A Cultural Resource Overview of the Gifford Pinchot National Forest, South-Central Washington

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A CULTURAL RESOURCE OVERVIEW OF THE
GIFFORD PINCHOT NATIONAL FOREST,
SOUTH - CENTRAL WASHINGTON

by

Jerry V. Jermann
Roger D. Mason

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Indian Race Track, ca. 1910
# TABLE OF CONTENTS

LIST OF FIGURES .......................................................... iii
LIST OF TABLES ............................................................ iv
INTRODUCTION ............................................................... v

**PART 1: CULTURAL RESOURCE OVERVIEW**

ENVIRONMENTAL OVERVIEW .............................................. 4
- Location .............................................................. 4
- Climate .............................................................. 4
- Topography .......................................................... 7
- Geology ............................................................... 7
- Soils ................................................................. 8
- Vegetation .......................................................... 9
- Wildlife ............................................................. 15

HISTORICAL OVERVIEW ................................................... 16
- A Brief History of South-Central Washington .................. 16
- History of Settlement by Areas .................................... 29
  - Wind River ....................................................... 29
  - Little White Salmon Valley ...................................... 30
  - Western Klickitat County ....................................... 30
  - Lewis River Valley and Eastern Clark County ............... 32
  - Toutle River and Spirit Lake ................................... 32
  - The Upper Cowlitz Valley (the Big Bottom) .................. 34
  - The Forest Service in the Upper Cowlitz ..................... 38
- Mining History ...................................................... 40
- Grazing History .................................................... 45

ETHNOGRAPHIC OVERVIEW ................................................ 47
- Yakima and Upper Yakima .......................................... 51
- Klickitat ............................................................. 60
- Upper Chinook ...................................................... 69
- Cowlitz and Taidnapam ............................................ 76
- Upper Chehalis ..................................................... 85
- Mical ................................................................. 86
- Tribal Summary ..................................................... 87
ARCHAEOLOGICAL OVERVIEW ......................................................... 93
East of the Cascades—the Columbia Plateau .................................. 96
South of the Cascades—the Lower Columbia River ......................... 115
West of the Cascades—the Southern Puget Lowland ....................... 122
In the Cascades—the Gifford Pinchot National Forest .................... 124

PART 2: CULTURAL RESOURCE INVENTORY
A PRELIMINARY CULTURAL RESOURCE INVENTORY ..................... 127
Historic Euro-American Sites ...................................................... 129
Historic Aboriginal Sites .......................................................... 136
Prehistoric Aboriginal Sites ....................................................... 136
Miscellaneous Cultural Sites ...................................................... 140

PART 3: CULTURAL RESOURCE MANAGEMENT
PRELIMINARY MANAGEMENT GUIDELINES ..................................... 163
SPECIFIC MANAGEMENT GUIDELINES .......................................... 167
Present Forest Land Use ............................................................. 168
A Proposed Cultural Resource Management System ....................... 171
Planning-related Recommendations .............................................. 172
Project-related Recommendations .............................................. 180
Specific Resource-related Recommendations ............................... 182

BIBLIOGRAPHY ................................................................. 184
Archaeology ................................................................. 184
Cultural Resource Management ............................................. 195
Environment ................................................................. 198
Ethnography ................................................................. 205
History ................................................................. 209
Mining ................................................................. 212

APPENDIX I: Regulatory Authority for Cultural Resource Management .... 213
APPENDIX II: Internal Guidelines for Cultural Resource Management .... 216
LIST OF FIGURES

Fig. 1. Location map of the Gifford Pinchot National Forests including the locations of Forest Planning Units.................. 6

Fig. 2. Vertical stratification of environmental zones in the Gifford Pinchot National Forest................................. 11

Fig. 3. Distribution of ethnographic tribal groupings in the vicinity of the Gifford Pinchot National Forest...................... 50

Fig. 4. Proposed cultural sequences for the Columbia Plateau......................... 114

Fig. 5. Summary of Pettigrew's (1975) proposed cultural periods for the Lower Columbia Valley......................... 121

Fig. 6. Locations of major archaeological survey and excavation projects in relation to the Gifford Pinchot National Forest......................... 137

Fig. 7. Location of major aboriginal trails in relation to the Gifford Pinchot National Forest......................... 143

Fig. 8. Distribution of inventoried cultural sites in Bear Planning Unit......................... 151

Fig. 9. Distribution of inventoried cultural sites in Clear Creek Planning Unit......................... 152

Fig. 10. Distribution of inventoried cultural sites in Cowlitz Planning Unit......................... 153

Fig. 11. Distribution of inventoried cultural sites in Green River Planning Unit......................... 154

Fig. 12. Distribution of inventoried cultural sites in Lone Tree Planning Unit......................... 155

Fig. 13. Distribution of inventoried cultural sites in Panther Planning Unit......................... 156

Fig. 14. Distribution of inventoried cultural sites in Spirit Planning Unit......................... 157

Fig. 15. Distribution of inventoried cultural sites in Trapper Planning Unit......................... 158

Fig. 16. Distribution of inventoried cultural sites in Upper Cispus Planning Unit......................... 159

Fig. 17. Distribution of inventoried cultural sites in Upper Lewis River Planning Unit......................... 160

Fig. 18. Distribution of inventoried cultural sites in White Salmon Planning Unit......................... 161

Fig. 19. Distribution of inventoried cultural sites in Yacolt Planning Unit......................... 162

Fig. 20. Plat map of the St. Helen's Mining District Showing locations of claims, circa 1910................................. (folder)
LIST OF TABLES

Table 1. Generalized Settlement/Subsistence Systems for Ethnographic Tribes Peripheral to the Gifford Pinchot National Forest

Table 2. Early Surveying Dates for Townships Included Within the Gifford Pinchot National Forest

Table 3. Inventory of Historic Euro-American Cultural Sites Located Within the Gifford Pinchot National Forest

Table 4. A Listing of Major Archaeological Surveys and Excavations Conducted in South-Central Washington

Table 5. Inventory of Historic Aboriginal Cultural Sites Located Within the Gifford Pinchot National Forest

Table 6. Inventory of Prehistoric Aboriginal Cultural Sites Located Within the Gifford Pinchot National Forest

Table 7. Inventory of Claims Filed Within the St. Helens Mining District, Circa 1910

Table 8. Breakdown of Gifford Pinchot's Timber Management Plan

Table 9. Proposed Activities Within the Gifford Pinchot National Forest, for the Period 1976-1979

Table 10. A Characterization of Forest Projects
INTRODUCTION

In June of 1975 the University of Washington's Office of Public Archaeology was approached by the Gifford Pinchot National Forest to discuss the possibility of conducting a cultural resource overview of the Forest. Subsequent negotiations between the senior author, the Forest Service archaeologist for Region 6, and Mr. Jerry Hutchins of Gifford Pinchot established the desirability of an overview as well as the general parameters that such an undertaking might include. Based upon these discussions a contract between the University of Washington and the Gifford Pinchot National Forest was issued on June 25, 1975. The following report details the results of the research that was authorized by that agreement.

Before proceeding with the detailing of information that constitutes the results of over six months of research, it might be useful to take this opportunity to briefly review what constitutes a cultural resource overview, how this particular overview was conducted, and how the results of that investigation are structured in the present report.

Briefly, a cultural resource overview consists of a preliminary search of existing documentary and archival records concerning a particular study area for the express purpose of compiling and integrating that information pertaining to the area's cultural resources. In the sense used here, cultural resources include all those remains of sites, structures, or objects used by man in the past. The results of such a cultural records search should assist in outlining the nature of further inventory work required as well as providing the necessary background data for any further work in the area. Viewed in this manner, the cultural resource overview is appropriate as not only a first step in the inventory process but also as a land use planning tool on specific Forest-related projects.
As specified in the agreement under which this project was conducted, a cultural resource overview operationally consists of:

1. A systematic search of extant ethnographic, historical, and archaeological literature touching on the study area;

2. A review of the National Register of Historic Places;

3. A review of the site record files maintained by the National Park Service, universities and museums, and historical or archaeological societies;

4. Consultation with knowledgeable local residents, university-based professionals, members of local historical or archaeological societies, and other individuals or agencies with expertise in the general or specific project area;

5. Consultation with the State Historic Preservation Officer.

Information that is gained within this framework is compiled into a written report which documents the nature of the extant knowledge of the area, provides an inventory of previously discovered or designated cultural resources, and estimates, if possible, the potential nature and quantity of as yet unknown cultural resources in the areas as well as the amount of inventory work required in the future.

As has been indicated previously, the present research effort was concerned with those cultural resources occurring within the Gifford Pinchot National Forest. Despite the fact that this particular administrative unit contains a very considerable contiguous area, there was almost no professionally generated information about any of its cultural resources. Because of the paucity of direct archaeological and historic syntheses, much of the overview effort was necessarily expended in ferreting out just such information. Historic Euro-American and aboriginal data was vested primarily in histories and ethnographies dealing with areas actually peripheral to the Forest, areas that had witnessed most of the early exploration and settlement. We were
fortunate, however, that the management of Gifford Pinchot had gone to considerable effort during the 1930's to compile much historical documentation about the early Forest Service activities in the Forest. While these records had been compiled somewhat unsystematically, they nonetheless provided us with invaluable historical source materials.

The elucidation of the prehistoric cultural record presented a somewhat more exasperating situation. A review of the National Register of Historic Places and the University of Washington's Archaeological Site Survey Records revealed an absence of any designated or recorded cultural sites in the entire Forest area. Additionally, it was soon discovered that virtually no professional archaeological work had ever been conducted within the Forest. Because we were still interested in the possibility of qualifying and perhaps quantifying the extent of potential prehistoric sites, our research efforts had to be concentrated on professional archaeological work in areas marginal to the Forest. Specifically, these included the Columbia Plateau, the Lower Columbia River region, and the southern Puget Lowland.

The ensuing report details the results of our various documentary endeavors. Structurally this document is divided into three parts. Part 1, Cultural Resource Overview, details the general nature of past settlement and use of the Forest. Included within this narrative account are sections on such topics as history, ethnography, archaeology, mining, and grazing. The information compiled in this part of the report synthesizes much of the widely scattered documentary evidence. Part 2, Cultural Resource Inventory, represents a compilation of various potential cultural resource sites identified during the overview process. As the work conducted under the present agreement was restricted solely to documentary and archival research, the sites listed in
the inventory have not been verified or assessed by direct field reconnaissance. Part 3, *Cultural Resource Management*, presents a brief consideration of cultural resource management and the articulation of the resource overview with future Forest land use planning. No attempt was made to provide a comprehensive consideration of the general problem of cultural resource management and the National Forest systems; such a treatment is currently being completed by the regional archaeologist.

The authors would like to acknowledge and express their appreciation to the several individuals and agencies who graciously gave of their time and knowledge. In particular the following individuals deserve special mention: Dr. Leslie Wildesen, Region 6 Forest Service archaeologist; Messrs. Jerry Hutchins and Ron Tuttle of the Gifford Pinchot National Forest; Mr. Hal Kennedy, who provided much-needed and timely help on the environmental section of the report; Dr. Robert C. Dunnell, who served as co-principal investigator; and Ms. Lynn Leonard and Ms. Carolyn Wallace who typed the manuscript and kept the senior author out of financial trouble with the powers that be.

Finally, we would particularly like to acknowledge our debt to a man who unknowingly provided us with much of the Forest Service data contained within this report. During the 1930's Mr. William Sethe of the Gifford Pinchot National Forest made a concerted and conscientious effort to compile an historical file on past Forest Service activities as well as a general Forest history. Perhaps this historic interest was kindled by the fact that his father, "Fritz" Sethe, who graces the cover of this report, served with the Gifford Pinchot before him. For whatever reason, however, we are eternally grateful for the legacy that he left us.
ENVIRONMENTAL OVERVIEW

LOCATION

The Gifford Pinchot National Forest is situated in the south-central portion of Washington State and includes portions of eight counties: Clark, Cowlitz, Klickitat, Lewis, Pierce, Skamania, Thurston, and Yakima. Comprising a total area of approximately 1,527,761 acres, nearly 177,800 acres of this total are either private or state-owned lands. Because there currently is a program of consolidating Forest holdings, the total acreage may vary slightly in the future.

 Portions of the present Forest were originally set aside as a reserve by President Cleveland in 1897. This original forest unit included the unappropriated lands between the Columbia River and Snoqualmie Pass and was called the Mount Rainier Forest Reserve. In 1933, the Rainier Forest was dissolved and that portion which now comprises the Randle and Packwood Ranger Districts was added to the Columbia Forest. An additional area was included in 1937. In 1949, the name, Columbia National Forest, was changed to its present designation, the Gifford Pinchot National Forest.

As an aid to future land use planning and management, the Forest has been administratively sub-divided into 16 planning units (see Fig. 1). Within each planning unit, land use alternatives are currently being developed and proposed. Once completed, these plans will provide a baseline for future management decisions.

CLIMATE

The climate and seasons of the Forest are typical of that generally found in the Cascade Mountain range, though climatic conditions vary greatly
between the east and west sides of the Cascades.

In general, the climate is influenced by factors of terrain, distance and direction from the Pacific Ocean, and the position and intensity of high and low pressure systems over the north Pacific Ocean. The resulting diversity of climatic conditions is perhaps best exemplified by the mosaic of precipitation patterns. Annual precipitation ranges from less than 50 inches in certain areas (e.g. the White Salmon Valley) to more than 100 inches along the windward slopes of the Cascades (Wilcox 1911:5; Snyder and Meyer 1971:45).

Seasonally, the climate can be summarized as follows (adapted from USDA n.d.a):

**Winter.** Precipitation throughout the Forest is heavy during the winter months, particularly along the western slopes of the Cascade range. Precipitation is greatest at the higher elevations and during the winter months falls mostly in the form of snow above the 2500 foot level. Thus snow, up to several feet in depth, covers all the higher mountainous areas throughout the winter months.

**Spring.** The springs are usually damp and mild with occasional brief periods of fair weather. By May the snow is receding at most elevations, but usually lingers into May and June above 3,500 foot elevations. Thus, much of the higher country with its many small lakes is not free of snow until early summer.

**Summer.** After the first week in July there is usually little precipitation until after the first weeks of September. By this time all travel routes are free of snow and all areas, including the alpine lakes and meadows, are accessible. While there are occasional hot spells during the summer months, when temperatures soar above 90°F, daytime temperatures in the 70's are much more usual; night temperatures cooling to the mid 40's. Frosts have been recorded as late as early July and as early as mid-August in exposed areas above 4,000 feet.

**Fall.** With the arrival of fall, the clouds and rains increase. This season is truly transitional between the warm, dry summers and the cool, wet winters.
Fig. 1. Location map of the Gifford Pinchot National Forest including the locations of Forest Planning Units.
TOPOGRAPHY

The Forest generally lies within the South Cascades Physiographic Province. Franklin and Dyrness (1973:21) have summarized the area as being characterized by:

generally accordant ridge crests separated by steep, deeply dissected valleys. The general ridge elevation is approximately 2,000 meters in the northern section and 1,200 meters in the southern. An extensive area around Mount Adams is composed mainly of recent lava flows; it comprises a gently sloping plateau at 900- to 1,500-meter elevation, differing markedly from the rest of the province.

The landscape encompassing the Forest is dominated by two dormant volcanoes: Mount Adams at 12,326 feet (3,801 m) elevation and Mount St. Helens at 9,677 (2,948 m) elevation. In general, the ruggedness of the mountainous topography increases as one travels north from the Columbia River. Overall, there is a gross altitudinal difference of over 12,000 feet between the highest and lowest points in the Forest.

The Forest is drained principally by six rivers and their tributaries. Characteristically, these drainages have deep, narrow, and often precipitous slopes. "Occasional benches and flats are found along most streams and rivers, though these are noticably non-existent in the southwestern section of the Forest"(USDA n.d.a:13). In addition to these rivers and streams, there are also several hundred lakes scattered throughout the Forest; most being quite small in extent.

GEOLOGY

The bedrock of the Forest is of volcanic origin with andesite and basalt dominating. Only minor amounts of igneous intrusive, sedimentary, and metamorphic rocks occur (Franklin and Dyrness 1973:21). Metal deposits
which attracted miners to the area include copper, silver, lead, zinc, and sulphur (Hougland 1935). Low-grade coal deposits occur in the northwestern Forest area (Fowler and Ness 1954). The general description of the geology of the Southern Cascades Province by Franklin and Dyrness (1973:22) is as follows:

At least 90 percent of the Southern Washington Cascades Province is made up of andesite and basalt flows with their associated breccias and tuffs. These lava extrusions have been classified into four rather generalized age classes: (1) Eocene to lower Oligocene, (2) upper Oligocene to lower Miocene, (3) middle Miocene, and (4) Pleistocene to Recent. The Eocene-Oligocene volcanic rocks are described as bedded andesitic breccias with interbedded andesite and basalt which have been considerably altered by faulting and folding. These rocks are widely distributed from Mount Rainier southward, largely west of the Cascade Range crest. The Oligocene-Miocene volcanic rocks are mainly andesite flows and flow breccias which, to a large extent, retain a fresh look and are in a horizontal position. These rocks outcrop in a large area north of Mount Rainier and at scattered locations to the south. The Miocene deposits are Columbia River basalt which extends into the province from the east. Pleistocene to Recent deposits include the andesite flows and pyroclastics which comprise the slope of Mount Rainier, Mount Adams, and Mount St. Helens. Pleistocene vesicular basalt lavas are especially widespread in the vicinity of Mount Adams.

Tertiary granitic rocks are found only at scattered locations. Another area of granodiorite is southwest of Randle. Small deposits of sedimentary rocks are located southwest of Mount Rainier.

Areas adjacent to the three volcanic peaks are generally mantled with pumice deposits of variable age, origin, and thickness. Deposits near Mount St. Helens sometimes exceed 300 centimeters.

SOILS

Because of the recent volcanic activity which characterizes the area, approximately 60 percent of the Forest supports soils derived from fine to coarse pumice with underlaid lava, glacial drift, alluvium, and cumulose with alluvium (USDA n.d.a:26). A topsoil of light volcanic ash covers
approximately ten percent of the Forest area, found principally in the higher elevation areas such as Goat Rocks, Mount Adams, and Indian Heaven. Approximately 30 percent of the Forest is covered by a soil consisting of a loose loam formation with occasional rocky outcroppings; this is mostly found in the southern end of the forest (USDA n.d.a:27).

The most detailed examination of soils was recently published by Snyder and Meyer (1971). In this study the many different soils within the Forest were classified according to variations deriving from one or more of the soil forming processes, including: climate, vegetative cover, time, topography, and parent material. The two variables considered most important by Snyder and Meyer in soil identification were parent material and topography. According to Snyder and Meyer (1971:5) over three-fourths of the Forest contains volcanic ejecta of pumice and ash (to some degree). These materials derive from a number of sources, though principally from the three presently dormant volcanoes—Mount Rainier, Mount Adams, and Mount St. Helens.

VEGETATION

The Forest contains a wide variety of vegetation which has been divided into three Resource Associations in the Recreation Management Plan. These are: the Principal Forest Resource Association, the Upper Forest Resource Association, and the Alpine Resources Association. A general description of these associations would include (USDA n.d.a:16-20):

**Principal Forest Resource Association.**

The Principal Forest Resource Association contains a large variety of shrubs and trees. Shade is the Douglas-fir timber type, including tree species such as Douglas-fir, western hemlock, western redcedar, and silver fir. Screening consists of vine maple, red
alder, yew, salal, Oregon grape, Western dogwood, ferns, huckleberry and hemlock understory.

Also within this resource association, especially along the river bottoms, are stands of hardwood, such as cottonwood and big leaf maple.

**Upper Forest Resource Association.**

It contains a wider variety of tree and shrub species, more meadows, and natural openings in the timber, and a more park-like forest environment....The meadows, lakes and huckleberry fields are found in this Resource Association. Also, it provides an ideal habitat for a wide assortment of wildlife.

The Upper Forest Resource Association is characterized by true fir-mountain hemlock timber stands, including such shade species as mountain hemlock, Pacific silver fir, lodgepole pine, and noble firs. An assortment of herbaceous plants, such as huckleberry, currant, mountain ash, beargrass, silver fir thickets and ceanothos....

**Alpine Resource Association**

The Alpine Resource Association contains abundant high elevation lakes, open alpine meadows, glaciers....

(It) extends from the barren mountain peaks and rocky ridges to an elevation just below timberline. Average elevation is about 6,000 feet, but it may be as low as 4,200 feet, as the case on Mount St. Helens. The shade is generally limited to that furnished by a narrow band of timber, mostly sub-alpine timber types such as alpine fir, whitebark pine, mountain hemlock, and lodgepole pine. Mountain heath, dwarf juniper, whortleberry and eumerable perenials are typical cover and ground plants of the association.

A somewhat more comprehensive and complicated classification of the general vegetative associations characterizing the Forest is provided by Franklin and Dyrness (1973). In their detailed consideration of the natural vegetation of both Oregon and Washington, the two authors recognize several major vegetation zones which vary particularly with elevation and moisture (see Fig. 2). The following description of vegetative zones included within the Gifford Pinchot National Forest derives principally from their pioneering work.
Forests of *Pseudotsuga menziesii* with *Tsuga heterophylla* and *Thuja plicata*

Forests of *Pinus ponderosa* and *Quercus garryana*

Prairie (bunchgrass steppe of *Agropyron spicatum*)

Forests of *Abies amabilis*, *A. procera*, *Pinus monticola*, *Tsuga heterophylla*, and *Chamaecyparis nootkatensis*

Forests of *Pinus contorta*, *P. ponderosa*, *P. monticola*, *Larix occidentalis*, *Pseudotsuga menziesii*, and *Abies grandis*

Subalpine forests of *Abies lasiocarpa*, *Tsuga mertensiana*, and *Pinus albicaulis*

Alpine communities

Snowfields and glaciers

---

Fig. 2. Vertical stratification of environmental zones in the Gifford Pinchot National Forest (adapted from Franklin and Dyrness 1973:311).
The Tsuga heterophylla Zone is the most extensive vegetation association in western Washington and typifies the temperate lowlands. Included within this zone are several tree species of commercial importance. These include *Pseudotsuga menziesii* (Douglas fir), *Tsuga heterophylla* (western hemlock) and *Thuja plicata* (western redcedar). *Abies grandis* and *Pinus monticola* occur sporadically, while *Taxus brevifolia* is found throughout the zone but always as a subordinant tree. *Abies amabilis* is commonly found near the zone's upper altitudinal limits.

The understory species associated with this zone vary primarily with moisture gradients. On dry sites the understory is characterized by *Holodiscus discolor* or *Gualtheria shallon*, or both. At the opposing end of the gradient, very moist sites are typified by *Polystichum munitum* and *Oxalis oregana*, with the very wettest forested sites indicated by *Lysichiton americanum*. Intermediate mesic localities are typified by *Rhododendron macrophyllum* and *Berberis nervosa* in some areas or by a co-dominance of *Polystichum* and *Gaultheria*.

The *Abies amabilis* Zone lies between the temperate mesophytic *Tsuga heterophylla* Zone of the lowlands and the subalpine *Tsuga mertensiana* Zone. In southern Washington this association is generally found at elevations between 900 to 1,300 meters. The overstory composition varies widely, depending upon the particular stand's age, history, and locale (Franklin 1965a, 1965b). However, the typical tree species include *Abies grandis*, *Picea engelmannii*, *Pinus contorta* and *Larix occidentalis* may also occur. Along the zone's upper altitudinal margins, *Tsuga mertensiana* and *Chamaecyparis nootkatensis* appear.
Understories are usually dominated by ericaceous genera, such as Vaccinium, Menziesia, Gaultheria, Chimaphila, Rhododendron, and Pyrola. Cornus canadensis, Clintonia uniflora, Rurus lasiococcus, R. pedatus, Linnaea borealis, Xerophyllum tenax, and Viola sempervirens are also common species.

The Tsuga mertensiana Zone is the highest forested zone along the western slopes and crest of the Cascade Range; generally occurring between 1,250 and 1,850 meters in elevation (Franklin and Bishop 1969). In general the zone extends for varying distances east of the Cascade crest until it is gradually replaced by the Abies lasiocarpa Zone which is more typical of the subalpine interior environments.

Franklin and Dyrness (1973:101) divide this zone into two major subzones: a lower subzone characterized by a "closed forest" and an upper parkland subzone. The lower subzone is composed of virtually a continuous cover of Tsuga mertensiana and its co-associates. In the upper subzone one finds a mosaic of forested patches and three groups interspersed with shrubby or herbaceous subalpine communities.

The actual forest composition within this zone varies dramatically with particular site locale; relatively few species are ever found as dominants. However, Tsuga mertensiana is found in old-growth forests throughout the zone, while Abies lasiocarpa or pinus contorta, or both, are typical of seral stands in drier areas. Abies amabilis is also conspicuously present.

The Abies grandis Zone is the most extensive midslope forest zone in the southern Washington Cascade Range; typically occurring at elevations between 1,100 and 1,500 meters (Franklin and Dyrness 1973:193-196). The
major tree species include *Abies grandis* (or *A. concolor*), *Pinus ponderosa*, *P. contorta*, *Larix occidentalis*, and *Pseudotsuga menziessii*. Importantly, any of these four species may dominate seral forest stands. Many other trees are also present in either limited numbers or localized areas. These include such species as *Picea engelmannii*, *Abies lasiocarpa*, *Libocedrus decurrens*, *Pinus lambertina*, *P. monticola*, *Tsuga mertensiana*, and *Abies magnifica* var. *shastensis*.

In addition to these major areal zones, Franklin and Dyrness (1973:300-304) also delimit certain special associations characterizing particularly unusual topographic and geological circumstances, such as mud and lava flows. While these details are beyond the scope of the present summary, certain of these could be of importance in any detailed environmental consideration.

It is perhaps appropriate at this juncture to also consider the further factor of fire as it bears on the Forest's vegetation. In approximately 1900, Plummer (1900:133) noted that ancient burns were evident over 40-50 percent of the then Rainier Forest Reserve. Obviously, such widespread disruptions of the indigenous vegetational system would have important consequences to any past human use of the Forest (see Franklin and Dyrness 1973 for a discussion of the successional relationships characteristic of each zone). Perhaps the most important consideration here concerns the effect of burns on the occurrence and production of huckleberries, an important aspect in the subsistence pattern of many of the region's aboriginal inhabitants. Importantly, the open areas that result from fires would contain the potential for more such resources than would otherwise occur.
WILDLIFE

In general, there are many types of wildlife habitats which typify the Forest. Importantly, the numerical abundance of specific species fluctuates with the amount of available open space. Such areas as meadows and burns have a particularly high wildlife potential.

The most common species include elk, black-tailed and mule deer, white-tailed deer, black bear, beaver, mountain beaver, raccoon, mink, river otter, muskrat, bobcat, martin, cougar, snowshoe hare, chickaree, and white-footed deer mouse. Also occurring are various species of birds and fish.
A BRIEF HISTORY OF SOUTH-CENTRAL WASHINGTON

The original inhabitants of the area around the southern Cascade Mountains were the Cowlitz, Yakima, Klickitat, and Upper Chinook Indians (see the ethnographic section). The first major change in the traditional fishing-gathering-hunting pattern of the Indians east of the Cascades (the Yakimas and the Klickitats) was caused by the introduction of the horse, which was an indirect European import (before the actual appearance of any non-Indians in the area). The Yakima and the Klickitats probably had obtained horses by the 1730's (Haines 1938) from groups further south. The original source of horses was the Spanish in Mexico. The horse greatly increased the mobility and wealth of the Plateau Indians. After the arrival of Europeans in the area, the use of horses enabled the Klickitats to carry on a lively trade between Eastern and Western Washington and as far south as the Umpqua in Oregon, at least during the period from 1835 to 1855. The Yakima became rich as a result of selling horses to the early fur traders and settlers, at first through Klickitat intermediaries. "The rich grasslands of the plains and mountain valleys provided a natural, ideal pasturage and the animals thrived in Yakima country" (Schuster 1975:188).

European penetration of the area began in 1792 when Captain Gray discovered the mouth of the Columbia River and named it for his ship, the Columbia. Later the same year, Lieutenant Broughton of Great Britain sailed up the Columbia as far as Washougal. Captain Vancouver, sailing in Puget Sound in 1792, named Mount St. Helens for Great Britain's ambassador to Spain at the time, Lord St. Helens. The first non-Indians
to travel through the interior were Lewis and Clark who crossed the Rockies, descended the Snake and Columbia Rivers and arrived on the coast in the fall of 1805. These various expeditions resulted in the area being claimed by both Great Britain and the United States (Meany 1909).

The first non-Indians to actually occupy the area were the fur trappers and traders. In 1811 the Pacific Fur Company established a post called Astoria at the mouth of the Columbia. It was named after the director of the company, John Jacob Astor. This venture did not last long and in 1813 the post was sold to the North West Company, a British competitor of the Hudson's Bay Company. The British changed the name of Astoria to Fort George. In 1818 the North West Company established Fort Nez Perces at the mouth of the Walla Walla River. They already had posts at Okanogan and Spokane (Meinig 1968).

