

Chapter V. Native Wildlife: Plants and Animals

The study area contains a wide diversity of native plants and animals typical of the western Cascades of Oregon, including the southern-most extent of Alaskan yellow cedar and northern-most extent of Shasta red fir. Although Douglas-fir currently dominates most of the study area -- with the exception of higher elevation peaks and ridgelines -- relict stands and groves of Oregon white oak, ponderosa pine, sugar pine, western redcedar, and chinquapin strongly indicate past conditions, when Douglas-fir populations were more limited, and savannas, grasslands, brakes, and berry fields were more extensive.

Significant numbers of native insects, birds, and mammals were also observed and/or documented in the study area, including elk, deer, coyotes, black bears, cougars, western gray squirrels, skunks, ruffed grouse, Canada geese, turkey vultures, frogs, butterflies, ticks, and mosquitoes. Wolves were last documented in the study area in the mid-1940s, although there is some questionable evidence they may have returned in the past few years. Other extirpated species include condors, grizzly bears, and wolverines. Turkeys were the only introduced animal species noted, and exotic invasive plants included scotch broom and tansy ragwort observed along certain roads, trails, and landings.

This chapter profiles native plants and animals documented in the study area in 2010 during field research activities. Select plants and animals thought to be of particular importance to ca. 1800 Takelma and Molalla occupants of the upper South Umpqua River basin are given specific attention. Because the area was subjected to regular burning and fuel-gathering activities over time, additional attention is given to general effects to native species in that regard.

As most gardeners know, harvesting fruits and pruning away dead growth tends to stimulate additional growth, decrease disease and insect problems, and to produce significantly more fruit and fiber products the following growing seasons. Indian women are believed to have systematically harvested fruits and deadwood from fields of manzanita and huckleberries, as examples, and then burned the shrubs or trees when they needed to be replaced or rejuvenated. Digging bulbs, harvesting hazel and willow cuttings, and breaking off dead oak limbs all had similar positive management effects on those plant species.

Native Plants and Fire

Table 5.1 lists the common names of several important precontact food, fiber, and fuel plants still found in the study area. Although regular landscape-scale burning activities and widespread firewood gathering and use have been generally eliminated from the environment, these plants continue to persist, and much

remains known about their individual adaptations to regular fire, pruning, and harvesting disturbances related to past human presence and use (e.g., Dickson 1946; Anderson 2005). The column marked "Fire" denotes whether plants were dependent on (or otherwise benefitted by) regular disturbance for their survival -- such as provided by fire -- or whether they were merely tolerant of such actions, and tended to persist despite human actions. "XX" denotes plants largely dependent on fire and other regular disturbances for their existence, and "X" denotes plants tolerant of fire; blank spots denote plants in which the relationship to fire is unclear. Note that no plants are intolerant of regular fire: all have either

<u>Food Type</u>	<u>Food Name</u>	<u>Fire</u>
Berries	Blackberry	XX
	Gooseberry	X
	Huckleberry	XX
	Strawberry	XX
	Thimbleberry	XX
Bulbs	Beargrass	XX
	Camas	XX
	Cat's Ears	XX
	Fawn Lilies	XX
	Onions	XX
	Tiger Lilies	XX
Fruits	Chokecherry	XX
	Manzanita	XX
	Rosehips	XX
Grains	Grass seed	XX
	Indian peas	XX
	Sunflower	XX
	Tarweed	XX
	Wokas	X
Greens	Dock	XX
	Miner's Lettuce	XX
Mushrooms	Morels	XX
	Puffballs	XX
Nuts	Shaggy Manes	
	Acorns	XX
	Filberts	XX
	Chinquapin	XX
	Pine nuts	XX
Roots	Bracken fern	XX
	Mountain carrot	XX
	Yampah	XX
Stalks	Cattail	X
	Fiddleheads	XX
	Thistle (Edible)	XX

Table 5.01 Important native food and fiber plants of the South Umpqua River headwaters, ca. 1800.

benefitted by its regular use, or adapted to its presence in the environment. Other forms of disturbance related to plant management, such as tillage, picking, and pruning, were also present in all environments but seem far more likely to have occurred in regularly burned areas, and are included under the single heading for that reason.

Note that only plants directly associated with ponds (wokas and cattails) do not seem to directly benefit from regular burning or harvesting activities. Gooseberries and shaggy mane mushroom responses to regular fire are not so well understood (at least to this author) as the other plants listed. Important plants which are not on the list, such as incense-cedar and madrone, also likely benefitted by regular fire – possibly at much longer intervals than the majority of listed plants – in order to reduce competition from invasive Douglas-fir and other large, long-lived conifers.

Energetically, many of the plant species used and managed by people were also important to other plants and animals for habitat, cover, or forage (Norton et al 1984; Todt and Hannon 1988). Table 5.2 provides photographs of a sampling of such species; several of which have become greatly limited in population and range since late precontact time. Still, these plants continue to provide important cover, nectars, pollens, nesting materials, fruits, bulbs, nuts, shade and other benefits of value to associated native plants and animals that also continue to persist to this time.

In addition to indicating the great diversity of species that continues to define the environment of the upper South Umpqua headwaters region, these tables also indicate the wide variety and abundance of important foods and trade items available to local people in late precontact time -- as well as the generally beneficial response of favored species to regular fire management practices.

Types of Plants Used by People

Seeds and Nuts. Seeds were most prized from tarweed and sunflowers, which were burned annually over thousands of acres throughout western Oregon in precontact and early historical time, including fields and patches that were grown and harvested within the study area. Oak, hazel, chinquapin, and sugar pine all produced nuts of great value, and were also systematically harvested and processed seasonally throughout the great lower and middle elevation expanses of groves, orchards, stands, and woodlands of these species throughout the region; and also including large portions of the study area (see Chapters IV and VI).

A. Manzanita, Big Squaw Mountain.	B. Gooseberry, Little Black Rock, April 19, 2010.
C. Camas, Boulder Creek mouth, May 12, 2010.	D. Bracken fern, Collins Ridge.
E. Tarweed, Bunchgrass Meadows, May 31, 2010.	F. Cat's Ear, Tallow Butte, May 25, 2010.
G. Beargrass, Ash Valley knoll.	H. Fawn lilies, Whisky Camp, May 31, 2010.

Table 5.02 Selection of persistent native plants documented in the study area in 2010.

Burning was done almost annually in many of these areas, although hazel sticks and other plant materials harvested two and three years after burning were prized by many weavers.

Fruits and Berries. All fruits and berries produced by native plants in southwest Oregon and the western Cascades were used by local people for thousands of years, mostly as foods, but also dye, medicines and other products. Manzanita berries for cider, huckleberries, elderberries, salal berries, strawberries, choke cherries, blackberries, thimbleberries, etc., were all harvested, eaten, and processed in great quantities during picking season. Because these foods grew on shrubs, vines, and small trees, patches were burned on a more discrete basis, and intervals might vary from a few years to several decades between fires.

