CHAPTER 4

USE OF THE LAND

INTRODUCTION

Use of the Lake Sonoma Area has changed radically during its five thousand years of occupation. What had been major resources often became unimportant, while new sources of sustenance or income were recognized and emphasized. Timber, now a major resource of the North Coast Ranges, was virtually ignored by Indian people, while early White settlers destroyed trees to increase grazing land. The sedge beds of Warm Springs and Dry creeks, which have produced roots greatly valued by Pomoan basketmakers, had become overgrown and tangled from years of disuse by Euroamerican settlers. Geographer Carl Sauer described the phenomenon succinctly: “Natural resources are in fact cultural appraisals” (1).

Although resources were continually being redefined, one attribute—diversity—characterized the area through the centuries. There were some important specialists among the Dry Creek Pomo, but most individuals developed all their skills to get as much as possible from the land. The average Mihilakawna man was a hunter, toolmaker, housebuilder, fisherman, trap builder, and maker of sturdy baskets, and he knew when and where to direct his attention as the seasons shifted. Diversity was also the hallmark of the early subsistence years of historic-period occupation, when new settlers were trying out a variety of means to stay alive while slowly building up their new holdings.

By the 1880s, two main emphases had developed along geographic lines: stockraising (primarily sheep) in the Dry Creek uplands and grapegrowing at the head of the valley. But even with these specialties, landowners always viewed their land as a multiple resource. Thus the uplands rancher raised not only sheep or cattle, but also a variety of barnyard stock. He hunted in the mountains to rid his rangeland of pests, to collect valuable hides to sell, and to bring variety to the table. He also cut and sold his timber and his tanbark, explored the potential in his mineral springs and attempted to tap into the chromium, mercury, or manganese beneath his soil. The valley farmer may have emphasized fruit, but he also kept stock to feed his family and even raised sizable herds where grazing land was available.

One year a landowner might list himself in a local directory as grapegrower; in another he chose to be known simply as a farmer, or as a stockraiser, a winemaker, or even a blacksmith. These changes in occupational title rarely represented actual change in activities. Instead, they reflected the diversity that typified the Lake Sonoma Area until well into the 20th century. As corporate ownership increased, diversity declined. The area has been returned to diversity more recently; government plans are characterized by their variety, providing for public recreational facilities, education, hydroelectric power, flood control, and fish and wildlife maintenance.

The changing resources of the area are described here under four categories: minerals, native plants and animals, domestic plants, and domestic animals. Although the resources are discussed separately, it is important to remember while reading this chapter that rarely was only one resource exploited at any time.

MINERALS

Water

North Coast archaeologists have studied prehistoric living sites to learn why they were placed in their locations. Water and slope of land were the major factors; villages were almost always on level terrain one quarter mile or less from a water source. In the project area, living sites are generally found on the second terrace, out of the flood plain, next to major creeks. Water was no less important for historic-period settlers. Their more sedentary living, in fact, made them even more dependent on a nearby water source. All the earliest homesteads were along the area’s major creeks, usually at their confluences with other streams, or near year-round springs.

Lush spots could be found throughout California in the wet winter and spring, but the dry summer rendered many lands marginal—to the surprise of early Euroamerican settlers. E.L. Cherny, the Russian agriculturalist who farmed near Fort Ross in
The former Peña adobe: a diversified farmstead in Dry Creek Valley
(from Thompson’s Historical Atlas Map of Sonoma County, 1877)

the 1830s, was one of the first to remark on the peculiarities of California’s seasons: “The entire year here can be divided into the rainy and the rainless; the first is called winter, and the second summer . . . July, August, and September present an appearance similar to our winter” (2). The Spanish and Mexican rancheros, already acquainted with a two-season year, used deep plowing to retain moisture, allowing crops throughout the dry summer. Chernyク claimed that unplowed land dried to a depth of two or two-and-a-half feet, but “just dig up some deeply plowed ground, and it will surprise you to see that dry soil is only 1 to 2 inches deep from the surface” (3).

California’s dry summer presented conditions which completely overturned all the habits and ideas of eastern and midwestern farmers. Many of them held the rancheros in contempt, and, rather than emulating their successful techniques, they kept doggedly to their old practices. They attempted to sow in May or June when the rains were over, getting “no more return than if they had planted corn in Illinois in August” (4). Others simply turned back when they saw the desertlike conditions. But, according to California boosters, a dry summer had immense advantages. The whole harvest season, being without rain, was unhurried. Grain could be threshed, bagged, and left in the fields or along the railroad tracks without fear of injury from exposure. Hay could be stacked in the field and potatoes left in the ground until wanted; there was no need for costly granaries or barns. Fewer hands were needed for the harvest due to the more leisurely pace. And the wet winters with their green forbs and grasses meant that there was little need to put away feed for the winter. Only work horses were fed; all other livestock lived on the natural pasture (5).

In some areas of California, such a paradise was not obtainable without irrigation. But in the North Coast Ranges, with its greater rainfall, summer fogs, and numerous springs and small streams, irrigation was considered unnecessary—even undesirable. Sonoma County enthusiasts stated that the “heaven watered” lands of the county were worth more than were artificially irrigated fields. Nonirrigated lands, it was claimed, required less work, were more healthful, and did not leave the farmer at the mercy of an irrigation company which might fail him (6). Following the dry summer came the heavy rains,
which often backed up the waters of Dry Creek and the Russian River over agricultural fields. Farmers found the seasonal inundation valuable, fertilizing the fields and adding topsoil to the land.

After the first years of experimentation, farmers and stockmen in the area settled on operations that required little water; grapes fare better without irrigation, and sheep require far less water than cattle. The numerous springs and creeks were ample for drinking water and the kitchen garden. Historical archaeologists found spring houses and other water installations at nine sites in the project area. The homestead was usually placed well below the spring, so that gravity brought water to the door. Early pipes may have been smaller than a series of connected wooden troughs; such systems were crude, but they were preferable to the alternative of hauling buckets from the spring (7).

The mineral springs in the project area were major resources throughout its occupation. At least three important mineral springs were present, and one (Kahowani, later Skaggs Springs) drew outsiders to the area for centuries. Because these springs figured significantly in many aspects of life in the Lake Sonoma Area, they are discussed in several places in this volume (8).

Chert Quarries

Franciscan chert, a fine-grained rock that can be broken along predictable planes, was once a major resource in the Lake Sonoma Area. Here two chert quarries (CA-Son-584 and CA-Son-554/H) contain evidence of thousands of years of use. One of the local quarries (CA-Son-554/H), named the “Warm Springs Lapidary Center” by archaeologists who first recorded it, was carved by toolmakers from a narrow, wooded terrace on a tributary of Warm Springs Creek. It contains two sources of chert, one an amphitheatre-like depression of nearly 2000 square meters (9).

Chert is thought of as common in the North Coast Ranges, yet it constitutes less than half a percent of the area’s dominant geological formation, known as the Franciscan assemblage. Chert is more resistant to erosion than most Franciscan rocks, however, leaving it generally well exposed; in many places, chert forms the only outcrops on otherwise smooth, grass-covered slopes. There are a number of Franciscan cherts, but all are fine-grained, hard, highly siliceous rocks of a variety of colors (10). The colors at CA-Son-554/H are grey green and red brown, with occasional bands of green and light yellow. A collection of well-made tools from varying colored cherts has strong aesthetic appeal; it seems likely that color affected the toolmaker’s choice of which chert to use.

Don Crabtree, a stone tool expert who has quarried and worked chert for decades, describes chert mining as an exacting and hazardous job. Considerable strength is needed to pry loose large blocks of stone, and the worker is often struck by sharp flakes flying through the air.

The stone must be removed in large enough blocks to produce artifacts of adequate size and must not be subjected to battering and bruising by indiscriminate pounding. Cracked, bruised, and weakened stone is not usable for the manufacture of artifacts and most quarries give mute evidence of poorly mined and rejected material (11).

At most quarries, there is little evidence of tool manufacturing. Instead, the toolmaker roughed out blanks and preforms to be finished under the more comfortable conditions of the campsite. Such a pattern apparently prevailed near Warm Springs Creek, where a long-used habitation site was located nearby. For men who lived in local villages, chert quarrying may have been an occasional afternoon activity. Other men must have traveled some distance to the quarry, in small groups or with their families, collecting enough material so they had only to make infrequent visits.

Chert was the dominant stone tool material in the area until about 1000 B.C. As trade increased within the North Coast Ranges, the better working qualities and perhaps the greater prestige of obsidian, available only outside the area, were recognized. At project-area sites away from chert quarries, obsidian gradually became the tool material of preference. People at the small villages and campsites near the two quarries, however, continued using chert almost exclusively.

The Copper Rush

A flurry of mining activity in the early 1860s brought promise of lucrative prospects and intensive settlement of the Dry Creek uplands, but the excitement died as abruptly as it had started. Details on the Dry Creek mining rush are few, as the information on this event is limited to newspaper
articles (12). That mining fever prevailed—on a far smaller scale than in the Sierras, but every bit as intense—is shown by an 1863 newspaper entry:

Some are so intent on finding their fortunes they don’t stop to exchange the usual salutation with a fellow prospector. Every man you meet is hurrying to or from the Recorder’s office and each has a new lead to prospect.

