Nch'i-Wána
"The Big River"

Mid-Columbia Indians
and Their Land

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with James Selam and Family

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work (e.g., Turner, Bouchard, and Kennedy 1980, Turner et al., n.d.), Gary Palmer's Shuswap and Coeur d'Alene material (1975, 1978, 1985), dissertations by Helen Schuster on Yakima traditional religion (1975), by Alan Marshall on Nez Perce social ecology (1977), and by Lillian Ackerman on Plateau sex roles (1982). Schuster's Yakima bibliography (1982) is a useful resource. Popular accounts by archaeologists provide some ethnographic background (Daugherty 1973; Uebelacker 1984). Craig Lesley's award-winning novel, *Winterkill* (1984), gives us a vivid appreciation of a Umatilla Indian's contemporary reality.

Notwithstanding the above valuable works, no accessible, contemporary ethnographic account exists for any Plateau Indian culture. This book is intended to fill that gap.

2

History

ETHNOGRAPHY HAS often been written as if the ethnographic present—cultural conditions in effect, or presumed to be in effect, at the time of first Euro-American contact—had existed unchanged throughout the indefinite past. For some, this assumption rests on a view of traditional cultures as products of rigid habit, maintained by a fear of change. I believe such an assumption is unfounded. I believe that the dizzy pace of cultural change we have grown accustomed to is due not to any progress in human creativity but rather to the accelerating pace of change in the conditions to which people must adapt.

In fact, archaeological evidence suggests that the Plateau Indian way of life had remained fundamentally the same for ten thousand years prior to the first Euro-American influences of the eighteenth century. What demonstrable changes did occur during that long period of time can be traced to two factors: the biogeographical consequences of climatic change[1] and innovation in resource harvest strategies and techniques. The resulting changes represent subtle shifts of emphasis rather than profound redesign of Plateau economic and social patterns.

Geologists tell us that some fifteen thousand years ago massive sheets of ice bulged southward from great cordilleran ice fields centered in the rugged mountains of what is now British Columbia. South of the ice a veritable zoo of prehistoric animals flourished: mammoths, mastodons, giant ground sloths, camels, horses, sabre-toothed tigers, and huge condor-like birds. Familiar animals such as bison and elk were present also, but were "larger-than-life" size. The wholesale extinction that came with the retreat of the ice

1. C. Miller (1985:24–26) builds an elaborate argument for cultural changes in the Plateau due to a "Little Ice Age" said to have lasted from about A. D. 1550 until about 1690. However, there appears to be no clear archaeological support for his contention that this climatic "blip" had a significant impact on Plateau culture history.

has generated intense speculation, most particularly on the question of whether people had anything or everything to do with it (Martin 1973; Grayson 1977).

The ice sheets cut the American super-continent off from continued contact with the Eurasian land mass. But did human beings slip through the ice gate before it slammed shut? In short, was *Homo sapiens* a part of the Ice Age ecosystem of the New World? The issue is still hotly contested. What is certain is that Pleistocene (that is, Ice Age) human occupation of the Americas was sparse, at best, and has left few if any incontrovertible traces of human occupation in the Pacific Northwest (Borden 1979:964).

By 9,000 B.P. ("before the present"), rich archaeological deposits occurred virtually throughout the Columbia Plateau from the Dalles (Cressman et al. 1960), east to the Snake River (at Windust Cave and Hell's Canyon; see Kirk and Daugherty 1978, Ames and Marshall 1980–81), north to Kettle Falls, and west to the Fraser River canyon (the Milliken Site; Borden 1979:965–66). These early Plateau peoples harvested fish, including salmon and suckers (Ames and Marshall 1980–81:41), gathered plant foods in quantity, hunted large ungulates, and traded with coastal peoples for decorative shells (Kirk and Daugherty 1978:37), as they did in Lewis and Clark's time.

