Environmental and Cultural History

of the

Eel River Basin

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Updated and reedited 2017

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Preface

This paper was first published in 1996 as the cultural resources section of the Six Rivers National Forest Eel River Watershed Assessment document. At that time, I was a member of an interdisciplinary team (biologists, botanists, foresters, hydrologists, archaeologists) studying and documenting the current state and condition of the various natural resources and cultural resources found within the Eel River watershed. The environmental analysis was focused on the South Fork Eel River, South Fork Van Duzen River, and the North Fork Eel River watersheds as this was a federal undertaking and those watersheds have significant acreages of public lands.

Since then, I have continued to research the environmental and cultural history of the North Fork Eel River region. For that reason, I have made numerous changes in that section and have included additional data that has been collected since publication of the original document. Also a number of photographs, tables, and maps have been added—there were none in the original document. In a few places noteworthy information or comments have been included in text boxes or in brackets as a result of subsequent research that in some way (for better or worse) has led me to change or modify my original data or conclusions.

This paper along with numerous other papers that I have written on the history and environment of northwestern California can be found at my web site:

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TK
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Introduction

The purpose of this portion of the Eel River watershed analysis is to provide a contextual history of the past human land-use activities taking place within the major watersheds that comprise the Eel River basin. The main emphasis of this study is to document how past human occupation and land-use activities have influenced the flora and fauna and the hydrological, erosional and depositional processes taking place within the basin. In addition, there are brief summaries of the paleoclimatic data, the status of current research in prehistoric archaeology, a synopsis of the kinds of heritage resources that have been recorded within the basin.

The Eel River basin contains numerous micro environments---each influenced by climate, soils, geology, and other variables. Climate (including average yearly temperature and total amount of precipitation) is especially variable within the basin. It is influenced by such factors as altitude, distance inland from the Pacific Ocean, relative location on a north-south axis (there is a north to south gradient to the winter storm track), and geomorphology (for example, the rain shadow effect) that greatly affect the distribution of animals and plants across the basin. As a result, the prehistoric and historical settlement activities and land-use patterns across the basin are far from being homogenous.

The scope of this watershed analysis is limited, primarily, to Bureau of Land Management (BLM) and national forest lands within the basin. For that reason, the overview is primarily concerned with documenting the cultural and environmental history of the following watersheds:

* North Fork of the Eel River watershed (primarily national forest lands)
* South Fork of the Eel River watershed (BLM lands)
* Van Duzen River watershed (national forest and BLM lands)

From a historical and cultural perspective, however, it is necessary to understand the interplay between environmental processes and historical and prehistoric land-use activities that have occurred across the entire area. Therefore, a more generalized contextual overview is presented for the entire region. This is followed by more specific data related to the BLM and Six Rivers National Forest lands within each watershed that are the primary focus of this study.

Chapter 1

The Climate and Environment of the Eel River Basin during the Holocene

The purpose of this chapter is to present a brief synopsis of the paleoclimatic and pollen data relevant to the Eel River basin. To date [1996], no paleoclimatic model has been formulated specifically for the Eel River Basin. Therefore, this overview incorporates pollen data from several locations on the Six Rivers and Mendocino National Forests with regional paleoclimatic data to present a more generalized model.

Even prior to the arrival of humans, the environment of the Eel River basin was in a constant state of flux. While human land-use activities have most likely accelerated the rate of change, over the millennia the migration of new species into the region, changes in the distribution of flora and fauna, and quite likely, the occasional out-migration or extinction of a particular species of plant or animal, all took place in response to natural processes including changes in climate and naturally occurring fires.

Pollen Analysis in the North Coast Ranges

Several pollen studies have been undertaken in the North Coast Ranges by James West. The following overview summarizes pollen analysis data from locations on Pilot Ridge (West 1983a), Six Rivers National Forest, and at Lily Pond (West 1983b) and A-M Lake (West 1991), both located on the Mendocino National Forest. These studies are relevant because of their radiocarbon dates and time-depth, as well as their proximity of the Eel River Basin (see also West 1993).

Based on his studies, West (1983b: 12-14) hypothesized that the most important factor affecting the changing pollen counts is climate.

Pilot Ridge Pollen Data

The pollen cores were taken from a small marsh adjacent to CA-HUM-558; a prehistoric site located at an elevation of approximately 4,200 feet. There were two components to the pollen core recovered. The lower core sample dates from approximately 5,000 B.P. to around 2,600 B.P. It included high pollen counts for oak (Q*uercus*), with Douglas-fir counts increasing over time. Also noteworthy is the almost total lack of tanoak and chinquapin (*Castanopsis chrysopylla*) pollen until about 2,600 B.P.

The upper core sample dates from about 2,600 B.P. to the present and is characterized as having high counts for Douglas-fir, pine, tanoak, and chinquapin. Douglas-fir appears to have increased in numbers during this period while oaks decreased.

West (1983a:3.21) concluded that the currently composed Mixed Evergreen Forest on this portion of Pilot Ridge did not form until approximately 2,700 to 2,800 years ago. Prior to that time there were greater numbers of pine and oak, with fewer Douglas fir.

These changes in the pollen record reflect changes through time in both species composition and distribution of trees on Pilot Ridge; they are consistent with other studies of the environment in the North Coast Ranges (Adam and West 1983).

Lily Pond Pollen Data

The most complete pollen core referred to in this study was taken from Lily Pond located about 4 kilometers southwest of Fouts Springs in Colusa County. This area is better characterized as a marsh than a pond; it is located at an altitude of approximately 4,000 feet above sea level. Several samples were radio-carbon dated, with the oldest registering 8,700 B.P. (± 100). The lowest portion of the core, as determined from radio-carbon dating and sedimentation rates, was estimated to be about 9,700 B.P. (West 1983b: 4).

Pollen samples from pond vegetation indicate that around 7,000 B.P. the water level was lower than during the previous period (which extended to 9,700 B.P.). During the more recent past, the water level of the pond has again increased (West 1983b:10).

The pollen core data for Lily Pond suggests that prior to 8,700 B.P., this area was an open pine forest with a sparse shrub and herbaceous understory. Oak were present, but not a major part of the vegetation associations. There are high counts for TCT (*Taxaceae, Cupressaceae,* and *Taxodiaceae*) pollen, consistent with pre-Holocene sediment studies at Clear Lake.

Some Douglas-fir pollen is present, but it is a very minor component. West infers that cooler conditions prevailed during this period that marks the end of the Pleistocene. Between about 8,700 B.P. and about 7,500 B.P. there appears to have been a transitional period marked by warming and drier conditions when the number of oaks increased. At that time, Lily Pond was shallower and supported dense growths of pond weeds. During this period Douglas-fir pollen count becomes almost non-existent in the sample.

During the next era, dating from about 7,500 B.P. to about 3,400 B.P. the oak woodlands became a major component of the landscape. Pine counts remained high and Douglas-fir counts still remained almost non-existent, suggesting an increase or further continuation of a warmer, drier climate. Significantly, true fir (*Abies*), that were present in low amounts in the earlier levels, disappear completely from this sample.

After about 3,400 B.P., major changes in vegetation distributions took place. True fir reappear, and at about the same time Douglas-fir counts begin to increase steadily until

this species becomes a major component of the forest. Moreover, oak counts drop slightly, while pine counts increase slightly.

A-M Lake Pollen Data

A-M Lake is a small (approximately 1 acre) eutrophic pond between Alder and Maple Creeks on the southwestern slopes of Hammerhorn Peak at an elevation of 3,320 feet above sea level (within the upper Middle Eel watershed). The lake has no official name but was termed A-M Lake for ease of discussion in West's report (1991: 1).

The age determination and sedimentation rates indicate that the bottom of the core dates to about 2,500 B.P. Pollen preservation was good, and *Pinus* was the most abundant pollen type in the sample. Douglas-fir has low counts (>1 percent) in the lower portion of the core, but these increase through time (>18 percent) in the upper samples (West 1991:4-5). As West (1991:9) notes, "[t]he trends in the pollen record of A-M Lake are consistent with other pollen records for the region." One of his most noteworthy observations is the increase through time in the distributions and numbers of Douglas-fir at all sample locations.

Given the pollen data cited above, and other data related to climatic studies (see Taylor 1976), it appears that during the late Pleistocene and early Holocene, the climate of northwestern California was cooler than today. Evidence supporting this conclusion also includes the documentation of glaciation during this period on South and North Yolla Bolly Mountains, Anthony Peak, and other locations in the North Coast Ranges (Simons 1983:3. 3).

During the mid-Holocene, lasting from about 8,500 to 3,000 years ago, the North Coast Ranges underwent a change to a warmer and possibly drier climate than that of today. This era is sometimes referred to as the as the Xerothermic Period. Dwight Simons (1983: 3.13-3.14) summarizes some of the evidence for the Xerothermic Period in the North Coast Ranges (see also Barbour and Major 1977:187). This evidence includes vegetation types that are disjunct from the main areas occupied today by those species. For example, discontinuous stands of ponderosa pine extend southward from Clear Lake to as far as Mount St. Helena. Isolated stands of the Gray Pine Woodland association are found north of Weaverville, in Hoopa Valley, and in the Mad River Valley to the west of South Fork Mountain.

Some isolated stands of gray pine are also located within the North Fork watershed (see also Griffin and Critchfield 1972: Map 56). These trees are found most often at lower elevations on dry south- and west-facing slopes, especially to the east of the North Fork of the Eel River. The more continuous distributions of gray pine in the North Coast Ranges begin in Round Valley and extend southward throughout the lower elevations of the interior Coast Ranges (Griffin and Critchfield 1972:89).

Taylor (1976: 307) notes that it is likely that some Great Basin plant species extended their ranges into the mountains of the North Coast Ranges during the Xerothermic Period, probably entering the area from the volcanic plateaus of northeastern California.

There are several tree species found today within the Eel River Basin that are isolated from their main distributions further to the east in the Sierra and Great Basin. For example, remnant stands of western juniper (*Juniperus occidentalis*) are found in the Yolla Bolly Mountains. One isolated stand of juniper is located on Soldier Ridge in the Mendocino National Forest and is documented in the literature (Griffin and Critchfield 1972: Map 32). In addition, several other isolated stands of juniper are found within the headwaters region of the Middle Fork of the Eel River, just to the east of the North Fork Basin along Powell Ridge, in the Shell Mountain area (including within an oak-juniper woodland adjacent to Mud Lake), and near Ant Point (personal observation). Furthermore, one lone tree, isolated from any other stands of juniper, was identified in the Littlefield Creek drainage of the North Fork watershed (personal observation, See Keter 2017: B06). These trees are found at higher altitudes (above 5,000 feet), on well-drained and exposed southwest-facing serpentine soils (except for the lone tree in a glade adjacent to Littlefield Creek in the North Fork watershed [see Keter 2017: B07] and are the locations were western juniper has been able to survive in the Coast Ranges. The closest area in which this species grows today is in Scotts Valley west of Yreka (Griffin and Critchfield 1972: 21).

Further evidence for the extension of Great Basin species into the Coast Ranges includes a single grove of aspen (*Populus tremiloides*) that still survives in the vicinity of North Yolla Bolly Mountain (Griffin and Critchfield 1972:32). Also, another tree species, fox-tail pine (*Pinus balfouriana*), has disjunct populations in scattered remnant stands in the Yolla Bolly and Klamath Mountains. These trees are also found in the southern Sierra Mountains near Mount Whitney, and in portions of the upper Kings River and Kern River drainages (Griffin and Critchfield 1972:25, and personal observation).

Included below are images taken in 1994 (unless otherwise noted) for some of the locations where the tree species discussed above have been identified in the Yolla Bolly Wilderness Area by the author

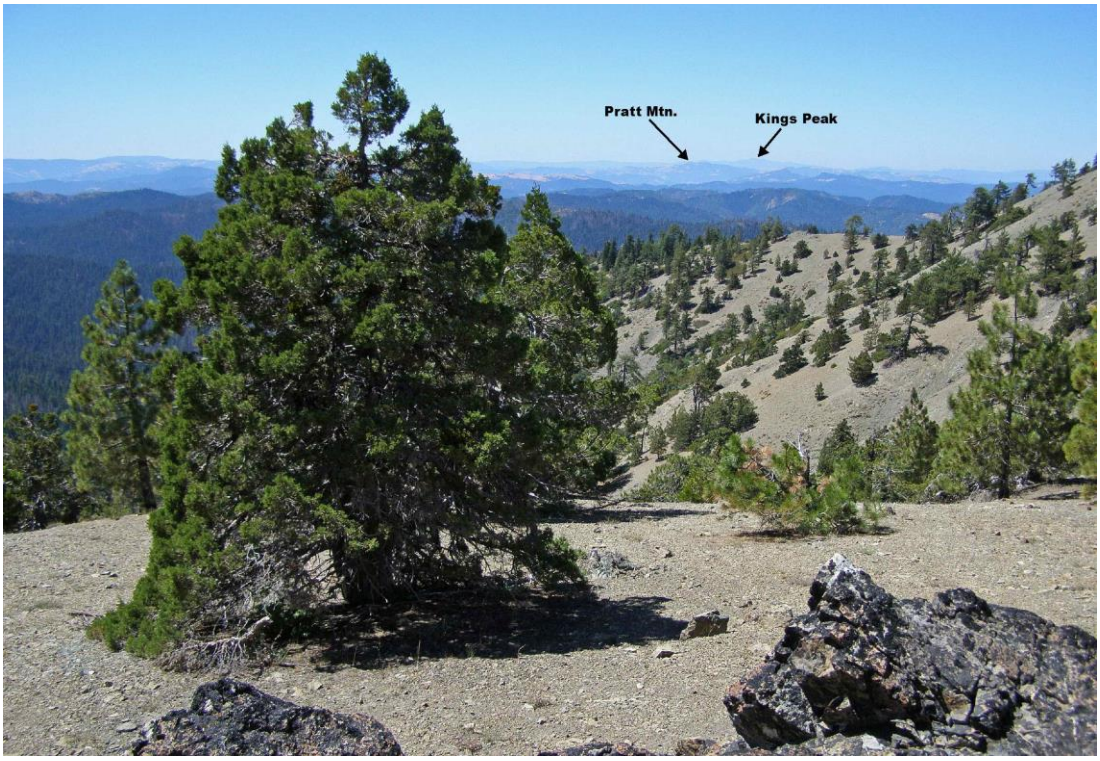


Image 1
Juniper on serpentine soils Shell Mountain Yolla Bolly Wilderness view to west. Kings Peak is on the horizon about 55 miles away. (Keter 2010)

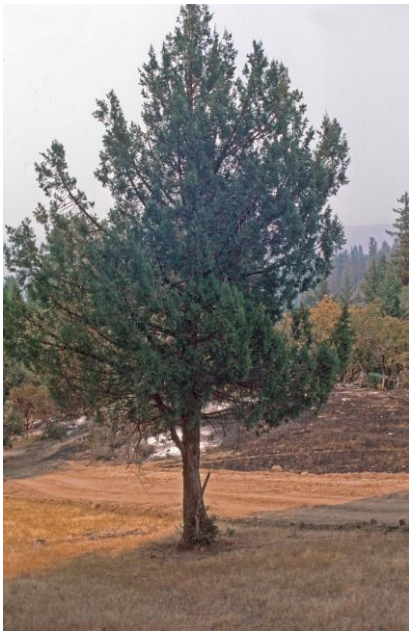


Image 2
Juniper growing in the Littlefield Creek drainage after the 1987 Travis Fire. Note burned area and fire line behind the tree.

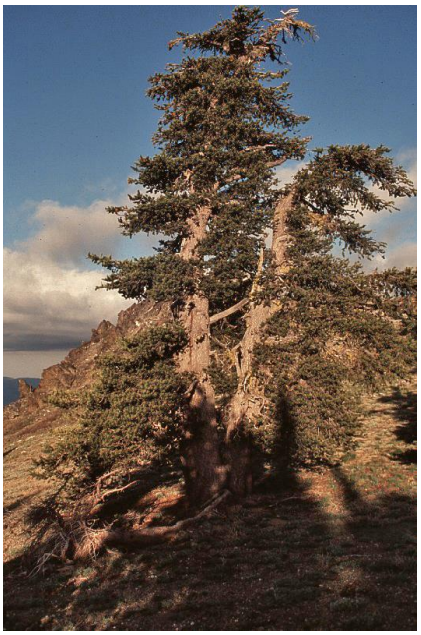


Image 3
Foxtail pine on North Yolla Bolly.

Image 4
Fox tail pines growing on North Yolla Bolly Mountain
View to east.

Image 5
The Humboldt Trail passes through a stand of Aspen trees in Beaver Glade. It is the only aspen grove in the Coast Ranges.

A General Model of Past Climate and Vegetation for the North Coast Ranges

The pollen and climatic data for the North Coast Ranges, as analyzed by West, have been presented as a generalized model (West 1988: 8-9; 1990, 1993). This model suggests that, during the Pleistocene and early Holocene, the climate of the North Coast Ranges was cooler and more continental than today, with a weak subtropical high in July and strong westerly flows. During the next period, referred to as the Xerothermic and lasting from approximately 8,500 B.P. to about 3,000 to 2,500 B.P., climatic conditions changed to milder winters and warm, possibly drier, summers, probably persisting somewhat longer than those of today. Some plant species moved up-slope as much as 1,000 feet (300 meters). In addition, some species of oaks and other more xeric species migrated further to the north and west.

Beginning approximately 2,500 to 3,000 B.P., stronger maritime conditions began to prevail and the climate of the region began to change from a warmer regime to a cooler, moister one. This change, which resulted in a climate similar to that of today, has been documented in vegetation shifts in the pollen record discussed earlier. Yearly average temperatures dropped about 1.3 to 2.1 degrees centigrade, and plant species began to shift down-slope and to the south and east. Douglas-fir began to increase in numbers and distribution.

A Diachronic Paleoenvironmental Model for the Eel River Basin

A generalized model of the past environment for the entire Eel River basin based primarily on the paleoenvironmental model formulated for the North Fork watershed is presented below.

Xerothermic Period (8,500-3,000 B.P.)

During the Xerothermic Period, yearly average temperatures were about 1.3 to 2.1 degrees centigrade warmer than today (West 1983a:3.19), resulting in somewhat warmer summers, with a longer dry season. In response to the changing climate, some plant species within the Eel River basin migrated up slope as much as 300 meters in altitude. With longer, drier summers, the oak species currently found further to the south and to the east (in the Sacramento Valley), probably would have extended their range further northward and westward.

The vegetation associations within the southern portions of the Eel River basin during this era would have been similar to the more open Blue Oak/Gray Pine Vegetation Type (Küchler 1977: Map) found today in the Coast Range foothills along the western edge of the Sacramento Valley and to the south in portions of Mendocino, Napa, and Sonoma Counties.

Gray pine was more abundant than today and the oak savanna (dominated by blue oak/gray pine) and savanna vegetation associations were major components of the environment. Oak woodlands were likely to have been more widely distributed while Douglas-fir would have been more restricted. Natural wild fires, and possibly toward the end of the Xerothermic Period, anthropogenic fires, would have occurred periodically, helping to maintain or encourage these vegetation associations.

At higher elevations in the Yolla Bolly region, more arid winters favored the growth of western juniper, fox-tail pine, and aspen. These tree species had wider distributions than they do today, extending north to Scotts Valley along the interior of the Coast Ranges and Klamath Mountains. It has also been hypothesized (Keter 1995) that the some of the fauna of the basin would have been affected by these changes during the Xerothermic Period. For example, within the North Fork of the Eel River watershed, because vegetation moved up slope approximately 1,000 feet in response to warmer temperatures during the Xerothermic Period, the summer deer range was probably also somewhat higher in altitude than today. This rise in altitude would have reduced significantly the amount of habitat in this region available for summer range (today's summer range in this area is above 4,000 feet). Within the North Fork watershed and the region immediately to the east, many of the peaks and ridge lines (including Jones Ridge, Mad River Ridge, and Haman Ridge) are between 3,500 and 4,000 feet. The reduction in summer habitat and concentration of deer at higher altitudes (probably in areas above 4,500 feet) may help to explain the presence of so many Early Period prehistoric sites at higher altitudes in this region--for example, Government Flat, Estle Ridge, Soldier Ridge, and South Fork Mountain.

> In 2016 newly acquired information confirmed the hypothesis that it is likely beaver inhabited the Yolla Bolly Mountains as late as the 1860s or 1870s. See Keter 2016: *Beavers in the Yolla Bolly Mountains?* The pdf is located at the link below.
>
> http://solararch.org/uploads/3/4/0/3/34036807/beavers_in_the_yolla_bolly_mountains.pdf

The Xerothermic Period would also have affected the anadromous fish populations. Because of the warmer, longer, and drier summers (and in all probability diminished yearly rainfall and snowpack) during the Xerothermic Period, stream flows would have been reduced within the basin. The density and distribution of the riparian vegetation would probably have also been reduced. In view of the critical need for cold water temperatures and adequate water flows to maintain critical summer habitat, it is likely that there was a significant reduction in the number of anadromous fish within some of the more marginal water courses of the basin (for example, the North Fork watershed and possibly upper

portions of the main stem further to the south). The number of perennial springs in the region would probably also have been reduced, influencing both the distribution of deer and other species of wildlife and the selection of locations by the region's aboriginal inhabitants for temporary seasonal camps and villages.

It is not known just how a change in climate would have affected the distribution of the redwood/tanoak vegetation communities within the basin. Studies further to the west on the high ridgeline dividing the South Fork of the Eel River watershed from the coast near Usal have identified a number of what appear to be Early Period village sites (Peak and Noble 1983). It appears that when these villages were inhabited the dense redwood forest in this region was at least broken along the ridgelines by some prairies. This may have been the result of either climate or anthropogenic fire.

Post Xerothermic Period (3,000-2,500 B.P. to 1865)

By about 3,000 to 2,500 years ago, the distribution of plant species within the basin began responding to the increasingly more maritime weather pattern. Inland, in what is now the Bald Hills region of the basin, white oak and Douglas-fir began to move down slope and spread across the lower elevations as the more xeric species of oaks retreated to the south and east. It is likely that grasses, forbs, bulbous plants, and other plant species also responded to changes in both climate and distribution of tree species.

It appears (Keter 1995) that an extended period (measured in centuries) was needed for vegetation associations to respond to the changing climatic conditions (due to what might be termed "vegetative inertia" the tendency for a biotic community to resist change). Natural fire also played a role in slowing the rate of change taking place within plant communities in response to the moderating climate. Sometime during this era, aboriginal land-use activities (including anthropogenic fire and resource procurement activities) became major factors influencing the environmental dynamics of the region.

