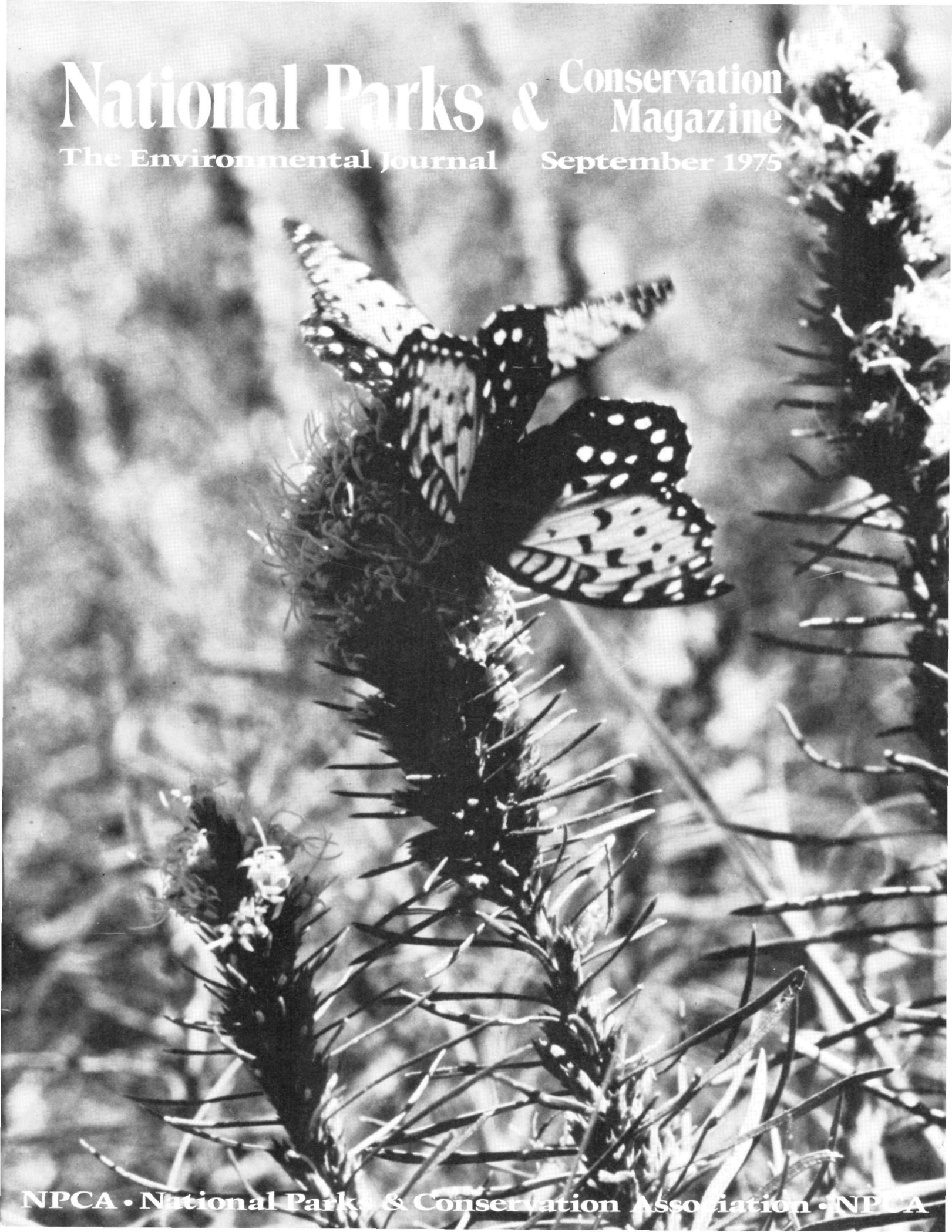
National Parks & Conservation Magazine

The Environmental Journal September 1975



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The Majesty of Rivers

IN TIMES of cultural disintegration like the present, men have an opportunity to rebuild the value structures which shape their lives.

For a century and more, as industrialization has dominated the thought of the west, and now spreads east and south, the values which have governed the mismanagement of the river basins of the planet have been domination, control, and mastery of nature.

As these totems totter, first in the industrial world, and tomorrow in the formerly dependent lands, new virtues are esteemed: empathy with the biotic community of which human beings are a part; delight in the natural setting from which the race emerged.

IN THAT RESPECT, the anatomy of hydroelectric power is easy to dissect. Fifty years or so ago capitalist America and communist Russia embarked on parallel programs of hydropower development; the Russians emulated the Americans. The rivers were all to be harnessed, turned into stepladders of reservoirs, their water dispatched on schedule, and in some cases made to flow backward.

The social and ecological disturbances were enormous. Farms, homes, and communities were submerged under reservoirs. Soil, forests, and wildlife were obliterated. History as recorded in churches, meeting houses, graveyards was discarded. Ordinary people, for the most part, were unable to resist the juggernaut. And yet now it is clear that hydropower could never have supplied any significant portion of the energy eventually needed by an industrializing planet.

Flood control by impoundment was accepted everywhere as common sense; it compounded the damage. But now both ecological and economic considerations point toward flood plain management and protection against encroachment as the sound way to get along with torrential rivers.

Water supply was ever an argument for giant reservoirs. For a time the notion of many small headwater impoundments served as offset and defense. Later on, the real estate speculators turned the small water supply reservoirs into lakes for subdivisions. But more and more the flowing river itself, properly purified of wastes accumulating along its course, and supplemented by ground water, estuaries, and limited local storage, is seen to be preferable.

RIVER NAVIGATION was promoted for a long time and helped to put the railroads out of business. As highways proliferated, interest in the waterways died down; but now the Army Engineers would resurrect navigation on a tremendous scale on the Mississippi.

A dozen years ago the Engineers were pushing reservoirs everywhere for the dilution of pollution. But the basic concepts of federal law were already changing and the nation had embarked on a course of stopping the pollution of water at source.

Recreation was added to the imputed functions of the big dams and reservoirs. The motor boat manufacturers persuaded thousands to hitch huge ships to their autos and travel from reservoir to reservoir. The fishing tackle people found it profitable to promote additional fishing opportunities everywhere, regardless of the damage to ecosystems and communities. Overlooked were the satisfactions, for anglers and walkers, of quiet outdoor recreation along natural streams.

Big irrigation was done by the Bureau of Reclamation, coupled with and subsidized by hydropower. These programs have run their course in America, and are questioned gravely around the world, as salinization and alkalinity spread.

AN ENORMOUS WEIGHT of economic and political interests accumulated behind these values. Large urban contractors found ways to make the necessary political contributions and secure the commitment of prominent politicians to construction programs. The building trades unions, measuring their function by the number of jobs, stood solidly with the contractors. Armies of realtors descended on localities which were ripe for the picking and promoted the projects in city hall and county courthouse. The public agencies which arose to administer the programs bred bureaucracies committed economically and ideologically to the growth of the system.

The agencies were usually held reponsible, but it was unfair to blame them entirely. The Engineers eventually, to some extent, did follow the election returns; their shift to flood plain protection has been detectable; they have endorsed the natural filter system of water purification. The Bureau of Reclamation has retained an undue

Continued on page 31

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weathered american chestnut trunk
jack jeffers photograph

National Parks & Conservation Magazine

The Environmental Journal **Vol. 49, No. 9, September 1975**
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FRONT COVER Butterflies in the Tallgrass, by Ron Klataske
BACK COVER Kansas Tallgrass, by Jan S. Garton
The tallgrass prairie of eastern Kansas is alive with the grace and beauty of wildflowers and butterflies, the songs of birds, the drumming of prairie chickens, and the life and death struggles of a myriad of other creatures. A Tallgrass Prairie National Park would be a fitting Bicentennial birthday present to all citizens to commemorate the important natural and historical part the prairie played in forging our nation. (See page 4; see also page 10.)

National Parks & Conservation Association, established in 1919 by Stephen Mather, the first Director of the National Park Service, is an independent, private, nonprofit, public service organization, educational and scientific in character. Its responsibilities relate primarily to protecting the national parks and monuments of America, in which it endeavors to cooperate with the National Park Service while functioning as a constructive critic, and to protecting and restoring the whole environment. Life memberships are $600. Annual membership dues, which include a $6.50 subscription to National Parks & Conservation Magazine, are $120 Sustaining, $60 Supporting, $25 Contributing, $18 Cooperating, and $12 Associate. Student memberships are $8. Single copies are $1.50. Contributions and bequests are needed to carry on our work. Dues in excess of $6.50 and contributions are deductible from federal taxable income, and gifts and bequests are deductible for federal gift and estate tax purposes. Mail membership dues, correspondence concerning subscriptions or changes of address, and postmaster notices or undeliverable copies to National Parks & Conservation Association, 1701 Eighteenth Street, NW, Washington, D.C. 20009. When changing address, allow six weeks' advance notice and send address label from latest issue along with new address. Advertising rates are available on request from headquarters in Washington.

Time to Save

THE VANISHING PRAIRIE

Time is running out in the fight to create

a Tallgrass National Park

article by JAN S. GARTON
photographs by RON KLATASKE

A SOFT SPRING breeze wanders over the rolling vastness of the Kansas Flint Hills, gently setting the hillsides in quiet motion. I pause on a hilltop to drink in the sights and smells. On a ridgetop greater prairie chickens boom out predawn courtship rituals, and eastern meadowlarks now flash briefly into view, scolding and chattering around their nests.

Remnant clumps of last year's grasses whisper in the wind. A small group of cattle dots the landscape and nuzzles the ground for bites of tender green growth. Overhead, three turkey vultures soar in silence, riding on the warmth of the sun.

These quiet hills are some of the finest pastureland in the country. But the land is important for another reason: Here is found the last significant portion of tallgrass prairie on this continent.

Tallgrass once covered an area of roughly 400,000 square miles, stretching from Texas to Canada, from Kansas to Indiana. Now the plough has claimed nearly all of it, except for some 4,000,000 acres in the Flint Hills of east central Kansas. When that is gone, the tallgrass prairie will be no more.

Concern over the vanishing prairie is not new. As early as 1931, state legislators in Illinois considered setting aside a portion of the "Prairie State" for future generations to appreciate. But after intensive searching, the tragedy became apparent—no suitable tracts of prairie existed.

Studies and reports on grasslands in Kansas, Nebraska, Colorado, the Dakotas, and Montana included one report by the Department of Agriculture in 1950 that recommended the preservation of at least 20,000 acres of each of six types of grasslands existing in the West. In 1961 the National Park Service proposed a 57,000-acre prairie park to be located adjacent to Tuttle Creek Reservoir near Manhattan, Kansas. Scattered citizen support and strong local opposition from landowners already upset by the then recent fight against the reservoir killed the proposal.

Ten years later, in 1971, Kansas Senator James Pearson and Representative Larry Winn, Jr., introduced identical bills calling for the creation of a 60,000-acre Tallgrass Prairie National Park in the Flint Hills of Kansas, but so far a reluctant Kansas congressional delegation and lack of a clear mandate from the state have left Congress unconvinced of the proposal's value.

Save the Tallgrass Prairie, Inc. (STP), a broad-based citizen organization, has been working since 1973 to alert the state and the nation to the beauties of and the peril to the tallgrass. The group has sponsored two tallgrass conferences on location in the Flint Hills, has cooperated in putting together a mock legislative hearing for use by high schools and organizations interested in exploring the tallgrass issues and learning about legislative processes, and has stumped the state far and wide to awaken awareness and interest in the tallgrass prairie controversy.

In spite of its efforts, STP has not yet been able to effectively counter the powerful lobbying of agricultural organizations opposing the park. In April 1975 the Kansas Senate passed a nonbinding resolution urging Congress to reject any bill that would establish a Tallgrass Prairie National Park other than on land already owned by the federal government, or to consider a parkway with scenic overlooks, picnic areas, and rest stops. "Actually, no suitable federal land exists in Kansas," Elaine Shea of STP says, "and a parkway overlooking agricultural land is hardly a substitute for a total ecosystem. The legislative action was a disappointment and a setback, but thousands of people want to see something of the original tallgrass prairie saved. Congressman Larry Winn, Jr., introduced a bill in July for this purpose. We are determined to get this essential addition to the National Park System."

Lengthening shadows on a spring afternoon delineate the slopes and draws of one of the most scenic undeveloped areas remaining in mid-America—the tallgrass prairie.

NOT a single tract of tallgrass prairie is under the protection of the National Park System. Yet the prairies are as unique and distinct as other major ecosystems such as the Redwoods in California or the Everglades in Florida. Although some argue that the tallgrass prairie is not so striking as Yosemite Valley or the Grand Canyon, many people appreciate the subtle and awesome grandeur of this open grassland and the great blue expanse over it.

Climatic conditions, fire, and the presence of large wild grazing animals—elk, bison, and deer—shaped the tallgrass and set it apart from the deciduous forests of the East and the Great Plains that stretch away west to the Rocky Mountains. Historically, annual rains of thirty to forty inches supported lush stands of big bluestem and Indian grass that towered as much as twelve feet above the land in lowland valleys.

Fire was a natural part of the early tallgrass ecosystem. Whether ignited by lightning or by Indians, fire in the tallgrass meant renewed life and vigor for the grasses. Without fire, deciduous trees and shrubs

There was only the enormous, empty prairie, with grasses blowing in waves of light and shadow across it, and the great blue sky above it, and birds flying up from it and singing with joy because the sun was rising. And on the whole enormous prairie there was no sign that any other human being had ever been there.

—Laura Ingalls Wilder
(writing of the 1870s)

A coyote bounds through tallgrass as an autumn sun warms the golden grasses of the Flint Hills in eastern Kansas.

and red cedar trees would have overtaken the hills, and many low-growing forbs and grasses would have been choked under the build-up of prairie thatch. Today some ranchers burn their pastures in early spring, which maintains the distribution of native vegetation.