Roots and Bulbs. Camas, tiger lily, fawn lilies, and cat's ears were all favored bulbs used for eating by western Oregon Indians during precontact and early historical time. Such bulbs existed in mostly-pure stands of dozens or hundreds of acres and were dug by the ton every year. Edible roots used by people during that time included wild carrots, cattails, yampah, and bracken fern, and were also systematically harvested in great amounts by seasonal digging. Such harvesting practices created hundreds or thousands of acres of bare dirt every year, usually in wet prairies, along riparian areas, ridgelines, and balds, where these plants were grown.

Stalks, Greens and Bark. Sunflower stalks, the leaves of miner's lettuce, clover greens, and the cambium bark of willow, ponderosa pine, and sugar pine were all favored foods of western Oregon Tribes, including those of the South Umpqua River basin. Bark was often prepared by baking or roasting, but the others were often eaten fresh, or with minor preparation. Sprouts of young thimbleberries and bracken fern "fiddleheads," for example, were often eaten as they were picked; much like fresh berries.

Construction Fibers. Beargrass leaves, willow sticks, hazel sticks, cedar bark, iris leaves, and many other parts of shrubs, trees, and grasses were (and continue to be) used by western Oregon Indians to weave and otherwise produce a wide range of products. In addition to a great variety of baskets that were produced to perform a similarly great variety of tasks, plant fibers were also used to produce clothing, traps, fishing line, rope, mats, platters, seed beaters, temporary housing, and numerous solid wood and stem products. Skilled weavers could assemble most of the non-food needs for a person or family fairly quickly, no matter what plants were made available; but particular quality was attained if they were able to spend a few years to produce, harvest, and process the fibers first.

Fuels. Gathering, storing, and using fuels were a daily and seasonal occupation of most precontact people, as with pre-industrial society people everywhere. Precontact people in southwest Oregon depended on local plants for most fuels, although some animal oils were known to be used at times. Small logs, pine knots, limbs, mosses, leaves, grasses, deadfall, etc., had to first be systematically gathered before they could be stored or used as fuel. Woodlands and forest areas – connected by ridgeline and riparian trail networks – would have been logical fuel gathering places in spring, following winter storms or receding floodwaters. Another source was simply harvesting incremental deadwood from living shrubs and trees; which seemed to be a common practice with oak, manzanita, and other hardwoods in northwest California and western Oregon.

Miscellaneous Products. In addition to the general categories and uses just listed, native plants were also used for medicines, dyes, smoking, poultices, musical instruments, home construction, bows, arrows, toys, tools, weapons, art, and in any other manner that can be imagined.

Key Plant Species

A number of plant species known to be important to late precontact Umpqua Takelma and southern Molalla people who occupied the study area are profiled in the following pages. These plants were selected because of their perceived importance to these people, and because their current physical conditions, persistence and locations in the environment often provide strong evidence of past conditions and uses.

Oaks. Precontact Indian people prized oaks for many reasons, including the tree's ability to produce acorns. In western Oregon areas where oak are left undisturbed by fire, grazing, mowing, plowing, logging, or other management processes, they are soon replaced by competing conifers, particularly Douglas-fir (Sprague and Hansen 1946; Zybach 1999: 102-117). Many Indians prized oak trees and groves highly, and viewed most conifers in their midst as invasive weeds (Thompson 1991: 33).

The staple food of the Takelma is probably to be considered the acorn (yana), of which there were several recognized varieties, the black acorn (yana yahal) being considered the chief. The first acorns appeared in the early spring, at which time they were gathered and prepared by the women (Sapir 1907: 258, quoted by Pullen 1996, App. I: 30).

Bread is made of acorns ground to flour in a stone mortar with a heavy stone pestle, and baked in the ashes. Acorn flour is the principal ingredient, but berries of various kinds are usually mixed in, and frequently seasoned with some high-flavored herb. A sort of

pudding is also made in the same manner, but it is boiled instead of baked (Walling 1885: 180, quoting Bancroft).

Pines. The two pine species of particular importance to the Takelma and Molalla people who resided in the study area were Ponderosa pine and sugar pine. Both were probably used to make boards or as fuels, and for other purposes, but sugar pine was also valued for its large, tasty nuts and for its sweet pitch, which could be used as a condiment in cooking, while Ponderosa was often peeled for its inner-bark during the spring:

The custom of the Indians of peeling the yellow pine at certain seasons of the year to obtain the cambium layer which they use for food, is in some localities a fruitful contributory cause toward destruction of the yellow pine by fire. They do not carry the peeling process far enough to girdle the tree, but they remove a large enough piece of bark to make a gaping wound which never heals over and which furnishes an excellent entrance for fire. Throughout the forests of the Klamath reservation trees barked in this manner are very common. Along the eastern margin of Klamath marsh they are found by the thousands (Leiberg 1900: 290-291).

At midday [October 26, 1826] I reached my long-wished *Pinus* (called by the Umpqua tribe *Natele*), and lost no time in examining and endeavouring to collect specimens and seeds. New or strange things seldom fail to make great impressions, and often at first we are liable to over-rate them; and lest I should never see my friends to tell them verbally of this most beautiful and immensely large tree, I now state the dimensions of the largest one I could find that was blown down by the wind: Three feet from the ground, 57 feet 9 inches in circumference; 134 feet from the ground, 17 feet 5 inches,; extreme length, 215 feet. The trees are remarkably straight; bark uncommonly smooth for such large timber, of a whitish or light brown colour; and yields a great quantity of gum of a bright amber colour. The large trees are destitute of branches, generally for two-thirds the length of the tree; branches pendulous, and their cones hanging from their points like small sugar-loaves in a grocer's shop . . . A little before this the cones are gathered by the Indians, roasted on the embers, quartered, and the seeds shaken out, which are then dried before the fire and pounded into a sort of flour, and sometimes eaten round (Douglas 1959: 230-231).

Hazel. Hazel was managed in two distinct manners: it was either burned in clumps every two or three years or so, in order to produce prized weaving sticks, arrow stock, and flexible construction materials, or it could be let to grow into large shrubs for hazelnut production.

Hazel Nuts (Suthxale) – In about the middle of the summer, the headman of the village had to burn off the brush. All the hazel nuts fell off and the people went out to pick them up. The nuts are roasted by the burning of the brush. They are whipped with a stick in the basket in which they have been collected. This husks them. The nuts are then picked out by hand (Cora DuBois, 1934, quoted in Pullen 1996, App. I: 32).