Chapter 2

Prehistory of the Eel River Basin

With a more maritime climatic pattern influencing the region, stream flows during the dry season increased. Moderating climatic conditions (shorter dry season, reduced evapotranspiration, and possibly increased precipitation) also provided for increases in groundwater flows and the number of live springs in the basin. At lower altitudes, along the stream courses of the region, habitat improved for anadromous fish species, and the availability of this resource probably increased over time. These changes in the environment, and the resulting increase in the availability of subsistence resources, would have made this area more attractive for permanent habitation by humans.

Within the South Fork of the Eel River watershed, it is likely that changes occurred in the extent and distribution of the redwood/tanoak forest region. More research is needed to document these changes; however, some of these changes may be reflected in site settlement patterning in the prehistoric record (for example, see Peak and Noble 1983).

It has only been within about the last two decades that any significant amount of archaeological research has been conducted within the North Coast Ranges. Much of this work has been accomplished on public lands as a result of federal laws and regulations related to cultural resources. Archaeological excavation and survey work on the Six Rivers National Forest, Mendocino National Forest, and on Bureau of Land Management lands in the King Range Conservation area have all contributed significantly in increasing our understanding of the prehistory of northwestern California. However, within much of the Eel River basin (except those portions within Six Rivers and Mendocino National Forests), little in the way of archaeological work has occurred (this is especially true for the Van Duzen and South Fork of the Eel watersheds). Therefore, much of the prehistory of the Eel River Basin remains to be written. To date, archaeologists in the North Coast Ranges have been concerned primarily with formulating a chronology for the region explaining when humans first entered this region, in developing an understanding of resource procurement strategies, and where human settlements were likely to have been located across the landscape.

Given the lack of research and the limited prehistoric data, the following overview for all three relevant watersheds is presented at the basin level.

North Coast Ranges Chronology

The Eel River basin extends north from the Russian River divide to Humboldt Bay. At this time, it is not clear when humans first entered and settled within the Eel River basin. For purposes of this overview, two chronologies are applicable---the first was developed for

the region just to the south of the Eel River basin around Clear Lake and the second for the inland higher altitude regions of the northern portion North Coast Ranges including the North Fork and upper Van Duzen River watersheds. Although no chronology has yet been formulated specifically for the Eel River basin, it is likely that prehistory of the basin lies somewhere within these two chronologies.

Chronology of the Clear Lake Region (Southern North Coast Ranges)

Studies to the south of the Eel River Basin near Clear Lake have placed the earliest occupation of that region at about 10,000 years ago (possibly as early as 12,000 B.P.). The following is a brief summary (see also Fredrickson 1984: 497-498) of the current chronology for the southern North Coast Ranges.

Paleoindian Period (ca 12,000 B.P.-8000 B.P.).

This period, represented by the Post Pattern is believed to represent the earliest occupation of the North Coast Ranges. Artifacts characteristic of this period include fluted projectile points and chipped stone crescents.

Lower Archaic Period (8,000 B.P. to 5,000 B.P.)

Represented by the Early Borax Lake Pattern, artifacts from this period include Borax Lake Wide Stem points, manos, and metates (the latter two are stone implements used for processing acorns, seeds, and other plant resources).

Middle Archaic Period (5,000 B.P. to 3,000 B.P.)

This period is represented by the Borax Lake Pattern. Artifacts characteristic of this period include non-fluted concave base projectile points, large leaf shaped contracting stem projectile points, and ground stone artifacts (including bowl mortars, metates, and pestles).

Upper Archaic Period (3,000 B.P. to 1,500 B.P.)

Artifacts from this period are characterized by contracting stem and lanceolate points, motars, pestles, manos, and , metates.

Emergent Period (1,500 B.P. to beginning of the Historic Period [c1850])

This period is represented by small corner notched , side notched, barbed points (possibly signaling the introduction of the bow and arrow into the region)

Northern North Coast Ranges Chronology

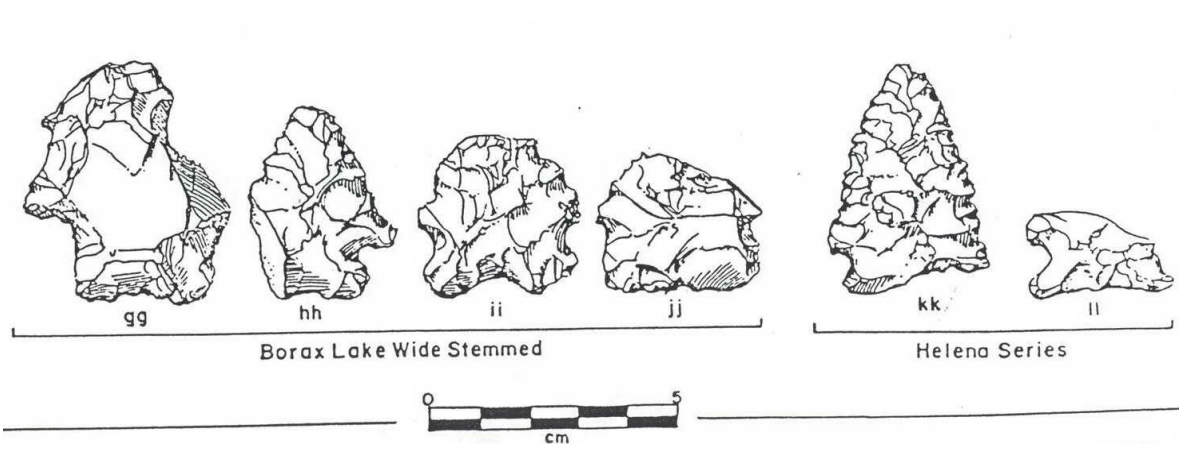
Immediately to the north and east of the Van Duzen watershed, excavations were conducted at a number of sites along Pilot Ridge and South Fork Mountain on Six Rivers National Forest during the mid-1980s by Sonoma State University (Hildebrandt and Hayes 1983, 1984; Hayes and Hildebrandt 1985). This work resulted in the formulation of a chronology for the inland, high altitude areas of the northern North Coast Ranges. This chronology also incorporated paleoenvironmental data and a catchment analysis formulated by Dwight Simons that permitted the investigators to integrate cultural chronology with paleoenvironmental data. It is likely that this chronology is especially relevant for the interior regions of the basin, including the upper Van Duzen, North Fork, and Middle Eel watersheds.

Researchers have found three broad cultural patterns for this portion of the North Coast Ranges. The definitions of these cultural patterns are based on chronology and artifact patterning. These time periods, and their primary characteristics, are summarized below.

Early Period (5,000-4,500 BP. to 2,800 B.P.)

The earliest period of human occupation in the northern portions of the North Coast Ranges is also sometimes referred to as the Borax Lake Tradition. It spans that period of time from the entry of aboriginal peoples into the region, approximately 4,000 to 5,000 B.P. to about 3,000 B.P.--roughly coincidental with the change in the region's climate at the end of the Xerothermic Period. Little is known about the first people to enter this portion of the North Coast Ranges, neither the language they spoke nor where they came from. The artifacts (Figure 2) found on prehistoric sites within and adjacent to the region dating to this period include the Borax Lake Pattern assemblage defined by large Borax-Lake wide-stemmed projectile points, milling slabs, handstones, relatively large serrated bifaces (worked on both sides with a saw-like edge on some portion of the artifact), and edge flaked spalls.

Figure 2
Early Period projectile points.
(Hildebrandt and Hayes 1984)



Several "single component" Borax Lake assemblages (i.e. all the materials recovered from a specific area of the prehistoric site dated from this time period) were identified. These assemblages show little variability from site to site (Hildebrandt and Hayes 1993: 110) and for the most part appear to be locations where a number of subsistence oriented activities (processing of both animal and plant resources) took place--inferring that family groups were camped at these locations. Further support for this hypothesis is the recovery from the Borax Lake components of these sites of a greater percentage of artifacts associated with food processing and household maintenance activities than were recovered from either Middle or Late Period single component sites. Early Period artifactual materials included handstones, spall tools, cobble tools, and drills.

One of the sites excavated on Pilot Ridge (Hildebrandt and Hayes 1983) contained a feature which appears to be the remains of a structure approximately 5 foot by 5 foot in size. Structural indicators included a possible compacted floor surrounded by three post holes (Hildebrandt and Hayes 1993: 110). This feature contained a significant number of artifacts, including 12 milling slabs (two of which were stacked one on the other), four handstones, three hammer stones and numerous bifaces, projectile points, flaked tools and cores. This feature represents the oldest structural remains to be found to date in this region of the North Coast Ranges (Images below).

Update!!

Twenty years after the Pilot Ridge excavations organic remains from the floor of the pit feature that had been forgotten and locked away in the Sonoma State archival collections were "re-discovered" and radio-carbon dated to nearly 8,000 years B.P.

The report noted that the sample date: "...turned out to be 7120 ± 50 radiocarbon years B.P., which calibrates to an age of 7945 cal BP, or nearly 8,000 years old. This date is one of the oldest ever obtained from a house structure in California."

See Fitzgerald and Hildebrandt Society for California Archaeology paper (no date):

WILL THE TRUE AGE OF THE BORAX LAKE PATTERN PLEASE STAND UP? THE ARCHAEOLOGY OF CA-HUM-573, AN EARLY HOLOCENE SITE ON THE SOUTH END OF PILOT RIDGE, HUMBOLDT COUNTY, CALIFORNIA.

web link:
https://www.scahome.org/publications/proceedings/Proceedings.15Fitzgerald.pdf

CA-HUM-573: note the stacked milling slabs.
(Image from Pilot Ridge report 1983)


CA-HUm-573: Mark Hylkema recroding data at one meter in depth
(T. Keter 1983)

CA-HUM-573: Excavation of pit feature
(T. Keter 1983)

It has been hypothesized that the people living in this region during the Early Period lived in small, highly mobile bands, probably consisting of one or a small number of extended families. These small groups utilized a "foraging" resource procurement strategy oriented towards a wide range of resources, but emphasizing little handling or processing time such as big game (elk and deer) and hard seeds. With this resource procurement strategy, little emphasis is placed on storage of food resources, rather "incongruities in the distribution of resources over time and space are solved by moving people from places of declining productivity to areas where foraging opportunities are enhanced" (Hildebrandt and Hayes 1993: 115). Thus, within the Eel River Basin and adjacent areas (for example Pilot Ridge and further south Soldier Ridge) during the Early Period, it is likely that relatively small, highly mobile groups inhabited the region for at least some portion of the year, moving from location to location as various kinds of resources became seasonally available for procurement. This subsistence strategy requires frequent moves by entire social units resulting in homogenous settlement site structure (i.e. little site-to-site variability) with similar generalized artifact assemblages (Hildebrandt and Hayes 1993: 115).

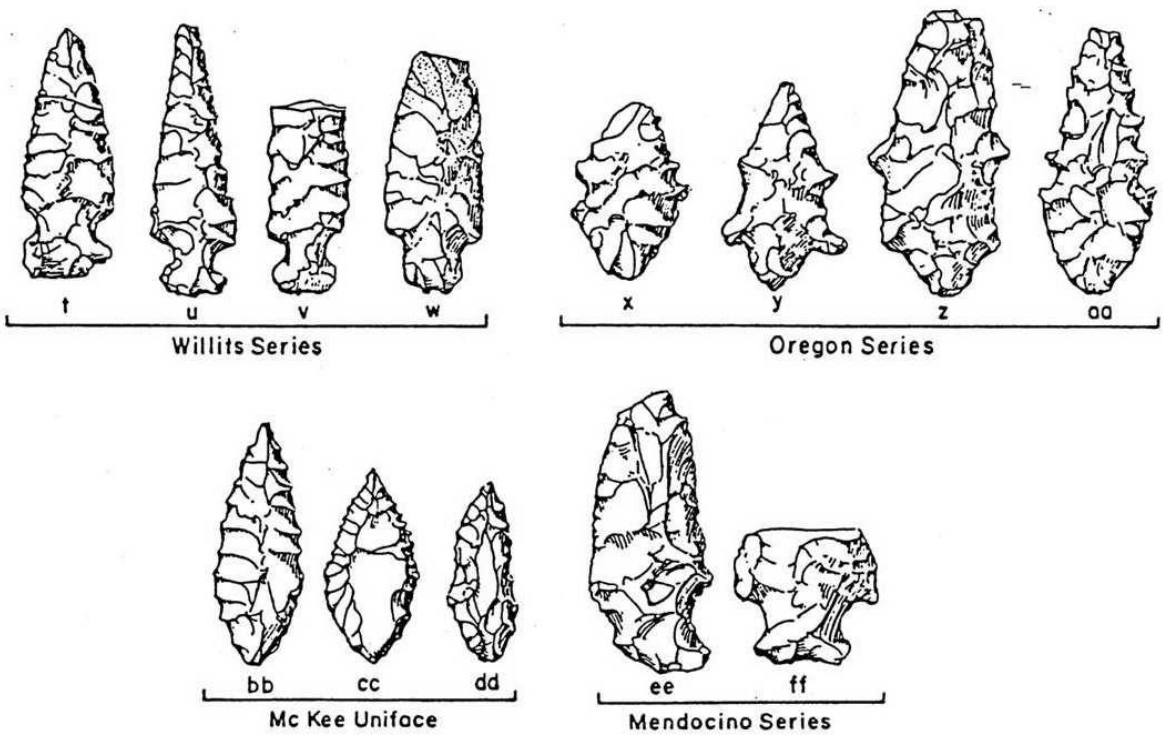
Even at this early date, human land-use activities related to subsistence resource procurement were having an effect on the environment. By this time, anthropogenic (human caused) fires, along with natural fires, were quite likely major forces influencing vegetation trajectories and environmental dynamics in this region. In addition, collection of certain plant species and the hunting of animals also influenced environmental dynamics

and trajectories. For example, the large Borax Lake projectile points were probably used on spear points or atlatl darts for the hunting of large game animals, including elk. It has been hypothesized that the over-hunting of elk and the resulting reduction in their numbers may have influenced the shift to the utilization of a wider range of resources including acorns.

Middle Period (2,800 B.P.-1,100 B.P.)

The Middle Period spans that interval of time between approximately 3,000 B.P. and 1500 B.P. The beginning of this period is roughly coincidental with the change in climate at the end of the Xerothermic Period. This change in climate has implications for the prehistoric record. It appears that montane forest began to increasingly dominate at higher elevations (above about 4,500 feet in the northern portions and 4,000 feet in southern portions of the basin). This change in vegetation distributions through time resulted in a shift in resource procurement strategies. The artifact assemblages recovered from single component site areas dating from this period include Willits Series, Mendocino Corner-notched and McKee projectile points, bifaces, flake tools, and mortars and pestles--see Figure 3.

Figure 3
Middle Period projectile points.
(Hildebrandt and Hayes 1984)



During this period, there appears to have been a decline in the intensity of use of the upland region. This decline is reflected in the archaeological record with a reduction in the

relative amount of Middle Period artifactual materials recovered from the high elevation sites when compared to the number of artifacts recovered from the Early Period.

Archaeological evidence suggests that it was during this time period, that the shift from a forager to a "collector" based subsistence strategy began to take place. Collectors store foods for some part of the year; usually in sedentary or semi-sedentary villages. In addition, rather than a need for group mobility, as in the forager resource procurement model, distributions of resources across time and space are solved by moving the resources to consumers, resulting in fewer residential moves. Land-use activities in relation to settlement patterns are, therefore, also changed. Under the collector strategy, intersite variability becomes more pronounced. There are, for example, residential sites (villages) as well as various other kinds of specialized sites used for the collection of specific resources. These resources (such as acorns, grass seeds, or deer) were gathered and/or processed at special use sites, then transported back to the main village locations (Simons 1983: 1.23).

In addition to changes in climate and vegetation species trajectories, another factor which might have influenced both site settlement patterns was the increase in population density. Population growth necessitates that more energy be extracted per unit of land. Generally this is accomplished by an increase in the range of resources utilized. That is, there is an increased use of lower ranked resources.

Given the intensification in the procurement of subsistence resources resulting from an increase in population density, the procurement of a wider range of resources, and the use of fire to promote the productivity of desired resources, it is probable that by the end of this period the environment of the region was being affected to some extent by human land-use activities. Over time, this dynamic between a more intensive use of natural resources and an ever-increasing human population could have been a significant factor influencing the evolution of the region's ecosystem.

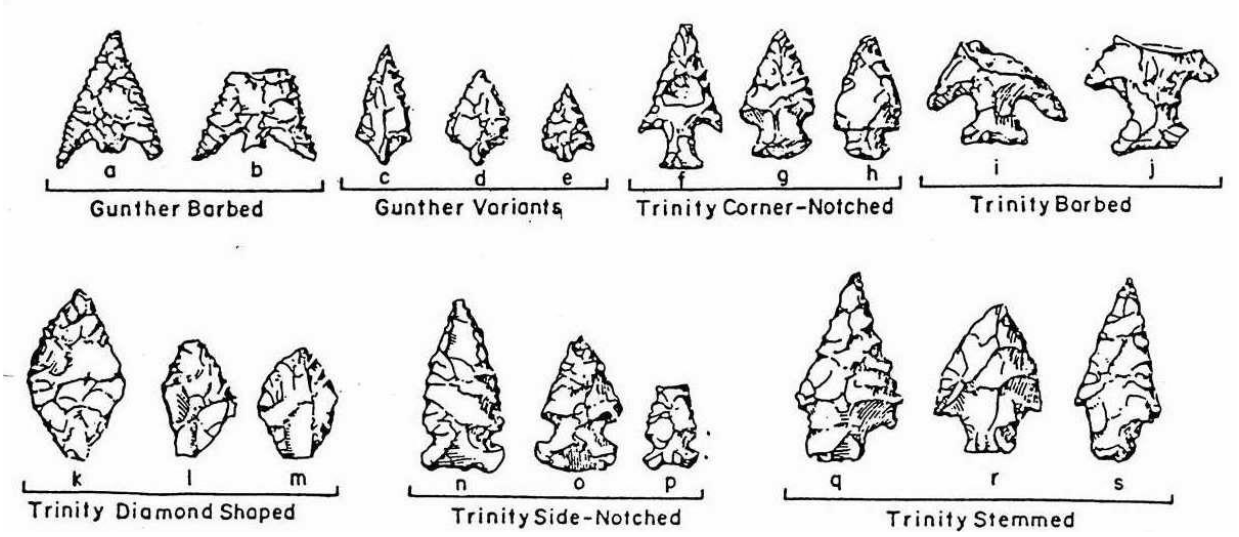
Late Period (After 1,100 B.P.)

This period extends from approximately 1,500 B.P. to the beginning of the historic era (often referred to as the Contact Period) and includes the ethnographic period (which will be discussed in greater detail in the next section). The artifact assemblages recovered from these sites were predominantly of flaked stone tools (ie. projectile points, cores, bifaces and other flaked tools [Hildebrandt and Hayes 1993: 112]) similar to artifact assemblages found in Middle Period components. Artifacts characteristic of this period include Trinity corner-notched, Trinity diamond-shaped, and Gunther series projectile points and milling equipment including the hopper mortar and pestle—see Figure 4.

Figure 4

Late Period projectile points.

(Hildebrandt and Hayes 1984)



It appears that there was a continuing increase in population density and intensification in the collection of lowland subsistence resources like fish and acorns. There was also more emphasis placed on the storage of resources for winter consumption. Sites located away from the sedentary village locations along the rivers are of a more limited and specialized nature reflecting their use as temporary camps visited for specialized resource procurement activities (Simons 1983: 1.26).

By the Late Period, aboriginal peoples, through their land-use activities and increased population density, were an important influence on the environmental dynamics of the North Fork watershed. Human land-use activities, by this time, were significant factors influencing the mix of plant species and animal species found in the region. The next section discusses in greater detail the effects of human land-use activities within the North Fork Eel River basin during the ethnographic period.

In this region, a theoretical dispute among archaeologists exists concerning the relationship between the peoples occupying the area towards the end of the Late Period (ie., the ethnographic period) and those living here during the Early and Middle Periods. One hypothesis suggests that the changing adaptations to the environment and the ethnographic cultural patterns present at the time of historic contact occurred in place and were relatively early in origin. The alternative hypothesis (Hildebrandt and Hayes 1993:116), also supported by linguistic data (Whistler 1979), contends that many of the adaptations related to the exploitation of subsistence resources and cultural patterns present during the ethnographic period were brought in by immigrant groups with "technological systems preadapted to the local resource base".

This second theory suggests that the original inhabitants, of at least the inland portions of much of the Eel River Basin in the Van Duzen Watershed, were ancestral Karuk (Hokan Stock) with a culture focused on an inland-oriented subsistence resource procurement

strategy. The evolution of both inland and coastal cultures during the later portion of the Late Period is summarized by Hayes and Hildebrandt (1993: 116).

Around 1,100 B.P., the Wiyot arrived and occupied previously under-populated and under-exploited coastal habitats. Soon thereafter, the Yurok settled along the lower Klamath and adjacent coastline, a process made possible by their superior technological abilities to fish, build boats, and store salmon. Marking the beginning of the Gunther Pattern, these arrivals are thought to be manifested archaeologically at a series of coastal sites containing Dentalium shells, bone and antler harpoon points, various woodworking tools, ceremonial obsidian bifaces, and ground stone zoomorphs, as well as a variety of other artifact forms.

The final wave of immigration were Athabascan speakers (the ethnographic Tolowa, Chilula, Hupa, Whilkut and southern Athabascans). Arriving about 700 B.P. and occupying areas peripheral to the Wiyot and Yurok, these groups possessed an acute knowledge of forest and riverine environment, and possibly an improved technological system that included the toggle harpoon and sinew-backed bow.

Archaeological Investigations within the Eel River Basin

Archaeological investigations within the Eel River Basin have taken place for the most part on sites located within the Mendocino National Forest on the upper portions of the Middle Fork of the Eel River and its tributaries (see for example, Edwards 1966, King 1966, King 1974, Jackson 1976, Holson and Fredrickson 1980, Holson 1986, Eidsness 1986, Waechter and Origer 1992, Huberland 1993). Given the large amount of territory encompassed by the Eel River basin, however, it is likely that these studies have only limited applicability to the remainder of the Eel River basin. For example, no substantial excavations have been undertaken farther to the north within the Van Duzen watershed.