The North West Company was merged with the Hudson's Bay Company in 1821. After an inspection tour in 1824 by Governor Simpson, who was interested in finding ways to cut costs, the Hudson's Bay headquarters on the Columbia were moved from Fort George to Fort Vancouver where crops could be grown; thus reducing the need to import food. During the winter of 1830-1831 there were 89 men at Fort Vancouver including a chief factor (John McLoughlin), a chief trader, three clerks, a surgeon, and a postmaster. Fort Vancouver became the headquarters for the entire Columbia Department, which included those posts at Nez Perces (mouth of the Walla Walla), Okanogan, Colville, Kootenay, Flathead, Thompson's River (Kamloops), and Langley (at the mouth of the Fraser River). Posts at Umpqua and Boise
were established in 1832 and 1834, respectively. The Hudson's Bay Company extended itself into the Puget Sound region with the construction of Fort Nisqually in 1833 (Meinig 1968).

Americans, such as Nathaniel Wyeth and Captain Benjamin Bonneville, tried to compete with the Hudson's Bay Company in the early 1830's but were not successful. However, they served to provide information about the area and increased interest in the American settlement of Oregon. The first Americans to actually reside in Oregon territory were missionaries. Methodist missionaries accompanied Nathaniel Wyeth's fur trading party and established a mission in the Willamette Valley near present-day Salem. In 1838 they established another mission at the Dalles. Another group of missionaries was sponsored by the American Board of Commissioners for Foreign Missions. This group, which included Marcus Whitman, established missions at Wailatpu (near Walla Walla) and Lapwai to the east in 1836 (Meinig 1968).

As the fur trade declined (both the number of pelts obtainable and their market value fell), the Hudson's Bay Company began to diversify, becoming interested in agriculture. In 1838 the Puget Sound Agricultural Company was begun at Fort Nisqually and included the Cowlitz Farm which was located near present day Toledo, just north of the Cowlitz River. The presence of the American missions and the beginning of American settlement in the Willamette Valley in 1839 caused alarm in the Hudson's Bay Company and in 1841 former employees were settled in the Cowlitz and Nisqually areas to strengthen British claim to the area north of the Columbia. However, most of these British settlers soon moved to the Willamette. A flood of American migrants came across the Oregon Trail in 1843 and by 1845 there
were more than 5000 Americans settled south of the Columbia. At this time the Hudson's Bay Company was preparing to withdraw northward to the recently established Fort Victoria on Vancouver Island. In 1845 the Hudson's Bay Company had 2,300 acres under cultivation at Vancouver, Cowlitz, and Nisqually and thousands of sheep, cattle, hogs, and horses, as well as two flour mills (at Vancouver) and four saw mills (three at or near Vancouver and another at Cowlitz). All this had to be given up after 1846 when the boundary was set at the forty-ninth parallel, although compensation was provided for in the attendant treaty. The Whitman massacre in 1847 also marked the end of the Protestant mission system in the interior (Meinig 1968).

Just before the Whitman massacre in 1847, a Catholic missionary, Father Chirouse established the first mission among the Yakima. He left during the Cayuse War, following the Whitman massacre, but returned with three more Catholic missionaries in 1849 and established the St. Joseph's mission on Ahtanum Creek. As part of the withdrawal of missionaries from further east during the Cayuse War, a Catholic mission was established at The Dalles. The Methodist mission there had been abandoned early in 1847. Further development at The Dalles began in 1850 when a company of federal troops occupied Fort Dalles. In 1852 there were two stores, a blacksmith shop, a few houses, and a river landing where a steamer operated to the Cascades (Schuster 1975, Meinig 1968).

On the Washington side of the Columbia, the first settler was probably F. A. Chenowith who arrived in 1849 and took out a Donation Land Claim under the law of 1850 at the Lower Cascades. The town of Lower
Cascades was platted in 1850 and was located on the southeast corner of Chenowith's claim. Much of the area along the north side of the Columbia in what is now Skamania County was taken up by settlers under the Donation Land Claim Law between 1850 and 1855. Under this law, a single person could claim 320 acres and a husband and wife could claim 640 acres. These claims were not surveyed and were irregularly shaped with boundaries frequently going from tree to tree. During this time, Bradford's store opened at the Upper Cascades and in 1855 a blockhouse named Fort Rains was built at the Middle Cascades. It was named for Major Rains, the commander of Fort Dalles. Chenowith served in the Oregon Territorial Legislature in 1852. In 1853, the Joslyn family became the first settlers upriver from the Cascades, about two miles east of the White Salmon River. The same year, a wagon train led by David Longmire made its way through Yakima territory and became the first wagon train to cross Naches Pass (SCAS 1959, Coon 1923, Schuster 1975).

On the western side of the mountains, the Hudson's Bay Company had the only non-Indian settlements until 1845, the year before Washington (at that time part of Oregon) became part of the United States. In 1845 the first American settlers arrived, including the Michael Simmons group which founded Tumwater, and John R. Jackson who settled at Jackson's Prairie (present day Mary's Corner in Lewis County). There was also a settler a mile southeast of Woodland (in Cowlitz County) in 1845. Settlers arriving in 1846 located near present-day Centralia. Simon Plomondon, a former Hudson's Bay employee occupying Cowlitz Farms, continued on there and soon many American settlers moved in on the already cleared and developed Hudson's Bay property, filing Donation claims to it after 1850. The year
1850 saw the beginnings of Olympia and Steilacoom and the Denny party arrived at Alki Point (Seattle) in 1851. Settlement at Monticello at the mouth of the Cowlitz River began in 1849. Monticello was the beginning of the route from the Columbia to Puget Sound followed by most early settlers. The usual procedure was to go up the Cowlitz River by boat to Cowlitz Landing, near present-day Toledo, and then overland through Jackson's Prairie and the Centralia area to Tumwater. Settlement in what was to become southern-western Washington was concentrated along this route and greatly increased after the end of the California gold rush and the Cayuse War about 1849 (Meany 1909, Olson 1948).

As early as 1851 there was agitation for the creation of a separate territory north of the Columbia River. On August 29th of that year there was a meeting at Cowlitz Landing at which a resolution was passed favoring separation from Oregon. A similar resolution was adopted and sent to Congress by a convention held at Monticello on October 25, 1852. Congress acted quickly and the organizing act creating Washington Territory passed on March 2, 1853. Isaac I. Stevens was appointed territorial governor, Indian agent*, and head of a survey team sponsored by the War Department whose mission was to find routes for a railroad to the Pacific. In 1853 there were 3965 non-Indians in Washington territory and an unknown number of Indians who greatly outnumbered the settlers (Meany 1909). Most of the settlers occupied Donation Land Claims in Western Washington along Puget Sound and the lower Cowlitz. However, the Donation Law had made no provision for transferring title from the Indians or for compensating them for their land. This was to be rectified by Governor Stevens in his role

* Superintendent of Indian Affairs for Washington Territory.
as Indian agent. Stevens was instructed to start treaty negotiations with the Indians:

... having for a principal aim the extinguishment of the Indian claims to the lands ... so as not to interfere with the settlement of the territories (Superintendent of Indian Affairs 1856).

While Stevens and his party came overland, exploring passes through the Rockies for the railroad survey, Captain George B. McClellan and his party was sent by ship to Vancouver to begin exploration of passes in the Cascades. Accompanying McClellan was George Gibbs, geologist and ethnologist of the team. Gibbs' report on the Indians of Eastern Washington was instrumental in helping Stevens assess the Indians' attitudes toward land cessions and removal to reservations. McClellan and his party of 66 men and 173 horses and mules left Vancouver on July 18, 1853 and began their journey across the southern Cascade mountains, through what is now the Gifford Pinchot National Forest. The reasons behind this choice of route were given by Stevens as follows:

The country east of the Cascade range being more open and traversable than that on the western slopes, it was considered best to reach there early and conduct the examination of the mountains by striking in with small parties whenever a practicable pass was met with. The unusually high stage of water in the Columbia made the usual trail eastward, on its banks, impracticable, and that of the Klickitat Pass, near Mounts St. Helens and Adams, was adopted. (Stevens 1860:138)

McClellan's party made its way up the Lewis River, through McClellan Meadows to Chequoss (Indian Race Track) where they encountered "twenty lodges" of Klickitat Indians, and across to Trout Lake (Overmeyer 1941). From there they traveled to Tahk Prairie (between the branches of the Klickitat Rivers) and then moved north into the Yakima Valley and the *(Gibbs 1855)
Ahtanum Mission where they met Kamaiakin, the most influential of the Yakima chiefs. The talks with Kamaiakin and the Yakimas were important because:

Their country was to become a thoroughfare for the whites, and it was very important that a proper impression should be made, and a friendly understanding established (Gibbs 1855:410).

McClellan explained to Kamaiakin the nature of the American government "as far as it was necessary for him to understand," and asked that the Yakimas be friendly to the whites who would be coming through their country on their way to Puget Sound. McClellan later met with Owhi, the Upper Yakima or Kittitas chief, at his camp on Wenas Creek. Owhi, who was wearing an American suit, was the guide for the party's exploration of the Yakima, Snoqualmie, and other passes. Gibbs' assessment of the Yakima chiefs was that "all of them appear to be well disposed and friendly towards the whites, whose superiority they have sense enough to understand" (Gibbs 1855:407). Gibbs perceptively attributes this friendly attitude to the lack of both previous contact and white encroachment. Difficulties with other Indians where settlement had already taken place were attributed by Gibbs to the:

... donation act, in which, contrary to the established usage and to natural right, the United States assumed to grant, absolutely, the land of the Indians without previous purchase from them... A consequence of this has been that a natural distrust has sprung up in their minds as to the good faith of the government or its agents in making treaties at all (Gibbs 1855:422).

Governor Stevens arrived in Olympia late in 1853 and immediately set about organizing the new territorial government. The first legislature created several new counties. As part of Oregon territory, Washington
was divided into only two counties: Lewis (the area north and west of the Cowlitz River) and Clark (the area south and east of the Cowlitz). In 1854 the Washington legislature created Skamania County with its county seat at the Lower Cascades and Cowlitz County with its county seat at Monticello. Clark County (now reduced in size) continued to have its county seat at Vancouver. Other counties were also created on Puget Sound (SCAS 1959, Olson 1948).

Meanwhile, Stevens was busy trying to negotiate treaties with the Western Washington tribes. These groups had been greatly decimated by smallpox and other European diseases and according to Gibbs the number of Indians south of Puget Sound amounted to only about 850 in 1854. Gibbs states that Captain Wilkes' estimate for these same Indians in 1841 was 3000 (Gibbs 1855:428). In February, 1855, Stevens began negotiations with the Upper and Lower Chehalis, Cowlitz, Lower Chinook, Quinault, and Queets Indians. Stevens tried to get all these groups to give up their lands and come together on a single reservation. These groups were apparently willing to give up much of their land since their population was so small, but they refused to move away from their home villages onto a single reservation. The inland groups were especially reluctant to move to a coastal reservation. Consequently, no treaty was signed. However, the Quinaults and Quilleutes signed a separate treaty later in 1855. A reservation was created in 1864 in an area where many of the Chehalis were living at that time. None of the other groups (such as the Cowlitz and Chinook) recognized this reservation as their home and thus never came to live there.

Stevens' failure to negotiate a treaty with the southwest Washington tribes did not greatly disturb him since they posed little threat to white
settlement. However, the Eastern Washington Indians were another matter and Stevens turned his attention to them in the spring of 1855. Kamaiakin's friendly attitude toward government agents changed abruptly when it became clear that Gov. Stevens intended to acquire undisputed title to Indian lands. In 1854 Kamaiakin had called a council of all Plateau tribes to formalize tribal boundaries and consolidate Indian territory as a block that would not be for sale. Stevens called a ground council for the end of May, 1855, at Walla Walla where the proposed treaty was to be discussed. The council convened May 29th with between 5000 and 6000 Indians present. After days of persuasions, threats, and bribery, the Indians accepted three reservations: a Nez Perce reservation, a Cayuse - Umatilla - Walla Walla reservation, and a Yakima reservation. The Yakima reservation was to include the Yakimas, the Klickitats, some Upper Chinook remnants, and all of the Columbia Salish groups. This was part of Stevens' plan to consolidate and contain all the Indians in one place, freeing the rest of the area for white settlement. This was the most objectionable part of the treaty to the Indians who did not want to live with people with which they had no kin relationships. In spite of this, Kamaiakin and the other Yakima chiefs, Skloom and Owhi, did sign on June 9, 1855 (Schuster 1975). However, Kamaiakin later insisted that "he only made a pledge of friendship by touching a little stick as it made a mark" (Josephy 1972:21).

Provisions of the treaty were not to take effect until it was ratified by Congress (which didn't take place until 1859). However, within a month of the treaty negotiations, Stevens proclaimed that the ceded lands of the interior were open to settlement. In the resultant land rush, land improved by Indians was taken by settlers and wagon trains were
increasingly passing through Indian territory on their way to Puget Sound. A second major treaty violation was the crossing of Yakima lands by prospectors on their way to newly discovered gold fields in the Colville area. From the point of view of the Indians, these events completely nullified the treaty (Schuster 1975). Consequently, during the later summer of 1855, hostilities erupted when a band of Yakima intercepted and killed a group of miners.* Indian Agent Andrew J. Bolin, stationed at The Dalles, was sent to investigate and was also killed on September 20, 1855 (Schuster 1975).

The Indian Wars of 1855-1856 began in the fall of 1855 with the defeat of a punitive expedition under Major Haller at Toppenish Creek. This was followed by an expedition commanded by Major Rains out of Fort Dalles who burned the Ahtanum Mission while the Yakima and their allies scattered for the winter (Schuster 1975). The attitude of Major Rains is vividly expressed in a message sent to Kamaiakin at this time by Rains:

> We will not be quiet, but will war forever until not a Yakima breathes in the land he calls his own. The river only we let retain this name to show that here the Yakima once lived . . . The treaty . . . gave you too much for your lands, which are most of all worthless to the white man . . . My kind advice to you, as you will see, is to scatter yourselves among the Indian tribes more peaceable, and there forget you ever were Yakimas (Yakima Tribal Council 1955:16).

Early the following spring, Klickitats burned the Joslyn place at White Salmon. The Joslyns were warned and escaped to the other side of the Columbia. Major fighting resumed with an attack on the Cascades by Yakima, Klickitat, and Cascades Indians on March 25, 1856. Simultaneous attacks were made on Bradford's Store at the Upper Cascades, the Fort

* who had shot some Yakimas who "did not want to give them /the miners/ their wives" (Yakima Tribal Council 1955:16).
Rains blockhouse at the Middle Cascades, and the Lower Cascades. Eighteen were killed and eleven wounded before reinforcements arrived from The Dalles after two days of siege (eyewitness accounts of this battle can be found in SCAS 1959). Nine of the local Cascades Indians were subsequently held guilty of treason and hanged for their participation in the attack.

After leaving the Cascades, the Yakimas and Klickitats rode down the Lewis River. They were seen by "Indian Zack," a "friendly" (probably a Cowlitz Indian) who was hunting in Chelatchie Prairie. He rode swiftly down the Lewis River warning the settlers at its mouth that 200 Yakima Indians were coming. Because of this Indian counterpart of Paul Revere, the settlers were able to escape across the Columbia before the Yakimas arrived (Burke 1959). During the Indian war, many of the Cowlitz Indians were interned at Fort Vancouver "for their protection" (Olson 1948).

Major Garnett was sent to secure the Yakima area in the summer of 1856. Construction of Fort Simcoe on Agency Creek gave the army effective control of the Yakima Valley. General Wool, commander of the Pacific Division, closed the interior to non-Indians in 1857 and sporadic fighting continued until September 1858 when Owhi surrendered and was killed trying to escape. Kamaakin escaped to Canada. Eastern Washington was again thrown open for settlement on October 31, 1858. The Treaty of 1855 was ratified by Congress and signed by President Buchanan on April 18, 1859. The Yakima began to settle into reservation life and many of the Klickitat joined them there (Schuster 1975).

A few settlers had located across the Columbia from The Dalles in the early 1850's, but the Klickitat Valley area had no settlers until 1859. During this year the area began to be settled with such rapidity that the
legislature created Klickitat County toward the end of the year. The settlers in this area were primarily stockmen with Ben Snipes having the largest herd. In the summer of 1862 he drove his cattle to British Columbia for sale (Coon 1929). Before 1870, settlement was mostly confined to the central part of the county around Goldendale and the Swale. In 1870 there were only thirteen families west of the Big Klickitat River (Ballou 1938).

Settlement in the Yakima Valley was slower, due to its isolation. The first store was opened at Yakima City (presently Union Gap) in 1869 and ranches were scattered along the main valley north of the reservation and along the north side of Ahtanum Creek by 1870 (Meinig 1968: Map 28).

In southern Western Washington, the construction of the Northern Pacific Railroad from Kalama to Tacoma provided the stimulus for the beginning of several new towns. Kalama, the southern terminus on the Columbia where a railroad ferry carried trains to the Oregon side of the Columbia, was platted in 1872. Construction of the railroad also stimulated the growth of Centerville (now Centralia) in the early 1870's. The railroad began operating in 1873. Settlement around Silver Lake began in 1870 and represented the beginning of the expansion of settlement up the Toutle River where the community of Toutle had its beginning in 1876. The first store at Woodland opened in 1881 and Kelso was platted in 1884 (Olson 1948).

In Skamania County, the Lower Cascades had a population of 149 in 1880. Stevenson was not platted until 1893 and it became the county seat the same year. The Barthwick sawmill operated at the mouth of the Wind River in the 1880's but closed in 1890. The Carson store and post office opened in 1895 and there was a large hotel at St. Martin's Springs in the late 1890's. A construction camp for the Spokane, Portland and Seattle Railroad marked the beginning of Underwood in 1905. The railroad began operation in 1909 and Cooks was platted the same year (SCAS 1959).
HISTORY OF SETTLEMENT BY AREAS

Wind River*

By the early 1890's there were settlers' cabins as far upriver as Soda Springs. Also during the 1890-1900 period there were timber claims of 180 acres each, as follows:

Warren Creek and Warren Gap -- A. A. Warren and Frank Howard
Hollis Creek -- Ed, John, and Will Hollis
Trout Creek, Martha Creek -- Celo "Cap" Anderson (1892)

A wagon road and bridge were built into the area at this time. About 1900 many of the early settlers and those with timber claims sold out to the Wind River Lumber Company which came to own much of the timber in the upper Wind River Valley. They built a dam across the Wind River 12 miles up from Carson to form a log pond.

Between 1902 and 1916 new settlers took up homesteads in the area. Some of these were: Button, Gordon, Hutchings, Davison, Cummings, Hollenberry, Lung, Gray, Blaisdell and Szydlo. In 1909 a large hotel was built at Government Soda Springs. This turned out to be unprofitable because the season was too short. It burned down in 1937. The present campgrounds at the same site were built in the 1930's by the Civilian Conservation Corps (CCC).

The first district ranger, Horace Wetherell, was appointed in 1902 and an office building and a house were constructed. In 1909 the Wind River Nursery and the Wind River Experiment Station were established. In 1923 the weather station, radio, and humidity research facilities were added.

* Information compiled from SCAS 1959 and S-HI-C 1939.
Little White Salmon Valley

The first settler in the valley was Charlie Meyers who occupied the meadows along the river in the upper valley below Timberhead Road. Another early settler was John Dart who located himself close to the ford, one-half mile below Moss Creek. Also among the earliest in the area were George Tyrell and Emile Willard (no dates given -- SCAS 1959).

One of the earliest settlers, Emile Willard, had a homestead of 160 acres in 1882. By 1884, there were two more families up the river from Willard, living in one room log cabins (S-HI-C 1939). By 1893 there were 35 homesteads in the Valley between Cooks and Oklahoma Park as well as a water-powered shingle mill at the Willard homestead on Moss Creek (SCAS 1959).

In the lower valley, Mill A of the Oregon Lumber Company was established in 1880. In 1885 the first store and post office opened one mile south of the present Broughton Mill. The road from Cooks opened in 1900. There were several early cordwood camps at Chenowith Flat. Mill A closed in 1907 (SCAS 1959, S-HI-C 1939).

The Howe Mill opened in 1912 and was taken over by Broughton in 1915. In the late 1890's, the first salmon hatchery on the West Coast opened at Cooks (ibid.).

Western Klickitat County

Husum and Gilmer Valley had settlers beginning in 1870. Camas Prairie was settled in 1872. In 1870 there were only 13 families west of the Big Klickitat River (Ballou 1938).
Trout Lake was originally an Indian summer camp for hunting, fishing, and berry collecting. The original vegetation was timber, scrub pine, and brush. However, the upper part of the valley up to the Ice Caves and Peterson Prairie was a prairie covered by native grass which was fired by the Indians and later by shepherds at regular intervals. The area is now covered by timber (MACS 1951).

The first settler at Trout Lake was Peter Stoller who staked out a 160 acre homestead just southeast of Trout Lake in 1880. A wagon road was built into Trout Lake in 1882 and during the following year more settlers arrived, including Stadelman, Bentz, Kittenburg, Aerni, and Pearson. In 1887 the Lower Bear Valley was settled by C. Guler and A. G. Winegartner and in the same year a post office and school opened in Trout Lake. The Trout Lake Irrigation Company began operations in 1889 with the construction of Coate Ditch and red clover was seeded. The first stage began running between Bingen and the Guler Hotel in 1893 and in 1902 the Guler Post Office opened at the upper end of the valley. Lumbering was greatly increased in 1903 with the formation of the Menomie Lumber Company which built Menomie Dam on the White Salmon River the same year. Their camp was located in lower Bear Valley and was known as Michigan City (S-HI-C 1939).

The Trout Lake area was an early tourist center. In 1884 forty to fifty people came for a summer outing. By 1903 there were 1000 tourists who pitched tents along the creek and filled the Guler Hotel to capacity. One of the major attractions was fishing in Trout Lake and thousands of trout were caught each year. Trout from a Colorado hatchery were planted in the lake in 1901 and 1902; 15,000 the first year and 20,000 the second (Interstate 1904).
Lewis River Valley and eastern Clark County

The first settlers on the Lewis River above Secs. 2 and 10 of R.5E. arrived in 1867. In 1869 the first settler at Yale arrived. A logging camp went into operation at Speelyai in 1890 and was supplied by a steamer which operated as far as Speelyai Riffle. Ole Peterson set up housekeeping at Cougar Flats in 1893, 7.5 miles up river from the Cougar Post Office. The 1902 Yacolt fire killed 13 to 17 people in the area (Gardner 1961).

The Yacolt Valley was originally an Indian summer camp and burial place. In 1876 Alex Farrar became the first white settler and began raising cattle. With the arrival of the Portland, Vancouver and Yakima Railroad in 1902, Yacolt became the headquarters of the Weyerhaeuser Company* and was practically a company town. Sixteen lots were surveyed and the next year the first store opened (S-HI-C n.d.).

The Dole Valley was first settled by the Muncton family before 1890 and others soon followed. The 1902 fire burned much of the timber in the area. The Moulton Lumber Company, which began operation in 1910, soon failed for lack of transportation.

Toutle River and Spirit Lake

Logging began in the Ostrander Creek area south of the Toutle River in 1887 and the logging railroad was finished in 1895. At that time there were 8 log camps and 29 shingle mills. In the Toutle River Valley, the

* From 1902 to 1910 known as Twin Falls Logging Co. and from 1910 to 1925 known as Clark County Logging Co.; by 1925 they had logged off the entire area.
community of Toutle began in 1876, settlement at Kid Valley began in 1888, and at St. Helens the same year. The post office at St. Helens opened in 1892 (Cowlitz County Advocate 1896).

At Spirit Lake there was a homesteader's cabin built by Marsh which adjoined the Portland YMCA ballfield. It was already an old abandoned cabin in 1910. Around 1900 Dr. Coe began mining operations north of Spirit Lake and was soon followed by R. C. Lange and the Burgoynes. The mining activity caused the county to build a road to Spirit Lake in 1901. A telephone line was strung to the Lange mine in 1906. Around 1900 Dr. Coe built a dam at the outlet of Spirit Lake but it only raised the lake level about two feet* (Buzzetti 1963: S-HI-C 1938).

The Toutle Ranger Station was constructed in 1910 by George Williams and the Spirit Lake Guard Station the same year by Joe Burgoyne. In 1913 the ranger station was moved from Toutle to Spirit Lake (ibid.). The Portland YMCA received a special use permit in 1911 for a permanent campsite at the south end of the lake, just east of the ranger station, and in 1913 the Spirit Lake Lodge, the first permanent building, was constructed. Cabins were built by the boys in the early 1920's and in 1928, Holdstadt Memorial Lodge was finished with guest room space for 50. In the late 1930's the YMCA bought Coe's property at the north end of the lake and the camp was moved to this site in 1951. The old site at the south end of the lake was transferred to the Episcopal Diocese of Olympia in 1956 for use as a church camp (Wilder 1959).

* (See section on mining for further information.)
The Upper Cowlitz Valley (The Big Bottom)

The Upper Cowlitz River valley is locally known as the "Big Bottom," the name given it by its early settlers, many of whom were from the Appalachians. The Big Bottom is composed of the approximately 19,000 acres of flat land between Tumwater Falls and the Clear Fork. It is thirty miles long and about one mile wide. The mean elevation is 1000 feet (Tompkins 1933).

"Hundreds of Indians" are reported to have brought furs from the Big Bottom to a Hudson's Bay Company post at Jackson's Prairie in 1833 (Tompkins 1933:250-251). The first non-Indians to visit the Big Bottom were James Longmire and William Packwood, two settlers from Tumwater who were looking for a pass to connect Puget Sound with the Oregon Trail. In 1854, led by three Nisqually Indian guides, they travelled up the Nisqually River to Bear Prairie (which they named), over Bear Prairie Pass and down Skate Creek to the Upper Cowlitz. Here they found an Indian village on the banks of the river with "several hundred members of the Cowlitz tribe" (ibid.). Packwood and Longmire did not find a pass over the Cascades on this trip but Packwood later discovered Cowlitz Pass and built a trail over it. In 1869 Packwood discovered anthracite coal in the Coal Creek and Lake Creek area. He visited his claim every year until his death twenty-eight years later (PCSP 1954).

William Jeork visited the Big Bottom in 1882 and became the first settler in 1883, just upriver from the site of Randle. Jeork was a German merchant who had been a supplier of the miners in California. The Davis family also arrived in 1883 and settled at the mouth of Davis Creek.
The arrival of Rufus Siler in 1885 marked the beginning of a large migration from the over-populated Appalachian Mountains to the Upper Cowlitz. Siler brought in the first cattle herd. Two Cowlitz Indians acted as packers for the early settlers. Columbus Kiona and George Washington lived near Kiona Creek and had the only horses in the area. Other Indians moved back into the valley and provided the settlers with seed potatoes and pelts. There was never any Indian hostility in the area (Tompkins 1933, PCSP 1954).

The rich alluvial soil and the Northern Pacific Railroad surveys, which began in 1878 according to PCSP (1954) and in 1884 according to Tompkins (1933),* attracted a large number of settlers so that by 1886 there were eighty bachelors in the valley. Apparently the only family was the Davis family. In 1886 the Vance Post Office and the Cora Post Office were opened. The Vance Post Office was named for Senator Vance of North Carolina to whom the request for its establishment was made by Rufus Siler. The Cora Post Office was named for Mrs. Davis and was located at the Davis homestead. In 1887 a grist mill was built at Miller Creek, but there were no saw mills until after 1900. The Randle and Sulphur Springs Post Offices were opened in 1890. The Sulphur Springs Post Office was located across from the mouth of Johnson Creek. By 1890 there were homesteads as far east as Tatoosh Mountain. These claims were validated by the Homestead Act of 1892. Transportation into the area was greatly facilitated in 1893 with the completion of a wagon road out to Mossyrock, built entirely by the settlers (Tompkins 1933, PCSP 1954).

*Reports of the railroad engineers can be found in PCSP 1954. White Pass and Carlton Pass were named for two of these engineers.
A majority of the people in Big Bottom came from Floyd, Johnson, and Pike Counties, Kentucky and Buchanan County, Virginia. The first to arrive, beginning in 1885, were Siler, Osborne, Ormsby, Huffaker, Johnson and the Blakenships. They sent reports of good hunting, forests, and bottom land back to their relatives in the over-populated Appalachians where game had become scarce and all the good bottom land had been taken. More than 1400 people from seventeen Appalachian counties migrated to the Big Bottom. Before 1920, fifty percent of the population was from the Appalachians and the Upper Cowlitz was known as "Little Kentucky." Between 1900 and 1937 migration from the Appalachians doubled the population between Toledo and Packwood (Clevinger 1938).

The Rainier Forest Reserve was created in 1897 and included the Upper Cowlitz Valley. Therefore, between 1897 and 1906, no new homesteads were allowed. In 1906 new homesteads were allowed on a case by case basis and in 1914 the present forest boundaries were established, excluding the Cowlitz Valley. This created a land rush in which, on the appointed day, persons wanting land raced to the parcel of land they wanted. The first to stake his claim was eligible to homestead it (PCSP 1954).

