

The Klikitat Trail of South-central Washington

A Reconstruction of Seasonally Used Resource Sites

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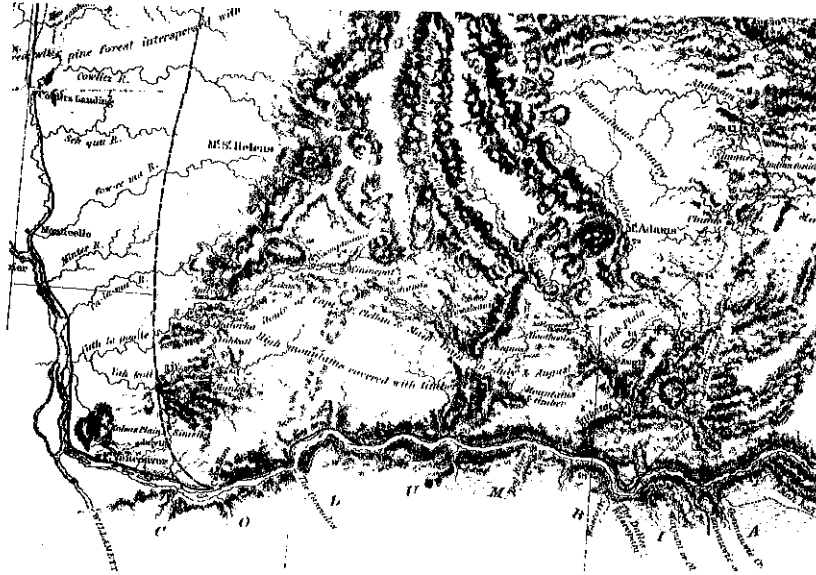
Introduction

Comment and Context

The subsistence economy of the Northwest Coast has been described most frequently as one based on aquatic resources, especially the five species of anadromous salmon. In addition to aquatic foods, many of the more southerly and interior peoples of the Northwest Coast depended heavily on terrestrial resources. Throughout the Northwest Coast, important terrestrial resource sites were connected to settlement areas by well-used trails. The communication function of aboriginal trails has obscured their role in the subsistence economy.

Terrestrial resources crucial to native economies were concentrated in grasslands and prairies. Many of these open places were anthropogenic in nature and supplied food and medicinal plants as well as forage and grazing for game and horses. Several early observers commented on the singular appearance of these prairies, but few recognized their origin and fewer still acknowledged their importance to the native subsistence economy. The grasslands stood in sharp contrast to the densely forested surrounding country and became of immediate importance to the Euro-Americans as settlement sites and range land. Thus, many of the aboriginal prairies no longer are available for archaeological inspection.¹

The Klikitat Trail of south-central Washington, an overland route from Fort Vancouver to The Dalles and Yakima (see maps), is one example of a trail that connected aboriginal settlement and subsistence areas. In this paper, we examine the various resource areas along the Klikitat Trail and make some suggestions about their archaeological significance based on linguistic, botanical, and related data. From an archaeological standpoint, our subject matter is non-traditional. There are few studies of aboriginal trails or resource areas that provide models for this kind of work.² With very little strictly archaeological data at hand,³ we have relied on auxiliary sources of information for our reconstruction. Our data are primarily ethnohistorical. We have



Map 1. Route of the McClellan party over the Klickitat Trail, 1853. Report of the Pacific Railroad Expedition, vol. 12, map no. 3 (cropped). OrHi #10438

organized and interpreted these data from an ethnobiological perspective and combined them with the limited ethnographic field data on aboriginal settlement and land use patterns to arrive at an approximation of the Klickitat subsistence pattern, seasonal round, and the role the Klickitat Trail played in that pattern.

*Ethnographic Background*⁴

The Klickitat (*ixwa'ixaypam!*)⁵ were the major ethnic group of the south-central Washington Cascades in the early historic period. They were closely associated with Upper Chinookan peoples of the north bank of the Columbia, sharing winter village and salmon fishing sites with them. Judging from the location of winter village sites and summer camps, the traditional Klickitat life-range included the drainages of the Wind, Little White Salmon, and White Salmon Rivers, and the lower reaches of the Klickitat River. The extent of Klickitat occupation of the Lewis River drainage before the demographic and economic dislocations caused by Euro-American intrusion is difficult to determine. By the mid-1800s, the Lewis River was occupied by close linguistic relatives of the Klickitat, the "Lewis River Cowlitz," *!táytnapam!* speakers, down to within 5 miles of its junction with the Columbia, where they were joined by the Klickitat sometime before 1850. Many sites along the Lewis

River had Sahaptin names by 1853 (Map 2), suggesting a respectable time depth for the occupation or regular use of the lower Lewis by Sahaptin speakers, whether Klikitat or *Idátnapamí*.⁶

Klikitat Indians had a “prairie-oriented” subsistence strategy, which contrasts with the shoreline orientation of most Northwest Coast Indian societies. Like the Cowlitz to the north and west, they had no direct access to saltwater resources and only limited access to the Columbia River fisheries. The Klikitat Trail, a network of trails and prairies, linked their subsistence areas. Their country was well endowed with camas (*Camassia quamash*) and huckleberry (*Vaccinium* spp.), resources of open meadow or prairie habitats that the Indians maintained by periodic intentional burning. These prairie resources attracted visitors from Yakima Valley and Columbia River villages as well, some as much as 100 kilometers distant.⁷

The aboriginal relationship between Klikitats and their Chinookan neighbors poses an intriguing ecological puzzle. The two groups maintained linguistic and ethnic distinctiveness despite intermarriage and co-utilization of all major resources of the south-central Cascades and upper Columbia River Gorge. There is no record of conflict between them over resources. Available evidence suggests that the ethnic boundary was reflected in contrasting subsistence strategies. The Chinookans of the upper Columbia Gorge were aquatic in orientation and moved primarily east and west along the river by canoe in search of seasonal harvests. The Klikitat moved north to south with the seasons, up the tributary valleys—later on horseback—taking advantage of resources ripening at a range of elevations. They spent the better part of their subsistence effort in upland meadows. This is an example of two cultural groups sharing a territory by virtue of their contrasting niches.⁸

The Klikitat also were favorably situated to take advantage of trans-Cascade trade; a network of trails linked their camas and berry campsites to the lower Yakima Valley (via upstream tributaries of the Klickitat and Yakima Rivers), to winter villages and salmon fishing sites of the Columbia between the White Salmon River and The Dalles, and to Chinookan villages of the lower Columbia River via a trail down the Lewis. In the Chinookan villages, Klikitat traded “slaves, skins, deer meat, hazelnuts, huckleberries, and camas.” The Klikitat were well known for their fine cedar root baskets, which still are made today. After 1800 they also traded horses to people west of the Cascades. Two widely renowned “Indian racetracks” are located in Klikitat country and were foci of large, ethnically diverse gatherings in the month of August coincident with the huckleberry harvest. These meetings provided an opportunity for socializing, gambling, and trading, and added to the significance of the Klikitat Trail.⁹

Ethnohistorical Data on the Klikitat Trail

Sources

With the exception of a questionable 1830 account,¹⁰ there is no evidence of non-Native penetration of the mountainous region traversed by the Klikitat Trail prior to 1853. In that year, the Pacific Railroad Survey made a thorough examination of the route. The manuscript and printed documents of the expedition provide the only detailed source of information on aboriginal exploitation areas along the trail. Regular use of the western half of the trail declined significantly after the Indian Wars and removal of most of the local native people to the Yakama Reservation in the late 1850s. Documentary sources after that time are correspondingly scarce. Our primary sources were two manuscript daily journals of survey members George McClellan (1853) and James G. Cooper (1853, 1855). Parts of McClellan's journal have been cited previously, but Cooper's diary, to our knowledge, has not been used by Northwest researchers. We also have employed selected works from the official 1854–1855 Pacific Railroad Report.¹¹

Aboriginal Prairies

Members of the Pacific Railroad Survey, like previous explorers, were impressed by the prairies that dotted the otherwise unbroken forest of western Washington. Cooper summarized their observations:

... the prairies ... form ... the division most important to the settler, who, in the western section, finds the absence of trees ... desirable. ... From February to July they look like gardens such is the brilliancy and variety of the flowers with which they are adorned. The weary traveler, toiling through the forests, is sure to find in them game, or, at least, some life to relieve the gloomy silence of the woods.¹²

Cooper's interest in western Washington prairies led to numerous descriptions and hypotheses concerning their origin and maintenance. He classified the regional prairies into two major categories, wet and dry. The dry prairies are of particular concern in an examination of the Klikitat Trail. Regarding the origin and maintenance of dry prairies, Cooper wrote:

It is certain that the Indians have always been in the habit of burning off these prairies annually to kill the young trees and cause a fresh growth of grass ... The first Indian immigrants may have found spots yet unwooded by the extending forests, which were and still are almost the only resort of game such as deer and elk. To keep these as hunting grounds they used the only means they knew ... they also derived one of their principal vegetables from these same prairies and

still, the whole tribe resorts to them and encamps during June and July to gather the kamass root. They do not however seem to have resided permanently on them except when open to the river banks. I cannot, otherwise than by this agency of man, account for the existence of many prairies whose outline is as sharply defined by the unbroken edge of forest as if carefully cleared for the farmer, every stump dug out, and the ground levelled—raked smooth, and sown with grass and flowers.¹³