Within the South Fork of the Eel watershed the only major excavation was undertaken by Ann S. Peak and Associates on Louisiana Pacific lands in 1983 within the Sally Bell redwood grove on the north-south trending ridge near the Usal Road several miles south of the Four Corners intersection at the northern Mendocino County line (Peak and Noble 1983).

In broad terms, and based on the two closely related chronologies presented in the last section, it is likely [based on the radio-carbon date discussed earlier] that humans first entered the Eel River basin at least 8,000 ago and that human land-use activities have influenced, to some degree, the ecosystem of the Eel River basin for thousands of years.

One possible hypothesis for the evolution from a forager- to a collector-based economy within the Eel River basin is that, prior to about 1,100 A.D., the more southerly portion of the basin was inhabited by the Yuki (or proto-Yuki) while the more northerly portions

were inhabited by Hokan speakers (proto-Karuk). This hypothesis is based on linguistic evidence (Whistler 1979), the proximity of the Yukian peoples directly to the south, and evidence related to the early arrival of Hokan speakers in the northern portion of Humboldt County. The linguistic evidence also suggests that these two groups pre-date Athabascan movement into the region (those aboriginal groups inhabiting the region during the ethnographic period). It is also possible that Penutian speakers (Wintu or proto-Wintu) from the east may have also utilized portions of the basin during this era.

The more intensified and diversified utilization of natural resources led to an increase in population and further specialization in the procurement of localized resources. Perhaps the arrival of Athabascan speakers was roughly contemporaneous with, or could only have occurred sometime after the region became more productive as a result of the changing climate.

Chapter 3
Ethnography

Use of the term Sinkyone

After living in Garberville for 35 years and meeting and consulting with many local Native Americans, as well as Wailaki living on the Round Valley Indian Reservation, I found without exception that the Southern Athabascan residents native to southwestern Humboldt County that I talked to consider themselves to be Wailaki and not Sinkyone.

I have not edited the following section regarding the term Sinkyone, but refer the reader to my 2009 paper (cited below) for further discussion. In that paper, I provide the names of a number of consultants and additional ethnographic data to support my conclusions. The 2009 paper also provides additional documentation on the problems with using the term Sinkyone as it is applied to the inland Southern Athabascans.

Use of the terms Wailaki and Lassik

It is clear given the common language and shared cultural beliefs of the Native Americans residing in southern Humboldt, northern Mendocino, and southwestern Trinity Counties during the ethnographic period, that at some higher level than Kroeber's small triblets the southern Athabascans (ethnographers have named Sinkyone, Eel River Wailaki, Pitch Wailaki, Lassik, and Nongatl) shared a common cultural and linguistic identity.

During my research over the years and in my interaction with numerous Wailaki from southern Humboldt, northern Mendocino, and southwestern Trinity Counties, as well as with Wailaki consultants living in Hulls Valley and Round Valley who had links to what has been delineated by ethnographers as "Lassik Territory"(see Baumhoff 1958), not one individual I have talked to considered themselves to be Lassik, but instead referred to themselves as Wailaki. This included descendants of Lucy Young (who despite being called Lassik by Merriam, Essene and Kroeber insisted that she was Wailaki) and descendants of Mary Major who were two of the principal informants for Essene and Merriam.

I have chosen in updating this paper to use the term " Lassik Wailaki" in order to infer that the two terms are equivalent and that like the North Fork Wailaki and Pitch Wailaki (see Goddard's field work on the North Fork) the Lassik Wailaki were a direct offshoot and therefore closely related not only through language and familial ties with the other Wailaki "triblets" (I prefer the term "communities" see Keter 1991, but they shared cultural beliefs and practices as well. Reflecting this broad cultural connection of the southern Athabascans it is interesting to note that today (2017), there is a local group of Native Americans in southwestern Trinity County that refer to themselves as the "Lassic Band of Wylacki-Wintoon Family Group, Inc."

The people living in this region prior to the historic era, referred to themselves collectively with some derivative of the term *ken'-es-ti* (personal communication: Fred Coyote Downey). As noted below, Merriam (1923: 276) claims that the southern Athabascans used the term "nongatl" to indicate "the name of their nation--covering all the tribes between Round Valley and Iaqua."

2009 All Those Things that You're Liable to Read in the Ethnographic Literature They Ain't Necessarily So. Paper presented to the Society for Archaeology, Modesto, CA.

The Eel River basin has been traditionally viewed by anthropologists as a culturally and linguistically complex region and as a transition zone between the California Culture Area that encompasses much of the state south of the basin and the Northwest Coast Culture Area which extends from about Humboldt Bay north along the Oregon and Washington coast into southern British Columbia. Thus, many of the groups living in this region are viewed by anthropologists as having cultural traits and subsistence and resource procurement strategies that have been influenced to some degree by groups residing to the north and to the south of the Eel River basin.

During the ethnographic period, the Eel River basin was inhabited by a number of linguistically and culturally diverse groups. To the north along the lower reaches of the river, the Wiyot (classified linguistically as Algonquin speakers) occupied the Eel River Valley from the mouth to somewhere south of the confluence of the Van Duzen. Much of the interior portion of the Van Duzen watershed, the South Fork watershed, and the North Fork of the Eel watershed were inhabited by several closely related Athabascan groups; while further south the upper Middle Eel and the upper Main Eel watersheds were occupied by the Yuki, Huchnom (Yukian language Stock) and Pomo (Hoakan language Stock).

More specifically, those groups most directly associated with the portions of the Eel River Basin discussed in this overview are presented below.

North Fork of the Eel watershed—Wailaki
(Pitch Wailaki, North Fork Wailaki, and Lassik Wailaki)
Van Duzen watershed-- Nongatl
South Fork of the Eel watershed--Sinkyone, Cahto,

This section provides a brief overview of these groups focusing on delineating their location with each of the relevant watersheds within the basin, as well as the primary settlement and subsistence strategy orientations of the various groups.

The Athabascan speaking peoples of northwestern California can be broadly divided into three distinct subgroups. The most northerly group was the Tolowa. Their territory centered on the coastal plain which fronts the high mountains and deep canyons of the Smith River drainage near the California/Oregon border. Further to the south, the Hupa, and the closely related Chilula and Whilkut, occupied much of northeastern Humboldt County along the Trinity River, as well as portions of the North Fork of the Mad River and Redwood Creek watersheds.

The most southerly group of the Athabascan speakers in California occupied the central and southern portions of Humboldt County, northern Mendocino County, and southwestern Trinity County. They have been referred to in the ethnographical literature as the southern Athabascans. They are the southernmost extension of Athabascan speakers along the Pacific coast.

The major groupings have been delineated as the closely related Wailaki, Pitch Wailaki, North Fork Wailaki, Wailaki Lassik , the neighboring Sinkyone, and the Nongatl. In addition, the Cahto, the southernmost-Athabascan group on the Pacific Coast (Myers Vol 8: 244) inhabited the region around Long Valley and Branscomb but appear, culturally, to have had more in common with the Yuki and Northern Pomo.

For purposes of this overview the southern Athabascans have been divided into two distinct subgroups based on the similarity of their cultures and the similar environments of their respective territories that appear to have produced similar subsistence procurement strategies and land-use activities.

Inland Southern Athabascans

The Wailaki, North Fork Wailaki, Pitch Wailaki, Lassik Wailaki, and Nongatl occupied the more inland regions of the Basin, including much of the Van Duzen watershed, all of the North Fork of the Eel watershed, and the main stem of the Eel River below about Outlet Creek. This region has been referred to as the "Bald Hills." It consists of a northwest to southeast trending swath of oak woodlands and savanna in the North Coast Ranges lying between the redwood-tanoak belt to the west influenced by the Pacific Ocean and the higher altitude distributions of montane forest to the east. The Bald Hills stretches south from about Pilot Ridge to Round Valley.

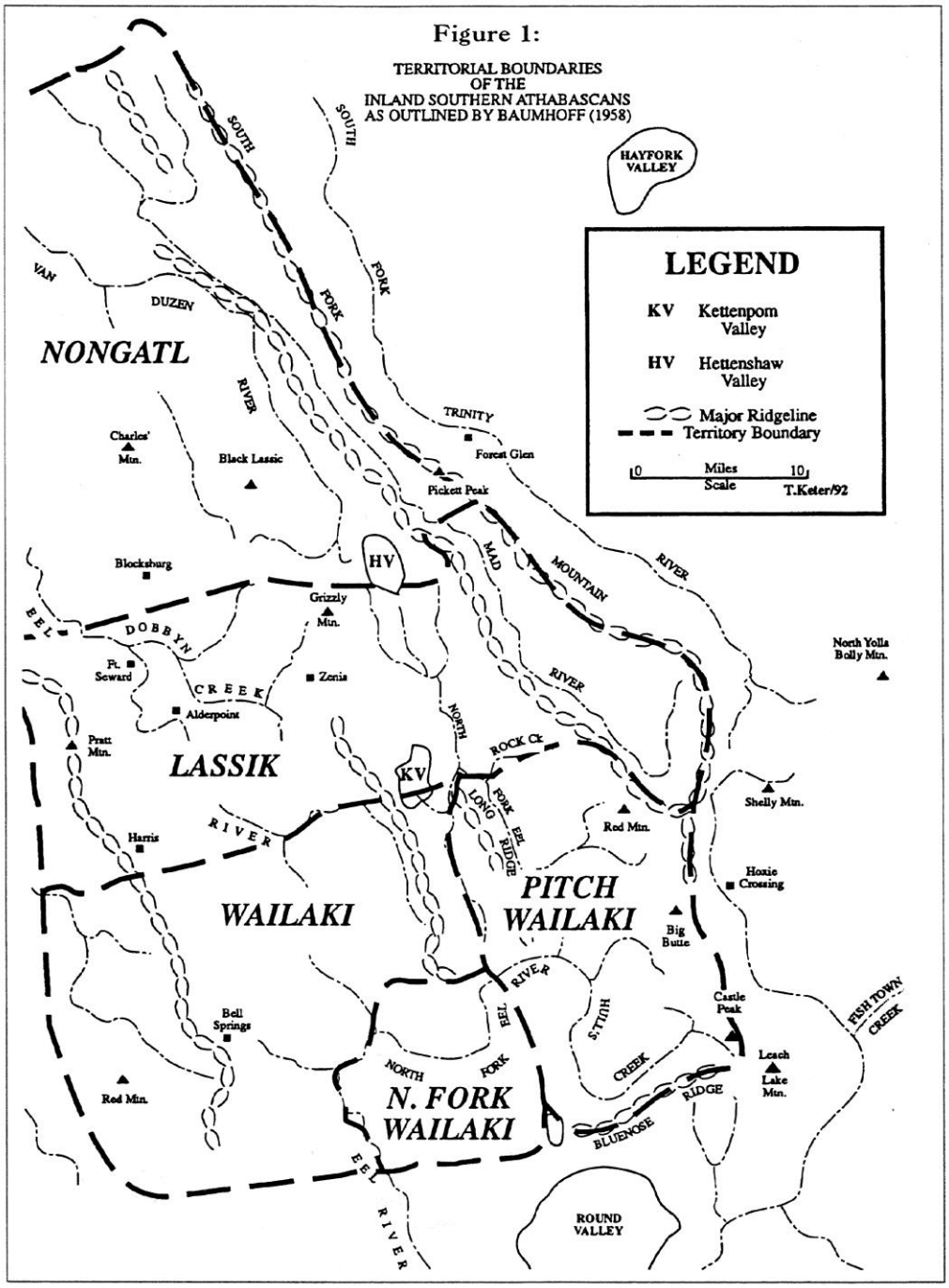
Coastal Southern Athabascans

The Sinkyone occupied the region immediately adjacent to the coast and the redwood belt that includes the South Fork of the Eel River watershed. The subsistence strategies in this region of the basin were oriented more towards anadromous fish and coastal resources (including marine mammals); with some upland use but not as much as for the inland groups. Redwood forests tended to dominate much of the lower river and stream channels.
It is likely that the Cahto, inhabiting the region immediately to the south of the Sinkyone in the headwaters region of the South Fork Eel watershed, pursued a similar subsistence procurement strategy. It appears the Cahto, however, had much more in common with their neighbors to the south that with other southern Athabascan groups.

North Fork of the Eel River Watershed:The Inland Southern Athabascans

The Pitch Wailaki, Lassik Wailaki, and North Fork Wailaki occupied the entire North Fork of the Eel River watershed and adjacent region. These groups were closely related

linguistically and culturally with the Wailaki who inhabited the main stem of the Eel River between Nongatl territory to the north, and Yuki territory to the south.. Martin Baumhoff (1958) has delineated the territory of each of these groups based on a review of the work of the early ethnographers who worked in the region (Goddard, Merriam, Essene, and Kroeber). Figure 1 delineates the boundaries of the groups inhabiting the North Fork watershed based on Baumhoff (1958) and additional research by Keter (1993).



Baumhoff (1958:167), who summarized the work of the ethnographers who worked in the region in the early 1900s, writes “Kroeber was able to devote to them [Wailaki] only a little more than three pages in the Handbook [of the Indians of California, (1925)] and we know scarcely more today.” Even less is known of the Pitch Wailaki, North Fork Wailaki, and Lassik Wailaki. Only one short monograph has been published on the Pitch Wailaki (Goddard 1924) and except for Frank Essene’s Cultural Element Lists (1942) that includes the Lassik Wailaki, no studies were ever undertaken specifically concerning the Lassik Wailaki or North Fork Wailaki.

Part of the problem with defining the territorial boundaries of the southern Athabascans in this region is related to differences in world view and culture between the anthropologists who documented the group boundaries and the Indian people. To the anthropologists working in the area:

> defining boundaries was a product of western logic conceived as strict demarcations that were well defined and agreed upon. However, as George Foster (1944: 157) noted, "in the minds of the Indians exact boundaries were never known" (Keter 1993: 44).

It is likely, therefore, that the territorial boundaries of the peoples living in this region were more complex and ambiguous than the lines confidently drawn on the map by ethnographers. The author has summarized this problem (Keter 1993: 48) related to delineating ethnographic boundaries in this region:

> No doubt certain portions of their homelands were well defined. For example, ownership extended to the immediate area surrounding the village. This might change, however, if another, related community was in need of resources controlled by a particular village. In that case cooperation and resource sharing would occur. Also, ownership was sometimes claimed and territory defended by a particular extended family or community at a location rich in a particular subsistence resource within what might be termed their core territory...In other instances, territory was claimed by two or more groups further complicating the efforts of ethnographers.

It is more likely that there were no hard and fast "tribal" boundaries. Rather, boundaries between groups and communities were dynamic and varied over time based on the relations between individuals and among communities. For the Athabascans living in this region of northwestern California,

> [T]he key to understanding "boundaries" lies in the socialization and affinal ties among the peoples who inhabited the region. Their concept of family influenced all aspects of culture. None of the communities...were self-sufficient. They relied on trade and cooperation in obtaining subsistence resources which were both needed and desired. Effective communications

> and cooperation developed through extended kinship ties were primary factors in the ability of the inland southern Athabascans to successfully and effectively exploit their environment (Keter 1993: 49).

For the reasons outlined above, it has been suggested (Keter 1993: 43) that all of these groups (Wailaki, Lassik Wailaki, North Fork Wailaki, Pitch Wailaki) were part of what can be termed the "greater Wailaki group."

Subsistence Resource Procurement Strategies

The Wailaki were, in general, more dependent upon a wider range of plant and animal resources for their subsistence than the more riverine oriented groups to the north (for example the Wyiot, Hupa, and Yurok) and quite likely the coastal southern Athabascans living further to the west in the South Fork watershed.. Unlike the river-oriented peoples who tended to occupy their villages year around, the Wailaki tended to spend some portion of the year (possibly as much as three to six months) away from their river village sites living in the mountains.

The Seasonal Round

The Wailaki occupied semi-permanent villages located along the major water courses (all of the Pitch Wailaki and North Fork Wailaki villages were along the North Fork, some of the Lassik Wailaki villages were located on North Fork north of about Rock Creek) and followed a resource procurement strategy that has been termed the seasonal round or transhumance. This subsistence strategy involves the movement of extended family groups through their territory in order to procure subsistence resources as they become seasonally available. Year-to-year strategies varied depending on environmental conditions effecting the distribution and availability of various procurement resources.

A general model (adapted from Keter 1995) of the yearly seasonal round applicable to the Wailaki is presented below.

Spring

Spring marked the end of the long winter season in which stored resources, including grass seeds and acorns, were the primary staples. One of the earliest food resources to be collected this time of year were the young leaves and stems of a number of plants, including clovers, referred to collectively as "greens." Essene (1942: 84) wrote that "the earliest clover is eagerly gathered as greens [and] have been a conspicuously absent dietary item during the past season." During March and April, anadromous fish were also available for procurement by the Lassik Wailaki in the North Fork of the Eel River.. In the main Eel and

the North Fork of the Eel there were small runs of both spring steelhead trout and spring Chinook salmon. In late April and early May there was also a run of Pacific Lamprey in the North Fork. This run lasted for about three to four weeks. It is likely that other southern Athabascan groups also procured Pacific Lampreys.

It was sometime during the spring when communities and extended families began to leave their winter villages to start their seasonal round. In the Bald Hills region east of the main stem of the Eel River region, this travel most often was not over great distances, rather, it was a gain in elevation. The usual pattern was for each extended family to travel alone. Sometimes, however, several families might be together for weeks at a time. At certain times of the year families would gather at a location (for example Kettenpom Valley, Red Mountain, or a particular spot on South Fork Mountain) when a particular resource was abundant. This gathering of extended families or even a number of communities also provided the opportunity to socialize. Therefore, in addition to the ready availability of subsistence resources, cultural factors including socialization and the need to share environmental information on the availability and location of particular resources were also considered in selecting the location of seasonal camps.

Bulbous plants including certain species of Brodiaea, Camus, and Lillium began to mature in late March or early April. V. K. Chestnut (1974: 322) writes, "no where in the world is there more characteristic abundance and variety of bulbous rooted liliaceous plants than in California." The bulbs of these plants are highly nutritious with a nut-like flavor and were collected in great quantities. Subsequent to the historic era they were referred to as "Indian Potatoes."

One of the most important of these bulbs was *Camassia leichtlini*. The Wailaki referred to this bulb by its Wintu name--Ket' in. This bulb was found in great abundance in the North Fork watershed (especially at Kettenpom and Hoaglin Valleys) in the month of June. It is likely that bulbous plants were also abundant in the upper Van Duzen River and South Fork of the Eel River watersheds.

Deer were also an important food resource during the spring. In the North Fork Eel River watershed deer travel in herds during the winter and spring. During this time communal hunting was practical because of the large numbers of deer (see also Foster 1944: 161). Women and children would drive the deer up slope. Snares were set where game trails came together at low gaps in the ridgelines. A hunter would be located near the snare to shoot or club any deer avoiding the snare. During certain times of the year (including the spring) a deer drive would be organized every two or three days and there was no need to preserve meat because of the abundance of deer.

Summer

With the arrival of summer the hillsides began to dry out and the availability of plant

resources at the lower elevations began to decline. Deer also tend to leave the lower elevation country with most summering on the ridgelines and mountain areas above about 4,000'. The mountain encampments usually consisted of simple brush shelters, conical bark houses, or people simply slept under the stars (Essene 1942: 12, 57).

Lucy Young (an elderly Lassik Wailaki woman who was a primary informant for Essene and Merriam) indicated that summer was a "good time" because of the abundance of food resources (Murphy Ms.). Some of the most notable things about summer in this region were the wide variety of plant resources collected and the distances that families sometimes traveled to pursue resources or to socialize. This may indicate that while there were a great many food resources available but that these resources were not available in large quantities at any one location.

Fall

By late summer and early fall, the extended families began returning to their winter villages. Fall was a critical time of year when the winter food supply was collected and stored. The most important food resource in this region was oak acorns (Chestnut 1974:333). Lucy Young told Frank Essene (1942: 55), "[i]f Indians ain't got acorns it seem like he ain't got nothing." The species of oak acorns available in this region were white oak, black oak, and tanoak. A year's supply, about 400-500 pounds of acorns, was collected by each family. Lucy Young indicated that in her community tanoak acorns were considered best for acorn soup while white and black oak acorns were best for bread (Murphey 1941: 359).

Hazel nuts were also prized and hazel branches and shoots were used as basketry materials. Gray pine nuts were another important storable food resource found in the North Fork Basin. Grasses, that began to mature as early as July, were collected and along with other seed resources such as sunflower seeds and tarweed were used to make *pinole*. Pinole stored well and next to acorns was the most important winter staple. Both grass seed and acorns (except tanoak in some locations) were most likely available in significant quantities within a reasonable distance of the river villages. Deer begin to move down into the lower elevations of the Yolla Bolly country by October and would also have been available as a food resource. Significantly, there were no fall runs of anadromous fish in the North Fork of the Eel River (Keter 1995).

Winter

By mid-to-late November, winter usually arrives. Merriam (Ms.) noted that this time of year, the families of each community were scattered along the rivers in small rancherias consisting of four to seven families living in two or three houses. Each house was inhabited by about seven or eight people. Houses were excavated to about two feet and were made

of split pine (probably ponderosa with cedar used when available as it splits easily) slabs standing upright or sloping in at the top to form a conical house (some ethnographers recorded bark covered houses; see also Curtis 1924, Baumhoff 1958:176).

In preparing for the long winter, families would pile firewood in a dry place and fill their storage bins made of hazel and willow branches with acorns. Important winter staples included seed resources (for pinole), dried meat, and acorns.

Van Duzen Watershed--The Nongatl

The territory of the Athabascan speaking Nongatl included most of the Van Duzen River watershed as well as portions of the Mad River basin stretching from Bug Creek south to about Jonathan Creek. Very little ethnographic data was recorded for the Nongatl. Alfred Kroeber (1925) included only one paragraph in his seminal work, Handbook of the Indians of California. Albert Elsasser (1978:203) who summarized the ethnographic data on the southern Athabascans for the Smithsonian Institution series on the Indians of North America wrote:

> Because of their isolated geographical situation, these five tribes have been among the least known to California ethnography. It is only by combining data from several different and limited sources that these Athapaskans can be placed in the well-known cultural patterns of northern California.

The only ethnographic data recorded for the Nongatl is related to some village locations (about 31 were recorded in the Bridgeville region along the Van Duzen) and other similar ethnogeographic data (Baumhoff 1958:181-184). The Nongatl lived in circular, conically-shaped houses, constructed from bark or wood slabs that were not excavated.