Development and further settlement of the upper Big Bottom increased after 1906 due to the activities of the North Coast Railroad Company and the Valley Development Company. The North Coast Railroad conducted surveys up the Cowlitz River around 1907 as had the Northern Pacific earlier. It was later decided that the route was not feasible, but for a time the prospect of a railroad caused increased growth in the area. It is said that the North Coast survey party built the first trail along the Clear Fork (PCSP 1954).
The Valley Development Company was the brainchild of Rhodes Green and a Mr. Lewis. Their plan was to dam the mouth of Packwood Lake and pipe other creeks into it, running water from the dam through a tunnel through Snyder Mountain to a power plant above what is now Packwood. The power generated was to be sold to the city of Tacoma. Surveys were conducted between 1907 and 1910 and construction began in the summer of 1910. After camps for the workmen were built, a narrow gauge tramway and a grade for the flume were built and a temporary power plant was constructed. Many test shafts were also bored. After $225,000 had been spent, Tacoma decided the project was not feasible in 1912, and all work ceased. The activities of the Valley Development Company caused a boom in the area because of the need to supply the company and its many laborers.

As a result, the town of Lewis was platted in 1910,* being named after the president of the Valley Development Company. In 1931, the name was changed to Packwood to avoid confusion with Fort Lewis. The Valley Development Company buildings at Lake Packwood were later used by the Forest Service and the state fish hatchery. After the failure of this early grand plan for power generation, there was no electricity in the area until 1935 when the Kerr brothers built a sawmill and a power plant to run it, which also supplied power to Packwood (PCSP 1954).

Settlement of the Cispus Valley was late and not intense because of the limited amount of agricultural land (totaling about 400 acres on the south side of the river). The area was first settled by a Mr. Covel in 1910. He was followed by Thomas Music in 1913. Some prospecting was

* The Sulphur Springs Post Office was moved to Lewis in 1910.
carried out on McCoy Creek and in Niggerhead, Dark, and East canyons. The McCoy Creek Mining Company widened an old Indian trail from the Siler ranch to McCoy Creek in 1905 (S-HI-C 1939).

The Forest Service in the Upper Cowlitz

The creation of the Rainier Forest Reserve in 1897 halted new settlement in the Upper Cowlitz Valley until 1906. Between 1906 and 1914 settlement was restricted to those who received permission from the Forest Supervisor. In 1914 the Forest boundaries were changed to exclude the valley bottoms (PCSP 1954).

William Sethe was the Packwood District Ranger from 1915 to 1949 except for four years (1927-1931) and is the source for much of the following information (S-HI-C 1935, PCSP 1954). The first forest officer was Frank Gates who had a homestead below Cora Bridge (which was not built until 1916). He had the position from 1897 to 1899. There was no ranger in the area again until 1901. The Randle Ranger Station was improved in 1906, a new cabin was built, and two assistants were assigned to the ranger. In 1907 the area was divided into the Randle and Sulphur Springs Ranger Districts. The headquarters of the Sulphur Springs District was at Skate Creek (the site of the present guard station). The Skate Creek Ranger station was on the Ed Dixon homestead and the ranger, Harry Cunningham, lived in one of Dixon's cabins until 1909 when a new ranger residence was built and fencing and clearing operations were carried out. The next year a horse barn was built. In 1910 an assistant ranger was assigned to the district and was stationed at the Davis Coal Mines on Summit Creek. The ranger station was moved to Lewis (now Packwood) in 1923.
During this early period, the forest service was resented by the settlers because of its rules controlling access to public domain, particularly with regard to grazing and logging. The principal activity of the Forest Service during this period was trail building. The Skate Creek Trail was built in 1906 and in 1907 the Cowlitz Pass Trail was constructed. The Johnson Creek Trail was finished in 1912. A trail had been cleared up the Clear Fork around 1907 by the North Coast Railroad survey crew and the trail into Packwood Lake had been constructed by the Valley Development Company in 1909. These were subsequently maintained by the Forest Service. A campground was maintained at Packwood Lake by the Forest Service until 1921 when Higgins established his camp hotel at the lake.

About 1910 the Coval cabin at the head of Oliver Creek was built and the Twin Buttes cabin was finished the same year by Skarr, Wang, and Wetherall. Also in 1910 a trapper cabin was built at the mouth of Milridge Creek by Slenkamp and Podcronick. In 1911 the Cora guard station was built and in 1912 a Forest Service telephone line was run from the Davis Coal Mines to Skate Creek to Longmire. Cabins and Lookouts constructed by the Forest Service during this early period were:

- Chain of Lakes cabin (1913)
- Cabin at the base of Cispus Lookout (1915)
- Berry Patch cabin (1916)
- Kiona Peak Lookout (1917)
- Badger Peak Lookout (1926)
- Cispus Lookout -- Twin Sisters Lookout (1926)
- Hawkeye Lookout -- soon abandoned (1927)
- Clear Fork Guard Station (1928)
- French Butte Lookout (1929)
- Hamilton Butte Lookout (1929)
- Packwood Office and Warehouse (1929)
- Sunrise Park Lookout (1930)
- Packwood Dwelling (1931)
Summit Prairie Lookout (1929-30)
Council Butte Lookout (1931)
Burley Lookout (1932)
South Point Lookout (1932)
Tatoosh Lookout (1932)
Goat Ridge Lookout (1933)
Trail's End Lookout (1934)
Tongue Mountain Lookout (1934)
McCoy Peak Lookout (1934)
Midway Lookout (1934)
Pompey Peak's Lookout (1934)
Day Creek Lookout (1935)

MINING HISTORY

The St. Helens Mining District is located in the area north of Spirit Lake and includes the upper Green River. The first discoveries in the area were made by Andy Olson in 1891. The district was organized September 22, 1892. The predominant rock in the area is diorite which is crosscut by andesite porphyry dikes. Veins of low grade copper with minor amounts of gold and silver were formed as escaping gases solidified through fractures in the cooling diorite. Most mineral-bearing veins occur at the interface of the diorite and the porphyry dikes (Landes 1902, Zappfe 1912).

The most development work was done on claims belonging to Dr. Henry Coe who previously had been associated with an Alaska sanatorium for the insane. Coe's company was formed in the late 1890's when Coe bought out Olson's claims just north of Spirit Lake on Paradise Creek. This was developed as the Sweden Mine. Coe's company which, according to Landes (1902) was called the Mining Corporation, Ltd., of Portland and according to another source was called the Mount St. Helens Consolidated Mining Company (S-HI-C, n.d.), also had claims adjoining the Sweden group known
as the Bronze Monarch, Norway, and Young America groups. In 1901, Landes (1902) reported that ore from the Sweden group was averaging $3.25 gold, six ounces silver, and nine percent copper. There were four hundred tons of ore on the dump with an estimated value of $9000. The company at that time was also:

installing machinery for a large water power plant which when completed will furnish power for drilling, hauling, lighting, etc. . . and this winter (1901-1902) are building boats and barges on the lake for transportation of the heavy machinery and ores during the summer of 1902 (Landes 1902:95).

Coe's company also had claims in the Chicago and Yellow metals groups about two and a half miles northeast of Spirit Lake over Norway Pass. The Chicago group had a tunnel 200 feet long in 1901. The same company had working arrangements on the Index group, two and a half miles northwest of the Chicago group, and the Samson group at the base of Goat Mountain on the Green River where 600 feet of tunnel had been driven by 1901 (Landes 1902). Coe invested over $50,000 in mining equipment and even sold stock to Theodore Roosevelt. He employed forty men in 1904 (S-HI-C n.d.). Coe had a dam built at the outlet of Spirit Lake which raised the lake level less than two feet. The purpose of this dam is not known (Buzzetti 1963).

Claims on the Green River and Miner's Creek were developed by a man named Ludluck who had backing from a Milwaukee newspaper. These claims probably included the Minnie Lee, Insurance, Independence and Last Hope groups (S-HI-C n.d.). The Minnie Alice and Athens groups on Miners Creek which were also said to have had Milwaukee backing (Hodges 1897) and Theodore may have been part of the same development. Ludluck had fifty men on the job at Camp Sampson which was located on the site of the present Golconda mine. There was also a camp on Green River near Miner's Creek.
The Milwaukee backers quit advancing funds in 1907 and operations ceased soon thereafter (S-HI-C n.d.).

The Polar Star Mine was located two-and-a half miles below the Samson group near Black Falls on the Green River and was owned by the Gray brothers of the Cascadia Mining and Development Company. Gray had a homestead near the Soda Springs state ranger station. The mine had about 200 feet of tunnel in 1901 (Landes 1902). In 1907 the Polar Star Mine had an 800 foot tunnel, 700 feet of which were in copper ore. A crosscut of 69 feet, 600 feet from the mouth of the tunnel, had 18 feet in 10% copper, 15 feet in 15% copper with $5 gold and 16 ounces silver, and 36 feet in 3% copper with $3 gold and 10 ounces silver. The Sweden and Norway mines in 1907 had a tunnel 2300 feet on the vein in ore. A crosscut of 23 feet showed 7 in 10% copper with gold and silver similar to the Polar Star mine (McIntyre 1907).

In 1904 R. C. Lange began work to the west of Coe's claims:

Lange later prospected in the SW ¼ of Section 1, T.9N., R.5E, on Margaret Creek. Apparently it was his idea to cross the same vein that Coe had originally located on. Prior to beginning operations he had gone to Germany to promote his mining property and it is estimated he rounded up a quarter of a million dollars that was sunk in this mine. He also brought German mining engineers to inspect his location and it was thought by them that the same lode vein as Coe was operating on would be intersected by a shaft to the north. Nothing ever came out of this mine. (S-HI-C n.d.)

The mining activity in the area caused the county to build a road into Spirit Lake in 1901. Louis Pauly freighted equipment into the miners by wagon and stage. A telephone line was strung into the Lange mine in 1906. The packers for the Green River area were the Burgoyne brothers who also had mines at Snow Lake, the Keystone group on the Green River, and the Mountain Chief group (S-HI-C n.d., Buzzetti 1963).
By the summer of 1911, prospecting and mining activity had practically ceased: "today the district has all the indications of a field full of disappointments" (Zappfe 1912:349). Intermittent prospecting over the fifteen years prior to 1911 had produced 250 mineral claims on which were located 75 tunnels with a total length of 11,000 feet. Zaapfe's assessment of the area was that:

Nowhere in the diorite in this district were metallic minerals seen in sufficient quantities to enable extraction profitably (Zappfe 1912:349).

Winchell toured the area in the fall of 1911 and agreed with Zappfe's assessment. These two men were the first geologists to visit the area. Winchell stated that there was no ore in commercial quantities. The original interest in the area was caused by certain specimens of higher quality which were "obtained by handling and extracting many tons of rock for one ton of specimens" (Winchell 1913:586). Winchell outlines the chain of events which led to development of the area:

To the inexperienced prospector, who is unable to distinguish specular hematite from galena, who cannot tell gray copper from a mixture of pyrite and arsenopyrite, who does not know the difference between chalcopyrite and tarnished massive pyrite, there would probably be an inducement to perform some work of exploration. He could even procure, as the result of hundreds of dollars worth of work and weeks and months of labor, an occasional specimen which might attract the attention of men with money, who themselves were unacquainted with mining and geology, -- specimens which, lying in a broker's office, might sell stock to the uninformed. (Winchell 1913:584).

Winchell contends that even after mining proved to be unprofitable in the area, more mining claims were taken, not for the available materials, but for the timber:

In order to secure this timber, mining locations were plastered over the country in solid blocks with parallel end-lines
and side-lines covering thousands of acres; and in order to keep up the pretensions of a mining-region, more tunnels were driven into the solid rock following the tourmaline joints (Winchell 1913:581).

The only record of any ore, other than specimens, being taken out of the area appeared in 1929:

Three cars of low-grade copper ore from the St. Helens property in Paradise Gulch near Spirit Lake were shipped for testing purposes. The property is opened by several tunnels aggregating 2,850 feet, and the audit was cleaned and retimbered in 1929. (U.S. Bureau of Mines 1929:427).

Prospecting also occurred in the Cispus Valley area as well. There was activity along McCoy Creek and in Dark, East, and Niggerhead Canyons. The McCoy Creek Trail was begun by gold prospectors in 1903. The McCoy Creek Mining Company widened an old Indian trail from the Siler Ranch to McCoy Creek in 1905 and in 1909 they built a bridge across the Cispus River above the mouth of Niggerhead Creek, suitable for a horse dragging a sled (S-HI-C 1935, S-HI-C 1939).

There were several mines in the Cowlitz Pass area after 1901, including the Green Horn, Black Bear, King Solomon, and Copper City mines. The Black Jack Mine was located on Miner's Ridge near Twin Lakes and had a shaft over 100 feet deep. There were two bunk houses, a cook house, an office, and a blacksmith shop. All equipment was packed in on horseback (PCSP 1954).

Another mining area was along the headwaters of the Washougal River. The Mabie Mine was located on Shirt Creek, a branch of Bluebird Creek. In the 1890's a "mile-long tunnel" was excavated. The mine was abandoned in 1912 since it was "not a paying mine." In 1893 there were 150 men in Copper City, a mining camp on Copper Creek, which was soon abandoned (S-HI-C 1936).
In 1932 Wade Dean of White Salmon, an entrepreneur who owned the local telephone company and the Mt. Adams Orchard, "the largest source of D'Anjou pears in the world," began a survey to determine the extent of sulphur deposits on Mt. Adams. The sulphur deposits were originally discovered by J. E. Wang of Trout Lake in 1920. Men employed by Dean's sulphur mining company dug test pits over a half-mile square of the mountain's crater. The men slept in the abandoned Forest Service lookout at the summit. The survey showed that there was a large quantity of sulphur on the mountain, an estimated one million tons of ore containing forty percent pure sulphur and a great quantity of calcium sulphate. The next year a camp for pack horses was established at the 9000 foot level and 1200 pack-horse loads were carried to the summit in the next few years. Dean's plans called for a 1700 foot tunnel near the summit and an eleven-mile tramway from the mouth of the tunnel to timberline. These plans were approved by the Forest Service but never carried out. A fall in the price of sulphur and World War II caused delays and by the time the war ended, Dean was involved in other ventures. (Murphy 1971).

GRAZING HISTORY

In 1885 Charles and Alexander McAllister, sheep men from New Zealand, had 5000 sheep in an area near Mount Adams from King's Mountain to Bird Creek. The area was used by others from New Zealand in the following years. By 1892 there was a sheep and cattle war over available range land. McAllister took his sheep to Mount Rainier in 1892 because the Mt. Adams area was so crowded. In 1920 all possible range area was in use. In that year M. Gilmore of Goldendale had a Forest Service permit for 1100 sheep
on Strawberry Mountain, but sent 1100 sheep and 800 ewes to the area making a total of 1900 animals. Due to lack of pasture and an early snow only 902 animals survived, reaching Trout Lake on November 2nd. This was known as the "Gilmore disaster." A permanent sheep-dipping station was established at Bird Creek near Mount Adams by the Klickitat County sheep inspector in 1902 (S-HI-C 1939, Ballou 1938).

In the Upper Cowlitz area, Moorcroft and York began running cattle on Mount Purcell in 1890. They were followed by Davis and McMahon who had 100 head a year on the mountain, which resulted in over-grazing. Around 1910 the Silers used Pompey Mountain, and Davis Mountain was used by Will Owens who had thirty to thirty-five head (S-HI-C 1951). During the 1920's there were eleven sheep allotments and three cattle ranges in the Packwood Ranger District. In 1954 there was one sheep allotment, one horse range, and five cattle ranges (PCSP 1954).
ETHNOGRAPHIC OVERVIEW

The Indian groups which inhabited areas within or adjacent to the Gifford Pinchot National Forest included the Yakima, the Klickitat, the Upper Chinook, the Cowlitz, the Upper Chehalis, and the Upper Nisqually or Mical. It should also be pointed out that these names do not refer to political groupings such as tribes, since for most of these groups the largest political unit was the village. The larger units to which the above names refer are social, ethnic, or linguistic. In most cases these larger socio-linguistic groups were not recognized as distinct named units by the Indians.

If the people themselves had no such common names and no common organization, why are they introduced into the discussion, apparently in self-contradiction? The answer is partly historical, partly theoretical. Early settlers, traders, missionaries, and government officials carried with them from the east the notion that all Indian groups were of necessity organized along tribal lines. Upon learning a village name from a native the whites immediately and indiscriminately applied it to all Indians of the vicinity... Early attempts at more objective classification frequently proceeded along linguistic rather than political lines. (Ray 1939:9).

The use of linguistic groupings is discussed by Spier:

In western Washington, the villages appear to have been largely autonomous in a political sense but differentiated only slightly in culture. Local groups of this kind have been marshalled by dialect both by the natives and by ethnographers, who forthwith refer to the dialect groups as tribes... The upshot is that some of us have solved the dilemma by describing these peoples in somewhat arbitrary groups: groups having some degree of community of speech, contiguous territory, and a name commonly used in the sense of a tribal designation.

Demarcating the territories used by these somewhat nebulous socio-linguistic groups is thus complicated by the lack of distinct tribal entities. Territories which were used by these groups also varied through time as a result of changes due to white contact. The most profound
effect of white contact was the introduction of European diseases that decimated the Indian population because of their lack of any immunity to these diseases. The drastic reduction in population of many groups led to a great decrease in the territory they occupied and in some cases led to the merging of formerly separate groups. Other groups which were not as drastically affected by the diseases expanded to occupy territory abandoned by others or which they were too weak to defend. An example of this is the Klickitat population which expanded from its original territory on the eastern slopes of the Cascades south of Mount Adams to occupy most of western Oregon as far south as the Umpqua River and even roamed as far north as Mount Baker in western Washington for a brief period.

Spier (1936) presents a map entitled "Tribal Distributions in Washington in the Early Nineteenth Century" which has been used in the preparation of Figure 3. However, Spier's boundaries for the Cowlitz have been challenged recently by Ray in his findings for the Indian Claims Commission (Ray 1974). Spier, as shown above, was relying principally on language groups, which may not correspond to ethnic or social units. For the purposes of this section, the linguistic groupings will be used, as given by Spier (1936) and Jacobs (1931, 1937). Deviations from this general linguistic distribution will be discussed in the sections dealing with specific groups.

The southern Cascade mountains of Washington were an area of great linguistic diversity with speakers of three major linguistic stocks represented. These linguistic stocks were Salish, Sahaptin, and Chinookan. Specific languages represented in the area are Coast Salish, Northwest Sahaptin, and Upper Chinook. The Coast Salish occupied most of Western
Washington and were represented in the area around the southern Cascades by the Cowlitz and Upper Chehalis dialects. The Cowlitz dialect was spoken principally along the Cowlitz River from approximately Kosmos to within a few miles of its mouth on the Columbia. The Upper Chehalis was found along the Chehalis River from Satsop to Centralia and along its tributaries, the Skookumchuck and Newaukum Rivers.

The Northwest Sahaptins were found principally along the eastern side of the southern Cascades and the dialects were, from south to north, Klickitat, Yakima, and Pcwanwapam. The Klickitat dialect was found originally along the Klickitat (except its headwaters), White Salmon, and Wind Rivers. The Yakima dialect was found along the lower Yakima River and its tributaries below Wenas Creek plus the headwaters of the Klickitat River. Pcwanapam (also known as Upper Yakima) was found along the Yakima River above Wenas Creek. The Skin dialect was spoken on the north side of the Columbia River above The Dalles.

In addition to these dialects along the eastern side of the Cascades there were also Sahaptin speakers on the west side of the divide. These were the Lewis River Klickitat, the Taidnapam, and the Mical. Mical speakers were found along the upper Nisqually River, Taidnapam speakers along the upper Cowlitz, and the Lewis River Klickitat along the Lewis River. Jacobs (1937) states that Klickitat is recent in the Lewis River area as is Sahaptin (Taidnapam) in the upper Cowlitz area. Jacobs states that the spread of Sahaptin speech west of the Cascade divide was not the result of "spectacular mass incursions or migrations" but of "generations of quiet friendship, intercourse and intermarriage of Coast Salish speakers and
Fig. 3. Distributions of ethnographic tribal groupings in the vicinity of the Gifford Pinchot National Forest (adapted from Spier 1936).
Sahaptin speakers" (Jacobs 1931:95-96). Thus:

much of the blood and culture of the upper Nisqually, upper Cowlitz, and other coastal up-river bands continued to possess a large Coast Salish content, while speech boundaries moved westwards and northwards imperceptibly, at Salish expense (Jacobs 1931:96).

The Upper Chinook language group contained the following dialects from west to east: Kathlamet and Clackamas, Cascades, Hood River, White Salmon, Wishram, and Wasco. All of these Upper Chinook dialects were found along the Columbia River from near its mouth at the boundary with Lower Chinook to The Dalles where Wishram and Wasco were spoken. Apparently only a narrow strip along the river was actually occupied by Chinookan speakers. On the north side of the Columbia, the area directly north of this strip was principally occupied by Klickitat and Cowlitz speakers, although the Chinook made trips into the area for hunting and berry picking (Spier and Sapir 1930).

YAKIMA AND UPPER YAKIMA

The Yakima and Upper Yakima or Kittitas can be considered together since they were culturally very similar. The major difference is linguistic since the Upper Yakima speak Pcwawwapam rather than Yakima proper (Jacobs 1931). According to Schuster (1975:27-28):

The home of people known aboriginally as Yakima consisted of the territory drained by the river of that name, from the tributaries rising in the Wenatchee Mountains on the north to the Simcoe Mountains and Horse Heaven Hills on the south, and from the summit of the Cascades on the west to the territories of the Columbia-Sinkiuse and Wanapams along the Columbia River on the east. Yakima villages were also scattered along the lower Yakima River to its confluence with the Columbia River near Richland, Washington.
The division of this territory into two groups was described by Gibbs in 1853:

The Yakima occupy the country drained by the river of that name. They are divided into two principal bands, each made up of a number of villages, and very closely connected; the one owning the country on the Nachess and lower Yakima, the other upon the Wenass and main branch above the forks (Gibbs 1855:407).

The political organization of this area was summarized by A. B. Robie, an Indian agent:

They are divided into two principal bands, namely, the Upper and Lower Yakimas. Each of these bands is made up of a number of small bands or villages acknowledging the authority of one or more chiefs or principal men (Robie 1857:350).

There was no political unit which could be referred to as a tribe. In Schuster's usage, the Yakima "people" were "a nameless but identifiable ethnic group composed of:

small, politically autonomous groups, which were joined together by bonds of territorial contiguity, linguistic affinity, a common culture, and a high level of recurring social interaction. Common interests, customs, a body of informal rules, and other shared cultural characteristics served to differentiate them from other similar groups (Schuster 1975:33-34).

The Yakima population was concentrated along the major rivers and their tributaries. Each local group (the small bands referred to by Robie) was named and identified by the location of its permanent winter village (Schuster 1975). Curtis (1911) states that each band controlled part of the territory which usually consisted of the valley of one of the small lateral streams which the group regarded as being its home. Curtis points out that these "home" villages were occupied only in winter; the people being semi-nomadic the rest of the year. Ray (1936) has identified the locations of eleven villages and camps in the Upper Yakima area and forty-four in the Lower Yakima area. His map shows these winter villages and
camps to be concentrated along the Yakima River between Atanum Creek and Satus Creek and along Satus, Toppenish, Atanum, and Cowiche Creeks.

The average village population varied from fifty to two hundred inhabitants in the middle of the nineteenth century (Desmond 1952:28). Mooney (1928) estimated the population of the Lower Yakima for the year 1780 to have been 3000. Anastasio (1955) estimated that the combined population of the Upper and Lower Yakima in 1805 was 3,500 and was at least double this number before suffering population losses from epidemics of European diseases, which began in 1782 according to Mooney (1928).

Before the acquisition of horses in the 1730's (Haines 1938), the Yakima wintered in:

 semisubterranean circular pit dwellings, excavated to a depth of three to four feet and roofed over with a hemispherical or conical frame of light poles covered with mats, grass, and earth. Their size varied from twelve to eighteen feet in diameter, depending upon the number of persons living in the lodge (Schuster 1975:46-47).

Up to six nuclear families might occupy one dwelling. The introduction of the horse probably caused a shift to multifamily rectangular tule mat lodges. These could be more easily dismantled in spring and were adaptable to the mobility provided by the horse (Stallard 1958:46). Apparently some of the same mats were transported on horses and used in construction of the summer conical mat lodge which housed only one nuclear family. The rectangular winter mat lodges were composed of a pole frame covered with several layers of mats. The walls were banked with earth up to a height of about three feet for protection against the cold and wind. Some mat lodges were up to 100 feet long (Curtis 1911) and housed many related nuclear families. Apparently a form of the pit house was still used as a women's house in the winter (Curtis 1911).
The Yakima relied principally on the gathering of wild plant foods. Anastasio estimates that for all inhabitants of the Plateau, one half or more of the food supply was composed of roots and bulbs. The next most important item was fish which comprised about one third of the diet (Anastasio 1955:18-19). The rest of the food supply came from hunting and the gathering of fruits and berries. In addition, Gibbs mentions the fresh water mussel: "deep beds of their shells are found near the sites of villages on the river" (Gibbs 1855:408). Men did the fishing and hunting while the women were responsible for collecting wild plant foods.

Hunting and gathering areas were perceived by the Yakima as being held in common and all Yakima bands had the right to use all gathering grounds and hunting territories.* However, the use of hunting grounds by outsiders required obtaining formal permission from a headman. Root digging grounds were exploited by people from many bands and did not belong to any one band. However, fishing stations did belong to individuals or families and were passed on by inheritance. Other families fished at these stations only with the permission of its owner.

The seasonal round began with the melting of the snow in February or March. The first food available was an early celery. The first salmon run occurred in March and was greatest during mid-April. People moved to their fishing stations along the Yakima River at this time, although many went to Celilo Falls on the Columbia above The Dalles. As activity at the fishing stations decreased, families dispersed to their favorite root digging grounds in the hills. While the women dug the roots and prepared them for storage

* The following information on subsistence activities is from Schuster 1975 unless otherwise indicated.
the men hunted. Roots gathered at this time were bitterroot, breadroot, and others which have no English name. At the beginning of June, many of the Yakima gathered at the camas meadows near the present town of Kittitas. The camas roots must have been particularly abundant here since the Yakima were also joined by many Interior Salish groups from the north and east. While the women dug and prepared the roots, the men gambled and raced horses, held councils, and traded. Marriages were also arranged at this time. This gathering usually lasted a week.

During June there was a second salmon run and the favored fishing stations at this time were located in Wenatchi territory (an Interior Salish group to the north of Yakima territory) around the village of Wenatchapam at the mouth of Icicle Creek on the Wenatchee River. According to Schuster (1975), the Yakima had reciprocal rights to fish at Wenatchapam. This village normally had a population of 200 but:

at the height of the salmon fishing season, the population swelled to as much as 2,000 or 3,000....Large salmon drying racks were maintained here for all to use (Ray 1936:142).

During July people moved up into the mountains to avoid the high temperatures in the valleys and to hunt. At this time the Yakima met and traded with groups from west of the Cascades. Gibbs (1855:408) says that the Yakima went over Yakima and Naches Passes to sell horses to the Nisqually and buy dried clams and hiaqua (dentalia shell). Hides were also traded and marriages with these western groups were arranged.

At the beginning of August, another large gathering was held in Upper Yakima territory at the camas grounds near the present town of Teanaway. Later in August, Yakima families could be found south of the Simcoe Mountains in Klickitat territory at the camas meadows between present Laurel and Glenwood and at Snowden. Both of these places were large Klickitat summer camps.
Huckleberries ripen during August and they are gathered near timberline in "burns". The Klickitat summer camp at Trout Lake was popular for berry picking and trout fishing. In Yakima territory, the favorite huckleberry area was around Potato Hill. Curtis (1911) says that huckleberries were gathered on the slopes of Mount Adams and Mount Rainier.

In early fall, Yakima families returned to the river valleys for fishing. In late August and September, Celilo Falls was a popular trading and fishing site on the Columbia in Skin territory. Trading and fishing trips were also made to the Wishram trading center at The Dalles during the fall. As the number of salmon decreased, the men turned their attention to elk and deer hunting in the mountains. About mid-November, families returned to their winter villages where they subsisted on the supplies of dried roots, salmon and venison. During the winter, occasional forays were made into the hills for deer hunting and a few whitefish and eels were caught.

There is some information available on fishing and hunting techniques. Salmon were caught:

with spears, weirs, cast nets, or seines with net sinkers, and dip-nets from platforms called "staging poles." Dip-nets were made of reeds and grasses, in particular of Indian hemp (Apocynum cannabium). Fishing platforms were constructed by supporting horizontal spars on a series of tripod supports jutting out into the water. Some were nearly fifty yards long (Schuster 1975:70).

Men fished in relays day and night while the women cut up, dried, and packed the fish. After the fish were dried on scaffolds, it was pulverized between two stones and packed in baskets lined with salmon skin. This salmon powder was combined with roots or berries to make a stew.

Deer was the principal game animal hunted and provided clothing, shelter and household equipment, as well as meat. Elk, bear, mountain sheep, and goat were also hunted. There were also game birds such as duck, quail,
pheasant, sage hen, grouse, chuckers, and geese. Gibbs noted in 1853 that game was scarce because of the introduction of guns. However, sage fowl and grouse were abundant (Gibbs 1855:408). Before the introduction of guns, bows and arrows were used. Hunting was an individual or small group activity with little emphasis on surrounds or other organized large groups method "probably because hunting was not the major subsistence activity, as was fishing, for men" (Schuster 1975:74). Yakima occasionally joined the Nez Perce and Flathead for buffalo hunting on the plains east of the Rocky Mountains.