Their supper consisted of fresh salmon, and a species of hazel-nut, which is found in the country in great abundance. Having made a suitable fire, they commenced the operation of cooking their salmon . . . Stones were then provided for the purpose of cracking nuts, and all being seated on the ground, the eating process commenced. The extreme novelty of their appearance, the nut cracking, the general merriment, the apparent jokes, ready repartee, and burst of laughter, were sufficient to have excited the risibilities of even a Roman Catholic priest, however phlegmatic (Gustavus Hines, 1850, quoted in Pullen 1996, App. I: 32).

Arrows were generally made from hazel, but sometimes Indian arrow[wood], willow, and other wood was used. Straight limbs were gathered in the winter, and they were tied up in bundles and seasoned. The limbs were cut and smoothed down and soaked in warm oil. The men rolled and straightened the arrows between their hands (Ward 1986: 12)

Yew. Yew is one of the hardest, heaviest woods found in the forests. It is a small, slow-growing tree that was typically disregarded as a “junk tree” (little or no value) by most loggers and foresters in the early 20th century; until the value of a chemical contained in its bark and needles (taxol) was discovered to be an effective cancer-fighting medicine in the 1980s (Hartzell 1991: 175-195). At that time, it was heavily harvested for several years, until a method of manufacturing taxol artificially was developed. Local Indian men and boys seemed to have valued yew for almost one purpose entirely – the manufacture of hunting bows:

Boys hunted with their small bows and arrows. They worked with the men, and learned to make strong yew wood bows. Yew wood was cut in the winter when the sap was down and well seasoned. The men shaped their bows with stone knives, scraped the wood with clamshells, and smoothed it with sandstone. The bow-staves were soaked in hot fish oil to soften the wood. The craftsman bent the bow over his knee, and held it to get the right curve. Bow strings were made from leg tendons and sinews of wild game and nettle twine. (Ward 1986: 12).

On our arrival most of the Indians were armed with bows and arrows. The bows were made of yew-wood, the backs covered by the sinews of the deer held by some kind of glue. The bows were about thirty inches long and very elastic. They could be bent until the ends would almost meet. The quiver holding the bow and arrows was made of the whole skin of the otter or fox and swung across the back so that the feather end of the arrow could be reached over the shoulder. They were so expert in reaching the arrows and adjusting the bow that they could keep an arrow in the air all the time (Riddle 1993: 58-59).

Huckleberries. Several varieties of huckleberries exist in tracts in the study area that were once obviously much larger in size than their present extent, particularly near Huckleberry Lake, Huckleberry Gap, French Junction, and other locations along the high elevation ridgelines. These tracts have become compromised by rank growth of unmanaged shrubs and seedlings, and by extensive invasion of conifers

from scattered old-growth and from adjacent stands of second-growth. Writing of an area in the eastern Cascades of Washington, Minore (1972: 7-8) noted:

The heavily used Twin Buttes field is an example. This field once encompassed over 8,000 acres of old burn. Before the days of fire protection, it was perpetuated by periodic fires set by the Indians. However, fires have been kept out of the area for over 40 years, and the original area has dwindled to 2,500 acres as huckleberries have been replaced by brush and trees. Local foresters estimate that the Twin Buttes field is disappearing at the rate of 100 acres per year. In 25 years it could be gone. Huckleberry fields throughout the Northwest are similarly deteriorating. Some will disappear in less than 25 years if competing vegetation is not controlled.

The cultural importance of huckleberries to western Oregon Indian Tribes is well-known and widely recognized. Berry-picking was often a season for socializing in large groups from many different Tribes, while harvesting and drying tons of berries into tasty, nutritious raisin-like foods that could be easily transported and stored for long periods of time. Gwennede (Mrs. James) Maple was a life-long native and resident of Empire, Oregon, on the coast west of the study area. Her close friend and neighbor was Daisy Wasson Coddling, a Kusan-Athapaskan oral historian. In 1952, in an essay titled “How the Coos Indians Lived” (Peterson and Powers 1952: 23-28), she wrote:

They also dried the huckleberry, blackberries and blueberries. They were very fond of the salalberry fresh, but never dried it. They liked to pick the salalberries on long stems, dip them in hot melted elk tallow and eat them off the stems. The red elderberry juice was a much relished beverage. They also drank several kinds of tea – bush tea, vine tea, yerba buena, swamp tea, fir tea.

Camas. Camas was found in numerous locations throughout the study area – from the lowest elevations adjacent to the South Umpqua River (see Table 5.02 C.), to the river’s headwaters near Buckhorn Mountain, Huckleberry Gap, or along the ridgeline trail from Black Rock to French Junction. Wherever this plant is found it is a very strong indicator of precontact Indian land use. Camas was a primary food crop for most precontact Indian families throughout all of North America, including the Takelma and Molalla of the Umpqua River basin. Haskin (1934: 29-30) states:

Of all the food plants used by the Western Indians the camas was the most important and widely known. There is more romance and adventure clustered around the camas root and flower than about almost any other American plant.

Walling (1884: 180) also noted:

The principal root used was the camas, great quantities of which were collected and dried during summer and stored for the coming winter's provision. This is a bulbous root much like an onion, and is familiar to nearly every old resident of Oregon.

Coquille Thompson, an Athapaskan born west of Cow Creek Valley, reported to John Harrington (Pullen 1996, Appendix I: 39) on one favored method of preparing camas:

The Indians used to mash camas and make it into a loaf like a loaf of bread called Wistae. Not very big. Made of finely pounded-up camas. When they eat this, they slice it with a knife as one does bread. When this loaf is all sliced up ready to eat they call it by the special name of hammi.

Other important bulbs used for food – also members of the lily family, in common with camas – included cat's ears (Dickson 1946: 29-31; Pullen 1996, Appendix I: 40; Fluharty 2007: 213), tiger lilies (Dickson 1946: 32-33), fawn lilies (Fluharty 2007: 213), and bear grass (Pullen 1996, Appendix I: 43).

Iris. “Flags,” also known as wild iris or Oregon iris (Fluharty 2007: 229), was first discovered and named by David Douglas near present-day Eugene, on his way to the Umpqua River with Alexander McLeod in October, 1826. Douglas named it *Iris tenax*, because he noted the extremely strong fibers being used to make ropes for snaring elk. Riddle (1993: 57-58) describes how these snares were made, used, and valued:

The deer was the principal game, which, before they had guns, were taken with snares. To capture a deer in this manner they must have ropes and good ones. These were made from the fibre taken from a plant – a kind of flag – growing in the mountains. From each edge of the long flat leaves of the flag a fine thread of fibre was obtained by the squaws, stripping it with their thumb nails. This was a slow process and would require the labor of one squaw a year to make a rope five-eighths of an inch thick and fifteen feet long, but the rope was a good one and highly prized by its owner . . . I remember at one time a great antlered buck came across the field with a rope around his neck with a piece of root on the end. The deer in plunging through the brush at the river's edge entangled the rope and being in swimming water was unable to pull loose. An Indian soon came running on the track and was greatly pleased at the capture of the buck and recovery of his valuable snare rope.