The Nongatl were subdivided into a number of bands or "triblets." Baumhoff noted a number of village sites within some of the major watersheds of the Van Duzen including Yeager, Indian, and Larabee Creeks. Despite the lack of ethnographic data, archaeological evidence suggests that the use of the Van Duzen watershed for subsistence resource procurement was extensive. Tangible evidence of this use includes numerous sites (including village sites) within the watershed containing Late Period materials, including Gunther barbed projectile points.

Land-use Activities and their effects to the Environment

It is likely that the subsistence strategy pursued by the Nongalt was a seasonal round was similar to that of the Wailaki. The upper portion of the Van Duzen watershed and the territory that extended further east into the Mad River Basin were quite similar to the North Fork watershed. Ethnographic data are lacking, however, it would appear that the

Nongatl inhabiting villages along the lower portions of the Van Duzen (to the west of about Bridgeville) may have had a more riverine oriented subsistence strategy similar to that of the Sinkyone inhabiting the South Fork of the Eel.

The South Fork of the Eel: The Coastal Southern Athabascans

The coastal southern Athabascans were closely related linguistically and culturally to the Wailaki. The main difference was that their territory was influenced to a greater degree by maritime conditions and there was a wider distribution of conifers (especially redwood forests). In addition, many of these communities had direct access to maritime resources including fish and marine mammals. The following groups occupied portions of the South Fork Eel watershed during the ethnographic period:

Sinkyone

The Sinkyone were closely related culturally and linguistically with the Wailaki (see comments at the beginning of the chapter about the questionable use of the term Sinkyone for the Native Americans living in this area). It appears, however, that riverine resources were somewhat more abundant within the territory of the Sinkyone when compared to the inland southern Athabascan groups. Elsasser (1979: 193) notes that among these closely related groups,

> ...only the Mattole and Sinkyone appear to follow the pattern of the lower Klamath River peoples like the Yurok and Karok in exploiting fish as a primary resource, more than game and acorns.

In addition, some Sinkyone communities had direct access to marine resources.
Due to linguistic differences, some of the early ethnographers (for example Merriam and Kroeber, c.f. Baumhoff 1958: 184), further subdivided the Sinkyone into two groups--the Lolangkok and the Shelter Cove Sinkyone. The Lolangkok occupied the portions of the main Eel south from Shively on the east side of the river to about Dyerville and all of the South Fork of the Eel watershed south to almost Phillipsville. The Shelter Cove Sinkyone occupied a portion of the South Fork watershed south from Phillipsville to Cahto territory in the headwaters region of the South Fork as well as a portion of the coast south from Matole territory to about the mouth of Usal Creek.

Early 20th century ethnographers (see Baumhoff 1958 for a review of the ethnogeographic data) recorded numerous village sites along the South Fork and its main tributaries (including Bull, Salmon and Redwood Creeks). Martin Baumhoff (1963:173) indicated that of the southern Athabascan groups only the Sinkyone and Nongatl (those communities along the lower Van Duzen) had a “primary” part of the Eel River within their territory.

Given this greater focus on riverine resources and the fact that much of their territory was within the redwood belt, it is likely that the Sinkyone followed somewhat less of a seasonal round traveling through the mountainous country of their territory during the summer than did the Wailaki. In addition some of the Shelter Sinkyone communities (and quite possibly Lolangkok communities with kinship ties to the Shelter Cove Sinkyone) had access to the coast and the associated subsistence resources (including large marine mammals).

Cahto

The Cahto were the southernmost Athabascan speaking tribe along the Pacific coast. They occupied the upper reaches of the South Fork of the Eel River watershed. Most of their village sites were located in Long, Cahto, and Jackson Valleys. Historically, they have been recognized as somewhat apart culturally and linguistically from the other southern Athabascan groups. Given their location adjacent to Yuki territory, and only a short distance from northern Pomo territory, they appear to have been much more influenced by their southern neighbors than the other Athabascan groups. Ethnographers noted that in many Cahto villages, Pomo was spoken as a second language (Myers 1979:244). In addition, the Cahto share many religious and cultural affinities with the Northern Pomo and Yuki. As with the other southern Athabascan groups, however, there is a lack of ethnographic data.

Much of the region inhabited by the Cahto contains heavy timber, including dense redwood forests. Given this fact and the lack of ethnographic data, it is not clear to what extent the upland regions were used. It appears that most of the villages, however, were located along the river and creeks in Long, Branscomb, and Cahto Valleys.

Seasonal Round: The Coastal Southern Athabascans

It is likely that the coastal groups followed a subsistence strategy similar to that of the inland groups. It appears, however, that the Sinkyone relied somewhat more on anadromous fish that the inland southern Athabascans. Another main difference was that many of the Sinkyone communities spent at least some portion of each year at the coast. Also, given the lower altitude of the mountains adjacent to the South Fork of the Eel River region as compared with the interior Coast Ranges, it seems likely that more time was spent in their villages with occasional trips to the mountains for specific resources.

Chapter 4

The Historic Period:
The North Fork of the Eel River Watershed

This purpose of this chapter is to present a brief overview of the historical development of the North Fork of the Eel River watershed. The historic era for this region has been divided into five distinct periods-- each defined by distinct socio-economic themes that dominated the land-use activities taking place.

1854-1864	Conflict and Historic Settlement Period
1865-1904	Ranching Period
1905-1945	Homesteading Period
1946-1970	Post World War II Period—Development and Resource Extraction
1971-	Modern Era (back-to-the-land movement)

Exploration and Early Settlement 1854-1865

[The following information is abbreviated and summarized from *The Conflict and Settlement Period* Keter 1990 a pdf of this paper is available at solararch.org.].

The first Euro-Americans to enter the North Fork watershed were probably the Kelsey party and the Asbill brothers in May of 1854. The Kelsey party was commissioned by a group of Petaluma merchants to locate a route for a trail between Sonoma County and the mines in Trinity County. Frank and Pierce Asbill and their friend mountain man Jim Neafus planned to winter in the region hunting deer and tanning the hides which were in great demand in the mining districts. They traveled north through Round Valley and into the North Fork watershed passing over Long Ridge and spending the night of May 16, 1854 camped at Soldier Basin (see Keter 2017 TCHS: B02). The next day they continued north into Hettenshaw Valley (in the Van Duzen watershed). The Asbills and Neafus remained here, establishing a camp near the southern end of the valley, while the Kelsey party continued on.

Throughout the winter, hundreds of deer were shot, skinned, and their hides tanned. In just one day, for example, Jim Neafus shot 35 deer with his muzzle loader and skinned them. They often were able to shoot whole herds of deer at one time by driving them up canyons into deep snows where they could easily be shot (Asbill ms: 29).

In April 1855, Pierce Asbill transported the hides to the central valley crossing the southwest facing slope of North Yolla Bolly Mountain on what was to become known as the

Humboldt Trail. He sold the hides to Kingsley's Trading Post near present day Red Bluff. Upon his return to Hettenshaw Valley, the men then headed south to the Round Valley region.

The rich grasslands of the Yolla Bolly country (the region stretching to the east of the main stem of the Eel River to the crest of the Yolla Bolly Mountains from about Alderpoint south to about Round Valley) were immediately recognized as being prime grazing lands by miners exploring the region for gold and those just passing through to the mines in northern Trinity County. By the late 1850s, a number of ranchers had moved into Round Valley despite its being set aside as an Indian Reservation. As the ranchers increased the size of their cattle herds, and as these herds ranged further and further into the country surrounding Round Valley, they began to have a serious effect on the ability of the Indian groups in the region (including the Wailaki living in the North Fork watershed) to procure a sufficient amount of subsistence resources to survive.

The settlers moving into the region had little regard for the property rights of the aboriginal groups and viewed them merely as impediments to establishing their ranching operations. Lynwood Carranco and Estle Beard (1981) chronicle the actions taken by ranchers and other residents of Round Valley during this era in their book *Genocide and Vendetta*. When the Indians began to resist the ranchers the result was, more often than not, violent and bloody retribution against the nearest Indian encampment whether they were guilty of anything or not. Referring to the Round Valley region in the late 1850s, J. Ross Browne reported that "a war of extinction against the...Eel River...Indians was being waged" (Miller 1975: 8).

The period from about 1860 to January of 1865 was marked by numerous confrontations within the North Fork watershed and throughout much of northwestern California between the Indians and the military and local settlers. This era of conflict between the Native American groups desperately trying to retain their ancestral lands and the newly arrived settlers in what are now Del Norte, Humboldt, Trinity and northern Mendocino Counties is referred to collectively as the "Indian Wars of the Northwest" (Bledsoe 1885) and has been chronicled elsewhere (see Bledsoe 1885, Carranco and Beard 1981, and Keter 1990).

By late 1864 nearly all of the Native Americans who had inhabited the Eel River basin were gone. Many were killed by the military and armed bands of settlers, others died of disease, some were sold into slavery, while most of the survivors were placed on Indian Reservations (primarily at Round Valley, Smith River, and Hoopa)(Keter 1990) . By January of 1865, it was reported that "Lieutenant Middleton, Company C arrived at the Peninsula [Humboldt Bay] with a large number of prisoners, comprising the last of the hostilities in Trinity County" (Bledsoe 1885:209). Only a few survivors remained in the mountains and Bledsoe (1885: 209) noted that they were "too few in number to be feared or avoided."

Land-use Activities and the Environment

The period from 1854 to 1865 can be viewed as a transition era. At the beginning of this era, hunter and gathers still pursued a traditional way of life within the North Fork watershed. By the end of the era, ranchers and homesteaders were beginning to move into the region along with large numbers of livestock. Therefore, as of 1865, the North Fork watershed still remained largely unaffected by any historical land-use activities.

Ranching Period 1865-1905

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[The following section is condensed from Keter 1994 *The Ranching Period in the North Fork of the Eel River Basin 1865-1905.* A pdf of this document can be found at solararch.org]

The Ranching Period covers that interval of time beginning in January of 1865, and ending in April of 1905, when President Theodore Roosevelt signed a proclamation creating the Trinity Forest Reserve. During the Ranching Period, the primary human land-use activities taking place within the basin were the result of the farming and subsistence activities by a few settlers living on small, isolated, widely-scattered homesteads and the grazing of livestock on the rangelands of the region. For the most part, the large herds of sheep and cattle that grazed the savannas and oak woodlands of the North Fork basin were owned by ranchers with large-scale operations who lived outside the basin. These ranchers, due to their economic and political power greatly influenced the types and intensity of land-use activities, as well as historic settlement patterns within the basin.

Despite its productive grasslands, the North Fork basin was not an easy place to establish a ranch or homestead. The region is extremely rugged and in the winter torrential rains can swell the North Fork and its tributaries to raging torrents making travel difficult and dangerous. Some years, deep snows can lie on the high ridges all but isolating the basin for months at a time. In the summer, rain almost never falls, most creeks dry up, water is difficult to find with few perennial springs, and the land bakes under the hot summer sun. It was also remote from population centers and there was a total lack of transportation except by horse, mule, or on foot due to the rugged terrain. For these reasons, much of the North Fork watershed was by-passed when homesteaders first entered the North Coast region.

George White, the "King of Round Valley"

During much of the Ranching Period, perhaps an even greater impediment to homesteading within the North Fork watershed than those mentioned previously was the determination of George White, a rancher living in Round Valley, to create a ranching empire in the Yolla Bolly country--and he achieved much of his goal. For several decades White was a major force influencing the settlement, or more precisely the lack of

settlement, within the North Fork Basin. Lynwood Carranco and Estle Beard who authored *Genocide and Vendetta* a book on the history of this region, noted (1981:217) that

> George E. White had full control of this vast territory [including much of the North Fork watershed] in the 1860s, the 1870s, and most of the 1880s. The land was not surveyed until the mid-1870s, and there were no taxes to pay. The settlers were literally kept from settling in this area by White's outlaw buckeroos.

The fact that George White "controlled" much of the North Fork watershed influenced to a significant degree the type and intensity of land-use activities taking place within the North Fork watershed until almost the turn of the century. At the height of his power and influence, he was known as the "King of Round Valley." He paid politicians to pass favorable legislation, bribed lawmen to look the other way, and paid judges to provide favorable rulings. White often boasted that he controlled the judges in three counties and according to an article in the *San Francisco Call*; he was considered the richest rancher in northern California. His "buckeroos" led by the infamous Wailaki John managed to prevent a significant number of homesteaders from moving into the North Fork Basin (see Carranco and Beard 1981:217-308 for a more complete overview of White).

Only a few days after brothers Frank and Pierce Asbill and their friend Jim Neafus had passed through Round Valley on May 15th of 1854, George White and a party of men traveling west from the Sacramento Valley in search of gold accidentally discovered the valley. White immediately recognized the potential for raising livestock as the rangelands of this region were some of the most productive in the state. The perennial bunch grasses were high in nutrients and grew as tall as the men's horses and there was no underbrush since the Indians periodically burned much of their territory. In 1856, two months before Indian Agent Simon Storms crossed over from the Nome Lackee Reservation to claim Round Valley as an Indian Reservation, White preempted 1,000 acres at the southern end of the valley (Carranco and Beard 1981: 219).

White's holdings grew at a steady rate and his ranching business prospered. By 1860, he controlled over 5,000 acres of land. During the late 1860s and early 1870s, White continued to acquire land within the North Fork Basin and elsewhere in the Yolla Bolly country. In some instances, White used his hired men to homestead in the Yolla Bolly country on parcels of land containing perennial springs. Once they acquired the land the title was then transferred over to White. White also loaned money to subsistence homesteaders who were trying to settle on small parcels of land in the back county. When their five years were up and they could claim the land, White would then purchase the land--usually having loaned the homesteaders so much money they could not pay up. Often, these men would then join White's infamous buckeroos (Carranco and Beard 1981:222).

By controlling the water, White was able to control much of the grazing land in the Yolla

Bolly country. This strategy for controlling large areas of public lands was common during the late nineteenth century throughout the rangelands of California. In 1886, Hubert Visher (in Burcham 1981:195) noted that:

> There are ranges covering thousands of acres which are controlled (not owned) by sheep men, their holdings simply covering strategic points of the range, possession of water sources generally sufficing in itself to attain the desired end. Holding these points, the balance of the range is of no value to anyone else, and his herds range undisputed over public lands. These lands are effectually excluded from settlement, the county and state governments deprived of legitimate sources of revenue, and at the same time valuable public property rapidly is going to waste.

Between 1881 and 1883 White acquired numerous parcels of land in southern Trinity County substantially increasing his holdings and tightening his control of the Yolla Bolly country. The Weaverville newspaper, the *Trinity Journal* (March 12, 1881), reported that:

> Many deeds: no less than 36 transfers of real estate in the south-western portion of this county have been recorded here during the past week. Most of these deeds were for land sold to George E. White, with an occasional transfer to William Pitt White and to White & Wathen. That portion of our county is fast getting into a very few hands.

By the mid-to-late 1880s, White controlled much of the Yolla Bolly country to the north of Round Valley including much of the North Fork watershed and parcels of land as far north as the Blocksburg area and as far east as the slopes of South Fork Mountain.

By 1890, through fraud, murder, arson, the filing of dummy homestead applications, the buying up of abandoned homesteads, and other land grabbing schemes (some of which were legal), White owned about 150,000 acres. Included were approximately sixteen strategically located parcels (situated around perennial springs and varying in size from about 160 to 320 acres equal to one or two homesteads) totaling about 2,600 acres (Lowden 1897) within the North Fork watershed. In 1890, from his ranch in Round Valley, he ran about 1,000 head of cattle and about 30,000 sheep and he marketed some 40 tons of wool (Ward ms., Heady n.d. Appendix IV).

White maintained his control of the Yolla Bolly country through violence and intimidation. Carranco and Beard (1981:220) note that he:

> had only two rules for the few homesteaders who had claims: that they should run no more stock on their land than their feed or water would permit and that they should keep their mouths shut no matter what they saw or heard.

His gang of thugs, known as "White's Buckeroos", was led by John Wathen who was known and feared far and wide as "Wylackie John." Carranco and Beard (1981:230) wrote of Wylackie John and his dedication to his boss George White;

> He was a remarkable man: he did not smoke or chew tobacco, he dressed well for the mountain country; he kept himself very neat, and he was suave and polite to the local people, always touching his hat and inquiring about their health.
>
> But Wathen's kind facade hid an unscrupulous man; he had no conscience for right or wrong. He was a robber, a poisoner, an arsonist, a perjurer, and a murderer. He was an absolute genius at planning evil, and he employed all his talents with tireless energy in the interests of his master, George E. White.

Throughout the North Fork region during White's era of power, occasionally an individual or family would attempt to homestead a small parcel of land. Most often they would arrive with a few horses and a small number of livestock. Often the homesteader's springs were poisoned, their stock ran off or stolen--branded with White's Crop-and-Lop brand and mixed in with White herds. In some cases, when someone refused to be intimidated or to get off of their land, they were murdered.

The public record shows that there were fifteen and perhaps as many as nineteen murders in the Yolla Bolly country in which it was believed that Wylackie John was the planner and in some cases the perpetrator, but he was never brought to trial for any of them (Lynn 1977:30).

Wylackie John was handsomely rewarded for his service to George White. White made him a partner in the ranch on Long Ridge which had a significant number of sheep. In addition, Wathen also owned outright, a parcel of land on the east side of the North Fork, just to the south Red Mountain Creek near Wylackie Hill. It is likely that Wathen homesteaded this parcel in the late 1860s or 1870s, prior to moving to Long Ridge.

Wylackie John also led a gang of men (probably some of White's buckaroos) who made raids into the region on the Sacramento side of the Yolla Bolly Mountains, running off with thousands of head of sheep from the summer ranges of ranchers from the Sacramento Valley. It was estimated that the "Long Ridge Rustlers" were responsible for stealing over 400,000 sheep, cattle, and horses from northern California stockmen. The San Francisco *Examiner* (February 19, 1888) noted that the raids were so common it made sheep rustling "one of the recognized industries of that country."

Homesteading in the North Fork Basin

[See Keter 2017 *A Compendium of People and Places for the North Fork Eel River Region during the Homesteading Era* for more information on each of the properties and subjects discussed below. This includes historic maps, copies of original homestead records, Indian Allotment records, and biographical sketches of numerous individuals. The *Compendium* can be found at solararch.org.]

With the end of the Civil War, the removal of the last Indians, and the playing out of the gold fields, the rich rangelands of the Yolla Bolly country began to draw a few settlers who tried to establish claims under the Homestead Act of 1862. In the North Fork region during the late 1860s the main impetus to settlement was the desire to secure free public land in order to establish a homestead. The principal economic activities which were pursued by the new homesteaders were the raising livestock and the hunting of deer for their hides.

The homesteads and ranches within the North Fork watershed discussed below are those for which documentation could be located. It is likely that a few others were living in the watershed at this time, including some herders and their families who spent time seasonally at the numerous sheep camps. In addition, history, in many cases, does not record the attempts of homesteaders who tried making a go of it and spent a year or two in the isolated back country before moving on.

Kettenpom Valley

Kettenpom Valley is the largest area of level terrain within the entire North Fork watershed. This is quite likely why it was the first location to be homesteaded within the North Fork basin, perhaps as early as about 1860 (See Keter 1990). No documentation could be found on the names of the families occupying the valley during the late 1860s but given its level land and earlier settlement by Fulwider and two or three other families during the early 1860s, it is likely that several families were living here at the end of the decade.

East of the North Fork

The geographic region to the east of the North Fork of the Eel River and to the north of the river's confluence with Hull's Creek is referred in this overview as the "east of the North Fork" region. It remained the last area within in the North Fork watershed to be homesteaded. It was not until the early twentieth century that a substantial number of homesteaders settled in this area. Since that time, every homestead east of the North Fork has been abandoned. Today, a few seasonal residents, but not one year-around resident lives in this still-remote area (in 1996).

It appears, that prior to the Travis Brothers acquiring their ranch in this area in the mid-1890s, that the original house on the ranch was built in the 1860s (probably the late 1860s) by a Swede (Trinity Yearbook 1978:21) although his name could not be found. Other possible early residents who arrived in the late 1860s, or possibly the early 1870s, who lived in the vicinity of the Travis Ranch were Tom Hayden and John Vinton. Both of these men worked for White in some capacity (Vinton, for example, ran sheep) and both figured prominently in the Jack Littlefield murder a significant event in the history of the North Fork Basin that will be discussed later (Trinity Yearbook 1978:21). It is also likely that at this time John Wathen may have been homesteading the parcel of land just to the north of the present day Travis Ranch in the Wylackie Hill area.

South of the North Fork and Mendocino County

South of the confluence of Hull's Creek with the North Fork, where the river flowing south makes an abrupt turn to the west lays the most southerly region of the North Fork Basin. This portion of the North Fork basin, for the most part, is located within Mendocino County. It encompasses the Hull's Creek drainage and a number of minor drainages including Asbill Creek. The best homesteading lands in this area are located in Hull's Valley, the open hills sloping down to the north and east towards the confluence of Hull's Creek and the North Fork, and in Summit Valley which lies on the divide with the Middle Fork drainage at the south edge of the basin about sixteen miles north of Round Valley. The Asbills settled in this small picturesque valley of about 60 acres in 1864 by filing a "squatters claim" (Carranco and Beard 1981:183).

The Introduction of Livestock into the North Fork Basin

During the latter part of the 1860s, the cattle herds from Round Valley were just beginning to summer in great numbers in the Yolla Bolly country. In addition, some of the local homesteaders were also bringing in cattle. Many of the cattle which formed the foundation of the Yolla Bolly herds were driven north from Los Angeles. Some cattle, however, were brought from as far away as Texas. The following newspaper article cites one such example.

> Besides Flemming's great herd [of cattle], there is near the ford, J. Willburn with a hundred or so and Mr. _____ [sic] with three hundred. Mr. Smith was just arriving from Texas with 276 head, all of which be brought from that distant state being eighteen months in route. He crossed through Colorado and Nevada and did not lose a hoof until he crossed the Sacramento, but had lost about twenty since by straggling (*Daily Evening Bulletin* October 27, 1871).

1870-1880: The "Decade of Wool" in the North Fork Basin

It was during the 1870s that the large ranches along the main Eel River from Alderpoint south to the North Fork's confluence with the main Eel River were first settled. The livestock from these ranches, along with those of White, used the public domain to the east of Haman Ridge in the North Fork Basin for transitional range, slowly moving their herds from the lower altitude winter ranges along the main Eel River through the basin on "trailways" en route to the summer ranges in the high Yolla Bolly country just to the east of the North Fork watershed. It was the ranchers from this region who often cooperated with White in preventing individuals from homesteading in the North Fork region (Carranco and Beard 1981:223) because they utilized the rangelands for grazing. They also employed many of the small-time homesteaders and Indian families living within the Basin. The following section presents a brief overview of those ranches adjacent to the Basin that, through their land-use activities, had a major influence on the environment.