Survival of aboriginal prairies into historic times was the result of one of two processes: regular inundation, which inhibits or retards tree growth during part of the year; or regular burning which destroys adventitious species. Without one or both of these processes, fast-growing trees eventually would have moved onto the prairies, overtopping and thus eliminating the unique prairie flora. Many prairie species are intolerant of even light shade. For example, oak (*Quercus garryana*), most huckleberries, and other berries all cease bearing when overtopped. Climate, particularly the amount of precipitation, has been argued as the cause for the continuance of western Washington prairies, but that argument must be discounted for two reasons: 1) prairies were found from sea level to 1,500 m in areas having from 250 to 2,280 mm of rain annually, and 2) survey maps document the disappearance of many prairies in the last 130 years due to lack of burning and the inevitable encroachment of forest, not to climatic change.¹⁴

There is strong ethnohistorical evidence of patterned burning by Indians to maintain grassy open areas in western Washington and Oregon. There is ample evidence of fire along the Klikitat Trail, but it is difficult to separate human causation from natural factors. There is ethnographic documentation of patterned aboriginal burning in sub-alpine huckleberry meadows, and many of the west-side prairies were of anthropogenic origin. But some of the burned forests encountered by the survey probably were caused by lightning strikes, then as now an important cause of forest fires in the southern Cascades. Volcanism, such as the 1842 eruption of Mount St. Helens, also caused forest fires.¹⁵

Prairie Foods

Cooper noted that of “360 species of plants . . . collected west of the Cascade range . . . , more than 150 are peculiar to these prairies.” Analysis of Cooper’s plant lists show that of the 148 native prairie species, over two-thirds are recorded in the literature as being important either for food, medicine, or artifacts. Of the sixty-five plants mentioned on the Klikitat Trail, fifty-eight were used in the material culture as medicines or especially as food (see Table 1 at end of chapter).¹⁶

Important food plants are camas, found in wet prairies and Garry oak and hazel (*Corylus cornuta*), found in dry open areas. The latter two provided nuts. Oregon grape (*Berberis* spp.), serviceberry (*Amelanchier alnifolia*), and various species of *Rubus*, all valued for their berries, are found in sunny microhabitats ranging from rocky areas to open woods. Bracken fern (*Pteridium aquilinum*) proliferates in open and edge environments, while strawberry (*Fragaria* spp.) and huckleberry abound in subalpine meadows. Many of these species are early succession plants, which favor burned-over areas.¹⁷

The prairies also attracted animals. With regard to elk, Cooper noted

The Indians formerly killed them by enclosing a large space by a circle of men and then gradually narrowing it until they drive the game into an open spot where they were easily killed. The black tail deer also occurs rather sparingly about the borders of these prairies.

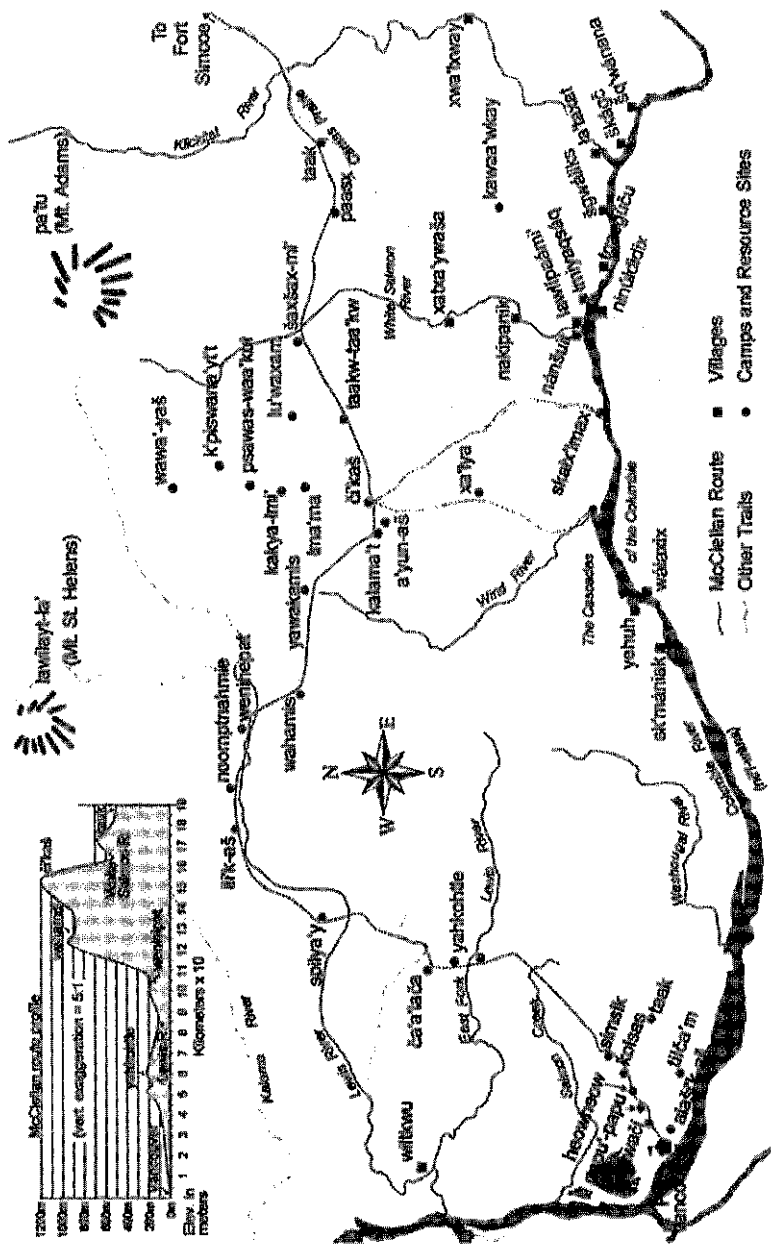
The prairies also supported rabbits and mountain beaver, from whose fur clothing was made, as well as several other mammals and birds.¹⁸

The Klikitat Trail

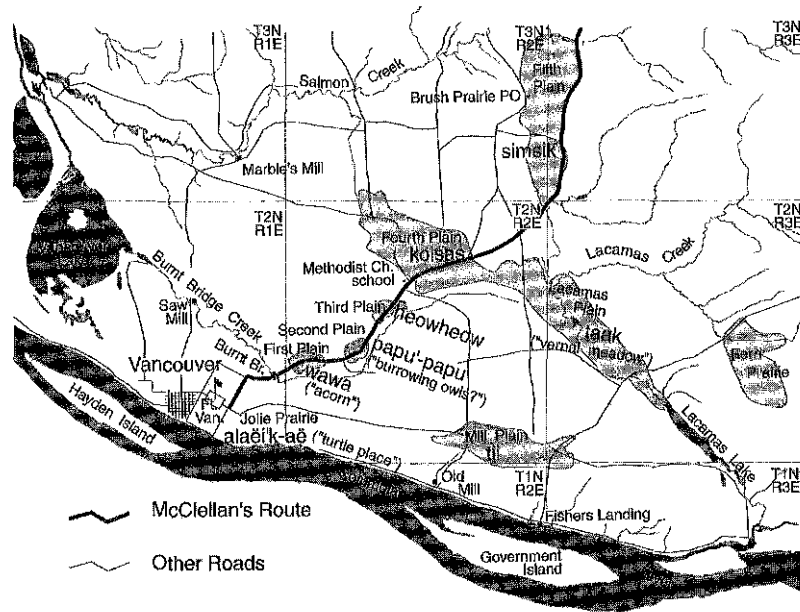
The Klikitat Trail passes through a highly variable terrain (Maps 1-3). Elevations range from near sea level at Vancouver to over 900 m on the high plateau south of Mount Adams; average annual precipitation varies from more than 2,500 mm on the upper Lewis River to 400 mm at Conboy Lake. The trail traverses five major vegetational zones listed by Franklin and Dyrness.¹⁹ Four of these zones contained important native foods exploited by the Klikitat. Within each of these zones, many of the food sources were concentrated in prairie areas. The Klikitat Trail connected these seasonally utilized subsistence locations and also served as a trade and communication route. The Trail filled a role in Klikitat culture not unlike that of the Columbia River among neighboring Chinookans. The accompanying maps show the location of major sites along the trail. Table 2 (at the end of the chapter) incorporates descriptions of each named site.

Low Prairies (Zone 1)

On the first part of the Klikitat Trail there was a series of prairies, numbered by the settlers "First" through "Fifth Plains." The corresponding Indian names, as recorded by J. F. Minter, were Wahwaikee, Pahpoopahpoo, Heowheow, Kolsas, and Simsik (see maps and Table 2). These qualify as typical "dry forest prairies" in Cooper's typology (though parts of Kolsas seem to have been wet).



Map 2. The Klikitat Trail: detail showing Indian place names (transcriptions by E. Hum in Sabapin orthography). Map by Ric Vrana. Inset is a vertical cross-section of the trail.



Map 3. Clark county prairies, mid-1800s. Map by Ric Vrana based on George Goethals's 1883 "A Map of the Country in the Vicinity of Vancouver Barracks, Washington Territory." Courtesy of the Clark County Historical Society, Vancouver. The locations of First, Second, Third, and Fifth Plains, as well as all Indian names, are from George McClellan's 1853 manuscript journal.

