

SECTION II HUMAN HISTORY OF THE COAST REDWOODS

In a document with the scope of *Redwood Ed*, it is impossible to go into depth regarding the history of a region the size of the coast redwood's range. *Redwood Ed* provides a brief summary of "stages" in the human history in the coast redwood region, particularly as it pertains to the redwood forests. For those who want to go into greater depth, many books have been written about specific local history. Some of them are listed in the Resources and Works Cited in the Appendices. Local parks, museums, libraries, schools and colleges, and book stores can provide a wealth of additional information.

Chapter 1

Native Americans and the Redwoods

The first people to inhabit the coast redwood region were the Native Americans who, according to their traditions, believe that they were placed in their homelands by the Creator and that they have lived there since "time immemorial." Most scientists agree that the people who are now called Native Americans are probably descendents of people who migrated to North America from Asia about 15,000-10,000 years ago, when the last ice age lowered sea level to a point several hundred feet below its present level. "Indians" probably came to California from elsewhere in North America about 10,000-8,000 years ago and to the northern redwood region from California's central valley. Evidence of human occupation from about 5,500 before present (B.P.) has been found in northwestern California (Moratto, 1973).

Archaeological evidence indicates that the entire coast of California was occupied by humans by about 5,000-4,000 B.P. By about 4,000 B.P., human populations in the redwood region had reached high levels. In the North Coast ranges, Native American populations were some of the densest in California. Before the Spaniards arrived, over 10,000 people lived in the coastal area between Point Sur and the San Francisco Bay.

Estimates of the number of Native Americans in California at the time of Columbus range from about 200,000 (Hewes, 1981) to as many as 700,000 (Wilson, 1998); by 1900, there were probably no more than 15,000 (Emanuel, 1993).

Teaching Idea



Have students find the average of 200,000 and 700,000. Then have them compare that number (450,000) to the populations of large cities in California and of the state. Discuss how more people are able to live in California now than 500 years ago. Be sure to discuss not only how agriculture and medicine have changed our lives, but also how people living in cities depend on food and water from elsewhere, i.e., the populations of cities exceed the carrying capacity of that area's land.

In the northern redwood region, some of the Native American peoples and cultures were very similar to the people of Alaska's southern coastal areas, living mainly along salmon streams and obtaining much of their food by fishing. Evidence of this derivation is found in their languages, culture, boat building techniques, and plank houses. Other groups apparently came to the north coast from the south and from the central valley.

In the southern redwood region, the Native Americans obtained more food by hunting and gathering than by fishing.

At least 15 different tribal groups inhabited the redwood region when the Europeans arrived in the 1700s. Native Americans in each area adapted to their local

environments, utilizing the natural resources, including the redwoods, in a variety of ways. Use local resources to learn about the lifestyles of specific groups. Because there were so many different groups, it is difficult to discuss all of them here. Some common practices of major groups are described below, especially as they pertain to the redwood forests.

The rugged geography of the redwood region, which tended to isolate groups from each other, was an important factor in the development of different languages and cultures. Plentiful resources, especially foods such as fish and acorns, also reduced the need to interact with other groups, further increasing isolation. As the relative isolation continued for many centuries, languages and cultures became increasingly distinct.

Teaching Idea



This cultural evolution is a similar process to biological evolution. Discussion of cultural evolution can provide a basis for discussion of biological diversification and evolution... change over time.

Evolution is emphasized in the seventh grade science curriculum. In high school life science, students learn about how geographic isolation affects speciation. (With regards to Native American groups, we're not talking about speciation, of course, but rather about development (evolution) of different cultures and language groups.)

Even as early as first grade, the history-social studies standards discuss such things as "some aspects of people, places, and things change over time while others stay the same." In third grade, students study "the ways in which physical geography, including climate, influenced how the local Indian nations adapted to their natural environment."

Several of the resources listed in Appendix III and IV provide maps of Native American groups. (See Eargle, Emanuels, Heizer, Woodhead, and others.) By comparing a map of Indian group territories to a map that shows mountain ranges, students can see that groups in the northern region, where the mountains are very rugged, tended to inhabit a more restricted area than those in the southern areas, where the terrain made travel easier. This is very evident if one also looks at the large areas inhabited by groups in the central valley, where travel was relatively easy, or the southern deserts, where food and water resources were scarce and necessitated larger hunting/gathering areas.

Coastal groups utilized many resources from the sea, including many kinds of fish, seals, sea lions, shellfish, octopi, seaweeds, salt, and other resources, including the occasional whale. Not only did marine organisms provide food, but shells were utilized as tools, furs provided protection from cold weather, and many resources were used as trade goods. Resources such as fish, acorns, and deer were so plentiful that there was little need to "farm" such crops as corn or squash.