On the same day, the paper reported:

Parties are daily arriving at the mines from Napa, Contra Costa, Sacramento, San Francisco and other points. The country for many miles is staked off and duly recorded, and in several instances claimed by two or more parties—the system of “jumping claims” being freely indulged in. It is almost useless for us to attempt to caution people against the danger of getting unnecessarily excited on the subject (13).

Exactly what was found and where it was located is unclear. The metal prospected was often identified as copper, sometimes silver, and, rarely, gold. Copper may well have been the primary target. Perhaps spurred by the requirements of the Civil War, copper was at a higher value and rate of production in 1863-64 than it would be again until the 1890s.

In April of 1863, the newspaper reported, “We learn the ground is claimed for twenty-five miles in length and several miles in width.” The mines were referred to as “The Healdsburg Mines” in one issue and as being “on Dry Creek near Healdsburg” in another; companies in the “Peña Creek section” are also mentioned. Other claims were reported in “Gold Canyon,” identified to be about 10 miles northwest of Healdsburg, placing it within or near the Lake Sonoma Area. Some of the greatest activity was just outside the project area, 10 miles northwest of the Warm Springs/Dry Creek confluence on the divide between the Gualala River and Dry Creek, perhaps at the location of Grouse Camp, shown on Bowers’ map compiled in 1863 (see Chapter 3). The Derrick district, whose location was not given, was said to contain about 50 ledges, with 1000 claims recorded. This wide-ranging activity throughout the Dry Creek drainage, taking place over a period of a few months, gives the impression of feverish probing in all possible places.
Prospecting in the Gualala/Dry Creek divide was sufficient to inspire two men, Gurlock and Groves, to purchase 320 acres of land, enclose it, and name it the new town of Monte Cristo. Town lots, they announced in the newspaper, would be given to any party who would build on them. Expectations were clearly high: one writer from the mines, who signed himself “Prospector,” ended his letter with, “Yours, very respectfully, and decidedly coppery.” According to the newspaper, however, the town “exists on paper, and in the imagination of its inhabitants.” Reports of the yields were optimistic, and the editor pronounced the copper sample he saw to be “simon pure.” Throughout the winter of 1863, news of the mines was reported: more shafts and tunnels were sunk in the mountains, and stock in new companies was regularly put up for sale. So much trading was occurring in Healdsburg in March of 1864, that “the town looked like Montgomery Street” in San Francisco’s financial district. But a newspaper article published in May of 1864 was the last mention of mining in the area (14).

What happened that turned hundreds of men back from their prospects? One answer might be that the claims were overrated; only superior quality ore could have offset the high cost of transportation. Mining expenses became even greater in the spring of 1864, when the federal government legislated scores of new taxes to finance the Civil War. Miners were to pay five percent on gross proceeds, in addition to a five-dollar permit prior to prospecting. The tax would close down many mines, the newspaper predicted, “since few small operators make 5% profit” (15). More important was the fall of the copper industry itself. California production began to crash in late 1864, falling from an output of more than 2000 short tons in that year to around 150 tons by 1870 (16).

Direct involvement in the Copper Rush by families in the Lake Sonoma Area is not recorded. Since the area had not yet been surveyed, this was still government land, with unoccupied areas open to prospecting. Prospectors may have been working on unclaimed acreage alongside the resident farmers and stockmen; indeed, residents themselves may have been prospecting on their possessory claims. Local settlers were no strangers to mining; more than half a dozen Lake Sonoma Area residents are known to have had their introduction to California in the Sierra goldfields. Whatever their involvement, residents were clearly aware of the mining, since many prospectors working claims west of Dry Creek passed through the area. The route recommended by the newspaper was to travel up Dry Creek Road and stop “at the last farm in the valley,” just upstream from where the Warm Springs Dam is now located. This was the home of one of the area’s earliest resident families, the Pritchets. “Mr. Pritchett’s good lady, for a very reasonable compensation, will furnish the anxious prospector with a square meal—an indispensable luxury before taking to the hills” (17). Pritchett was taxed by the Internal Revenue Service in 1863 for an eighth-class hotel. That operation apparently closed the following year, along with the mines themselves. Skaggs Springs, then an undeveloped tent resort, was also rated eighth class in 1863. Perhaps it also served the mining community initially, but by the following year Skaggs was improving the property to appeal to a more discriminating clientele.

Quicksilver Mines

After government surveys opened the land to purchase and homesteading, prospecting by outsiders was probably rarely attempted. Instead, landowners tested their own mineral resources. Mining was usually undertaken only as an adjunct to ranching activity, although some settlers may have hoped to find their fortune underground. On a Dry Creek uplands homestead in the late 1880s, for example, a man named Cassidy struck a gold claim rumored to be worth $10,000. He reportedly waited some weeks—with 40 feet of mining boxes constructed and ready—for the rains to come and signal the start of work. Perhaps the weather failed him or other events intervened, but Cassidy’s claim was closed shortly thereafter (18). Such attempts may have been common in this geologically diverse area, at a time when industry was continually finding new uses for minerals. The mineral requirements of the First World War spurred new prospecting. Chromium and manganese mines were developed in the Lake Sonoma Area between 1916 and 1918, but no croppings were rich enough to warrant long-term exploitation.

The longest lived, and perhaps the most lucrative, mining in the Lake Sonoma Area occurred during the 1930s and 1940s at the then-failing Skaggs Hot Springs resort. In the mid-1920s, Leo Curtis, owner and operator of the resort, discovered an unfamiliar yellow mineral in fractures of the sandstone outcrops near the springs. The crystals were identified to be a new hydrocarbon mineral, subsequently named
curtisite after its discoverer. Of more economic value, the specimens contained a considerable amount of metacinnabar, the black sulfide of mercury.

Mercury, also called quicksilver, is a critical element in hundreds of industrial processes, and satisfactory substitutes are generally unavailable, even with late 20th-century technology. While the United States uses about one quarter of the world’s supply, the country produces as little as 21 percent of its own requirements, most of this coming from California. Prices skyrocket in times of war, when access to foreign mines is limited at the same time that mercury is in high demand for manufacturing explosives; once peace has resumed, the market becomes glutted and prices become greatly depressed. This situation results in wider price fluctuations for mercury than for most other commodities, and mercury mining has the reputation of being a high-risk industry (19).

Curtis’ Skaggs Springs mine was marginal, yielding over a short period some encouraging profits but never competing with some of the state’s larger operations. Curtis’ find came at the wrong time. Even with the low-yield ore at Skaggs, profits would have been higher had he discovered his mine during the First World War. Fifteen years later, he would have seen profits as well. Instead, Curtis leased the property to various operators until 1934, when he began commercial mining himself. During a three-month period, he recovered 42 flasks (3292 pounds) of quicksilver.

Despite that high figure, at 1934 prices he profited little from the yield. After a brief leasing period to another operator, the mine lay idle until 1939, to be leased again for a short time.

The greatest activity at the mine occurred under the management of Star Springs Mercury, Inc., of Hollywood, whose principal investors were actors Frank Morgan, Randolph Scott, and Reginald Owen. The mine shafts were greatly expanded, and a reduction plant capable of processing 20 tons daily was erected in June 1941. The high price of mercury during the Second World War warranted intensive operations: the mine was worked 16 hours per day, and the plant ran unceasingly. Fifteen people were employed, making this the only operation in the area to equal the number employed by the resort itself. Whether any of the area’s residents worked at the mine was not learned, but the industrial bustle surely affected the rural setting.

Geologists from the California Division of Mines mapped the expanded workings in the meticulous detail that this agency accords even the smallest operations. The maps and their accompanying descriptions depict 1825 feet of workings, with five
levels extending to a depth of 135 feet below the opening of the main, inclined shaft. Although the extensive Star Springs operations yielded 250 flasks (19,000 pounds) of quicksilver from September 1941 to September 1942, one ton of ore had to be processed for every three to four pounds of quicksilver. Even at high wartime prices, the mine could not be run profitably, and Star Springs Mercury, Inc., was liquidated in September 1942. A one-month operation by another lessee ended the use of the mine (20).

It is not surprising to learn that Skaggs Hot Springs resort finally closed in the summer of 1942. Other factors figured more importantly in the resort’s demise (see Chapter 10), but surely ore-processing machinery operating 24 hours a day, along with the scarred ground inevitable in most mining operations, would have been incompatible with a woodland retreat!

**Native Plants and Animals**

The topographic variety of the Lake Sonoma Area, with its densely wooded ravines, open stream terraces, grassy ridgetops, and narrow valleys, resulted in an environment with numerous and diverse plants and a variety of animals. This local diversity supported people in the area for thousands of years, requiring relatively few imports. Even after new settlers introduced domestic plants and animals, native flora and fauna were economically important for market hunting, logging, and tanbarkning.