Curtis (1911:5) states that the Yakima made use of "no fewer than twenty-three kinds of roots and eighteen kinds of berries." Roots included bitter-root, breadroot, wild carrots, wild onions, and camas. Roots were dug with a hardwood digging stick with a cross-wise handle of wood, horn, or antler. Roots were made into storable cakes by drying and pulverizing. Celery stalks and sunflower stalks were also eaten. Berries included huckleberries, chokecherries, service berries, cranberries, and berries from several trees. Hazel nuts and acorns were gathered along with a moss that grows on pine trees and a large mushroom.

As can be seen from the description of the seasonal round given above, the Yakima had extensive contacts with many other groups. The two most productive fishing sites which they visited were actually outside their territory (Wenatchapam in Wenatchi territory and Celilo Falls in Skin territory). Yakima actually owned their own fishing stations at Celilo Falls and many were related through intermarriage to families living there. Although the horse probably greatly increased the mobility of the Yakima and the amount of goods they could transport, trading was probably always important. Horses began to replace dentalia shell as a medium of exchange and white trade goods
entered the system, but this probably only intensified an ancient pattern. Use of the horse as a standard of wealth probably greatly increased the prestige of the Yakima, who could now "produce" wealth by breeding horses, rather than merely depending on imports of dentalia from the coast.

Schuster (1975:97-98) summarizes the kinds of relationships the Yakima maintained with other groups:

the Yakima were tied by a network of affinal alliances through intermarriage with Wenatchi, Wishram, Skin, Klickitat, Walla Walla, Umatilla, Wayam-Tenino, Nez Perce, Palus, Spokane, Wanapam, Columbia, and Coast Salish such as the Snoqualmie. Intertribal relationships were further strengthened by co-utilization of resources and settlement sites by Wenatchi, Klickitat, Wishram, Skin, Wayam, Umatilla, Wanapam, the Sinkius band of Columbia Indians, and others. Gathering at important fishing sites and root and berry grounds functioned to maintain and regulate additional intergroup activities including ceremonies, feasts, councils, sporting events, gambling, and intergroup visiting. Many of these sites were also the location of major trading centers were economic transactions further extended the network of social ties.

Schuster (1975:67-78) has analyzed Yakima social structure and has summarized her findings as follows:

aboriginal Yakima society was relatively flexible and limited in organizational scope, characterized by shifting alliances, residential alternatives, a loose political structure with few positions of permanent leadership except at the village or band level, and considerable autonomy held by individual, family and band.

The village or band was essentially an egalitarian community. Heads of extended family household units conferred on decisions and resolved conflicts among themselves largely by consensus. Concurrence was necessary to effectively coordinate and carry out group action.

A village was usually composed of a group of bilateral kinsmen, who formed alliances by means of ritualized transactions (trades and give-aways), shared control of village or band territory, shared responsibility for social activities with that territory.

A high value was placed on the prerogative of the individual to make his own decisions; restraint and control of the self were
also idealized as a personal responsibility. Behavior was largely regulated by coordinate controls, principally of an informal nature. Ideal behavioral norms were reinforced by a pervasive Yakima ethos based on cooperation, hospitality, sharing, peaceful co-existence, and expectations of reciprocity.

Key social groupings, in particular affinal alliances and consanguineal bonds between grandparents and grandchildren, were reflected in kinship terminology. The network of bilateral kinship ties merged as a principal mechanism for social organization; and cooperation and expectations of reciprocity were influential, cohesive behavioral factors for social integration. In keeping with a flexible social organization, residence after marriage was more likely to be influenced by demographic and ecological factors than by post-marital residential preferences or rules.

Yakima beliefs about the supernatural revolved around the obtaining of spirit power from a guardian spirit by means of a vision quest. Yakima believed that everything, animate and inanimate had spirit powers which could be conveyed to people. It was believed that a person with superior ability or unusual skills had acquired extra power from a spirit helper.
KLICKITAT

According to Curtis (1911), the Klickitat referred to themselves as Xwalxwaipam. The term Klickitat was applied by other groups and according to Maddock (1895) meant "robber". Jacobs (1931:96) states that:

the term Klickitat covers no general native language, cultural or tribal grouping. For the purpose of more exact description I apply Klickitat solely to the Xwalxwaipam band, not to Skins, Yakimas, or Taidnapam.

Xwalxwaipam means people of Xwalxwai, the pam, being a locative suffix. Xwalxwai (or Hwahlhwai in Curtis' spelling) was located in the vicinity of the falls of Klickitat Creek near its junction with the Klickitat River (Curtis 1911).

Lewis and Clark called the Klickitat "Wah-how-pum" and said they lived on the north bank of the Columbia from the bend of the Columbia River to the John Day River and that they wintered on the Yakima and Klickitat Rivers (Ray 1974). Lewis and Clark saw a village of twelve mat lodges at Rock Rapids on the Columbia (Curtis 1911). In the 1830's W. F. Tolmie and Samuel Parker described the Klickitats as being north of the Cascades of the Columbia River and Horatio Hale reported that the Klickitats wander about Mount St. Helens (Ray 1974). In 1851, Anson Dart described the Klickitat as being a scattered roving tribe north of the Columbia who numbered 492. E. A. Starling stated in 1852 that the Klickitat winter east of the Cascade Range but in summer they trade and gamble on the west side. Starling also reported that the Klickitat were divided into five bands and numbered two to three thousand (Ray 1974).

Gibbs, who travelled with McClellan across the southern Cascade Mountains in 1853, said that the Klickitat inhabit the valleys between Mount
St. Helens and Mount Adams. Gibbs encountered 138 Klickitats at Chequoss (now known as Indian Race Track) in August, "feasting on strawberries and the mountain whortleberry, which covered the hills around" (Gibbs 1855:404). Gibbs encountered another 84 Klickitat at Camas Plain (southwest of Glenwood, according to Curtis). Gibbs estimated that the total number of Klickitats probably did not exceed 300 (Gibbs 1855:403). Gibbs in a later publication said that the Klickitat and "Tai-tin-apam" occupied the "elevated plateau lying south of Mount Adams and Mount St. Helens and upon the southern and western slopes of the latter" (Gibbs 1877:164). In this publication Gibbs estimated the Klickitat population to be between 300 and 400, not including the Taidnapam. Stevens (1857) gave an estimate of 500.

Curtis (1911) says that the original home of the Klickitats was in the valleys of the Klickitat River and its tributaries but that they had also spread west over the mountains to the Lewis River and north to Mount St. Helens and Mount Adams. They wintered in the valleys of the Klickitat, White Salmon, Little White Salmon, Wind, and Lewis Rivers, according to Curtis. The "Taitnapum" were "a small, cognate, but distinct tribe" at the head of the Lewis River (Curtis 1911:37). Curtis also says that the Klickitat "mingled freely" with the Chinook on the Columbia River and fished there but that most of their fishing was done on the smaller streams.

Spier and Sapir state that the Klickitat held the north bank of the Columbia above Ten Mile Rapids "and had several villages interdigitated with those of the White Salmon group, or occupied jointly with them" (Spier and Sapir 1930:160). The White Salmon group were Upper Chinookans living between The Dalles and the Cascades. There were 50 Klickitat one half mile below Memaloose Island, 300 White Salmon and Klickitat opposite Moiser, Oregon,
and there were White Salmon and Klickitat at White Salmon Landing (Spier and Sapir 1930:167).

Ray obtained the location of seventeen Klickitat villages and camps from informants. Their distribution circa 1850 was as follows (Ray 1936: 148-50):

1. a permanent village of the Columbia opposite Lyle; population: 200.
2. a permanent village at the confluence of the White Salmon River and Jewett Creek; population: 500.
3. a permanent village at the present town of Husum; population: 150.
4. a winter village four miles above Husum on the river; population: 200.
5. a summer camp at Snowden with camas meadows; population: 100. (This is one of the camas meadows identified by Schuster 1975 as being visited by Yakima).
6. a summer camp and camas meadow between Laurel and Glenwood; population: 500. (This is another camas meadow visited by the Yakima according to Schuster. It is also the "Camas Plain" and Tahk Prairies mentioned by Gibbs 1855 where he found 84 Klickitats.)
7. a summer camp at Glenwood meadows; population: 300-400.
8. a summer village at Trout Lake. This was the largest summer village and was used for trout fishing and berry picking. (Trout Lake was mentioned by Schuster as being visited by Yakima during August.)
9. a summer camp at Dead Horse Meadow, northwest of Guler.
10. a summer camp at Peterson Prairie near the head of Lava Creek; summer population: 100-150.
11. a summer camp with a race track six miles west of Peterson Prairie. (This is Chequoss where Gibbs counted 138 Klickitats)
12. a camp and race track two miles west of number 11.
13. a summer camp at Huckleberry Mountain.
14. a summer camp at Sawtooth Mountain.
15. a summer camp at Lemei Mountain.
16. a summer camp at Twin Buttes.
17. a summer camp at Bird Mountain.

There were also fishing camps at the mouth of the Little White Salmon River and the Wind River. A trail led up the east side of the Little White Salmon River to huckleberry areas on Little Huckleberry Mountain. A trail from the Wind River camp led up the east side of the Wind River, across the Little Wind River and, following the route of the present Cascade Crest Trail, arrived at Big Huckleberry Mountain (SCAS 1959).

There is very little ethnographic information available on the Klickitat. However, Gibbs provides a few details which are worth quoting:

Their country supplies them with an abundance of food. The lower prairies afford kamas, and the mountains a great variety of berries in profusion. The business of gathering these of course falls on the women, who go out in small parties, attended by a boy or old man as camp-keeper, collect and dry the berries, or bring into the general camp what is wanted for present food. Such of them as bear keeping they store for winter use, and also for trade, exchanging them for fish, smoked clams, and the roots which their own territory does not furnish.

Of game there is but little left. The deer and elk are almost exterminated throughout the country, the deep snows of winter driving them to the valleys, where the Indians with their usual improvidence, have slaughtered them without mercy. The mountain goat, and the big-horn, or sheep, are both said to have formerly existed here, but, since the introduction of fire-arms, have retired far into the recesses of the Cascades. The black bear alone is still found, though but rarely. The salmon furnishes to these, as to most other tribes of the Pacific, their greatest staple of food. Their neighborhood to the fisheries of the Cascades and the Dalles provides them for the summer; while, after the subsidence of the Columbia, later schools ascend the small rivers, and in the autumn an inferior kind forces its way into the brooks, and even the shallow pools which form in the prairies (Gibbs 1855:403-404).
Gibbs also provides a description of part of the seasonal round:

Their usual residence during the summer is around Chequoss, one of the most elevated points on our trail from Fort Vancouver across the Cascades, where we met them at the beginning of August. They were, at this time, feasting on strawberries and the mountain whortleberry, which covered the hills around, though during the night the ice formed on the ponds to the thickness of half an inch. Towards the end of the month they descend to the Yahkohtl, Chalacha, and Tahk prairies, where they are met by the Yakimas, who assemble with them, for the purpose of gathering a later species of berry and of racing horses (Gibbs 1855:404).

Tahk Prairie is the same as Camas Prairie (site number six, above) which was also identified by Schuster as a meeting place for Klickitats and Yakimas. Tahk Prairie was described by Gibbs (1855:477) as follows:

It is about six miles in length by a mile in its greatest width, and is 1,268 feet from Vancouver. A shallow, marshy lake occupies its lower end, and the remains of one which formerly covered the whole and extended much beyond the present bounds of the open land. It is a favorite Kamas and Wappatoo ground of the Indians. The lake referred to is Lake Conboy.

Gibbs does not mention actually seeing any Indians at Yahkohtl (now Yacolt) Prairie when they passed through it at the end of July. However, McClellan's journal does describe Indians in the area. On July 25th, 1853, as they were descending toward Yahkohtl Prairie, McClellan wrote:

On the rocky border of the stream there was an Indian camp -- it is scarcely possible to imagine a more miserable sight -- their tents to not deserve the name -- consisting mainly of 3 sticks propped together, with a torn blanket thrown over. They had a double barrel shot gun. * They were making new fish traps (McClellan 1853, July 25th entry).

* illegible
Upon arriving at Yahkohtl Prairie the same day, McClellan notes that "a few Indians are camped about 100 yards from us." The next day McClellan wrote:

The Indian squaws went off about 7 for the fish traps they left near the falls. ... The Indians near us are Klik-a-tats. ... We found 2 Indians (belonging to the party camped near us) at the falls, preparing their fish traps. ... they catch the salmon trout -- the salmon does not come up this far (McClellan 1853, July 26th entry).

The trout McClellan saw were sixteen inches long and weighed about one pound.

McClellan mentions other evidence of Indian activity as well. On July 22nd, at Sim-Sik Prairie he saw "an old Indian camp in the clump where we camped," and on July 31st, while describing the hills around Chelatchie Prairie, McClellan wrote that "at the top of the highest is a bare cliff used by the Indians as a 'watch-post'." On August 1st, at Spil-yeh Prairie "we found an old Indian at the crossing" and on August 6th, the party went "into a small prairie where were a number of old Indian huts." This prairie is located between "Wahamis" (now known as 2 x 4 Prairie) and "Yawakamis" (McClellan Meadow). On August 8th, 2½ miles from McClellan Meadow according to Minter's itinerary, they "reached a small plateau in the midst of which was a small pond, the grass nearly eaten off by Indian horses." At Chequoss on August 9th, McClellan says they camped near twenty lodges of Indians. Since Gibbs (1855:403) counted 138 Indians here, there must have been about seven Indians per lodge.

The only other description of the Klickitat seasonal round is given by Rea (1941) for the period around 1900. In the spring the Klickitat went to Camas Prairie to dig roots and bulbs. In the summer they went to Celilo
Falls for salmon and in the fall they travelled to the mountains for berries and hunting. They wintered along the Columbia River. The family described by Ray wintered near Roosevelt, Washington.

Although there is little other ethnographic information available, both Gibbs and Curtis state that the Klickitat were very similar to the Yakima:

The Klickitats and Yakimas, in all essential peculiarities of character, are identical, and their intercourse is constant; but the former, though a mountain tribe, are much more unsettled in their habits than their brethren (Gibbs 1855:403).

Curtis (1911) states that the material culture and religion of the Klickitats were the same as that of the Yakima, although the Klickitat women were more expert basket makers, being famous for their imbricated coiled baskets. Curtis also says that the Klickitats were hired by the Chinook as warriors to fight other Chinook in the early nineteenth century and that they were paid in women and beads.

After 1830 the Klickitats began to take advantage of the decimation of the Indians west of the Cascades from epidemics of intermittent fever by moving into their territory. The other advantage the Klickitats had was their horses, giving them great mobility. The more sedentary western Indians depended principally on canoes for transportation and were thus limited to the rivers. In 1835 the Klickitats moved west along the south bank of the Columbia River looking for more game and established a village on Sauvie's Island (Coon 1923). After 1839 they moved into Willamette Valley, "attracted by the game with which it abounded, and which they destroyed in defiance of the weak and indolent Callapooyas" (Gibbs 1855:403).
The Klickitats ranged south all the way to the Umpqua River and Maddock (1895) calls them the "chief rogues of the Rogue River". The Klickitat were able to conquer this entire area because they were "accomplished horsemen, skilled in the use of firearms", according to Coon (1923). Coon says that the Klickitats established depots for collecting furs and levied tribute from the conquered tribes. After 1843 they began to hire themselves out to settlers as farm hands and the settlers considered them to have "superior intelligence and energy" (Coon 1923:249). The Klickitat also volunteered as scouts in the war against the Rogue River Indians. According to Teit (1928:99), the Klickitats also made brief forays as far north as Mount Baker in Western Washington.

During this period the Klickitat seem to have replaced the Chinook in controlling the east-west trade on the Columbia. According to Maddock (1895), the Klickitat controlled two points on the Columbia, one near Vancouver where the "canoe tribes" traded, and one at Celilo Falls where the "pony tribes" traded. Maddock describes Celilo as the "Indian Wall Street" and says that the Klickitats' "geographical position and cunning made them the most aristocratic and richest tribe on the Pacific coast" during the 1840's (Maddock 1895:308). Gibbs (1855:403) also discusses the trading activities of the Klickitats:

They manifest a peculiar aptitude for trading, and have become to the neighboring tribes what the Yankees were to the once Western States, the travelling retailers of notions; purchasing from the whites feathers, beads, cloth, and other articles prized by Indians, and exchanging them for horses, which in turn they sell in the settlements.
In 1854 the Klickitats were ordered out of the Willamette Valley by Indian Superintendent Palmer. The Klickitats were angry because they claimed the area by right of conquest but Palmer only dealt with the original inhabitants of the area when negotiating treaties for indemnification for Indian land (Coon 1923). This was one of the reasons why the Klickitats joined the Yakima in the Indian War which began in 1855. However, Curtis (1911) says that the Klickitats from the Willamette fought with the Yakima only after they were promised horses and ropes by Kamaiaakin, the Yakima war chief. The Klickitats later surrendered because they did not receive the promised horses. After the Indian War, most of the Klickitats joined the Yakima on the Yakima reservation.
UPPER CHINOOK

On linguistic grounds, the Upper Chinook are composed of seven dialect groups, which from west to east are: Kathlamet, Clackamas, Cascades, Hood River, White Salmon, Wasco, and Wishram (Spier and Sapir 1930). Gibbs (1855, 1877) places the division between the Upper and Lower Chinook at the mouth of the Cowlitz River. This would place the Kathlamet with the Lower Chinook. The Clackamas originally occupied both sides of the Columbia below the Cascades and the Cascades Indians lived on both sides of the river at the Cascades. The White Salmon group occupied the north shore of the Columbia to a point opposite Mosier, Oregon. The Wishram had villages on the north shore from this point to a few miles above The Dalles. The Hood River group lived on the south side of the Columbia from the Cascades to The Dalles and the south side of the river at The Dalles was occupied by the Wasco. The only Upper Chinook group for which ethnographic information is available is the Wishram. This is partly due to the early depopulation of the Columbia region as a result of exposure to European diseases. In 1853 there were only 200 Indians at The Dalles (probably not all of whom were Upper Chinook) and 36 at the Cascades (Gibbs 1855:418). The information on the Wishram was obtained by interviewing the few survivors of that group living on the Yakima reservation in 1905 and 1924-25 (Spier and Sapir 1930).

Spier and Sapir also give some information about the location of Cascades and White Salmon villages. The Cascades Indians occupied both sides of the Cascades and on the north side had the banks of the Columbia downstream to Skamania and perhaps as far as Cape Horn. Lewis and Clark called them the Watlala or Wahclellah and the Sha-la-la. They had villages
two miles above Cape Horn (population: 400), two miles below Skamania (population: 1000), near Skamania, and at the Cascades on the north side (Spier and Sapir 1930:167-168). The White Salmon Indians had villages opposite Mosier, Oregon (300 White Salmon plus Klickitats), one-half mile west of there (100 White Salmon), at White Salmon Landing (White Salmon and Klickitat), at Underwood, and on Canoe Creek just above the Wind River (Spier and Sapir 1930:167,173). Using information provided by Lewis and Clark, Spier and Sapir (1930:169) estimate the population between The Dalles and the Cascades to have been 2200.

The Wishram occupied the north bank of the Columbia from a mile below Memaloose Island to Ten Mile Rapids. They had eighteen villages, the largest of which had a population of about 400 and was located at The Dalles near Spedis. Most of the other villages were located within a few miles of this village so that a small area around The Dalles was densely occupied. Spier and Sapir (1930:171) estimate the total population of the Wishram in 1800 to have been between 1000 and 1500. The Skin, a group of Sahaptin speakers, had the area above Ten Mile Rapids at Celilo Falls.

Whereas the Yakima and Klickitat derived a majority of their food from wild plants, especially roots, the Wishram's diet emphasized fish:

It is probable that the Wishram depended primarily on fishing for subsistence, secondarily on root and seed gathering, with hunting in distinctly subordinate place (Spier and Sapir 1930:174). However, even though plant gathering and hunting were secondary, the Wishram made use of a large area which has already been described as Klickitat Territory:

The Wishram lived on the north bank of the river. ... Their permanent settlements were directly on the river,
but they hunted and sought plants on the higher country directly back from the river to the watershed, that is on the southern slopes of Mount Adams and the so-called Klickitat Mountains (Spier and Sapir 1930:160).

The Wishram were much more sedentary than the Yakima and Klickitat because of the great abundance of fish in the river during most of the year. It is probable (although not directly stated by Spier and Sapir) that there were always people living in the river-side villages and that parties of root or berry gatherers went out in the spring and fall, living in temporary camps for a short time. The principal root gathering time was in May when the camas were ready and berries were collected in late August. Deer were hunted in the winter when the snow hindered their movements. Deer stuck in deep crusted snow were clubbed to death and pit-falls were dug on game trails and covered with snow. Hunters also waited with bow and arrow on game trails where deer passed frequently in the winter. One such place was one and a half miles above the mouth of the Klickitat River.

Fishing was the primary subsistence activity year-round. With five species of salmon, there were runs during most of the year. The number of fish, however, decreased greatly during early winter and during April. When the salmon were not running there were pike, sturgeon, sucker, chub, trout, smelt, lamprey eel, and shell fish. The chub and suckers were caught in the spring (April) and the lampreys and smelt were netted at night during the winter.

Fishing stations were owned by groups of six to ten related old men. They usually had at least two; one for summer dip netting and one for fall spearing. The different locations and techniques were necessitated by
changes in the river level. The fishing stages were made of posts and saplings set in holes in the rock. Lower stagings were set up as the water level decreased. Some salmon runs were so heavy that:

informants described how it was not necessary to erect platforms but one could stand along the walls at the side of the rapids and take twenty to twenty-five salmon an hour (Schuster 1975:72).

At these times Yakima, Klickitat, and other groups were numerous at The Dalles and Celilo Falls since it was not necessary to get permission to use someone's fishing station.

Like the Yakima, the Wishram dried the salmon on racks, pulverized it, and stored it in baskets lined with salmon skin. However, because they traded much of this salmon (see below), it was put up in standard size baskets which held 90 to 100 pounds each. Twelve baskets wrapped in mats made up a stack and Lewis and Clark counted 107 stacks at The Dalles which would have been more than 10,000 pounds. Dried salmon was also stored in pits and would keep indefinitely (Spier and Sapir 1930:179). Roots and berries were also made up in three standard size baskets.

The Wishram lived in multifamily rectangular mat lodges and also had some winter semi-subterranean earth lodges. There seems to have been a few coastal type plank houses as well. These must have been occupied only by the wealthy since the planks would have had to be imported. The Wishram also had Chinookan large (12 to 20 feet long) shovel-nose canoes made out of hewn cedar logs which were also imported from lower on the Columbia. The Wishram were superior to all other Plateau peoples in woodworking, making canoes, paddles, bailers, bowls, mortars, ladles, spoons, bows, and cradle-boards. They also had stone bowls, mortars, and pestles. Tule mats
and twined baskets were made by the women.

The Wishram and Wasco were famous as traders and "the vicinity of The Dalles was probably the most considerable trading establishment of the whole northwest", being the meeting place for interior and coastal groups (Spier and Sapir 1930:224). The Wishram were not travelling traders. They were purely middlemen, buying and selling whatever was brought to them.

Teit gives the following description of trading at The Dalles:

Trading at the Dalles was in skins, fur, fish, oil, roots, pemmican, feathers, robes, clothing, shells, slaves, and horses. On the whole, products of the lower Columbia, the Coast, and the southern or Oregon country, were exchanged for products of the interior east and north. . . .

Products from the coasts of Washington and Oregon, Puget Sound, the plateaus of the interior to the north and east, the Plains, the interior of Oregon and northern California, reached the Dalles.

Slaves were very numerous on the lower Columbia and at the Dalles long ago. They were boys and girls and some adults. All the Oregon tribes dealt more or less in slaves, and so did the Coast people. The Dalles people always bought slaves and resold them. . . .

Shells, beads, Hudson Bay blankets, robes, clothes, horses, and fish were probably the principal things traded, also slaves, canoes, dressed skins, furs, and the like. Furs sold by the Dalles people to the Hudson Bay Company were all procured from other tribes. . . . Some people of the following tribes came to the Dalles in the trading season: Columbia, Spokane, Yakima, Klickitat, Tyighpam, Walla Walla, Umatilla, Cayuse, and sometimes Palous, Nez Perce, Klamath, Molala, and Kalapuya (Teit 1928:121-122).

The only commodity actually produced by the Wishram was the dried salmon powder which was in great demand by interior groups who had been subsisting on dried roots all winter and even by coastal people who had plenty of fish of their own but, according to Lewis and Clark, did not dry it (due to the lack of sun?). According to Lewis and Clark, all trade with
the coast was by means of canoes on the Columbia. The actual transport of
goods between the coast and The Dalles was in the hands of the Chinookan
peoples lower on the Columbia, such as the Cascades and Clackamas groups.
Items imported from the coast included shell, ornaments, candlefish, dried
seal meat, dried sturgeon, cured shellfish, whale blubber, and dogfish oil.
Coastal people were especially interested in obtaining buffalo skins. The
Coast was the source of *hiaqua* or dentalia shell money which came from the
coast of Vancouver Island and was highly valued as ornamental shell beads
(Schuster 1975). They also served as the medium of exchange; commodities
had recognized values in terms of the amount of *hiaqua*. According to
Alexander Ross, however, many of the items changed hands through gambling:

> which alone draws so many vagabonds together at this place;
because they are always sure to live well here, whereas no
other place on the Columbia could support so many people
together . . . .

For every fisherman there are fifty idlers, and all the fish
cought are generally devoured on the spot; so that the
natives of the place can seldom lay up their winter stock
until the gambling season is over, and their troublesome
visitors gone. All the gamblers, horse-stealers, and other
outcasts throughout the country, for hundreds of miles round,
make this place their great rendezvous during the summer
(Ross 1904:129-130).

When Ross visited the area in 1811, there were "3000 souls, or more" at the
main fishing camp (Ross 1904:129).

The Wishram, as a correlate of their great wealth, had rank distinctions.
There seemed to have been three gradations in social standing based on wealth,
plus the slave class. Chiefs inherited their position and were not necessarily
the wealthiest people. There was more than one chief among the Wishram
and it is possible that they were lineage or clan heads. They had
considerably more power than leaders among the Yakima and Klickitat, with power deriving from authority rather than the marshalling of consensus. The primary function of a chief seems to have been adjudication:

Chiefs seem to have had considerable power: their word was implicitly obeyed. Acting in concert, the chiefs decided on the fines or death penalty for a murderer or adulterer. If there was trouble within the tribe, it was the function of the chief to declare what should be done. Whatever, the decision, it must be obeyed (Spier and Sapir 1930:212).

The depopulation of the Chinook by epidemic diseases and probably the competition of the Hudson's Bay Company posts greatly reduced the volume of trade at The Dalles and the flow of goods in canoes along the Columbia. As mentioned above, Gibbs (1855:418) says there were only 200 Indians at The Dalles and 36 at the Cascades in 1853. Thus during the 1830's the Klickitats and horses began to replace the Chinook and canoes in the east-west trade along the Columbia. It is also significant that horses became the medium of exchange, replacing hiaqua as a standard of wealth.
COWLITZ AND TAIDNAPAM

The Cowlitz were a Coast Salish group which had no territory on the coast. They occupied much of the interior of southwest Washington, principally along the Cowlitz River. Taidnapam is a linguistic designation for Sahaptin speakers living west of the Cascade divide and were found principally along the Upper Cowlitz River and the Lewis River. Jacobs (1931) restricts the Taidnapam to the upper Cowlitz but this was probably the result of having no informants from the Lewis River area. Curtis (1911:37), in discussing the Klickitats, notes that the "Taitnapum" at the head of the Lewis River area were "a small, cognate but distinct tribe." The assignment of the Lewis River area to the Klickitats as on Spier's (1936) map (which follows Jacobs 1931) was due to the Klickitat presence in the area after 1830 as part of their general westward expansion. The Lewis River was part of their "Klickitat Trail" route to Fort Vancouver. As Ray (1974:258) explains,

The whites at the settlements and trading posts, seeing the "Roving Klickitat" arrive from the Lewis River quarter, even came to assume -- perhaps quite naturally -- that the Lewis River country was theirs. These whites never visited the more distant parts of the territory of the Lewis River Cowlitz, and the Cowlitz seldom or never came to the settlements. Indeed as late as the 1850's there were some Lewis River Cowlitz known almost not at all, it became quite customary for the Lewis River country to be called "Klickitat" country.

This same confusion was noted by Lewis (1906) who says that the Klickitat were recent in the Cowlitz area and began to be called Cowlitz. Gibbs (1877:171) states that the Klickitats intermarried with the "remenants of the original proprietors of the Lewis River."