I TRY TO imagine what Coronado saw, the first white man to explore the Kansas tallgrass prairie in 1541. Elk, bison, antelope, and white-tailed deer wandered the hills. Cougars, gray wolves, and black bears hunted on the prairie. The sparkling streams and rivers supported beavers, muskrats, and occasional river otters. Thick grasses hid the doings of the prairie vole, deer mouse, and Franklin's ground squirrel. More than eighty species of mammals inhabited the tallgrass.

This sea of grass waved from horizon to horizon, under a canopy of brilliant blue sky. Successions of wildflowers told of changing seasons. Prairie groundsel and blue wild indigo gave way to summer-flowering composites—prairie coneflower and the sunflower. August and September saw the hills bathed with yellow goldenrods. A casual eye might have picked out fifty conspicuously flowering wildflowers, but more than two hundred types grew there.

Meadowlarks, dickcissels, and grasshopper sparrows nested in the native grasses. The prairie was the refuge of the greater prairie chicken and the upland sandpiper. Thousands of migratory birds paused there before continuing north or south.

But the grasses dominated all. The tallgrasses—big bluestem, Indian grass, prairie cordgrass, switchgrass, and Eastern gamagrass—clothed and colored the prairie. The grasses sustained the ranging herds of large mammals and the local populations of small animals. They were the fiber that held the land intact.

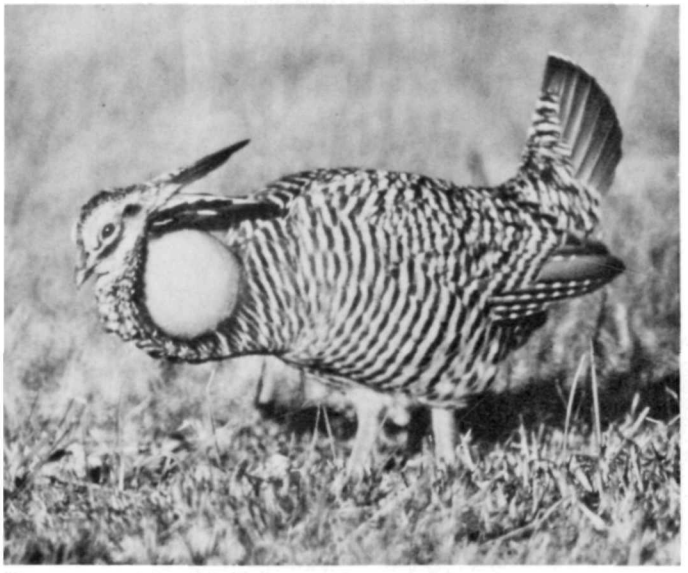
THAT any tallgrass prairie still exists is due in part to the rocky slopes of the Flint Hills, which make plowing nearly impossible, and to careful range management practices of ranchers in the past. But the pastureland of today is not the prairie of yesterday. In essence, that is the conflict.

Flint Hills farmers and ranchers form the primary opposition to the national park and have banded together as the Kansas Grassroots Association (KGA) to block its establishment. They claim that the federal government already owns enough Kansas land, that taking land out of beef production is illogical, that county governments would suffer from decreased tax revenues. The KGA argues that the land would be essentially locked up and that no one without a scientific degree would be allowed to enter such a park. Rumors of people-consuming wolf packs and prairie fires within the park are also part of their propaganda arsenal.

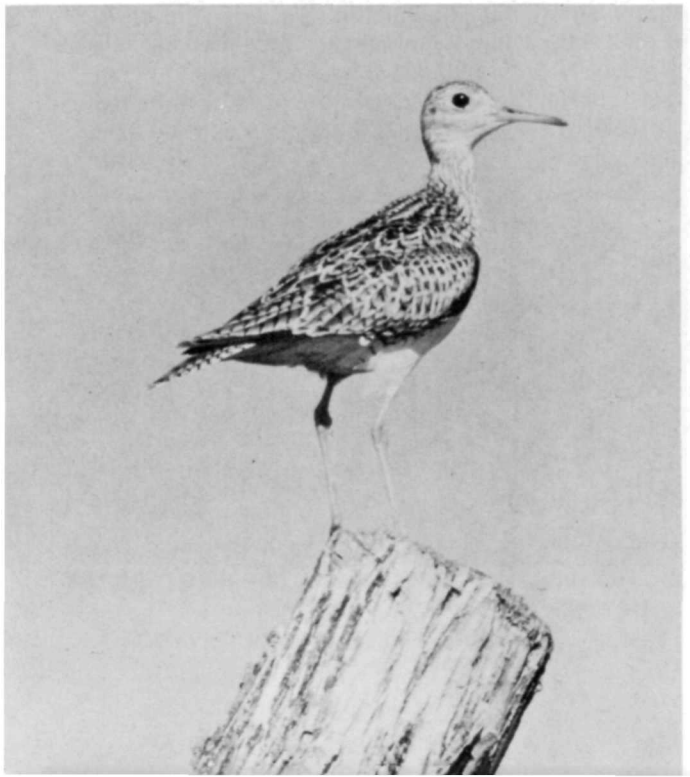
Conservationists are sympathetic to some of the opposition arguments. They are concerned particularly, as is KGA, that tourist traps and congestion around the park would follow establishment of a park. Many feel that a buffer area around the park would prevent such development. As envisioned by supporters, the park would be large enough to support herds of bison, elk, white-tailed deer, and antelope—large enough to provide

BIRD POPULATIONS INSTITUTE, KANSAS STATE UNIVERSITY

Eastern meadowlark



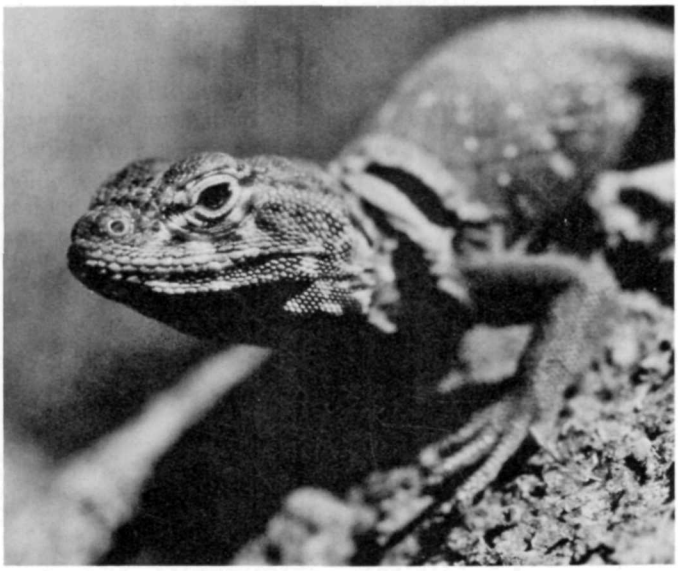
Greater prairie chicken



BIRD POPULATIONS INSTITUTE, KANSAS STATE UNIVERSITY

Dickcissel

The Flint Hills prairie nurtures many species of wildlife. An eastern meadowlark sings outside its nest while a tiny dickcissel perches on a stalk of grass. Perhaps the most distinctive and visible birds of the tallgrass prairie are the upland sandpiper and the greater prairie chicken. The upland sandpiper characteristically surveys its prairie home from the top of a fencepost. In spring, dawn on the prairie is heralded by the drumming of greater prairie chickens on booming grounds, where males gather to compete for the attention of females by strutting about and displaying large orange air sacs which are used to make the loud drumming sound. This performance undoubtedly inspired Indian songs and dances. Collared lizards are common among the limestone outcrops that shape the Kansas Flint Hills.



Upland sandpiper, left; collared lizard, above

adequate forage and the genetic diversity necessary to maintain strong natural characteristics. The roughly 10 miles square proposed for the park is large enough to preserve an impression of the unbroken sweep of the early prairie, a characteristic as vital to the park as the tallgrass flora and fauna.

In 1967 the Kansas legislature designated a series of highways running through the Flint Hills as a "Prairie Parkway" to draw attention to the natural beauty of the area. But that action did nothing to ensure the preservation of that beauty. The essential question remains: Is the tallgrass prairie valuable enough in itself to be preserved as a part of our national heritage? My answer is a resounding *yes,* but the need for national action is imperative, for the days of the tallgrass are numbered.

THE MAKINGS of a tallgrass prairie still lie in the network of roots locked together deep in the Flint Hills soil. Within three years of removing cattle from the land, stands of grass six to eight feet tall could once again blanket lowland areas where the land is in good condition, according to Dr. Lloyd Hulbert, plant ecologist at Kansas State University. But it may take one hundred years before the finer intricacies that characterize the tallgrass system are in balance.

Some threats to the prairie are obvious. In much of the area powerlines and transmission towers disrupt the smooth flow of land and sky; oil wells and pumping stations are scattered through the pastures and new developments are taking place; underground pipelines crisscross the land; roads and highways bisect the countryside.

Lengthy court battles failed to halt a proposed Kansas Power and Light generating facility in the Flint Hills of Pottawattomie County—just 15 miles from the site of the proposed location of the prairie park in 1961—and construction at that 13,500-acre site is now in progress. A 10,000 acre nuclear powerplant in Coffey County is also in temporary limbo, but opponents have already lost the first round of court action. Eight Army Corps of Engineers dams are located in the Flint Hills region, and others are authorized or in the preconstruction planning stage. Housing developments are spreading out across the prairie from the larger towns and cities in eastern Kansas. In addition, more homes are being built alongside Interstate Highway 70, which cuts through the northern tier of the Flint Hills, and beside other less traveled roads. Vast unbroken vistas are increasingly uncommon.

Halting inroads still would not spare the tallgrass prairie. Changing agricultural practices are potentially even more dangerous because they threaten to change the character of the vegetation that is the heart of the tallgrass ecosystem.

In 1974 and 1975 several thousand acres of pristine Flint Hills pastureland were plowed under and planted to tall fescue in an attempt to find a species of grass to replace

Herds of elk and bison will once again be possible if a tallgrass park is established in the Flint Hills. Here the two species graze together on a small area managed by the Kansas Forestry, Fish and Game Commission.

The horizon fades in the distance on a spring morning behind two Hereford yearlings in one of the areas in the Flint Hills where one can still imagine the original vastness of our diminishing tallgrass prairie.

the native grasses that are not good winter forage. One of the people doing this is a wealthy oil executive who is acquiring land in the Flint Hills. Though most area ranchers opposed the action, some may follow suit if the experiment succeeds, because of the present high cost of producing beef. If such is the case, large areas of shrinking prairie will be interspersed by vast expanses of nonnative species.

During the past decade a changing tradition from summer steer grazing to year-round cow/calf operations means another change for the prairie. Under this operation, more pastures are overgrazed, leaving too little fuel for burning to be used as a management tool. To replace fire in keeping out invading shrubs, widespread use of herbicides has increased. Greater reliance on herbicides could spell doom for many native broad-leafed forbs, says Dr. Hulbert, but no one knows for certain what the effects will be. He thinks a tallgrass prairie preserve would serve as a valuable measuring stick—to determine whether productivity over the past one hundred years has increased or decreased, what the effects of herbicides on native vegetation would be, and to answer other questions important to ranchers and researchers alike. Continuing studies on the use of a combination fire/fertilizer program to increase grassland productivity are underway at Kansas State University; if they prove successful, the face of the prairie could soon be beyond recognition or the possibility of recovery.

Progress toward a Tallgrass Prairie National Park has been realized by increased national awareness of the need for such a park, but political progress has been slow. Forty years have passed since the idea first was suggested. The National Park Service recently concluded suitability/feasibility studies at six Flint Hills sites, but no further action will be taken until Congress asks for recommendations and public hearings on the Winn bill are held.

Each day the existence of the remaining tallgrass grows more precarious. Creeping civilization and rapidly changing agricultural practices portend an eventual end to one of the most important natural/historical areas that helped shape the character of this nation and its people. *Now,* during the observation of our nation's Bicentennial, is an appropriate time to save a portion of the tallgrass prairie by setting aside a Tallgrass Prairie National Park in the Flint Hills of Kansas. ■

For more information, contact Save the Tallgrass Prairie, Inc., 4101 West 54th Terrace, Shawnee Mission, Kansas 66205.

Jan Garton, freelance writer currently at work on a master's degree in journalism at Kansas State, is a victim of a lifelong love affair with the open spaces of Kansas. Ron Klataske is west central regional representative of National Audubon Society, and also works as a freelance photographer to share with others his vision of the beauties of the tallgrass prairie.

BUTTERFLIES and the National Parks

National parks play a vital role in preserving populations of rare butterflies, which are a rich but frequently overlooked interpretive resource

article by ROBERT MICHAEL PYLE
drawings by SARAH ANNE HUGHES

The Valerata Arctic (Oeneis chryxus valerata) *ovipositing on a sedge in Olympic National Park. Drawings ¾ life size.*

AS A RANGER-NATURALIST led a small group of park visitors across the rich alpine meadows of Hurricane Ridge, a few alert eyes noticed tawny flashes down among the sedges. Set against the massive grandeur of the Olympic Mountains and tucked away among the bright floral carpet, the subtly colored buckskin butterflies are not commonly seen. But those July hikers who spotted them felt richer for it; and they would have felt even richer had they known the whole story behind these high-country insects, for the Valerata Arctic butterfly lives only in Olympic National Park in Washington.