**Native American Seasonal Round**

The oldest tribal scholars, several generations removed from the traditional Southern Pomo lifestyle, recall a wealth of information on precontact plant and animal use. Lake Sonoma project ethnographers listed 81 plants which these elders identified (21). Knowledge of the plants’ uses, up to seven per species, has been passed down through oral tradition, and many are still used in the same ways.

While some unusually reliable and nutritious foods were staples appearing in the daily diet, a wide assortment of other plants was also important. Many types of seeds and nuts, as well as a wide range of edible bulbs and corns, roots and tubers, fungi, greens, and berries, added variety and essential nutrients to the diet and could bridge the gap when the staples’ reliability faltered. Anthropologist Alfred Kroeber remarked that California Indian food resources were bountiful in their variety rather than in their overwhelming abundance along special lines. If one supply failed, there were a hundred others to fall back upon (22).

Even the primary staple, acorns, came in many varieties. There were two genera: *Lithocarpus* (the tan oak) and *Quercus*. Within the latter genus, there were four species of major importance and an equal number of others that, although not preferred, were edible. Since each species has slightly differing environmental requirements, some flourish at times or in places where others fail, assuring at least a minimal crop each year.

Most plants and animals had a variety of uses. Deer was taken primarily for food, but its hide was also used for a variety of purposes, including clothing and containers; in addition, antlers and long bones were made into tools, and knuckle bones were used as gambling pieces. Berries of the manzanita were eaten fresh, or they were dried and ground into a flour or made into a drink; manzanita leaves were used to treat diarrhea and stomach trouble, or they could be made into a solution and used externally to treat poison oak. The tough manzanita wood could be fashioned into a simple club, a bulroarer, a double-pointed fishhook, the toggle head of the salmon harpoon, or a sinew-backed bow.

While plant foods were the mainstay of the Indian diet, a variety of meats provided a necessary supplement of nutrients and protein throughout the year. Rabbits, squirrels, pigeons, quail, and other small game were sought whenever meat was wanted. Rather than stalking these animals with bow and arrow, the hunter set intricate woven willow traps to catch the prey, allowing himself time to pursue other activities. Deer, taken throughout the year, were hunted more during late summer and early fall, when does and bucks were thinned from the herds and the meat dried for winter storage. Some fishing occurred year round, but the seasonal migration of steelhead and Coho salmon up Dry Creek dictated an emphasis on fishing during spring and from late fall to early winter. Migratory waterfowl also appeared for only brief periods, focusing some hunting activity during that season in the marshy bottomlands while other men fished in the upland streams.

The seasonal availability of plants required an even more careful scheduling of activities, particularly at times when an important crop was
ripening in the hills while another was ready in the creek bottoms. Some crops, such as acorns, had a relatively long season of a month or two during which they could be gathered, while others had an optimum period of only a few days or weeks. To determine the most efficient use of all the people in the tribelet, food-gathering activities were regulated by the headman or the shaman, one of whose major duties was to observe the particular variations of each year. People shifted residence several times during the year, from winter towns to summer villages and camps, in order to make best use of their territory’s resources. These movements, and the settlement pattern that resulted from them, are discussed in Chapter 6. Seasonal forays often took people into other territories as well, in order to gather or trade for geographically limited foods (see Chapter 10).

**Historic Market Hunting**

In the early days of subsistence farming, before large livestock herds were amassed, hunting was of vital importance to settlers. Even after stringent restrictions on deer hunting were enforced around the turn of the century, many farmers and ranchers continued to get much of their table meat from the hills. As one old timer described it:

They lived off the land, killing deer for meat, but never abusing the game. There were game wardens in those days who rode the hills looking for poachers. The game wardens would eat supper with local families. Often they were served deer meat. The families knew the wardens knew they hunted only for subsistence (23).

Hunting was also important for its recreational value. Since the 1870s, men came to hunt in the Dry Creek uplands from as near as Healdsburg and Santa Rosa, and as far away as Europe. Information on hunting clubs can be found in Chapter 9, which describes social networks extending beyond the local community.

Distinct from hunting for subsistence or recreation, some hunting was geared toward supplying wild game for city and town markets. Taking game for profit may have been one of the first Euroamerican uses of the area. One account of the origin of the town of Healdsburg claims that Harmon Heald opened a trading post there in 1846 to serve the hunters and trappers in the area (24). By the mid-1850s, the area was known for its prolific game: an
1857 newspaper reported that two men in one day
cought 15 dozen quail, one dozen wood duck, and 14
hare in the valley around Healdsburg, bringing them
to market in Santa Rosa (25). The Dry Creek drainage
would surely have attracted such men, and the major
Indian trails through the uplands to the coast might
well have been used. Clearly fur animals were
plentiful in the area, if we can believe even part of
rancher Sylvester Scott’s exaggerated claim that, in
the 1860s and 1870s, he caught a bear and a panther
for every day in the year (26). The mountains near the
headwaters of the Gualala River, just west of Dry
Creek, were recommended for hunting trips in an
1873 history and guidebook, but with the following
warning:

If a venture is made off here, the heart must
be nerved to the possibility of a tussle with a
bear, or a jaguar. All through this section of
country, deer, brown or cinnamon bear
abound, grizzlies are frequently found, the
jaguar, or California lion, the wild cat, and
other animals are frequently met with (27).

In the early years of market hunting, mammals
were taken primarily for their pelts, which continued
as salable items into the 20th century. At first, market
hunters were specialists, usually single, landless men
who could move where the game led them. Later,
hunting for fur-bearing animals became an adjunct to
ranching. In the Dry Creek uplands, young boys and
teenagers were often the main market hunters, and the
hunt itself may have given as much pleasure as the
money it brought in. For the older rancher there was
an additional benefit: the animals sought—wildcat,
skunk, mink, fox, and raccoon—were all predators of
young livestock or poultry, and their numbers had to
be contained. Prices for pelts from the uplands varied
according to their condition: from 10 to 35 cents for a
raccoon and as much as 45 cents for a fox in 1894
(28). In 1909 considerably more was paid for these
products: Orville Baldwin relates that the boys at his
ranch received as much as $2.00 per pelt in that year.
The big jump in prices suggests that these animals
were becoming more valuable as they were hunted
out. It also reflects the growing popularity of
inexpensive furs: skunk fur was quite fashionable
around 1910, and raccoon coats grew in popularity to
become the hallmark of the younger generation 15
years later.

As California’s population grew and
transportation improved, market hunting for meat
became increasingly important. Selling wild game in
markets was common in the late-19th century;
although domestic beef, pork, and mutton were
generally available, venison was often sold as a
novelty. George C. Matthews, later to become one of

Firewood, the most necessary of all native plants (from GM Collection)
the area’s most successful ranchers, paid his way through college by hunting deer in the uplands near his parents’ home. During one summer prior to 1887, he shipped 63 bucks to the city market.

In the 1890s, a new law made all selling of wild game a misdemeanor, but this rarely stopped either the hunter or the butcher. Occasionally the game inspector caught wind of the transaction, and the evidence had to be disposed of quickly, as happened to a shipment of “veal” sent by Matthews to a San Francisco market in 1894. Illegal sales were a high-risk business; one could lose everything and be stuck with freight expenses, or make a good profit if all went well. The San Francisco butcher had planned to sell Matthews’ venison for 25 cents per pound at a time when beef could be had for five cents less; instead, with the inspector on his tracks, he gave it away as quickly as possible (29). Some 20 years later, hunters in the Dry Creek uplands reportedly made venison jerky and sold it to the saloons around the Healdsburg Plaza for $1.00 per pound; the saloonkeepers made a handsome profit, selling the jerky to their customers for two-and-a-half times that amount (30).

**Euroamerican Native Plant Use**

Ethnographers have compiled a list of the numerous uses to which native plants were put by White settlers in the area (31). Some of the plant uses described continue today, such as gathering wild blackberries or elderberries for fresh fruit or jams, collecting California bay laurel leaves for seasoning, and picking lupin and California poppies for decoration. Other familiar uses on the list include gathering mistletoe and toyon berries, tying them in bunches with homemade ribbons, and selling them in San Francisco during the Christmas season. Various trees were appraised for their value as firewood: owners of fireplaces or woodburners today will agree that valley oak is too punky, that Douglas fir is good for woodstoves but pops too much for fireplaces due to moisture, and that black oak is excellent wood for fireplaces and stoves, providing constant heat.

Other plant uses, however, take us back to a period when people made do with what they had on the land, rather than being dependent on the hardware or dry goods store for their every need. The list includes extracting a dark blue dye for woolens from deadly nightshade (*Solanum* spp.), and carving gunstocks, pistol handles, pitchfork tines, and teeth for rakes from buckeye or madrone. The listed uses for elder (*Alnus* spp.) include fashioning its bark into soles for shoes.