Plains one through five were covered in part with "good grass" acceptable to horses and were noted for their profusion of berries. Eight edible varieties are mentioned in the journals; of these, seven ripen in July and August, lending support to Cooper's contention that "berries form the chief food of the natives at this season (late summer)."²⁰ Plants gathered for their sprouts in the spring, including fireweed (*Epilobium angustifolium*), salmonberry (*Rubus spectabilis*), and thimbleberry (*R. parviflorus*), were also common. Most of these species are early succession plants, which quickly invade burned-over areas. Frequent journal references to the prairies' "sharply defined borders" and circular or oval shapes suggest a controlled burning pattern, like that reported for fire-maintained fields elsewhere. This pattern is the result of firing vegetation from the peripheries of the field to the center to avoid setting fire to adjacent woodland.

On Simšik, the survey party found an "old Indian camp" at a "detached clump" of fir trees. No details are given, and we cannot be sure if this camp consisted merely of hearths and refuse, or if it included traces of temporary structures. The Klikitat utilized both the ramada and the rush mat lodge common to most Plateau peoples.²¹

Low Forests (Zone 2)

This region is covered by the typical coniferous forest [Douglas-fir (*Pseudotsuga menziesii*), western hemlock (*Tsuga heterophylla*), and western red-cedar (*Thuja plicata*)] of western Washington and Oregon. The economically useful flora in this area are transitional between that of the lower plains (Zone 1) and that of the high mountain zone (Zone 4). Berries remain of major importance, with serviceberry, dwarf huckleberry (*V. caespitosum*), and elderberry (*Sambucus* spp.) mentioned by the survey party, as well as acorns and hazelnuts. McClellan noted that Yahkohtl (now Yacolt) “. . . abounds with berries & is much visited by the Indians about a month later . . .”²², that is, late August, the time the dwarf huckleberry ripens. Chalacha (*č'a'a'lač'a*; “bracken fern,” now Chelatchie) Prairie was noted for berries as well as its dense stands of bracken fern and a grove of oaks. Bracken fern rhizomes, dug in late fall, were an important source of carbohydrate throughout the southern Northwest Coast. Acorns, a vegetable protein source, were valued by the natives of western Washington.²³

Fire is mentioned frequently in both McClellan and Cooper’s journal entries for this region. Enroute from Simsik to Mankas Prairies, the survey party encountered a “Brulée” [“burn” in French] . . . covered by large snags; between Mankas and Yahkohtl they passed through a “forest” of uniform-sized fir seedlings “as if the ground had lately been a prairie & the trees had grown up



Fourth Plain, sketch by Paul Kane, 1847. Courtesy of the Royal Ontario Museum 80 ETH 493, 946.15.166

suddenly and all together.” Cooper implicitly contrasts this “young forest” with Yahkohtl prairie, which “. . . seems to have been caused by fires as there are several mounds scattered over it, the remains of stumps & logs.” Both areas were able to support trees, but on only one were they growing back. The obvious implication is that Yahkohtl prairie was being maintained by aboriginal firing.²⁴

The railroad survey encountered small groups of natives in the Zone 2 prairies. A few “Tlikatat” families were camped at a falls on the Yahkohtl River (now the East Fork of the Lewis) fishing for steelhead. Gear used in fishing at such locations consisted not only of “traps,” but also spears. These were Plateau-style mounted Indians. McClellan states “They had a double barrel shot gun etc—their saddles resemble those of the Comanches.”²⁵

At Chalacha, Indians were cultivating potatoes, introduced in the area by the Hudson’s Bay Company. The Chelatchie area has very good soil. Because of its subsistence potential (as well as its isolation), the Indian Agent recommended in 1854 that Chalacha be made a reservation for the Vancouver Klikitat, Lewis River */táytnapam/*, and Cowlitz. Cooper noted the abundance of serviceberries and huckleberries at Spilyeh (*/spilya’ý/*, “mythological coyote”). Thirty years later huckleberries still were important here; an 1883 journal noted that Native Americans had “. . . lately took forty gallons of berries away. They pick them very rapidly by means of a wooden comb, raking it through the bush and holding a dish underneath.”²⁶

“Four archaeological sites” have been identified in the vicinity of Yacolt and Chelatchie.²⁷ To date, however, there has been no intensive archaeological work in the area.

Lewis River Camps (Zone 3)

The 28 miles of trail between Spilyeh and Wahamis Prairies passed through heavy forest along the Lewis River. There were no prairies or sizable open areas, and economically useful plants mentioned were limited to kinnikinnick (*Arctostaphylos uva-ursi*), an occasional source of berries and an Indian tobacco. This segment of the trail also lacked grass for horses. The survey party’s mounts suffered, and were weak from lack of food after the third day.

In the early 1950s, an archaeological survey of this portion of the Klikitat Trail revealed

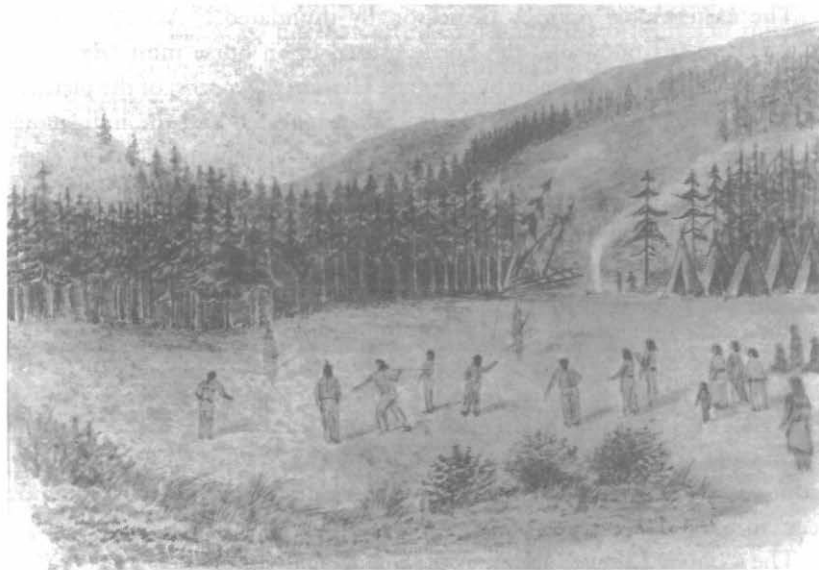
A total of 6 sites . . . Four were very small campsites probably used by travelers and hunting parties . . . one site was apparently used primarily as a chipping station. The most important site was an isolated semi-subterranean pit-house, located on the river near a spot which was excellent for fishing.²⁸

Subalpine Prairies (Zone 4)

On August 5, the railroad survey left the dense forest of the Lewis River Valley and climbed to the thinly wooded mountain plateau southwest of Mount Adams. The three prairies visited in this subalpine area, Wahamis, Yawakamis, and Chequos, supported extensive tracts of huckleberry. Chequos (*/či'kaš/*), in particular, was a traditional huckleberrying ground. The primary species gathered was black mountain huckleberry (*V. membranaceum*), the largest native Northwest huckleberry and one of the most valued. Black mountain huckleberry is an early succession plant that grows best in recently burned-over areas. Burning not only removes competition from other species but serves to prune the bushes, stimulate sprouting, and destroy parasites.²⁹

On August 9, McClellan recorded twenty Klikitat lodges at Chequos Prairie. The huckleberry season was called */wíwnumi/* (“of black mountain huckleberry”) by Klikitat Sahaptins and was inaugurated by a first-fruits ceremony, one of several such rites observed annually by Sahaptin peoples. A quotation from missionary Henry Perkins describes a typical “berry month” (at the Mount Adams fields) in 1843:

August 19 . . . People moving to the mountains for berries. They obtain at this season the large mountain huckleberry. The berry month is to the natives like one great holy-day. . . . The young, the



Indians playing the spear game in what appears to be a mountain clearing. Sketch by Joseph Drayton, 1841. Courtesy of the Oregon Historical Society, OrHi #46190.

middle-aged, & the aged share alike in the release which is thus afforded them . . . They are usually absent on these excursions from four to six weeks; during which each family lays in, for winter use, four or five pecks of nice dried berries. These they mix from time to time with pounded salmon, & a good portion of salmon oil & thus is prepared one of the best dishes which an Indian can make.³⁰

George Gibbs noted that the Klikitat at Chequos were “using the sweat lodge . . . a small oven-shaped affair heated with stones” as a means of ritual purification after the death of a kinsman from smallpox, which was then raging among the Indians seen on the Trail. Sweat lodges were still in use in the area in 1980 by Indian berrying parties from the Yakama reservation. David Douglas described sweat lodges of this type in the vicinity of Vancouver in 1825. Such structures should leave distinctive archaeological remains.³¹

Prairies East of the Crest (Zone 5)

Descending eastward from the subalpine plateau, “the wood became very open & of large pine trees [*Pinus ponderosa*] standing 20–30 yds. apart, the ground below being covered with grass and small shrubs.” Ponderosa pine is widely recognized by ecologists as a fire dependent species. “Before fire control was initiated about 1900, fires burned through *Pinus ponderosa* stands at intervals variously reported as 8 to 20 years.” The clearing effect of regular burning would explain the open, grassy “ornamental” areas noted.³²

The easternmost prairies are seasonally inundated.³³ At Hoolho-olse (*šaxšax-miʔ*, Trout Lake) the horses grazed upon horse mint (*Agastache occidentalis*) and the common bunch grass (*Festuca idahoensis*) of the plateau. At Tahk (*taakʔ*, Conboy Lake) Garry oak reappeared and the indigenous roots, wapato (*Sagittaria latifolia*) and camas, were found in abundance. Camas and wapato, as well as other vegetables and meats, were baked in earth ovens. An early description from the 1820s noted:

the *Quamash* of the natives, who prepare its roots in the following manner. A round hole is scraped in the ground, in which are placed a number of stones and a fire is kept burning on them until they are red hot, when it is removed and replaced by some brush-wood and straw, on which the roots are laid (covered with leaves, moss, or straw, with a layer of earth), and they remain there until they are baked or roasted.