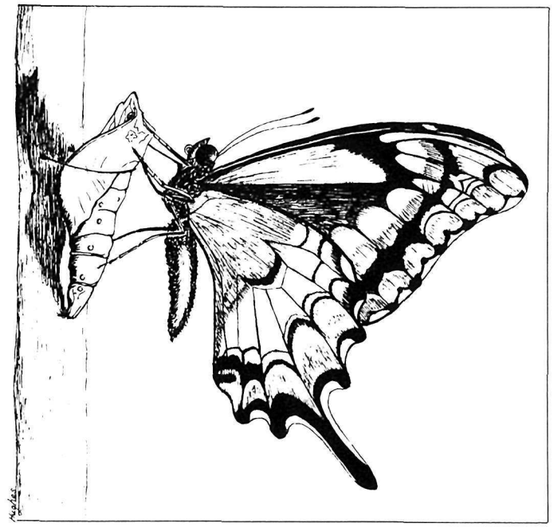
Oeneis chryxus valerata is not the only butterfly whose sole or major habitat lies within a national park. The national parks and monuments furnish natural enclaves for a great many species of native butterflies, including some exceedingly rare species and distinct subspecies. The parks, in fact, are the very cornerstone of the butterfly conservation movement.

BUTTERFLIES are in need of protection along with other, larger forms of life. Following the lead of the British, American lepidopterists and conservationists have begun to identify and deal with the most critically rare and endangered populations of insects. Interest groups that are concerned with the conservation of insects have also been formed in recent years. For example, for three years the Xerces Society has been in existence, combining scientific expertise with public energy working for insect conservation. Named for the extinct Xerces Blue butterfly, formerly of the San Francisco Bay area, the international organization hopes to prevent further losses.

Official recognition of the need to conserve invertebrates has also evolved. Recently, the Office of Endangered Species (OES) of the Fish and Wildlife Service, Department of the Interior, has appointed insect ecologist Dr. Paul Opler to lead government programs in a turnabout of traditional applied entomology. Heretofore, public money has continually been spent solely to wipe out pest insects, but the new program centers on the support and saving of insect diversity. Dr. Opler recently announced that forty-one species and subspecies of North American butterflies are being considered for inclusion on the list of threatened and endangered organisms.

It is clear that butterflies, moths, and other insects stand in need of the protective umbrella of national parks and other reserves much as do American bison, whooping cranes, or desert pupfish. Butterflies, being the most beautiful and visible insects, are the best place to start. It is much easier for most park visitors to admire a Tiger Swallowtail than a grylloblattid (Glacier Crawler). It is this public awareness that will ensure the success of the insect conservation movement.

SOME VERY SPECIAL BUTTERFLIES find refuge in the park system. Every one of the parks and monuments harbors populations of butterflies that are more secure because the park is there. Because alteration of habitat is the primary problem in insect conservation, parks provide the firmest kind of insurance for numerous scarce butterflies. Among butterflies recognized as threatened by the Office of Endangered Species are the extremely rare Schaus' and Bahaman Swallowtails *(Papilio aristodemus ponceanus* and *P. andraemon bonhotei).* Both these species are relatively secure within Biscayne National Monument, Florida. (See Larry Brown's article "Haven for Rare Butterflies,"

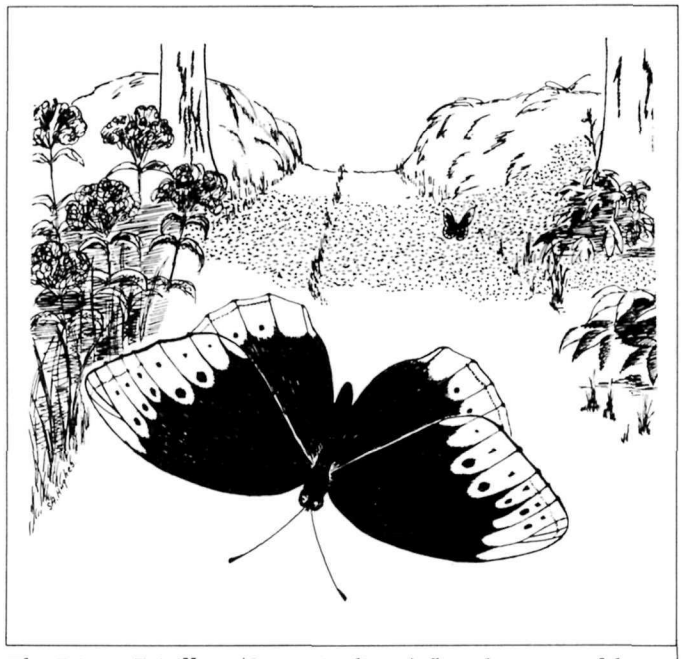


Schaus' Swallowtail (Papilio aristodemus ponceanus) *emerges from a chrysalis in Biscayne National Monument.*

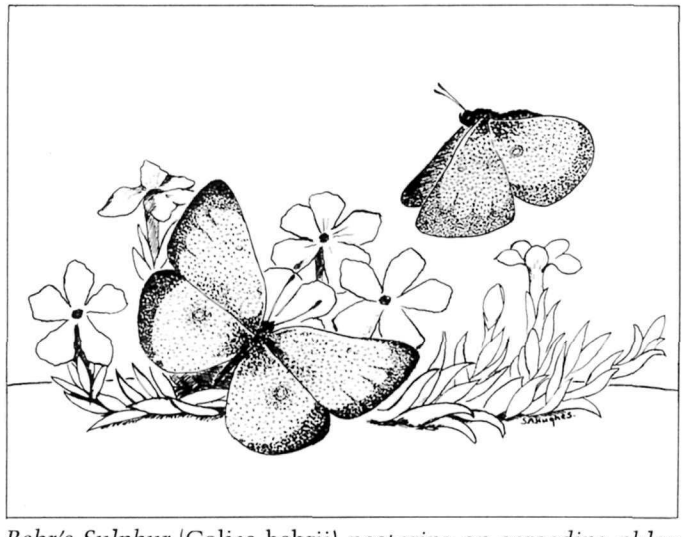
National Parks & Conservation Magazine, July 1974.) Nearby, Everglades National Park was the scene of a 1960 attempt to save the brilliant green hairstreak *Eumaeus atala florida* by introducing individuals from the last known population into the park. Hurricane Donna foiled this bold project of lepidopterist George Rawson, and the butterfly may now be extinct in the United States. However, new colonies may yet be discovered in the Everglades, or another introduction to the park could be made from the Bahamas colony of *E. a. florida.* Additional members of the OES list of forty-one include the Myrtle Fritillary (*Speyeria zerene myrtleae*) and the Pheres Blue (*Icaricia icarioides pheres*). Both of these lovely insects are known to occur only in the vicinity of Point Reyes National Seashore.

Certain butterflies that are not on the proposed list of threatened and endangered species might be if it were not for the protection afforded them by certain national parks. For example, two scarce butterflies of the Appalachians are the West Virginia White (*Pieris virginiensis*) and the Diana Fritillary (*Speyeria diana*). Both of these species have long been prized catches or sightings for naturalists. These species share a condition of extensively reduced habitat due to logging, strip mining, and land development. Happily, the National Park Service extends sustained habitat to sizable populations of both species: *virginiensis* in Shenandoah National Park and *S. diana* in Great Smoky Mountains National Park. Such pockets of protected landscape will become increasingly important for generally scarce butterflies as more and more habitat continues to be altered.

Some other species of butterflies that are not classified as rare by the OES have their entire or primary



The Diana Fritillary (Speyeria diana) *flits down an old road in Great Smoky Mountains National Park.*



Behr's Sulphur (Colias behrii) *nectaring on spreading phlox in Yosemite National Park.*

range within the parks. Olympic National Park and North Cascades National Park comprise the greater part of the range of Vidler's Alpine (*Erebia vidleri*) in the United States. This cinnamon-and-chocolate hued creature is one of the very few butterflies restricted entirely to the Pacific Northwest. The fragile alpine tundra that comprises its life support could easily be overgrazed or otherwise impaired were it not for the protection offered by these national parks.

The mysterious green butterfly known as Behr's Sulphur lives farther down the western cordillera. So confined is the range of *Colias behrii* in the High Sierras that one pioneering collector was able to supply virtually all known specimens for museums in the years before the establishment of Yosemite National Park. Now, of course, the Sulphur's stronghold at Tioga Pass is held sacrosanct in the park. *Behrii* is not considered threatened, but it might well be really endangered were it not for John Muir's big park.

AS MUCH AS NATIONAL PARKS have bolstered the nation's butterfly conservation program, holes in the system remain. The proposed additions in Alaska, the Big Thicket in Texas, the Big Cypress Natural Preserve in Florida, and a southern Cascades national park in Oregon would all be boons to conservation of rare butterflies. Perhaps the most important pending addition to the National Park System, with respect to butterflies, is the Tallgrass Prairie National Park proposed for the Flint Hills of Kansas. This sole remaining enclave of unplowed tallgrass prairie nutures many blues, skippers, and other butterflies dependent upon open country.

A walker in the Flint Hills might enjoy the special good fortune to encounter a Regal Fritillary visiting thistles or sailing over the tallgrass. *Speyeria idalia* is a huge butterfly—a large female can measure fully four inches in wingspan. Bronze and olive upper wings fold to reveal great silver orbs beneath. Although not totally restricted to the prairie, *S. idalia* finds rich grassland communities with its requisite larval food, violets, particularly attractive. Thus the range of this butterfly has been drastically reduced during a century of grazing, plowing, and paving the plains. Entomologists have expressed concern for the long-term survival of the Regal Fritillary, surely one of our most spectacular species. A national park in the Flint Hills would go a long way toward preventing the extinction of a magnificent animal, a butterfly that many Americans will want a chance to see.

Additions to existing parks may prove nearly as vital as the creation of new units. The outstanding example is Mineral King Valley in California. Not included in Sequoia National Park when it was founded in the past century, Mineral King is now a very vulnerable peninsula of national forest that extends into the park. If the proposed ski and resort development is built there, many natural values that are ecologically if not officially part of Sequoia National Park will be compromised. Among these values are populations of several rare Sierran butterflies, including the Ivallda Arctic

(*Oeneis ivallda*) and the southernmost colony of Behr's Sulphur. I have watched these dun arctic relicts, hardly visible against Sierran granite, skim over Mineral King; and I know their fate if a big resort is built in the valley. The Mineral King valley should certainly be added to Sequoia National Park.

THE DESIGNATION OF WILDERNESS within existing national parks and monuments may be just as important for insect conservation as new and amended units of the system. Failure to designate important natural areas as wilderness could ultimately lead to the extinction of some species of butterflies within parks. For instance, most of Olympic National Park was recommended for inclusion in the National Wilderness System. But those park areas designated "general outdoor recreation" in the Olympic National Park Master Plan include Hurricane Ridge and other wild heights adjoining it—the only sites from which the Valerata Arctic has ever been recorded. The rationale for the exclusion from wilderness was to leave free potential sites for further visitor development. If this butterfly is indeed restricted to this vicinity—a question that my research will test—then such development could be a ticket to extinction for one of Olympic's most interesting species, a post-glacial relict whose nearest relatives are many miles away across Puget Sound. The NPS is cooperating in studies to ensure the Valerata's survival.

Once the parks are established, they need to be safeguarded from deterioration. Studies in Olympic, Mount Rainier, and Rocky Mountain national parks show serious damage to tundra communities from overuse. Because most high-altitude butterflies are grass or heath feeders in the larval stage, this deterioration of meadows can lead to sparser populations, at least locally. Similarly, changes in water table that have plagued the Everglades, caused by the water needs of urban Florida, could threaten scores of interesting kinds of butterflies that live there, much as the alligators are affected. Protecting the parks' resources may involve active management to maintain certain successional communities no longer perpetuated by natural calamities—which brings up the critical issue of research in the national parks.

CASUAL COLLECTING of animals and plants is rightfully banned from the National Park System. This ban may aid in conserving some extremely scarce butterflies with weak flight and low reproductive capacity, but in practice it is extremely difficult to overcollect mobile invertebrate populations. Reproduction and replacement of insects are too rapid for most collecting to have any impact from year to year. Some investigations can be conducted in the undisturbed conditions of national parks better than elsewhere; and if the species under study makes its home only in a particular national park, researchers have no choice but to use the park as their laboratory. The no-collecting policy should never be used to impede legitimate scientific inquiry.

This kind of investigation, in fact, may very well provide the scientific basis for successful management of park ecosystems. For example, the Kaibab Swallowtail (*Papilio indra kaibabensis*) was studied in Grand Canyon National Park by Drs. Tom and John Emmel. This beautiful, jet-black butterfly with creamy spots and short tails can be found nowhere else but in Grand Canyon. The Emmels' findings, like those of other researchers, may provide park managers with the knowledge and strategies they need to protect butterflies in their jurisdictions. One other example of park research is Project Ponceanus. This energetic study, led by Dr. Charles Covell, is devoted to the preservation of Schaus' Swallowtail in southern Florida. Covell has received full support from the National Park Service, which has benefited greatly from his results. Similar cooperation elsewhere will provide park managers with the highest quality data upon which to base their programs.

THE U.S. NATIONAL PARKS have yet to incorporate butterflies or other insects into their interpretive programs. Most ranger-naturalists are essentially unaware of butterflies. Publications on butterflies are rare on visitor center book racks. John Garth has written fine guides to Grand Canyon and Yosemite butterflies, but they have not been emulated in many other parks. Few exhibits or self-guided trails take advantage of insects, either mounted or alive.