Some readers may be familiar with medicines that come from the garden or the woods, but native plant remedies are generally rare today. Among the remedies of the area’s 19th-century settlers was cascara bark tea, a powerful laxative that had to be carefully administered; dandelion leaves for kidney ailments; and Douglas fir and digger pine pitch used as a dressing for cuts. The pitch kept the cut clean, sealed it from air, and was said to aid healing. There was even a salve made from sheep’s sorrel and tanbark that was believed to control skin cancer. Gradually these home remedies gave way to commercial medicines, mirroring other changes in the project area which marked the shift from self-sufficiency to reliance on the outside.

**Tanbark**

While people in the Russian River Valley were exploiting local timber for construction in the growing towns, a different tree crop was gaining importance in the Lake Sonoma Area. The tan oak (*Lithocarpus densiflora*), an acorn-producing tree highly regarded by Indian people, became the most economically significant native plant for settlers. Unlike the timber industry, which could not be successful in this rugged country until roads were put in, tanbarking required only narrow trails, which could go deep into the woods. Throughout the coastal mountains for several decades around the turn of the century, settlers stripped the bark of the tan oak and shipped it to tanneries, receiving a major part of their annual income for this seasonal work.

The Russians at Fort Ross were probably the first to use tanbark in the Sonoma County area for tanning leather. A tannery was located on Fitch Mountain in Healdsburg in 1840 by the manager of Fitch’s Sotoyome land grant, Cyrus Alexander, and several more tanneries were established in the area by 1861. By the mid-1860s, however, the closest operations to the Lake Sonoma area were in Santa Rosa. The difficulties of transporting this awkward load a distance of some 40 miles may have precluded taking full advantage of the rich groves of tan oak in the area. With the establishment of the railroad in 1872, the process was simplified and the industry grew quickly. For example, only 80,000 pounds of tanbark were shipped by railroad from Healdsburg in 1876; harvesting had increased tremendously by 1903, when a single Dry Creek uplands rancher sold more than

58
A load of tanbark in the town of Geyserville, circa 1910 (photo courtesy of Obed Bosworth)

86,000 pounds of tanbark to a dealer in Cloverdale (32).

The tanbark industry was organized in a variety of ways: some landowners harvested their bark themselves, often aided by their wives and children; some hired transient laborers to do the job; and others leased harvesting rights to neighbors or outsiders. Often landowners cut their own bark but left the laborious hauling to professional mule handlers. According to an historian of nearby Gualala:

It was big Company business; it was also small family survival. For many not so big landowners, the peeling, selling and hauling of tanbark was a staple among the resources their land could provide. Unlike the big timber, it was accessible to most settlers, with few tools or specialized paraphernalia (33).

Stripping the bark began in mid-May and continued through the early summer. The bark was commonly harvested by peeling it from the standing tree. First, bark was measured off in four-foot rings and each ring was cutting an axe; then a swathe was split from ring to ring, and a sharp rap on the tree jarred the tanbark curl loose. By this method two curls could be taken from each tree. If oaks were felled, as many as 20 curls could be harvested. This greater yield did not always offset the logistical problems of working in an area cluttered with felled trees, and harvesting standing trees was the more common method. Standing oaks died within a few years and fell to the ground. Thus whichever method was used, the end result was the same: the slopes of northwestern Sonoma County were littered with dead trees for decades, in many cases leaving scars that were still not healed more than 50 years later. Some landowners, desirous of more grazing land, burned off the dead oaks. This set the stage for another problem: severe erosion on the steep, open slopes.

When companies ran the harvest, the business could be complex. Bark contractors would “spot out” tan-oak groves throughout an area, then negotiate leases with the owners. Contractors had to estimate the potential yield, determine packing costs, and find the best places to set up camp. A crew was hired to peel the bark for the season, with a few men retained until September to stack the dried curled coils and pack them out for market. Mules were loaded with three bark coils to a side, each coil weighing about 100 pounds. Sturdy, well-trained animals were necessary to negotiate steep trails under such loads. Training the mules took time and patience, but according to Mark Walker, veteran Mendocino
County barkpeeler: “The mule gets so he knows more about packin’ bark than you do” (34).

Tanbark harvests continued in the Lake Sonoma Area through the Second World War, but they were much less frequent than before the 1920s, and the profits were small. Tan oaks had been eliminated in the more accessible areas, and the mules had to be driven further and further into the woods. Gradually, tanbarking ceased altogether. Increased shipping and labor costs, and the decreasing importance of leather as synthetic products were developed, made the harvesting of the few remaining stands uneconomical. Even though harvests had stopped decades before, only a few scattered tan oaks could be found in the 1960s, when the U.S. Government acquired the lands for Lake Sonoma.

**Timber**

Compared with today’s industry, timber was unimportant in the Lake Sonoma Area during the 19th century. It is unlikely that the area’s timber was significantly tapped during the early years. José German Peña, like most other rancheros, constructed his buildings from adobe, continuing a tradition from a less wooded homeland. Commercial timber cutting did occur on the Rancho Sotoyome in the 1840s (35), but the timber boom that was to deforest much of the Russian River Valley and its surrounding slopes did not occur until the growth of towns in the 1850s. In the remote Lake Sonoma Area, however, nearly a century passed before large-scale commercial logging took place.

Prior to government survey, it was illegal to remove trees from federal land, but such activity surely went unnoticed in the remote country of the uplands. In fact, a state forester reported in 1886 that illegal cutting on government land in Sonoma County had formerly been “immense” but had ceased at the time of his writing. Residents of the area would have used timber from their claims to build their homes, primarily redwood, which was considered far superior to fir. Several of the area’s first homesteads are shown on early maps adjacent to redwood groves, a practical way to eliminate transporting building materials.

A few ranchers did turn their trees into commercial lumber or sold timber rights to others. But transporting timber requires either broad, stable roads or a deep, strong river. The Lake Sonoma Area had neither, and the operations remained small. Rather than trucking logs down to the towns and cities, portable sawmills were frequently set up in the forest; when nearby timber was exhausted, the mill was moved. Thompson’s 1877 map shows a mill in the Warm Springs Creek area, and many more may have been established within the Dry Creek drainage.
A more common use of the area’s redwoods was for manufacturing “split stuff”: posts, shakes, stakes, and shingles. Once a tree was felled, the work could be done in spare time throughout the year, the product could be transported in manageable loads, and it was always in ready demand. The homesteader with a few redwoods on an otherwise poor claim might earn much of his living from this activity. On more prosperous holdings, fashioning split stuff was a chore for ranchhands, often Native Americans, who were said to excel at the work. The production of split stuff was one of the longest-lasting Euroamerican economic activities in the area, beginning with the first settlers and continuing well into the 20th century.

Douglas fir, much more abundant in the area than redwood, was considered of little value until the Second World War. In the 1920s, according to the nephew of one turn-of-the-century rancher, “You couldn’t give fir timber away. It wasn’t worth chopping down” (36). Instead, ranchers cut down or girdled the fir, burning downed wood and opening up grazing land.

The post-war building boom dramatically increased the market for timber, and new roads—most notably Kelly Road, which crossed a portion of the northern project area—were constructed to gain access to previously untouched stands. A newspaper article in 1953 reflected the local excitement:

The bonanza is timber—an estimated billion feet of virgin redwood, douglas fir and sugar pine in a vast area whose accessibility has padlocked it for a century against exploitation (37).

Outside logging operations bought timber rights and moved into the area, gaining access to virgin stands by the new road. County tax assessors were quick to note this new source of revenue. Beginning in the early 1950s, property assessments included the market value of timber, even in areas where trees were not being harvested. The tax could be devastating, with some local landowners taxed in excess of their gross income from sheep ranching. Ranchers were given little choice, and they began systematically cutting off huge tracts of timber. Some ranchers in the Lake Sonoma Area were known to give timber away in order to avoid paying these taxes. The effect on the environment was severe:

[The tax] discouraged conservation by pressuring owners into premature logging … the tax forced some timber owners to sell more of their trees than was wise practice, not only so that they could pay the tax; but, in some cases, to get rid of 70% of all trees larger than 16 inches in diameter and thus win exemption for at least some of the remaining growth (38).

The law was finally rescinded in 1976, and trees were then taxed only upon harvesting. For the large timber operations, the period during which the tax was levied was one of high economic excitement. For many Dry Creek uplands landowners, however, the logging of the 1950s was an assault on the land that robbed much of the pleasure of ranching life (39).

**DOMESTIC PLANTS**

**Native American Garden**

Native Californians neither plowed the soil nor planted seeds until some of them were forced into agricultural work at the missions or ranchos. New settlers pointed to this lack of formal agriculture as support for their own “right” to the land. Indians, they reasoned, wasted the land’s potential. The settlers were unaware, however, of the complex techniques California Indians used to maintain their environment. Native people had consciously manipulated plant habitats, growing patterns, and life cycles for generations.