Archaeologists contest the relative significance of these major food sources at various periods in Plateau prehistory. Borden, for example, argues that the earliest Plateau peoples "concentrated on large game," and that "fowling and fishing were of negligible significance" (1979:964). He attributes the "strong emphasis on salmon fishing in addition to hunting" that later characterizes the Plateau, to an "Early Boreal Tradition" that spread south through interior British Columbia from Alaska as the ice sheets melted. The complex of features he associates with this "new tradition" are evident at the Ryegrass Coulee site near Vantage by 6,500 B.P. (pp. 967–68). Excavations near The Dalles well south of Vantage, however, disclose "huge quantities of salmon bones" by 7,700 B.P. (though none was found in the earliest levels there, dating to 9,800 B.P. [Borden 1979:965]). Ames and Marshall note that though "fishing tackle and fish remains [are] generally rare in [southeastern Plateau] sites, [they] are present throughout the regional sequence" (1980–81:41). Kettle Falls archaeology reveals evidence of fishing as early as 9,000 B.P., though it is not certain that people were drying the fish for winter rations at that early date (Kirk and Daugherty 1978:67).

Nelson (1973) has put forward a Salish-expansion theory, asserting that

intensive fishing arrived—and with it, the historically documented Plateau winter village settlement pattern—with the invasion of the Plateau by Salish-speaking peoples. This movement originated in the Fraser Canyon area, and is estimated on linguistic grounds to have begun about 4,500 B.P. at the end of the Altithermal, a period of hotter and drier conditions than is typical today (Elmendorf 1965). Ames and Marshall dispute this diffusionist theory, arguing that pit-house villages first appear by 5,000 B.P. in the southeastern part of the Plateau, far from the center of Salish expansion (1980–81:43, 47). They ascribe this new residential pattern not to improved fishing techniques imported from the coast, but to an increased intensity of root food collection which emphasized a preexisting Plateau subsistence alternative. This shift in emphasis, they argue, might have been a response to some aspect of Plateau social dynamics rather than to outside influences. They cite an apparent shift in the types of grinding implements present at different levels of Snake River village sites as support for their views (pp. 41, 44). Kirk and Daugherty suggest, however, that though "milling stones seem rare until the Altithermal, . . . roots, berries, and greens must have been major foods before then. Milling stones and a quantity of chokecherry pits found in the earliest levels of the Marmes deposits bear this out" (1978:67).

In sum, despite competing theories as to the origins and antiquity of various features of the immediate precontact Plateau socioecological system, there is a consensus among prehistorians that "culture change on the Plateau proceeded at a modest pace through the millennia to historic time" (Kirk and Daugherty 1978:68). Projectile points, for example,

> . . . arranged by age, . . . show a progression in form and manufacturing technique, not necessarily an improvement through time—for early workmanship was as good as what came later—but a definite and ordered change. . . . Points became gradually smaller . . . reflecting the change in weaponry from spears that were thrust to those thrown with atlatls [i.e., spear-throwing boards], and finally to bows and arrows. (Kirk and Daugherty 1978:68)

Ames and Marshall conclude that "the available data indicate a generalized, broad spectrum adaptation . . . over the last 11,000 years: fishing, fowling, hunting, and gathering of both terrestrial and riverine resources" (1980–81:40).

Such cultural stability certainly belies the conclusion of one scholar, who remarked that the Flathead way of life "was neither stable nor durable, but a culture in transition, fragile, and out of equilibrium with its environment"

(Fahey 1974:xi). In direct contrast, we should conclude that Plateau culture worked, and as the saying goes, "If it ain't broke, don't fix it."