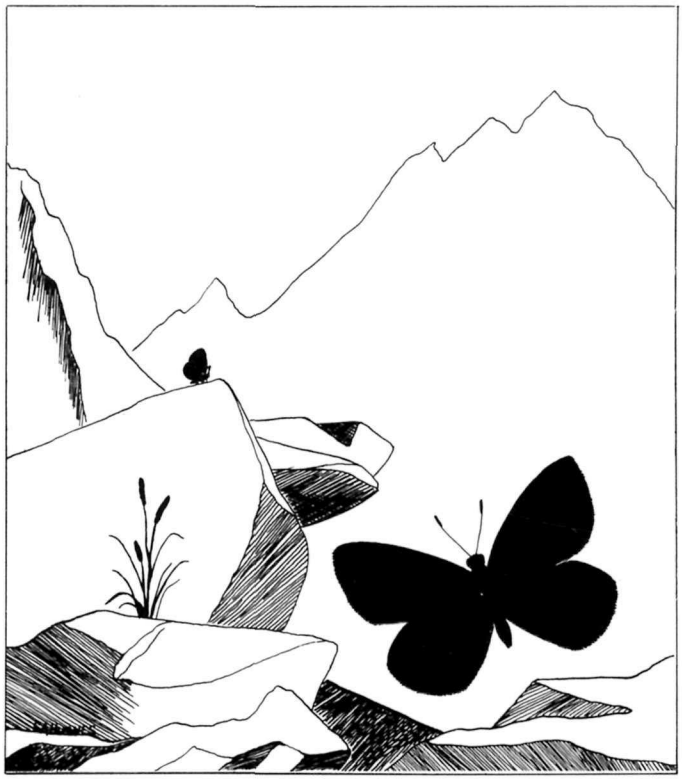
Yet American park visitors are not immune to the charms and fascination of butterflies and moths. In

The Regal Fritillary (Speyeria idalia) *nectars on thistle in the proposed Tallgrass Prairie National Park.*

several settings, from a May Day butterfly walk of the Seattle Audubon Society to my own guided nature walks as a ranger-naturalist in Sequoia National Park, I have interpreted insects as components of the scene. Basically, this consists of simply making people aware of insects. As the huge sales of Edwin Way Teale's earlier books on insects showed, the public has a great curiosity about insects. I have found beyond doubt that watchful people readily and happily add butterflies to their outdoor appreciation repertoires; and their satisfaction increases accordingly.

The availability of guidance for identifying and understanding butterflies is growing. Alexander Klots' excellent Peterson Series *Field Guide to the Butterflies East of the Great Plains* will soon be joined by a western companion volume by Bill Tilden. My own book, *Watching Washington Butterflies,* the first state guide written specifically as an interpretive tool, has surprised me as well as the publisher with its enthusiastic reception in the Pacific Northwest. This year, the Xerces Society initiated an Annual Fourth of July Butterfly Count to emulate the successful and revered Audubon Christmas Bird Count. This activity, we hope, will further raise the status of butterflies in the mind of the public.

The need for naturalists and rangers to provide sources of information and appreciation of butterflies was driven home to me forcefully on a July day last summer in Rocky Mountain National Park. As I came down a trail in the tundra, my father motioned excitedly. He called my attention to a number of "black butterflies" by the roadside. Knowing that could mean only one thing, I hurried to see—and could scarcely believe my eyes or my good fortune. It was a swarm of *Erebia magdalena.*



The Magdalena Alpine (Erebia magdalena) *suns itself on an alpine talus slope in Rocky Mountain National Park.*

The Magdalena Alpine is the only pure, velvety black butterfly in North America. It frequents only high, precarious rockslides above timberline (usually over ten thousand feet) in a few western states. Collectors and watchers travel many miles and risk their lives treading treacherous screes to encounter these rare black beauties. *Erebia magdalena* is a rare sight indeed, denied all those but the agile and the foolhardy. And yet here were a score of Magdalena Alpines, the only easily accessible Magdalena I have ever seen, easy to watch and in numbers, flitting from rock to rock in the warm sunshine—not ten feet from a crowded parking lot!

Excited, I visited the high-altitude headquarters and conveyed the news to a group of ranger-naturalists. Their response was polite, even interested, but not ecstatic nor even quite enthusiastic. Perhaps, one of the naturalists indicated, he would point out the black butterflies in his next nature walk if they were still there. I got the idea that he felt visitors would not be very much interested—surely not so interested, for example, as they were in the brown-capped rosy finches at the feeder outside.

But visitors *were* interested. They noticed Magdalena on their own and responded enthusiastically to a little impromptu interpretation that I provided. Pretty soon the Clark's nutcrackers and hoary marmots lost their hold on the watchers at the roadside rockslide. Those watchers, I felt, might notice butterflies more often in the future—and they might care about the preservation of rare butterflies.

NATIONAL PARKS are probably the best single resource for Lepidoptera conservation in this country. If the parks can be expanded where needed, stringently protected once set aside, studied and managed for optimum results, and used to their fullest for increasing awareness and appreciation of insects, then they will continue to be the cornerstone of the butterfly conservation movement. ■

Robert Michael Pyle founded and directs the Xerces Society, the international organization for the conservation of rare and endangered populations of butterflies and other beneficial insects. He pursued studies in butterfly conservation at the Monks Wood Experimental Station, Great Britain, as a Fulbright–Hays Scholar in 1971–72. Currently he is conducting doctoral research on the "Politics and Ecology of Lepidoptera Conservation" at Yale University. His book, *Watching Washington Butterflies* (Seattle Audubon Society) appeared in 1974, and he has written some fifty articles in the natural history and conservation field.

Sarah Anne Hughes' artistic talent and long-time interest in natural history combine delightfully in collaboration on various conservation projects with husband Bob Pyle.

POPULATION:

The Forgotten Crisis

All nations must collaborate to halt population growth, for Planet Earth has a finite capacity to support human weight

by RUSSELL W. PETERSON

UNICEF PHOTO BY T. S. SATYAN

THE WORLD POPULATION problem worsened today, and it will grow more acute tomorrow when another two hundred thousand beings are brought forth to compete for the earth's finite resources. Although it would seem impossible not to take notice of a new arrival on the planet about every four seconds, this phenomenon is virtually ignored worldwide. Population, the world's most pressing problem, is its forgotten crisis.

This incredible growth rate is a relatively new experience in the affairs of man. For a long time, world population grew slowly, reaching the one billion mark in 1830. Between 1830 and 1930, however, population doubled; it reached three billion thirty years later and passed the four billion level this year. If the present growth rate continues, world population will reach eight billion within the next thirty-five years.

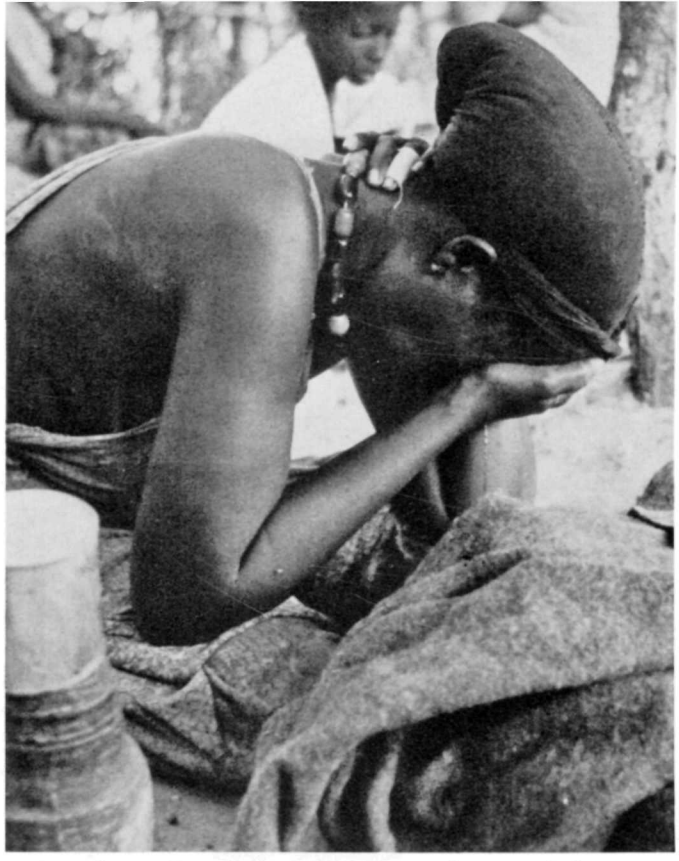
Although there is no firm, scientifically demonstrable estimate of the maximum human population our ecosystem can support, we do know that in some regions of the earth—notably in the Sahel, in Africa—local carrying capacity has been destroyed, perhaps irrevocably. We know that in other regions, large numbers of people depend totally on international food aid for survival. And we know that last year UNICEF (United Nations Children's Fund) declared a state of emergency for fifteen million children in the poorest nations. According to various estimates, between one-third and one-half of the world's people are chronically undernourished; and because of this, more than ten thousand die every week.

Even though we have no precise figure for the earth's human carrying capacity, we would surely be justified in concluding that we are approaching the limit. Considering the amount of human suffering that already has been caused by overpopulation in some areas, we might wonder how anyone could contest the necessity for moderating population growth.

Yet, some people do—for good reasons, for bad reasons, and for cynical reasons. Others simply cannot work up to any sense of urgency about the problem. This latter attitude, I think, characterizes the thinking of most Americans. Understanding why some people think as they do about population growth and understanding why other people don't think much about it at all, requires a look backward.

THE HUMAN SPECIES has been around and reproducing for at least three million years. But if it took us until 1830 A.D. to number one billion, why did we add the fourth billion in only 15 years more (1960-1975)?

The reason is not high birth rates, but low death rates. In past centuries, the average birth rate around the world was higher than it is now. But the death rate of newborn infants and young children was also extremely high. In addition, because of disease, malnutrition, famine, man's helplessness in the face of natural disaster, and the primitive state of his medicine, human life expectancy was low. In prehistoric times, it is estimated, man had a life expec-



UNICEF PHOTO BY BILL CAMPBELL

A Somali mother, one of countless refugees of the 3-year drought in the Sahel—an arid belt extending all across the African continent that has been overgrazed for centuries by nomads' goats—mourns the death of her only daughter in a government relief camp.

UNICEF PHOTO BY T. S. SATYAN

UNICEF helps children all over the world by providing food, medicine, blankets, clothing, teaching equipment, and vehicles, as well as funds to train personnel. The United States must increase direct food aid, but developing nations must work to reduce population growth.

tancy of only thirteen years; by the fifteenth century man's life expectancy was only about thirty years. In consequence, even though human couples produced numbers of children that would astound us today, most of those children died before they could reproduce; and human population growth proceeded at a relatively low rate.

Beginning about the time of the Industrial Revolution, however, improved public health practices in Europe and North America began reducing infant mortality and prolonging human life. More people lived to adulthood, and consequently more had children. Because of the sudden disparity between birth rates and death rates, the stage was set for a population explosion.

But that did not happen in Europe or in the United States. The reason is that, together with improved public health practices, the Industrial Revolution brought with it some major changes in attitudes toward children and human life. Prior to industrialization, children were valued as workers and as a form of future social security. The more children a family had, the more hands there were to cultivate land or pursue crafts, and the more adults there would be later on to support the parents when their working lives were over.

But as mechanization spread through agriculture and crafts, the value of child labor decreased. By and by, large families became an economic anachronism that meant many mouths to feed, with a decreasing financial return. And as the nineteenth century gave way to the twentieth, the emergence of labor unions, improved wage scales, pensions, and finally the Social Security System capped this process.

COMPRESSING a great deal of economic history into a few lines involves simplification; nevertheless, the basic thesis holds true: Rapid economic growth made children negligible as producers and a handicap as consumers. The result was that, after a few decades of social adjustment, the birth rate began to decline in tandem with the death rate. In the United States, for example, with the single exception of the "baby boom" following World War II, the birth rate has declined steadily since 1825. At present, annual population growth rates in the developed countries approximate one-half of 1 percent—about what they were *before* the Industrial Revolution. A few nations, including East Germany, West Germany, and Luxembourg, have actually achieved zero population growth.

In the developing nations, by contrast, birth rates have *not* declined with the reduction in mortality rates brought about by public health improvements. Beginning in Latin America in the 1920s, and in the rest of the world from about 1940 to the present, new public health measures cut death rates in half—from thirty-five per thousand population to about eighteen per

CARL PURCELL—AID

The U.S. Agency for International Development helps many countries provide family planning services for their people. This vasectomy bus in Bombay, India, contains modern operating rooms, where men are paid a small gratuity for undergoing the simple 15-minute operation.

UNICEF PHOTO BY JACQUES DANOIS

A trained health worker instructs village midwives in Indonesia on various forms of family planning so they can teach the women of their villages. UNICEF provides such assistance to about 30 countries within the framework of basic health services to mothers and children.

thousand. Birth rates, however, remained essentially unchanged. In consequence, population grew rapidly, from 0.5 percent to the current level of 2.5 to 3.5 percent. A population growing at 3 percent annually doubles every twenty-three years.

Today, about 70 percent of the world's population lives in the developing countries. At present rates of growth, that proportion will, within thirty-five years, grow to 82 percent. That rate of expansion, if unchecked, threatens danger for us all—not only incalculable human misery but international conflagration. One of the roots of the India-Pakistan-Bangladesh conflict was overpopulation. Considering the growing interdependence among the nations of the earth, the "new politics" of Third World nations that assert that our abundance has been achieved at the expense of their deprivation, and the proliferation of sophisticated weaponry around the world, *no* country—however farsighted it may be in controlling its own population—can escape the consequences of the failure of others to moderate population growth.

Ten years of U.S.-sponsored programs in a number of developing nations demonstrate that a country can couple a modest improvement in the socioeconomic status of its people and family planning services to markedly lower the birth rate. The challenge now is to repeat these successful programs in other nations.

FOR THE LONG TERM, the developed nations must increase their investment in multilateral and bilateral programs to help developing nations to both improve their socioeconomic status and reduce their birth rate. These programs must include comprehensive family services in addition to furnishing birth control materials. Unless parents are assured, through the provision of health education and services, that at least two healthy children will survive, they will not voluntarily limit births. A related investment that must be increased is in fertility research. Present methods of contraception are too expensive for massive, widespread adoption by developing countries. We must help bring the price tag down. At the same time, safer contraceptives are required in developing countries where adequate medical attention is not available or where a serious shortage of trained medical personnel exists. While these nations struggle for a sounder economic footing, the developed nations will probably have to pay most of the research bill.