Contemporary Sahaptin peoples still use this type of oven. Processing camps seem to have been situated on the borders of prairies.³⁴

The Conboy Lake area also was the site of a late summer congregation of Sahaptin peoples (and of Chinookans and Interior Salish), who gathered to harvest camas, trade, and race horses. Gibbs said that the Klikitat met the

Yakama at the Conboy Lake “Tahk” in late August for horse racing, a report confirmed by the Indian Agent at the temporary White Salmon Reservation. Given the importance of this prairie as a subsistence area, like Chalacha in the west, the Columbia district Indian agent recommended, in 1854:

that a large reservation should be made as soon as possible in the Camass prairie on White Salmon River [sic., actually in the Klickitat River drainage]. This prairie supplies several of the large tribes of the middle district, and some of the bands of the Southern with a great part of their winters' food.

The Klickitat Trail in the Context of the Klickitat Seasonal Round

Summary of Seasonal Round

Various lines of evidence, ethnohistorical, ethnobotanical, and ethnographic, suggest that the Klickitat seasonal round proceeded as follows: 1) winter villages on the middle and upper stretches of the Klickitat, White Salmon, and (perhaps) other rivers to the west (see map) occupied from October–November until early May, with visits to the Columbia by fishing parties. 2) Late winter–early spring harvest of suckers (*Catostomus* spp.)³⁵ and early “Indian celeries” (especially *Lomatium grayi*) using the winter village as a base camp. 3) Late April–early May gathering at the Columbia to harvest spring Chinook salmon.³⁶ 4) Late May–July harvesting and preparing of camas at middle-elevation prairies, with harvest of early-maturing fruits such as serviceberry, chokecherry (*Prunus virginiana*), kinnikinnick, and hawthorn (*Crataegus douglasii*), along with trout (as at Trout Lake). 5) the peak social concentration of the summer in “huckleberry month” (August) at subalpine meadows and burned clearings on the Cascade crest. Hunting and fishing was pursued at a distance from these camps by parties of men. Socializing, gambling, horse racing, and trading also were important activities. 6) Return to middle-elevation prairies to harvest later-maturing fruits, nuts, and camas, September–November. While November is cited as the peak acorn harvest month among the Wishram, hazelnuts could be harvested in late August or early September.³⁷ 7) Return to winter villages, reliance on dried stores of roots, bulbs, berries, nuts, and fish, while also hunting game driven out of the mountains by winter snows.

Winter Villages

In early contact times, the Klikitat occupied a string of winter villages on the north bank of the Columbia from a point midway between The Dalles and the Klickitat River to the mouth of the White Salmon. Most of these settlements were co-occupied with the Chinookan-speaking White Salmon people. Predominantly Klikitat winter villages were located on the middle and upper stretches of the Klickitat and White Salmon Rivers (Map 2).³⁸

Twentieth-century Indian informants named two villages upriver from the mouth of the Klickitat, /šq wánana/ and /škágč/, "inhabited partially by Klickitat." /ta taxat/ was located, downriver from /šq wánana/ and /škágč/, at the mouth of the Klickitat. Lewis and Clark visited a village of eleven lodges at this location on October 29, 1805, but considered its occupants culturally and linguistically identical to adjacent Chinookan villages. The standard Wishram Ethnography considers /ta taxat/ a White Salmon settlement and the name an Upper Chinookan designation. On the return trip, however, the explorers found twenty lodges and "about 100 fighting men of several tribes from the plains to the north collected here waiting for Salmon," clearly a reference to Sahaptin speaking groups, most likely Klikitat and their Yakama relatives. Joint occupation also is suggested by the facts that the name "Klikitat" is derived from Upper Chinookan /ta taxat/ and that contemporary descendants of Klikitat-speakers still fish for salmon and steelhead in the narrow gorge some 2 miles above the Klickitat River mouth.³⁹

The next village downriver on the Columbia, called /šgwálik/ in Upper Chinookan, is described in "Wishram Ethnography" as a Klikitat village of fifty individuals. Evidence in Lewis and Clark for a Klikitat or mixed White Salmon-Klikitat village near the mouth of the White Salmon River is ambiguous. The three closely spaced villages cited in "Wishram Ethnography" at this location probably include both the "Klikitat" settlement /lawli-pa-ami/ and Lewis and Clark's "We-ock-sock Wil-la-cum" village. It was at the White Salmon mouth that the two explorers, on their 1806 ascent of the Columbia, first noted horses, "Nez Perce style" clothing, and Plateau style houses. Wishram Ethnography describes these populations as mixed White Salmon-Klikitat. Klikitat also are said to have had fishing sites at the mouths of the Little White Salmon and Wind Rivers, linked by trails to inland berry fields. Lewis and Clark, however, reported no villages, Klikitat or otherwise, between the White Salmon River and head of The Cascades 10 miles below the mouth of the Wind River.⁴⁰

Lewis and Clark named the White Salmon River "Canoe Creek" for the several canoes noted at its mouth, and they commented that "in this creek the Indians above [perhaps those of the upriver Klikitat villages, /nakipanik/ and /xatxa ywaša/] take their fish." Thus, the ethnographic claims that Klikitat

had access to the Columbia River anadromous fish resources, though at odds on certain details, are supported by the earliest ethnohistorical records.⁴¹

Twentieth-century informants described three of these Klikitat winter villages as permanently occupied. It seems likely that a few people might have remained in the villages year round, or that villagers were never absent for extended periods, since the distance between the Columbia River and Klikitat root and berry grounds is but 30–60 km. James Selam, a John Day River, Sahaptin-speaking Indian, whose family camped at the subalpine site /a`yun-aš/ (“place of lovage, *Ligusticum canbyi*”) while berry picking and racing horses at /kalama`t/ (“yellow pond lily,” *Nuphar polysepalum*) during the late 1920s, reports that men would leave these high camps (occupied in August and September) to fish at the Columbia, presumably traveling down the Wind, Little White Salmon, or White Salmon rivers to the mouths. They would bring their catch back for the women to prepare. It is likely that there was a constant coming and going between high country camps and camas meadows and the fishing stations during the spring, summer, and fall, especially in view of the coincidence of salmon runs with these upland resource harvest periods. Whether these villages were occupied permanently or only in winter, stored dried foods would have been of great significance to survival during the winter months, the low point of anadromous fishing activity.⁴²

Interior Resource Areas

Gibbs noted that the usual residence of the Klikitat Indians during the summer is “around Chequoss, one of the most elevated points on our trail from Fort Vancouver across the Cascades.” The survey party’s “Chequoss” is certainly the same site as the ethnographer’s *te`ikwa`c* which has been located 3 km east of the Indian race track at /kalama`t/. Hunn visited /kalama`t/ with James Selam in late August 1981, and found abundant black mountain huckleberry and dwarf huckleberry with some grouseberry (*V. scoparium*), all three highly valued Sahaptin fruit resources. The meadow supported palatable forage grasses (e.g. *Calamagrostis purpurascens*) and the small temporary pond sported a few yellow pond lilies (*Nuphar polysepalum*) for which the site is named. In 1981, the race track meadow was being overgrown with lodgepole pine (*Pinus contorta*).⁴³

Patterned burning of mountain huckleberry meadows by Sahaptin Indians is fairly well documented, for the practice persisted in sub-alpine areas around Mounts Adams, Hood, and Jefferson well into the early decades of this century. Indians allowed berry-drying fires (see below) to spread when the harvest was finished and they were departing from the fields. Autumn rains extinguished these fires. Fire as a mechanism in maintaining the productivity of these sites

is highlighted by place names such as */lu'waxam/* (“burnt ground”) and */taakw-taa'kw/* (“many [small] meadows”), such as might be produced by controlled Indian burning. In the absence of regular firing in the past half-century, many huckleberry fields have reverted to forest. The Twin Buttes (*/wawa'-yaš/*; “mosquito place”) field near Mount Adams has diminished during this period to one-third of its original area.⁴⁴

In 1936, the U.S. Forest Service sought to document the traditional Indian custom of “berrying” in the Mount Adams country (where the U.S. Forest Service has set aside huckleberry fields exclusively for Indian use). At that time, Indians from four Northwest states still traveled to this area to gather and process huckleberries for winter use. Women were the principal pickers and processors, while men engaged in hunting, fishing, and social and political activity. Berries were collected in traditional baskets as well as in disposable cedar bark baskets of two- to four-liter capacity made at the berrying grounds. Indian women could gather four liters in a single day. The Twin Buttes field has produced as much as 170 liters per hectare.⁴⁵

An ancient method of drying with indirect heat prepared the berries as a raisin-like product for easy transport and storage. The women chose logs as fuel, then

... scooped out the earth along one side of it, and from this trench built up a parallel ridge about three feet from the log. The slope of the ridge on the side facing the log would be approximately 45°. Upon this she would place a tule mat or some other suitable covering and put a row of stones along the lower edge.⁴⁶

Berries were either spread on the mat and dried, or dried on long racks above smoldering logs. Trenches of this nature and stones, along with charred material, may remain in situ as archaeological evidence.⁴⁷

Klikitats West of the Cascades

By the beginning of the 19th century, the Klikitat proper (*/xwa'xwaypam/*) had split into two groups, one inland east of the Cascades in traditional Sahaptin territory, the other west of the Cascades between the Lewis and Columbia Rivers.⁴⁸ The occupation of the western lands was facilitated by several factors: 1) the adoption of the horse and the subsequent ease of transport over the Klikitat Trail; 2) the attraction of traditional subsistence resources (berries, deer, camas, etc.) and (after contact) White trade goods; and 3) the depopulation of the Chinookan villages by disease, which left a vacuum ready to be filled by newcomers.