The major groups in the northern part of the redwood region were the Tolowa, the Wiyot, and the Yurok. The Tolowa lived in northern Del Norte County in the Smith River

area, while the Yurok inhabited an area from Wilson Creek in Del Norte County to Little River south of Trinidad Head in Humboldt County. They lived in over 70 villages ranging in size from one family to fifty people. The Wiyot lived along the coast from Little River south to the False Cape/Bear River Ridge just north of Bear River.

Tolowa and Yurok houses and other buildings such as sweathouses and assembly halls were made mostly of redwood planks. (See Figures 70 and 71.) While somewhat different in design, Tolowa and Yurok buildings had much in common. The planks were typically made from trees that had fallen in the forest and from driftwood. The trees were split into planks using wedges made from elk antlers that were pounded with stone mauls, and shaped with mussel shell adzes. The boards might be several inches thick and 1 to 4 feet wide. These rectangular buildings might be up to 50 feet on a side, but were generally smaller. To conserve heat, and to protect against animal or human intruders, access was through a round opening, barely large enough for a person to crawl through, cut into a plank. Redwood's resistance to decay helped these buildings last more than a hundred years.

While most of the redwood used by the Native Americans came from fallen trees, they apparently did occasionally use fire to cut trees down. Hot stones and fire were used to char and burn a "cut" in one side of the tree. The charred wood was scraped away and the process repeated. When one side was partly burned through, another "cut" was made higher up on the opposite side.

Fortunately for early users, much of the old-growth wood was knot-free, which made it easier to split. This facilitated the making of planks from the abundant old-growth trees and logs. (It also made it easy to make grape stakes, shingles and other "split products" in later times.)

Teaching Ideas



Many of the illustrations in Section II are provided two-to-a-page so that they are large enough to use as masters for overhead transparencies.



See the activity "Ideas for Using Historic Images" in Section IV.

Pictures from many sources in IV and V, including Barbour et al. (2001), can be used as a basis for student-built models of Native American plank houses and bark cone-shaped houses built by students.



Figure 69. Replica of a Yurok dugout canoe. (Photo from Clarke Museum collection.)



Figure 70. This replica of a Yurok redwood plank house can be seen at Patrick's Point State Park, north of Arcata. Note the small entrance opening, which helps conserve heat and makes the dwelling more secure. Since the house surrounds a pit, the walls needn't be very tall. (Photo by Michael Roa.)



Figure 71. Replica of a Yurok sweat house at Patrick's Point State Park. (Photo by Michael Roa.)



Figure 72. Model of a Yurok plank house on display at Patrick's Point State Park. (Photo by Michael Roa.)

Redwood was used in a variety of other ways, especially by the Yurok. They created furniture such as stools and boxes, paddles, dugout canoes, and fishing tools. Redwood bark and root fibers were used in basket-making. Redwood bark was even used to make women's skirts and men's mantles.

Canoes were especially important to the Yurok and the Tolowa. In many areas, the rivers provided an easier way to travel than hiking through dense forests and up and down steep terrain. (See Figure 69.)

Dugout canoe making was a complex process. After using fire to "cut" driftwood logs into sections about 18 feet long, the shaping process began. Pitch was spread on one side of the log and ignited. As the pitch burned, it charred the wood. The builders smothered the fire with damp green leaves or fresh redwood bark and then scraped out the charred wood. Repeating the process and scraping and shaping both the inside and outside produced a canoe that worked well on the rivers. Five or six months might be spent making a canoe, which could be used by the makers or traded to another group (Barbour *et al.*, 2001).

Even larger canoes were built for use in the oceans. Seagoing canoes might be thirty to forty feet long and five to ten feet wide. Such a canoe could easily hold over a ton of fish, seal meat, or other goods (Hearst, 2006).

The Yurok diet was based on salmon and acorns. Tanoak acorns were preferred, but black oak and canyon live oak were also used. Since oaks grow better in clearings than under a forest canopy, the Yurok and other native groups learned to start fires on a regular two-year cycle. The regular burning produced openings in the canopy, which resulted in a larger acorn crop, and it also provided fire breaks around villages, reduced the invasion of conifers into clearings, reduced the intensity of accidental fires, and provided habitat and food for a variety of desired plants and animals such as deer and elk. Burning to improve acorn crops was especially common in the inland forests, but was also practiced in the redwood forests.