How do we know that the cultural persistence suggested by ten millennia of eating the same foods and making the same tools was not simply force of habit, the result of an inbred resistance to change? Proof to the contrary is found in the dramatic response of western Indians to Spanish horses. Creatures of habit confronted by such an animal, never seen before, might have been expected either to run away in fear or to hunt it as if it were bison or elk, following long established patterns of action. Instead they quickly learned to ride like the wind, to hunt at full gallop; some learned to geld their stallions (*n.b.:* in the Spanish, not the English, manner, as Osborne [1955] has shown) and to control both the behavior and the genetics of their herds. They learned what wealth could be, wealth in horses by the hundreds, by the thousands. They adopted patterns of raid and counterraid on a vastly expanded scale, with the horse the primary motive and means of these adventures. All this and more in the space of just two or three generations, so that the first whites to meet Plateau people face to face on their home ground met them as already transformed people. Clearly, Plateau Indians were not resistant to changes that they judged advantageous. A similar opportunism has been demonstrated for the Coast Salish people who adopted potato cultivation prior to direct Euro-American contact—with no outside encouragement or instruction and without prior experience with agriculture (Suttles 1953).

In fact, the horse is such a central part of traditional Plateau life that James Selam finds it very hard to believe (in fact, he still does not believe it, and I haven't been able to convince him) that Plateau Indians have not always had horses. His grandparents recalled that their grandparents had lots of horses and were expert at horse husbandry (at twenty-five years per generation that dates to 1820 or so) and that the Indian "cayuses" were smaller horses with other characteristics differentiating them from the horses of later white settlers. I suggest that in the absence of written histories modern Americans might find it hard to swallow the fact that there have not always been cars on our highways. In fact, the horse was as rapidly and thoroughly adopted by Plateau Indian society as the automobile has been by modern American society. In sum, a lack of dramatic cultural change does not demonstrate a lack of ability or receptivity to change. (Major events subsequent to first Euro-American contact are listed in chronological order in the *Plateau Historical Time Line,* see pp. 52–57.)

Outside Impacts I: The Horse

Smohalla, the Indian prophet from Priest Rapids, asserted that horses did not come from the white man but had been known to Indians long before white settlers arrived. As I have noted, James Selam believes the same. While it is true that a species of horse flourished in Ice Age North America, none appears to have survived the wave of extinctions that befell so many large mammals and birds as the last ice advance receded. Those first horses went the way of the mammoth, mastodon, North American camel, giant ground sloth, and the predators (e.g., the sabre-toothed cat) and scavengers (e.g., several "elder brothers" of the surviving California condor, now fighting for a last precarious foothold on earth) that lived off the great herds. At least there is no fossil evidence for horses for over ten millennia until, abruptly, they are everywhere in evidence just prior to contact.

We also have eyewitness accounts told by grandparents to their grandchildren, thence written down, of first encounters with the horse by Plateau Indians (Teit 1930:350–52; Haines 1938:434–36). Francis Haines has scoured the early diaries of explorers and fur traders in order to trace the spread of horses from their presumed source in the Spanish colonies in what is now New Mexico. The Spaniards had settled here early and were established before 1600. But they jealously guarded their prized stock, their extensive herds of cattle, sheep, and horses. Cattle provided red meat for their tables (and many of the frontiersmen considered all other foods scarcely worth eating), and they provided skins to be shipped for good profits to Europe. Sheep provided wool for a weaving industry. Horses as mounts symbolized the Spaniards' colonial domination. It was forbidden under severe penalty throughout Mexico for an Indian to ride a horse (Wolf 1959:212). Yet the Spanish seventeenth-century colonial empire had fallen on hard times and the Indian Pueblos, sensing this weakness, revolted in 1680, driving the Spaniards out for a time. Thousands of liberated Spanish horses spread up both sides of the Rockies: on the Plains from Apaches to Comanches, from Pawnees to Kansas Indians, reaching the upper Missouri Mandan villages by 1740; on the west from the Utes on the Colorado Plateau to the Shoshones of the Upper Snake, then to the Flatheads by 1720 and on to the Nez Perces and Cayuses sometime after 1730. Lewis and Clark encountered horses all along the Snake and Columbia to the edge of timber below The Dalles (e.g., Thwaites 1959 [1904], 3:119, 127, 132, 137, 140, 151; 4:280, 295, 301, 318, 322, 323, 327, 342, 344).