Yellow leaf iris (*Iris chrysophylla*) is still found in extensive clumps throughout the study area, from the lowest elevations to ridgelines. The use of iris for making rope seems universal among west coast Indian Tribes; perhaps particularly those of western Oregon, where the plant grows in abundance. Cora DuBois, living at the Siletz Reservation in 1934, differs from Riddle in her understanding of who made the ropes (quoted in Pullen 1996, App. I: 23):

Net twine made of iris fibers. Temele. Fiber extracted by splitting leaf with teeth. Fibers spun by rolling on thigh. Gathering iris, spinning, and net making all men's work. Informant didn't know how nets were made because work was carried out in sweathouse from which women and children barred.

Manzanita. Manzanita was used as a fuel, and its fruits (manzanita means "little apples") were used to make a favored cider-like drink. Fruits were also dried and used as condiments or made into a flour (Zybach 2007). Sapir and Dixon were two early anthropologists who had an opportunity to interview Athapaskan and Takelma elders who could still remember early historical time; before they had been removed from their lands and sent to reservations. Sapir (Pullen 1996, I: 34) noted in 1907:

A favorite food was the manzanita berry (loxom). These were pounded into a flour (pabap), mixed with sugar-pine nuts (tgal), and put away for future use; they were consumed with water.

During the same year (1907), Dixon also recorded that (Pullen 1996, I: 34):

Berries and nuts were in abundance. Manzanita-berries (*Arctostaphylos Manzanita* Parry) grew in great quantities and were used to make the well-known 'manzanita-cider' . . . Manzanita-berries were crushed, and used to make manzanita-cider in a manner similar to that described among the Maidu. The winnowed meal was also mixed with the acorn-meal in making a special variety of acorn-soup.

Bracken fern. Bracken fern was a major source of winter food and starch for precontact western Oregon Indian families (Dickson 1946: 65-68; Norton 1979a; Fluharty 2007: 210). Bracken fern prairies (or "brakes") were common along major ridgeline trail systems and along certain bottomlands throughout the Umpqua basin, including the study area. In addition to being dug for their roots, young sprouts were gathered and eaten in the spring. Louisa Smith, a Siuslawan, for example, stated in 1911:

They had dried salmon, and likewise (dried) fern-roots, which they ate during the winter. They ate fern-roots (mostly). Thus the people did during the winter . . . Such was the food of the people belonging to the past (Frachtenberg 1914: 81-83).

Typically, brakes were burned in late winter and grasslands burned in late summer. There is a biological reason for this timing. As Ross (1971: 2) notes:

The name "brake" or bracken, which traces back into a number of European languages, may have come from the broken appearance of the fern cover after the first heavy frost. The leaves lie collapsed like a miniature forest hit by a tornado.

Prior to being desiccated by frosts in the fall and early winter, bracken fern plants simply held too much moisture to burn effectively (Zybach 2002). Following a burn, roots (and animals) were left exposed, making root harvest and localized hunting easier tasks. New sprouts in the spring could also be readily located and harvested once the heavy plant cover had been removed. Dickson (1946: 66) describes bracken fern use specific to the Molalla:

When the young fronds of the Brake fern first shoot out from the ground, they are very tender and have been eaten like asparagus. In fact, the young shoots of the Brake fern were roasted in the ashes by the Molala Indians. Then, they ate these shoots after they were cooked tender just as we eat asparagus today.

Tarweed. Takelma were well known for raising fields of grains, which white immigrants often referred to as “Indian oats.” Food grains included various grasses, balsamroot (Dickson 1946: 160-161), and sunflower (Dickson 1946: 61-62; Pullen 1996, Appendix I: 36), but the most important in western Oregon, by far, was tarweed (Dickson 1946: 155-160; Pullen 1996, Appendix I: 35-36). Burning and harvesting tarweed were important community events, and the resulting roasted seeds were valued both for their flavor and for their nutritional value.

Tarweed was grown extensively throughout the South Umpqua Valley, and several relict populations were documented in the study area; most notably in and near Bunchgrass Meadows. Because it was viewed as a noxious weed and poor forage by white immigrants, it was systematically removed from pasturelands and hayfields wherever possible.

Indian-oats. They burn a patch of wild-oats to gather the seeds – the seeds do not burn. These oat patches belonged to tribe or village – a stranger would not touch them. The burned ‘meat’ was black. (Coquille Thompson to John Harrington, in Pullen 1996, App. I: 35).

During the summer months the squaws would gather various kinds of seeds of which the tarweed seed was the most prized. The tarweed was a plant about thirty inches high and was very abundant on the bench lands of the [Cow Creek] valley, and was a great nuisance at maturity. It would be covered with globules of clear tarry substance that would coat the head and legs of stock as if they had been coated with tar. When the seeds were ripe the country was burned off. This left the plant standing with the tar burned off and the seeds left in the pods. Immediately after the fire there would be an army of squaws armed with an implement made of twigs shaped like a tennis racket. With their basket swung in front, they would beat the pods into the basket. This seed gathering would only last a few days and every squaw in the tribe seemed to do her level best to make all the noise she could, beating her racket against the top of her basket (Riddle 1923: 46).

Sunflowers. Sunflowers, also known as “wild sunflowers” or “Oregon sunflowers,” are also sometimes called “mule ear’s” because of the characteristic way their leaves stand up. They are not actually members of the sunflower family, but a species of wyethia. Large patches of these plants were documented in the Coffin Butte area.

A wild sunflower, grows 4 ft. high, used to grow where ‘Indian oats’ [Tarweed] patches grew. Indian oats and sunflowers would be burnt together. The Indians would burn only an oat-patch and would not let fire spread. Then the next day they would gather the seeds up. (Coquille Thompson to John Harrington, in Pullen 1996, Appendix II: 15)

Wokas. This yellow water lily (Haskin 1934: 95-97) was an unexpected find when first observed in Skookum Pond. According to Ruby and Brown (1986: 137): “From the Molalas the Klamaths obtained elk-horn spoons in exchange for the wocus lily roots of the Klamath Marsh.” The Klamaths were also reputed, according to several sources, to have sown plants of their native land along the great trade routes they established in western Oregon and northern California. If this story is accurate, then it stands to reason that the Klamaths’ most treasured plant, the wokas, might be distributed in much the same way, at favored ponds and camping spots. Wokas was also documented at Five Lakes, and both areas are within ready hiking distance to the historic Klamath Trail, as well as being highly likely campground sites used by precontact Molalla.