These "original proprietors" of the Lewis River were probably already Sahaptin speakers or Taidnapam long before the Klickitat expansion after
1830. This was due to the uni-directional character of Klickitat-Cowlitz intermarriage:

the intermarriage was predominately a one-way affair, from the Interior to the Coast. Women from the Interior were eager to share in the riches of the Coast, and coastal men were not reluctant to accept them as wives. However, coastal women were quite unwilling to go to the dry lands and assumed poverty of the Interior. Given the predominant pattern of patrilocal residence, as practiced on both sides of the mountains, this meant that there was a gradual infiltration of Sahaptin speakers to the Cascade slopes on the west, but no comparable movement of Salish to the east. The process was slow but over the centuries extremely effective . . . . The end result was the replacement on the western slopes of the Cascade Mountains, in the area under discussion, of Salish speech by Sahaptin. In this manner, the upriver Cowlitz on the Cowlitz and Lewis River drainage systems, although originally sharing a language with their fellow tribesmen on the lower courses of the rivers, came slowly to speak a quite different language, with their tribal relationships in no fundamental way being affected (Ray 1974:253).

Thus, the Taidnapam, living along the upper Cowlitz and upper Lewis Rivers, were Cowlitz in culture and ecological adaptation, although speaking an Interior language. Jacobs (1931:96), who originally proposed the model elaborated above by Ray, states that:

much of the blood and culture of the upper Nisqually, upper Cowlitz, and other coastal up-river bands continued to possess a large Coast Salish content, while speech boundaries moved westwards and northwards imperceptibly at Salish expense.

The situation is more understandable when it is realized that in actuality many of these upriver peoples were bilingual.

The Cowlitz proper, or Lower Cowlitz, "occupied the middle and lower course of the Cowlitz River, its tributaries, and adjacent lands; also the Kalama River and tributaries" (Ray 1974:254). Curtis (1913) gives the location of thirty villages on the Cowlitz River from its mouth to "a few miles east of the Willamette Meridian," (at Knab). Curtis' informant gave the number of houses in each village and stated that each multi-family
The facilities for grazing offered by this tract have induced in
the occupants equestrian habits, which distinguish them from their
neighbors. The number of their horses is, of course, inconsiderable,
as compared with the tribes of the great plains, but has been
sufficient to create an exception to the otherwise universal aqua­
tic life of the coast region (Gibbs 1877:169).

The prairies themselves were described by Lt. Duncan of McClellan's expedition:

the entire country west of the mountains is broken up by these
small plains occurring at regular intervals here and there
throughout its whole extent. They are generally slightly rolling and dry, and covered with fine bunch-grass (Duncan 1855:205).

The seasonal round began about the first of May when families left the winter villages on the river and moved to the prairies where they set up temporary mat lodges and engaged in root digging and hunting. Two months later they moved higher into the hills for berry picking, which included the collection of huckleberries, blackberries, elderberries, salmonberries, strawberries, and salal berries. Huckleberries and salal berries were dried for winter use. Hazelnuts were also gathered. In late August families began to return to villages on the river to build fish weirs. Later in the fall as the river rose, the weirs were removed and fishing continued by means of spearing (Curtis 1913:6). That the salmon were not as abundant as could have been desired is indicated by Lt. Charles Wilkes' statement on Chinook-Cowlitz trade in 1841. Wilkes, on his way down the Cowlitz River, noticed many canoes going up-river loaded with salmon and trout from Willamette Falls which were to be traded to the Cowlitz for camas (cited by Ray 1974:270).

The Cowlitz were excellent hunters and hunting continued year-round. Deer was the principal flesh food and were taken by driving them toward other hunters armed with spears or arrow and by driving them toward snares and pits. Elk were hunted in the winter when they were slowed by deep snow (Curtis 1913). Ray (1974) says that the Cowlitz had a primary dependence on meat and were much better hunters than other western Washington groups. Apparently, the Upper Cowlitz or Taidnapam were even more specialized as hunters since one of Jacobs' informants states that the Upper Cowlitz hunters regularly traded deer and elk meat to the Lower Cowlitz (Jacobs 1934).
The Cowlitz lived in long rectangular cedar plank houses most of the year. These had sleeping platforms around the sides and fire troughs down the center with openings in the roof for the smoke. Salmon were dried over the fires on racks (Olson 1948). Such houses were occupied by up to ten families (Jacobs 1934). The Cowlitz had some canoes on the lower Cowlitz River but most transportation was by horse (Ray 1974). Garments were made of tanned skins as were mocassins. Shields and "armor" were made from elk hide and cedar bark was used to make string, skirts, and fish nets (Olson 1948, Jacobs 1934).

There is little information available on social and political organization but Ray (1974:259) gives the following summary:

Details are lacking but it is clear that, while the principle of village autonomy in all local affairs was maintained, the village in fact looked to the division and the tribe for leadership. The villages were too closely spaced, at least among the Lower Cowlitz, and shifting of residence from one village to another was too common, to permit any effective village separation. It is questionable whether villages had headmen but there was village leadership by respected and capable men.

The office of chief was a formal position, regularly occupied in the larger divisions but probably rather neglected in the smaller ones. The role of tribal chief was more or less real depending upon circumstances. Certainly the coming of the whites provided the circumstances which led to the functioning of a tribal chief through the nineteenth century.

The "division" referred to by Ray are Lower Cowlitz, Upper Cowlitz, and Lewis River Cowlitz. Ray (1974:261) concludes that:

The Cowlitz tribe was more firmly and cohesively organized than other western Washington tribes. . . . The tightest organization was within the tribal divisions. The most impressive aspect of the social organization, however, was perhaps the overall unity. The ties between the divisions were loose but unyielding, and. . . of very long standing. This, despite the fact of linguistic differences and occupancy of territories of considerable geographic and ecological contrast.
However, Curtis (1913:5) describing the Lower Cowlitz says:

Allied by speech and proximity, the people of these villages were not politically united by a tribal organization. Nevertheless their language contained a collective name for them -- Stlplimuhkl.

Thus the degree of political integration remains in doubt but there do seem to have been chiefs with more than just local influence. Curtis (1913:14) also reports that all the Cowlitz did occasionally unite under one war chief against the "warlike northern tribes" and allied themselves with the Chehalis and apparently with the Nisqually and Puyallup who were said to have furnished canoes for use on Puget Sound.

Slavery was a well-established institution among the Cowlitz:

Slavery was firmly established among the Coast Salish ... A chief's influence was in direct proportion to the number of his slaves ... Among the Cowlitz, ... slave women not infrequently married native-born men, even men of rank, and ceased then to be slaves ... Few families of the common people held slaves, but many a chief possessed as many as ten ... The slaves of the Cowlitz were obtained by the barter of canoes at the annual native gathering at the Dalles of the Columbia, or at Fort Vancouver, and were usually Kalapuya from Willamette River in Oregon, or Klamath and Shasta from southwestern Oregon and northern California.

The above information shows that differences in rank were important among the Cowlitz and probably correlated with differences in wealth.

Some information on specific village locations is available. Curtis' (1913) list of thirty villages along the lower Cowlitz River has already been mentioned. These extended to a few miles east of Toledo. In the Lewis River area, Donovan (1970) mentions that Chelatchie Prairie was used as a summer camp by Indians (of unspecified affiliation) for camas gathering and hunting. Yacolt Valley was visited every year (apparently in the late nineteenth century) by two Indian families who pastured their horses there and engaged in berry picking and horse racing. There were tree burials where the
town of Yacolt now stands but these were removed by the Indians (S-HI-C n.d., Ross B. Sheppard). There is also the story of Indian Zack (given in the historical section) who was hunting in Chelatchie Prairie on March 28, 1856, when he saw 200 Yakima approaching and warned the Lewis River settlers (Burke 1959). This shows use of the area in the spring as well as the summer. Finally, there is the description of Indian use of Yacolt Prairie at the end of July given by McClellan (1853) in his journal quoted in the Klickitat section above. McClellan identified the Indians as Klickitats but as has been shown, this could also mean Lewis River Cowlitz. The Indians McClellan saw here were catching trout in weirs.

There is quite a large amount of information on sites in the Upper Cowlitz area given by early settlers and the Taidnapam speakers who were Jacobs' (1934) informants. One of Jacobs' informants says that there was a Taidnapam band which had a village at the mouth of Tilton Creek. There was a prairie nearby where strawberries, camas, and other roots could be gathered. Another band lived at Mossy Rock Prairie and had a fishing place on the river. A band at the mouth of the Canyon of the Cowlitz fished there and at the narrows four miles above Cosmos.

Another of Jacobs' informants mentions a fishing camp at the mouth of the Clear Fork. There was berry picking on Mount Tatoosh and fishing in all the creeks around and above Packwood. There was a salmon fishing place opposite Silver Creek and at Kiona farm ("a great many people used to be there"). There was a camp at the creek below the mouth of the Cispus and many fishing places between the Cispus and Cosmos. The most popular fishing place was Cowlitz Falls where "a great many people used to stay and obtain fish" (Jacobs 1934:230). There was also a campsite a mile or two below the
falls and at Cosmos and Mossyrock Prairie. Mountain goats were hunted at the source of the Cowlitz and at Goat Rocks. Huckleberries were collected at the source of the Cowlitz and at Longmire Springs.

There were seasonal camps at the mouths of the Muddy Fork, Skate Creek, and Hall Creek for fishing, deer hunting and berry picking. Winter villages were at Nesika and Cowlitz Falls (PCSP 1954). According to Forest Service information (S-HI-C n.d.) there were winter camps at Cowlitz Falls and Chapman Prairie at the line between Range 7 and 8 (on the Cowlitz River?). There were camps half a mile below the Cora bridge on the north side of the river, on the Davis homestead, and at the mouth of Skate Creek. This was one of the largest camps except for the one at the falls. Longmire and Packwood found an Indian village of "several hundred" on the banks of the Cowlitz at the mouth of Skate Creek (Tompkins 1933). There was a summer fishing and hunting camp at the mouth of the Muddy Fork and a summer fishing camp at the mouth of the Clear Fork. There was an Indian cemetery on the Voorhies homestead half a mile above Packwood near the highway and the mother of Indian Batt Kiona died on Purcell Mountain and was buried at the base of the hill by the Purcell Mountain Trail (S-HI-C n.d.).

When Rufus Siler arrived in the upper Cowlitz area in 1884 the Indians were "sparse." There were a few at Cowlitz Falls, at the mouth of Kiona Creek, along the hill near Siler Creek, and in the Cispus Valley at Tower Rock. The Indians George Washington and Columbus Kiona lived near Cowlitz Falls and Jim Kiona lived at Kiona Creek where there was an Indian village and burial ground just west of his ranch (S-HI-C n.d., R.T. Siler, as told to Rolfe Anderson). Jim Yoke, one of Jacobs' informants, had a homestead at the mouth of Skate Creek and was married to a Yakima woman (evidence of the
east to west directionality of marriage discussed above) and Jim Suterlick had a homestead at the Muddy Fork (PCSP 1954).

There were Indian trails along both sides of the Cowlitz and one went over Cowlitz Pass into Yakima country. Another trail went along the divide between the Cowlitz and Cispus Rivers and over Cispus Pass. The trail to the upper Nisqually went over Skate Mountain and ended at Bear Prairie. There were also trails up Davis Mountain, Purcell Mountain, Tatoosh Ridge, and Backbone Ridge. There was also a trail from Cowlitz Pass to the Goat Rocks used for mountain goat hunting (S-HI-C 1938, William Sethe). Rice (1964) states that the trail along the Cowlitz followed the north side of the river and that Indians camped at Kitchen Rock before going over the pass. Other camps were at the mouth of the Muddy Fork and at La Wis Wis. There was also a trail through Carlton Pass.
The Upper Chehalis were a Coast Salish group with winter villages on the Chehalis River between Satsop and Chehalis (Gibbs 1877). They were similar to the Cowlitz, making use of the river and the surrounding prairies:

In the spring some of the villagers would leave their winter wooden plank dwellings, take to their canoes and move up the Chehalis River and its tributaries to fish, dig camas, pick berries, and hunt. . . . On the prairies, camas roots were dug and smoked for winter use. The most important food, however, was salmon, and the salmon runs were the most significant economic events of the year (Fried 1974:221).

They made use of land around the Newaukum and Skookumchuck Rivers for hunting and gathering purposes. Gibbs (1877) says that another name for the Upper Chehalis was Stak-tamish and on Stevens' (1857) map the word Staktamish is written along the Skookumchuck River. According to Taylor (1974), the boundary between the Upper Chehalis and the Nisqually was along the divide between the Chehalis River and the Deschutes River. The Upper Chehalis had horses, as did the Cowlitz, "and were somewhat more nomadic than the coast Indians. They remained, however, primarily a riverine, canoe people" (Taylor 1974:152).

Concerning social organization, Taylor (1974:153) states that "The Upper Chehalis consisted of four bands organized in a loose confederation" which "united under a recognized over-chief for purposes of war or treaty-making."

However, Fried (1974:200) is of the opinion that:

there existed no political unity among these Indians. There was no paramount chief, no council uniting villages, no planned activities, and no coordinated social events.

Fried concludes that:

The basic social and political unit was the small autonomous village composed of two or more extended households. Heads of such households were called "chiefs" but the nature of their powers was circumscribed and limited, in part due to the mobility of the separate households, families and individuals, in the seasonal economic quest for food. The individual families and households were really the
primary economic production and consumption units and they required little or no coordination with other families and households that necessitated leadership with special powers of social control (Fried 1974:223).

MICAL

Mical is the linguistic designation given by Jacobs (1931, 1937) to the Sahaptin dialect spoken by the Upper Nisqually. The presence of Sahaptin speech here was the result of the same process already described for Taidnapam: unidirectional inter-marriage of Sahaptin women into Upper Nisqually groups (Jacobs 1931). Little information is available specifically about the Mical but Smith (1940) treats the Nisqually in general. Culturally, the Mical or Upper Nisqually were similar to the Upper Cowlitz or Taidnapam.

According to Smith (1940) they had a village near Eatonville on the Mashel River and hunted the Bald Hills south of the Nisqually River. Haeberlin and Gunther (1930) report an Upper Nisqually village at Elbe on the Nisqually River.
TRIBAL SUMMARY

The preceding descriptions of specific Indian groups has shown that they had much in common, especially in terms of subsistence techniques. All of these groups made use of roots and berries, fish, and game animals, especially deer. However, the emphasis placed on each of these resource categories varied from group to group (See Table 1). The Yakima and Klickitat emphasized roots and berries, the Upper Chinook emphasized fish, and the Cowlitz (especially those on the upper Cowlitz and Lewis River) emphasized hunting. These differences in exploitive emphasis correlate with variations in the proportion of the year that the groups were sedentary. The Yakima were only in their winter villages from mid-November to February or March while the Cowlitz lived in their plank houses from September to April. The Wishram (and probably the other Upper Chinook) lived in their Columbia River villages most of the year, making short forays into the hills at various times of the year for root gathering and hunting.

These differing degrees of sedentism were adaptations to the degree of concentration of resources and the relative ease of movement. The Wishram were able to remain in one place most of the year because of the great concentration of fish in the Columbia River. The Yakima were mobile throughout much of the year due to the wide distribution and differing ripening times of the twenty-three kinds of roots and eighteen kinds of berries they sought (Curtis 1911). The mobility of the Yakima was also encouraged by the relative openness of their territory and their use of horses after 1730. The Cowlitz had their villages on a salmon river but the concentration of fish was not as great as in the Columbia, necessitating greater dependence on hunting and roots than the Wishram. Perhaps the Cowlitz would have been more mobile if their territory had been more open. However, they were restricted to prairies enclosed by dense
forest. Thus, except during the summer when roots (concentrated in the prairies) were dug, it was more practical to leave the women and children in the permanent river villages while the men formed hunting parties to go to the hills. Incidentally, the difference in emphasis on hunting between the Yakima and the Cowlitz can be seen in the use of organized drives by the Cowlitz while the Yakima did not use drives or surrounds and hunting was an individual or small group activity.

Of course, the reason that any of these groups could remain in a permanent village through the winter was their ability to accumulate storable resources for winter use, such as dried salmon and roots. However, attitudes toward accumulation varied from the norm of reciprocity and sharing found among the egalitarian Yakima to the accumulation of wealth to achieve status, as among the Wishram.* The Cowlitz were intermediate in this respect, with differences in wealth being mentioned, but apparently not of primary importance as among the Wishram traders. Thus, the degree of status ranking seems to correlate with the first two variables discussed above: concentration of resources and degree of mobility.

One would expect a similar correlation in terms of political organization; those groups displaying internal differences in ranking and wealth having a more hierarchical political structure. This does not seem to have been the case, however, although information on political structure before white contact is usually either lacking or difficult to interpret. Ray (1974) states that the Cowlitz had divisional chiefs but this is suspect in view of Fried's (1974)

*It should be noted that status or high rank was probably not validated until much of this wealth was redistributed (given away) at a feast similar to a "potlatch."
statement that such chiefs were only the result of white contact and that the basic political unit in western Washington was the autonomous village with the wealthier village members having more influence. Among the Wishram, there seem to have been chiefs whose "word was implicitly obeyed" (Spier and Sapir 1930: 212), but there seem to have been many "chiefs" in each village. Their main function seems to have been the adjudication of disputes, especially those involving murder; acting as a council which endeavored to get all parties to agree on compensation or "blood money." Wishram "chiefs" seem to have been men of wealth and influence who could best be placed in Sahlins' "big man" category (Sahlins 1963): someone who becomes influential and attracts followers through the accumulation of wealth. However, Spier and Sapir's (1930:211) statement that the "chief's" position was hereditary is contradictory. Nevertheless, the fact remains that the Wishram did not have a person in a position of superordinate authority over the whole group (all villages).

As a postscript, it should be mentioned that the above ethnographic sketches have been presented as if all information given (except for that on the Klickitat) represented the Indians before white contact. Of course, the specifics of Indian culture before white contact can never be known. Even the use of the horses, which seemed to be an integral part of Indian culture when the first fur traders arrived, was a relatively recent addition. The horse probably greatly increased the mobility of the Yakima and the Klickitat, both in terms of the distances they were able to travel and the amount of material they were able to carry with them. Therefore, it is probable that the Yakima were restricted to their own valley before the arrival of the horse and that the large gatherings of thousands of people from all over the Plateau were a relatively recent phenomenon. The ability to accumulate wealth in terms of horses
probably began to erode the egalitarian Yakima and Klickitat norms. This was probably further accelerated by the availability of white trade goods.

The most drastic effect of white contact was the introduction of epidemic diseases to which the Indians had no resistance. These arrived before any non-Indians had entered the area. According to Mooney (1928), smallpox from the Missouri arrived in the Plateau in 1783, killing thousands. On the coast, a fever introduced by the Hudson's Bay Company decimated the Chinookans in 1823 and again in 1830 intermittent fever broke out "which has almost depopulated Columbia R. of the aborigines" (W.F. Tolmie, quoted by Ray 1974:302). Mooney (1928) also records that smallpox again broke out in 1852. Samuel Parker in 1835 estimated that seven-eights to nine-tenths of the Indian population of the Lower Columbia had been killed by disease (quoted by Ray 1974:303). Of the over 4,000 Cowlitz estimated by Curtis to have originally inhabited the lower Cowlitz River, Lt. Wilkes estimated that there were only 330 Cowlitz and 350 "Cowlitz Klackatacs" in 1841 (Ray 1974:296). Gibbs in 1853 estimated that the Cowlitz and Upper Chehalis together amounted to only 165 people (Gibbs 1855:428). Gibbs' estimate for the Yakimas at this time was 600 and for the Klickitats 300. Stevens' (1857) estimate was 700 Yakima and 500 Klickitats. Mention has already been made of Gibbs' estimate of 200 Indians at The Dalles and 36 at the Cascades in 1853 (Gibbs 1855:418). These can be compared with the 3,000 estimated for the Yakima in 1780 and the 1,000 to 1,500 estimated for the Wishram in 1800 who only occupied the north side of The Dalles. The Wasco probably comprised a similar population on the south side.

Such an extreme depopulation probably had great effects on social organization, especially in terms of the consolidation of groups and the emergence of leaders. The Yakima are a good example of this. Depopulation and the threat
of white encroachment led to the consolidation of the Yakima under Kamaiakin and the emergence of a true tribal organization which resulted in the Indian War described in the History section. In other cases, such as the Chinook, depopulation was so severe that groups approached extinction and other groups were able to appropriate their territory, as the Klickitats did after 1830. The Klickitat's success as traders was entirely a product of white presence since the Klickitat acted as middlemen, exchanging white trade goods for horses which they resold to the whites. The Klickitats seen in 1853 by Gibbs had little of their own culture remaining to them:

Very few characteristic features remain among these people. Their long intercourse with the Hudson's Bay Company, and of late years with the Americans, has obliterated what peculiarities they may have had; nor is there any essential difference in their habits or manners from those of the Indians adjoining them. They use, for the most part, the arms and utensils of the whites, and the gun has superseded the bow (Gibbs 1855:405).
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<thead>
<tr>
<th>TRIBE</th>
<th>SUBSISTENCE PATTERN</th>
<th>SETTLEMENT PATTERN</th>
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<tbody>
<tr>
<td>YAKIMA</td>
<td>Feb.-e. March, celery gathering; l. March-April, fishing; May- e. June, root collecting &amp; hunting; June, fishing; July, hunting &amp; trading; Aug., camas &amp; berry collecting; l. Aug.-Nov., fishing &amp; hunting; Nov.-Feb., fishing &amp; hunting as needed.</td>
<td>Winters spent in large villages on the rivers; spring fishing on Yakima River and Celilo Falls in dispersed camps; summer hunting and gathering from temporary camps in the Cascades; fall fishing in river valleys and at Celilo falls, hunting in mountains; return to large winter villages in November.</td>
</tr>
<tr>
<td>KLIICKITAT</td>
<td>Same basic pattern as the Yakima.</td>
<td>Large winter villages located on Columbia and tributary streams, e.g. Klickitat and White Salmon. Root gathering activities from temporary camps on Yacolt, Chelatchie, and Tahk prairies. Berry picking in dispersed camps in Cascades.</td>
</tr>
<tr>
<td>UPPER CHINOOK</td>
<td>Year-round fishing on Columbia and its tributaries; May, camas gathering; Aug., berry picking; occasional hunting in wint.</td>
<td>Lived in large river-side villages most of year. Temporary camps in the &quot;hills&quot; for gathering activities.</td>
</tr>
<tr>
<td>COWLITZ</td>
<td>May, root collecting &amp; hunting; July, berry collecting; l. Aug., fishing; year-round hunting--a major aspect of subsistence.</td>
<td>Large winter villages located on main river; temporary camps for hunting and root gathering on prairies; berry collecting from dispersed camps in Cascades.</td>
</tr>
<tr>
<td>UPPER CHEHALIS</td>
<td>Similar pattern to that of Cowlitz except that fishing replaces hunting as the major economic focus.</td>
<td>Similar to that of Cowlits. Located primarily on the Chehalis River and its tributaries, e.g. the Newaukum and Skookumchuck Rivers.</td>
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ARCHAEOLOGICAL OVERVIEW

Interest in the manifestations of prehistoric human occupation of the Pacific Northwest can be traced even to the period of early Euro-American exploration and settlement (cf. Sprague 1973:253-5). However, most of this early enthusiasm was characterized by a collector rather than professional mentality.

The first major professional archaeological investigations in the region were associated with the Jesup North Pacific Expedition around the turn of this century. While the expedition was under the directorship of Franz Boas, virtually all of the archaeology was personally conducted by Harlan I. Smith. Though Smith's field methods left much to be desired, much of his work is still of importance if only because it still represents the only professional excavations in many areas of British Columbia and Washington. One of the more useful of Smith's works was his survey of the Yakima Valley, conducted under the auspices of the American Museum of Natural History (Smith 1910). The extensive descriptive detail of artifacts and collections he visited make this an invaluable work for the archaeology of the central Plateau.

The "modern" period of Northwest archaeology can be traced to the early 1920's with Kroeber's theoretical consideration of Northwest Coast - Interior relationships; problems that still remain of central concern to many Northwest prehistorians. During this period and until after the Second World War, virtually all archaeological research was confined to that portion of the Columbia River south of the Canadian border. Nevertheless, the investigations and reports issuing during this period set the stage for much of what was to follow. In their publication dealing with the archaeology of
The Dalles - Deschutes area, Strong, Schenck, and Steward (1930) produced the first comprehensive site survey and excavation report in the Pacific Northwest; a report that even by modern standards was well-written and organized. Further efforts on the Columbia River during this time were stimulated by salvage projects associated with dam construction. Along the Lower Columbia Herbert W. Krieger conducted the only work that was carried out in the Bonneville Dam Reservoir prior to its inundation (Krieger 1935). Salvage excavations behind Grand Coulee Dam (1939-1940) resulted in yet another seminal report (Collier, Hudson, and Ford 1942).

Following the Second World War professional archaeological activities mushroomed in the Northwest. In large part this blossoming interest was occasioned by the Columbia Basin Project, River Basin Surveys, and the Smithsonian Institution. During the nearly six years of its existence, the Columbia Basin Project carried out over forty surveys and reconnaissances of proposed reservoirs as well as nine reports of archaeological salvage excavations. National attention and interest in Northwest prehistory accompanied the frequent reports that appeared in leading regional and national professional journals. While being somewhat obscured by the passing of time and intervening interests, the Columbia Basin Project laid the theoretical and substantive groundwork for much of what has followed. It was here that such extensive programs as the University of Washington's work in McNary, Chief Joseph, Priest Rapids, Wanapum, and Wells reservoirs, the University of Oregon's excavations in The Dalles and John Day reservoirs, and Washington State University's investigations in the Lower Snake River region (e.g. Ice Harbor, Lower Monumental, and Little Goose reservoirs) received their impetus.
Subsequent to this period of large-scale salvage investigations, archaeological emphasis in the Northwest has come to be somewhat re-oriented in both scale and focus. While the need for salvage-based investigations associated with reservoir projects has waned during the past several years, archaeological survey and salvage work accompanying a multitude of public and private developments has burgeoned in response to a number of recent state and federal statutes. These more recent developments promise to eventually result in a fuller, more coherent understanding of the region's history/prehistory.

It should be noted in passing that the historical preoccupation with sites located in one particular micro-environment (i.e., the floodplains of the area's major rivers) has had very important consequences for the present state of archaeological knowledge: (1) data really only obtain for major river valleys, especially the Columbia and Snake; (2) theoretical constructs for development of prehistoric Plateau cultures have largely ignored (or, more correctly, been unable to consider) the total subsistence/settlement systems. As we shall see in the discussion which follows, the former bias has resulted in there being little extant information about prehistoric utilization of not only the area encompassed by the Gifford Pinchot National Forest but also the areas immediately west and south. And, even in that region which has enjoyed by far the greatest field appraisal, the Columbia Plateau, our present understanding of cultural dynamics is based almost solely on that limited portion of the settlement/subsistence system contained within the alluvial floodplains.

In the discussions which follow an attempt is made to summarize, even if in a cursory fashion, the existing state of archaeological knowledge as it
pertain to both the Forest and those areas immediately contiguous to it. The delimitation of these latter areal units has been conditioned by not only their supposed ethnographic/physiographic integrity but also their professional treatment (a consideration that has accrued largely through historical accident). Obviously, given the more than 50 years of relatively intensive archaeological field work in the state, we cannot hope to provide a thorough synthesis -- a problem which has vexed many before us and which is deserving of more careful treatment in other contexts. To those who would wish to pursue this matter at further length, a rather extensive bibliography has been provided within this report.

EAST OF THE CASCADES -- THE COLUMBIA PLATEAU

As has already been intimated in the previous introductory remarks, much of the archaeological work conducted in the state has been concentrated in that area lying east of the Cascades in what is commonly referred to as the Columbia Plateau. Indeed, so skewed has been the distribution of archaeological investigations that nearly all of the general theoretical constructs proposed to account for the development and distribution of aboriginal culture have only addressed the Plateau. Still further evidence of this lopsided concentration of archaeological knowledge is apparent in even the availability of local cultural chronologies. Thus, while several sequences obtain for various parts of the Plateau, to date there is really only one such tabulation for those areas immediately south or west of the Gifford Pinchot National Forest (Pettigrew 1974). It should be noted in passing, however, that efforts are currently under way to remedy this rather untenable situation.

Given the biased nature of areal coverage just noted, an attempt will
be made here to summarize the features of some of the more salient models that have been proposed for the Plateau. Due to the constraints of space and applicability, little attempt will be made to either critique these constructs or offer anything in the way of a re-synthesis.

In spite of the fact that there has been a prolific array of particular developmental schemes purporting to describe the development of aboriginal Plateau culture, to a large extent the diversity of views can be subsumed within two basic themes, and the various permutative syntheses of them. On the one hand stands Daugherty's (1962) integrative concept of the "Intermontane Western Tradition," while on the other stands Swanson's (1962a) formulation with its attendant variations (Butler 1961, 1962a, 1965a; Cressman 1960, Sanger 1967; Shiner 1961; Rice 1967; Nelson 1969; and Warren 1968).

As a theoretical framework, Daugherty's Intermontane Western Tradition is allied closely to Jennings' (1957) "Desert Culture" construct and actually subsumes that concept within it. Proposed to account for what he sees as broad developmental similarities throughout the intermontane province (an area bounded by the Rockies on the east, the Sierras and Cascades on the west, southern British Columbia on the north, and northern Mexico on the south), Daugherty's sequence is tied closely to supposed changing environmental and economic conditions from the early and postglacial period to the ethnographic present. Within these spatial/temporal boundaries he recognizes five successive periods (see Fig. 4) which reflect the following integrative assumptions (Daugherty 1962:144):

(1) The intermontane area was characterized by diversified economies which are not strongly oriented to big-game hunting, except locally.
(2) There was a strong similarity throughout the Intermontane West in artifact traditions, in the specific types of artifacts within the traditions, and in other cultural practices.