The techniques used by California Indians probably had their origins thousands of years ago. By the time of historic contact, according to anthropologists T. Kroeber and R.F. Heizer, California had become a garden (40). To reap from a wilderness, one simply takes and moves on. To maintain a garden, the future health and productivity of the plants are as important as today’s harvest. Pruning, root-crop cultivation, weeding and clearing, selective harvesting, and controlled burning were all practiced to improve the land as a human habitat. Plants were stimulated to grow in patterns that would provide the best fruit, the finest building materials, or the richest greens, while the soil’s nutrients were replenished through burning and cultivating. Burning also encouraged the growth of green shoots on trees and shrubs, providing a superior forage for deer and other game animals.
The diseño for the Tzabaco Rancho: “siembre” and “milpa” indicate wheat and corn fields; inverted Vs represent an Indian rancheria

One of the most important and carefully tended local plants—the basket sedge, *Carex barbara*—received new attention during the building of the Warm Springs Dam. Many central California groups developed basketmaking to a fine art, but Pomoan basketry has been singled out as exceptional. Several types of fibers can be used in weaving baskets, including switches of willow, hazel, and redbud. The roots of the basket sedge, however, have been identified with the unusually delicate work of Pomoan weavers, because the woody fibers can be stripped down to the diameter of a fine thread (41).

Sedge is prolific and widespread, but few beds produce good roots for weaving. Ideal beds are on primary creek terraces, on sandy rises and banks away from flowing water. Ample ground water must be present to feed the roots, and seasonal floods are necessary to add nutrients to the soil. Of equal importance, beds must be well maintained. When unused, the soil becomes compacted, roots are short, brown, and dry, and the bed becomes choked with weeds. Ideally, the bed is carefully cultivated every few years, allowing a fallow season or two for the roots to be replenished. In well-cultivated beds, roots may grow as long as six feet, but in poor areas they often only reach a few stunted inches. First the bed is raked clean of debris and weeds are removed. Then the roots are sought in the sandy soil, a process which stirs nutrients into the earth and maintains the loose, moisture-holding soil structure. The length of the root is carefully followed out, while avoiding damage to neighboring roots; then it is cut from the parent plant, encouraging new root growth. Any plants accidentally dislodged are replanted, to be harvested from in another season.

Older basketmakers remember important sites throughout the county where their mothers and grandmothers collected roots. Early in the industrial growth of the area, sedge beds on the Russian River and lower Dry Creek were destroyed by gravel operations, bridge construction, and agricultural activities, while access to the few remaining beds was often denied. By the 1970s, the sites along Warm Springs and Dry creeks came to be the major sources of basket materials, not just for local weavers but for basketmakers from throughout the region. Indian weavers identified 16 basket-sedge sites within the future Lake Sonoma reservoir. Some of these sites,
located near the archaeological remains of old villages, must have been used for hundreds of years; oral tradition regarding them goes back to the 1850s, when Indians living on local ranches still had access to the beds. Other sites were new, discovered after the Corps’s purchase of the property. Regardless of the sites’ legal owners—be they private ranchers and farmers or the federal government—differing kinds of ownership were recognized among the basketweavers. Some beds were common property, open to weavers throughout northern California; others were private property, used exclusively by weavers of local descent; while some were kept secret for use by a few individuals (42).

All of the sedge sites were to be inundated by the creation of Lake Sonoma, and basketweavers were vocal about their concern over the loss of these important cultural and economic resources. The Corps’s response to their concern resulted in an unprecedented project: the removal and transportation of thousands of sedge plants to new beds downstream of the dam (see Chapter 1).

**Early Crops in the Lake Sonoma Area**

In the 1840s, rancheros in the Alexander and Dry Creek valleys brought agriculture to the area. The Peñas’ agricultural activities were typical of the primarily ranching economy: some corn and grain fields and a small vineyard. A small garden for melons, squash, tomatoes, and other vegetables was usually also planted, but the Mexican Californian diet consisted primarily of corn, beans, and beef. The Peñas, like other rancheros, kept a large number of Indian people on their land, with a village directly adjacent to their fields. When the seasonal chores of planting were completed, the mere presence of people near the fields served a purpose. In 1851 George Gibbs described “swarms of Indians, idling about, or perched on high platforms of poles and bush,” whose job it was to protect nearby San Miguel Rancho crops from flocks of crows (43). Indians served as virtually free labor, although some payment was usually made in the form of beef and clothing.

As squatters began settling the Tzabaco land grant, a variety of subsistence crops must have sprung up throughout the Dry Creek lowlands.

Most important to the local economy were the fields of wheat, planted long before farmers gained legal title to the land. In contrast to orchards or vineyards, wheat could be planted with low investment, especially if no land payments were necessary. By the time the land had been subdivided and sold in the late 1850s and 1860s, wheat was the principal crop in Dry Creek Valley, as it was in Sonoma County generally.

The 1860 U.S. Agricultural Census provides some information on three of the earliest settler families—the Boards, Bishops, and Pritchets—a few years after they first arrived. At that time these families emphasized livestock, not the large herds of the rancheros or of later years, but a sampling of various farmyard species. Only Pritchett is shown as raising crops: he grew a modest amount of wheat, Indian corn, and oats, and a considerably larger crop of barley.

By the time the 1880 census was taken, there was greater, commercial-sized, production among some settlers (44). The Hallegren’s, with ample arable land near the Warm Springs/Dry Creek confluence on land they purchased from the Bishops, grew 40 acres of barley the Boards had 16 acres of wheat, while the Pritchets had 10. Most of the settlers for whom we have information grew apples (from 15 to 200 trees). Several vineyards—from one to three acres each—had been planted, and some were already bearing well.

Not included in the agricultural census were home gardens. As much as a day’s round-trip from the markets and the truck gardens surrounding the towns, every farm or ranch would have had a garden providing the family’s daily needs. Since most of the families had many children—Sylvester and Malinda Scott had at least 20—some of these gardens must have been extensive.

Differences between crops in the uplands and the upper Dry Creek Valley were not marked during the early decades, but as holdings expanded, land use within the two areas diverged. While sheep ranching became the main economic focus in the uplands, crops in that area remained essentially the same: a family orchard, a kitchen garden, a small field of potatoes, and a few acres of grain raised primarily for livestock. At the head of the valley, however, what was to become the agricultural rage of the North Bay area took hold—the vineyard.

**Grapegrowing**

Wine grapes arrived in California along with the first Europeans. Due to the sacramental use of wine, a vineyard was a component of every mission. Mission
grape vines were robust growers and good producers, but wines made from them were often said to be dull and heavy. Cuts from these same vines were the ones grown on rancho lands, where wine was a popular drink for all occasions. Few efforts were made to improve strains or techniques of growing and winemaking during the first years of American settlement, until Agoston Haraszthy took up the cause in the mid-1850s.

Haraszthy’s widespread proselytizing spurred the planting of grapes on even the smallest parcels. Excited by an agricultural product which could withstand the transportation difficulties of early California, inexperienced men joined the grape bandwagon, and wines were usually mediocre. Grapes were gathered before fully ripe, and green and rotten berries were not picked out; cleanliness was not observed, and the wine was often fermented in barrels which had been used for other purposes and not cleaned; fermentation was not properly supervised; and the wine was hurried to market too early. To bolster the alcoholic content, brandy was often added (45). By the end of the 1850s, the growing United States market for California wines was due more to the low cost of the product than its quality.

When Haraszthy began his experiment in 1856, there were about one-and-a-half million vines in California; nearly half of these grew in irrigated vineyards at the missions and ranchos, the rest in the area of Los Angeles. By 1862, 20 million vines were growing throughout the state. To encourage Californian agriculture as mining activity waned in the gold fields, taxes were removed from wines in 1866; this act brought enthusiastic response, and hundreds more vineyards were planted. In the mid-1870s, a California booster stated that California grapegrowing was “still in its infancy, with the demand increasing every year faster than the population. The planting of vineyards goes on steadily” (46).

The fertile slopes and terraces of the upper Dry Creek Valley were ideal for the grape. First, the red clay soils of the foothills were not only acceptable but ideal and, in contrast to field crops, grapes did better on slopes than on level bottomland. Further, the climate was tailor-made for grapegrowing. For full maturity, varietal grapes require separate seasons of long, warm, dry days and cool nights, followed by sustained rainy weather with some freezing but no temperatures below 10 degrees—a fairly precise
description of the climate of the Lake Sonoma Area. Many early planters were hesitant to grow grapes without irrigation, but Haraszthy and other early agricultural leaders proved that nonirrigated grapes, grown by “using the plow instead of water,” were not only possible but preferable (47). By stirring the ground repeatedly during summer months, moisture was drawn from the atmosphere and experimental plantings flourished in the loose soil. When these vines bore fruit, it was pronounced finer and sweeter than that of irrigated fields.

In the 1860s, just when the North Bay wine industry was accelerating, phylloxera began devastating vineyards throughout the wine region, threatening these new investments. The insect’s effects were first noted at Haraszthy’s Buena Vista vineyards, where vines exhibited short growth, small and colorless fruit, prematurely yellow leaves, and decayed roots. An attack on the problem was begun years before the exact cause was understood. From the list of remedies tried, it is clear why one wine historian stated that “all resources and stamina were tested” (48):

coal tar, coal tar and gas lime mixed, carbolic acid, concentrated glycerine, bisulphide of carbon and manure mixed, sulphuric acid and water, J.O. Weatherby’s remedy, guano, Hoffman’s remedy, Dr. E.J. Fraser’s remedy, liquid from tanned skins, liquid from cow and other manure, Deschues rohart, whale oil and copperas (49).