FOR THE SHORT TERM, we must increase direct food aid in the form of foodstuffs for immediate consumption to mitigate as far as possible the ravages of starvation and malnutrition, as well as increase indirect food aid in the form of fertilizers, seeds, and agricultural technology that the

CARL PURCELL—AID

Improved strains of wheat, rice, and corn that yield many more bushels per acre than old varieties are being planted around the world in the "Green Revolution." Much of the development of new varieties, especially wheat and rice, was initiated under the auspices of the Rockefeller Foundation. AID distributes the "miracle" seeds and helps farmers with agricultural advice. But food production cannot possibly keep pace with burgeoning population.

poorest nations cannot afford. Not only does sheer humanity require such action by affluent nations, but so does sheer pragmatism. Many Third World nations, as evidenced by statements at the World Population Conference in Bucharest last year, believe that the affluent nations want to retard the population growth of developing nations in our interest, not theirs. Only through continuing, substantial help can we convince them that our interest in their development is genuine.

We have a right to emphasize, however, that the continuation of this sort of aid requires, on the part of the developing nations, a governmental commitment to reduction of population growth. They have every right to charge us with overconsumption; and it is clear, from such events as the oil price increase, that if a sense of justice does not lead us to change our ways, economics will force us to do so. At this point, however, overconsumption by the affluent countries cannot be used as a pretext for inaction by the developing countries. Charges and countercharges may satisfy the spirit, but they do not fill the stomach. All the nations must *collaborate* to halt population growth.

SOME PEOPLE advance a third answer to the population crisis: food technology. There are valid reasons for hoping that we can produce more food than we do now, as witness the "Green Revolution." A strain of wheat called Norin 10, developed by the Japanese in the 1930s and altered here in the United States for tropical environments, has proven extraordinarily successful. Using new varieties developed from Norin 10 by Nobel Prize winner Dr. Norman Borlaug and his colleagues, Mexican farmers have managed to raise their yield per acre sixfold.

Food technology holds out hundreds of interesting possibilities, and all should be pursued. But none of these possibilities, no matter how successful, is an answer to excessive population growth. If anyone should be optimistic about food technology, it should be Dr. Borlaug. Yet he is not. "The Green Revolution," he commented recently, "only delayed the world food crisis for another thirty years. If the world population continues to increase at the same rate, we will destroy the species."

Without population growth, there would be no food problem. With today's excessive population growth, there can be no solution to the food problem.

THE TROUBLE with restraint of population growth as a "cause" is that, although it is all about sex, it has no sex appeal. Americans prefer problems that can be attacked fast and solved fast. We like to hit problems on the head with our doctorates and our dollars today and see them crumple tomorrow. And it's awfully hard to keep us interested in a problem that is not only persistent, but seemingly far away.

But we've got to stick with this problem, tiresome and distant and intransigent as it is. We must assume *now* that we have reached the earth's carrying capacity, for past population growth has built into future growth a momentum beyond our recall. Barring massive famine, nuclear warfare, continentwide outbreaks of plague, or other such Malthusian "solutions" to excessive population growth, we cannot prevent world population from reaching at least eight billion by the year 2025.

We must hope that out planetary ecosystem can support that many people. But we cannot indefinitely expect nature to correct our errors, to subsidize our follies, or to tolerate our continuing political, economic, and social excuses for failure to act. Like any life-support system, earth's ecosystem has a finite ability to support human weight. ■

Dr. Russell W. Peterson, Chairman of the President's Council on Environmental Quality, and formerly governor of Delaware, has had a distinguished career in industry and public service. He is deeply concerned about the problem of population growth and the quality of human life everywhere.

NPCA at work

The Interior Department's right to restrict public access to national wildlife refuges and national parks when people are causing ecological damage in these areas has been affirmed by a recent hands-down court victory for Interior, NPCA, and fourteen other environmental groups.

In June the Fourth U.S. Circuit Court of Appeals in Richmond upheld the Interior Department's right to limit four-wheel drive access to the beach at Back Bay National Wildlife Refuge, which is located south of Virginia Beach, Virginia. By ruling in Interior's favor in this case, federal officials say that the court made a precedent-setting decision of national importance.

In the Back Bay case, the U.S. Fish and Wildlife Service (FWS) of Interior had clamped down on hordes of four-wheel-drive beach buggies and trucks that had been using the refuge beach to reach second-home developments to the south.

The vehicles were disrupting the food chain, killing small beach crustaceans and turtles, and disturbing shore birds as well as migratory birds that winter at Back Bay. Therefore, starting in 1972 FWS banned driving on the beach to all but certain year-round residents and emergency, school, and service vehicle drivers.

NPCA has been involved in litigation concerning this case for several years. When local developers and citizens went to court to try to alter Interior's regulations, NPCA intervened on the side of the government, maintaining that wildlife refuges exist for the protection of wildlife rather than as thoroughfares for land developers and private landowners.

The recent ruling by the appeals court upholds a February U.S. District Court decision.

The Voice of America interviewed A. W. Smith, President and General Counsel of NPCA, on July 3. The interview covered a wide range of subjects relating to international environmental problems. VOA, which is the official American radio, broadcasts in thirty-six languages; many VOA broadcasts carried extracts from the interview in translation. "The show is terrific," says Art Small, the VOA interviewer.

Dungeness National Wildlife Refuge in Washington should continue to be managed primarily for the preservation of wildlife and associated land and water habitat, and public recreational use of the refuge should remain secondary, NPCA testified at recent public hearings.

NPCA trustee Patrick D. Goldsworthy, a University of Washington biochemistry professor, represented this Association at hearings in Port Angeles, Washington, concerning public use policies for the refuge.

Supporting a continuation of the FWS policy of deemphasizing non-wildlife-related public uses of this refuge, NPCA stressed that intensive recreational uses such as road access to areas within the refuge, proposed camping and picnicking facilities, restrooms, parking lots, and unrestricted human use should not be allowed at Dungeness.

In addition, the refuge cannot be considered out of the context of the surrounding lands and waters. A proposed marina nearby would cause a concentration of boats detrimental to wildlife, and a breakwater jetty would irreparably damage the natural balance of the Dungeness River ecosystem.

The first International Conference on Marine Parks and Reserves drew 137 participants from thirty-three countries to Tokyo, Japan, during May 12–14, 1975. NPCA trustee and marine biologist Dr. Eugenie Clark represented this Association. In consideration of the great need for worldwide protection and conservation of marine life, Dr. Clark reports that the scientists agreed to cooperate further toward this cause.

Fifty-three oceanographers from Japan, fifteen from the United States, and scientists from other countries representing Africa, Asia, Europe, North, South, and Central America, and remote islands in the Pacific reviewed the status of present and proposed marine parks and reserves throughout the world and explored various aspects of marine conservation.

Comments by participants from small and/or far-off countries in early stages of setting up marine conservation measures illustrated some of the problems in producing legislation in isolated cultures with a long history of freedom of the individual in utilizing the sea.

As emphasized by papers, discussions, and conference speakers such as Dr. Carleton Ray of Johns Hopkins University, Dr. Clark says it is apparent that "marine conservation depends on the holistic view of the complex and interdependent ecosystems of all the oceans, coastal lands, and rivers draining into the ocean. The rapid deterioration of the marine environment resulting from man's far-reaching damage and pollution is likely to accelerate

Continued on page 22

TAKAO OTSUKA

NPCA trustee Eugenie Clark visited President A. W. Smith at Association headquarters in Washington, D.C., before her departure to Tokyo, Japan, for the First International Conference on Marine Parks and Reserves. Dr. Clark, a noted marine biologist, represented NPCA at the conference. She is famous as "the shark lady" due to her work with sharks and poisonous fish.

NPCA Staff Report

TRIPLE JEOPARDY at GLACIER NATIONAL PARK

Glacier National Park, straddling the Continental Divide in northwestern Montana, is a remote and isolated mountain wilderness. Known worldwide for its alpine lakes, hanging glaciers, grizzly bears, and rugged ice-carved valleys, Glacier seems as secure from industrial encroachment as any of our wilderness parks. Bordered on the west and south by Flathead National Forest (including the Bob Marshall Wilderness) and Lewis and Clark National Forest, to the north by Canada's Waterton Lakes National Park, and to the east by the 900,000-acre Blackfeet Indian Reservation, Glacier's 1,600 square miles (1,013,100 acres) should be well buffered from trouble. Unfortunately, however, Glacier is the "hard luck" park of 1975. Trouble is coming from three directions at once—Indian claims, mining, and oil and gas leases.

One major problem is related to rights claimed by the Blackfeet Indians. Trouble began when Woodrow Kipp, a Blackfeet tribal member, was cited on September 15, 1973, for entering Glacier without paying the required entrance fee. On January 2, 1974, the U.S. District Court in Missoula, Montana, ruled in favor of Mr. Kipp based on the Treaty of September 25, 1895, whereby the Blackfeet sold lands of their reservation to the U.S. Government for $1.5 million while reserving the right to enter the area, hunt, fish, graze animals and cut timber on lands which subsequently became a part of Glacier National Park.

Later, on July 9, 1974, the same District Court found other Blackfeet Indians guilty of hunting and other park violations on the basis of a 1935 Claims Court decision which had not been evident at the time of the favorable ruling for Woodrow Kipp.

More recently, however, some Blackfeet have submitted a petition to the Department of the Interior that seeks to approve administratively what was not established through the courts. They propose a "Conservation Agreement" providing for the "regulation of reserved rights on the eastern portion of Glacier National Park." The petition proposes a supervisory council to establish and oversee hunting seasons, timbering rights, and the like for the Blackfeet in the national park.

The legal staff at the Department of the Interior is studying the petition, but as yet has no recommendation on how to protect the resources of the park from the incompatible patterns of use contemplated by the Blackfeet.

Indian attempts to penetrate national park lands for exploitative purposes, like the successful efforts by the Havasupai Indians to acquire part of Grand Canyon National Park during passage of the misnamed Grand Canyon National Park Enlargement Act of 1974, represent another sad commentary in Native American History. The failure of our nation to afford equal rights to Indian nations is now being paid for in full—by the National Park Service—while the Indians, understandably desperate for redress, may destroy something of value to both themselves and the rest of the nation.

Another threat to Glacier comes from the north. Across the Canadian border in British Columbia, Canadian and English industrialists are eyeing an area west of the Continental Divide for coal development.

The proposed mine would be developed in the watershed of Cabin Creek, a Canadian tributary of the North Fork of the Flathead River, which forms the western boundary of Glacier National Park, at a site only eight miles from the primitive northwest corner of the park. The mine would be developed by Sage Creek Coal Company, a subsidiary of Rio Algom Mines Ltd. of the United Kingdom. Rio Algom is expected to market the coal in Japan.

The proposed Cabin Creek mine would have devastating impacts on the entire region around Glacier. Coal has been discovered in two mountains, one on each side of Cabin Creek, containing an estimated 150 million tons of high grade, low-sulfur coal worth $60 a ton. If the mine is developed, the American people can look forward to a twenty-year strip mining operation, obliterating these two mountains with subsequent leaching of silt, sulfur, nitrates, phosphates, arsenic, antimony, and other pollutants into Cabin Creek, the Flathead River, and Flathead Lake near the park. Scientists predict that Flathead Lake would suffer rapid eutrophication, converting this sparkling mountain lake into an odorous algal broth. Add to this the impact of establishing an "instant" community of workers in Cabin Creek Valley, containing from 3,000 to 7,000 residents, and the threats to the national park become frightening.

Cabin Creek is being watched by a citizens' group known as the Flathead Coalition, of which NPCA is a member. The Flathead Coalition, backed by Montana's congressional delegation, is pressing for multilateral talks with the Canadian Government, the United States, the State of Montana, and the Province of British Columbia. Canada is being urged to reject this mining proposal on the basis of threats to water flowing into the United States and into our national park. In addition, Glacier holds the unique status of being linked with Canada's Waterton Lakes National Park in a unit named the Waterton-Glacier International Peace Park, and also has been designated a "biosphere reserve" under the "Man and the Biosphere" program of the United Nations.

Meanwhile, the Rocky Mountain goats and grizzly bears roam the wilderness of Glacier oblivious to the insatiable human appetite for black gold that may ultimately destroy their home—and our national park.