Information on these western Klikitat is sparse. The various ethnohistorical sources point to a duplication, with some modification, of the subsistence round practiced east of the Cascade crest. The important foods of the western group were concentrated in anthropogenic prairies. Data suggest that the Klikitat maintained a winter village at or near LaCamas Plain (near Fort Vancouver), on the lower reaches of the Washougal River.⁴⁹ Many of the subsistence areas in the northwestern portion of Clark county were co-utilized with Lewis River */táytnapam/*, a kindred Sahaptin group. All western Klikitat (along with the Lewis River */táytnapam/*) were moved to the Yakama Reservation in the late 1850s.

Conclusion

The Klikitat Trail is an example of an aboriginal trail that served as a route of trade and communication, but more importantly, joined native settlement and subsistence sites. Using ethnohistorical and ethnographic sources, we have established that the Trail connected a series of interior resource areas. These resource areas were joined by feeder trails to settlement sites in the lower reaches of Columbia River tributaries. Most of these resource sites are non-forested, grassy prairies containing a wide range of economically useful plants and animals. Evidence has been presented that many of these prairies were maintained by patterned burning. Archaeological remains in such areas are limited to temporary structures, food gathering and processing apparatus, and scarred trees (either from cambium removal for food or bark removal for manufacturing purposes).⁵⁰ We suggest that further trail studies may provide insights in problems of culture contact, trade, and subsistence patterns, and that coordinated ethnohistorical, cultural, ecological, and archaeological research offers the greatest potential for isolating and identifying aboriginal subsistence strategies.

Originally published in Prehistoric Places on the Southern Northwest Coast, edited by Robert E. Greengo, pp. 121–52, Thomas Burke Memorial Washington State Museum Research Report Number 4, 1983. Revised and updated for this publication.

Table 1: Plants cited by McClellan and Cooper on the Klikitat Trail⁵¹**Polypodiaceae**

Pteridium aquilinum (L.) Kuhn [*Pteris aquilinea* Linn.], bracken.

Taxaceae

Taxus brevifolia Nutt., western yew.

Cupressaceae

Chaemaecyparis nootkatensis (D. Don) Spach, yellow cedar.

Thuja plicata Donn. [*Thuja gigantea* Nutt.], western redcedar.

Pinaceae

Abies grandis (Dougl.) Forbes, grand fir.

[*A. Menziesii* Lambert] Now?

Picea englemanni Parry [*Abies canadensis* Michx.], Englemann spruce.

Picea sitchensis (Bong.) Carr., or *Pseudotsuga menziesii* (Mirabel) Franco [*A. taxifolia* Lambert], Sitka spruce or Douglas-fir.

Pinus contorta Dougl., lodgepole pine.

Pseudotsuga menziesii (Mirabel) Franco [*A. Douglasii* Sabine], Douglas-fir.

Alismataceae

Sagittaria latifolia Willd., wapato.

Cyperaceae

[*Carex* spp.] Both Cooper and McClellan mention *Carex*. Cooper published five species of this sedge.

Liliaceae

Camassia quamash (Pursh) Greene [*C. esculenta* Lindl.], camas.

Trillium chloropetalum (Torr.) Howell or *T. ovatum* Pursh [*T. grandiflorum* Salisb.], trillium.

Salicaceae

Populus tremuloides Mich., trembling aspen.

P. trichocarpa T. & G. [*P. angustifolia* Torr.], black cottonwood.

Betulaceae

Alnus rubra Bong. [*A. oregana* Nutt.], red alder.

Fagaceae

Corylus cornuta Marsh [*C. americana* Walter], hazelnut.

Quercus garryana Dougl., Garry oak.

Paeoniaceae

Paeonia brownii Dougl., Brown's peony.

Ranunculaceae

Aquilegia formosa Fisch. [*A. canadensis* (Linn.)], columbine.

Actaea rubra (Ait.) Willd. [*Actea arguta*], baneberry.

Berberidaceae

Berberis aquifolium Pursh, Oregon grape.

B. nervosa Pursh, Oregon grape.

Fumariaceae

[*Dicentra exima*] Now?

Grossulariaceae

Ribes bracteosum Dougl., stink currant.

R. divaricatum Dougl., straggly gooseberry.

R. lacustre (Pers.) Poir., swamp gooseberry.

Rosaceae

Amelanchier alnifolia Nutt. [*A. canadensis* Linn.], serviceberry.

Crataegus douglasii Lindl. [*C. sanguinum*], black hawthorn.

Fragaria vesca L., strawberry.

F. virginiana Duchesne, strawberry.

Oemleria cerasiformis (H. & A.) Landon [*Nuttallia cerasiformis* T. D. & G. (G.)], Indian plum.

Prunus emarginata (Dougl.) Walp. [*Cerasus mollis* Dougl.], bittercherry.

Pyrus fusca Raf. [*P. rivularis* Dougl.], crabapple.

Rosa nutkana Presl. [*Rubus Nutkanus* Moc.], rose.

[*Rosa Sinnamous*] Now?

Rubus leucodermis Dougl., blackcap.

[*Rubus occidentalis*] Now?

R. spectabilis Pursh, salmonberry.

R. ursinus Cham. & Schlecht. [*R. macropetalus* Dougl.], blackberry

[*Sorbus* spp.] Mountain ash.

Spiraea betulifolia Pall., spirea.

S. douglasii Hook., spirea.

[*S. tomentosa*] Now?

Aceraceae

Acer macrophyllum Pursh, big leaf maple.

A. glabrum Torr., maple.

A. circinatum Pursh, vine maple.

Rhamnaceae

Ceanothus sanguineus Pursh [*C. oreganus* Nutt.], buckbush.

Elaeagnaceae

Shepherdia canadensis (L.) Nutt., soapberry. Mentioned by McClellan and Cooper but no binomial given. In Cooper's published list he says it is found only in the Straits of Juan de Fuca.

Onagraceae

Clarkia quadrivulnera (Dougl.) Nels. & Macbr. [*Oneothera quadrivulnera* (G.) Dougl.], godetia.

[*O. apacos*] Now?

Epilobium angustifolium L., fireweed.

Araliaceae

Oplopanax horridum (J. E. Smith) Miq. [*Echinopanax horridum* Smith], devil's club.

Ericaceae

Arctostaphylos columbiana Piper [*A. tomentosa* Pursh], manzanita.

A. uva-ursi (L.) Spreng., kinnikinnick.

Gaultheria shallon Pursh, salal.

Vaccinium caespitosum Michx., blueberry

V. membranaceum Dougl. [*V. myrtilloides* Mich.], black mountain huckleberry.

V. ovalifolium Smith, early huckleberry.

V. ovatum Pursh, evergreen huckleberry.

V. parvifolium Smith, red huckleberry.

Caprifoliaceae

[*Sambucus* spp.]

Curcubitaceae

Marah oreganus (T. & G.) Howell [*Megarrhiza Oregona* Torr. and Gray], manroot.

Compositae

[*Solidago elongata* Nutt.] Now? A goldenrod.

Table 2: Descriptions of the Klikitat Trail and campsites⁵²

Descriptions are from Cooper (C) and McClellan (M). Dates, distances (from Vancouver) and site spellings are by Minter. Elevations are approximated from USGS maps.