At first it was uncertain whether phylloxera was a disease, a fungus, or an insect. Once the insect was identified, it was recognized that it had been imported along with European vines.

The mid-1870s—a period of general depression for the whole country—were particularly harsh on the California wine industry, resulting in many grapegrowers giving up their vineyards rather than attempting to check phylloxera. But phylloxera did not have the long-term effects on the grape industry that were originally feared; the pest was found to be a wingless variety, and thus geographically contained. Through manuring, continued use of increasingly sophisticated insecticides, and grafting imported varieties onto hardy American roots, the threat had passed by. Although scores of vineyards in Sonoma Valley were afflicted, no phylloxera was officially reported in the Lake Sonoma Area. Grapegrowing within the project area continued to accelerate: the climate was excellent; the vineyards were phylloxera-free; and the grapegrowers were sober, hardworking settlers, rather than short-term investors. In addition, the area’s economy had become stimulated when Cloverdale became the terminus of the railroad in the early 1870s, and rapid, inexpensive transportation for agricultural products was now available.

On the 1880 agricultural census, three of the area’s residents—Board, Hallengren, and Yordi—reported good yields from their one- to two-acre plantings. These small vineyards of the late 1870s expanded and multiplied by 1893, when the State Viticultural Commission made an inventory of Sonoma County growers. In that year, seven settlers in the Lake Sonoma Area were listed as “winegrowers,” with vineyards from 8 to 20 acres. Contrasting the figures from these two inventories shows the increase clearly:

<table>
<thead>
<tr>
<th></th>
<th>1879</th>
<th>1893</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Ferry</td>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td>Hallengren</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>Hendricks</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>Pritchett</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Thomsen</td>
<td>-</td>
<td>15</td>
</tr>
<tr>
<td>Yordi</td>
<td>2</td>
<td>17</td>
</tr>
</tbody>
</table>

The 1893 report provides the first information on the Thomsen Brothers Winery at the head of Dry Creek Valley; in that year, Nicolai and Johann Thomsen had 10,000 gallons on hand, “all sold but not delivered” (50). That year marked the Hallengrens’ first yield from their grapes. A few years later, they ran a winery at the confluence of Warm Springs and Dry creeks (where the dam was completed nearly 90 years later), crushing several tons of grapes at harvest time and hauling out their wine in the spring. By 1911 they had 140 acres in grapes, one of the project area’s largest vineyards, and the vines were still in production at the time the federal government purchased the property in the late 1960s.

The greatest threat to the grapegrowing region was Prohibition, which reduced the number of
WINERIES IN CALIFORNIA FROM 700 IN 1914 TO 100 DURING THE 1920S (51). MOST OF THE FAILED WINERIES WERE SMALL, FAMILY OPERATIONS LIKE THOSE IN THE LAKE SONOMA AREA. ALTHOUGH WINERIES SUFFERED FROM THE NOBLE EXPERIMENT, THERE WERE LOOPHERS THAT ALLOWED GRAPEGROWERS TO CONTINUE WHILE OTHERS OF THE INDUSTRY FOLDED. HOME PRODUCTION OF UP TO 200 GALLONS PER FAMILY EACH YEAR WAS LEGAL; THUS MANY OF THE STATE’S VINEYARDS WERE MAINTAINED TO SUPPLY THIS VAST, NATION-WIDE MARKET FOR FRESH WINE GRAPE, WHICH HAD BEEN CREATED ALMOST OVERNIGHT, AND THE PRICE OF WINE GRAPE ROSE TO UNPRECEDENTED LEVELS. DRY LAWS ALSO PERMITTED THE PRODUCTION OF WINES FOR MEDICINAL, SACRAMENTAL, AND COOKING USE, ENABLING PART OF THE COMMERCIAL WINE INDUSTRY TO REMAIN ALIVE. MEDICAL PRESCRIPTIONS FOR WINE INCREASED TREMENDOUSLY, AS A NAPA COUNTY RESIDENT REPORTED: “THE DOCTORS IN THE WINE COUNTRY DID THEIR PART TO HELP OUT THE INDUSTRY. YOU’D BE AMAZED AT HOW MANY DISEASES REQUIRE THE TREATMENT OF WINE” (52). GRAPEGROWERS EVEN EXPERIENCED A BOOM FOR A WHILE, WITH SONOMA COUNTY VINEYARDS INCREASING UP TO 23,816 ACRES IN 1919 TO 28,361 IN 1929 (53). AS IN THE EARLY YEARS OF THE CALIFORNIA GRAPE INDUSTRY, THE BOOM ATTRACTION INVESTORS WHOSE GOAL WAS IMMEDIATE PROFIT, RATHER THAN A SUPERIOR PRODUCT. PLANTING POOR VARIETIES IN UNSUITABLE AREAS, THESE NEW GROWERS DEMORALIZED THE INDUSTRY, SENDING IT INTO A SLUMP FROM WHICH IT COULD NOT RECOVER UNTIL AFTER THE SECOND WORLD WAR.

HOW LAKE SONOMA AREA LANDOWNERS FARED THROUGH PROHIBITION IS POORLY DOCUMENTED. ALBERT Pritchett SWITCHED FROM GRAPES TO PRUNES, AS MANY OTHERS MUST HAVE. WILL RICHARDS, WHOSE PARENTS HAD PIONEERED THE AREA WHICH IS NOW DIRECTLY BELOW THE WARM SPRINGS DAM, LEFT A RECORD OF HIS SHIFT IN EMPHASIS TO PRUNES DURING THE PROHIBITION YEARS; PRUNES AND GRAPE PROVIDED AN EQUAL INCOME IN 1919, BUT A FEW YEARS LATER GRAPE BECAME INCIDENTAL, AFTER NEW PRUNE TREES WERE PURCHASED AND SET OUT. THE THOMSEN WINERY MAY HAVE CONTINUED PRODUCING THROUGH THE EARLY YEARS OF PROHIBITION, BUT IT HAD BEEN ABANDONED, WITH ALL EQUIPMENT STILL INTACT, BY 1928 (54).

THE SLOW PROCESS OF LEGISLATING PROHIBITION HAD ALLOWED AFFECTED INDUSTRIES TO PLAN AHEAD. IN FACT, SOME WINERIES ANTICIPATED THE END OF PROHIBITION BEFORE IT HAD BEGUN: THE SANTA ROSA PRESS DEMOCRAT IN JUNE 1919 REPORTED THAT SOME SONOMA COUNTY WINEMAKERS WERE SENDING CASES OF WINE, ADDRESSED TO THEMSELVES, TO WAREHOUSES THROUGHOUT THE COUNTRY. WHILE SOME OF THESE STOCKPILES MAY HAVE SUFFERED THROUGH THE 12-YEAR WAIT, IT IS LIKELY THAT MANY OF THESE WINES RECEIVED PREMIUM PRICES WHEN THE AMENDMENT WAS FINALLY REPEALED. IN 1932, WHEN REPEAL WAS IMMINENT, WINERIES Began BUILDING UP STOCK AGAIN, AND GRAPEGROWERS BEGAN PLANTING NEW VINEYARDS AND REPLANTING OLD. BECAUSE MANY VINEYARDS CONTINUED PRODUCING THROUGH THE DRY YEARS AND 100 WINERIES REMAINED OPERATING IN THE STATE, WINE PRODUCTION RESUMED FULL SCALE ALMOST IMMEDIATELY UPON REPEAL.


DOMESTIC ANIMALS

FIRST HERDS

THE ONLY ANIMAL REGULARLY KEPT BY NATIVE CALIFORNIANS WAS THE DOG. IN SOUTHERN CALIFORNIA, DOGS WERE OFTEN RAISED FOR FOOD, BUT THE MIHILAKAWNA AND MAKAMO HAD SMALL, PRICK-EARED ANIMALS WHO AIDED IN HUNTING AND PROVIDED COMPANIONSHIP. OCCASIONALLY OTHER ANIMALS WERE KEPT; THERE ARE REPORTS, FOR EXAMPLE, OF CAGED CONDORS AND IMMATURE BEARS. FOR THE MOST PART, HOWEVER, THERE WAS NO ROLE FOR DOMESTICATED ANIMALS IN NATIVE CALIFORNIA.

the valleys and along the coast, sheep declined in importance, and cattle herds dominated the landscape.