Indian Hellebore. This plant is sometimes called false hellebore. It is highly poisonous and known to cause deformities in calves and sheep. It grows more than 5-feet tall in wet prairies, woodlands and meadows and is a member of the lily family; large fields were found in the Donegan Prairie and Grasshopper Meadow areas. According to Haskin (1934: 54):

Among the Indians of the North Coast no plant was more highly valued for its magical potency than this [Indian hellebore]. It was truly “skookum medicine,” if we may judge from their myths and legends, which record endless instances of its marvelous use and powers.

Haskin then recounts several stories regarding the types of “supernatural” and “magical” uses of the plant, but no medicinal uses. Haskin was a local historian, amateur botanist, and photographer of some renown in the early- to mid-1900s; he was also an avid collector of oral histories and regional Indian stories and was paid by the WPA during the Depression to conduct such interviews in, so he is an acknowledged authority on this topic.

An Internet search of western US Native American uses of Indian hellebore turned up more than 100
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separate entries, including:

Used mainly as a poultice of the mashed raw root as a treatment for rheumatism, boils, sores, cuts, swellings, bruises, and burns;

The root is analgesic, disinfectant and febrifuge. A decoction has been used in the treatment of venereal disease;

It also had quite a reputation as a contraceptive. A decoction of the root has been taken orally by both men and women as a contraceptive;

A dose of one teaspoon of this decoction three times a day for three weeks is said to ensure permanent sterility in women;

The roots have been grated then chewed and the juice swallowed as a treatment for colds;

The powdered root has been rubbed on the face to allay the pain of toothache;

Dried powder of Indian hellebore was used to treat fleas and other skin parasites;

The roots were eaten to commit suicide.

[Note: I am not a botanist or an ethnobotanist, and it is entirely possible I have misidentified this plant. However, the plant documented at Huckleberry Gap and several other locations is so similar in appearance and description to Haskin's "Indian hellebore," that even if it is a slightly different species I assume it may have been used for entirely similar purposes as listed above, much as the different varieties of edible bulbs, ribes, or huckleberries were used in the same manners. BZ]

Tobacco. Tobacco was universally grown, used, and traded among the Tribes of western Oregon. According to Zenk (1990: 573), "The only plant cultivated by Siuslawans and Coosans was tobacco." Miller and Seaburg (1990: 582) state:

Among the [Athapaskan-speaking] Tututni, Galice, and Upper Coquille, old men would burn over and fence an area in which they grew tobacco . . . Men fished, hunted, and tanned hides with a mixture of elk brains, tree moss, and starfish. They also made nets, planks, canoes, and tended tobacco.

Kendell (1990: 590) says of the Takelma:

The primary food was the acorn; other commonly used vegetables were camas bulbs and various seeds and berries. Their diet also included deer, salmon, and other fish. The only cultivated crop was tobacco.

Note: It is uncertain why tobacco was considered to be “cultivated” by anthropologists and other experts, yet tarweed, camas, oak, huckleberries, bear grass, and hazel were not.

Native Animals and Fire

As described in Chapter V, the development and maintenance of transportation corridors, extensive oak savannas, root fields, grassy prairies, bracken fern prairies, berry patches, nut orchards, pine woodlands, meadows, and balds by Indian burning practices also resulted in beneficial habitat to a number of plant and animal species, providing sunlight, abundant food, ready travel routes, and certain types of cover. Haswell first noted the relationship of western Oregon Indian burning practices to wildlife habitat as he sailed along the southern Oregon Coast near Coos Bay in August, 1788 (Elliott 1928: 167-168):

. . . this Countrey must be thickly inhabited by the many fiers we saw in the night and culloms of smoak we would see in the day time but I think they can derive but little of there subsistance from the sea but to compenciate for this the land was beautyfully diversified with forists and green veredent launs which must give shelter and forage to vast numbers of wild beasts most probable most of the natives on this part of the Coast live on hunting for they most of them live in land this is not the case to the Northward for the face of the Countrey is widly different

Table 5.03, as with Table 5.01, uses a column marked "Fire" to denote if animals benefited by regular burning practices (XX), had adapted to such practices (X), or were independent of such practices (O).

<u>Food Type</u>	<u>Food Name</u>	<u>Fire</u>
Crustaceans	Crawdads	X
Fish	Eels, Lamprey	X
	Salmon, Chinook	X
	Salmon, Coho	X
	Trout, Cutthroat	X
	Ducks	XX
Birds	Grouse, Ruffed	XX
	Geese	XX
	Pigeons, Band-tailed	XX
Insects	Grasshoppers	XX
	Yellow jackets (larvae)	XX
Red Meat	Bear, Black	XX
	Deer, Black-tail	XX
	Elk	XX
	Squirrels, Gray	XX
Shellfish	Mussels, freshwater	X

Table 5.03 Important native food animals of South Umpqua headwaters.

This table indicates that all of the basic food animals that lived on the land benefitted by regular burning practices of local Takelma and Molalla people in precontact time, and assumes that even anadromous fishes and other freshwater animals had to adapt to influxes of carbon and changes in solar energy caused by fire – whether those adjustments were beneficial or detrimental to freshwater populations could not be determined by the research scope of this project.

Table 5.04 shows some of the native animals documented during this research, whether by direct observation and photograph, or by bones, bedding areas, scat, prints, or (in the case of owls) pellets. All of the animals (and animal signs) shown were found in open, sunny environments; typically those created and maintained in precontact time by regular burning practices. Heavily forested areas documented during this project were generally found to contain significantly less evidence of animal life, including – in addition to the visual evidence shown in Table 5.04 -- the sounds of songbirds, chirping mammals, insects, flying birds, and running or climbing animals.

Key Animal Species

Fish. South Umpqua Falls has been a favored fishing location for hundreds of years, as evidence by local archaeological findings, oral traditions, and historical documentation. The river has well-known runs of Chinook, coho, steelhead, and cutthroat trout, and lesser-known runs of lamprey eel, placing anadromous fish in the stream nearly every month of the year. Resident native cutthroat trout also populate higher elevation lakes and streams and archaeological excavations show that people also used “crustaceans” and “mollusks” in precontact times (Beckham and Minor 1992: 75) – most probably crawdads and freshwater mussels.

Eels. Lamprey eels and eel runs figure prominently in the anthropological and oral history interviews of most western Oregon Tribes (e.g., Pullen 1996, Appendix I: 27-28; Downey et al. 1993); the Coquille River in western Douglas County derives its name from the Chinookan name for this fish, which is also the namesake for the Eel River in northwest California.

Eels swarmed in the river. They wriggled through the rapids, and they sucked on the rocks and their long snake-like bodies hung down in the water. Men speared the eels off the rocks, and they set funnel shaped nets in the stream. They used canoes in the deep places, and dipped up the eels with long handled dip nets (Ward 1986: 23).