The horse was adopted as if the Indians had long awaited its coming. They had always been mobile people, as their lives depended on an extensive seasonal round up and down the mountain slopes from winter village to fishery to root digging flats to high mountain berry fields and hunting grounds. The horse was mobility epitomized. It did not radically change Plateau life so much as it accelerated existing patterns by enhancing this mobility.

The spread of horses among western Indians involved another dynamic element essential to our understanding of the speed with which horses were adopted: competition. A group without horses could not long withstand the pressure of mounted neighbors who began to use their horses to attack the weaker groups nearby. Verne Ray saw Plateau peoples as "pacifists" with the tendency exhibited most clearly by the Sanpoil, a group he considered archtypically Plateau (1933). They had remained isolated from the disruptive influences of Plains and coastal contacts longer than their neighbors. They were as well one of the last peoples on the Plateau to get horses. There is reason to doubt that this "pacifism" was a matter of cultural values (cf. Kent 1980). More likely Plateau peoples maintained largely peaceful intervillage relations because intermarriage and trade were more effective ways of gaining access to mates and useful supplies and of extending one's political influence than violence pursued on foot over large distances. The horse seems to have tipped the scales in favor of violence in many cases.

Lewis and Clark noted that the Columbia River villages from the Umatilla to The Dalles were mostly located on the north shore or on islands in the stream, for fear of the depredations of "Snake Indian" raiders. River Indians today delight in tales of courageous, miraculous escapes of their ancestors from these cruel attacks. Who were these waxpúš-pal (literally, the "rattlesnake people")? Like rattlesnakes they were powerful, deadly, and capricious. They were clearly Numic speakers from the south and southeast, but the Northern Paiutes of southern Oregon at that time were peaceful "digger Indians," preoccupied with gathering their annual supplies from a land considerably less generous than that of the Plateau. The evidence points to another group of Northern Paiutes, known subsequently as "Bannocks," and to their Shoshone colleagues. At an early date, they had adopted horses and a wide-ranging predatory life style, hunting bison herds up the headwaters of the Snake, Missouri, and Yellowstone rivers. Much later a similar mobile, predatory life style became the norm among Northern Paiutes of northern Nevada and southern Oregon, but with white migrant trains as the targets (cf. Steward and Wheeler-Voegelin 1974). The early Bannock penetrated Montana east of the continental divide and harrassed Blackfeet and Sioux groups, as yet still foot Indians. In response, certain Sioux asked for and received horses from their Flathead allies. Nez Perces and Cayuses, and soon after, Walla Wallas, Umatillas, and Yakimas, learned to retaliate in kind, joining this new arena of social intercourse. Their young men (sometimes with support groups of women) proved themselves in daring penetrations of Snake and Blackfeet territory in search of bison and the enemy.

Another piece of this historical puzzle is the gun. Not long after horses enlarged the scope of intergroup raiding (as well as expanding the range of less sanguinary interactions), fur traders began extending their frontier outposts toward the eastern base of the Rockies. Alexander Mackenzie of the Northwest Company pushed across the continental divide and down the Fraser and Bella Coola rivers to the sea in 1793 in the vanguard of this commercial expansion. In exchange for furs they provided—among other novel items of great interest to the Indians—guns and ammunition (Giannettino 1977). Just as the Indians quickly perceived the value of horses to their way of life, they could appreciate guns as vastly superior to their own hunting and fighting equipment. As each group acquired guns from the fur traders, they put them to use to press their newfound advantage over their unarmed western neighbors. The latter in turn were forced to obtain guns for themselves, for defense on their eastern flank and for offense on their western borders. Horses and guns, once made available, spread inevitably, the desire for them feeding on the consequences of their possession.