Asbill Ranch

As noted earlier, White's close friends, Frank and Pierce Asbill, owned a ranch in the Summit Valley area (located on the divide between the North Fork and the Middle Eel drainages). This ranch continued to grow in size and, by 1879, it is estimated that the Asbills had 15,000 sheep, 200 head of cattle, and about 150 head of horses (Carranco and Beard 1981:183). The Asbills also controlled some lands just to the east of the North Fork and slightly to the north of its confluence with Hull's Creek in the vicinity of the future Travis Ranch (Carranco and Beard 1981:186).

Benjamin Arthur Ranch

Arthur established his ranch on near the Eel River on the Trinity County/Humboldt County line in about 1871. It was the first ranch to be settled in this area. The original site of the ranch was property that Arthur acquired from John Quincy Duncan. Duncan was one of the earliest settlers in this area, having settled here in the late 1860s (STF#9). In 1871, after Duncan sold out to Arthur he moved his family to Long Ridge (Trinity Yearbook 1956:25) and was most likely one of the earliest residents on Long Ridge.

The Arthur homestead was patented on April 6, 1874---the first in the area. In 1876 and 1877, Arthur began to buy parcels of land around the ranch and in the Ruth area. The ranch eventually grew to 3000 acres in size (with parcels of land scattered throughout southern Trinity County). It appears that Arthur's summer range during the 1870s and much of the early 80s was centered on the Ruth range (the upper Mad River drainage and probably the western slopes of South Fork Mountain) which was sparsely settled at this time (Trinity Yearbook 1978:4).

Pitt White Ranch

Known as the Kekawaka Ranch (located on beautiful Kekawaka Creek above its confluence with the Eel River), this ranch was actually owned by George White and his brother William Pitt White a silent partner (for legal reasons related to an outstanding judgement filed against Pitt White in Placer County) (Carranco and Beard 1981:212).

Pitt White moved onto the ranch about 1875 and, along with Arthur, it was one of the earliest ranches in the southern part of Trinity County (Trinity Yearbook 1978:16). This was a large ranch. It had it's own blacksmith shop (Carranco and Beard 1981:212). No estimates of the number of sheep White ran are available, but the number surely ran in the thousands.

Doc Merritt or Armstrong Ranch

This ranch was settled in the latter part of the 1870s by Doc Merritt who previously had lived in Round Valley. It was located to the west of Lake Mountain along the west facing slopes of the Eel River drainage. It appears that Merritt had substantial financial resources and put his ranch together by buying up a number of small homesteads (Trinity Yearbook 1978:18). Some records suggest that some of Merritt's property was also purchased from the Asbill brothers (Trinity Yearbook 1978:20). He also bought out nearly all the homesteaders in Kettenpom Valley beginning in the late 1870s or 1880s, and by about 1890, he owned most of the private land there (1895 Lowdens Map).

Merritt, like other ranchers in the region during this period, raised primarily sheep. The ranch eventually became the Armstrong Ranch and today is part of the Dean Whitter Lone Pine Ranch that, at about 45,000, acres the largest ranch in Trinity County.

Fenton Ranch

The Fenton Ranch (also now part of the Lone Pine Ranch) was one of the earliest of the large ranches to be established in the Yolla Bolly country. It appears that Charlie Fenton may have acquired the parcel of land containing the ranch house from one of the Asbill brothers (Robb 1981:346). It was located on the main Eel River just to the north of the mouth of the North Fork (Carranco and Beard 1981:23). At one time, Fenton ran 30,000 sheep, tended to by Indian herders. In the summer the sheep were driven through the North Fork watershed and summered on South Fork Mountain (Miller Papers Gummer Ms.).

Homesteading the North Fork Watershed

By the early 1870s, George White was at the zenith of his power and controlled much of the North Fork Basin. Despite the threats and intimidation, a few small-time homesteaders moved into the region during the 1870s. Some of the homesteaders settling in the Basin, or those who may have utilized portions of the North Fork watershed, included Bill Nowlin, George Kunz, and Pete Haman.

By this time, southern Trinity County had grown enough (especially the areas around Zenia and Hettenshaw Valley) that in August of 1874, the Trinity County Board of Supervisors created a Hettenshaw School District (Trinity Journal 1961:43):

> Laying south of a line drawn from the head of the South Fork of the Trinity River, on the eastern boundary of the county, to a point on the western boundary of the county crossed by Van Duzen's Creek...

Most of the settlers who made a go of it within the North Fork watershed during this decade managed to either keep a low profile and not antagonize White or, as noted earlier, along with the few surviving Indian families living away from the reservation, provided the labor needed for White and the other ranchers living to the west of the basin along the main Eel River to maintain their holdings. The small-time homesteaders actually outnumbered the large ranchers but they had little political or real power in the region. They were, in fact, dependent upon the large ranches for work and the hard currency needed for staples.

The following locations were the principal locations for settlement within the basin during the 1870s.

Long Ridge

Isolated far from the county seat (and the sheriff) in Weaverville, Long Ridge was, from the beginning of historical settlement until the turn of the century, associated with outlaws and lawlessness. Wailaki John lived at the southern end of the ridge and some of White's buckeroos also spent time in the area working at the many sheep camps and cattle corrals. For this reason, all of the murders which took place during this period throughout the Trinity County area were referred to as "the Long Ridge Killings" in the county newspapers (Robb 1981:357).

During the 1870s, a few other homesteaders settled on Long Ridge. After selling out to Ben Arthur, John Quincy Duncan, his wife Polly, and their family moved to Long Ridge. At the north end of the ridge, the Hoaglins filed a homestead claim, and Church Willburn established a homestead near the southern end of Long Ridge. By the late 1870s, a number

of families with children were living in the Long Ridge/Hoaglin Valley region, and a school was needed. The first school in the North Fork Basin was built out on Long Ridge (at Schoolhouse Springs in Section 36 T.4S., R.7E.) in about 1879 by the local homesteaders. At that time, it was the only school south of South Fork Mountain in Trinity County (Holtdorf STF#4).

Hoaglin Valley

Hoaglin Valley was first settled around 1870 by Louis Meyer The valley was named after the Hoaglin family who were living on Long Ridge. Another early resident was D. Osborne, an early postmaster who settled on the northwestern side of the valley (Trinity Yearbook 1978:22)

Kettenpom Valley

It appears that by the end of this decade, Doc Merritt owned a substantial portion of the private land in this area. He may have bought out some of the earlier homesteaders living in the valley. Despite the lack of historical data it is likely, given the flat open valley, that several families were living here during the 1870s. Some may have been employed by the Merritt ranch.

East of the North Fork

Certainly by the end of the 1870s, K. Doolittle had settled with his son Frank at Red Mountain Fields (1880 Census Records). In the 1890s, Frank Doolittle would become the proprietor of the Red Mountain House at this location. George White also owned a parcel of land near Red Mountain Fields just to the north of the Doolittle homestead. This parcel was the location of at least a seasonal sheep camp, however, it is possible that this may have been the location of an Indian sheepherder and his family who maintained a year round residence (see the portion of Wathens diary presented below).

During the 1870s, there were possibly a few other small homesteads established in the vicinity of what later became the Travis Ranch, including (as noted earlier) the homesteads of John Wathen, Tom Hayden, and John Vinton. To complicate matters, it was not uncommon for settlers in this region to move frequently, often squatting on government land for a few weeks or months, sometimes even a few years, before moving on. For that reason, settlers sometimes had a number of primitive cabins or temporary homesteads. During this period, the east side of the North Fork was settled much more sparsely than the area to the west of the North Fork of the Eel River on Long Ridge and in Kettenpom and Hoaglin Valleys.

South of the North Fork and Mendocino County

Little historical documentation exists on the portion of the North Fork drainage lying within Mendocino County. It appears that the Hull's Creek drainage being somewhat closer to Round Valley, was even more tightly controlled by George White. In the summer of 1873, approximately 98,000 acres in the region to the north of Round Valley were added to the Indian Reservation. The Round Valley Indian Reservation by that time had been reduced from its original 25,000 acres to about 5,000 acres. In effect, settlers using their political power had convinced Washington to abandon the original goal of setting aside the entire valley as an Indian reservation. As part of the "reform" process, a commission visited the area and recommended that the reservation be extended north to the North Fork of the Eel. The commissioners believed that the Indians could then use this still relatively unpopulated area for the grazing of as many as 30,000 sheep and/or a large herd of cattle (Carranco and Beard 1981:326). The portion of the watershed that was included within the new reservation boundaries was that part of the area to the south of the confluence of Hull's Creek with the North Fork extending east all the way to the Middle Fork/North Fork divide.

As so often happened on the Round Valley Indian Reservation, the funds for the livestock were never appropriated and White (and possibly a few other local ranchers, including Fenton) used this land for grazing. Eventually, by about 1897, the military removed the settler's livestock from the area.

It is unlikely that many homesteaders were living the this portion of the basin until the late 1890s, when the Reservation lands were subdivided and allotted to Indians who, in many cases, then sold out to settlers entering the area. Other reasons that few homesteads were located in this area are due to the rugged terrain and lack of wate; few locations were adequate for establishing a homestead. These locations include the region directly adjacent to the confluence of Hull's Creek with the North Fork and Hull's Valley, a small long and narrow valley several miles south of the county line.

Deer Hunters and the Hide Industry

During the 1870s, hunting deer for the hides was still a relatively common activity in the Yolla Bolly country and a few hide hunters continued to make a living selling hides (most often in the Red Bluff area or to Benjamin Blockenburger) despite increasingly stringent game laws. Others in the region who are known to have hunted deer in order to sell their hides were John Duncan, the Asbills, Steve Flemming, and Dave Willburn. In addition, it was not uncommon for many of the small scale homesteaders to sell the hides of deer to earn some hard currency (Rahm 1943:4-7).

Sheep on the Yolla Bolly Ranges

By 1870, sheep were becoming the preferred animal on the ranges of the Yolla Bolly country. The period of 1870-1880 has been characterized as the "decade of wool" in California (Burcham 1981:156). State-wide, the number of sheep reached its highest point in 1875 (Heady n.d.:77, Rand et al n.d.:5, Coy 1929:256).

Initially, as noted earlier, cattle had dominated the ranges of the Yolla Bolly country. L. T. Burcham in his study of California Rangelands (1981:157) noted, however, that in the North Coast Ranges climate, topography, and plant cover tend to favor sheep production over that of cattle. After the Civil War, a high tariff was placed on wool to keep out foreign competition and drive up the price (Carranco and Beard 1981:185). Another reason sheep were preferred in this rough remote area during the early years of the Ranching Period is that it was much easier to pack out the wool than drive cattle to market (Trinity Yearbook 1978:15).

In 1871, the *Daily Evening Bulletin* (October 27, 1871) noted the increasing numbers of sheep on the ranges of the Yolla Bolly Country and adjacent region:

> Along Dobbin's Creek there are 20,000 sheep, and they are said to be more profitable just now than cattle. There is, and has been for some weeks, a considerable movement of sheep from Del Norte County into this region, and Mr. Hoaglin already owning some 3,500, is absent in the Sacramento Valley to fetch 1,500 more. It is believed there will be suffering this winter from overcrowding. Sheep are shorn here twice a year, and many are now shearing....

By the middle of the decade, the Yolla Bolly region was known as prime sheep country. The San Francisco *Alta* (October 19, 1974) noted this trend away from cattle to sheep:

> ...The majority of mountain ranches in the region are now stocked with sheep. Many who had been raising cattle for years are selling off and going into the sheep business. Before sheep were seen as damaging to pasture but now they find that sheep are managed as easily as cattle.

One of the advantages enjoyed by sheep ranchers during this era was the unrestricted use of government lands for grazing. As Nordhoff (1874:139) noted:

> ...in the little valleys and fertile hill slopes of the Coast Range, where there is much unsurveyed government land, to which hundreds of thousands of sheep and cattle are annually driven by graziers of the plains, who thus save their own pastures, and are able to carry a much larger number of sheep than they otherwise could.

During this era, literally tens of thousands of sheep passed through the North Fork region on their way to and returning from the summer ranges in the Yolla Bolly Mountains, the upper Mad River drainage, and the South Fork Mountain area. Locations used for summer grazing within or adjacent to the North Fork Basin were Haman Ridge (to some minor extent), upper Jones Ridge, and the Lassics/Grizzly Mountain region (STF#53).

As noted earlier, many of the large ranches located along the eastern slopes of the main Eel River just to the west of the basin used the rangelands of the North Fork basin as transitional range. In late spring or early summer, the herdsmen would slowly drive their bands of sheep to the east towards their high altitude summer range that was for the most part above 4,000 feet in altitude. These bands of sheep would spend as much as four to eight weeks moving through the North Fork watershed. For example, the Ben Arthur Trail was the main sheep trail from the Arthur Ranch to upper Ruth Valley where Arthur's summer range was located. The traillead through the North Fork basin crossing the North Fork of the Eel River at Soldier Basin heading east into upper Ruth Valley. It was used by Arthur from the early 1870s to about the early 1890s (Robb 338, STF#32). The sheep of some ranchers (most notably George White) were even sheared at herder's camps on Long Ridge, Red Mountain Fields, and possibly a few other locations in the North Fork watershed (Wathen MS).

In the Zenia area and the region immediately to the west of the Trinity County line north towards Blocksburg, the preferred summer range for sheep was in the Grizzly Mountain/Lassics area (some of this area is within the North Fork watershed). In the late 1870s, George Burgess of Zenia ran about 3,000 head of sheep, one band numbering about 1,500 were summered just to the east and south of Grizzly Mountain. The herder for this band was camped at Watts Lake. Burgess would visit each herder under his employ once every two weeks to bring in supplies and check on his herds (Edward Burgess Trinity Journal 1956:6).

Not all sheep ranchers who used the summer ranges had large herds. For example, it was noted in the Humboldt County tax records for 1875 that Peter Hamman and a Mr. Bartlett living near Blocksburg owned 425 sheep which were driven to Trinity County for summer pasturage.

In the North Fork watershed and much of southern Trinity County, smaller-sized ranches had a difficult time raising substantial numbers of livestock. One reason for this was the lack of adequate winter range. It was difficult (often impossible on a small 160 acre homestead) to raise enough feed to carry livestock through the winter and the big ranches along the main Eel to the west of the North Fork watershed controlled the prime winter range, which was lower in elevation and closer to the Pacific Ocean and its mediating influence on winter temperatures.

Many Sacramento Valley ranchers also used the Upper Mad River/South Fork Mountain area for summer range. Some of the locations they used were Shell Mountain, Kelsey Ridge,

and even as far west as the Jones Ridge area (STF#53 Ivan Jeans). Bands of sheep ranged in sized from 2,000 to 5,000 head. Those who ran their sheep in the Yolla Bolly country from the Sacramento Valley side included: Earl Moore from Corning, the Flanagan Brothers from Corning and Paskenta, Tom Flournoy from Paskenta, and Ellison Saunders from the Red Bluff area (STF #53).

During the late 1800s, more than 10,000 sheep and 1,000 cattle summered in the country around Mike's Rock (located to the east of the North Fork watershed). This area is only one of the numerous locations where herds of sheep grazed throughout the high country. It is unlikely that an exact counting other number of sheep in the Yolla Bolly region for this period will ever be known. In Trinity County, and much of the remote back country in California where raising livestock on the open ranges took place, the numbers of animals shown in census counts were always appreciably lower than the actual count (Burcham 1981:130), but, it is probable that as many as 100,000 to 150,000 sheep were grazing the rangelands of the Yolla Bolly country during some portion of each year.

It is likely that the 1870s was the decade in which the greatest number of sheep grazed within the North Fork watershed. The main reason for this conclusion is based on the condition of the range. As the decade wore on, the overgrazing reached a level where the rangelands were deteriorating, greatly reducing their carrying capacity. First, the highly nutritional native bunch grasses were replaced by native annuals and then by non-native species of annual grasses. As noted in the environmental portion of this study (Appendix 1), these hardy exotic species mostly from the Mediterranean region, had a long history of adapting to human and livestock disturbance. They were, however, significantly less nutritional than the native grasses, thus substantially reducing carrying capacity.

As overgrazing continued in the Yolla Bolly region even the less nutritious exotic annuals were replaced by weed or noxious species of grasses and associated pioneer species of plants (for example tarweed). This occurs when livestock selectively graze on the most palatable and nutritious species. As this process continues, the less desirable species (for example fox-tail and squirrel-tail) begin to dominate the rangelands simply because they are selected for grazing only when higher level desired plants are not available. Browse was also effected by erosion resulting both from overgrazing and from "trailing" (the hooves of thousands of animals digging into the easily erodible and fragile mountain soils). Sheep even browsed on small trees effecting forest regeneration.

Sheep Predators

During the early years of the decade, predators were not a serious problem. The main predators during the early grazing years were bears (probably grizzly bears), and mountain lions. A bounty of $5.00 was paid for scalps of these animals captured on any range. Wildcats and eagles had a bounty of $1.50 and coyotes $10.00 each (Carranco and Beard 1981:183).

Coyotes initially had not been a serious problem. As noted in the environmental part of this study, coyotes appear to have been uncommon in the Yolla Bolly country prior to the introduction of livestock. Some early settlers even insisted that coyotes followed the early flocks of sheep into the region from the central valley. It is more likely, however, that large herds of sheep lead to an increase in the coyote population in the region. Steps were taken to reduce the coyote population through predator control programs including bounties and government hunters. Eventually, these steps helped reduce the problem sufficiently for sheep ranching to continue (Heady n.d.:82).

The Wool Market

The sheep in the Yolla Bolly country were raised principally for their wool. Unlike much of the state where sheep were only clipped annually, in this region they were shorn twice a year--usually in the spring (as early as late March to about early-to-mid June) and in the fall. On many of the large ranches, including those of Fenton, the Asbills, and George White, Indians were employed in a number of menial jobs including shearing and herding sheep. Indian men made excellent sheepherders and often Indian women would serve as domestic help in the ranch house. Sheep were often sheared by a group of Indians using hand clippers and they could shear about 30-150 head of sheep per day. One such team of shearers lived at the reservation and traveled to the various ranches during shearing season. On the Pitt White Ranch, the sheep were sheared twice a year by a crew of 15 or 16 Indians coming from Round Valley (STF#17). One historic account indicated that they received six cents for each sheep sheared.

The wool from the Yolla Bolly country was shipped out to several locations, depending on where the shearing was done. In Mendocino County, the wool was shipped out to the south to the railhead at Cloverdale (the railroad extended north to Ukiah in 1888) (STF #53). The large ranches along the main Eel River to the west of the North Fork watershed tended to ship their wool to the north to markets in Humboldt County.

Because of the lack of adequate wagon roads, many ranchers in the steep and rugged Yolla Bolly country used mules to transport their wool. It was packed out from the ranches by mule train in 150 pound bags (Anderson 1948:7). Bill Crabtree and Charlie Fenton both had mule trains for transporting wool to market (Burgess MS). Fenton's pack train had about 35 to 45 mules ran by Sid Wilburn and John Duncan that transported the wool. On their return trip, they often brought back supplies to Helmke's and Blockenburger's stores and salons in Blocksburg (Burgess MS). Fenton even packed in a mowing machine and a piano (Burgess MS.) for his wife to his ranch by mule from Hydesville. Ranchers were charged about one cent a pound to carry out the wool (Trinity Year Book 1978:20).

The price of wool drove the market and varied greatly. For example, in 1870 it was 14 cents per pound, in 1872 it rose to 29 cents, and then in 1873 fell back to 13 cents per

pound (Elliot 1881). In 1879, with wool bringing 33 cents a pound, George White shipped forty tons of wool valued at $24,000 and the Asbills shipped twenty tons valued at $12,000 (Carranco and Beard 1981:185). In discussions with local agriculture officials it appears that the average weight of wool for one sheep at that time was about 6 pounds per year. It is likely there was one major shearing a year and one perhaps of the wool around the belly and rectal area. Either way, wool growth for the year is cumulative---therefore, the total for the year of two shearings is not appreciably more than one.

By the mid 1870s, wool from much of the Yolla Bolly region was being sold to Ben Blockenburger who had established a trading post at what became know as the village of Blocksburg. In 1872, Blockenburger moved to Humboldt County where he built a store on the stage coach route from Sonoma to Humboldt Bay. He quickly became the principal buyer of wool for the ranches of southern Trinity and southern Humboldt Counties. By the end of the decade, Blockenburger was the most prominent resident in the southern part of Humboldt county. By the mid-1880s, Blocksburg was booming with several stores and shops and there was a race track just outside of town (betting on horse races was a favorite activity of local ranchers and cowboys). The main stage from Sonoma to Eureka passed this way and, in 1881, the "Ticknor House" was opened. It was a fine hotel and a favorite stopping place for travelers (STF#35).

From Blocksburg, the wool was transported either north to Hydesville where it was usually shipped out of Port Kenyon at the mouth of the Eel River (Anderson 1948:7) or west to Shelter Cover (Carranco and Beard 1981:196). At Shelter Cove, most of the wool was shipped in the months of July and August but wool was shipped every month of the year. In 1870, Humboldt County exported 51,767 pounds of wool. By 1880 the shipments had increased to 450 tons (900,000 pounds)(Anderson 1948:6). (To move 900,000 pounds of wool to Shelter Cove by mule would have required 6,000 mule-loads.)

During this period, Blockenburger also bought deer hides from many of the local hide hunters. Deer hides brought about .25 cents a pound and as much as $3,000 was paid out during one three month period for deer hides (Suzy Baker Fountain Papers Vol. 24:12).

The 1880s in the North Fork Watershed

By the 1880s, the era of open range on public lands had ended in most parts of the state except in the more mountainous and remote regions of the state like the high Sierra and the Yolla Bolly country (Burcham 1981:196). No regulations existed in the Yolla Bolly country on the use of public lands for grazing prior to 1905, when the Trinity Reserve was established. In essence, huge tracts of public lands were used as the private preserve of a few wealthy and powerful ranchers.

This fact did not go unnoticed. An article in a Mendocino County paper (*Democratic Weekly*

Dispatch April 26, 1882) noted that;

> G.E. White occupies southwest portion of Indian Reservation with about 7,000 head-additional herd of cattle and horses and an area of additional unsurveyed land, if divided would make good homes to settlers....But as it is these men are becoming millionaires by its use, having no taxes to pay on the land that has been laid in reserve for the Indians by the Government.