(3) There existed a strong cultural stability with slow, gradual change involving principally the accretion of new elements with little loss or replacement of the old.

Taking his own research along the lower Snake River as the point of departure, Daugherty then traces the developmental characteristics of certain specific traits of the northern aspect of this tradition from its earliest manifestations, through the emergence of what he terms "the Northwest Riverine Area Tradition," to the period of Euro-American contact. In Daugherty's scheme, those features which constitute the ethnographic Plateau culture pattern began to appear at the end of his Transitional Period (ca. 2500 B.C.). The Developmental Period (2500 B.C. to A.D. 0) witnessed regional economic specialization in response to the onset of milder, climatic conditions and the attendant enhancement of available plant and animal resources. Concurrently, traits characterizing the Northwest Riverine Area Tradition, the nuclear ethnographic pattern, were established, and by the onset of the Late Period appear in fully developed form.

Before proceeding any further, it should be noted that Plateau archaeologists in general and Daugherty in particular have often been criticized for their rather broad-brush areal interpretations in the absence of any firm evidence to support their contentions (cf. Jennings 1964:163; Warren 1967:181). While it is not suggested here that no evidence obtains to lend credence to Daugherty's hypothesis, we do agree with Rice (1967:7) that since the whole of the Intermontane Western Tradition is based on excavations from
sites along the lower Snake River, perhaps the utility of this particular construct may be more parochial than originally suggested.

As an alternative model to Daugherty's Intermontane Western Tradition, Swanson (1962a) has proposed a sequence which he describes as *The Emergence of Plateau Culture*. This particular model takes as its point of departure the supposed ethnographic Plateau pattern as defined by Ray (1939). Using archaeological materials from the Vantage region, Swanson applies the "direct historical approach" in an attempt to establish the fundamental continuity between the ethnographic present and the archaeological past. As a consequence of the hypothesized continuity and its attendant archaeological material manifestations, he can then address the problems concerning the antiquity of the Plateau pattern and the specific factors surrounding its origin.

In Swanson's opinion it was a re-organization of the older elements of Plateau culture, not a change in actual formal content, that characterized the emergence of the ethnographic pattern. These basal elements derived from what he termed a "forest-hunting culture" which occupied the eastern and western foothills of the Cascade Range; this culture was also hypothesized as being the basis for the ethnographic pattern of the Northwest Coast as well. The particular local manifestation of this forest-hunting culture in the Vantage area is known as the Frenchman Springs Phase (see Swanson 1958:169-170, 1962a:83 for particular identifying features). Believed to have been established no later than 1500 B.C., Swanson sees this unit as developmental to a Plateau culture which appears along the eastern flanks of the Cascades in response to improved climatic conditions. Swanson further suggests that this new structure, known archaeologically as the
Cayuse Phase, appeared first in the northern plateau and diffused southward, reaching the Vantage area by about A.D. 1300.

The Cayuse Phase is characterized by several diagnostic features. These include the spread of semi-permanent pit house communities onto the Columbia River floodplain, the sudden appearance of trade in marine shells, a general decline in lithic manufacturing techniques, the appearance of circular rock pits, an improvement in the manufacture of twines for basketry, and the replacement of burins by gravers. Importantly, these characteristics and their associated contextual relationships are seen by Swanson, at least, as constituting the essence of the ethnographic Plateau pattern.

Nelson (1969), using Swanson (1962a) as his point of departure, examines in considerably more detail the evidence for the Cayuse Phase and its concommitant distribution within the Columbia Plateau. Those distinguishing characteristics suggested by Swanson are further elaborated and made much more explicit by Nelson (1969:37-47). In general these include functionally interrelated "site complexes," structural remains (i.e., concentrations of semi-permanent house pits), increased site size, topographically restricted site settings, increased population, coastal trade, and increased fishing. In spite of the fact that Nelson accepts Swanson's general model, he nonetheless rejects the latter's date of A.D. 1300 for the appearance of the ethnographic Plateau pattern. Instead, on the basis of more than 15 radiocarbon determinations from Cayuse Phase components, Nelson feels that the phase appears sometime between 100 B.C. and A.D. 100 throughout most of the Plateau. Interestingly, this placement accords well with Daugherty's estimate for the appearance of a fully developed riverine area tradition.
Actually the temporal discrepancy between Nelson and Swanson is not the least surprising in view of the fact that Swanson extrapolated his date from exceedingly flimsy evidence (Swanson 1956:210-211). Indeed, Swanson himself actually clarifies his earlier position and states that the ethnographic pattern derived from elements (e.g., pit houses) that were present much more than 1,000 years before A.D. 1200-1300 (Swanson 1970:495).

Finally, before proceeding forward with an explication of certain other frameworks proposed for the Plateau, it should be noted that Nelson postulated the existence of another cultural phase between Frenchman Springs and Cayuse. Termed the Quilomene Bar Phase (see Fig. 4), this unit is thought to be transitional between the former two and is characterized by an adaptation to the Columbia River floodplain.

A further variation on the Swanson-Nelson scheme has been proposed by Rice (1967). After a fairly thorough review of the then extant models, Rice perceptively notes that there is no consensus of opinion concerning the emergence of the Plateau ethnographic pattern:

In part, these differences stem from the various formal materials encountered; to some extent these may be due to different geographic perspectives and the tendency to generalize from one's own areal experience to some larger areal interpretation (Rice 1967:14).

Having recognized the inherent problems with most, if not all, of the existing constructs, Rice proceeds to offer his own alternative model, or "re-synthesis," for the emergence of Plateau culture. The model is grounded in an ecological approach and incorporates two primary working assumptions (Rice 1967:22):

1. The Plateau is a distinctive natural area possessing a wide range of microenvironments suitable for hunting and gathering; and
(2) Climatic changes have had the effect of producing contracting and expanding series of concentric rings generating upward and downward migrations of ecological microenvironments.

While not concerning ourselves here with the details of Rice's model, its general features are nonetheless instructive. Like Swanson (1962:83), Rice suggests that a forest-hunting culture was established along the foothills and valleys on both sides of the Cascades as well as throughout the foothill regions of the Okanogan Highlands, the western slopes of the Rockies, and the Blue Mountains by at least 1500 B.C. In the western Plateau this unit manifests itself in the Frenchman Springs Phase characterized by burins, blades, edge-ground cobbles, contracting-stemmed projectile points, isolated pit houses, etc. While having the aforementioned wide-spread distribution and certain local, concommitant cultural/stylistic variations, Rice sees one common integrating factor:

a specialized economy based in large part upon root crops such as camas, kouse, and bitter root (Rice 1967:25).

Indeed, he sees this as the initial factor in the emergence of Plateau culture. Although Rice notes that such presumed root processing implements as edge-ground cobbles are found in the foothills perhaps as early as 6000 B.C., he sees this as evidence of an "incipient," rather than a "highly specialized" adaptation; the critical difference being the development of special preservation and storage techniques.

Increased fishing and the introduction of new fishing implements are tied to the appearance of the ethnographic pattern. Rice, following Nelson, notes the comparative lack of fish remains in pre-Cayuse components, with the exception of The Dalles (Cressman 1960). During the Cayuse Phase fish is found to be quite common. Again, as in the case of
root gathering, Rice feels that in part the increased emphasis on fish
during the Cayuse Phase is attributable to the development of preservation
and storage techniques.

Insofar as developments in settlement pattern systems are concerned,
Rice sees three particular kinds of systems involved. Prior to the Frenchman
Springs Phase there is little to suggest any kind of stable settlement
pattern for the Plateau as a whole. Thus Rice characterizes the system as
a "restricted-based wandering community pattern" (cf. Beardsley et al. 1956).
With the appearance of Frenchman Springs and its attendant improvements in
food processing, Rice hypothesizes the presence of isolated semi-permanent
pit house settlements in the foothill areas close to springs or along
tributary streams to the Columbia. This pattern he terms an "incipient
central-based wandering" system. During the intervening transition
(Quilomene Bar?) to the Cayuse Phase these semi-permanent settlements
became larger and moved down the canyons of tributary streams onto the
floodplains of the Columbia and its tributaries. Finally, the Cayuse Phase
(ca. 100 B.C.) marks the full emergence of the winter village pattern,
i.e., like Nelson, Rice sees the pit house as an essential "boreal" trait
which diffused south from the Northern Plateau. Likewise the Cayuse pattern
itself is hypothesized as having diffused south and eastward along the
western and southern margins of the Columbia Plateau: a movement that may
be related to the hypothesized expansion of Salishan-speaking peoples into
the interior (cf. Elmendorf 1965).

Yet another hypothesized integrative construct is the Old Cordilleran
Culture concept proposed by Butler (1961, 1962a, 1965a). Limited somewhat
more temporally than those we have considered so far (but not areally),
this concept is in some ways similar in form to Daugherty's Intermontane Western Area Tradition in that both are viewed as emerging in separate areas and having a distinctive character/identity throughout their histories. Butler sees the Old Cordilleran culture as arriving in the Northwest no more than 12,000 years ago; its oldest manifestations occuring along the Pacific Cordilleran at or near major fall lines draining into the Pacific. Thence, between 9,000 - 7,000 years ago it spread eastward across the Columbia Plateau to the northern Rockies, while between 8,000 - 7,000 years ago it moved west into the Puget Littoral. In those areas of the Columbia Plateau near the Great Basin, the basic pattern was modified by influences from adjacent Desert culture and/or Bitterroot culture (eastern Idaho) manifestations. These influences coincide with the period of xerothermic maximum and the deposition of Mt. Mazama ash (ca. 6600 B.P.). Elsewhere the basic Old Cordilleran culture pattern continued unchanged until after the altithermal (ca. 4500 B.P.)

Materially, the Old Cordilleran culture is characterized by a locally distinctive projectile point type known as the Cascade point (cf. Butler 1961 for a description). Additionally, Old Cordilleran assemblages also contain blade tools, oval knives, edge-ground cobbles, beveled antler wedges, and a variety of non-distinctive cutting, chopping, and scraping implements. Economically, the pattern is characterized by the hunting of deer, elk, antelope, and mountain sheep; the snaring or trapping of birds; the collecting and processing of roots such as camas and kouse; fishing; and the collecting of fresh-water mussels and land snails (Butler 1965a).

Daugherty (1962) questions whether or not the Old Cordilleran culture ever existed, and, if so, whether it should be called a "culture."
He notes that its defining characteristics are so general and its supposed
distribution so widespread that perhaps it should be termed a "tradition"
as well as being more restricted in distribution, specifically to the
Cordilleran region (and not the Intermontane) of the Pacific Northwest
from Oregon to southern British Columbia. Indeed, Daugherty goes so far as
to consider the Old Cordilleran culture as an area co-tradition with his
developing Northwest Riverine Area tradition; in the process he renames the
unit the "Northwest Cordilleran Area Tradition." While Daugherty feels
that the two "traditions" may be related, he cannot hypothesize specific
interactions for lack of sufficient evidence. However, in summarizing his
position on the matter Daugherty remarks:

In the Intermontane Columbia Plateau area was established the
northern aspect of the Intermontane Western tradition, the
developing Northwest Riverine Area tradition. In the foothills
of the Cascades, particularly on the western side, a more con­
servative tradition was established which ultimately provided
the basis for the water-oriented cultures of Puget Sound,
southwest Washington, and parts of the Oregon coast
(Daugherty 1962:149).

Butler (1965a), operating from a somewhat similar theoretical stance
as Swanson (1962a) is more concerned with the identification of early cultural
manifestations than he is with developing areal traditions. Consequently he
considers his proposed Old Cordilleran culture to be in clear opposition to
Daugherty's construct. Butler identifies three and possibly four distinct
cultures (one of these happens to be his Old Cordilleran) which developed in
separate areas and subsequently coalesced to provide the nuclei for the
various ethnographic patterns of the Plateau and adjacent regions of the
Northwest. This is indeed in opposition to Daugherty's (1962) contention
that Plateau culture emerged from a base held in common with the Desert
Culture and which developed through the gradual accretion of new elements from adjacent areas and internal stylistic change.

Yet another general developmental construct for the Plateau has been offered by Warren (1968). This particular model (see Fig. 4) is somewhat unusual in that the base data derives from a site that is not situated on the Columbia-Snake floodplains: the Wenas Creek site, located at the confluence of Wenas Creek and the Yakima River. Using the basic developmental continuum seen at Wenas Creek, Warren sets about the construction of his sequence of cultural "patterns" by incorporating his data into the general morass of previous work by other researchers. Given the general similarities between this model and those which have been previously discussed, we will confine ourselves here to a description of only the Wenas Creek site sequence as it may have some bearing on the Gifford Pinchot Forest situation.

Within the Wenas Creek site, Warren distinguishes two major cultural units (Selah Springs and Wenas Creek phases) which are each further subdivided into two assemblages. While a very few artifacts were found beneath the above designated units, they were uncharacterizable as to cultural affiliation. In general, the Selah Springs (the earlier of the two) phase is characterized by a variety of medium-sized, stemmed points, a series of flake and blade scrapers, and a general paucity of cobble choppers. The beginning of the Wenas Creek phase is marked by the introduction of a small point tradition as well as a sharp increase in the frequency of cobble choppers. The proposed division between Selah Springs I and II components is based primarily on changes in projectile point styles, including: a decrease in the frequency of rectangular stemmed points, an
increase in tapered stemmed points, and the introduction of narrow bladed, corner-notched, Middle Columbia points. The separation between Wenas Creek I and II is somewhat more problematical. Wenas Creek I is marked by a large variety of artifact types which include those persisting from the Selah Springs phase as well as those innovations mentioned as being characteristic of the Wenas Creek phase. During Wenas Creek II many of the Selah Springs types become extinct and a general conformity develops within the small points.

The basic subsistence orientation exhibited within the various Wenas Creek assemblages seem to have varied but very little during the period of its occupation. During the Selah Springs phase faunal remains indicate that extensive use was made of deer along with minor amounts of beaver, elk, mountain sheep, rodent, bird, and three fish vertebrae. The faunal assemblage remains basically the same during the succeeding Wenas Creek phase except that mountain sheep and beaver are absent and turtle is present. Importantly, mussel is present throughout and is relatively abundant. Given the kind and abundance of species represented, Warren concludes that the Wenas Creek site represents a basic hunting and shellfish gathering economy.

One other general development sequence should be mentioned, if only because of its comparative recentness and the seeming obscurity into which it fell almost from the date of publication. Late in the 1960's and therefore well after the dust had had a chance to settle on many of the previously mentioned models, Browman and Munsell (1969) offered yet another perspective on Plateau prehistory; a perspective based on the vantage point of the central Columbia Plateau. The model and its attendant sequence of cultural periods reflects an amalgamation of various previous views:
This new scheme attempts to combine the concepts of Daugherty and Butler and to also incorporate the new information. Provisionally, seven major periods are distinguished, each with outside influences from different directions yet each with considerable cultural continuity from earlier periods. It is argued that it is too simplistic either to look at the Northwest as a region where only three or four separate cultures evolved independently of each other and then merged /Butler 1965a/, or to look at it as a region in which there was a basic conservative stability with changes determined only by changing environmental conditions /Daugherty 1962/ (Browman and Munsell 1969:249)

Thus, during their seven hypothesized cultural periods(see Fig. 4), Browman and Munsell suggest the "impingement" of sporadic outside influences on a conservative cultural continuity that was maintained throughout the sequence.

As has been indicated, this particular scheme has generated little heat and therefore little light. In part this may be attributed to the fact that the Browman and Munsell model really offered little that was new, but was instead an attempt to accommodate all previous theoretical stances. Plateau archaeologists, skilled in the art of generating competing proposals and waging literary war, were obviously not prepared for mediative efforts.

In a rather novel approach, considering the Plateau archaeologists propensity for constructing all-encompassing generalizations from often very localized data, Leonhardy and Rice (1970) have proposed a culture typology to order the archaeological manifestations occurring along the lower Snake River region of southeastern Washington. In spite of the rather far proximity of the lower Snake to the lower Columbia (and the Gifford Pinchot National Forest), this sequence stands as almost the only currently well-defined system of units, and therefore provides one of the few means for comparative inter-areal studies.
Leonhardy and Rice propose a sequence consisting of six phases based on the results of some 15 years of archaeological research in the lower Snake River region (see Fig. 4). The earliest recognized archaeological manifestation is termed the Windust Phase (10,000 - 6,000 B.C.). The artifact assemblages assigned to this phase include "a variety of closely related projectile point forms with relatively short blades, shoulders of varying prominence, principally straight or contracting stems, and straight or slightly concave bases (Leonhardy and Rice 1970:4; Fig. 2, a-g). Other artifacts include large lanceolate or oval knives, large end scrapers, burins, large scraping planes, cobble choppers, utilized spalls, and bone needles, awls, atlatl spurs, and shafts. Faunal remains include elk, deer, antelope, rabbit, beaver, and mussel. Importantly, there is little if any evidence for fishing or plant processing.

The succeeding Cascade phase (ca. 6,000 - 3,000 B.C.) is named for its "hallmark" artifact, the lanceolate Cascade projectile point (see Leonardy and Rice 1970: Fig. 4, a-d). Other characteristics include large, well-made lanceolate and triangular knives, tabular and keeled end scrapers, large utilized blades, atlatl weights, cobble scrapers, pounding stones, manos, and the edge-ground cobble (the other diagnostic artifact). Though the general faunal assemblage remains much the same, fish (including large salmonids, salmon, and steelhead) remains appear for the first time. Additionally, the presence of manos and edge-ground cobbles suggests the introduction of plant seed utilization. The Cascade phase has been further subdivided into two chronological subphases on the basis of a horizon style marker, the Cold Springs side-notched projectile point (Leonhardy and Rice 1970: Fig. 4, e-f).
Early Cascade lacks the horizon marker, while Late Cascade is characterized by its presence.

The Tucannon phase (ca. 3,000 - 500 B.C.) reflects something of a cultural discontinuity when compared with the preceding Cascade phase material. This is somewhat apparent when one compares the phase assemblages. The Tucannon phase is characterized by two dominant types of projectile points: (1) a short-bladed form having shoulders of varying prominence with a contracting stem; and (2) a variety which is notched low on the sides or at the corners to produce an expanding stem and short barbs. Leonhardy and Rice (1970:11; Fig. 7, a-i) feel the second variety is a "crude version" of a form which, in later phases, is called "Snake River Corner-Notched." Besides projectile points, Tucannon assemblages also include small side scrapers and end scrapers, cobble spalls, numerous scraper-like cobble tools, pounding stones, sinkers, hopper mortar bases, and pestles. Interestingly, there are very few well-formed knives. The faunal assemblage remains much the same except that river mussels seem to become an economically important resource.

The Harder phase represents the next rung in the sequence. Leonhardy and Rice (1970:14) distinguish two subphases based primarily on differences in settlement types and stratigraphy. The earlier subphase (ca. 500 B.C. - A.D. 1,000) is characterized by substantial pit house villages and small, finely made corner-notched and basal-notched point forms associated with the Snake River Corner-Notched type. The assemblages of both subphases include a variety of small end scrapers, lanceolate and pentagonal knives, large cobble scrapers, utilized spalls, pestles, hopper mortar bases, and pestles. The economic pattern is somewhat different than the preceding phase.
In addition to the common deer, elk, and antelope triad, bison is also found. Remains of smaller mammals, including the dog, are abundant. The importance of fish is attested to by the abundant salmonid remains and numerous net sinkers.

The final two cultural units, the Piqunin and Numipu phases, span the period from A.D. 1,300 to the time when the Indians were completely relegated to reservations and thus had effectively ceased to operate as autonomous societies. The earlier, Piqunin phase is at present poorly understood but is represented by many small assemblages characterized by a variety of small, delicately made projectile points in which Columbia Valley Corner-Notched and Wallula Rectangular Stemmed types predominate (Leonhardy and Rice 1970: Fig. 11, a-1). The faunal assemblage is characterized by principally elk, deer, and salmon. The succeeding Numipu phase represents those archaeological manifestations of ethnographic culture after the arrival of the horse (ca. A.D. 1,750). As of 1970, no Numipu phase habitation sites had been excavated. Since this time Leonhardy in particular has directed efforts toward further refinement of the sequence (Leonhardy 1975).

Before proceeding on to a treatment of the archaeology conducted in other areas both within and immediately adjacent to the Gifford Pinchot National Forest, it would seem appropriate to summarize the situation at least as it pertains to the Plateau area. As should be readily apparent, the number of proposed models for aboriginal Plateau cultural development would seem to closely approximate the number of professionals who have worked in the area. While the kind and diversity of constructs offered might appear to defy any attempts at integration, upon closer scrutiny one single, central theme can be isolated: an overriding concern for the formal and
temporal characterization of the so-called "ethnographic Plateau pattern." Most commonly this focus manifests itself in the literature under the general rubric, emergence (cf. Swanson 1962a; Rice 1967; Nelson 1969). Yet, the question remains: to what extent does the supposed "true" ethnographic pattern (cf. Ray 1932) actually correspond to the archaeological manifestation known as the Cayuse phase?

In general, the identification of the ethnographic pattern centers on a particular settlement/subsistence system, which can be divided into two major segments: (1) the winter concentration of families into villages, and (2) the dispersal of this village band into a series of temporary camps during the spring, summer and fall (see Nelson 1973:374-377 for details of this system). The date for this "emergence" of the winter village pattern throughout the Columbia Plateau is taken to be in the 500 years preceding 2,000 B.P.; the pattern diffusing from the northern portion of the Columbia River basin southward along the western flanks of the Columbia Plateau and then eastward along its southern margins (Nelson 1969:47-48).

... the emergence of the winter village pattern and the ethnographically associated economic organization was linked directly with the introduction of more sophisticated fishing techniques which included the construction of weirs designed to pool large numbers of spawning fish (Nelson 1973:382).

Since the recognition of the Cayuse phase, the archaeological manifestation of large pit house villages on the Columbia-Snake River floodplains has been equated with the ethnographic winter village pattern. In point of fact the implicit equations used by researchers are even more simple: pit house villages = winter; camps = non-winter
To the best of our knowledge little, if any, attempt has been made to test these relationships. Indeed, for the most part there has been very little concern for examining even the non-pit house village portions of the prehistoric settlement/subsistence pattern. The one serious, systematic attempt at researching these "hinterland" sites and activities (Dancey 1973) suffered from a lack of sufficient environmental control, an absence of good temporal control, and an insufficient amount of artifactual material for meaningful statistical comparison. Yet, in spite of these difficulties Dancey's study does demonstrate the fact that knowledge about the significant aspects of the archaeological record can only be gained through a program of coordinated research both within and without the major river valley floodplains.

Finally, it must be noted that strict reliance on the known historic ethnographic pattern for the generation of Plateau archaeology's settlement/subsistence models may well lead to the use of inappropriate constructs. In large measure this caveat is tied to one inescapable problem: the ethnographic pattern is one based upon the horse. Nelson has noted that:

The horse was introduced into the Columbia Plateau in approximately A.D. 1750 and instantly revolutionized the transportation system. This in turn rapidly affected the religious, social, and economic aspects of Plateau cultures (Nelson 1973:387).

Given the apparent drastic changes occasioned by the addition of this single Euro-American trait, it is somewhat surprising that most Plateau archaeologists would insist on seeing continuity between the archaeological past and the ethnographic "present." It would be our hope that researchers would investigate the prehistoric record on its own terms; a focal reorientation that should result in testable developmental constructs that can then be compared to the ethnographic record.
Fig. 4. Proposed cultural sequences for the Columbia Plateau.
SOUTH OF THE CASCADES — THE LOWER COLUMBIA RIVER

While professional interest in the Lower Columbia River (that portion of the Columbia below The Dalles) has almost as long a history as that for the Columbia Plateau, neither the scope nor intensity of research is really comparable. Two factors would seem to be operative here: (1) the relative lack of large-scale hydroelectric projects on this stretch of the river; and (2) the historic preoccupation of the region's academic institutions with Plateau archaeology (this in itself probably engendered by the availability of substantial research funds tied to the many Plateau-situated reservoir projects). Fortunately, this long-standing dichotomy is now beginning to be brought into balance. The University of Washington is currently engaged in a long term archaeological research program prompted by various federal public works projects along the Lower Columbia (cf. Dunnell et. al. 1973; Dunnell and Lewarch 1974a, 1974b). Hopefully these efforts will eventually lead to a comprehensive areal chronology as well as a useful dynamic settlement/subsistence pattern model.

In the absence of any good developmental sequences for the Lower Columbia area, we will have to concern ourselves here with a brief historical sketch of the admittedly unsystematic accretion of current archaeological understanding. As will become apparent in this exercise, specific knowledge of or relations to the Gifford Pinchot National Forest is sorely lacking.

One of the first organized professional archaeological interests in the Lower Columbia region dates to 1934 and Herbert Krieger's reconnaissance of the Bonneville Dam Reservoir for the U.S. National Museum. Although Krieger located and excavated a series of sites lying upriver from the present
dam site, he failed to publish the results of any of this work, except for a brief note in the *Annual Report* of the Smithsonian Institution for 1935. More recently, George E. Phebus of the Smithsonian Institution has attempted to evaluate the materials collected by Krieger. Hampered by an absence of both site location maps and excavation plans, Phebus had to conduct his own reconnaissance and testing of the area during the late 1950's. His subsequent analysis of these data has resulted in at least a general temporal framework for the sites included in his sample (Phebus 1974). We will return to a further consideration of the Bonneville area in the context of the more recent researches conducted there.

Other than the Bonneville area, one other section of the Lower Columbia River has received considerable archaeological attention. Beginning with Strong, Schenck, and Steward's (1930) seminal treatment, The Dalles-Deschutes region has probably received more in-depth treatment than any other portion of the lower river. Although remarkably comprehensive for its time, the Strong *et al.* effort lacked the modern necessities of radiocarbon age determinations and clear research orientation. Thus the era of modern archaeological knowledge had to wait until the 1950's and the salvage program prompted by the construction of The Dalles Dam; the University of Oregon undertaking work on the Oregon side, and the University of Washington on the Washington side of the Columbia River. The results of the research conducted by both institutions demonstrated a long, continuous, intensive aboriginal utilization of the area. Cressman, in particular, was able to characterize nearly 10,000 years of occupation in The Dalles using samples recovered from his excavations at 35-WS-1 and 35-WS-8 (see Cressman 1960:58-62 for a fuller discussion of the cultural record). Importantly, the cultural stage
designated as *Full Early* (ca. 9500 - 7600 B.P.) includes a high preponderance of fish remains and projectile points of possible Cascade association.

Elsewhere in the Lower Columbia Valley (with the exception of the soon to be considered Bonneville area) archaeological investigations have been characteristically of limited scope associated with smaller-scale professional salvage efforts and the work of amateurs. Most of this work has been fortuitously concentrated in the Vancouver Lake-Lake River area just west of present-day Vancouver, Washington. The earliest work in that area derives from two gas pipeline surveys conducted during the 1950's (Warren and Eng 1955; Warren 1959; Touhy and Bryan 1959). More recent surveys have been conducted by various individuals in response to proposed public works projects (Hibbs and Ross 1972; Munsell 1973; Dunnell, Chatters, and Salo 1973). These various efforts have clearly demonstrated the intensity of prehistoric aboriginal utilization in this somewhat limited geographic area.

The work of Dunnell *et al.* (1973) is of particular importance. Disregarding the problems associated with limited sample sizes, this report nonetheless took the first substantive steps towards providing a reasoned subsistence/settlement pattern model for the Lower Columbia. Using data compiled during their own survey as well as that accumulated by various other amateurs and professionals, they were able to identify four basic types of functional-settlement loci which occurred on the Lower Columbia floodplain (Dunnell, Chatters, and Salo 1973:51-57). Additionally, these units were also hypothesized as being constituent elements of an integrated settlement pattern which made use of various floodplain and upland environments (1973:Fig.13). While this model has yet to be subjected to
close empirical testing, accumulating evidence from several excavated sites in the area would seem to at least corroborate its general features.

During the middle and late 1960's, the Oregon Archaeological Society undertook excavations at a number of sites in the Vancouver Lake and Sauvie's Island area (cf. Hoffarber 1969a, 1969b; Jones 1972; Matsen 1966; Rose 1965; Slocum and Matsen 1968; Strong and Galbraith 1955; Wiedemann 1965). With but a single exception, however, these efforts have been directed towards the obvious, large, and relatively late domestic sites exhibiting pit houses. While professional archaeological excavations have been relatively few in number, their findings have added substantially to our understanding. In 1971 and again in 1972, the University of Washington conducted salvage excavations for the Washington State Department of Highways at the Kersting site (45-CL-21). In addition to an incredibly rich and varied artifact inventory, the project located the remains of two, and possibly three, rectangular house structures with an associated radiocarbon age of 2,115±110 years B.P. (Valley 1972; Jermann, Lewarch, and Campbell 1975). Because of the close resemblance between these structures and those of nearby late "winter domestic" sites, Dunnell et al. (1973:6) see this as evidence of a measure of some cultural stability in the use of the area.