Energy consumption and national economic needs have helped to create still another threat to Glacier's pristine habitats and now merely illusory isolation. On June 23, 1975, the U.S. Forest Service issued a draft environmental impact statement (EIS) recommending that 165,681 acres of Flathead National Forest, just west of Glacier

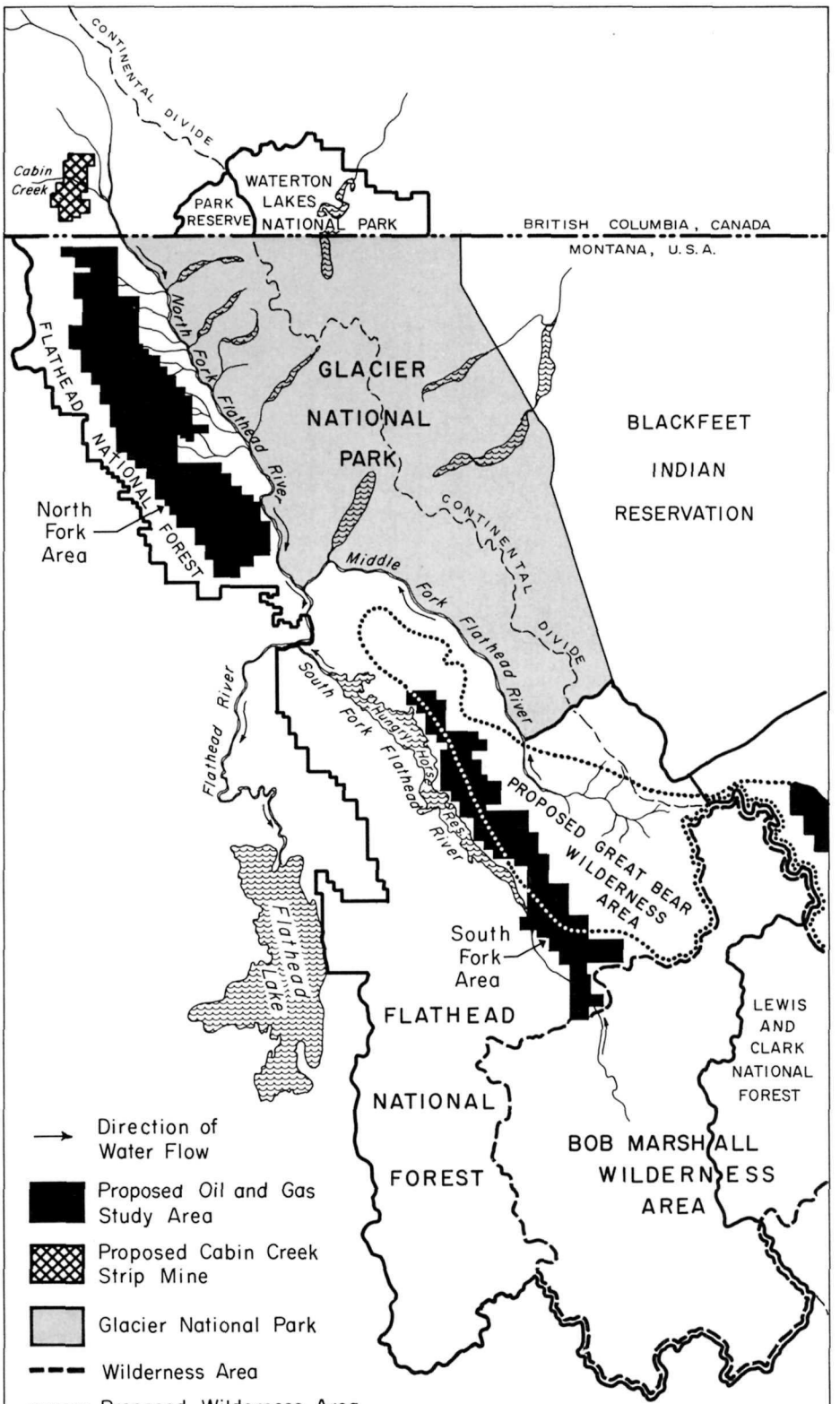
National Park, be leased for oil and gas exploration and development.

The lease applications have been made by American oil companies in accordance with the Mineral Leasing Act of February 25, 1920. The Bureau of Land Management (BLM) is the agency responsible for the actual issuance of the leases, whereas the Forest Service is responsible for managing the surface resources on national forest lands.

The Forest Service, upon releasing its recommendation to the BLM, stated, "Involved [in the proposed leasing program] . . . are portions of the forest that contain new wilderness study areas, other inventoried roadless areas, key winter elk range, grizzly bear habitat, and a small portion of the Wild and Scenic River proposal presently pending, and a very small area within the Bob Marhsall Wilderness. In addition, we've tried to recognize the nationwide need for domestic energy resource development along with current international economic and political trends in the energy field."

Recommendations for the affected areas within Flathead National Forest are as follows: denial of leases on 53,-323 acres of roadless area—including the small area within the Bob Marshall Wilderness, granting of leases with surface occupancy on 111,954 acres, granting of leases without surface occupancy on 53,727 acres, and holding leases on 16,996 acres until unit land use plans are complete.

The environmental impacts of this program would depend, of course, upon the quantities of oil and gas discovered. With no discoveries, impacts would be limited to seismic explorations. However, with discovery of increasing quantities of recoverable petroleum resources, impacts escalate to conform to the familiar phenomena of land ruined by petroleum development: drilling rigs, wells, pipelines, roads, tank farms, and even refineries—plus associated new towns, schools, recreation facilities, and roads to accommodate the labor force. As with the proposed Cabin Creek Coal developments, the Flathead River watershed basin, forming the western boundary of Glacier National Park, stands to suffer most heavily from oil and gas leasing in the



North Fork Area of the Flathead National Forest. Furthermore, industrial development in the South Fork Area will cause accelerated regional development too close to this fragile national park.

Forest Service lands in close proximity to national parks should not be compromised for single-purpose industrial development. Once the removal of petroleum resources begins, substantial degradation of the local environment will occur rapidly, and these adverse impacts will spread—to the detriment, in this case, of Glacier National Park. Despite the current thrust toward "energy self-sufficiency"—a program not demonstrably enhanced by leasing lands in Flathead National Forest—we should not sacrifice national park ecosystems to this end.

Besides the problems discussed here, Glacier's "hard luck" is coming from other sources—both natural and industrial: a late June snowmelt caused destructive flooding and disrupted park visitation; local aluminum smelters have caused fluoride contamination in parts of the park; utility concerns are seeking a "Middle Fork Utility Corridor" for power lines adjacent to the park. The only answer to "hard luck" is "hard work," and this can come only from concerned citizens who care enough to help Glacier National Park.

HELP GLACIER PARK

NPCA is commenting in detail on the draft EIS. Your help is needed in urging a recommendation that the North Fork and South Fork areas of Flathead National Forest not be opened for oil and gas exploration and development. Write *before October 1* to:

Mr. E. L. Corpe
Forest Supervisor
Flathead National Forest
Kalispell, Montana 59901

Members should also write to the Department of State, urging multilateral talks with the Canadian Government to reject the proposed Cabin Creek mine, in recognition of Glacier Park's unique wilderness qualities and international status. Write to:

The Honorable Henry Kissinger
Department of State
Washington, D.C. 20520

TOM COBB

Mr. Leo Pahl, NPCA volunteer consultant on the American chestnut, inspects some of the young seedlings at his Pasadena, Maryland, nursery. NPCA met with great success when it asked members and others last autumn to send in seeds from trees that seemed to have some immunity to the "chestnut blight" that has almost wiped out Castanea dentata. *More than 300 seedlings, ranging from about 4 inches to 1 foot tall, have survived at the nursery. Markers (right) indicate contributors. All available land is planted at present, so NPCA will not be able to use additional seeds this year. Next year the seedlings will*

Continued from page 19

unless further protective action is taken."

Based on the revelations of the meetings, the conference participants approved a series of resolutions proposing systematic actions of marine conservation.

The International Union for Conservation of Nature and Natural Resources (IUCN) and the Marine Parks Center of Japan organized the conference. Conference president Dr. Tuyoshi Tamura and Dr. Harold Coolidge, Honorary President of IUCN and NPCA member and former trustee, were among those who gave the opening speeches. Dr. Clark gave two film presentations.

Dr. Clark points out that Japan has taken the lead in establishing marine parks since a resolution concerning this need was passed at the First World Conference on National Parks held in Seattle in 1962.

After the Tokyo conference, delegates set off on a seven-day inspection of some of the forty marine parks in Japan.

Distressed about the crisis in national park personnel, one NPCA member went to work in an unexpected way. Debbie Huning of Brooklyn, New York, recently circulated a petition that was signed by 254 persons thus supporting the long-standing NPCA campaign to open up the budgetary procedures of the President's Office of Management and Budget (OMB) to public scrutiny and protesting personnel ceilings imposed on the National Park Service by OMB.

In forwarding the petition with its numerous signatures representing a "cross section of people across the country that I feel to be substantial enough evidence of the support behind NPCA," to NPCA headquarters, Ms. Huning requested that the NPCA staff forward it where it would serve the best purpose. Explaining that the petition resulted from her frustration upon reading several NPCA reports on the inadequate staffing that, if continued, will inevitably lead to closure of some park areas, she added, "I am a medical student and consequently do not have the time to devote to the acquisition of signatures that I would have liked. I wanted, however, to get this out before June 30."

Encouraged by this demonstration of support for our efforts, NPCA forwarded the petition to OMB, the National Park Service, and the Assistant Secretary of the Interior, pointing out that, "This day of June 30 marks the end of the fiscal year, and with it comes the imminent threat of more cutbacks and ceilings placed on the National Park Service—the finest governmental conservation program in the world today. This petition represents

TOM COBB

be replanted in a larger protected area. NPCA hopes that natural selection will eventually produce disease-resistant trees. The American chestnut was king of our eastern hardwood forests until the blight, a fungus disease of the bark, was introduced from Asia early in this century.

the depth of public sentiment we have behind a strong, well-funded, well-staffed National Park Service.

"The OMB's process of applying end-of-year personnel ceilings to the National Park Service following congressional approval of the federal budget request for national park operations is at best a sloppy form of representative government and at worst a serious abrogation of the public interest. Holding the National Park Service down to 7,168 permanent employees for FY 1976 at a time when the National Park System encompasses 30 million acres of land and receives over 200 million visits annually reflects the desperate need for revision of our fiscal priorities."

NPCA magazine reports in the last few years, including those in the April and June 1975 issues, have detailed how the OMB controls all phases of the preparation of budgets for NPS and has in effect caused the Park Service to become more and more understaffed and underfunded even as Park System acreage and visitation increase by leaps and bounds. As explained in the August NPCA at Work, this could have serious repercussions on the protection of national park areas and on the standard of service enjoyed by park visitors.

In related matters, NPCA recently won a landmark court decision that requires the U.S. Fish and Wildlife Service to submit an environmental impact statement with each annual budget request. We anticipate that other agencies such as the Park Service will be preparing statements on their requests, which will reduce the secrecy surrounding budget and policy decisions by OMB by allowing citizens to observe the scope of budget parameters before an agency's request goes to Congress.

We thank Debbie Huning and the 254 individuals on the petition for their support, and we reaffirm our goal of "opening up" the budget process. NPCA members can help by writing OMB to urge that the end-of-the-year personnel ceiling of 7,168 be lifted and that all 8,546 Park Service positions authorized by Congress be filled.

John A. Hill, Associate Director for Natural Resources, Energy, and Science
Office of Management and Budget
Washington, D.C. 20503

Permits for dredge and fill activities in both coastal and freshwater wetlands will soon be required unless the U.S. Army Corps of Engineers is successful in its efforts to shirk this protective responsibility. That such regulation is needed is evident from the rapid filling of our wetlands for development and the deleterious effects that dredging operations and spoil dumping can have on our waters.

Section 404 of the Federal Water Pollution Control Act (FWPCA) Amendments of 1972 (Public Law 92-500) requires the Corps to issue permits for dredge and fill activities and the Environmental Protection Agency (EPA) to draw up the guidelines under which the Corps will conduct this regulatory function.

The Corps had actually planned to enforce the dredge and fill permit program only in the traditional "navigable waters," thus excluding a major portion of coastal wetlands above the mean high tide line and nearly all freshwater wetlands and swamps along rivers, as well as the tributary streams not meeting the navigable test.

A recent court decision favoring the National Resources Defense Council, however, forced the Corps to revise its regulations. The proposed revisions, commented upon by NPCA recently, leave a lot to be desired.

Once again attempting to thwart the will of Congress and the courts, the Corps' current proposal consists of four alternative sets of regulations, only one of which comes close to meeting the law's requirements. (The Corps admittedly opposes the alternative.)

In a concerted effort to generate widespread opposition to its own proposed regulations, the Corps issued statements throughout the country that "under some of the proposed regulations, federal permits may be required by the rancher who wants to enlarge his stock pond, or the farmer who wants to deepen an irrigation ditch or plow a field, or the mountaineer who wants to protect his land against stream erosion."

NPCA and other national conservation organizations have protested this blatant distortion of facts.

In a strongly worded letter to Chief of Engineers General William C. Gribble, Jr., EPA Administrator Russell Train stated that, "It is becoming increasingly apparent that the recently proposed regulations and guidelines published by the Corps of Engineers and EPA governing the implementation of Section 404 of the Federal Water Pollution Control Act are being misunderstood by the public and by Congress. Most of this confusion and misunderstanding is directly attributable to the seriously inaccurate and misleading press release issued by the Corps at the time the regulations were published. Because of the extreme importance of Section 404 as the primary mechanism to protect America's valuable wetland resources, I consider it imperative that the Corps of Engineers take steps to remedy these impressions.

"We are particularly concerned that the false impression that farmers must obtain permits whenever they plow a field be corrected. Since this was clearly not contemplated by either the Corps or EPA and is not required by the statute, we fail to understand how such a statement could appear in this press release. As you are well aware, the primary concern of Section 404 is to address situations where dredged or fill material is discharged into wetland areas. By no stretch of the imagination can the simple act of plowing be considered to fall within that category.

"Both EPA and the Corps have issued policy statements recognizing the need to protect wetland areas. It would be unfortunate indeed if, on the basis of these recent misconceptions, legislative changes were made to return the statutory definition of jurisdiction to traditional concepts of navigability. Such a change would leave vast areas of valuable wetlands without the protection of this regulatory mechanism and possibly subject them to uncontrolled development."

In commenting on the Corps' proposed regulations, NPCA charged that the Corps has derogated from its responsibilities to protect wetlands since the amendments were enacted in 1972.

NPCA further asserted that three of the four alternatives in the proposed regulations violate both PL 92-500 and the recent judicial interpretation of that law.

It seems particularly ludicrous to us that the Corps would on the one hand state that a "broader definition of [navigable waters] to include waters beyond those which fall within the traditional definition of 'navigable waters of the U.S.' *is required* [empha-

sis added]," while it proposes only one of four alternatives that can meet the statutory requirement—and that is the one that the Corps rejects as too broad.

NPCA went on to argue that because Section 404 must be applied to the discharge of dredged spoil and deposit of fill into waters of the United States, the new regulations should not be found applicable to the great majority of agricultural or silvicultural operations.