The huge herds of the ranchos were made possible by the enormous size of the land grants and the minimal requirements of herd maintenance. Land grants ranged from around 1000 to more than 50,000 acres, providing ample grazing. It was not even necessary to confine a herd within these large tracts, since livestock were branded and then allowed to roam free. In place of fencing—requiring a tremendous expenditure in later years under fence laws—the rancheros held round-ups, or rodeos, at which the cattle of different herds were separated out. The Mexican government required that rodeos be held annually; the ranchero was to give his neighboring ranchers four days’ notice of the time and place. As a matter of convenience, rodeos were usually held twice a year: one at the end of the dry season for branding and counting young stock, and one in late spring prior to slaughtering animals for hide and tallow as well as some meat (56).

The Peña family clearly kept livestock on Tzabaco, but we have no account of the size of their herds. On the 50,000 acre Sotoyome Rancho immediately east of Tzabaco, Fitch had only 3000 head of cattle in 1846, or one head per 17 acres—a far lighter stocking of the range than was to occur in later years.

The rancho longhorn has been praised for only one attribute—its toughness, which enabled it to survive with virtually no maintenance. With meat of minor importance, the breed’s endurance outweighed its tendency to gaunt bodies and unwieldy limbs. The herds were essentially wild and extremely dangerous, one reason given for the ubiquitous horse on rancho lands; it was contended that a person would not survive long going among the cattle on foot. While cattle provided the economic mainstay of the ranchos, horses are said to have been the rancheros’ passion, and the reported inseparability of the ranchero and his horse was not based on safety alone. He was said to mount upon leaving his door and was rarely seen on foot, even in pueblos or elsewhere away from herds. Spanish horses, descended from Arabian stock, were described as exceptional animals—tractable, yet high spirited, and with unusual endurance.

With the discovery of gold in the Sierra foothills, the non-Indian population of California leaped from 15,000 in 1846 to 160,000 by 1850. The meat of cattle, which had previously been left for scavengers once the hide and tallow were taken, was suddenly in
extraordinary demand. While the hide and tallow trade had brought only $5.00 per head, it was common to receive $50 to $100 per animal at the gold diggings and, in time of scarcity, as much as $500 per head. Rancheros responded by increasing their herds, while many outsiders drove herds of cattle and sheep—almost worthless back home—from Mexico, Texas, and the Midwest. William Board, who later became a pioneer of the Lake Sonoma Area, was among those enterprising men, driving cattle across the plains from Missouri in the 1850s. From the estimated 300,000 cattle in California at the time gold was discovered, California herds had risen to the 1,234,000 head reported in the 1860 census or, more likely, to as many as three million (57).

**Early Settlers’ Livestock**

Profits from livestock sales to the mines decreased with the growing supply, but the trade remained brisk for some time, and 1850-1860 has been referred to as the Age of Cattle in California. Due to the high prices in the West, most of the new settlers brought their livestock with them over the plains. An 1857 Santa Rosa newspaper remarked on the new immigrants:

Almost every day, we notice more or less immigrants or recent arrivals, passing through our place on their way to the Russian River Valley. A large number of cattle have been brought in by them, which will add largely to the wealth of our county (58).

During the early settlement of the Lake Sonoma Area, however, domestic animals were rarely accumulated into large herds. Instead, family needs were met and, in a few cases, small commercial herds were kept. The following figures, extracted from the agricultural census of 1860, show a fairly wide range of livestock for the three known early Lake Sonoma Area settlers:

<table>
<thead>
<tr>
<th></th>
<th>Horses</th>
<th>Mules</th>
<th>Cows</th>
<th>Oxen</th>
<th>Cattle</th>
<th>Sheep</th>
<th>Swine</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOARD</td>
<td>8</td>
<td>1</td>
<td>45</td>
<td>-</td>
<td>100</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>VALUEOFSTOCK</td>
<td>$3707</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BISHOP</td>
<td>2</td>
<td>-</td>
<td>27</td>
<td>2</td>
<td>33</td>
<td>-</td>
<td>12</td>
</tr>
<tr>
<td>VALUEOFSTOCK</td>
<td>$2495</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRITCHETT</td>
<td>2</td>
<td>-</td>
<td>6</td>
<td>-</td>
<td>13</td>
<td>3</td>
<td>60</td>
</tr>
<tr>
<td>VALUEOFSTOCK</td>
<td>$855</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The large numbers of milk cows kept by Board and Bishop, both living near the Warm Springs/Dry Creek confluence where level pasture was available, would suggest that they ran small dairies. Board, with his cattle, and Pritchett, with his swine, must have been supplying meat for sale. The rest of the animals probably represent varied subsistence farming. These enterprises were typical of the general area: only slightly more than 2000 beef cattle were reported for the whole Mendocino Township (taking in Healdsburg and Dry Creek Valley) in 1860, and the total sheep population numbered less than 900 (400 owned by one rancher). The most popular farm animal in the township was the hog, which numbered nearly 4000 head in that year.

The cattle industry of California soon suffered a devastating setback. Beginning with a drought in 1859-1860, there followed the record floods of 1861 and 1862, which drowned or starved whole herds of cattle. The severe drought of 1862-1864 took the final toll. Altogether, 200,000 to 1,000,000 head had died, as much as a third of the state’s beef cattle, and hundreds of ranchers were bankrupt. California stockraisers had not been prepared for the disaster, partly due to promoters’ claims that cattle in this part of the country needed little maintenance. Many ranchers found themselves without a bale of hay or a barrel of water in reserve to save their herds. Most valley ranchers became farmers, joining the California wheat boom, while livestock raising was pushed to the foothills. In the uplands of the Lake Sonoma Area, however, ranchers may have actually benefited from the drought. Residents of Cloverdale Township (including the Dry Creek uplands), where ranching dominated, gained considerably in personal wealth between 1862 and 1865, while the residents of the farming community in Mendocino Township suffered economically. The well-watered, still pristine grazing land in the uplands may have encouraged a rapid increase in herds at a time when meat was selling at premium prices (59).

Little is known of this experimental period in the history of Lake Sonoma Area ranching. While bottomland farmers, such as Board and Pritchett, carried out the diversified regime of the Midwest, some of the upland settlers, like John Ferry, had begun to accumulate cattle. But by the early 1870s, sheep had become the dominant livestock; the Mendocino Township sheep population had soared from 900 head in 1860 to 3657 sheep 10 years later. In contrast, only slightly more than 600 range cattle
remained in the township. Were the Township’s cattle the victims of drought, with nearly three-quarters of the stock dying from lack of food or water? Or did ranchers willingly and gradually reduce their herds, slowly replacing their numbers with sheep? No records for individual ranchers exist for this period, and we have no account of how the rangeland came to be dominated by sheep.

The Dominant Sheep

Although a few ranchers in the uplands, such as Sylvester Scott and John Ferry, continued with herds of cattle. Most of the Lake Sonoma Area was becoming sheep country. The change may have been gradual, but lack of documentation makes it appear abrupt: there is a jump from the 1860 count of three head each for Board and Pritchett to a few hundred sheep on most ranches in the mid-1870s (60). By 1880, even John Ferry, the cattle raiser, had more than 1000 sheep.

It is not surprising that sheep became the preferred livestock here and throughout the North Coast Ranges. Sheep require a lower investment per head than cattle, and twinning is more common in sheep, so that flocks quickly multiply. Sheep also need less water, a lesson learned from the drought of the 1860s; they require fewer, less sturdy, fences; and they take well to the rugged terrain of the area. In fact, nonirrigated, upland pasture is particularly desirable, because sheep are liable to parasites and foot rot on poorly draining soils. This is “short-grass country,” according to one local rancher, and therefore not good for cattle. While sheep require only four pounds of fodder a day, a cow needs three times that amount; in order to survive on short-grass country, cattle must move constantly in search of food, burning off the calories they consume.

The general economy also dictated the shift to sheep. Mutton had a ready market at the Sierra mines through the 1850s, but the demand for food at the
diggings had plummeted before the end of the decade. Although California towns and cities were growing, the population failed to increase at a rate that would warrant large-scale food production. There was always some market for slaughtering sheep for food, but mutton—not lamb—was preferred. Archaeological investigations at the Skaggs Hot Springs Hotel indicate that leg of mutton was consumed nearly as often as beef. Even at the homes of Lake Sonoma Area ranchers investigated by archaeologists, no lamb bones were found, but mutton was represented in the remains (61). With the preference of mutton, meat was only a by-product of the sheep industry, a result of culling herds. Since wool was the primary product, sheep ranchers were generally referred to as woolgrowers.

The Civil War gave sheep raisers a new market, and the number of sheep rose rapidly. The war had deprived the Union states of southern cotton and created a demand on both sides for low-grade wool for blankets and uniforms. So many ranchers had joined the woolgrowing boom, both in the United States and abroad, that the end of the war brought glutted markets and depressed prices. Then a tariff imposed in 1867 stifled foreign competition, and flocks continued to expand. There seemed no end to the amount of wool the country could consume. The per capita consumption of wool was high in the 1870s and 1880s, when voluminous skirts and sleeves were in vogue. Before central heating and enclosed automobiles, woolen underwear, socks, overcoats, mufflers, mittens, and wool buggies robes were necessities, while men’s broadcloth had to be made from the fine wool of the Merino sheep.