Teaching Idea



Discuss what might have happened if the Native Americans hadn't set fires in the grasslands and prairies, i.e., if they hadn't managed the resources. (At first bushes and shrubs and then trees would be able to grow along the grassland/forest margin. Then the forest would encroach on the grassland, eventually replacing it with forest. This is an example of biological succession.

Fires are generally suppressed throughout the redwood region today. Ask students to discuss what is happening to the forest clearings as fires are prevented. When visiting a site such as Fort Ross, have the students look for evidence of forests moving into the grassland. Also ask students for ideas of ways other than fire to keep bushes and trees from invading the grassland.

*Be sure to discuss the problem of accumulation of fuel from decades of fire prevention. When fires burn an area every few years, there is little damage to the large trees because there is not enough fuel for a large, hot fire. If fuel accumulates for many years, fires tend to be much larger and more destructive. Sometimes **prescribed** or **controlled burning** is used as a tool to reduce the accumulation of hazardous fuel, but air quality concerns limit its use. Logging or thinning can also help reduce the fuel load. There are seldom simple solutions!*

Yurok villages were generally not located in the redwood forests, but rather in openings and prairies along the coast between Trinidad and Crescent City, and on the lower 45 miles of the Klamath River. The clearings were often maintained by fires. These clearings provided berries, bulbs, grains, nuts, and many other plants used not only for food, but for medicines, basket making, and for arrows and other tools. Bear-grass was highly desired for basket making. In some areas, the seeds of the grasses in the meadows and prairies provided a significant source of food. Indians sometimes saved seeds of desired plants and spread them in the ashes after a fire. Large redwood trees were seldom harmed by these regular fires, but the burning did influence the composition of the forest understory.

Teaching Idea



Discussion of burning by Native Americans should include discussion of the results of fire prevention around cities today. When brush and dead wood are allowed to accumulate, fires are much more intense than they are in areas that are regularly burned. Regular, cyclical burning by Native Americans reduced the intensity of the fires that they started or that occurred naturally.

Fires occur every spring, summer, and fall, and they threaten human life and habitation, especially in southern California. Save clippings or articles about these fires and discuss the pros and cons of controlled or prescribed burning. Invite speakers from the U.S. Forest Service, the California Department of Forestry and Fire Protection, or local fire departments to discuss controlled burning and fire safety.

Clearings created and maintained by the Indians also provided habitat for animals such as deer, rabbit, and elk.

The rivers and streams of the northern redwood region yielded abundant harvests of salmon, steelhead and lamprey. These fish were harvested during spawning season and dried for a year-round source of food.

The territory of the Northern Pomo extended from just north of Fort Bragg to near the mouth of the Navarro River, while the Central Pomo territory began there and extended south to the mouth of the Gualala River in southern Mendocino county. The territory of the Kashaya (another group of Pomo speakers) stretched from the mouth of the Gualala

River to Duncans Landing. Members of these groups sometimes built cone-shaped houses of bark by leaning large slabs of redwood bark against a central support pole. Layers of bark were laid on top of each other, shingle-like, until the only openings were a smoke hole at the top and a small "door." (See Figure 73.) They also used redwood planks to build structures similar to those of the Yurok and Tolowa, sometimes adding bark to the planks as additional weather proofing and insulation.

Like most other Native American groups of the redwood region, the Pomo generally didn't live in the redwood forest itself. Rather, they lived along the coasts, rivers, and mixed oak/grassland. The Pomo did enter the redwood forests in search of plants such as ferns, establishing seasonal camps that they might use for a few weeks each year. Like the Yurok, the Pomo hunted rabbits, deer, sea mammals and other animals. As with the Yurok, salmon and steelhead were an important part of the Pomo diet.

It was the Kashaya who were encountered by the Russians when they established the Fort Ross settlement in 1811-1812.



Figure 73. Redwood bark houses, or kotchas, were made by the Coastal Miwok. This replica is part of the Kule Loklo replica Coastal Miwok village at Point Reyes National Seashore. (Photo by Michael Roa.)

The Coast Miwok inhabited the area that is now Marin County, around Tomales Bay and Point Reyes, but also ranged north to Duncan's Point. Groups of Miwok speaking various dialects, lived in the central valley and the Sierra, including Yosemite.

From the Golden Gate south to the Sur River in Monterey County, the Ohlone (or Costanoans) were the predominant group, and they, like the northern groups, sometimes built winter shelters with slabs of redwood bark. In the milder areas such as Monterey County, the Costanoans slept in the open much of the year, using shelters of sticks and brush in the winter. Tule reeds were used for building shelters and making canoes.