This new pattern of warfare, while a dramatic innovation, probably had little effect on the basic ecological relations of people and resources along the mid-Columbia River. Bison hunting may have substantially increased game in the diet of groups on the eastern borders of the Plateau—of Flatheads, Nez Perces, and Cayuses (cf. Farnham 1906 [1841]:329). These were the Plateau peoples most active in the bison-hunting "task groups" (Anastasio 1972 [1955]), all groups with limited access to the salmon resources of the mid-Columbia. For mid-Columbia Indians, however, bringing bison meat home would have been like "carrying coals to Newcastle" in light of the abundance of salmon at their doorsteps. More important for them, I suspect, was the value of bison skins for robes and blankets, which might then be traded for surplus food or given in marriage exchanges. James Selam still keeps an old bison robe obtained by trade from Montana, which was handed down from his grandmother's grandmother.

Horses soon became accepted as standards of wealth, movable wealth that needed only to be set loose to feed on the nutritious range grasses (referred to collectively in Sahaptin as waskú), abundant on the low plains and into the mountains. Such wealth gave impetus to ambition, in most hunting-gathering societies severely restrained in the interests of band harmony (cf. Lee 1979).

The word for horse in Sahaptin is ƙúsi; dog is ƙusi-ƙúsi, or "little horse." (Curiously we find the same equation in a number of other, unrelated Indian languages such as Blackfeet, Sioux, and Cree [Roe 1955:61, 104].) It seems safe to assume that before there were horses, dogs were called ƙúsi. (Alternatively, we might interpret this linguistic evidence as support for James Selam's belief in the autochthonous horse.) Horses, when first encountered, might have been described as ƙusi-wáakuł, "dog-like," which was a common linguistic convention (Hunn and French 1984). Only later would the horse have co-opted the dog's name as its own, leaving the dog as the junior partner. But why horse and dog? Why not, as in the case of the Pomo of California, relate the horse to the deer (Bright 1960:217), a biologically more defensible position, as both horse and deer are ungulates while the dog is a carnivore? The similarity of dog and horse is clearly one of cultural role rather than of morphological or behavioral resemblance, the latter principle constituting the basis for modern scientific biological taxonomy. Dogs and horses were more nearly human than their wild counterparts, coyote and deer. They lived with humans as pets (ƙákya) and helped humans at their labors—dogs for twelve millennia as hunting partners, camp guards, and garbage collectors, and horses in the ways I have noted. Neither was considered edible by most Plateau peoples, who were rather disgusted at the fact that Lewis and Clark's men much preferred dog and horse flesh to the Indians' dried roots and fish.

Horses remain, ironically, a symbol of the old Indian way of life. Several hundred run wild over the Yakima Reservation foothills. The tribe protects them against the urgings of stockmen who see wild horses as economic competitors. James Selam fondly recalls rounding up wild horses as a young man. In the old days, horses were recognized individually and their owners' rights respected. Branding was thus unnecessary before whites arrived. James believes that Indians had a special way with wild horses, an empathy that allowed them to walk right up to a mustang and to break it with ease. He regrets that the traditional Indian horse, small and hardy, has been so interbred with other stock that the true "cayuse" is now rarely seen. His Sahaptin vocabulary is rich with horse terminology, including terms for at least thirty "breeds" (see Appendix 1).

Outside Impacts II: Pestilence

The new life promised by the coming of the whites and widely prophesied brought a very high price. As far as can be ascertained at present the first bill came due about 1775. Robert Boyd believes, based on a meticulous survey of early documents, that the first wave of smallpox might have come from the west about 1775 from ships exploring for furs along the north Pacific coast (1985:81–90), rather than up the Missouri in 1782, date of a well-documented epidemic that swept across the Plains. Perhaps that later epidemic exhausted itself among the immune survivors of the earlier outbreak on the Plateau.