It was during this period that Doc Merritt began to buy up every available parcel of land in the region to the east of his ranch when it came on the market (Robb 1981:347). Some of the parcels that he bought from homesteaders were located within the North Fork Basin, mostly in the Kettenpom Valley area.

The large-scale ranchers like George White were, however, beginning to have problems. In addition to deterioration of the rangelands due to overgrazing resulting in a reduction in the numbers of sheep the region could support--the ranchers were also beginning to lose large numbers of sheep to coyotes. Originally not much of a problem, the coyote population increased rapidly during the 1880s and was becoming a major problem (Rand et al n.d.:5). For this reason, during the 1880s, there was the beginning of a gradual shift back to cattle in the Yolla Bolly country. This shift was accelerated during the 1890s as the price of wool declined.

Homesteading in the North Fork Watershed

Despite the control of much of the North Fork watershed by White, a few homesteaders continued moving into the region. Thomas Raglin settled at what is now referred to as Raglin Flat probably during the early 1890s. One informant (I444) indicated that he did not stay long in this country and was driven out by White. It was said that he built his house over the well which was rock-lined and very well constructed (the well still exists and is in good condition although there is no evidence of a structure associated with it). The homestead had a few fruit trees (apple and plum) and a barn or out-building most likely built of fir pole construction.

Henry Holtorf and his family settled in Hoaglin Valley in 1888 after spending some time in the Blocksburg area. They came from Sacramento via Mendocino Pass to Covelo. They brought with them a number of cattle and horses (Gray MS. Miller Papers).

Holtorf ran a small farm and even owned a thrasher. His daughter Amanda was the first white child to be born in the valley (John Holtdorf STF#4). In the 1890s, he also had the first contract for carrying the mail from Alderpoint to Hoaglin.

The typical homesteader in the North Fork region before the turn of the century lived on a

160 acre parcel of land. Usually their cabins were of fir pole construction, and many had a rock foundation. A few were log cabins. They took longer to build but were warmer. They all had windows--usually the small 8-16 pane type. Usually there was a fire place at one end of the cabin. Most cabins had crude wooden floors (a few had dirt floors) with many cracks between the boards so a bear rug or something similar was usually placed over the floor. They usually had very steep roofs of pine (sugar pine was preferred but uncommon in the North Fork basin) or cedar (when available) because they "used to get lots of snow out in this country--more than they do today" (I444). Many of the cabins had a loft for sleeping with a ladder up to the loft. There were usually a few outbuildings and a wood-shed or lean-to for storing tools.

The typical homesteader had a large family (although single men homesteading were not uncommon) who helped with the many chores. The homesteader usually ran a few cows and/or sheep (perhaps as many as 50) that grazed on the homestead and adjacent government lands. Often the homesteader worked part of the year in order to secure wages for staples and needed supplies. They all had small gardens and most had at least a few fruit trees; often plum and apple. These were canned for the winter. They hunted deer and the wild pigs that were so common in the basin; the meat was jerked or canned. Deer meat stored well in the cooler months and was just hung up in a cool area. Gardens were usually planted in about April and by July they were harvesting vegetables. Although they did not have much money they provided nearly all the basic needs including shelter and food from the land. It appears that homesteaders, and even those of who were part Indian, did not collect and process acorns (I#37)

When one interviewee (INF1) was asked what did the homesteaders did for money; he said "they didn't have any" and that what little money people had in the back country they got from doing odd jobs on the larger ranches. Some of the residents of the North Fork would even travel to Round Valley to work or to other parts of Mendocino County, for example, Hopland where they could pick hops to earn money.

Wailaki Living within the North Fork Watershed

A number of Indian families were still living in the basin during the 1880s, but it appears that as time went on this number steadily declined. Many Indian men and women, however, still worked on the large ranches such as those of the Asbills and Fenton. The Fenton ranch had a approximately 62 Indian men and women working on the ranch as well as a few of their children (1880 Census). The Census rolls indicate that they were employed as herders, domestic servants, and ranch hands (cutting fire wood and maintaining the ranch).

The Winter of 1889-1890

The severe winter of 1889-1890 was a watershed event in the history of land-use practices and use of the ranges in the Yolla Bolly country. The loss of livestock was tremendous as many of the winter ranges lay under a blanket of snow for months. Thousands of cattle and sheep died of starvation (Trinity County Year Book 1955:29). Some ranchers lost their entire herds. Most years there were heavy winter storms but usually the snow only remained throughout the winter on the highest ridges. At lower elevations the snow would melt after a few days or so. For this reason, the ranchers stored very little winter feed for their livestock. Some feed was stored for their working stock and saddle horses.

By the late winter, the snow was fifteen feet on top of Bell Springs Mountain on the west side of the Main Eel River. This region usually experienced milder winters than the North Fork region. At Hettenshaw Valley, the snow was seven to nine feet deep and several barns collapsed (Carranco and Beard 1981:205). The Willburns raised "Willburn Mules," a breed of pack mules noted for their endurance, that were popular with the residents of the Yolla Bolly country. They lost their $1,000 Jack, but managed to some save of the mules by bringing them in to their cabin. James Howe, also of Hettenshaw Valley, lost everything during this winter (Trinity Yearbook 1959:16). George Eaton of Humboldt County lost all of his cattle and 2,000 of his 3,000 sheep. A man named Jensen had eleven sheep left out of a band of 3,000.

One early resident of the Zenia area wrote:

> The winter of 89 and 90 is a memorable winter for the early settlers as most everyone living here at that time had their herds entirely wiped out by the cold and deep snow and many ranches were abandoned at that time. (Miller papers Jessie E. Brown Gummer).

Hazel Hill in the *Humboldt Times* (December 18, 1955) wrote about the economic problems caused by the severe weather.

> [p]rior to what is still spoken of as the 'hard winter' of 1889-1890, Blocksburg was the congregating point for ranchers from the counties of Mendocino, Humboldt, and Trinity. The post office served as the district center for Zenia, Hoaglin, Ruth, and Caution, with mail going out by pack train. Because times had been so good for the years just preceding the 'hard winter' many farmers had mortgaged their property to the limit to buy additional sheep and cattle. When the hard winter hit, the heavy long lasting snows killed their livestock and crops, making it necessary for many of the homesteaders to give up their ranches and move to other communities.

In the North Fork watershed there was also a heavy loss of livestock. The *Trinity Journal* (in Carranco and Beard 1981:205) noted that:

> The past winter has been unusually severe for stockmen and southwestern Trinity has been swept pretty clean...Mad River has lost three-fourths of its stock. On the north fork, down as far as Fenton's, half of the sheep and lots of horses and cattle have perished. Some have lost all but the land.
>
> There is no doubt that but that the past winter has been a backset to the people of southwest Trinity, and it will be fully ten years before they recover from it.

After a steady deterioration in the condition of the rangelands due to severe overgrazing for a period of about twenty years and then a disastrous winter resulting in the death of quite likely over half of the livestock in the region, the numbers of sheep and cattle running the ranges of the Yolla Bolly country never again equaled the numbers of the 1870-1890 period. It appears that subsequent to this time, the sheep grazing in the high Yolla Bolly country in the summer were predominately from the Sacramento Valley side where large scale sheep ranches managed to avoid the severe losses of the Yolla Bolly country and continued to prosper.

1890-1905: The End of an Era

The decade of the 1890s marked the end of the control of much of the North Fork watershed by George White and the few other powerful ranchers in the region, as well as an end to the general lawlessness which seemed to thrive in such a remote area so infrequently visited by the law. By the end of the decade, the stage was set for the brief florescence of the early twentieth century when the population within the Basin reached its zenith.

This decade was marked by a number of setbacks both legal and economic, for the ranchers with large-scale operations. In addition, the entire nation was in the midst of a severe depression and economic times were difficult throughout the nation. The depression, which began in the late 1880s, continued into the early 1890s and the price of beef was very low. Nationally, by 1893, more than six hundred banks had collapsed and many businesses had failed. In the Yolla Bolly country, this depressed the stock industry.

By the 1890s, White was beginning to lose his control over the North Fork watershed. In 1895 an event occurred that greatly influenced the settlement of the North Fork watershed--the killing of Jack Littlefield. Although murders were fairly common in the "Long Ridge" country, the outside world was beginning to view with alarm and anger the lawlessness taking place there. The story of the murder and subsequent trail that almost broke Trinity County is recounted elsewhere (Carranco and Beard 1981, Keter 1994). Several of White's henchmen were tried and convicted although the county ran out of money and was unable to charge some of the conspirators including White. The murder

resulted in much attention being placed on the lawlessness that was taking place in the area. The Governor sent an investigator and offered a reward and lawmen from Mendocino and Trinity County spent time in the region gathering facts about the case.

The result of the Jack Littlefield murder and the trial was that George White's control over much of the North Fork region was ended, and an increasing number of settlers began to settle on homesteads within the watershed. The 1890 Census recorded 261 residents in the southern Trinity region. As the area continued to grow, a post office was established at Hoaglin. Frank Doolittle established a "roadhouse" along the trail from Covelo to Weaverville in the early 1890s (possibly the late 1880s) at his place at Red Mountain Fields.

The Ranching Industry 1890-1905

As noted above, the early years of the 1890s were tough times for the ranchers of the Yolla Bolly country. After the disastrous winter or 1890, many of the large scale ranchers accelerated the move from sheep to cattle. An additional reason that the number of cattle was increasing was that the railroad line had been extended from Ukiah to Willits making the shipping of cattle to market easier. Then in August of 1894, congress passed a bill signed by President Grover Cleveland that placed wool on the Free List (removed import tariffs). The result was that the price of wools collapsed due to cheap imports, mainly from Australia.

The largest cattle ranch within the watershed up to this time was established by the Travis Brothers in 1895. They purchased a 2,500 acres tract of land (from the original holdings of George White) just to the northeast of the confluence of Hull's Creek and the North Fork. It was said that the Travis brothers were the first ranchers to import white-faced Herefords in to the region when they brought in 1,000 head in 1895 (Keter 1993: 49). Eventually, through the purchase of many of the homesteads in the area, by the time the last Travis Brother died in 1940 the ranch totaled about 14,000 acres.

Land-use Activities and the Environment 1865-1905

The effects to the environment of the North Fork Basin from land-use activities during the historic period have been documented in *Environmental History and Cultural Ecology of the North Fork of the Eel River Basin, California* (Keter 1995, the pdf is available at the SolarArch website).

The Homesteading Period
1905-1945

[See Keter 2017: *A Compendium of Historic Documents and Information Regarding the Homesteading Era within the North Fork Eel River Watershed, Trinity County, C*A, available at the SolarArch website as a series of pdfs that includes; historic maps, census records (1880 to 1940), copies of original homestead records and Indian allotments, over 40 interviews with local residents, an overview and the mapping of over 60 historic trails, and a 200 page listing of people and places found within the North Fork watershed including short biographies. Also included are overviews of the archaeological findings related to numerous homesteads, schools, and post offices that once dotted the region.]

In 1891, Congress passed and the President signed the Forest Reserve Act. Passage of this legislation is a significant milestone in the management of Public Lands by the Federal Government and marks the birth of what was to become the U.S. Forest Service (Keter 2015). The Forest Reserve Act permitted the President to designate certain forested lands within the public domain as Forest Reserves in order to protect their timber values. Over the next decade and a half, the Forest Reserve system under the direction of Bernhard Fernow, and later, Gifford Pinchot, steadily expanded to include forested lands throughout much of the western United States. Prior to this time, there was a relatively *laissez faire* policy towards most land-use activities taking place on public lands throughout the west.

In February of 1905, 63 million acres of federal land (including forested lands in California) were transferred to the Department of Agriculture from the Department of Interior. In April and May of that year, the Trinity Forest Reserve was created and the Bureau of Forestry was renamed the United States Forest Service. Subsequent to the creation of the Trinity National Forest, federal policy and law began to play an increasingly important role in the kinds and intensity of land-use activities that took place within the North Fork watershed. It was during the early part of this era that the North Fork watershed experienced its most rapid population growth.

North Fork of the Eel River Forest Service Administration

[See Keter 2017 the *Compendium* cited above for an in-depth overview of historic Forest Service properties located within the North Fork watershed.}

The creation of the National Forest system marked the beginning of a new era in management of the nation's timbered public lands. From the beginning, there was considerable hostility to the imposition of new rules and regulations in a region where ranchers and homesteaders had been able to use public lands without any interference from “Government men.”

For example, grazing had been taking place on public lands for decades with little or no interference from the Federal Government. For that reason, the stockmen had the belief that they had a "natural right" to graze stock as they saw fit on government lands (Theodoratus 1980:23). The Forest Service, however, began to implement regulations requiring permits that restricted some grazing to prevent continued degradation of the rangelands. It was not until 1934, however, with the Taylor Grazing Act, that significant restrictions on the number of livestock grazing on public lands were implemented.

In June of 1906, Congress passed and the President signed the Forest Homestead Act. This permitted an individual to claim up to 160 acres of lands administered by the Forest Service by homesteading the parcel and making improvements. The land had to be primarily of agricultural value (ie. no timber potential). Over the next several decades, numerous homesteads were established within the North Fork watershed. In June of 1910, a similar law, the Indian Allotment Act, was enacted that permitted Indians to patent lands upon which they had settled. [Homestead Claim files for nearly every parcel of land filed for under these Acts within the North Fork watershed are located in the Heritage Resources files of Six Rivers National Forest.]

With the establishment of Trinity National Forest, a significant amount of the land base of the North Fork of the Eel River was placed under the jurisdiction of the Forest Service. During the early years, the main duties of the Ranger included field examinations and reports on lands acquired by individuals under the Timber and Stone Acts, trail construction and maintenance, and boundary and administrative site surveys. Another important job of the Ranger was "forest protection" --primarily fire detection and suppression. Rangers also spent a significant amount of their time on the Mad River Ranger District reviewing homestead applications and visiting homesteads to document improvements. Resource improvement was, however, limited to a few reforestation projects. Forest administration was decentralized and administrative facilities were uncommon. Those facilities that did exist were for the most part simple log or frame buildings erected by the field officer himself.

The Civilian Conservation Corps

In 1932, the Forest Service undertook a nation-wide comprehensive study of the status and condition of the National Forests. The report issued was entitled "A National Plan for American Forestry" (better known as the Copeland Report). It described the status of forestry and evaluated virtually all aspects, both private and public forestry, including timber, water, range, recreation, wildlife, research, state aid, and fire protection. This report provided the basis for a major shift in Forest Service policy and the management of public lands. To accomplish the work identified in the report, a larger workforce, as well as more administrative buildings to house additional people and machinery, was needed. On April 5, 1933 President Franklin Roosevelt signed Executive Order 101 establishing the Civilian Conservation Corps (CCC). Creation of the CCC, closely following the Copeland

Report, provided CCC, a mechanism by which it was envisioned that the Forest Service could accomplish its new and expanded role in forestry and conservation.
The 1930s and 1940s saw a substantial increase in the infrastructure of the Forest Service, including administrative sites (Ranger stations, guard stations, fire lookouts, connecting phone networks between ranger stations, and administrative sites including lookouts); resource work (for example tree planting), and an increasingly aggressive program to fight fires. Much of this work was accomplished by the CCC. A CCC camp was established on the Mad River District (it was located along the County Road to Ruth Lake just to the south of CA 36). No specific projects that were undertaken within the North Fork watershed could be documented, however, it is likely that the CCC were involved in some trail construction/maintenance, firefighting, and telephone line construction projects during the late 1930s and early 1940s.

Ranching and Homesteading

As noted earlier, within the North Coast Ranges there was a gradual but steady switch back to cattle from sheep towards the end of the 19th century. This was in part due to the rise in coyote population which put many sheep men out of business (coyote control programs in the 1920s permitted a new florescence in sheep ranching in some portions of the Eel River Basin--notably to the west of the Main stem and in the South Fork watershed (Burcham 1981:158).] In the High Yolla Bolly Mountains (just to the east of the North Fork watershed), however, sheep were still the most common in the summer ranges. This is due to the steepness of the terrain and quite possibly to the poor range conditions and the wider range of plants that can be consumed by sheep. Before the Forest Service took over administration in 1905, it was noted that in the Shell Mountain/headwaters of the Mad River area over 30,000 sheep grazed. They were driven to the region over trails like the Humboldt Trail and were herded in bands of 2,000 to 2,200 head. During this period, however, the majority of sheep ranches were located along the western fringes of the Sacramento Valley and used the Yolla Bolly country as summer range.

Shortly after creation of the Trinity Forest Reserve, legislation was passed creating the Forest Homestead Act. This law resulted in many families moving into the North Fork area. Much of this land was of marginal potential for homesteading. One ranger (writing about the Forest Homestead Act) noted that "[i]t would have been a kindness to the perspective entryman if 95 percent of this land had not been listed. The entryman starved out in a short period of time. Not 5 percent of the 340,000 acres listed [in California] was even placed under cultivation" (Barrett 1940:98). Due to lack of water, suitable arable land, and poor transportation routes, nearly all of the original homesteads established within the North Fork watershed during this era were abandoned. By the 1930s, most of these homesteads and allotments had been sold to the ranchers with large operations in the area (for example the Travis Ranch).
Within the North Fork watershed, with the establishment of numerous homesteads there was a corresponding shift in the dominant land-use theme from the relatively unregulated

open range grazing of cattle to small subsistence homesteads. Most of these homesteads were 160 acres in size and many were accessible only by trails. During the 1910-1930s era, the region of the North Fork watershed north of Hull's Creek contained numerous homesteads (perhaps as many as 50 to 75) and the result was that for a brief period of time a "North Fork community" existed. This community was made of widely scattered homesteads situated on small flats adjacent to a perennial spring or on river or creek terraces throughout the southwestern Trinity County area. Most of these homesteads were self-sufficient and grazed a few animals on their homesteads and adjacent Forest Service lands.

By the beginning of the depression era, the number of homesteads within the North Fork watershed was in a steep decline. Most of the homesteaders found that 160 acres in this region was simply inadequate to provide even a subsistence level existence and by the end of the 1930s, nearly every homestead within the North Fork watershed not adjacent to a road was abandoned. Many of these homesteads were purchased by the Travis Brothers while others were eventually sold to timber companies during the late 1940s and early 1950s (Six Rivers Homestead and Heritage Resources files).

Land-use Activities and effects to the Environment

Administration of the public lands within the North Fork watershed by the Forest Service beginning in 1905 marked a new chapter in both the kind and the intensity of land-use activities within the North Fork watershed. One of the most notable changes was in the control of wild fires. Human initiated fires were prohibited and natural fires were extinguished as soon as possible. Development of infrastructure including roads, trails, and a network of phone lines accelerated--especially after the establishment of the CCC camp at Mad River. This change in land-use activities was reflected in changes to the environment. These changes, including an aggressive invasion of the oak woodlands plant communities by Douglas-fir, resulted in significant changes to the environment of the North Fork watershed.

1946-1970 Post World War II Period: Development and Resource Extraction

On June 3, 1947, President Truman issued a proclamation creating a new National Forest from portions of the Siskiyou, Trinity, and Klamath National Forests. The Mad River District (including the lands within the North Fork watershed) of the Trinity National Forest was transferred to the newly created national forest at this time. Many names were proposed, the final name, Six Rivers National Forest, was suggested by noted author and lecturer Peter B. Kyne who noted that the area of the new national forest encompassed the

watershed of six major northwestern California rivers within its boundaries (HRM: historic files).

With the end of World War II and the creation of a new National Forest, emphasis began to shift and timber began to rival and in many cases exceed livestock grazing in economic importance. Within the North Fork watershed, private logging reached its peak during the 1950s while significant timber harvest activities on national forest lands did not begin to occur until the early 1970s.

The Rest of the Story

This history of the North Fork Eel watershed ends with the beginning of the post-World War II era that saw rapid growth in the local population due to the increase in logging activities on private lands. Refer to Keter 2011: *Pilot Ridge Country 1947-1996 The End of History and the Rest of the Story* at the SolarArch website for more information.

Chapter 5

The Historic Period:
The Van Duzen River Watershed

The Van Duzen watershed drains the most northeastwardly portion of the Eel River Basin. This watershed can be further sub-divided into two major sections. The lower portion of the Van Duzen, extending west from about Bridgeville to the river's confluence with the main Eel River, contains significant distributions of redwood forest and tanoak/Douglas-fir forest. The portion of the watershed to the east of Bridgeville is dominated by Douglas-fir forests, with substantial distributions of ponderosa pine, oak woodlands, and extensive areas of open grasslands. The focus of this portion of the Eel River Basin overview is on those lands within the Van Duzen watershed that are managed by federal agencies.. Nearly all of the federal lands located within the Van Duzen watershed are located well to the east of Bridgeville. For that reason, this overview will be limited to the upper portions of the watershed.

The historical development of the upper portion of the Van Duzen is similar in many ways to that of the North Fork of the Eel River watershed. That is, the land-use activities taking place within the Van Duzen watershed during the historic period were driven by the same socio-economic factors that influenced the kinds and intensity of land-use activities discussed for the North Fork Eel River watershed. The principal land-use activities during the historic era were related primarily to the grazing of livestock and towards the end of the nineteenth century, the establishment large ranches and small subsistence-sized homesteads. Since the historical development of the upper Van Duzen watershed closely mirrors that of the North Fork of the Eel, the historic era has been sub-divided using the same divisions as those outlined for the North Fork of the Eel watershed.

Exploration and Early Settlement (1850-1864)

It is not known exactly when Euro-Americans first entered the headwaters region of the Van Duzen watershed. The river was named for a member of the Josiah Gregg expedition that crossed the river while traveling south from Humboldt Bay towards the settlements in Sonoma County in December of 1849 (Coy 1929:43). It is likely that interior portions of the watershed were first explored by Euro-Americans in about 1850 or 1851. The first exploration of the region was as a result of the desire to establish a transportation link between Humboldt coastal communities and the mines in Trinity County. The first trail linking the coastal settlements in Humboldt County with the mining region was developed by the Cooper brothers in 1852. The five Cooper brothers settled in the Hydesville area and developed a trail that headed east from the coast--roughly paralleling the Van Duzen River to Shower's Pass. The trail then crossed the Mad River, ascended Eight Mile Ridge to

the crest of South Fork Mountain and continued east to Hyampom and the mines in Trinity County.