While the greatest concentration of archaeological research has been along the floodplain (a situation paralleling that noted for the Plateau), at least one upland site has been investigated to date. In 1972, the University of Washington conducted highways-related salvage excavations at the Schultz Marsh site (45-CL-29). Located near a marsh on an upland former terrace of the Columbia River, materials from this site indicated a time depth similar to that of the Kersting site. Importantly, however,
a functional analysis of the tools demonstrated a rather different activity focus -- a seasonal (probably late fall/spring) camp associated with both hunting and plant food collecting and processing (Chatters 1973:8). Again, these results are directly in keeping with the hypothesized settlement pattern model.

As has been mentioned previously, coherent cultural sequences are few and far between once one ventures outside the Columbia Plateau. Other than Cressman's (1960) sequence for The Dalles-Deschutes area, there is little to choose from for the remainder of the Columbia River's course. Up until quite recently the sole synthesis for the Lower Columbia valley had been proposed by an amateur. Emory Strong (1959), pulling together the incredible wealth of information he had amassed during his years of work in the area, proposed an areal chronology (Historic - Late Prehistoric - Early Periods) linked to the presence of trade goods and changing projectile point styles. While obviously simplistic, this sequence nonetheless provided an organizing device for future efforts. With the rekindled professional interest in the area has come at least a first attempt at a more refined sequence. Using the results of his own work on Sauvie's Island as well as much of the research already mentioned, Pettigrew (1975) proposed a developmental sequence for Lower Columbia River prehistory that is divided into five periods defined on the basis of broad technological, stylistic, and functional classes (see Fig. 5). While it is not presently known to what extent this sequence is applicable outside the immediate Sauvie's Island - Vancouver Lake area, the model will continue to be of importance if only because it is the only one we have.
Somewhat east of the immediate Vancouver - Portland area, the Oregon Archaeological Society has initiated reconnaissance and excavation efforts on Lady Island, near Camas, Washington. Based on a survey conducted in 1974, five sites were located in rather close proximity to one another (Hibbs and Starkey 1974). Subsequent excavations by the Society under the auspices of the Crown Zellerbach Corporation during the summer of 1975 have revealed the presence of a house structure very similar in form and content to those noted at the Kersting Site (Chuck Hibbs, personal communication). Eventually it is hoped that those efforts will result in the more precise characterization of the Lower Columbia settlement/subsistence pattern.

The proposed construction of a second powerhouse at Bonneville Dam has renewed professional archaeological interest in this portion of the Lower Columbia Valley. An initial reconnaissance survey during the summer of 1974 recorded several prehistoric and historic aboriginal and Euro-American sites within the immediate primary impact area (Dunnell and Lewarch 1974a). Based upon mitigative recommendations stemming from the survey, salvage excavations were initiated at two sites, 45-SA-5 and 45-SA-12, during the summer of 1975. While comprehensive reports detailing the results of both projects are anticipated in the near future, it is perhaps more important here to simply note the important fact that this portion of the lower Columbia valley is finally receiving systematic professional treatment. Because it is presently anticipated that several more years of intensive research will be involved, it is hoped that sometime in the not too distant future we will have available a comprehensive chronological sequence that will provide a needed baseline for any related studies in the Gifford Pinchot National Forest.
<table>
<thead>
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<th>Period</th>
<th>Date</th>
<th>Diagnostic Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>8,000-3,000 B.C.</td>
<td>Unifacially flaked cobbles&lt;br&gt;Large cobble celts (hand hammer-adzes)&lt;br&gt;Large and medium sized leaf-shaped points</td>
</tr>
<tr>
<td>II</td>
<td>3,000-1,000 B.C.</td>
<td>Not represented by any data</td>
</tr>
<tr>
<td>III</td>
<td>1,000 B.C.-A.D. 500</td>
<td>Perforated ground stone pendants&lt;br&gt;Peripherally unifacially flaked pebbles&lt;br&gt;Atlatl weights&lt;br&gt;Medium sized broad-necked points</td>
</tr>
<tr>
<td>IV</td>
<td>A.D. 500-1250</td>
<td>Elaboration of Lower Columbia art style in bone and stone sculpture&lt;br&gt;Use of clay for manufacturing beads, pipes, and anthropomorphic figures&lt;br&gt;Narrow-necked corner-notched points</td>
</tr>
<tr>
<td>V</td>
<td>A.D. 1250-1835</td>
<td>Point type frequencies change&lt;br&gt;Trade goods in 18th century&lt;br&gt;Small side-notched points appear during this time</td>
</tr>
</tbody>
</table>

Fig. 5. Summary of Pettigrew's (1975) proposed cultural periods for the Lower Columbia Valley
WEST OF THE CASCADES -- THE SOUTHERN PUGET LOWLAND

If the Lower Columbia is considered to be somewhat deficient in archaeological understanding, then the area immediately west of the Gifford Pinchot Forest is for all practical purposes an archaeological vacuum. Very little professional interest in the area has been generated to date, and this will be evident in the present discussion.

The first professional work in this area dates to the early 1950's and the reconnaissance survey associated with the Yale Dam on the upper Lewis River (Bryan 1955). Bryan was able to locate six sites, including: four very small campsites, one isolated semi-subterranean pit house, and a single burial cairn. Based on a very limited artifact inventory which included nine projectile points, Bryan felt the data indicated that a Plateau group once occupied the area.

A little over a decade later, yet another reservoir project provided an impetus for renewed interest in the western flanks of the Cascades. Sponsored by the City of Tacoma Department of Public Utilities, the University of Washington conducted an intensive archaeological survey of Mossyrock Reservoir on the Cowlitz River, Lewis County, Washington. As a consequence of this survey, 11 sites were discovered. Interestingly, all of the sites were found on a particular, distinctive topographic situation -- on upland terraces above the present river flood plain (Dancey 1969:2). While salvage excavations at three of these localities failed to reveal any significant depth to the archaeological deposits, the artifacts recovered as a result of intensive surface collecting demonstrated a considerable time depth in the area's occupation. The lack of "permanent" village sites plus the
particular topographic situation of those sites actually found led Dancey to conclude that this area was characterized by a series of hunting and/or fishing stations dating as early as 4,000 - 9,000 B.P. (Dancey 1969:38-42).

Other than the aforementioned areal surveys, research has been limited and sporadic at best. Jeanne Welch, a long-time resident of the Chehalis area, has spent the past several years conducting an independent archaeological survey of the Chehalis River valley. Though hampered by a lack of supporting funds, her efforts have resulted in the location and characterization of many previously unknown sites (Welch n.d.). While this research is still on-going, it should provide a good baseline study from which, hopefully, further professional analysis will proceed.

In 1972 the University of Washington conducted salvage excavations at the Mellen site (45-LE-125) near Centralia, Washington. Funded under a contract with the Washington State Department of Highways, excavations at this locality revealed the presence of a possible Olcott/Cascade phase occupation which elsewhere in the state dates to the period spanning 6,000 - 3,000 B.C. (Kennedy 1973). Unfortunately, the concentration of artifacts on or near the surface did not permit an accurate radiocarbon age determination. Indeed, the only dates on any archaeological sites within a 50-mile radius derive from another highway salvage excavation conducted by the University of Washington in 1974. The Hamilton site (45-LE-172) is situated along an abandoned terrace of the Newaukum River near Napavine, Washington. Again, excavations indicated that this site was essentially a surface manifestation. Fortunately, however, the presence of fire hearths permitted the removal of several good charcoal samples for dating. The resulting radiocarbon age determinations indicated an occupation spanning the period 1,800 - 2,350 B.P.
A report of the excavation and subsequent analysis is anticipated in the near future and should provide yet another point on a baseline for much-needed further research.

While there are no current syntheses for this entire area, the various investigations to date have effectively demonstrated the fact that the area is of crucial importance to any coherent understanding of Northwest prehistory, and even more so for any adequate characterization of prehistoric aboriginal utilization of the Gifford Pinchot National Forest.

IN THE CASCADES -- THE GIFFORD PINCHOT NATIONAL FOREST

Professional archaeological investigation within the administrative boundaries of the Gifford Pinchot National Forest have been relatively few in number and recent in origin. Thus any attempt at providing an overall synthesis of forest-situated prehistory is just not possible at this juncture. We can, however, indicate the extent of information as it is presently known and perhaps offer certain general comments about what could be gained by future investigation.

The first report of any note was Rice's (1964a) study of aboriginal utilization of the southern Cascades. While primarily concerned with synthesizing the extant historical documentation, Rice nonetheless supplemented the record with brief notes concerning his own personal reconnaissance of the area, particularly his investigations in the Upper Cowlitz River drainage. Importantly, he noted the pattern of archaeological remains along the Cowlitz followed the ridges and hillsides, as did many of the aboriginal trails (Rice 1964a:8). Additionally, three camp site locations were mentioned.
In a subsequent, more comprehensive treatment of the same general subject, Rice (1969) details the results of his personal reconnaissance and testing within an area ranging from Naches Pass in the central Cascades to Mount Adams in the south central Cascades, from the Kittitas and Yakima valleys in the east to the Cowlitz and Cispus valleys in the west. Though the entire area was not covered intensively or even systematically, Rice's efforts nonetheless provide the first reasoned evaluation of prehistoric cultural resources for the immediate Gifford Pinchot Forest area. In all, some 22 archaeological sites were recorded, almost all of which lie outside the Forest's boundaries. In addition, the private artifact collections from several local residents were also recorded and analyzed.

Reconnaissance efforts in the western portion of the Forest have been somewhat less rewarding. Surveys conducted on two large parcels of lands slated for exchange into private hands failed to locate any significant prehistoric cultural remains (Kennedy and Jermann 1975; Lewarch, Reynolds, and Jermann 1975). The former did, however, note an abandoned miner's cabin which had been unknown previously. Given the nature of the rough terrain and dense vegetation in this portion of the forest it is not at all surprising that these areas probably saw little aboriginal habitation.

As must be evident from the rather brief narrative offered above, our present knowledge about prehistoric habitation and/or utilization of the Forest is really only sufficient to stir the imagination. Indirectly, there is much evidence to suggest that certain portions of the Forest may have contained several resources important in native economic systems (see discussion of ethnographic relations). Additionally, there were several historic trails through the region which provided for intertribal trade and
social interaction. Vestiges of both sites and trails undoubtedly still remain, waiting to be discovered either through archaeological research or, perhaps, the land-use practices of modern forest management.
PART 2

CULTURAL RESOURCE INVENTORY
In the preceding part of this report an effort was made to provide the reader with a summarization of the nature of past habitation and use within that area now administratively recognized as the Gifford Pinchot National Forest. As should have been clear from that recitation, the Forest has witnessed a considerable diversity of use from various resident populations, both aboriginal and Euro-American. Because of this attendant diversity, it would be reasonable to expect that any tangible evidence of past human presence would also vary considerably. Thus, while we perhaps might not anticipate ever finding evidence of aboriginal berry-picking, we could expect to find remains of their campsites under proper circumstances. The important point to be made here, however, is that such remains are a finite, non-renewable resource; a resource that can and indeed must be properly managed for the use and enjoyment of generations of forest-users to come.

As at least a first step towards proposing and then implementing an effective program of cultural resource management (a program that will be detailed in the next part of this report), it is necessary to elucidate the nature of the extant cultural record. Putting this somewhat more simply, one cannot hope to conserve or manage a resource until you know what the resource is and where it occurs. Though on the surface this requirement might seem easily obtainable, in the case of cultural resources the matter becomes quite complex. As indicated previously, the varied nature of human use of an area is manifest in an equally varied array of potential material remains. At the same time, however, the forces of inorganic and organic decay differentially interpose themselves on this record. The result is that we are left with an unspecified, and perhaps unspecifiable, portion of an unknown resource base. How then, can we every hope to conserve or manage such an unknown quantity?
Though admittedly incomplete, our knowledge of the general nature of past human use should provide sufficient parameters for management guidelines. In the present instance the documentary record contains considerable information about the kinds and locations of past human activity within the Forest. This information can be used to compile a cultural resource inventory of known activity loci, which can then be used as a baseline for administrative decisions and future land use planning.

Having recognized the need for an inventory of cultural resources contained within the Gifford Pinchot National Forest, the present section of this report is directed toward enumerating such a data base. For reasons of organization and intensity of documentary coverage, the entirety of the cultural record has been divided into a number of sub-categories. These include the following: (1) historic Euro-American sites, (2) historic aboriginal sites, (3) pre-historic aboriginal sites and (4) miscellaneous aboriginal and Euro-American sites. Within each of these categories an attempt has been made to identify and locate as many sites as possible within the confines of documentary research. Because the research effort was wholly limited to archival sources, no attempt was made to verify the actual presence or absence of material remains at each inventoried locality. However, the need for such an in-field evaluation is obvious and will be addressed in a subsequent part of this report.

Before proceeding with a presentation of the inventory, it would perhaps be worthwhile to characterize both the manner of its organization and the inherent biases in its compilation. This commentary is in addition to those points that have been previously mentioned. First, for the sake of organizational economy and future use by Forest land use planners, the inventory is
offered in tabular form according to each previously identified sub-category. Within any given table site locations are further sub-divided by the various Gifford Pinchot Forest planning units, and appropriate locational and descriptive data enumerated for each site. In addition, a series of maps, showing the spatial locations of inventoried sites in relation to their particular planning unit association, is presented as an additional aid in future land-use planning. Finally, it should be noted that this inventory is by no means exhaustive. The intent here is to demonstrate that the Forest has a significant number of known cultural resources. At the same time, however, the inventory should also make clear the significant biases in our level of current understanding. This should be particularly apparent when contrasting the number of historic Euro-American sites with the number of prehistoric aboriginal sites. In spite of the fact that aboriginal peoples may have utilized the forest for several hundred, if not several thousand, years we currently have only the faintest notions of the nature and locations of their activities. The resolution of this dichotomous coverage is a matter that will also be taken under consideration in a subsequent part of this report.

HISTORIC EURO-AMERICAN SITES

The historic Euro-American presence in the Forest is materially characterized by the occurrence of such structural remains as houses, cabins, bridges, lookouts, Forest Service guard stations, and the like. The information compiled in Table 3 and displayed in Figs. 8-19 was gleaned from two principal sources. First, the locations of early settler's and miner's structures are noted on various territorial and state land survey maps plotted between 1870 and 1930. However, information derived from this source
has one principal drawback. That is, those structures either built after the completion of a township's survey or built and destroyed before such a survey would necessarily be left out of this inventory. Fortunately, most of the settlement of this area was within those major river valleys (e.g. the Cowlitz, Cispus, White Salmon, etc.) that are presently excluded from the Forest. Therefore, it is felt that the present historic structure inventory represents a fairly good sample of all actual locations. In an effort to further illuminate the potential bias, we have included a table which indicates the date when each township was officially surveyed (See Table 2). The cautious user can therefore take each survey date as a baseline for further interpretation.

The second major source of inventoried information derives from the internal records and files of the Forest itself (S-HI-C n.d.). Obviously, this information was primarily concerned with the nature and date of Forest Service activities. However, Forest Service structures such as lookouts and guard stations are as much a part of the area's cultural heritage as is any settler's cabin or aboriginal village. Unfortunately, the extent of coverage was decidedly non-uniform. Much more extant information was available for the Packwood and Randle Districts and our inventory correspondingly reflects this bias. For the present purposes, however, such differences in coverage are perhaps of less consequence than those that attend the soon to be considered aboriginal sites. The extent of Forest Service construction within the Forest is a finite and knowable matter. With little additional effort the locations and construction dates of such structures could be compiled as needed by relevant Forest Service personnel.
# Table 2. Early Surveying Dates for Townships Included Within the Gifford Pinchot National Forest.

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<th>Township</th>
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* indicates lack of early survey information
Table 3. Inventory of Historic Euro-American Cultural Sites located Within the Gifford Pinchot National Forest.

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<th>Location</th>
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<td></td>
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<td></td>
<td>4</td>
<td>House</td>
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<td>5</td>
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<td>6</td>
<td>F. Mehl House</td>
<td>2 9N 6E</td>
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<td></td>
<td>7</td>
<td>Cabin of Hidden Treasure Mine</td>
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<td></td>
<td>8</td>
<td>G. Crego House</td>
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<td>11</td>
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HISTORIC ABORIGINAL SITES

Unlike the historic Euro-American presence in the Forest, our knowledge of aboriginal sites represents something less than an adequate sample. As must have been evident in the discussion of the region's ethnographic cultures, the area presently encompassing the Gifford Pinchot National Forest was somewhat marginal to the settlement/subsistence systems of most tribal groupings. Indeed, of the several tribes inhabiting southwestern Washington perhaps only two, the Klickitat and the Upper Cowlitz or Taidnapam, actually inhabited the Forest. Others, such as the Yakima, may have made seasonal forays into or through the area for subsistence or trade.

The scant few historic aboriginal sites listed in our inventory (see Table 5) derive from two principal ethnographic sources, Ray (1936:148-50) and Jacobs (1934). As we know of no other relevant studies, this rather meager sample probably represents the entirety of our present and future ethnographic documentation.

PREHISTORIC ABORIGINAL SITES

As has already been stressed in a previous section of this report, our present knowledge of prehistoric aboriginal sites located within the Forest is severely limited. This is wholly a reflection of the simple fact that only a very few professional archaeological investigations have ever been conducted within the Forest boundaries proper (see Fig. 6). Those sites of which we do have knowledge (see Table 6) are limited to a few localities noted by Rice in his rather cursory examination of this portion of the south central Cascades (Rice 1964, 1969). Indeed, the only substantive artifacts referred to by Rice are in the hands of private individuals; the Klasse
Fig. 6. Locations of major archaeological survey and excavation projects in relation to the Gifford Pinchot National Forest (see Table 4 for key to project locations).
Table 4. Listing of Major Archaeological Surveys and Excavations Conducted in South-Central Washington, (see Fig. 6 for locations).

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Table 5. Inventory of Historic Aboriginal Cultural Sites Located Within the Gifford Pinchot National Forest

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Table 6. Inventory of Prehistoric Aboriginal Cultural Sites Located Within the Gifford Pinchot National Forest.

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collection taken from the now destroyed Packwood Mill site and the Siler collection obtained from a small single component site located near the mouth of the Cispus River (outside the Forest boundary).

MISCELLANEOUS CULTURAL SITES

The admittedly "catch-all" category of miscellaneous cultural sites has been included here to accommodate certain kinds of remains that do not easily conform to the categories just outlined. Specifically, these include prehistoric/historic trails and the Mount St. Helens Mining District.

As was perhaps evident from a previous discussion of Native subsistence/settlement patterns and inter-tribal relationships, the Cascades probably served as one of the principal avenues of travel and trade between the Plateau and the Puget Lowland. However, the Cascades, in general, are not characterized by the most altogether traversable terrain. Therefore, it is not at all surprising that travel was primarily concentrated along certain avenues or trails.

As Rice (1964:5) has noted, "It is reasonable to assume that man first followed game trails in search of food, water, and materials for shelter and clothing." In time, the continued use of such trails was no doubt extended to serve as avenues of trade and communication with other neighboring groups. Ultimately, the appearance of the white presence in the Northwest served to alter the indigenous trading patterns. Today, in many places where Native trails once wound their way through the mountain passes, railroads and highways now run, effectively eliminating any concept of a mountain "barrier" between west and east.

Rice has hypothesized three major periods in the patterning of trails between the time of Lewis and Clark (1805-1806) to about 1880 (Rice 1964:6).
(1) The Period of Chinook and Klickitat Traders (1305 - 1325)

This period was characterized by widespread trade on the Columbia and occasional crossings of the Cascades from the interior to the coast. The three principal avenues of trade included the Columbia River from The Dalles to Willapa Bay, the interior to Puget Sound via the Cascade passes (especially the Snoqualmie, Naches and Cowlitz) and southern Puget Sound to the Columbia via the Cowlitz and Chehalis drainages. The pattern of trade during this period was generally westward and downriver (Jacobs 1937:55). The introduction of the horse into the Plateau (ca. 1750) lead to the establishment of horse as well as foot trails; many of the foot trails eventually falling into disuse.

(2) The Period of White Traders (1810 - 1860)

The establishment of the many white forts and trading posts along the Columbia River and Puget Sound led to the replacement of Indian traders by white ones. Importantly, the trail terminals shifted to the new trading centers and pack trails were established to cross the Cascade passes (especially Naches and Snoqualmie). The general flow of trade somewhat followed the older pattern but focused on Fort Vancouver on the Lower Columbia, Fort Nisqually in Puget Sound, and Fort Dalles on the mid-Columbia and Plateau. Aboriginal downriver and western movements continued.

(3) The Period of White Settlement (1860 - 1880)

The growth of Euro-American towns on Puget Sound and along the Columbia necessitated the construction of wagon and military roads, and ultimately, railroads. In many cases these routes followed the older network of trails. The Native populations gradually became acculturated into the white system. Aboriginal trade across the Cascades was greatly curtailed because of the
Indian wars of 1855 - 56 and the westward movement of population was held in check by the creation of reservations.

Against this historical backdrop it is important to again reiterate the point that the southern Cascades have long served as an important link in the trading network between the interior and the coast. And, although Native trails and modern roads may traverse the same general territory, there are some important topographical differences which can be noted. As McClellan has pointed out:

... the Indian trail is a very bad one -- avoiding the valley, and keeping to the mountain-sides, where the ground is very stony; the ascents and descents long and steep -- so much so, that it would not be possible to construct a wagon road along the mountain sides at any reasonable expense ... . It may be well to mention here, once and for all, that the Indian trails in these mountains seldom follow the valleys; they generally keep to the higher ground, where the woods are less dense; for the Indian prefers riding over the mountain, to the labor of cutting a trail over more level ground. In other words, he has more consideration for himself than for his horse (1855:191-192).

While it will probably never be possible to know the locations of all the early trails that ran through the Forest, there were certain very important routes of which we do have some knowledge (see Fig. 7). One of these has particular historical significance. Portions of the Klickitat Trail (an important trading route between the interior and Fort Vancouver) were also used by George B. McClellan in his exploratory expedition between Fort Vancouver and Fort Simcoe.

The final category of cultural resource considered in this section are the mining activities associated with the St. Helens Mining District. This particular period is somewhat problematic in that during the relatively short period of its existence (ca. 1892-1911) several hundred mining claims were filed within a very limited geographic area. The major difficulty
Fig. 7. Location of major aboriginal trails in relation to the Gifford Pinchot National Forest (1=Klickitat Trail and McClellan's route; 2=Yakima Trail).
insofar as our purpose is concerned is that there is very little information pertaining to specific activities and improvements that occurred on each claim. Therefore, for reasons of economy we will only provide a listing of the claims filed (Table 7) and their individual locations (see Fig. 20). In passing, we should emphasize the fact that the St. Helens Mining District and the activities surrounding it represents an interesting and important chapter in the cultural history of the Forest; one that should be further elucidated and perhaps developed as a "special interest" recreational/historic district.
Table 7. Inventory of Claims Filed Within the St. Helens Mining District, Circa 1910 (See Fig. 20 for a Plat of the Relative Locations).

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Fig. 8. Distribution of inventoried cultural sites in Bear Planning Unit (circles = historic).
Fig. 9. Distribution of inventoried cultural sites in Clear Creek Planning Unit (circles = historic).
Fig. 10. Distribution of inventoried cultural sites in Cowlitz Planning Unit (circles = historic; squares = ethnographic; triangles = archaeological).
Fig. 11. Distribution of inventoried cultural sites in Green River Planning Unit (circles = historic).
Lone Tree

Fig. 12. Distribution of inventoried cultural sites in Lone Tree Planning Unit (circles = historic; squares = ethnographic).
Fig. 13. Distribution of inventoried cultural sites in Panther Planning Unit (circles = historic; squares = ethnographic).
Fig. 14. Distribution of inventoried cultural sites in Spirit Planning Unit (circles = historic).
Fig. 15. Distribution of inventoried cultural sites in Trapper Planning Unit (circles = historic).
Fig. 16. Distribution of inventoried cultural sites in Upper Cispus Planning Unit (circles = historic; squares = ethnographic; triangles = archaeological).
Fig. 17. Distribution of inventoried cultural sites in Upper Lewis River Planning Unit (circles = historic).
Fig. 18. Distribution of inventoried cultural sites in White Salmon Planning Unit (circles = historic; squares = ethnographic).
Yacolt

Fig. 19. Distribution of inventoried cultural sites in Yacolt Planning Unit (circles = historic; squares = ethnographic).
PART 3

CULTURAL RESOURCE MANAGEMENT
PRELIMINARY MANAGEMENT GUIDELINES

Up to this point the report has primarily focused upon an examination of the general nature of past land use within the Gifford Pinchot National Forest as well as a compilation or inventory of localities where material cultural remains of such activities occur. While such documentation should be a necessary ingredient in any future management and planning efforts initiated by those Gifford Pinchot personnel concerned with multiple use in the Forest, both the nature of the resource itself and the various laws and regulations governing it serve to potentially compound the difficulties of implementing clear-cut management strategies. The present section of this report is directed towards providing at least some general guidelines for the adoption of a cultural resource management program suited to the particular circumstances as they obtain within the Gifford Pinchot National Forest.

Like all Federal agencies, the Forest Service is required to inventory, protect and enhance the cultural environment on those lands which it manages. In general, the particular objectives of any cultural resource management program are bounded by an existing body of Federal laws, regulations, and at least one Presidential executive order (see Appendix I for a brief review of these regulations). However, the specific manner in which any particular agency implements these objectives varies within its organizational structure and broader agency mandates.

The Forest Service Manual (2361.05) defines cultural resources as "potential knowledge, in the form of historic and prehistoric products and by products of man, about human cultural systems." Operationally, such material manifestations can be further delimited as "historic, architectural, prehistoric and ethnic objects, structures, sites, and districts." The important point to be made here is that cultural resources are non-renewable;
once disturbed or destroyed, the particular objects, structures, sites, and districts comprising this resource base are gone forever.

Recognizing the non-renewable characteristic of the resource, the concept of cultural resource management is focused on the principle that cultural resources, like other resources, should be conserved. Conservation in this sense requires that planning for the present and future use of the resource should attempt to "maximize in perpetuity the exploitation of a finite resource" (Wildesen 1975:4). This is particularly true of cultural resources. The problems and research interests of professional archaeologists and historians have and will continue to vary greatly. However, changes in research strategies and the data requirements to meet the needs of changing research interests should be accommodated within the conservation ethic. At the same time it must also be realized that any disruption of a cultural resource, even if for legitimate professional research, forever destroys that entity. Thus, an effective program of cultural resource management must attempt to ensure that, "exploitation (present use by scientists or the public) will occur only when all other protection options have been explored, and that this exploitation is in a form of data preservation that conforms to the highest research standards" (Conouts 1975:1). For an agency such as the Forest Service, management then becomes "the process by which the most equitable compromises are effected between progress in the form of land-modification projects and preservation of [an] essential[ly] non-renewable"resource base (Grady 1975:1).

Essentially, then, the management (and) conservation of cultural resources resolves itself into the conscientious evaluation of the potential costs and benefits that may accrue by either making use of a particular
resource now or in the future. Against this admittedly weighty problem, the various Federal laws and regulations also direct the Forest Service to *inventory*, *protect* and *enhance* all cultural resources on National Forest lands. Thus, the management and planning effort, to strike the necessary balance between use and conservation, requires a process of informed decision-making in order to make the best use of money, manpower, time and the resource itself. Perhaps the most appropriate means of illustrating the necessary nodes in the management process is through the presentation of a series of interrelated questions that should be asked by any potential resource manager (adapted from Wildesen 1975:5-6):

(1) **Inventory**
   a. What percentage of the land included within the Forest has been examined for the presence or absence of cultural resources?
   b. What are the highest priority areas? (Which areas should be examined first?) What percentage of the Forest can reasonably be examined in a given unit of time?
   c. Are there ways to reduce time/costs and still get the job done? What resources (time, money, manpower) are available to assist in completing the inventory job?
   d. Which inventoried cultural resources in the Forest are regarded as *significant*? On what basis were these evaluations made?

(2) **Protection**
   a. Which inventoried cultural resources must be protected at all costs? What compromises are practical and prudent to ensure protection while minimizing potential conflicts with other programs or projects?
   b. What measures need be taken to protect a site from vandalism? What are the relative advantages (and disadvantages) of salvaging information now as opposed to preserving the site intact?
   c. Which techniques for mitigating adverse project-related impacts are most appropriate in any given case? How is effectiveness evaluated?
d. What are the qualitative and quantitative tradeoffs associated with conserving inventoried resources?

e. Which alternative protection/mitigation measure will most readily comply with the requirements of the advisory Council on Historic Preservation?

f. What are the most efficient/effective means to ensure compliance with relevant laws and still complete a project without delay? How is this efficacy evaluated?

(3) **Enhancement**

a. What techniques are available for stabilizing, restoring, or maintaining a specific cultural site? What are the potential costs of each? Which is best, and for what reasons?

b. Is a particular site or group of sites amenable to interpretation for the visitor? How may such interpretive efforts best be integrated into the other concerns of the Forest?

c. What kinds of facilities will best interpret the Forest's cultural resources to the visitor?

d. What programs can be developed to encourage relevant non-Federal land owners/users to manage their cultural resources wisely?