Smallpox again rampaged along the Columbia in 1801, attacking a new generation of susceptibles grown up since the first visitation (Boyd 1985:99–100). This likely carried off another 10 to 20 percent, reducing the original population to about one half by the time of Lewis and Clark's exploration. In their journals Lewis and Clark describe old men with pockmarked faces among the Upper Chinooks of the Lower Columbia River and were told that the disease had struck a generation before (Thwaites 1959 [1904], 4:241; see also Boyd 1985:78–80, 91–92, 102–3). Smith documents its ravages among the Nez Perces at about the same time (Drury 1958:136). Two more waves of smallpox may have afflicted Indian people on the mid-Columbia. An outbreak of disease reported in 1824–25 (Boyd 1985:338–41) may have been smallpox. The epidemic of 1853 was documented in detail by the McClellan railroad survey party as they conducted their explorations for a cross-Cascades rail route (McClellan 1854; see Table 1.).

Smallpox was devastating, but proved not to be the worst killer of Indians. That distinction is awarded to a disease described as "fever and ague" that broke out at the Hudson's Bay Company's Fort Vancouver headquarters in the summer of 1830 (Cook 1955; Boyd 1985:112–45). It raged unchecked for four years before abating. It was clearly seasonal, dying back in winter only to flare out again each summer. It emptied the Chinookan villages of the lower Columbia and decimated Indian populations throughout the Willamette Valley and in the densely settled Central Valley of Califor-

TABLE 1
Plateau Epidemic History (Boyd 1985:336–37)

Epidemic Area/ Ethnolinguistic Unit	1770s smallpox	1801 smallpox	1807–8 "distemper"	1824–25 "mortality"	1831–37 respiratory diseases	1844 pertussis, scarlatina	1848 measles	1853 smallpox	18 sma
(*Subarctic*)									
Carrier									
Chilcotin					X[c]				
Northeast Area									
Lillooet				[b]					
Thompson									
Lower									
Upper			X						
Nicola									
Shuswap									
Fraser									
Northwest Area									
North Thompson									
Kamloops			X						
Kutenai			X						
Upper									
Flatbow									
Central Area									
Salish group									
Flathead			X		X		X		
Pend Oreille/ Kalispel									
Spokan			X[a]	(X)		S	X	X	
Coeur d'Alene			(X)[a]	X				X	
Okanagan group									
Colville/Lake					X		X	X	
Nespelem/ Sanpoil/Sinekalt				(X)					
Sinkaietk/Methow								X	
Okanagan/ Similkameen				X					
Columbia group								(X)	
Chelan								(X)	
Wenatchee								(X)	
Sinkiuse							X	X	
NW Sahaptin								(X)	
Kittitas								(X)	
Yakima				X			X	X	
Klikitat							(X)	X	

TABLE 1 (*continued*)

Epidemic Area/ Ethnolinguistic Unit	1770s smallpox	1801 smallpox	1807–8 "distemper"	1824–25 "mortality"	1831–37 respiratory diseases	1844 pertussis, scarlatina	1848 measles	1853 smallpox	18… small…
Central Area	←	←		- -	- -			- -	
CR Sahaptin	—	—		- -	- -	P	X	- -	
Tenino-Tygh	—	—		- -	- -	P	X	- -	
Wayam/Skin	—	—		- -	- -	P	X	X	
Umatilla/John Day	—	—		- -	- -	P	X	- -	
NE Sahaptin	—	—		- -	- -		(X)	- -	
Walla Walla	—	—		X	X	P	X	- -	
Wanapam	—	—		X	- -		(X)	- -	
Palus	—	—		- -	- -		(X)	- -	
Southeast Area	—	—		- -	- -		- -		
Nez Perce	—	—		- -	X	S	- -		
Lower Snake	—	—		- -	- -	—	- -		
Clearwater	—	—		- -	- -	—	- -		
Upper snake	—	—		- -	- -	—	- -		
Cayuse	→	→		X	X	P	X		

[a]1819 "Grate Sickness"
[b]1827 pertussis
[c]1836 smallpox
X = documented; (X) = undocumented; P = pertussis (whooping cough); S = scarlatina (scarlet fever)

nia. Sober estimates of the mortality directly or indirectly attributable to this scourge in the four-year span of 1830 to 1833 is 90 percent!