7-18-1853 Wahwaikee (/wawač'i/, "acorn") (First Plain). 61 meters. 2.25 miles from Vancouver

" . . . nearly circular in form . . . (Spruces) which form a very sharply defined border around it . . . noticed in the wood *Sicyos Oregonus* very common. It is said to be used by the Indians medicinally . . . Also *Berberis aquifolium* . . . *Rubus nutkanus occidentalis* & *spectabilis* are common and their fruit with other berries forms the chief food of the natives at this season. *Epilobium angustifolium*, *Spiraea betulifolia* & *douglasii* are the most striking flowers now in bloom." (C)

"Hazel and maple are found along the road and on the stream—saw some small speckled trout in the stream. The 1st plain is a small prairie nearly circular and almost 1/4m in diameter—the grass is good." (M)

Pahpoo pahpoo and Heowheow (Second and Third Plains). 64 meters

" . . . small opening[s] dignified by the name of prairie; these are partially cultivated & have pretty good grass upon them." (M)

7-21 Kolsas (Fourth Plain). 70 meters. 7.25 miles

“ . . . about 12 miles in circumference and nearly oval in form . . . on low swampy parts a coarse species of *Carex* is the chief grass and is eaten readily by horses. Scattered Spruce trees dispersed in groups over the dry portions give the appearance of old cultivated grounds. The *Oenothera apacos* and *O. quadrivulnera* with some *Solidagos* and other Composites are the only flowers I saw at this season.” (C)

“The only water is a small stream about $\frac{1}{4}$ m from the Kolsas—it heads in a marsh at the SE border of the Prairie. The best grass is on the N edge, and in the marsh to the SE. The road today leaves the Kolsas plain . . . It was an old disused Indian trail . . . The undergrowth is of various kinds—we found an abundance of the black and red huckleberry (the latter a delightfully acid flavor),—the Sah-lal berry (growing on a species of low vine),—the Oregon grape (the leaf of which closely resembles the holly),—the blackberry,—dewberry,—thimbleberry etc. The arrow wood abounds . . . we found the white maple and willow . . .” (M)

7-22 Susic Prairie (Fifth Plain.) 79 meters. 13.25 miles

“ . . . about 6 miles circumference . . . ” (C)

“Sim-sik prairie is about $\frac{1}{2}$ m long & $\frac{1}{4}$ m wide—running nearly N & S. It is covered by a rather coarse grass, tufted and intermixed with a bush resembling the Chickasaw plum, a large fern, huckle-berries etc. It is surrounded by a dense fir forest, a circular clump of which forms one camp, & there is another detached clump in the center.” (M)

7-23 Mesache (“bad”; Chinook Jargon) Camp. 183 meters. 19.75 miles

“ . . . we entered a forest of more immense growth than any I have yet seen. Many trees of *Abies douglasii* and others being 10 to 12 ft. in diameter. The latter begins to be less common than hitherto. *A. Canadensis* replacing it. Saw also *Thuja gigantea* 30 to 40 ft. high and a species of *Vaccinium* with red acid berries resembling cherries in taste . . . ” (C)

“Our camp was a poor one . . . for it was nothing but a succession of little openings among the huge dead firs—all blackened by the fires with a coarse marsh grass for the animals: a fine clear stream . . . ” (M)

7-24 Mankas Prairie. 198 meters. 25.75 miles

“Noticed on the way quantities of berries of the different species of *Rubus*, *Uva Ursi*, *Amelanchiar* etc. Mankas prairie 4 miles in circumference covered thickly with *Spirea tomentosa* or *douglasii* . . . Also a shrub called “bear berry” in fruit, *Rosa sinnamous*, *Crateagus sanguineum* etc. The hills to the north rise steep from the plains and the lofty trees around it keep off the wind making the air hot . . . 18 $\frac{1}{2}$ m. from Calissis Prairie. The day was very hot and the atmosphere smoky from fires in the woods nearby . . . *Epilobium angustifolium* the “willow herb” colors the whole country with the hue of its purple flowers.” (C)

“ . . . the trail better cleared of brush. We found immense quantities of Blackberries, soapberries, thimbleberries, red huckleberries, Oregon grape, Salal berry etc . . . Mankas Prairie is about $\frac{1}{8}$ m wide & 1m long—good grass . . . It is, as usual, surrounded by the eternal fir . . . ” (M)

7-25 Yahkohtl Prairie (Yacolt). 198 meters. 35.25 miles

“The route from this River [Yacolt] to the plains was through a young forest chiefly of trees from $\frac{1}{2}$ to 1 ft. in diameter with a few large ones scattered among them as if the ground had lately been a prairie and the trees had grown up suddenly and all together. The ground [was] nearly level & little obstructed by logs or underbrush, it was the pleasantest part of our route so far . . . This prairie is four miles long extending toward the south and two miles wide. The Red fir is the most common tree about here and is scattered in groups over the surface. Along the border grows the *Pyrus rivularis*, *Amelanchier*, *Spirea douglasii*, which are now in fruit—*Cerasus mollis*, a bitter cherry not yet ripe. The ground is covered with *Vaccinium caespitosum* a species about 6 inches high with a blue berry from which the Indian name of the plain is derived . . . Saw on the way *Vaccinium ovalifolium* a blue acid berry growing near the red fruited species . . . Along the border of this prairie & on every elevation is a thick growth of fern (*Pteris*) higher than a man’s head . . . On this prairie grows a species of Elder” (C)

“The trail [from Mankas] follows the length of the prairie & then plunges into the thicket—first passing thro’ a dense growth of wild roses . . . the wild gooseberry occurs here, and at other places during today’s march . . . On the rocky border of the stream . . . there was an Indian Camp—It is scarcely possible to imagine a more miserable sight—their tents do not deserve the name—consisting merely of 3 sticks propped together with a torn blanket thrown over. They were making their fish traps etc . . . The atmosphere is very smoky—caused by fires in the mountains. . . . Indian squaws went off about 7 [am] for the traps they left at the falls . . . The prairie being in all some 2m long . . . They catch the Salmon trout here—the Salmon does not come up this far. . . . The grass is very fine (M)

7-31 Chalacha (*č’a’a’lača*); “bracken fern”) Plain. 180 meters. 41 miles

“This is of an oval form and about 5 miles long by 2 wide, surrounded by huge precipitous hills above which towers the snow-capped peak of St Helens in a direction nearly northerly from the prairie . . . On the end of this prairie is a grove of oaks, the only species I have seen here, peculiar from being always unmixed with evergreens which cover nearly the whole country.” (C)

“Found a few Indians on the prairie—they have cultivated a patch of the prairie near the eastern end . . . Found the Indian potato patches to be very inconsiderable in extent . . . A creek clear & good . . . [the prairie] runs about ENE is some $1\frac{1}{2}$ m long by $\frac{1}{3}$ m wide . . . The n side of the prairie is confined by higher, but somewhat less bold hills—on the top of the highest is a bare cliff used by the Indians as a “watch-post.”.upper end [of prairie] .

... thro' a dense patch of fern . . . This patch of fern, as well as two or three others, was taller and denser than any I have ever seen—it is over the head of a man on horseback and so dense that it is scarcely possible to force a way through it . . . The prairie of Chelacha takes its name from a long grass which grows there." (M 7-25-53)

8-1 Spilyeh (/spilya'y/; "myth coyote") Prairie. 137 meters. 51 miles

[enroute] "Noticed on the hillside a Taxus (Yew) in fruit." (C)

"Spil-yai is the Indian name of the bad ford (illegible) of the Cathlapootle . . . We saw wild cherry, hazel, oak, ash etc . . . this prairie runs about NE & SW, it is $\frac{3}{4}$ m long by $\frac{1}{4}$ m wide; has water on either side, & is covered with fine grass and an abundance of service & Huckleberries . . ." (M)

8-2 Lakas (or Lacash) (/ili'k-aš/; "kinnikinnick place") Camp. 152 meters. 57.5 miles

[enroute] ". . . camped on the east side . . . of the Cathlapootle [River] . . . in a grove of young spruce trees the ground being covered with *Uva ursi* . . . and small poplars." (C)

"The La-cahs (*Uva-ursi*) abounds here, it is used by the Indians for kinnakanick . . . there is little or no grass . . ." (M)

8-3 Noomptnahmie Camp. 305 meters. 65.5 miles

[enroute] ". . . through a region mostly burnt over recently and with a young growth of trees covering it . . . Noticed a species of *Sorbus* in fruit, the berries being orange color and larger than those growing in the Eastern states." (C)

". . . ash, maple, hazel, fir & cedar compose the growth—a few red huckleberries, oregon grapes & blackberries occur—the ground is covered by a large leafed sorrel and a plant resembling the may apple." (M)

8-4 Weinnepat Camp. 305 meters. 72 miles

8-5 Wahamis (Susuk) Camp (Two-by-Four Prairie?). 976 meters. 78.75 miles

"The hill was covered with a species of *Vaccinium* the fruit nearly as finely flavored as a grape, and the ground in many places carpeted by strawberry vines with ripe fruit of delicious flavor. Blue purple red yellow and white flowers adorned the hill side and altogether this was one of the pleasantest camps since leaving Vancouver . . . Two Pines & a species of dense leaved spruce . . ." (C)

"We have an abundance of excellent grass and the coldest possible water. Found quite large quantities of wild strawberries on the side of the mountain—their flavor was excellent . . ." (M)

8-6 Yawakamis (McClellan Meadow). 1037 meters. 88 miles

". . . a small meadow full of excellent grass where we encamped. Most of the way led through a burnt forest with but little living vegetation . . ." (C)

“a small pretty prairie where were a number of old Indian huts.” (M)

8-8 Chequos (Chickwass) (/či'kaš/; “rough place”). 1189 meters. 93.75 miles

“Chiquass prairie a high plain mostly covered with young spruce. The hills around are almost all burnt over . . .” (C)

“There are two ponds of water for the animals & a well for drinking purposes . . . Some 20 lodges of Indians in the vicinity. One died yesterday of the small-pox—which disease is making great ravages among them. Those who buried him go thro' a course of 3 days steaming and bathing by way of purification . . . The prairie in which we now are, and those to E. seem to make up an old & immense crater . . . Strawberries very abundant now in this vicinity. The grass in the crater is good—timber very poor—water only in ponds . . .” (M)

8-9 Resumé by Cooper at the Summit

“In ascending a gradual disappearance of some plants is noticed and a substitution of others. *Aquilegia formosa* has continued common up to this point. The three species of *Abies* composing the lower forest are here replaced to an extent by two others and by two species of Pine. Oaks disappeared with the Cathlapootle river and the maples are now very rarely seen . . .” (C)