It is likely that the earliest explorers within the upper reaches of the South Fork of Van Duzen watershed were the Asbill Brothers and Jim Neafus (see Chapter 4). They spent the winter of 1854/1855 camped in Hettenshaw Valley hunting deer for hides. By 1856, several men and their families (including the Jim Willburn, and Steve Fleming) had settled in this valley situated just to the north (within the Van Duzen watershed) of the divide between the North Fork of the Eel and South Fork of the Van Duzen.

Following this initial exploration of the region, little development took place during the next decade due to the conflict between the local Indian tribes and the whites settling in the North Coast region. During late 1850s and the first half of the 1860s, a series of violent confrontations took place between the Indians who had resided in this region for centuries and the local settlers. The culmination of these conflicts was the "Two Years War" in which the military took an active role in pursuing the Indians inhabiting the inland regions of Humboldt and Trinity Counties. A. J. Bledsoe (1885) recounts this period of conflict in his book Indian Wars of the North West.

Some of the fighting and military activity during this period took place in or adjacent to the Van Duzen watershed (Fort Baker was established near Showers Pass in 1862). The trail leading inland to the mines was dangerous to travel and discouraged development of the stock industry. For example, about one mile below the mouth of Pilot Creek (just to the east of Showers Pass) is the location where the County Line Trail crossed the Mad River. Today, this spot is called Olmstead crossing. In July of 1862, a party set out from the coast traveling up the Van Duzen in an attempt to reach to mines of Trinity County. The four men including William Olmstead were attacked by Indians at this location. One man was killed and Olmstead was wounded. In about September of the same year there was another Indian attack along the trail at the same location against three men driving hogs to the mines in Trinity County. All three men were killed in the attack (Bledsoe 1885:221-222).

During this early period of Euro-American exploration, the rich grass lands of the interior regions of Humboldt county were recognized for their grazing potential. The *Humboldt Times* (July 15, 1856) carried an article about the grazing lands of the eastern portion of the Van Duzen watershed and of the Mad River country (located directly to the east) based on information provided by the U.S. Deputy Surveyor (a Mr. Murray) who was working in the area at the time.

> He says there are thousands of acres of the finest stock lands he ever saw. For miles in succession they are obliged to wallow through the most luxuriant grass, which being a kind of mountain grass is known to be exceedingly nutritious....

Later that same year, the *Humboldt Times* (August 23, 1856) noted that ranchers were

already beginning to bring in cattle and were starting up ranching operations to take advantage of the rich grazing lands of the Bald Hills to the east of Eureka.

> About a week ago near two hundred head of cattle arrived in this county from Sacramento Valley, in one drove....The extensive ranges of excellent feed on the Bald Mountains and small valleys of Redwood Creek, Mad River, and other portions of this county will accommodate thousands of stock the year round, without any danger from flood or drought. The advantages of superior feed and mild climate which this section offers for stock raising are just beginning to be appreciated, and it will not be long before every available tract will be covered with herds of mules and cattle. Those who wish to secure good ranches will have to select them soon, for the surveyors and trail builders, during this summer, have been the means of bringing to light the choicest spots in the rear of this Bay, and already they are being rapidly taken...

During the period 1850 to 1865 few settlers were willing to risk the dangers of establishing a ranch in the interior. By early 1865, however, the conflict between the settlers and the Indians was over. Many of the Indian people not killed in skirmishes with the military and the local settlers were forcibly removed to the Hoopa Valley or Round Valley Indian Reservations. Bledsoe (1885:276) writes:

> The end of the Two Years' War was the beginning of permanent peace between the two races in the Northwest, a peace that was to endure unbroken through all the years of the future.

Following the cessation of hostilities, the stage was set for the rapid expansion of the livestock industry into the upper reaches of the Van Duzen and the adjacent watersheds.

Land-use Activities

It is likely that the first land-use activities within the Van Duzen River watershed during the early historic period were limited to the development of trails and the hunting of deer for hides.

Given the historical data presented above, it is likely that by the year 1865, about fifteen years after the initial exploration of the Van Duzen Watershed by Euro-Americans, the region had not yet been impacted by historic land-use activities to any significant degree. Perhaps the major land-use activity during this era would have been the hunting of deer for the sale of their hides. This activity was wide-spread in the eastern region of Humboldt County and in the region of Trinity County west of South Fork Mountain (See Keter 1990, 1994a). In 1861 Lieutenant Lynn (U.S. Army), whose men were operating in the Humboldt/Trinity County region noted:

> Between Spruce Grove [near Harris] and Willburn's place on the Eel River, and especially between [the] main Eel River and Larrabee's Creek [located within the Van Duzen watershed], game particularly deer, is quite plentiful, owing mainly to the fact I suppose, that buckskin hunters, killing deer in contravention of game laws and for their skin, have not yet, to any great extent, infested that region (U.S. War Department 1897a:10)

The Ranching Era 1865-1905

The open oak woodlands and grassland areas in the headwaters region of the Van Duzen watershed (for example the Eaton Roughs/Showers Pass area,) are part of what has been referred to as the "Bald Hills" region of northwestern California. Although the Bald Hills stretch north along the western divide of Redwood Creek almost to Orick, the main region extends south from about Pilot Rock to Round Valley-- across portions of western Trinity County, eastern Humboldt County, and northeastern Mendocino County. The Bald Hills region is located directly to the east of the redwood belt and contains numerous prairies and areas of Oregon and black oak woodlands. As noted earlier, explorers entering the region during the early historic era immediately recognized the grazing potential of the lands situated within the upper Van Duzen watershed.. These grasses were high in nutritive value and grew as tall as a man's horse (Keter 1994b:4). There was little brush as the Indians frequently burned the hillsides.

The end of hostilities in early 1865 resulted in the opening of these interior regions of Humboldt County and southern Trinity County to settlement. During the last half of the decade, homesteaders and ranchers began to claim the rich grazing lands of the upper Van Duzen (Coy 1929:201-202). During last several decades of the nineteenth century, thousands of sheep and cattle grazed on the rich rangelands of the Bald Hills including the portion within the Van Duzen watershed.

Livestock Grazing and Settlement: The Early Years

Cattle were the first livestock to be introduced into the rangelands of the Bald Hills country. Most of the cattle brought in to form the foundation herds of the future cattle industry in Humboldt County were driven into the region from southern California. In some cases, however, cattle were driven in from as far away as Texas (Keter 1994b:13). During the late 1860s the number of cattle in the interior regions of Humboldt County still remained relatively low as the ranches to the west (along the lower reaches of the Eel River Valley) were just being established.

Over the next several decades, the larger ranching operations, that ran the majority of stock in upper Van Duzen/Mad River region did so on a seasonal basis often using the area and the South Fork Mountain region to the east for summer and fall range. Most of these ranches were located to the west Bridgeville in the lower Van Duzen watershed or in the lower Eel River Valley.

The Rise of the Sheep industry

Although the first livestock to be introduced into the rangelands of eastern Humboldt County were cattle, by the early 1870s many of the ranchers in the interior sections of the County began to change over from the raising of cattle to sheep. There were several reasons for this change, perhaps the most important was the price being paid for wool. After the Civil War, a high tariff was placed on wool keeping out foreign competition and driving up the price (Carranco and Beard 1981:185). Also, some of the remote ranches preferred sheep because it was much easier to pack out the wool than to drive cattle to market (Robb 1978:15). Another reason for the change to sheep was the initial lack of predators, including coyotes (Keter 1994b:26), which if present can significantly affect the profitability of raising sheep. The trend towards sheep ranching during this period was state-wide. Historically, the number of sheep within the state of California reached its highest level in 1875 (Herbert et al n.d.:5)

The rapid growth of the sheep industry in the early 1870s is reflected in the steady increase of the sheep population within Humboldt County. In 1865, the total number of sheep in Humboldt County numbered 2,110. By 1870, this number had increased to 12,660. In 1873 the number of sheep totaled 74,148 and by 1875 the number of sheep had risen to 115,483 (Burcham 1981:157).

For the reasons outlined above it is likely that during the 1870s, 1880s, and the early 1890s sheep predominated on the rangelands of the Van Duzen watershed. Although no specific data relative to the number of sheep could be located it is likely that the number substantially exceeded the long term carrying capacity of the range. This inference can be made from the numbers of sheep and the condition of the rangelands during this era in the region directly to the south of the watershed within the North Fork watershed (Keter 1994a, 1994b).

Generally, during this period, the large-scale ranchers hired sheep herders (often local Indian men) to drive the sheep to summer pasture and to remain in the mountains during the summer slowing moving the sheep along a route through the high country as forage at one location became scarce. These routes were know as "trailways."

The sheep were driven to the summer pasture in "bands." A band of sheep numbered about 2,000 to 3,000 animals and usually one man and several dogs were responsible for each band of sheep. The ranchers usually brought in supplies to the mountain camps

periodically (Keter 1994b:24). The majority of the lands within the upper Van Duzen watershed were within the public domain and there were no regulations regarding grazing of livestock. Since the ranchers did not own the land, there was little motivation to take any precautions to prevent overgrazing and short term economic gain in the form of rasing the maximum number of sheep possible was the general rule.

With the availability of "free" and unregulated grazing lands the larger landholders did not want to see development. For example, Owen Coy (1929:283) wrote:

> "In the fall of 1868 the issue of a Mendocino road [only trails led south to connect with Mendocino at this time] was put to a vote and defeated decisively by a vote of 1038 to 134." One of the reasons this road was voted down was that the stockmen believed that trails were all they needed for their stock and that the opening of a wagon road would attract settlers to the area to homestead the interior country and "limit their extensive stock ranges."

That a certain number of large-scale sheep ranchers were utilizing the public domain did not go unnoticed. In Mendocino County the Ukiah paper (*Democratic Weekly Dispatch* April 26, 1882) noted that one rancher was grazing his livestock on unsurveyed lands that:

> ...if divided would make good homes to settlers....But as it is these men are becoming millionaires by its use, having no taxes to pay on the land.

Given the fact that the lands were not owned by the ranchers there was little motivation to prevent over grazing and the realization of short term profits over long term rangeland management resulted in a significant deterioration of the rangelands ultimately affecting their carrying capacity.

1905-1947
Homesteading and Forest Service Administration

By 1905 most of the lands within the Van Duzen watershed were private (Coy 1929:200-201). Some public lands remained in the Larabee Buttes region and the upper Little Van Duzen watershed along the headwaters of the drainage stretching south from Buck Mountain to the Lassics.

Forest Service and Bureau of Land Management Lands

In 1905, after the creation of the Trinity National Forest (Chapter 5 traces evolution of the administration of Forest Service lands in this region), nearly all remaining parcels of public

lands within the headwaters region of the Little Van Duzen were placed under the jurisdiction of the Forest Service. It appears, given the relatively isolated location of these lands (mostly on steep west facing slopes along the western boundary of the Forest), that no management activities except for the issuing of grazing permits and possibly some trail maintenance activity occurred on these lands until well after World War II.

The remaining public domain lands within the Van Duzen are under the administration of the Bureau of Land Management. The largest parcels of BLM lands are located in the Larabee Buttes area. Much of this land is steep and forested. Prior to World War II these lands were utilized by local ranchers for some limited grazing.

Private Lands

The vast majority of lands within the upper portion of the Van Duzen watershed are private. The largest landholders are several large ranching operations. Also, a large number of small homesteads were established in the upper reaches of the northeastern portion of the watershed around the turn of the century. A one-room school was constructed and there was a small community centered on the Showers Pass area. By the end of the depression most of these homesteaders had sold out to the larger ranching operations. The documentation related to the socio-economic evolution of the private holdings within the Van Duzen watershed are beyond the scope of this study.

Land-use Activities

During this period (1905-1947) the major socio-economic activities and effects to the environment were related to land-use activities taking place on private holdings. The primary land-use activity during this era was related to the grazing of livestock. Refer to Chapter 5 and Appendix 1 (Keter 1995) for a general discussion of the effects of grazing on the environment.

1946-Present
The Modern Era

As noted in Chapter 5, in June of 1947 President Truman signed a proclamation creating the Six Rivers National Forest from portions of the Trinity and Klamath National Forests. The Mad River District of the newly created Forest included all of the Trinity National Forest lands within the Van Duzen drainage. With the end of World War II, an increasing emphasis was placed on timber production. By the late 1960s and early 1970s a number of roads were constructed into portions of the Van Duzen watershed and commercial timber

harvest activities began to take place. The management of BLM lands also reflects the increased emphasis of timber production on private lands. During the 1970s and 1980s, some commercial harvest activities also took place on BLM lands.

Private holding within the watershed were also logged during this era and a substantial amount of timber was harvested. Specific data related to the harvest of commercial timber on private lands is beyond the scope of this overview. See Keter 2011a for a discussion of logging in this area during the 1950s and 1960s.

Chapter 6

Historic Period:
The South Fork of the Eel River Watershed

While the upper reaches of the Van Duzen River and the North Fork of the Eel River watersheds have many similarities in the kinds of historical land-use activities that took place, the South Fork of the Eel River has a much more diverse land-use history. The former watersheds contained extensive oak woodlands and grasslands that were prime ranching country. Over the years, economic development of these watersheds was related primarily to ranching and the settlement of small subsistence-oriented homesteads and more recently timber harvesting on both private and public lands. The South Fork of the Eel watershed has a much wider range of vegetation associations including not only grasslands and oak woodlands, but also significant distributions of redwood forests and Douglas-fir /tanoak forests. In addition, very little of the watershed remains within public ownership. For these reasons, the South Fork watershed has an extremely complex and varied land-use history.

The South Fork Eel Watershed can be divided roughly into four segments defined by vegetation and topography. Each of these segments has a relatively unique combination of resources that at various times, given socio-economic conditions of the particular period, provided a stimulus to economic development. The lower South Fork Eel River region, extending from its confluence with the Main Eel River to about Myers Flat, was dominated by a dense redwood forest. Some of the higher elevation hillsides on more southerly oriented slopes contained some grasslands, oak woodlands, and Douglas-fir/tanoak forests. Within the second segment, from about Myers Flat to just south of Piercy, the distribution of vegetation associations becomes much more diverse. While many of the river terraces and lower reaches of side drainages (to the west of the river) are dominated by redwood, there are also large areas of grasslands and oak woodlands reaching down to the river on a number of south and west facing slopes (for example Bear Buttes, Red Mountain, and Pratt Mountain). This region is inland from the Mendocino Peninsula and therefore receives somewhat of a rain shadow effect (while the fog, important for redwoods, tends to flow up the Eel River Valley from the coast). In this area ranching was the first important industry. In the 20th century, however, the economy of this portion of the river became more diverse with logging, the tanbark industry, and tourism becoming important economically.

The third segment extends from about 2 miles south of Piercy to near Cahto Peak. Here the river cuts a deep canyon through the Coast Range Mountains, the hillsides are heavily timbered (especailly to the west of the river), and there are few locations (Leggett Valley for example) for settlement. This portion of the watershed is only a few miles from the coast (where the southern end of the Mendocino Peninsula cuts back to the east), and is more influenced by maritime conditions than the preceding segment. For this reason, there is a much more dense distribution of Redwood at lower elevations with Douglas-

fir/tanoak dominating on many of the upper slopes (especially on north facing slopes). The fourth segment, the upper headwaters region (south of about Cahto Peak), is dominated by Cahto and Long Valleys. In this region, portions of the watershed to the west were predominately redwood and Douglas-fir/ tanoak forests while those areas to the east of Cahto Peak and Branscomb were dominated by oak woodlands and grasslands. Douglas-fir and Ponderosa pine are also common in this area.. Also of note, Ten Mile Valley (located directly to the north of Long Valley) is the most northerly distribution of the Valley oak (*Quercus lobata*) in California (Griffin and Critchfield 1972:36).

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1850-1865 Exploration and Early Settlement

The first documented exploration of the South Fork watershed during the historic era was by members of the Josiah Greg Party in late 1849 and early January of 1850. They had left the Trinity mines in November and headed west hoping to discover a land route from the coast to the mines. After "discovering" Humboldt Bay, they party headed south. After an argument among the men concerning the return route to the settlements in Sonoma County broke out near the mouth of Van Duzen River, one group of men led by L.K. Wood headed up the Eel River while Greg and the rest of the party headed west to attempt to reach Sonoma via the coast. The Greg Party was finally forced inland due to the rough coastline. Both parties passed through the South Fork watershed and after numerous hardships finally made it to the Sonoma settlements. In Lake County, Greg died when "he fell from his horse...and died from starvation" (Coy 1929:43) (others suggest a more sinister plot involving his murder since he had become intensely unpopular with the rest of the men during the journey).

In 1851, the Redick Mckee expedition, whose purpose was to make treaties with the Indian tribes of the region (these treaties were never ratified by Congress), was led by Thomas Sebring, a member of the Greg Party. They followed the route blazed the year before and this route became the main overland trail linking Humboldt Bay with Sonoma County. The trail passed through Little Lake Valley and then into Long Valley. North of there, it headed along the divide between the South Fork and Main Eel (roughly following the Bell Springs Road). The trail continued north past Harris (Spruce Grove) and then dropped down to the west to about the present location of Garberville, following the South Fork of the Eel north to its confluence with the main Eel. Later, a new route was blazed that dropped down from Harris to the east to Alderpoint on the main Eel. From here the trail continued north to Bridgeville and Kneeland before dropping down to Humboldt Bay. By 1859, a wagon road connected Long Valley with the settlements to the south.

Another early explorer who passed through the South Fork watershed was Ben Kelsey (a leader of the Bear Flag Revolt). Some early maps have "Kelsey's River" as the name for the South Fork of the Eel.

As noted in the earlier histories of the Van Duzen and North Fork Eel watersheds, the era from 1855 to 1865 was a period of conflict between the Indians and the new settlers. This conflict, actually a series of clashes between the Army and settlers with the various Indian groups in the region have been termed (collectively) by Bledsoe (1885) as the" Indian Wars of the Northwest." During this period, nearly all of the Indians within the South Fork watershed were displaced from their homelands. Many were killed and the survivors were placed on the Round Valley Indian Reservation. In addition, Long Valley became a center for the selling of Indian children to wealthy families in the Bay Area under the Indenture Act of 1850. Captain Thomas Ketcham commanding a company of troops stationed at Fort Baker reported (USWD 1897a:982):

> I have been informed that there are quite a number of citizens who intend as soon as the snow goes off, to make a business of killing bucks whenever they can find them and selling the women and children into slavery. It is supposed that they will make their headquarters somewhere in the neighborhood of Fort Seward, taking their captives to Long Valley, there selling them to certain parties for $37.50 per head, who put them in a covered wagon, to take them down to the settlements, and there dispose of them at very handsome profit.

Within the South Fork of the Eel watershed there were numerous conflicts between the settlers and the Indians. For example, a number of homesteaders had settled in the vicinity or the present town of Garberville. In early 1861, Indians attached one of the homesteads in the area owned by the Sproul brothers. The Indians were driven off but both brothers were seriously wounded. This incident was followed by an attack on a Sinkyone village near the present location of Briceland where many Indians were killed and the rest driven off.

The conflict between settlers and the Indians continued until early in 1865. By that time the army had rounded up the survivors and placed them on reservations at Round Valley or Hupa. With this action, the last impediment to settlement was removed and the number of settlers entering the region began to accelerate.

Mendocino County

Within this portion of the watershed the principal locations for early historic settlement were in Long Valley and some of the smaller valleys near the head of the watershed (Cahto, Ten Mile and Branscomb Valleys). The first to settle in this area were Robert White and James Simpson. In 1856 they settled in Cahto Valley. There was a small swampy lake at this location and the men dug out a section and drained out the water. Over the years this outflow has developed into a deep gorge. Within a short time, a number of other settlers had moved into the area (Mayo 1974:2). By 1860 there were quite a few settlers, some with families, living in the Cahto/Long Valley area. In 1861, Simpson built a hotel in Cahto.

It was on the route from the inland ranches to the coast at Westport.

By 1865 conflicts between the new settlers and the Cahto had ended with most of the surviving Indians placed on reservations. In addition, there was a rancheria in Cahto. The following information was found in the folder on Cahto and Laytonville at the Historical Society in Ukiah and is worth quoting at some length.

> Merchandise was freighted in [to Cahto] on the backs of Indians, from the seaport town of Westport. Each Indian was given approximately 80 pounds to carry.
>
> They were rewarded for making the trip with a cheap handkerchief, or a shirt or some other article of clothing.
>
> They were given but little consideration and would be stripped to the waist lashed after the manner of punishment inflicted on the Negro of the south during the days of slavery.
>
> John Simpson, an army captain, was placed in charge of the Indians by the Government, and he held them in subjection with an iron hand.

It appears that the number of Indians Simpson controlled numbered about 75.

In 1865, Simpson and White built a saw mill with a capacity of about 2,000 board feet per day in Branscomb. In 1870, the Cahto School district was established and in 1880 there were about 53 students.

During the last half of the 19th century numerous subsistence homesteads were established in the region--especially from about the confluence of Ten Mile Creek south to Branscomb Valley and in the regions to the east of Branscomb including Cahto and Long Valley.

Humboldt County

The Garberville area was first settled in 1862 by J.E. Wood and there were other several homesteaders (including the Sproul brothers as noted earlier) living in the vicinity. . Due to conflicts with the Wailaki and Sinkyone, few settelrs homesteaded in this area until 1865.

Ranching and Homesteading 1865-1900

It was during this period that nearly all of the lands within the public domain within the

South Fork watershed was transferred into private ownership. Because the watershed is so large, this portion of the study has been divided into several sections. The first section covers the history of that portion of the South Fork Eel River watershed of the region within Mendocino County and the second covers the history that includes portions of the watershed in southern Humboldt County; also included sections on transportation and mining.

Mendocino County: Settlement and Homesteading

During this era, poor transportation infrastructure limited development of the region. There was also a "break" or division at about the Humboldt/Mendocino County line. North of here, most commerce was oriented north to Humboldt Bay (or Shelter Cove). To the south of this division, commerce was oriented to the south using the wagon road from Laytonville to Willits (via Sherwood Valley) or to the west using the port at Westport for the transport of goods into the region and the exporting of wool, redwood shakes, and other local products to markets predominately in the Bay Area..

In 1873, Frank Layton moved to Cahto. Apparently after some disagreements with some of the local residents, Layton moved his blacksmith shop to Long Valley where he purchased 320 acres. In 1880 a post office was opened that bore his name. Although Layton left the area soon after this, the more convenient location in the center of Long Valley, with room for a settlement to grow and with a post office and stage stop, resulted in many Cahto residents moving into Long Valley. As Mayo (1974:1) notes, "Cahto slowly started to fade away and after a few years it disappeared altogether."

