands, grazing was often allowed to continue. It was unwritten policy that NPS would allow that use to continue until either the sale of the base ranch belonging to the permit holder or the death of that rancher. That policy was not always strictly adhered to especially when the transfer of ranch ownership (such as Earl Neel's Bear Spring Ranch to HC Tovrea) occurred shortly after establishment of the park unit.

[58] Email from Kathy Davis Natural Resources Specialist SOAR to Chris Andress Chief of Ranger Activities WASO, December 11, 1995 and forwarded to Carol Kruse Superintendent Chiricahua and Fort Bowie. Chiricahua Natural Resource Files.

[59] Memo to Field Director Intermountain Region from Carol Kruse Superintendent Chiricahua and Fort Bowie, February 28, 1996. Chiricahua Natural Resource Files.

[60] Memo to Field Director Intermountain Region from Carol Kruse Superintendent Chiricahua and Fort Bowie, February 28, 1996. Chiricahua Natural Resource Files.

[61] Memo to Alan Cox Superintendent Chiricahua and Fort Bowie from Arthur Arguedas Field Solicitor Southwest Region, January 6, 1997. Chiricahua Natural Resource Files.

ranch, in 1998 to discuss the termination. Eastman had no problem eliminating Fort Bowie lands from his BLM allotments as they represented such a small component of his grazing lands.[62] Indeed, Eastman was amazed that livestock grazing still continued to be permitted on national park lands.[63]

Two challenges remained to remove cattle from Fort Bowie National Historic Site. By a 1969 agreement with Earl Neel, Fort Bowie was obligated to make a portion of the output of Apache Spring available for Eastman's livestock. The proposed southern boundary fence line would exclude cattle from the old Apache Spring stock tank. Thus the Park Service had to transport water from Apache Spring further southward and upslope into the upper reaches of Siphon Canyon.[64] The second challenge was to complete the fence along the entire length of Fort Bowie's boundary. Since the owner of the HYL was agreeable to the exclusion of cattle from Park lands, BLM managers presented no objections. They did, however, request a permit to trail cattle through the Fort in order to move livestock between rotational pastures.[65]

Construction of the boundary fence was completed in 2001. In late fall of 2002, the Apache Spring pipeline and new stock tank were installed above the fence line in Siphon Canyon. Cattle were finally removed not only from the historic ruins but from the entire park for the first time in 140 years.

Protection and management of natural resources has been an ongoing struggle for Fort Bowie NHS. Inadequate funding, administrative support, labor and interest from regional and Washington offices and, even occasionally, from Chiricahua National Monument managers left many natural resource issues at Fort Bowie unattended or unresolved for too long. Through sheer determination on the part of too few dedicated employees, challenges to those resources continue to be addressed.

It is important to reiterate that the elimination of cattle has not ended all of the issues associated with grazing. Numerous internal and external studies at Fort Bowie NHS report that ecological changes initiated by 140 years of grazing are still occurring that affect both the cultural and natural resources in the landscape.[66] The absence of detailed data on the location and intensity of grazing over time across the NHS and the lack of continuing

[62] Larry Ludwig Fort Bowie Historian. Personal Communication. March 2, 2012. Fort Bowie lands provided sufficient forage for only 11 cows per year. Of the 750 acres grazed across the two allotments, Fort Bowie lands accounted for 11% of the Apache Spring allotment and 3% of the Silverstrike.

[63] Larry Ludwig Fort Bowie Historian. Personal Communication. March 2, 2012.

[64] Memo from Larry Humphrey Natural Resources Specialist BLM to Vernon Saline San Simon Resource Area Manager, January 28, 1997; "Environmental Assessment: Boundary Fence for Fort Bowie National Historic Site." Phoenix AZ: Southern Arizona Group, NPS, USDI, October 1998. Draft. Chiricahua Natural Resource Files.

[65] Letter to Alan Cox Superintendent Chiricahua and Fort Bowie from Marlo Draper Natural Resource Specialist BLM, November 17, 1998. Chiricahua Natural Resource Files.

[66] M A Dimmitt, RC Brusca, K Krebbs, CL McIntyre, J Viers, C Filippone and A Berry. "Natural Resource Condition Assessment: Chiricahua National Monument, Coronado National Memorial, and Fort Bowie National Historic Site." Tucson AZ: Arizona-Sonora Desert Museum and Sonoran Institute, 2011; Travis Nauman. "Erosion Assessment and Mitigation Plan for Apache Spring Watershed, Fort Bowie National Historic Site, Arizona," Nauman Geospatial LLC, 2010;" Colleen Filippone. 2009. "Quantify Soil-water Percolation to Apache Spring, Fort Bowie National Historic Site, Cochise County, Arizona." Tucson AZ: NPS, Intermountain Region, 2009;" Pinto *et al.* 2000. Fort Bowie and Chiricahua Cultural Resource Files. www.nps.gov/history/history/online_books/fobo/clr.pdf

studies comparing grazed and now ungrazed areas further complicates the assessment of those evolving changes.[67]

[67] M. A. Dimmitt, *et al.* 2011. Chiricahua Natural Resource Files.

References

The majority of information used in this history originates from memoranda and correspondence from Fort Bowie NHS, Chiricahua NM, and Regional and Washington Offices. Unlike most Park units, Fort Bowie has retained its own records on-site. None of the national or regional archives contain any documentation regarding the NHS that did not also record activities and decisions at Chiricahua National Monument. Because Fort Bowie has been managed by the superintendent of the nearby Chiricahua National Monument, some documents and reports have been retained at Chiricahua. This is especially true of archives relating to Natural and Cultural Resource Management issues. A small collection of documents relating to early planning are located at the National Park Service History Division Office in Washington DC. Early correspondence and planning documents generated at the Regional Office prior to dedication were later distributed to the Park archives.

Most of the information regarding regional history can be found at the Arizona Historical Society Library in Tucson Arizona. Reports from planning, archæological surveys and excavations, historical research, and management were located at various National Park Service libraries around the country, or the Western Archæological and Conservation Center Library (WACC) or the University of Arizona Special Collections Library, both of which are located in Tucson, Arizona. Many files at Chiricahua National Monument have already been sent to be processed and archived at WACC. Additional files from Chiricahua and many of the archival files from Fort Bowie NHS will be sent in the near future to the same repository.

Most photographs and maps included in this publication are derived from National Park Service documents, or Fort Bowie NHS or private collections. Taped interviews will reside at Chiricahua National Monument or Fort Bowie National Historic Site until distributed to WACC.

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