A. Black-tail deer and beargrass, Coyote Creek.



B. Ruffed grouse, Fish Lake Creek.



C. Bear print, Flagstone Peak ridgeline.



D. Bear scat, Castle Rock Fork.



E. Elk bones, Black Rock Fork brake.



F. Skunk, Acker Rock.



G. White spider on camas, Huckleberry Gap.



H. Friendly butterfly, Clayton Point.

Table 5.04 Native animals and animal signs of the South Umpqua headwaters, 2010.

Riddle (1993: 60) states:

Lamprey eels were highly prized by the Indians. They were a scaleless, snake-like fish which would hold to the rocks with their sucker mouth and the Indians would dive into the icy water, seize the eel with both hands and, coming to the top of the water, kill the squirming thing by thrusting its head in their mouth and crushing it with their teeth.

Eagles. The name Yoncalla is said to mean “home of the eagles” (McArthur 1982: 818). There are no landmarks in the study area named for eagles, and their use as decoration in the historical record seems limited to single feathers, and war dress. It is interesting to note that both the Upper Umpqua and the Cow Creek Takelma were noted for using eagle feathers in an identical manner. This might be either confusion on the parts of the informants, on the part of the anthropologists, or a more universal method of adornment (Ruby and Brown 1986: 254):

In historic times their [“Upper Umpqua”] men had entered combat wearing thick, impregnable two-piece elk-skin cuirasses, which were laced at the sides and ornamented with figures and designs. Other ceremonial elements in their battle dress were single white eagle tail feathers.

Mammals. When white immigrants all but replaced local Indian families in the South Umpqua basin in the early 1850s, the new arrivals depended heavily on hunting and trapping for their survival – in common with their predecessors -- as critical elements of pioneer subsistence farming and survival. However, the immigrants had steel traps, horses, and guns to aid in their efforts and were able to achieve great, and relatively easy, success until local game populations began to decline under the pressure. One result of those circumstances is that virtually all accounts of birds and mammals from early historical time have to do with hunting success (or failure), or encounters with dangerous carnivores; usually cougars or grizzly bears. The following index of select mammals provides a fair idea of the relationship between immigrant hunter success and native species decline that characterized the first few generations of white settlement in eastern Douglas County. Almost all references given will reinforce those patterns rather than provide much in the way of alternative information.

Bear. When Douglas and McLeod traveled through the Umpqua basin in the late fall and winter of 1826-1827, they encountered both black bears and grizzly bears; however the black bears seemed to be more associated with the coastal and upland forests, while grizzlies seemed to be encountered more in the prairie-type of environments found in the broader valleys of that time. One reason for the separation of

the two species is that grizzlies were known to predate on black bears. In 1937 the last grizzly bear was killed in Oregon, on Billy Meadows, near Enterprise. There have been no sightings since. There are no archaeological or historical records of grizzly bears ever being in the study area (although they most probably were), but there is significant archaeological and historical evidence that black bear have been present for thousands of years. Bear Wallows, near the camas prairie and campground at the headwaters of Prong Creek, is along the ridgeline trail from French Junction to Quartz Mountain and appears to be prime black bear habitat. Bear signs were noted throughout the study area during the course of research (see Table 5.04), with a significant amount of sign concentrated near a private pond on Emerson Creek, to the northeast of Acker Rock.

Beaver. Beaver Creek and Beaver Lake (which apparently washed out some years ago, according to Chuck Jackson 2010: personal communications) form a major tributary to Jackson Creek, indicating past populations of these animals in that area. Map 3.01 shows Beaver Lake as being the likely crossroads location of a primary precontact trail network – and probable campground site – connecting present-day Drew with the mouth of Jackson Creek (and South Umpqua Falls) to the west and north; with nearby Pickett Prairie; and with the Coffin Butte-Green Prairie ridgeline to the east. The Rondeau and Thomason families were known to have been frequented these areas from the late 1800s to the present. Because these people were expert trappers (especially beaver trappers, being directly descended from Hudsons Bay Company trappers) and hunters, these names may take on special significance. Today there is little, if any, evidence of beaver in the South Umpqua headwaters. They were probably extirpated by the 1950s or before, and have not been reintroduced in large numbers since. The biological, ecological, and hydrological values of beaver ponds have become better understood during the past few decades, but land managers have been reluctant to support reintroduction because of expensive problems related to the animals cutting down trees and plugging culverts.

In speaking of Athapaskan Tribes to the west of the study area, McLeod observed on December 12, 1826 (Davies 1961: 197):

These people seemingly never molest those animals [beaver], I presume others either judging from appearances they never kill an animal and depend solely on the produce of the waters for subsistence, with roots that grow spontaneously in the vicinity, the same observation is applicable to the natives on the great [Rogue] river, who never trouble themselves about furs, and have little or no intercourse with strangers.

Cougar. There was a lot of discussion in the town of Tiller during the time of this research, regarding the spotting of a cougar in town, near the school. A landmark two miles northwest of Abbott Butte is named Cougar Butte, located on the ancient ridgeline trail, connecting Elephant Head to Paradise Camp (see Chapter II). Fresh prints and scat, thought to be cougar, were also found in the snow near the parked car, during a hike back from Little Black Rock L.O. on April 19, 2010. According to Chuck Jackson and several local informants, cougar populations have been on the increase in the study area during the past several years and are posing a threat to local pets and livestock. During an interview on July 14, 2010, Jackson (2010: personal communications) had this to say:

Lots of cougar. Cougar are eatin' the deer, they've eat all the deer around here. In fact, there was a cougar and I witnessed his tracks, would be out here all the time, but since we got the dog why we haven't seen his tracks out here. I'd come in at night, I'd come in and he'd chirp at me when he was here, you know he'd make his rounds. I called him Billy, I even had a name for him, but he would come in and he kept everything cleared out, there was no deer, and no nothing. And he had a big track, boy he had a good track, and then there was a smaller track down there in the mud. When I go out at night to my clothesline to go in, I take a gun with me . . . But they won't let 'em run 'em with hounds now, and they've eaten the deer population here, there isn't any here, and there was thousands of deer in these mountains. And they're onto the elk now.

Local Angora goat farmers, Stanley and Alexandra Petrowski, who had to kill a large cougar that was eating their goats in 1996, confirm Jackson's concerns and assertions. The Petrowski's maintain a website for their farm, where Alexandra has written of this incident, further observing (<http://www.singingfalls.com/scribe/catland.html>):

This area is laced with cougars. In 1995 eleven full-grown cougars were known to have been "relocated" to Tiller, Oregon, the mountainous region where we live, by state officials whose duty it is to protect the catamount. There have been no recorded human fatalities yet due to the predator catamount, but realistically that kind of track record will have to someday soon be marred. There are too many of the big felines around; even the government officials in charge of monitoring and protecting them have admitted that over and over again

Deer. Deer, rather than elk, seemed to form a significant portion of the diet of precontact people in the western portion of the study area for thousands of years. Archaeological analysis of the South Umpqua Falls upper and lower rock shelter sites, for example, revealed nearly 2,000 identified remains of deer – and only 6 for elk for the 3,000 years of occupancy for those two locations; the nearby Times Square rock shelter had similar findings -- evidence of 371 deer or “deer-sized” remains, vs. only two for elk, and one for bear (Beckham and Minor 1992: 75). From this evidence the authors conclude (ibid.: 72):

Faunal remains accumulated by occupations spanning the last several thousand years indicate a long-standing reliance on the hunting of deer, presumably the common black-tail but possibly also including the rarer white-tail . . . A number of the faunal collection, especially those containing a large amount of unidentified material, consist of small burnt fragments, which may reflect marrow extraction and soup/grease production.