The primary economic activities in the area during this time were related to ranching. As elsewhere, sheep outnumbered cattle during the 1870s and 1880s. Some people also raised turkeys (one article in the *Redwood Advocate* [12/17/1965] describes how one farmer drove 75 turkeys all the way to Santa Rosa). Many of the homesteads depended to some extent on hunting and fishing to supplement their subsistence. By this time there were many wild hogs in the area, in addition, deer were also plentiful. One early resident wrote that the remote unroaded region to the north of Laytonville was:

> settled only by here and there a stock raiser, whose habitations are many miles apart...grazing lands are extensive and exceedingly rich. Even the mountains immediately bordering the valleys...abound in the richest of grass, and herds of cattle and sheep are seldom out of site while traveling over them. (Undated letter to E.R. Budd quoted in Herbert n.d.:1978)

Salmon (smoked) were an important staple in local residents' winter diet. One early resident (Mendocino County Historical Society files) wrote that

> ...in fact there were so many fish that came up the Eel River in the Jackson

> Valley area that they could be heard over the roar of the river, as they slapped against each other in their attempt to get upstream. Ranchers hauled wagon loads of them to their homesteads, where they were used for fertilizer.

In the 1880s, Simpson and White opened a sawmill in the Branscomb area (Jackson Valley), it was the first in this area. Its main purpose was to supply lumber to local residents. Although redwood logging along the coast was beginning to reach up into the headwaters regions of coastal streams, due to the distance inland from the coast little in the way of commercial logging took place within the South Fork watershed during this period. Tanbark was first harvested within the area in the 1880s (but not in large quantities).

One of the larger contiguous tracts of BLM within the watershed is in the Cahto Peak area. Adjacent to this is the land owned by the Nature Conservancy--the Coast Range Preserve together this area totals about 8,000 aces. The BLM lands are for the most part the located along the higher slopes of the area. The Conservancy lands are located to the west along the lower slopes of the surrounding mountains and the South Fork passes through this area. During the late 1800s, numerous settlers homesteaded in this area. A comprehensive review of the homestead entries for this area is contained in *The Land-use History of the Coast Range Preserve, Mendocino County, California* (1979) by Sharon Johnson. This study provides an excellent analysis of the past human land-use activities in this area during both the prehistoric and historic period and the reader is referred to this publication for a detailed overview of location and activities of the homesteads in this area.

Important for this overview is the finding (Johnson 1979:16) that; the most intensive use in this area was within the "Eel River Corridor" (that is along the lower slopes on terraces adjacent to the river).

Humboldt County: Settlement and Homesteading

Mary Anderson who authored *Backwood Chronicle* (1985), a history of the southern Humboldt County region, indicated that during her research she was able to find very little on the history of southern Humboldt County. One of the earliest settlers in the southern Humboldt area was James Wood. He homesteaded in what is now the Garberville area and raised hogs. He would then drive them all the way to Red Bluff where top price was paid by Chinese miners (Anderson 1985:25). Another early settler was William Cornelius. In 1867, he acquired the flat that was to become the future town of Redway.

Jacob C. Garber settled on the flat above the river (where present day Garberville is located) in 1873 and constructed a store and established a post office. Prior to this time, the area was known as Dogtown or South Fork.

By the 1878, the county road from Ferndale to Honeydew was completed to the settlement

of Briceland (a spur also connected with Shelter Cove). At that time it was the largest population center in southern Humboldt with about 300 people, while the population of Garberville was about 100. Garberville, however, was recognized as an important center for the farms and ranches of the region. One newspaper article noted that Garber and another merchant Martin had been running pack trains between Garberville and Shelter Cove for over two months and still had over 50 tons of supplies to transport (Suzy Baker Fountain Papers n.d. v 65:254). During this period many of the cattle were driven south to market to the head of the railroad in Ukiah (and later in Willits) to be sold in the Bay Area. During the early years river boats used to come all the way up the South Fork to Myers Landing (Myers Flat).

In 1879, a wagon road was constructed from Briceland to Garberville (the Old Briceland Road). A wagon road (now a portion of Alderpoint Road) was also constructed from Garberville east connecting with the newly constructed Humboldt-Mendocino Wagon Road.

During the period from the mid 1860s to the late 1890s, there was a steady stream of homesteaders and ranchers moving into the southern Humboldt County region. During the early years, sheep ranching was the primary industry in the area that generated capital. During sheep shearing time Anderson 1985:41) notes that these was a steady stream of mule trains (each consisting of about 100 mules) transporting wool to the docks at Shelter Cove.

During the late 1800s the redwood forests of the South Fork watershed remained relatively unlogged. To the west of the watershed logging was occurring in the creeks draining to the Pacific south of Shelter Cove. At Bear Harbor a wharf was constructed and a railroad led from the divide to Bear Harbor. Several small logging camps of villages were established in the area including Moody, Kinney, and Four Corners (along the divide between the Pacific watersheds and the South Fork and Matole watersheds. Later in the early 1900s, a lumber mill, Andersonia (named after the owner Henry Anderson), was constructed near the present town of Piercy with the idea of hauling logs from the western portions of the watershed (the headwaters area near Moody and Kinney). In 1906, Anderson was killed in an accident and the mill never opened despite a substantial investment.. Much of the logging in this region took place after the construction of the Redwood Highway finally provided a means to get the logs to market.

Transportation

Perhaps the most important factor in limiting the development and settlement of the South Fork Watershed during the late 1800s was lack of adequate transportation infrastructure. There was no wagon road connecting Humboldt County with the counties to the south until the mid-1870s. Eureka was a seaport town and many citizens did not even want a road (the ranchers feared it would increase the number of homesteaders and lumber men did not want to pay for a road that they did not need). Thus, in 1868 a measure to appropriate

funds to construct a wagon road were defeated. For that reason, the wagon road from the south ended at Laytonville. At this point, wagon roads led to the east to Round Valley and to the west (generally following the route of the Branscomb Road) to the coast, but to the north, there was only a narrow trail.

Eventually, a road was constructed to Petrolia from the Ferndale. This road was then extended to Briceland and then to Garberville. In 1875, a wagon road was constructed from Eureka via Kneeland and Bridgeville to Blocksburg. In 1876, the road was finally completed (using Chinese labor) to Laytonville. It was called the Humboldt and Mendocino Wagon Road. It was passable only six months a year and was closed from the first winter rains until late spring (Bunkse 1962:118). From Blocksburg, the road headed south to Alderpoint where the river was forded (it was usually impassable in the winter). From here, the road headed southwest climbing the ridge to Harris. It then headed south to Bell Springs on the divide separating the South Fork and Main Eel watersheds. It continued south along the ridge dropping down to the west into the Rattlesnake Creek watershed (following the route of the Bell Springs Road) and then south (along what is currently the U.S. 101 corridor) to Laytonville.

In the 1890s, a new road was constructed north from Harris along the upper western slope of Pratt Mountain following the ridgeline to where it drops down to the confluence of the South Fork with the main Eel River. This section became known as the Mail Ridge Road. Although it shortened somewhat the distance to Eureka, it was very steep (over 30% slopes in some places) with dangerous switchbacks and was considered little improvement over the old route. Garberville and the surrounding region did not have a direct link with Eureka until 1890 when a wagon road was constructed along the South Fork. Prior to this time it was known as "the most remote town of the [Humboldt] region" (Bunkse 1966:88-89).

While the wagon road at last connected Humboldt County with the south it was not considered a commercial success since traveling to Eureka from the Bay area was faster and easier via steamer and the road was closed much of the year. For this reason, much of the South Fork Watershed within Humboldt County still remained sparsely settled at the turn of the century.

1900-1945: Development and Growth

It was during this era, especially after completion of the Redwood Highway, that the watershed of the South Fork began to experience rapid growth. Transportation was the key to the development of this region and made possible the large increase in population and the beginning of a new industry within the watershed--tourism.

<u>Mendocino County</u>

In 1906, 200 aces on the west side of the valley was purchased by the Department of Interior and the Laytonville Rancheria was established. In the Branscomb area logging was still not practical due to poor transportation (until completion of the Redwood Highway see below) but some redwood was used to produce railroad ties, shakes, fence post, and pickets which were profitable to produce and transport via freight wagons to market.

In the early 1900s, the Lovejoy family developed a summer resort at the location of the current Coastal Reserve buildings called Wilderness Lodge. It was a popular vacation spot for those from the Bay Area. It was also the precursor of the large increase in tourism after completion of the Redwood Highway.

The small Valley at Legget was originally called Mitchel Valley. It was isolated and accessible only by trail until completion of the Highway. During the 1950s it was a logging town supporting about 25 small lumber mills.

Humboldt County

In 1915 much of downtown Briceland was destroyed by fire (Anderson 1985:28) but the tanoak mill outside of town was untouched. After collapsed of the tanbark industry the mill closed in 1922. With completion of the Redwood highway both settlement and increased tourism began to effect the local economy of southern Humboldt County. This era saw a significant increase in the number of tourist facilities. For example, Ben Bow Inn was built during this era and was a popular resort for Bay Area residents.

Major Land-Use Activities

It was only after construction of the Redwood Highway that significant development began to take place within the South Fork Watershed. The following is a brief summary of the kinds of land-use activities that took place during this period.

Mining

Very little activity related to mining has occurred within the watershed. Johnson (1979:158) notes that on what are now Coast Range Preserve lands that in 1903-04 two men worked a cinnabar mine for a short period of time but that no cinnabar was ever sold. The shaft was about 3-4 feet in diameter and 30 feet deep; Johnson (1979:159) noted that the shaft is still visible.

Red Mountain-Chromite:

The only location identified where mining has taken place to any significant degrees is in the Red Mountain area located east of Leggett. The earliest reference to mining in this area was found in the *11th Report of the State Mineralogist* (1892:256). The report noted that

a large deposit of ferruginous rock is said to occur at Red Mountain about 6 miles south of the Humboldt County Line. It has been used as [red] paint by many settlers in that portion of Mendocino County

The upper portions of Red and little Red Mountain contain deposits of Chromite ore. With the beginning of World War I, over 100 mining claims were filed in the area and some limited mining took place (the Guthrie]Group had the largest number of claims). The reason for this is that chromite was a strategic metal needed in the war effort and a premium was paid that made mining commercially profitable. In 1918, these claims were leased by the Moreland Trucking Company which packed the ore out to the road by mule (probably about 4.5 miles to the Redwood Highway then under construction). Due to the inability to economically transport the mineral to market very little chromite was mined. Figures in the Division of Mines Report (Bulletin 134, 1946:17) indicate the following amounts of chromite were mined in the Red Mountain area.

		Year	Tons
1918	522		
		1920	187
		1928	166
		1929	39
			914 long tons

One resident of the Long Valley area indicated that during World War I his father packed chrome off Red Mountain on pack horses (Mayo 1974:23).

In 1978, Hanna Mining Company had filed mineral claims on 3,400 acres of BLM land and had bought 5,000 acres in the area east of Legget where it was believed that the laterite soils contained about $1 billion worth of nickel. No mining actually took place but it is likely that some evidence of prospecting is visible in the area.

The Tanbark Industry

From about the turn of the century until about 1920, the tanbark industry was at its peak. In the Long Valley region, tanbark was transported with four or six horse teams with tandem wagons. It was hauled to the railroad for about $10 a chord. Eventually, trucks began to haul it for only $3 a load. Mayo (1974:13) notes that a man named Hansen owned

a grinder north of Laytonville that processed the tanbark and that it was sacked and shipped to China. It was used in the process for tanning leather. The industry went bust when a chemical process was developed

In the Cahto Peak area, tanbark harvesting reached its peak in the early 1900s. Most of the activity took place further to the west in coastal drainages, however, some harvesting took place in the upper reaches of the western portion of the South Fork watershed and a small amount from or adjacent to the homesteads located along the river north of Branscomb (Johnson 1959:153).

There was also a large amount of tanbark harvesting in the Briceland area extending west over the divide into the Matole watershed.

Timber Harvesting

Nearly all of the forested lands within the South Fork watershed are held by individuals or corporations. For a review of how these timber lands were transferred from public to private ownership (for both Humboldt and Mendocino Counties) refer to *One Hundred Years of the Redwood Lumber Industry* (Howard Brett Melendy 1952). Although the study traces only the evolution of redwood forests from public to private ownership it does contain insights on how the lands just to the east of the redwood belt--the Douglas-fir tanoak forests were also transferred to private ownership. This transfer of lands to private ownership has implications on how the environment of the watershed has changed over the last century due to the extent of timber harvesting and the resulting effects to terrestrial and aquatic plant and animal species within the watershed.

It is worth noting that by 1912 nearly all of the redwood forest regions of Humboldt and Mendocino Counties were held by large companies but that as of that time little attention had been paid by these companies to Douglas-fir forest lands as they were considered to be of little value. Within the South Fork watershed redwood commercial logging was rather late in arriving. This was due to the fact that immediately inland from the Mendocino coast and the Humboldt Bay area were dense stands of redwood that were easily (relatively) transported to mills situated on the coast for shipment to markets in the Bay area. After World War I and the completion of the Panama Canal in 1917 increased demand, easier access to markets on the east coast resulted in an increase market for redwood.

This increase in demand roughly coincided with completion of the Redwood Highway that provided easy access for the first time to the large groves of redwoods located within the South Fork watershed. When the highway was built, no timber rights were included in the right-of-way. One visitor, a wealthy Chicago philanthropist who traveled the new Redwood Highway, was shocked to find scenes of utter devastation, and wrote that many areas along the road looked “worse that the devastated districts of France” after World War I

(Schrepfer 198313).

It was a reaction to these events that led to the formation of the Save-the-Redwoods League and the purchase of a number of large groves of redwoods that eventually became state parks. The largest of these, Humboldt Redwoods State Park was made possible largely through the donations of a few wealthy individuals especially John Rockefeller.

Transportation

In the first decade of the 20th century, improvements had been made to the Humboldt and Mendocino Wagon Road and the first auto stages connecting the Bay Area with Eureka made the trip in two days. With the growing popularity of motor vehicles, the Govenor signed the State Highway Act in November of 1910. This Act called for the construction of a state-wide system of highways. One of these routes was to be the Redwood Highway linking the Bay area with Crescent City and Grants Pass, Oregon. When the route through northern Mendocino and southern Humboldt Counties was surveyed, the South Fork of the Eel River corridor was chosen. This route was selected since the railroad (the section connecting Eureka to Willits was completed in 1914) already occupied the best route through the main Eel River canyon and for that reason, a road would be prohibitively expensive (Robinson 1964:26). Therefore, the South Fork Canyon was selected even though the route was somewhat longer. At that time, the portion of the South Fork watershed within Humboldt County remained relatively isolated since bad weather still closed sections of the Mail Ridge and Bell Springs Roads during bad weather. In the Laytonville area, autos began traveling the stage road that extended from Willits via Sherwood in 1910. It was noted that during the year 1913, 30 autos passed through the town (Mendocino County Historical Society files).

In 1914, road construction began, but during World War II construction was nearly halted. Nevertheless, by 1918 the road was "passable" from Sausalito to Eureka. [One resident of Piercy remembered that the teacher in his small one-room school used to let out class whenever a car passed by since seeing one at that time was such a rare event].

The most difficult portion of the road to construct was the section from Cummings (near the intersection of the Bell Springs Road and U.S. 101) to Dyerville. The road was built through, as Robinson (1964:28) notes, "what was literally virgin wilderness.." For this reason, a haul road was constructed from Leggett to Westport on the coast (now the route of California Highway 1). Steamers could unload in good weather and then supplies were transported by wagon to the construction site. It was not until 1918, that the first steam shovel was used on the job. By 1920, the road was complete however large sections remained unpaved until the mid-1920s.

The construction of the Redwood Highway was a significant event in the history of the

South Fork watershed. Prior to this time, much of the region was isolated and sparsely inhabited. Garberville was the only small community in the central portion of the watershed and was a regional center for the ranching industry. Due to difficulty of access very few tourists ventured into the area. After completion of the new highway, the settlements along the wagon route (Blocksburg, Alderpoint, Harris) began to decline while there was rapid growth along the new highway corridor and every level spot along the river came to be occupied by small settlements or farms and tourism became a major industry (for example French's Camp and the Ben Bow Lodge were favorite tourist destinations).

Land-use Activities and their effects on the Environment

Within the upper reaches of the watershed homesteading, timber harvesting, hunting, feral pigs, the tanbark industry and the use of fire by some homesteaders are some of the primary factors influencing the environment during this era.

Within the Coast Range Preserve, Johnson (1979:36) notes that fire played a role in the past similar to that observed within the North Fork Eel watershed (see Keter 1995). For example, on Black Oak Mountain and the adjacent ridge, black oaks are being invaded by Douglas-fir and the oak woodland is rapidly disappearing. Some chaparral area (those in lower more mesophytic areas) dominated by manzanita, ceanothus, shrubby live oaks are also being overtaken by succession to Douglas-fir. When long-time residents of the Long Valley/Branscomb area were interviewed they also indicated that the area used to be much more open.

Johnson (1959:41) also notes that early resident of the area noted that Roosevelt elk were present and possibly, though unconfirmed, grizzly bear (Mayo [1974:130] notes that Diege Sheldon killed what was probably one of the last elk in the area in 1900 in the area between Branscomb and Westport). Deer were common as were black bear. During the late 1800s and early 1900s many of the local residents trapped mink, otter, raccoon, fox, bobcat, and ringtail since pelts were a valuable commodity (no mention was made of fisher). Also important to note is the fact the local residents indicated that until logging in Douglas-fir forest took place porcupines were not present in the area; one local resident noted he first saw one in the early 1940s (Johnson 1959:44).

One of Johnson's interviewees (1959:210) indicated that prior to the 1955 and 1964 floods that many of the streams were lined with willow, alder, and yew but that the floods destroyed the vegetation. The records also indicate that there was a spring run of salmon in this area. Mayo (1964:41) noted that one individual she interviewed indicated that in the 1920 one resident of Jackson Valley (Branscomb) caught a salmon that weighted 90 pounds and that salmon of this size were common in those days.

It should also be noted that hogs brought in by settlers during this era ranged the hillsides and many became feral. They are still found in this area today. Johnson (1959:45) notes that herpetologists visiting the Preserve have suggested that it is possible that feral pigs have affected negatively reptile and amphibian populations.

1946-1997: Post World War II--The Modern Era

This section provides a brief overview of the post-World War II era and is included to provide a transition and link with the contemporary social data gathered for the original watershed assessment. The following overview emphasizes land-use activities and does not include information on specific population centers and areas. The reason for this approach is that growth during this era was rapid and widespread within the South Fork watershed and too complex to document given the limited amount of time provided to accomplish this overview. Therefore, this study provides a thematic overview of the principal land-use activities taking place within the watershed that influenced the environment during this period.

Douglas-fir Forests and Timber Harvesting

It was not until after World War II that timber harvesting in earnest began on the Douglas-fir forests of the region. With the end of the war there was a rapid expansion of the economy and because of the home loan programs for servicemen there was a substantial increase in demand for lumber. Much of the early logging activity took place on private lands, but increasingly, national forest lands (to the east of the watershed) were also providing timber. By 1952, there were 258 small lumber mills operating in Humboldt County.

Much of the land with Douglas-fir was interspersed with oak woodlands and was owned by ranchers who by this time had acquired nearly all of the lands within the watershed to the east of the redwood belt. During this period, ranchers often sold the rights to log their land to timber companies unaware of the real value of their timber or the complexities of logging contracts. Since the timber companies did not own the land they had little motivation (or legal requirement contractually) to log carefully (Dasman 1965:86). For this reason, road construction and logging practices were undertaken with one objective in mind--to reach and harvest as much timber as possible. No consideration was given to either regeneration, slope stability, or future productivity of the land. As Dasman (1965:86) notes, often times when the loggers left, the ranchers found their lands badly damaged or even in useless condition.

It was during this era of the early 1950s that the number of sawmills within the watershed reached its peak. For example in the Garberville area alone there were nearly 50 small

mills. Employment rose, the economy boomed and many loggers and their families (many from Mississippi where a logging boom was going bust and Oklahoma) were moving to the area. This boom period lasted little more than two decades and by the late 1960s, nearly all of the old-growth Douglas-fir on private lands within the South Fork watershed had been logged. As the inventory of uncut timberlands declined on private lands attention turned to the vast stands of old-growth timber on BLM and Forest Service Lands (further to the east on Six Rivers National Forest). By the 1970s and 1980s, the timber from public lands within Humboldt County was a significant percentage of the total timber harvested within the county.

Recreation and Tourism

During this era, tourism and recreation related to hiking, sightseeing, and activities related water sports along the South Fork contributed to rapid development of an infrastructure along the US 101 corridor emphasizing tourism. The recreation and tourism over recent the years have evolved into the most important industry within the South Fork watershed.

Ranching

Ranching continued to play an important part in the economies of the small communities within the watershed. In much of the watershed sheep continued to outnumber cattle (although to the east of the watershed within the North Fork and Van Duzen watersheds cattle were preferred). By this time most of the small scale ranching operations had been consolidated and most ranches within the South Fork watershed numbered in the thousands of acres.

Back to the land Movement

Beginning in the late 1960s (just as the harvesting of timber from private lands was declining) a new a significant land-use activity came to dominate the watershed. The back-to-the land movement (as it was known at the time) consisted of numerous individuals leaving urban centers in an attempt to "get back to nature." Within the South Fork watershed, numerous ranches were subdivided (after the timber had usually been harvested) and parcels of land most varying between about 20 to 160 acres were sold. Real estate became a major economic activity (there were numerous Real Estate offices opened at this time in southern Humboldt and northern Mendocino Counties).

The population grew rapidly. In addition, there were significant impacts to the land resulting from the increase in rural development. One of the greatest impacts was from the construction of numerous roads leading to the new parcels of land. Often these developments were poorly designed and the roads were badly engineered (few or no

culverts, little consideration for slope stability, no effort to minimize runoff). Many of the new comers (especially by the mid-1970s) were unable to find jobs in the local economy and marijuana cultivation grew into what was (and to some degree still is) the principal economic activity within much of the South Fork watershed. This activity also had significant impacts on the ecosystem of the South Fork watershed (through runoff of chemical fertilizers, poisons used in controlling rodents, erosion, etc.).

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[This section has not been fully updated in 2017. All references in this document--including those by the author-- can be found in an updated bibliography at the SolarArch website in the *Compendium* section there is a link to References Cited. That document contains all of the references used by the author for research on the Eel River watershed over the last 35 years.]

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