Administrative definitions should be included in the regulations to limit the scope of applicability to *natural* coastal and freshwater wetlands and tributary streams. This can be done in terms of identifying and judging the existence of characteristic natural vegetation. Species of plants that live and reproduce in saturated soil conditions (hydrophytic plants) and those that live and reproduce in saline or brackish water (halophytic plants) should be identified and used as the major test for applicability of Section 404 (excluding such cultivated crops as rice, hay, and field grasses).

Following recent congressional hearings on proposals to roll back the Corps' jurisdiction under FWPCA to include only traditional "navigable waters," the Corps issues its "interim final regulations." Under strong pressure from conservationists, the Corps has clarified that the 404 permits will cover dredge and fill activities in natural coastal and freshwater wetlands, and will *not* cover normal farming operations. However, the regulations will be phased in over a three-year period and are subject to change following an on-going period of public review and comment. Members should write: Chief of Engineers, Forrestal Building, Washington, D.C. 20314: Attn: DAEN-CWO-N.

Air shipments of plutonium and other radioactive materials present a grave hazard to the unsuspecting public, NPCA recently warned the Nuclear Regulatory Commission (NRC). One of the most hazardous of all substances, plutonium shipped by air is exposed not only to the possibility of an air crash, but also to the threat of nuclear blackmail if the aircraft were to be hijacked.

In a strongly worded communication, NPCA, represented by Eldon Greenberg of the Center for Law and Social Policy, recently protested an NRC proposal to continue air transport of nuclear materials during the period in which the practice is being reviewed under the National Environmental Policy Act. All air transportation of hazardous nuclear materials should be stopped, NPCA told the NRC, at least until public health, safety, and environmental questions and problems have been resolved.

Although the whales of the world's oceans could still be saved from extinction, the task will have to be accomplished without much help from the International Whaling Commission (IWC) if the June commission meeting in London is any indication.

Before the IWC meeting, NPCA had contacted the U.S. Commissioner for the IWC, Dr. Robert White (Administrator of the National Oceanic and Atmospheric Administration), to urge that the United States stand firm in its support of the total moratorium on commercial whaling. A total moratorium is crucial to ensure restoration of depleted whale populations.

However, faced with an almost total lack of support for the moratorium among the other member nations at the IWC meeting, the United States threw its support behind the Australian amendment proposal, which was adopted. These newly approved IWC provisions establish a quota system for all population stocks of species that are still allowed to be harvested—mainly sei, minke, and sperm whales. Of course, those depleted species already designated by IWC for protection—gray, blue, right, humpback, and bowhead whales—will continue in that category. On the other hand, the finback whale, one of the most depleted species that is still harvested, will still be killed, although by a much reduced quota.

Although the agreements reached by the IWC go farther toward protection of these mammals than at any other time since the inception of commercial whaling, NPCA continues to believe that IWC agreements may be a case of "too-little-too-late" to assure the perpetuation of all whale species.

Certainly conservationists must continue to focus on attainment of a fully implemented moratorium on commercial harvesting of all whales.

The U.S. government—particularly the Commerce Department, the State Department, and the White House—must be kept fully aware of the widespread support for cessation of whaling by constant communication from citizens.

Even though the United States has taken the lead among all nations in seeking the preservation of the whales, we must continue to pressure these agencies, so that they in turn will be able to bring political and diplomatic pressure to bear on the nations, particularly Japan and the USSR, that continue to harvest whales commercially. The latter two nations account for approximately 85 percent of the total whale catch.

Members may write:

- Rogers C. B. Morton, Secretary, Department of Commerce, Washington, D.C. 20230.
- Henry A. Kissinger, Secretary, Department of State, Washington, D.C. 20520.
- Gerald R. Ford, President, The White House, Washington, D.C. 20500.

news notes

Sewage-fouled drinking water shut down Crater Lake National Park in Oregon in early July. Hundreds of visitors and staff—estimated as from 1,350 to 3,600 people—had become ill from untreated sewage contaminating the mountain spring water supply as a result of a single rock subsequently found to be blocking the sewage system. The park reopened on August 1 with the assistance of U.S. Army mobile water-treatment units.

Park Service officials had urged that all the approximately 9,000 persons who visited Crater Lake between the beginning of the summer season and July 11 consult with their doctors. NPS spokesman Thomas Wilson reports "many severe cases of cramps, vomiting, and other internal ailments." At press time no hepatitis cases or other serious illnesses had been reported.

The Interior Department is investigating allegations that concession officials at privately owned Crater Lake Lodge tried to cover up a gastroenteritus epidemic so that operations would not be interrupted.

NPS officials could not recall another instance in which a national park was forced to close in midseason.

Pollution of the spring that furnishes water for park facilities went undetected at first because the spring is under several feet of snow, officials said.

Lying on the crest of the Cascades, Crater Lake National Park receives more than 50 feet of snow annually, and the summer season at the park lasts for little more than two months.

The Environmental Coalition of North America (Encona) urged President Ford not to revoke or modify Executive Order 11643, which was issued in 1972 to stop the poisoning of wildlife on federal lands. The President announced in July, however, that he will modify the 1972 ban.

In late June the President's Domestic Council, acting under heavy pressure from sheepgrowers, recommended that the President rescind or modify the Executive Order to allow poisoning of predatory mammals and birds when other control methods were "determined" unsuccessful. Conservationists protested that the government could protect the interests of sheepmen without resuming brutal predator management methods.

Encona Chairman A. W. Smith, who had previously expressed the same recommendation to President Ford in his capacity as president of NPCA, noted that the opposition of Encona to the revocation of the order banning wildlife poisoning may be unusually significant because Encona represents a broad spectrum of Americans.

The Executive Order issued in July allows federal agencies to authorize emergency use of sodium cyanide on federal lands on an experimental one-year basis. While a concession to woolgrowers, the action was less extreme than feared by environmentalists.

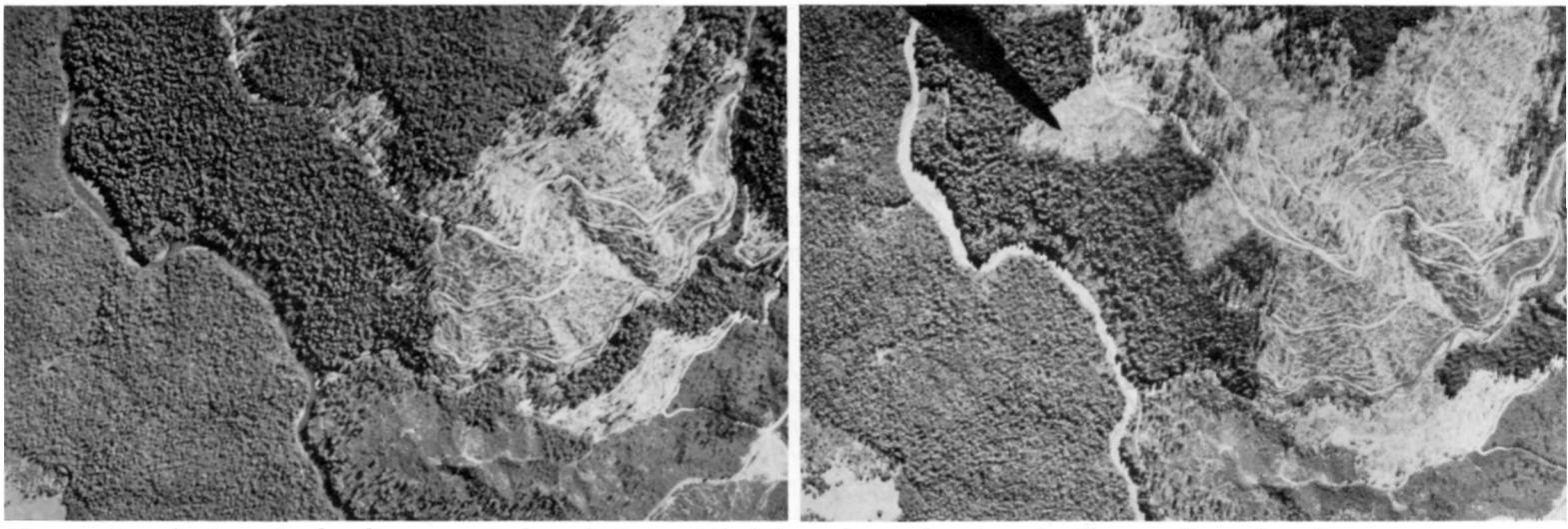
The Interior Department has announced a review of endangered plants listed in the report that was prepared by the Smithsonian Endangered Plant Project under the authorization and direction of the Endangered Species Act of 1973. Although the Smithsonian submitted the report to Congress and Interior at the beginning of the year, official announcement of a review by Interior did not appear in the *Federal Register* until July 1, 1975.

In early April NPCA protested to Interior officials that, for unexplained reasons, action on the authoritative study has been delayed for several months in the FWS Office of Endangered Species. NPCA has stressed the urgent need for FWS action, as evidenced by the astounding results of the study.

The Smithsonian *Report of Endangered and Threatened Plant Species of the United States* lists more than 10 percent of our native higher plants as "endangered" or "threatened." Of particular concern, NPCA has emphasized, is the need for immediate protection of the seventy-seven species identified as commercially exploited.

The report resulted from a painstaking year-long study of all available scientific data and information from the states, which was processed through a sophisticated computer system and then examined by experts.

The U.S. Fish and Wildlife Service announced that it considers the



Clearcutting of private lands adjacent to Redwood National Park has advanced ominously closer to the park each year, as indicated by aerial views of the lower Redwood Creek watershed in 1973 (left) and 1974 (right). Here the park includes merely a thin corridor of land bordering the creek, and in 1975 logging advanced farther into the 800-foot "buffer zone" between the park and cut areas—sometimes right up to the park boundary. Timber companies cable-logged settings of 20 to 30 acres, agreeing not to log within 75 feet of the park—excepting redwoods more than 12 inches in diameter.

Smithsonian report a "petition" under the Endangered Species Act and that the petition warrants a review to determine whether the plants should be protected under the Act. The *Federal Register* notice stated that "When data sufficient to substantiate a determination of whether any plant (or plants) described above is (are) a threatened or endangered species as provided for by the Act, such information will be summarized and a formal proposal to add any such plant will be published . . . in the form of a proposed rulemaking." A period of public comment would follow before the final decision was made on each proposal.

"Many of the plants have never been intensively studied before and little is known of them in terms of population trends, growth and reproductive rates," said Keith Schreiner, FWS Associate Director.

Under a new procedure that the Interior Department is applying to all species protected under the Act, the areas where plants exist will also be studied to determine if they qualify as "critical habitats."

The Fish and Wildlife Service is seeking the views of the governors of the states in which these plants are thought to occur. Other interested persons are asked to submit any factual information relevant to this review to the Director, U.S. Fish and Wildlife Service (SE), Washington, D.C. 20240.

Ever embroiled in controversy, Redwood National Park is a main focus of current legal battles over the question of environmental controls on the logging industry in California. Clearcutting of privately owned forests adjoining the park continues to threaten our park and virgin redwoods.

The California legislature recently imposed a one-year moratorium on the applicability of the California Environmental Quality Act (CEQA) to timber harvesting operations. At the same time the state approved all timber harvesting plans that the state forester had previously approved.

Earlier in the year the Humboldt County Superior Court, ruling in favor of the Natural Resources Defense Council (NRDC), had said that the state forester must set aside timber harvesting plans in the Redwood Creek watershed and comply with CEQA by filing environmental impact reports on logging operations subject to state permit.

The state forester approved several logging plans subsequent to the court ruling, and a controversy ensued concerning whether he had complied with CEQA. Angry lumbermen were protesting controls.

At the height of the controversy, sometime in March vandals armed with a chainsaw felled a 175-foot giant redwood and a 220-foot Douglas fir in Redwood National Park's Lady Bird Johnson Grove. No motive or suspects have been identified, but the FBI is directing an investigation.

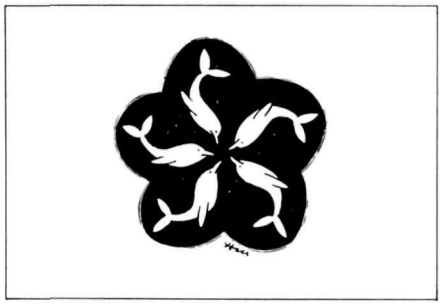
The Redwood Creek area, particularly the narrow "worm" appendage that contains the world's tallest recorded tree, is the park's most vulnerable and most difficult area to manage.

Undercutting of stream banks and stream-borne matter resulting from logging operations in the Redwood Creek watershed seriously endanger park redwoods, and reportedly are slowly killing the tallest tree.

When Congress established Redwood National Park in 1968, it gave the Secretary of the Interior authority to protect the park from damage caused by adjacent logging. On July 16, 1975, a federal court ruled in a case brought by the Sierra Club that despite "substantial on-going damage" to the park, the Interior Department has "unreasonably" and "arbitrarily" failed to exercise this authority as well as its general duty to protect a national park area. The court ordered the Department to act by December 15, 1975, to protect the park, specifying that Interior shall, as necessary, obtain interests in land, contracts or cooperative agreements with landowners, and/or modified park boundaries. According to park superintendent George Von Der Lippe, Interior will solicit public review of its management options, which it will be assessing this fall.

In addition, Mr. Von Der Lippe says he hopes that in the future the public will achieve input into the park's first master plan in a manner similar to the model planning approach being used by the Yosemite planning team.

However, he says that preparation of the draft master plan will be delayed until a planning team from the NPS Denver Service Center (DSC) is available, and the NPS Western Regional Director has told him that pending master plans for Yosemite and Grand Canyon national parks must take priority. (In the June Magazine (p. 19) NPCA detailed how the DSC would be victimized by personnel ceilings imposed on the Park Service by the President's Office of Management and Budget.)