This is an unusual finding, because elk were known to have existed in large numbers in the valleys to the west of the study area, and Molalla were renowned for their elk hunting abilities and elk products in the higher elevations.

In early historical time, Riddle (1993: 57) reports that “we found them (Cow Creek Indians) dressed in the skins of wild animals, principally in dressed deer skins,” and “deer was the principal game.” Within a few years, possibly due in part with the decimation of local Indian populations, or the elimination of large predators attacking livestock, there was an irruption of game animal populations in the Cow Creek area, including deer, elk, and bear:

The wholesale slaughter inflicted on the deer and elk herds was tremendous. Appalling is a better word for it. They were slain, their carcasses left to rot in the woods, only their hides being taken. In the case of elk their two ivory teeth were taken along with their hides, both bringing fair prices on the market. Often whole herds of elk would be slain and only a ham be removed from a single animal, to be used for food, the rest being left for predators.

My Dad told of five hunters making their way by trail and taking along pack animals over into the Eden Valley country [on the west fork of Cow Creek] during the pioneer days. They returned a couple of weeks later with 300 deer hides and not even a mess of venison . . . Elk and deer hides were towed down the Coquille River after being loaded upon large scows – hundreds of hides at each trip and shipped from Bandon to the various markets and dealers (Lans Leneve, Peterson and Powers 1952: 180-181).

Elk. Although Indians used dogs for hunting elk, they were also known for using pits, snares, and drives:

Indians didn't hunt when elk were rutting, but they made drives at other times of the years. They dug a big hole in an elk trail; then they drove a sharp stake down in the center of the hole and covered it over with limbs and brush. Then the hunters beat the brush and drove the elk over the pit, and it got impaled on the stake and that made it easy to kill. They had special canyons and places where they drove the deer (Ward 1986: 22).

The advent of horses and repeating rifles changed everything. John Coke remarked upon this change in the late 1890s (Dodge 1898: 179):

Game was plentiful, and Mr. Krantz and Mr. Swan, with the faithful dog, Traitor, enjoyed many a chase. At one time 38 elk were counted in one band and at another time the result of a few hours' chase was a large elk, a large bear, a deer and a wildcat. The introduction of the repeating rifles soon caused this great help to sustain the early settler to disappear, and now after a quarter of a century the elk are scarcely seen.

By 1900, most grizzly bears, wolves, and elk had been extirpated from western Oregon. A statewide moratorium was declared on elk hunting for nearly 30 years, and animals were brought in from the Rocky Mountains for breeding purposes and to rebuild the herds. No concerted effort, at least locally, has been made to restore grizzly bear or wolf populations in this part of the state to this time.

Dogs. Molallans were known for hunting elk with dogs, and for using snowshoes in the winter: characteristics that separated them from their Takelma neighbors to the west and Latgawa neighbors to the south. Dogs were said to be kept by Indian men for hunting purposes, and to guard their families at night. They were also an important part of the lives of white immigrant settlers, who used them for much the same purposes. Dogs were given names and treated as members of a family in early historical time; even receiving the last names of their owners when referenced by others. People often recalled the specific names of special hunting dogs for decades, whether they were the owner, a neighbor, or a hunting enthusiast with an appreciation of local hunting lore, and this reverence and affection for these animals probably extended back into precontact time as well.

When Coquille Thompson told Harrington stories about his father's prized elk hunting dogs (Wasson 2001: 116-117), he said they "were just like people, knew their names, they would sit down," and that their names were "K'uhlyo alias 'K'uhl yo ch'oh,' and the other was named 'Wun uh sht' gee,' meaning White neck. And he looked at you when you mentioned one name, and when you call his name he come." Thompson, an Athapaskan from the Upper Coquille River country in southwest Douglas County, described elk hunting with dogs to anthropologist John Harrington in 1943 (Wasson 2001: 116):

My father bought 2 Indian male elk-dogs from K'ammahss-dunn rancheria at the mouth of the Coquille River. The Indians there raised these pure-breed of dogs known as "elk dogs." These dogs grabbed the elks by the hind legs . . . they told the dog to go after the elks: "dushleet-ch'uh" or "dushle-cheh'." Then you would hear the dog bark when he arrived where the elks were. You could tell the arrival by the kind of bark.

Wolves. The existence of wolves in the South Umpqua headwaters has been a local topic of conversation for more than 60 years. They were certainly present in relatively large numbers during late precontact and

early historical time, and the study area has been a focus of wolf stories and encounters since. Hartley (1993), for example, recounts being tracked by wolves across the snow when she and her husband were returning to Butler Butte Lookout in 1942 – after wolves were said to have been exterminated throughout Oregon. On January 11, 2010, large canid scat was documented on Devils Knob; significantly larger than other coyote scat routinely encountered in that area (see Figure 5.01). On January 17, 2010 an Associated Press article appeared in local papers, claiming that wolves had been present in the study area as recently as 1946 and had currently been sighted in the Cascade Mountains again, near Sisters, Oregon (see Figure 5.02).

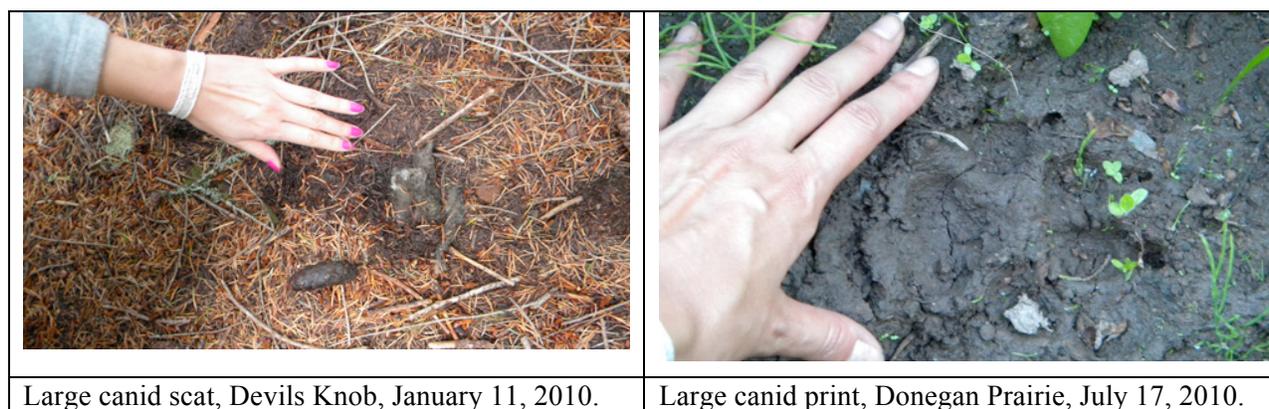


Figure 5.01 Large canid signs along the South Umpqua – Rogue River watershed.