8-11 Hoolho-ose (Wilwilchelis) (at or near Trout Lake, /šaxšax-mi'), “kingfisher’s”). 579 meters. 105.75 miles

“After passing the first two miles the wood became very open & of large pine trees standing 20 or 30 yds apart, the ground below being covered with grass and small shrubs. The scene resembled ornamental forest grounds more than wild uncultivated woods.” (C)

“The circular valley of the lake is green & pretty—an abundance of horse mint grows there . . . While in the Conf ground we met 3 or 4 parties of Indians, who were suffering terribly from the small pox . . . fine pine timber, with some [illegible] oak . . . Grass good—found here the blue bunch grass of the plains.” (M)

8-12 Tahk (/taak/; “vernal meadow”)Prairie (near modern Glenwood). 549 meters. 114.25 miles

“Noticed the oak again at this place . . . Found a species of *Paeonia* (Brownie) around the prairie with ripe seed, the root is used by the Indians here to give their horses long wind. The prairie is about 10 miles in length and three wide containing a marshy lake and appears to be subject to overflowing.” (C)

“An open country . . . white and yellow pine—oak, fir & spruce etc . . . Good grass & excellent water . . . The Camash root abounds, also the Wapatoo.” (M)

Acknowledgments

We would like to express our appreciation to the National Science Foundation research grants (BNS 76-16914 and BNS 80-21476), E. Hunn, principal investigator, for funding of portions of this research. We also wish to express our gratitude to the Smithsonian Institution Archives for permission to cite or quote material from Cooper and Everette.

Notes

1. James G. Cooper, "Notes for 1855 . . ." [Northern Pacific Railroad Survey] (Smithsonian Archives, Record Unit 7067); E. C. Ugolini and A. K. Schlichte, "The effect of Holocene environmental changes on selected western Washington soils," *Soil Science* 116(3): 218–27, 1973); Richard White, "Indian land use and environmental change: Island County, Washington, a test case (1975 and this volume); and Helen H. Norton, "The association between anthropogenic prairies and important food plants in western Washington" (*Northwest Anthropological Research Notes* 13(2): 175–200, 1979).
2. For a West Coast precedent, see L. L. Sample, "Trade and Trails in Aboriginal California" (University of California Archaeological Survey, Report no. 8, 1950).
3. The only archaeological work of note published before 1983 is Jerry Jermann and Roger Mason's "Cultural resource overview of the Gifford Pinchot National Forest: South-Central Washington" (University of Washington Office of Public Archaeology, Institute for Environmental Studies Reconnaissance Report No. 7, 1976). Since 1983, archaeologists have shown an increased interest in the area. See, for example, Cheryl Mack's "Prehistoric Upland Occupations in the Southern Washington Cascades" (*Archaeology in Washington* I: 49–57, 1989) and Dennis Lewarch and James Benson's "Long-Term Land Use Patterns in the Southern Washington Cascade Range" (*Archaeology in Washington* III: 27–40, 1991). Cheryl Mack's "In Pursuit of the Wild Vaccinium: Huckleberry Processing Sites in the Southern Washington Cascades" (*Archaeology in Washington* IV: 4–16, 1992) follows most closely the themes raised in our original 1983 publication.
4. The ethnographic record for the Klikitat is meager. A primary source is Verne Ray's "Native villages and groupings of the Columbia Basin" (*Pacific Northwest Quarterly* 27(2): 99–152, 1936), 148–50, which lists seventeen named Klikitat village and campsites; Edward Curtis's "The Klickitat" (pp. 37–40 in *The North American Indian*, vol. 7, 1911) is only four pages long. Some further information is found in reports of neighboring groups such as the Cowlitz (V. Ray, *Handbook of Cowlitz Indians*, Seattle, 1966); the Wasco-Wishram (Leslie Spier and Edward Sapir, "Wishram Ethnography" [*University of Washington Publications in Anthropology* 3(3), 1930]; and David French, "Wasco-Wishram" [pp. 337–429 in Edward Spicer, (ed.), *Perspectives in American Indian culture change*, Chicago, 1961]); and the Yakama and Columbia River Sahaptins (e.g. Helen Schuster, "Yakima Indian traditionalism: a study in continuity and change," Ph.D. dissertation, University of Washington, 1975; and Eugene Hunn, *Nchi-Wána: the "Big River": Mid-Columbia Indians and their Land*, [Seattle, 1990]). Linguistic

analyses include Willis Everette, "Yakima vocabulary recorded at Simcoe mountains . . ." (National Anthropological Archives Ms. #698, 1883); Melville Jacobs's "Northwest Sahaptin texts" (UWPA 4(2): 85–292, 1931, *Columbia University Contributions to Anthropology* 19, 1934), and "Historic perspectives in Indian languages of Oregon and Washington" (*Pacific Northwest Quarterly* 28(1): 55–74, 1937); and Bruce Rigsby, "Linguistic relations in the southern plateau" (Ph.D. dissertation, University of Oregon, 1965).

5. */xwaʔxaypam/* is the Klikitat self-designation in their own tongue, a dialect of the Sahaptin language. */xwaʔxaypam/* translates as "Steller's Jay people" (*/xwaʔxay/* "Steller's Jay" + */-pam/* "people of"). The Klikitat dialect is most closely allied with Yakama (*/mámačatpam/*) and Upper Cowlitz (*/táytnapam/*), adjacent members of the Northwest dialect group (NW) of the Sahaptin language. Klikitat speakers also had frequent intercourse with speakers of the Columbia River dialect cluster of Sahaptin, including the */wayamátama/* of Celilo Falls area and the */tinaynutáma/* of the village of Tenino. See Bruce Rigsby, "Linguistic relations in the southern plateau," for details on linguistic classifications and orthography.

6. See Spier and Sapir, "Wishram Ethnography," 167, on Klikitat/Chinookan co-occupation; Ray, "Native villages and groupings of the Columbia Basin" on Klikitat settlements; and Ray, *Handbook of Cowlitz Indians*, A7–A8 on the */táytnapam/* problem.

7. Ray, *Handbook of Cowlitz Indians*, A12, identified the Klikitat as "prairie oriented"; Eugene Hunn, in "Mobility as a factor limiting resource use in the Columbia Plateau of North America" (pp. 17–43 in E. Hunn and Nancy Williams, [eds.], *Resource managers: North American and Australian hunter-gatherers*, Boulder, 1982), discusses mobility and the subsistence round.

8. Lewis and Clark noted Chinookan riverine movement in their *Journals* (Moulton 1991 [v. 7] 38, 57). On the concept of ecological niche, see Thomas Love, "Ecological niche theory in sociocultural anthropology: A conceptual framework and application" (*American Ethnologist* 4(1): 27–41, 1977).

9. Ray, *Handbook of Cowlitz Indians*, A9 on the Lewis River trail; Edward Curtis, "The Chinookan Tribes" (pp. 85–156 in *The North American Indian*, vol. 8, 1911), 94 on trade with Chinookans; Nettie Kuneki, Elsie Thomas, and M. Slockish, *The Heritage of Klickitat Basketry: A history and art preserved* (Portland, 1982) on baskets; and George Gibbs, "Report of George Gibbs to Captain McClellan on the Indian tribes of the Territory of Washington, 3/4/54" (pp. 419–55 in *Report of exploration of a route for the Pacific Railroad from St. Paul to Puget Sound*, 33d Cong, 1st Sess, HExDoc 129, 1854), 421 on racetracks.

10. The "Journal of John Work," (*Oregon Historical Quarterly* 10[]: 296–313, 1909) describes what apparently was an early traversal of the trail by a Hudson's Bay Company trader.

11. The sources are James G. Cooper's two "Notebooks," dated 1853 and 1855 (Smithsonian Institution Archives, Record Unit 7067); and George McClellan's "Journal" (Microforms Collection A228, University of Washington Libraries, 5/20–12/11, 1853), previously cited by Jermann and Mason in "Cultural resource overview of the Gifford Pinchot National Forest." The official *Report of exploration of a route for the Pacific railroad from St. Paul to Puget Sound* (33d Cong, 1st Sess, HExDoc 129) includes George Gibbs's "Report . . . on the Indian Tribes of the territory of Washington," and J. F. Minter's "Itinerary of Captain McClellan's route," pp. 387–403.