As must be painfully clear, the single most important requirement in providing answers to these questions is *information*; a knowledge of the location, nature, extent, and significance of those cultural resources within the Forest's domain. The process of decision-making cannot take place in an informational vacuum.

The present research effort has been directed towards providing a first step in compiling a comprehensive cultural resource inventory of the Gifford Pinchot National Forest. Because this endeavor was purposely restricted to an examination of documentary records rather than an on-the-ground inspection, the resulting data is most appropriately seen as but the tip of the necessary informational iceberg.
SPECIFIC MANAGEMENT GUIDELINES

In the preceding brief overview concerning the general nature of cultural resource management as it relates to the overall Forest Service program, no attempt was made to cast that discussion in a manner that directly pertained to the particular concerns of the Gifford Pinchot National Forest. Yet, ultimately, the individual Forest must in large measure assume the responsibility for initiating and carrying out a program of cultural resource management. Importantly, such a program should not only be consistent with national and regional policy, but should also be tailored to the particular needs of the individual Forest. Obviously within the general Forest Service directive to inventory, protect and enhance all cultural resources on National Forest lands there is considerable tactical leeway within which a Forest can and should operate. Given the information derived as a consequence of the current study, as well as a general knowledge of the Forest's planning system, we feel that we are in a good position to provide at least a first approximation of how an effective management program could be structured and still be consistent and compatible within the overall Gifford Pinchot program.

Before recommending the set of tactical procedures which we feel are most appropriate to the Gifford Pinchot National Forest, it should be worthwhile to first consider certain strategic matters that concern the existing Forest management and land use planning system. The reasons for doing so are quite simple. Any proposed system of cultural resource management will have to articulate with the existing Forest planning infrastructure. Little purpose would be served if the management of cultural resources was conceived of as being something apart from or even directly opposed to normal operations.
PRESENT FOREST MANAGEMENT AND LAND USE

At present, the Gifford Pinchot National Forest comprises one of the six planning areas within the Forest Service's Pacific Northwest Region. In turn, the Forest has been subdivided into 16 planning units, the size and location of which are determined generally by social, political, and economic considerations as well as manageability. Importantly, the conduct of intra-Forest land use planning is structured within this planning unit system. This is manifest in the preparation of Unit Plans and Environmental Statements prepared in conjunction with each Unit Plan. A particular Unit Plan contains information about not only what the Planning Unit's potential is for meeting various social and economic demands (e.g. recreation and timber production), but also the coordinating criteria for planning projects to be implemented within the Planning Unit. The Environmental Statement that is prepared for each Unit Plan presents an assessment of the potential environmental, social, and economic impacts associated with various land use and management alternatives.

Within the framework of the general management and planning system just described, the various and sundry uses to which a Forest planning unit will ultimately be put are outlined. The particular blend of multi-purpose land uses (e.g. grazing, recreation, roads and trails, timber harvesting, etc.) is dependent upon the environmental character of the Unit as well as the anticipated regional social and economic needs.

To isolate the nature and extent of specific Forest-generated land use activities, the Gifford Pinchot National Forest "Action Plan" was consulted. In doing so, it was hoped that we would be better able to formulate a
Forest-specific management plan. Because the action plan also detailed the locations of the proposed projects which could then be compared with our cultural resource inventory, we would also be able to indicate projects of immediate concern to cultural resource management.

While undoubtedly a multiple-use Forest, the Gifford Pinchot is primarily organized as a sustained-yield timber producing-harvesting entity. Of the some 247 projects listed in the Forest's Action Plan covering the period from 1976-1979, 226 of these are timber sales. Though we will return to the matter of how cultural resource and timber management can best be simultaneously accommodated, it should be stressed here that timber is by far the most significant aspect of the Forest's land use system (see Table 8 for a listing of the Forest area directly involved in timber management).

In addition to the actual timber sale aspect of the Action Plan, the extent of ancillary activities associated with the projected sales (e.g. new road construction, road reconstruction, culvert installation, etc.) were also identified and tabulated (see Table 9). Projects not related to timber sales were treated in a similar manner.

Summarizing the current system of land use planning and management as it is practiced in the Gifford Pinchot National Forest, there are certain salient aspects that can be identified and that may, in turn, bear on the future conduct of cultural resource management. Forest management is perhaps best viewed as being characterized by two distinct, yet interrelated, activities:

(1) A program of general planning and development whose major focus is the establishment of land use alternatives both within and among the 16 Forest Planning Units.

(2) A program of specific planning and development whose major focus is the selection and conduct of particular land use projects; these are manifest in the Forest's Action Plan.
Table 8. Breakdown of Gifford Pinchot's Timber Management Plan (adapted from the Forest's Action Plan)

<table>
<thead>
<tr>
<th>Treatment</th>
<th>New Management Plan Level (ac/yr)</th>
<th>Historical Level (ac/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precommercial Thinning</td>
<td>3,356</td>
<td>425</td>
</tr>
<tr>
<td>Interplanting</td>
<td>2,950</td>
<td>325</td>
</tr>
<tr>
<td>Reforesting Older Nonstocked</td>
<td>1,815</td>
<td>695</td>
</tr>
<tr>
<td>Planting Genetic Stock</td>
<td>4,000</td>
<td>700</td>
</tr>
<tr>
<td>Release</td>
<td>2,204</td>
<td>1,385</td>
</tr>
<tr>
<td>Commercial Thinning</td>
<td>2,600</td>
<td>740</td>
</tr>
<tr>
<td>Mortality Salvage</td>
<td>4,100</td>
<td>800</td>
</tr>
</tbody>
</table>

Table 9. Proposed Activities Within the Gifford Pinchot National Forest, for the Period 1976-1979 (adapted from the Forest's Action Plan)

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Number of Projects</th>
<th>Extent of Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timber Sales</td>
<td>226</td>
<td>1,560.62 million board feet</td>
</tr>
<tr>
<td>Road Construction</td>
<td>112</td>
<td>400 miles</td>
</tr>
<tr>
<td>New Road Construction</td>
<td>168</td>
<td>325 miles</td>
</tr>
<tr>
<td>Bridges</td>
<td>6</td>
<td>3 new; 3 replacements</td>
</tr>
<tr>
<td>Culverts (major)</td>
<td>2</td>
<td>2 new</td>
</tr>
<tr>
<td>Trails</td>
<td>4</td>
<td>16.5 miles</td>
</tr>
<tr>
<td>Roads</td>
<td>4</td>
<td>6.6 miles new; 12.8 miles repair</td>
</tr>
<tr>
<td>Bridges</td>
<td>7</td>
<td>6 new; 1 replacement</td>
</tr>
<tr>
<td>Campgrounds</td>
<td>4</td>
<td>80 parking units; 10 camping units</td>
</tr>
</tbody>
</table>
The former, because it is wholly a planning rather than a use activity, does not result in direct impacts to the Forest's cultural resources. It does, however, directly affect the future status of cultural resources on a regional basis. Therefore any Forest-wide cultural resource management system must be capable of identifying potential impacts and means to mitigate those impacts at this higher planning level. At the same time, provisions have to be made within the system to provide for mitigative actions that may be required on specific Forest-generated projects.

In the section which follows, we will outline the basic elements of a cultural resource management system that we feel will meet both of the above requirements and yet be easily accommodated within the existing Forest management system. It should also be stressed that these proposals should not be considered as alternatives to the general cultural resource management guidelines currently being developed on the regional level (cf. Wildesen 1975). Instead, the particular system to be proposed here should be viewed as an action plan to most effectively implement those guidelines within the Gifford Pinchot National Forest.

A PROPOSED CULTURAL RESOURCE MANAGEMENT SYSTEM

Having briefly considered the matter of cultural resource management as it applies to the Forest Service as a whole, and having reviewed the general structure of forest management and planning as it is operationalized within the Gifford Pinchot National Forest, we will now focus our attention on the construction of a forest-specific cultural resource management system. Care has been taken to ensure that:
The proposed cultural resource management system is compatible with existing national, regional, and Gifford Pinchot guidelines (see Appendix II).

The proposed cultural resource management system provides for the inventorying, protection, and enhancement of cultural resources at both the general land use planning and specific project levels.

To facilitate the potential reviewer or user of our proposed management system, the discussion which follows has been framed as a set of recommendations divided into three general categories: (1) planning-related, (2) project-related, and (3) specific resource-related. Each category is introduced by a brief statement of the general management considerations which led to the succeeding recommendations. The specific recommendations within a category are each followed by a discussion of both the work and the procedures required to implement the proposed action.

**Planning-related Recommendations.**

The adoption of a cultural resource management strategy at the highest levels of planning would greatly alleviate the potential problems that could arise with respect to specific proposed projects and land use alternatives. At present the Forest has an established planning system that centers on the 16 administrative planning units. Because it is at this level that most major planning decisions are made which will ultimately affect the Forest's cultural resources, it is imperative that this aspect of the decision-making process be conducted in an organized and coherent fashion.

Cultural resources, like any other finite resource, are amenable to inventorying, assessment, and, ultimately, management. As has been pointed out elsewhere, management and planning cannot take place in an informational vacuum. In spite of the fact that the current study has provided an inventory
of cultural sites, this inventory is by no means complete. Just as importantly, however, the further compilation of a cultural resource inventory and the subsequent assessment and management of the resource should not be carried out on an *ad hoc* basis. Care must be taken to ensure that these aspects are consciously conceived and systematically conducted.

**RECOMMENDATION 1:** The Gifford Pinchot National Forest should initiate a coordinated and comprehensive program of cultural resource inventorying and assessment as a necessary and normal part of the Forest's planning unit management system.

While the present planning system has endeavored to identify cultural resources as a part of the preparation of its Unit Plans and Environmental Statements, this effort has not been wholly systematic. Even more importantly, the cultural resource locations that *have* been identified have *not* been assessed in terms of their significance or potential eligibility to the National Register of Historic Places. However, both the inventory and assessment of such sites are necessary procedures within the structure of existing Federal statutes (see Appendix I). Therefore an organized program of activities to accomplish these ends should be adopted.

In practical terms the actual means of achieving the stated objectives could vary tremendously. Because the Forest already has at its disposal personnel who are qualified to conduct the necessary inventory, the following implementative recommendations are offered:

(a) The Gifford Pinchot's cultural resource "field technicians" should conduct in-field verifications of the sites noted in the cultural resource inventory of the present report. Because the sites listed in the present inventory were derived solely from archival data, remains of individual sites may or may not exist at present.

(b) Field technicians should conduct a systematic program to locate additional cultural resource sites not noted in the present inventory. Because of the vast areas of land
included within the Forest, we would not suggest that this activity be areally structured. Instead, it would seem most appropriate that the inventory be compiled primarily through the use of informant interview and in-field verification. Because of the large number of past and present Forest personnel who may have knowledge of cultural sites, perhaps the use of a written questionnaire would facilitate the process. No matter what the means used to collect the locational data, however, field reconnaissance should be used to verify the existence and extent of the cultural remains.

Care should be exercised in conducting the recommended inventory that the information gained is both fully documented and carefully guarded. The latter point is particularly important in view of the non-renewable nature of the resource. More often than not the only real protection that a site has is its obscurity.

While as a practical matter the inventorying procedure could be best tied to the preparation of Unit Plans and Environmental Statements, we would also suggest that a high priority be assigned to locating sites that may be located in areas to be impacted by specific projects (e.g. those listed in the Action Plan). By doing so, advance provision could be made for mitigating potential impacts to sites associated with particular projects.

As should be apparent from the above discussion, we have as yet only touched upon the matter of inventorying. An equally important part of our recommendation concerns cultural resource assessment. This is considered to be operationally distinct from the inventory for two reasons: (1) the assessment of cultural resources should be framed within the guidelines established by the Advisory Council on Historic Preservation (i.e. 36 CFR Part 800); and (2) assessments should be conducted by professionals trained in such procedures. Given these restrictions, we would suggest that this activity not be carried out by the field technicians but by a reliable professional.
e.g. the regional archaeologist or an academically-affiliated archaeologist or historian. Field technicians should, however, be encouraged to assist in this procedure. This would provide additional training and reduce the overall costs of the assessment should it be contracted for outside of the Forest.

- **RECOMMENDATION 2:** The Gifford Pinchot National Forest should consider undertaking a systematic program of professional archaeological reconnaissance as a means of formulating a predictive model for cultural resource site locations.

As has been stressed elsewhere, the cultural resource inventory compiled as a part of the present study is by no means exhaustive. Indeed, given the relatively few ethnographic and archaeological sites that were identified, we would expect that perhaps hundreds or even thousands of additional sites should be located within the Forest. However, the extant information is simply not sufficient to provide a predictive model for identifying the locations of additional sites. Yet, given the vast amounts of area contained within the Forest and its associated environmental diversity, just such a predictive model is needed to develop more reasoned planning strategies and land use alternatives.

At this point one might reasonably ask: how would a predictive model for cultural resources be generated and what purpose would such a model serve for the Forest? Essentially, the kind of predictive model considered here would represent nothing more than a formal means of assessing where cultural sites should occur; the identification of relevant and reliable factors that structured the location and character of past land use in the Forest. Intuitively, one should be able to understand the matter by answering the following simple question: if you wanted to make use of the Forest for some particular purpose (e.g. hunting, fishing, mining, etc.), where would you locate yourself? Of
course, you would place yourself where the resources for your particular use are available. People were no different in the past except that now they are unavailable for direct comment. We must use indirect means to achieve the answers we seek.

Tactically, the formulation of a predictive site location model consists of several procedural steps. Minimally these would include:

(a) The identification of potential uses to which the Forest as a whole could have been put.

(b) The internal structuring (or "stratification") of the Forest according to the potential availability of resources that would satisfy these previously-identified needs.

(c) The selection of a representative sample of both the number and kind of "environmental strata" available within the Forest.

(d) The direct examination or reconnaissance of the "sample" to identify and assess those cultural resources contained within the various strata.

(e) The extrapolation of the sampled data to the entire Forest.

Though perhaps seeming to be a rather involved process, the actual procedure really is quite simple and straightforward. In fact, the only difference between this system and the more accustomed inventory process is that the field reconnaissance stage is conducted within a purposefully structured environment rather than within an area chosen for reasons of administrative or practical convenience. Obviously, the key element in this system is the stratification of the forest environment. The ultimate choice of variables which will be used to identify the various environmental strata (e.g. soil, topography, vegetation, distance to water, etc.) should reflect the choices of the peoples for whom the model is being constructed. Because this aspect of the process requires some measure of expertise, it would best be
conducted by a trained professional. However, the required field recon-
nnaissance could be undertaken by field technicians either alone or in concert
with professionals.

Finally, we should point out the potential utility that the proposed
predictive model might have for the Forest. Perhaps the most economical
means of addressing this issue is by answering the following question: barring
a complete reconnaissance and inventory of the Forest, how can management
know whether or not its land use policies will potentially impact cultural
resources? The answer is that without such an inventory there is no way of
knowing the extent cultural resources that might be affected. Even more
importantly, without such an exhaustive listing management cannot know
whether or not even a particular proposed project will have the potential for
impacting cultural resources. The value of a predictive site model is that
it can provide management with an advance warning system; indicating particular
environmental circumstances that should either be avoided or at least surveyed
prior to a project's implementation. Such a model could also indicate areas
of low cultural resource potential as well. In many ways this latter attribute
may be of particular planning importance.

- RECOMMENDATION 3: The Gifford Pinchot National Forest should con-
sider undertaking a research program to investigate the affects of
timber clearcutting on cultural resources.

Because the Forest is primarily organized as a timber producing and
harvesting entity, the overwhelming majority of Forest projects concern the
sale and harvesting of timber. Importantly, the clearcutting of timber
results in potentially significant disturbances to the ground's surface;
disturbances that could possibly have adverse impacts on any cultural
resources. Yet, the actual affects of the various timber harvesting methods
(e.g. skyline, hi-lead, and tractor yarning) have never been demonstrated. Indeed, it may well be that the practice of clearcutting may actually serve to enhance the success of inventorying by making the ground's surface more available for reconnaissance. The critical point to be made here is that we simply do not at present fully understand either the negative or positive impacts that might accrue to cultural resource management as a result of timber harvesting.

In an effort to clarify the issues raised above, we would recommend that a pilot program be initiated to test the affects of various clearcutting methods on the Forest's cultural resources. The results of such a testing program would provide much needed information about the interrelationships between timber and cultural resource management. Of perhaps even greater practical importance, such a program would perhaps alleviate the difficulties that may soon arise if the Forest is faced with having to inventory all timber sale areas in order to comply with existing Federal regulations, guidelines, and executive orders. At present, these various statutes require that a Federal agency (e.g. the Forest Service) assess the potential impacts to cultural resources on all projects which may possibly result in adverse affects (e.g. timber harvesting). In practical terms, however, this is almost an untenable situation because of the sheer amount of acreage that would have to be inventoried annually. Neither the Forest nor perhaps even the professional archaeological community has the time or manpower to undertake such an extensive reconnaissance program. The present recommendation is an attempt to test the need for cultural resource appraisals on all timber sales.

If undertaken, the pilot program we are recommending should be directed at answering the following two questions:
(a) What are the impacts associated with the various techniques currently used in timber harvesting?

(b) Does clearcutting actually serve to enhance the probability of locating cultural resources?

The actual testing of these two propositions could take many forms. However, we will briefly outline here one possible test that we feel would provide the most effective and efficient means of providing the necessary data. As an ancillary benefit the procedure to be outlined here would not directly affect any actual cultural resources: a matter of perhaps some legal and ethical importance.

Given that our aim is to determine the nature and extent of the impacts that clearcutting and the various techniques used to accomplish it have on the cultural resource record, it would seem most appropriate to test the matter by constructing artificial archaeological examples. To examine the direct affects that clearcutting has on site integrity, several sets of objects could be "salted" in a proposed timber sale. These artificial sites would be constructed such that the number of "artifacts" as well as their spatial relationships were known. After the logging operation has been completed, the artifacts would be relocated and their locations noted. Repeated trials, using various clearcutting methods and "site types" (e.g. surface and subsurface manifestations), should permit both a qualitative and a quantitative impact assessment.

The second aspect of the experiments would be to assess whether or not clearcutting actually increased the probability of finding sites. Using the same "sites" constructed for the above determination, field technicians could survey the timber sale area both before and after logging. Discrepancies noted in their ability to locate sites should provide the necessary test. As an ancillary benefit, this procedure would also provide the field technicians with needed reconnaissance experiences as well as test their own inventorying abilities.
Project-related Recommendations.

Existing Federal regulations and guidelines direct all Federal agencies (e.g. the Forest Service) to assess the impacts associated with their activities. While we have already considered the matter of a cultural resource management strategy that might be implemented into the Forest's general planning system, the recommendations that were offered did not address particular Forest projects. Yet, this consideration must ultimately be faced simply because it is with such projects that direct impacts can occur to the cultural resource base. While planning can serve to identify and perhaps minimize potential impacts, it cannot completely avoid them. Therefore, some organized system of impact assessment and mitigation is still required at the project level. The recommendations that are to be offered here are one means of implementing such a system.

In examining the Forest's Action Plan it became apparent that we could characterize the various types of proposed projects along two independent dimensions: (1) the probable intensity of disturbance; and (2) the probable extent of disturbance. The former refers to the potential for adverse impacts on cultural resources should they be found within the project area (characterized as either high or low), while the latter refers to the actual areal extent of impact (characterized as local, linear, or areal). Given these distinctions, we can so classify forest-generated projects and evaluate the need for advance impact assessment (see Table 10).

- **RECOMMENDATION 4:** Advance reconnaissance surveys should be conducted on all projects designated as having the potential for high intensity disturbances.

The need for advance cultural resource assessments associated with the
Table 10. A Characterization of Forest Projects in Terms of the Nature and Extent of Potential Adverse Impacts as well as the Need for an Advance Impact Assessment.

<table>
<thead>
<tr>
<th>Kind of Project</th>
<th>Intensity of Disturbance</th>
<th>Extent of Disturbance</th>
<th>Need for Impact Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridges</td>
<td>High</td>
<td>Local/Linear</td>
<td>Yes</td>
</tr>
<tr>
<td>Campgrounds</td>
<td>High</td>
<td>Local</td>
<td>Yes</td>
</tr>
<tr>
<td>Culverts</td>
<td>High</td>
<td>Local/Linear</td>
<td>Yes</td>
</tr>
<tr>
<td>Grazing</td>
<td>Low</td>
<td>Areal</td>
<td>Unknown</td>
</tr>
<tr>
<td>Mining</td>
<td>High</td>
<td>Local/Areal</td>
<td>Yes</td>
</tr>
<tr>
<td>Parking Lots</td>
<td>High</td>
<td>Local</td>
<td>Yes</td>
</tr>
<tr>
<td>Roads</td>
<td>High</td>
<td>Linear</td>
<td>Yes</td>
</tr>
<tr>
<td>Timber Sales</td>
<td>Unknown</td>
<td>Areal</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Trails</td>
<td>High</td>
<td>Linear</td>
<td>Yes</td>
</tr>
</tbody>
</table>
particular circumstance noted in our recommendation should be obvious at
this juncture, and therefore we need not dwell on the matter further. 
Operationally, however, it might be worthwhile to point out that such
assessments could be conducted by the Forest's field technicians. This
would alleviate the potential difficulties in arranging for external assis­
tance on limited notice and would also perhaps be more economically feasible
in the long run.

Before dropping this matter, we might again reiterate our concern for
resolving the issue of timber sales and their ultimate affect on cultural
resources. As noted in Table 10 we could not decide whether or not the
potential intensity of impact associated with this type of project should be
judged as high or low. If the impacts are indeed found to be high, then an
advance program of reconnaissance will be required. As has been indicated
elsewhere, such a determination has not as yet been made. Therefore, until
such time as a resolution to this problem has been found, we would suggest
that the need for assessments be reviewed on a case-by-case basis. Where
known inventoried sites are to be directly involved, an advance assessment
should be conducted. Additionally, timber sales situated in particularly
favorable environmental circumstances for cultural sites (e.g. along streams,
lakes, prairie or meadow margins, etc.) should also be examined.

Specific Resource-related Recommendations.

Other than the planning- and project-related cultural resource management
considerations, there are certain specific recommendations that we feel are
warranted in view of the present investigation. In particular, these concern
the parts of our cultural resource inventory that might be amenable to further
enhancement.
- 183 -

- RECOMMENDATION 5: The Gifford Pinchot National Forest should study the feasibility of locating, restoring, and interpreting its historic trails.

As noted in our resource inventory there are at least two aboriginal trails of considerable historical importance located within the Forest. These include the Yakima and Klickitat Trails. The latter is of special interest because several portions of it were used by George B. McClellan during his exploration of the southern Washington Cascades. Because of the historical importance of these resources and the potential public interest that might be generated should they be restored and interpreted, we feel that a feasibility study is justified.

- RECOMMENDATION 6: The Gifford Pinchot National Forest should study the feasibility of enhancing and interpreting the area known as the St. Helens Mining District as an historical district.

The St. Helens Mining District represents a unique chapter in the history of the forest. As such, its enhancement and interpretation might provide a valuable recreational experience for the general public. As a necessary prelude to any such consideration, however, the area should be inventoried and assessed to determine which areas would be most amenable to enhancement and interpretation.

Finally, it should again be stressed that activities conducted within the present cultural resource overview are but a first step along the long path to the effective management of the Forest's cultural resources. While hopefully providing a useful baseline, the needs and requirements of future cultural resource management programs will require the close cooperation of relevant Gifford Pinchot personnel, the Forest Service's regional archaeologist, and the professional archaeological community. The first steps have been taken. Let us hope that the future path will prove less difficult in light of our present efforts.
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APPENDIX I

REGULATORY AUTHORITY FOR CULTURAL RESOURCE MANAGEMENT

**Organic Act of 1897**

Implementation under the provisions of 36 CFR 294, this act authorizes the creation of special interest areas within the National Forest system as well as their management for recreation uses. Areas so designated are distinguished by having unusual scenic, natural, historic, prehistoric, or scientific interest.

**Antiquities Act of 1906 (Public Law 59-209)**

This is the first federal law protecting what are now termed cultural resources on public lands. It establishes criminal penalties for the disturbance, destruction, or unauthorized excavation of cultural resources on all Federal lands. It provides for the issuance of permits to conduct legitimate research on cultural resources and consists of two parts: *An Act for the Preservation of American Antiquities, and Uniform Rules and Regulations.*

**Historic Sites Act of 1935 (Public Law 74-942)**

This act declares it to be a national policy to preserve for the public, historic (including prehistoric) sites, buildings, and objects of national

b. **Forest Coordinator.** This individual will act as Liaison between the Regional Archaeologist and Land Manager; and provide leadership for the Forest Cultural Resource Management Program. He or she will likely serve as Contracting Officer's Representative (COR) on cultural resource contracts and make informal contacts with consultants including the State Historic Preservation Officer and Advisory Council.

In addition, this individual will complete the National Register nomination forms preparatory to submitting them for consideration.

c. **Regional Archaeologist.** This person, a qualified professional archaeologist, will review National Register
the National Trust for Historic Preservation; and (4) the establishment of an Advisory Council on Historic Preservation. Section 106 requires that the Council have an opportunity to comment on any undertaking which may adversely affect properties listed, nominated, or eligible for inclusion on the National Register.

**National Environmental Policy Act of 1969 (NEPA) (Public Law 91-190)**

This act directs all Federal agencies to "identify and develop methods and procedures which will insure that presently unquantified environmental amenities and values are given consideration in decision-making along with economic and technical considerations." It includes cultural resources among those resources to be inventoried and for which potential impacts are to be determined and mitigated.

**Executive Order 11593 (Protection and Enhancement of the Cultural Environment)**

Issued in 1971, this Presidential Order mandates that all Executive Branch agencies, bureaus, and offices: (1) compile an inventory of cultural resources for which they are the trustee; (2) nominate all eligible government properties to the National Register; (3) preserve and protect their cultural resources; (4) insure that agency activities contribute to the preservation and protection of non-federally owned cultural resources.

**Procedures for the Protection of Historic and Cultural Properties (36CFR800)**

Archaeological Conservation Act of 1974 (Public Law 93-291)

This act amends the Reservoir Salvage Act of 1960 and essentially provides for the recovery, protection, and preservation of significant scientific, prehistoric, historic, or archaeological data, when irreparable loss of such data is threatened by federal construction projects and federally licensed projects, activities, or programs. It also specifies the particular procedures and circumstances for federal funding of such activities.
APPENDIX II

INTERNAL GUIDELINES FOR CULTURAL RESOURCE MANAGEMENT

In addition to the legislated authority of cultural resource management, the actual conduct of management is proscribed by a set of internal guidelines. At the regional level, appropriate actions are outlined within FSH 2360, "Cultural Resource Management." At the level of the individual forest, a further set of guidelines obtain. In the case of the Gifford Pinchot National Forest, the conduct of cultural resource management has been further detailed by a supplement to the Forest Service Manual.

The following guidelines have been adopted by the Gifford Pinchot National Forest:

1. General participant responsibilities are as follows:
   
a. **Field Technician.** The primary responsibility of these individuals will be to conduct the reconnaissance or on-the-ground search for evidence of historic or prehistoric human activity in a specific project area or areas. Consequently they will provide the basic data needed to decide if an evaluative survey is required and alert the Forest Coordinator to the possible need for further action.

   In addition, they will provide the descriptive information needed for nominating sites to the National Register of Historic Places.

   b. **Forest Coordinator.** This individual will act as Liaison between the Regional Archaeologist and Land Manager; and provide leadership for the Forest Cultural Resource Management Program. He or she will likely serve as Contracting Officer's Representative (COR) on cultural resource contracts and make informal contacts with consultants including the State Historic Preservation Officer and Advisory Council.

   In addition, this individual will complete the National Register nomination forms preparatory to submitting them for consideration.

   c. **Regional Archaeologist.** This person, a qualified professional archaeologist, will review National Register
nomination forms, applications for antiquity permits, contract reports, and Draft Environmental Statements to ensure high professional standards have been maintained. She or he will advise Forest Service officers on matters of general policy and procedure, as well as management alternatives in any specific case.

2. Field Cultural Resource Technicians. Cultural Resource work assignments and constraints will be by their District Ranger and coordinated through the Forest Coordinator.

3. Direction of cultural resource technical work is by the Regional Archaeologist through the Forest Coordinator.

4. Cultural Resource work by field technicians will normally be financed by the function or project requiring the assistance. Beginning in FY 1977 funds for Cultural History Service (CHS) are identified as an 071 line in each system.

5. No lead on a cultural site will be by-passed. Any known or suspected site will be referred to the Forest Coordinator.

6. After January 1, 1976, each E.A.R. will include:

   a. Documentation that the records of the State Historic Preservation Officer (SHPO) have been consulted. This can be accomplished through the Forest Coordinator.

   b. Documentation that the National Register of Historic Places has been consulted. This can be accomplished through the Forest Coordinator.

   c. A statement of what was actually done in the process of deciding that cultural resources have been satisfactorily considered in this particular E.A.R. (Consult FSH 2360, "Cultural Resource Management" and Region Six Environmental "Stuff Book" for additional guidance.)