The National Whale Symposium, a multidisciplinary public conference to study and celebrate the great whales and their dolphin relatives, has been scheduled for November 8–12, 1975, at Indiana University, Bloomington, Indiana.

The symposium will gather together experts from the social and natural sciences, arts and humanities, and concerned citizens to draw national and international attention to the plight of these endangered mammals.

Alternatives and recommendations will be offered to current national and international political bodies responsible for the conservation of whales.

Numerous program offerings range from lectures and discussions on topics such as the proposed moratorium on whaling, the tuna/porpoise problem, Eskimo whaling, and whale psychology to at least five musical concerts inspired by or about whales and museum exhibits.

For information write: The National Whale Symposium, 605 South Fess Street, No. 3, Bloomington, Indiana 47401. (Tel. 812-339-1484.)

reader comment

On "Cruelty for Fun"

As a hiker and rider in many of our national parks I appreciate your magazine. Am especially pleased by the June number. "Cruelty for Fun" is what I have been saying for years, and I am pleased to be backed up. The article on Johnnie Holzwarth brings back glorious memories of many happy weeks spent at his ranch. . . .

Dorothy Currier
Wellesley, Massachusetts

I commend your organization for its efforts in protecting our national parks and monuments. I am concerned that your recent attitude toward hunting and fishing will lose to the NPCA an important segment of its support. In my opinion your recent article concerning "Fish for Fun" was in poor taste and has little relevancy to your stated purposes.

The sport of hunting, and evidently fishing, is adequately balanced by the numerous so-called "humane groups." I would hope that the NPCA can continue its work without expressing partisan opinions concerning the sports-hunter and fisher.

Hillard J. Hayzlett
Hagerstown, Maryland

NPCA has never adopted a policy for or against hunting or fishing, except for opposing hunting in national parks and monuments, which is entirely within our purview. The "Exploring Earthman's World" series is intended to examine man/nature relationships from various angles that will hopefully give new insights into living harmoniously with nature and stimulate thinking about our actions.

I am writing to express my extreme displeasure with the article "Cruelty for Fun," by Darwin Lambert. The idea that catch-and-release fishing "violates ecological principles" and constitutes an "insult to the fish and the whole ecosystem" carries the self-righteous concept of protectionism to the *n*th degree of stupidity, in my opinion. Those of us that are striving to develop a working relationship between the protectionists and the sportsmen are put in an impossible position by this sort of irresponsible hogwash. Faced with the enormous task of trying to preserve fish habitat in the future, we will need the combined and unified support of all the disparate groups that function under the conservation banner. Articles such as Lambert's serve only one purpose and that is to discourage sportsmen from any hope that they can find a reasonable working relationship with neo-protectionists. It certainly discourages me.

A. Starker Leopold
Berkeley, California

I've appreciated Starker Leopold's conservation work and can't easily believe he'd have written this vehement letter if he'd had time in his busy schedule to think the matter through. My article doesn't represent the policy of NPCA nor, to my knowledge, of any conservation group or category. It grew from a decade of independent study of man-nature relationships. It certainly doesn't fit into the context of protectionist versus sportsman. The reasoning that questions "Fishing for Fun" (no food used) points up a continuing need for regular sport fishing (food used)—and, incidentally, for sport hunting (food used)—to keep reminding our civilization that we're dependent on the ecological reality of the plant-animal-people food chain.

The article fits into the larger context of the earthwide environmental crisis. More and more leaders in many disciplines agree that humanity needs to live more nearly in harmony with ecological reality. Yet we resist doing what we can see needs to be done. We teeter on the fence, and unsuspected influences could shift the balance. Under these circumstances, it surely makes sense to identify and encourage what helps us toward harmony and to identify and discourage what leans toward disharmony.

"Fishing for Fun" has been promoted for what seemed good purposes, yet there have long been doubts. Back in 1967, F. Fraser Darling and Noel D. Eichhorn protested (in *Man and Nature in the National Parks*) that this kind of fishing emphasizes a notion "that angling as a sport is completely unrelated to any feeling of man's de-

pendence on nature. This idea seems so foreign to the ethics of the National Park Service as we have known it, that we wonder how it came to be used, even while admitting that the intention is to protect fish populations by reducing the kill."

My article doesn't pretend to make final judgment on "Fishing for Fun" but urges readers to weigh its "plus and minus values . . . and go on from there to examine the deep, broad, long-range effects that various activities or projects may have on humanity as well as on nature." For example: What is the effect on the feelings, thoughts, and habits of a person who sets out to fish and inflict possible pain on a creature, with no intention of eating it as ecological reality demands? And what is the effect on our civilization and way of life from the combined effects on thousands or millions of individuals?

I use "Fishing for Fun" as an illustration of an activity that lends itself to examination from both sides in a short article, not to condemn it without fair and well-considered public trial. Far from opposing the conservationist-sportsman, I myself enjoy fishing and eating the fish; and I continue to work for cooperation by all kinds of conservationists and the general public to save fish habitat—and, most important, the whole planetary habitat for all life, including humanity doing its very best to harmonize with ecological reality.

Darwin Lambert
Luray, Virginia

Reserve Mining Co. Still Dumping

I wish to commend you on your article concerning the Reserve Mining case in the May issue [News Notes] of *National Parks and Conservation Magazine.* You certainly helped bring an important issue into the national spotlight. This problem is not of small scale; it involves three states, the federal government, and the largest freshwater lake in the *world.* And whatever flows into Lake Superior is free to flow into Lakes Huron, St. Clair, Erie, and Ontario. Unfortunately, Reserve Mining Company is still polluting, and the end seems nowhere in sight. For such a serious problem to be gagged by legal red tape is almost a crime in itself.

Jeffrey Lapinski
Dearborn, Michigan

conservation docket

Recent action on bills of interest to NPCA members includes:

Land Use: The full House Interior Committee voted 23 to 19 to defeat the land-use planning assistance bill, HR 3510, on July 15. This vote marks the third year in which similar measures have been defeated by a narrow margin. Prior to the vote, amendments had been adopted to meet the Administration's objection to funding new spending programs this year by delaying for one year the start of funding for the bill's grants to the states.

Wetlands Loans: By a landslide vote the House passed HR 5608, which approximately doubles to $200 million the loan authorization for wetlands acquisition under the Migratory Bird Conservation Fund and extends until 1983 the period in which advance appropriations are authorized. Since 1955, nearly 7 million acres of wetlands have been acquired using this Fund, with the money coming from the so-called "duck stamps." The latter would be renamed the Migratory Bird Hunting and Conservation Stamps by the bill.

Strip mining: Although the House failed to override the President's veto of the strip mine regulation bill (S 25), congressional members have not ceased efforts to resolve this issue. Senators Metcalf, Jackson, and Haskell have introduced an amendment to the proposed Federal Coal Leasing Act (S 391) that would apply the same basic mining and reclamation standards as had been contained in S 25 to all coal strip mining *on federal lands* only. These federal lands are not covered by the various state strip mining laws that already exist.

Pork Barrel: The House recently passed HR 8122, the Public Works Appropriations bill, by a vote of 377 yeas to 28 nays. The bill also includes some power development and energy research funds and appropriates a total of more than $7.2 billion covering 507 Army Corps of Engineers and Bureau of Reclamation projects. Controversial

projects covered by the bill include these Corps projects: Red River Dam, Ky. ($1.5 million); New Melones Dam, Calif. ($58 million); Dickey-Lincoln Dams, Maine ($1.4 million); Meramec Park Dam, Mo. ($6.8 million); Tennessee-Tombigbee Waterway, Ala. and Miss. ($101 million); and Atchafalaya Basin, La. ($25 million). Bureau of Reclamation projects: Garrison Diversion, N. Dak. ($13.6 million); and Mid-State project, Neb. ($600,000).

Coastal Zone: The Senate recently passed a group of amendments (S 586) to the Coastal Zone Management Act of 1972 by a vote of 73 to 15. S 586 would authorize $300 million a year for three years in grants to the coastal states for planning for development of on-shore facilities. These facilities, which will be required as Outer Continental Shelf development progresses, include refineries, tank farms, and docks. The funds would also be used to help states to reduce the adverse impacts of growth, induced by energy production, that will bring new schools, roads, housing, and sewage systems.

Newly introduced bills include the following. Descriptions indicate those who introduced the bills and committees to which bills were referred.

Mineral King: HR 6882—To add the Sequoia National Game Refuge, including the 16,000-acre Mineral King valley, to Sequoia National Park. Miller (D-Calif.) and 65 co-sponsors. Interior.

Alpine Lakes: Three alternative versions: HR 3977, to establish the Alpine Lakes National Recreation Area in the Cascades of Washington consisting of 1,012,000 acres; HR 3978, to establish a 172,000-acre Alpine Lakes wilderness and a 44,000-acre Enchantment wilderness; and, HR 7792, to designate a 292,192-acre Alpine Lakes wilderness. Meeds (D-Wash.). Interior.

Commercial Recreation in National Forests: HR 6670—To authorize the Forest Service to permit the use and occupancy of areas of the national forests by persons or corporations in order to provide commercial recreation facilities and services for public use. Under the bill the Forest Service could grant permits for commercial facilities covering up to 80 acres. Facilities up to 1,280 acres would be permitted unless the Congress objects within sixty days of notice, and commercial ski facilities covering 5,000 acres or more would be permitted only with the specific endorsement of the Interior Committees of Congress. Johnson (D-Calif.). Interior.

Toltec Gorge: S 1853—To study the Toltec Gorge in New Mexico and Colorado for inclusion in the National Park System. Domenici (R-N.M.). Interior.

Appalachian Slope: HR 7895—To study the southern slope of the Appalachian highlands areas of North Carolina, South Carolina, and Georgia as the Southern Appalachian Slope National Recreation Area. Mann (D-S.C.). Interior.

Continued from page 2
self-esteem somewhat longer, perhaps because of its isolation in areas of slight population. The Soil Conservation Service, which should have held to its original purposes of ecological stabilization in the upper watersheds, turned far too quickly toward its peculiar temptations, artificial lakes and channelization. The Federal Power Commission, isolated from the legislative battles over authorizations and appropriations for construction, has executed beautiful end-runs around the main battle-grounds; much of the pumped-storage destruction of recent years is its handiwork.

AND YET the agencies were but symptoms, not cause. Sustained by the powerful economic aggregates which created them, they reinforced, but did not initiate, the prevailing policies of domination. When all was said and done, it was we, the people, with mistaken perspectives, who launched and for so many decades fostered these programs.

Looking at the horrors of the early industrial cities, their grime and their smoke, we turned to hydropower as a clean source of energy, never looking upstream from the dams. Enraged by the greed of the utilities, largely unregulated in those days, many citizens welcomed public ownership in energy. And so the Tennessee Valley Authority was created, engaging in much beneficial work which must not be forgotten, and yet ultimately committed to impoundments on every small remaining stream, and responsible for some of the most abominable strip-mining practices of our times. The righteous course with floods was to hold them back with steel and concrete. Water pollution was the unpleasant but inevitable consequence of industrialization and jobs. And yet gradually all this changed.

A MAJOR THEATER was the Potomac. The NPCA enlisted in that struggle against pollution-control dams a dozen years and more ago. Persons associated with the NPCA formed the Citizens Permanent Conference on the Potomac, with participation by people associated with the labor unions and farm organizations as well as conservation organizations, and won.

A campaign to save the Colorado and Grand Canyon National Park against hydropower dams was forced upon the defenders of the national parks at about the same time. The NPCA recommended the use of the coal-fired thermal plants which were going to be built anyway, instead of hydropower, to pump the water which central Arizona demanded. The strip-mining conflicts were far in the future; the hydropower battle was won, and must not be lost anew as we face the problems of atmospheric pollution and the brutalization of the land from stripping.

THE SWEEPING POWER of the Columbia before Grand Coulee Dam has been broken, and the abundance of the primordial salmon runs largely destroyed. Great cities have arisen, air-conditioned, flood-lit at night, with gigantic plants to make aluminum for admirable peaceful uses, and for the insatiable armaments industries. The fish which the river once produced may have been the region's most valuable resource in the judgment of the oncoming generations which must live for a century with famine.

The tragedy of Aswan in Egypt is widely understood: how the huge dam which was to irrigate a nation and serve it with electricity destroyed the rhythms of a river which had nourished a great civilization for thousands of years. And on the Mekong, tragic stream, a decade ago, before the wars deepened, plans were afoot to repeat the act in an unsuspecting land—what now?

As portent and promise of a change of heart, we have added protective legislation in recent years for wild and scenic rivers, coastal zone management, wetlands acquisition, and flood plain insurance.

Hudson, Potomac, Tennessee, Colorado, Mississippi, Columbia, Nile, Mekong—all of them rivers of majesty; will men turn from their destruction to their protection in the future?

AMERICA must revise its public purposes in these matters. To be practical and precise, a reformulation of national river basin policy by appropriately concerted executive and agency orders, if not by congressional action, is essential. A central executive agency must be established or an existing agency utilized for the refinement of policy, with veto authority over the operating and licensing agencies.

The governing values must be those of ecological river basin management and protection: care and concern for the land, plants, animals, water, soil, forests, history, scenery, and the people who live in the basin. These values must replace the previously prevailing notions of growth, construction, development, domination. The principles can be stated easily enough; the machinery of government can be made to run in harmony with the principles.

—Anthony Wayne Smith

AFFECT THE FUTURE AS WELL AS THE PRESENT . . .

NPCA has always fought for wise use of our great national parks. In recent years we have expanded our programs to include sound planning to protect all phases of the natural environment.

As we expand our programs, we must also expand our financial resources through your generous support. Among the various kinds of support is bequest giving, which offers a rare opportunity to affect the future as well as the present.

Bequests can be made in many forms, such as gifts of money, property, and stocks—and all have tax benefits for you. Send for our complimentary brochure containing important bequest facts, and help ensure our work in the future.

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