Despite the demand for fine wool, early California sheep raisers were often more intent on increasing wool yield than wool quality, and many of the early clips were inferior. In fact, one critic in 1862 stated that, despite improvements, the condition of many California wool clips indicated “either culpable negligence or intended fraud. The time has gone by when the sweepings of the corral or the barnyard can be sold for wool” (62).

Ranchers in the Lake Sonoma Area appear not to have made an effort to improve stock in the first years of woolgrowing; all tax assessments in the area until 1880 were made on common sheep. Sylvester Scott, who showed an interest in upgrading cattle and horses, was also the first settler reported to own improved breeds. He bred 10 imported sheep in 1880 to his band of common ewes, resulting in 1100 graded sheep three years later. Later records do not discriminate between graded and common, but local ranchers recall that upgrading with strains of Merino sheep became common in later years. Animals of this breed not only produced exceptional wool, but their hardness was particularly well suited to the North Coast Ranges, and the flocks prospered.

Problems with wool quality were not limited to choice of breed. Californians’ rather lax attitude toward cattle extended to sheep, who were rarely husbanded with the care administered in other states. Elsewhere, herds were fed hay during winter, and shepherds lived with the flock, giving care when needed. In California, the herds were expected to subsist on natural vegetation whatever the food value, despite the fact that the leanest season—from July to January—coincides with the period of breeding and gestation. As early as 1863, the State Agricultural Commission was pleading with woolgrowers to provide some supplemental feed during these crucial months, to rotate stock within enclosed tracts, and to break up large flocks and distribute them among more diversified farmers. Just 25 cents per head could bring the flock through a severe winter, ranchers were advised. But ranchers did not take heed; more and more sheep were put to increasingly deteriorated rangeland. Lands originally stocked at 5 acres per head required 10, 12, and even 20 acres per head within a few years.

As rangeland quality decreased, more and more land owners in the Lake Sonoma Area sought to increase their holdings. Before buying up new tracts, the rancher’s first task was to clear as much of his initial acreage as possible. This he did by cutting or girdling trees in much of his forested holdings. Controlled burning, a more beneficial method of increasing grazing land, was also practiced; but burning was dangerous and illegal, and an expert was required (63).

During the peak years of the 1880s, sheep ranching was a profitable business. Expenses ran less than 50 cents per head, while fleeces sold for $1.50, and additional income came from the occasional sale of mutton. Woolgrowers were confident, and herds were expanded. But a significant financial setback could come unexpectedly through loss of stock from “stress of weather”: in 1879, some ranchers in the Dry Creek uplands reported losing more than 50 percent of their flocks from this cause. Lambing
Hauling sacks of wool in Cloverdale, 1913 (photo courtesy of the Sonoma County Room, Sonoma County Public Library, Santa Rosa)

season, according to rancher Orville Baldwin, was “filled with anxiety and sometimes crowded with tragedy” (64). Lambs were born between January and early March, when near freezing wind and rain were not uncommon. Storms frightened the flock, scattering the sheep; some lambs were trampled to death in the stampede, while others were permanently separated from their mothers. When flocks were well tended, such losses could be reduced; many ranchers kept a constant watch on the range, gathered up ewes in bad weather, and sheltered them during lambing.

The only detailed record of 19th-century ranching practices in the Lake Sonoma Area is a calendar-diary kept by George C. Matthews during the first seven months of 1896 (65). “Went over range” is a weekly notation on the calendar in the winter months, while “went after sheep”—presumably those who had strayed off the property—is a recurring entry. At the beginning of March, Matthews’ sheep were gathered up; the ewes and lambs were separated, and 400 lambs were “Marked” at the beginning of April. Sheep shearing occurred in June, when Matthews and a hired hand sheared more than 500 head over a three-week period, bagging the wool and hauling it to Cloverdale at the end of the month. When the sheep were put back to pasture, “went over range” again appears on the calendar. In the years when flocks and ranges were relatively small and labor was provided by the family or a low-paid ranch hand, the careful tending exhibited by Matthews may have been the rule. As operations grew, more hands were required to cover the range and maintain the sheep. When labor costs rose, shortcuts were taken. On many large ranches, the sheep were only seen when marking lambs and shearing wool. Reduced care resulted in large lamb losses, which in turn required ever larger flocks to maintain profitability.

Adding to this circular problem was the rise of predators in the Lake Sonoma Area. The large number of predators in the area when Euroamerican settlers first arrived were quickly reduced through the rancher’s pleasure in the hunt. Holding the population of predators in check was serious business, but it was also a time to experience the excitement of the chase, to test the skills of prized hunting dogs, and to appreciate the habits and intelligence of wild animals. Signs of predators were watched for and quickly responded to. Neighboring ranchers joined in the
hunt, which could continue for several days. With the advent of larger ranges, predators often went unnoticed, leaving behind the carcasses of slaughtered lambs. By the turn of the century, coyotes had become a serious problem. Ranchers in Cloverdale Township banded together to create a coyote bounty fund; the ranchers were to pay trappers for each coyote killed on members’ land, but disputes sometimes arose, and payments were slow. A rancher in charge of administering the fund wrote that it was easier to kill the coyote than to collect the payment (66). An all-out, government-sponsored attack was instituted in 1919, but coyotes showed remarkable resilience to the program; as one rancher described it, the attempt to exterminate the coyote was like “digging a hole in the ocean.”

Several problems in the sheep industry caused the decline of sheep in the Lake Sonoma Area: wildly fluctuating wool prices due, in part, to tariff changes; a general depression in the 1890s; deteriorated rangeland which required greater acreage for the same sized flocks; and reduced maintenance which resulted in loss of lambs.

After a severe slump that saw several Lake Sonoma Area ranchers bankrupt (see Chapter 8), a revitalization of the sheep industry occurred in the late 1920s, when a change in American tastes made lamb an important item on the table: now wool, not meat, became a by-product of sheep ranching. Ranchers in the 1930s responded to the new market by shifting from raising three- to four-year-olds primarily for wool, to selling four-to-six-month-old milk lambs for meat. California had a competitive advantage; because the relatively mild winters allowed early lambing, meat could be shipped to eastern markets in early spring. The war years saw a drop in sheep population, but by 1950 Sonoma County sheep production had surpassed the 1880 peak. The following figures, extracted from U.S. Census records, demonstrate the dramatic rise and fall of the sheep population in Sonoma County:

<table>
<thead>
<tr>
<th>Year</th>
<th>Sheep Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1860</td>
<td>35,589</td>
</tr>
<tr>
<td>1870</td>
<td>58,387</td>
</tr>
<tr>
<td>1880</td>
<td>156,554</td>
</tr>
<tr>
<td>1890</td>
<td>74,604</td>
</tr>
<tr>
<td>1900</td>
<td>49,126</td>
</tr>
<tr>
<td>1910</td>
<td>65,315</td>
</tr>
<tr>
<td>1920</td>
<td>62,846</td>
</tr>
<tr>
<td>1930</td>
<td>147,916</td>
</tr>
<tr>
<td>1940</td>
<td>84,921</td>
</tr>
<tr>
<td>1950</td>
<td>158,393</td>
</tr>
</tbody>
</table>

The years from the turn of the century through the 1950s marked the era of the huge sheep ranches, run by corporations, which covered much of northwestern Sonoma County. The corporations justified the large spreads on economic grounds. Casper Orba, chief investor in the Rockpile Ranch Corporation, described the reasoning:

One thing that may impress you is the fact that all of those purchases consisted of large ranches. This is one of the reasons that our operations were successful. One of my reasons for purchasing ranches of the size of these was to cut down expenses. I found that two good men could handle two or three thousand sheep almost as cheaply as they could handle one thousand or fifteen hundred. And it was my idea to run on each ranch the maximum number that could be handled (67).

Some small-scale ranchers held out; to these men, breaking even was sufficient. More important than profit was knowing the land, the stock, and the sheep dogs that were a part of every operation. Asked why he chose sheep ranching, one former owner of a ranch near Skaggs Springs stated: “Darn if I know. I always liked sheep. Some years they was good and some years they wasn’t. Some years I had to cut wood to earn a living” (68). But even this simple lifestyle could not be maintained by the 1960s and 1970s. Despite rising wool and lamb prices, most sheep ranches could not be operated at a profit, and the county’s sheep population fell below that of 1900. At the time the federal government purchased land for Lake Sonoma, sheep raising was the major economic activity in the uplands, although most operations were said to be running at a loss. Families could not live on the income from sheep ranching; instead, ranchers made their living from a variety of other activities in San Francisco or nearby Sonoma County towns. Some ranchers experimented with a return to the area’s original range animal, beef cattle, which had a better chance of surviving predators. Even after Warm Springs Dam was completed and Lake Sonoma formed, private land bordering government property still included a few large sheep ranches.
Coyote carcass displayed on fence as a warning to others of its kind (photo by Karana Hattersley-Drayton).
Before Lake Sonoma—the upper Dry Creek Valley prior to the construction of Warm Springs Dam