During the July 14, 2010 interview with Chuck Jackson (2010: personal communications), the topic of local wolf populations was discussed:

Bob: When was the last wolf [around here], about '46, '47?

Chuck: No, the last wolf I seen was about, oh boy, we was horseback, you know where Grasshopper Lookout is? We went to Grasshopper Lookout and we was comin' down on that side, you know where Grasshopper Springs are? That wolf was drinking right there. My uncle and I...

Bob: How long ago was that?

Chuck: 20, 27 years ago [ca. 1983-1990], it was before he died.

Bob: Wow, so not very long ago?

Chuck: Yeah, well, when I'd trap all the time, I'd see wolf tracks 'd come down, they'd come down right this road, right here behind the house, then they'd go the other way.

Bob: We found some scat that was either the world's largest coyote, or we were hoping a wolf, up by Devil's Knob, just in January.

Chuck: They used to be thick at Devil's Knob. Devil's Knob got a lot of wolf up in that area.

Bob: And that's why we thought, you know, there might be wolf here, you know, this scat's pretty big or it's a hundred fifty pound coyote.

THE REGISTER-GUARD **CITYREGION** SATURDAY, JANUARY 16, 2010

Wolf sightings on rise in Cascades

Their appearance this far west is sooner than expected

BY JEFF BARNARD
The Associated Press

GRANTS PASS — Wolves that have moved into Oregon from Idaho appear to be extending their range west, with recent sightings in the southern Cascades and the Ochoco Mountains.

U.S. Fish and Wildlife Service biologist John Stephenson said the reports of sightings and tracks have been growing since last January, when a photo was taken of an animal that looked like a wolf along U.S. Highway 20 east of Sisters.

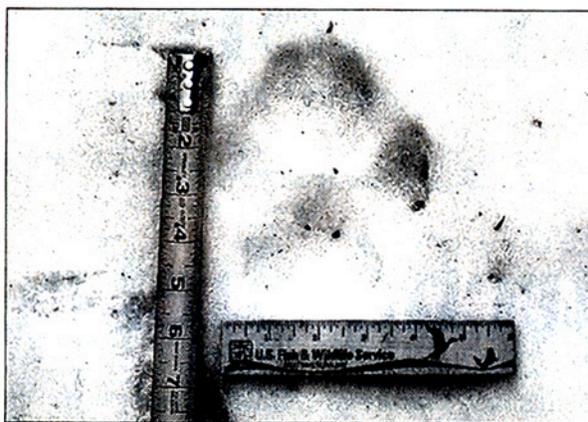
In December, tracks were spotted in the southern Ochoco Mountains and near Wickiup Reservoir in the Cascades, Stephenson said.

Stephenson said it was not confirmed these are wolves, but that he followed the tracks through the snow and they tend to go in straight lines the way wolves travel, not meandering the way dogs run.

"At this point, we are not sure whether we actually have wolves occupying the Cascades or single dispersing animals wandering through," he said.

Wolves were hunted out of existence in Oregon in the early 20th century, but have moved back into the state from Idaho, where packs were re-established in the 1990s. The last Oregon wolf was killed in 1946 on the west side of the Cascade Range on the Umpqua National Forest.

They are federally protected as an endangered species in the western two-thirds of the state and listed



The Associated Press

A U.S. Fish and Wildlife Service photo shows an apparent wolf track in the Cascade Range in Oregon. Wolves were reintroduced in Idaho in the 1990s and have been moving west.

as a state endangered species.

The state wolf management plan calls for establishing four breeding pairs east of U.S. Highway 97, and four breeding pairs west of the highway.

Russ Morgan, wolf coordinator for the Oregon Department of Fish and Wildlife, said they had expected wolves to fill up the habitat in eastern Oregon before moving into the Cascades, so their appearance is a surprise. Two known packs are established in northeastern Oregon, and 15 to 20 are thought to be in the state.

"One thing that is absolutely sure about wolves throughout the efforts to recover them is that they always surprise us," said Steve Pedery, conservation director for Oregon Wild, a conservation group.

"They don't need a lot from humans other than habitat and not shooting them. Even with these sightings and the documented packs we've got in Eastern Oregon, we still have a very long way to go before

wolves are recovered."

Cottage Grove Rancher Bill Hoyt, the new president of the Oregon Cattlemen's Association, said he had no immediate fear wolves could start attacking livestock in western Oregon but expected that would become inevitable as wolf numbers increase.

Government hunters killed two wolves that were attacking livestock in Baker County.

Duane Dungannon, state coordinator for the Oregon Hunter's Association, said they were not looking forward to increasing numbers of wolves, but that the sooner wolf numbers hit repopulation goals, the sooner wildlife authorities could start controlling them.

Spencer Lennard of Big Wild, a conservation group, said several studies have found that when wolves move into an area, deer and elk become more wary and are less likely to overgraze willows and trees along streams, helping to preserve fish habitat.

Figure 5.02 January 17, 2010 Barnard article about Cascades wolf sightings (Barnard 2010)

Chuck: See, Laura Hartley wrote a book.

Bob: Yep, I've read it, the world war there, the lookout? Yeah, and then she wrote a couple of them, she wrote the one where she was back on the... where they were doing mining. But then they were up at the lookout.

Chuck: Yeah, and she tells about the wolves -- at that time.

Bob: Yeah, that was '42 and then they said they were all, she said they were supposed to be gone, she said no they're still here. And then I read an account where the last one was trapped up in here in '46 or something.

Chuck: No. See the guy from the [Milo, Oregon] academy down here, he told me not to tell. If anybody... 'cause he would go up, and it was probably the same wolf or whatever that I seen up at Grasshopper, he'd go up in the snow and he asked, he was talking to me, and he said, "Are there any wolves here?" And I said, "Yeah," and he said, "I've been trackin' 'em." Said, "I've got pictures of tracks in the snow," and I said, "Yeah."

A few days after the Jackson interview, very large canid prints were documented about 10 miles east of Devil's Knob, on Donegan Prairie (see Figure 5.01). Hartley's Butler Butte sightings during WW II (Hartley 1993) were about half-way between Devil's Knob and Donegan Prairie, along the same ridgeline.