12. J. G. Cooper, "Reports of explorations and surveys to . . . the Pacific Ocean in 1853—5" (Washington, 1860), 19, 23. A longer passage from this same source appears in Lewis and Ferguson (this volume).
13. Cooper, "Notes for 1855 . . .," 12–13. See also Cooper, "Reports of explorations . . .," 23, cited in Lewis and Ferguson (this volume).
14. See Cooper 1853 "Notebook . . .," 1855 "Notes . . .," and Reports of Explorations . . .; Norton, "The Association between Anthropogenic Prairies and Important Food Plants . . ."; and Ugolini and Schlichte, "The effect of Holocene environmental changes . . ."; Frank Lang, "A study of vegetation change on the gravelly prairies of Pierce and Thurston counties, western Washington" (M.A. thesis, University of Washington, 1961); and Don Minore, "The wild huckleberries of Oregon and Washington—a dwindling resource" (USDA Forest Service Research Paper PNW-143, Portland, 1972).
15. White and Boyd (orig. 1975 and 1986, and this volume); Norton, "The Association Between Anthropogenic Prairies and Important Food Plants in Western Washington"; Carl Johannessen *et al.*, "The vegetation of the Willamette Valley" (*Annals of the Association of American Geographers* 61(2): 286–306, 1971).
16. The Cooper quotation is from "Reports of explorations . . .," 23; his plant list appears in Cooper and George Suckley, *The Natural History of Western Washington . . . Plants and Animals Collected from 1853–57* (New York, 1859); an analysis appears in the appendix to Norton, "The Association Between Anthropogenic Prairies and Important Food Plants in Western Washington."
17. See Nancy Turner, *Food Plants of Coastal First Peoples*, Royal British Columbia Museum Handbook (Vancouver, 1995); and Minore, "The wild huckleberries of Oregon and Washington," on huckleberries.
18. The quotation is from Cooper's "Notes . . .," 6; the same manuscript, pp. 36–37, notes other prairie fauna.
19. As defined in Jerry Franklin and C. T. Dyrness, *Natural Vegetation of Oregon and Washington* (orig 1973; 1988 reprint by Oregon State University Press), 45.
20. Cooper 1853 "Notebook . . .," 4.
21. See Verne Ray, *Cultural Patterns in the plateau of northwestern America* (Los Angeles, 1939), 132–39.
22. McClellan 1853 "Journal," 18.
23. On bracken, see Helen H. Norton, "Evidence for bracken fern as a food for aboriginal peoples of western Washington" (*Economic Botany* 33(4): 384–96, 1980); on acorns, see Norton, "The Association Between Anthropogenic Prairies and Important Food Plants in Western Washington."
24. Both quotations are from Cooper's 1853 "Notebook . . .," 13.
25. The trap may be the "double funnel" trap noted in Verne Ray's "Culture Element Distributions 22: Plateau" (*Anthropological Records* 8(2), 1942), 107. Spears have been recovered archaeologically on the upper Cowlitz River: see David Rice, "Indian utilization of the Cascade Range in south central Washington" (*Washington Archaeologist* 8: 5–20, 1964), 14. The quote from McClellan is on p. 13 in his 1853 "Journal."
26. On the Chalacha Prairie Reservation recommendation, see William Tappan, "Annual Report, southern Indian district, Washington Territory, 1854" (Records of the Washington Superintendency of Indian Affairs, 1856–74 no. 5, roll 17: "Letters from employees assigned to the Columbia River or southern district . . .," National

- Archives); huckleberry gathering is described by Emily Lindsley in "The 1883 ascent of Mt. St. Helens," (*Northwest Discovery* 1: 296–305, 1980), 299.
27. See Hal Kennedy and Jerry Jermann, "Report of an archaeological survey in the Mount St. Helens area, Gifford Pinchot National Forest" (University of Washington Office of Public Archaeology Reconnaissance Report, 1975), 26.
28. Alan Bryan, "Archaeology of Yale Reservoir, Lewis River, Washington" (*American Antiquity* 20: 281–83, 1955), 282.
29. Chequos appears in Ray's "Native villages and groupings of the Columbia Basin," 149; on fire and *V. membranaceum*, see Minore, "The wild huckleberries of Oregon and Washington," 6, 9; and Fred Hall, "Literature review of huckleberry" (USDA Forest Service memorandum, file #2210, Portland, 1964), 1–5.
30. The Sahaptin term for huckleberry season is from Everette's "Yakima vocabulary," 106; see E. Hunn and D. French, "Lomatium: a key resource for Columbia Plateau native subsistence" (*Northwest Science* 55(2): 87–94, 1981); the quote from Reverend Henry Perkins is from his "Wascopam mission journal" (pp. 271–303 in Robert Boyd, *People of The Dalles: the Indians of Wascopam Mission* (Lincoln, NE, 1996).
31. The Gibbs quotation is from his "Report . . . to Captain McClellan," 432; McClellan's "Journal," entry of 8/8/53, describes the smallpox; Hunn's *Nchi-Wána*, 265–68 discusses contemporary Sahaptin sweatlodges, and Douglas's 1825 description is from the *Journal kept by David Douglas during his travels in North America, 1823–1827* (New York, 1959), 114–15.
32. Cooper, in his 1853 "Notebook . . .," 22, describes the open ponderosa stands; Franklin and Dyrness, in "Natural vegetation of Oregon and Washington," 180, are the authorities on fire frequency in ponderosa stands.
33. The same is true for those at the Trail's western extremity (e.g., Vancouver and LaCamas prairie (*jalaši k-aš!* ["turtle place"] and *!taak!* ["vernal meadow"])); see map of Clark County on page 00.
34. The early description of the earth oven is from "The literary remains of David Douglas, botany of the Oregon Coast" (*Oregon Historical Quarterly* 5(3): 215–71, 1904), 244; Eugene Hunn's Sahaptin field notes (1976ff; in possession of author) contain data on contemporary earth ovens. Gibbs, in "Tribes of western Washington and northwestern Oregon" (*Contributions to North American Ethnology* 1(2): 157–361, 1877), 193, noted the location of processing stations.
35. On suckers, see Spier and Sapir's "Wishram Ethnography," 174; and E. Hunn, "Sahaptin fish classification" (*Northwest Anthropological Research Notes* 14: 1–19, 1979).
36. Lewis and Clark (Moulton 1991 [v. 7]), 121 note harvest of both "herbs" and spring salmon, on April 14, 1806.
37. Spier and Sapir, "Wishram Ethnography," 184; Hunn, Sahaptin field notes.
38. See Ray, "Native villages and groupings of the Columbia Basin," 148–150; Spier and Sapir, "Wishram Ethnography," 166–69; and Boyd, *People of the Dalles*, 40–44.
39. See Ray, "Native villages . . ."; Sapir and Spier, "Wishram Ethnography"; and Curtis, "The Klickitat," 37, and "The Chinookan Tribes," 181, on these villages. Lewis and Clark's description of *!ta'axat!* is in Moulton, *Journals* [v. 7], 121; Hunn, in *Nchi-Wána*, 273, discusses contemporary Klickitat upstream fisheries.
40. See Spier and Sapir, "Wishram Ethnography," 167; Ray, "Native villages . . .," 148; and Lewis and Clark (*Journals*, [v. 5], 352; [v. 7], 119). Jermann and Mason,

- “Cultural resource overview of the Gifford Pinchot National Forest,” 63, note Little White Salmon and Wind River sites.
41. Lewis and Clark, *Journals* (Moulton 1988 [v. 5], 352); Ray, “Native villages . . .” on the upstream locations.
42. Ray, “Native villages . . .,” Hunn, in *Nchi-Wána*, 130–33, describes in some detail the historic late summer activity on the north bank of the Columbia Gorge.
43. See Gibbs, “Report . . . to Captain McClellan . . .,” 421; Ray, “Native villages . . .,” 149; and Hunn, *Nchi-Wána*, 94, on a later (1983) visit to the race track.
44. French (1957 and this volume) is the source on berry-drying technology and the fires that resulted from it; Minore, “The wild huckleberries of Oregon and Washington . . .,” 8, notes the historic contraction of the fields.
45. Ray Filloon’s “Huckleberry pilgrimage” (*Pacific Discovery* 5: 4–13, 1952) is the published result of the 1936 Forest Service documentation; Minore, “The wild huckleberries of Oregon and Washington . . .,” 1, is the source for the statistics on the Twin Buttes field productivity.
46. Filloon, “Huckleberry pilgrimage,” 5. See French (this volume) for a 1936 photograph.
47. Since the 1983 publication of this paper, Cheryl Mack, in “Aboriginal Use of Log-fire Drying Trenches in the Southern Washington Cascades” (paper presented at the 42nd Annual Northwest Anthropological Conference, 1989) and “In Pursuit of the Wild Vaccinium: Huckleberry Processing Sites in the Southern Washington Cascades,” has investigated the archaeological evidence for huckleberrying sites in the Indian Heaven Wilderness Area of the Gifford Pinchot National Forest.
48. Curtis, “The Klikitat,” 46. The split is mentioned in several contemporary historical sources as well.
49. See *Reports and letters, 1836–1838, of Herbert Beaver . . .* (Portland, 1959), 58; Gibbs, “Report . . . to Captain McClellan,” 420; and Tappan, Annual Report.
50. Since original publication of this paper, there has been more research on this topic. See, for example, Eric Bergland’s “Historic Period Plateau Culture Tree Peeling in the Western Cascades of Oregon” (*Northwest Anthropological Research Notes* 25(2): 31–53, 1992). At Fort Nisqually, the Hudson’s Bay Company paid Indians for bark used to roof buildings.
51. Synonymized from C. Leo Hitchcock *et al.*, *Vascular Plants of the Pacific Northwest* (Seattle, 1955–1969), with archaic name used by Cooper bracketed. Fifty-eight of the sixty-five plants noted in the journals are known to have been used for food, medicine, or in the material culture. Names marked with “Now?” are those for which the senior author could not connect Cooper’s species name with the contemporary Latin binomial.
52. Since Cooper and McClellan often did not travel with each other, we have attempted to place their descriptions, which may have been made on another date and another site, in the proper locations. Sahaptin transcriptions of place names have been added where appropriate. Species binomials as given in the original journals have been italicized and corrected for spelling.