Historical epidemiologists are largely in accord on the identity of this disease as malaria, though it was no doubt frequently complicated by influenza and other exotic diseases ready to take advantage of a body weakened by the struggle against malaria. The requisite anopheline mosquitoes thrived along the Columbia east to near The Dalles and required only the introduction of the disease agent in the blood of an infected passenger of one of the numerous trading vessels arriving from the Mexican coast, where malaria had arrived with the African slaves brought to work colonial plantations in the sixteenth century. But the "fever and ague" did not spread much above The Dalles, sparing the Plateau peoples the near total extinction suffered downriver. Nor did it spread north to Puget Sound or Canada. There are no suitable mosquito species in those areas. Oregon's major cities bear names such as Portland, Astoria, Eugene, and Salem, while Washington's have Indian names such as Seattle, Tacoma, Spokane, and Yakima (Ramsey 1977:xxi), reflecting the distribution of malaria.

Though spared from malaria, the Plateau people next found themselves in the path of thousands of immigrants crossing the continent over the Oregon Trail (see Table 2). Seasonal respiratory diseases had become commonplace among the Indians who congregated at fur trading posts each winter (Boyd 1985:341–48), a pattern repeated at the missions. In 1843 after a tour east, Marcus Whitman returned to his Walla Walla mission at the head of a train of one thousand settlers. This scene was to be repeated each subsequent year. With the immigrants came a potpourri of diseases against which the Indians had no resistance. In 1844 there was scarlet fever and whooping cough, in 1846 more scarlet fever, and so forth (Boyd 1985:349–50). Many white settlers saw this mortality of the Indians as an act of God,

TABLE 2
Immigrants at the Whitman Mission, 1841–47

1841	1842	1843	1844	1845	1846	1847
25	100	800	1,500	3,000	1,500	5,000

Note: From National Park Service, Whitman National Historical Monument.

clearing the rich bottomlands of the Willamette for Christian settlement (Scott 1928).

The coincidence of Whitman's hosting the hordes of settlers arriving late each fall from their arduous overland journey and the outbreak of new epidemics was not lost on the Indians. When measles erupted about the time of the immigrants' arrival in 1847, the Indians concluded that Whitman's murderous influence must be stopped. Ironically, in this case it is more likely that measles was introduced earlier that summer by Indians returning from an expedition to California (Heizer 1942).

On November 29, a group of Cayuses attacked the mission, killing Whitman, his wife, and eleven other whites, and taking some fifty captives, subsequently ransomed by Peter Ogden of the Hudson's Bay Company. This brought an abrupt end to the initial period of missionary activity in the Plateau. The massacre inspired revenge and fear among the settlers and initiated a series of violent confrontations—the Cayuse, Yakima, and Palouse "wars"—between whites and the remnants of the Plateau peoples. These conflicts were concluded some thirty years later with the effective confinement of the majority of the Indians to reservations.

The history of Indian-white relations in the Columbia Plateau has been first and foremost a history of the ravages of disease, for the most part inadvertently transmitted by Old World immigrants to defenseless New World populations (see fig. 2.1), which drastically reduced aboriginal populations and disrupted the social and spiritual fabric of Indian life. After the treaties were signed and the Indians confined to reservations, the significance of introduced diseases faded and political events affecting Indian life took center stage.

Outside Impacts III: The Fur Trade

Elegant fur clothing was in demand among European and Chinese elites late in the eighteenth century. Staggering profits could be made with luck, industry, daring, and access to the untapped potential of the North American forests. The Hudson's Bay Company (HBC) claimed first rights to the furs of the boreal forests of the Arctic-bound rivers west to the MacKenzie and had a secure foothold on the Northwest Coast.

The Northwest Company (NWC), also British-owned, controlled the St. Lawrence–Great Lakes axis and was rapidly expanding west across the

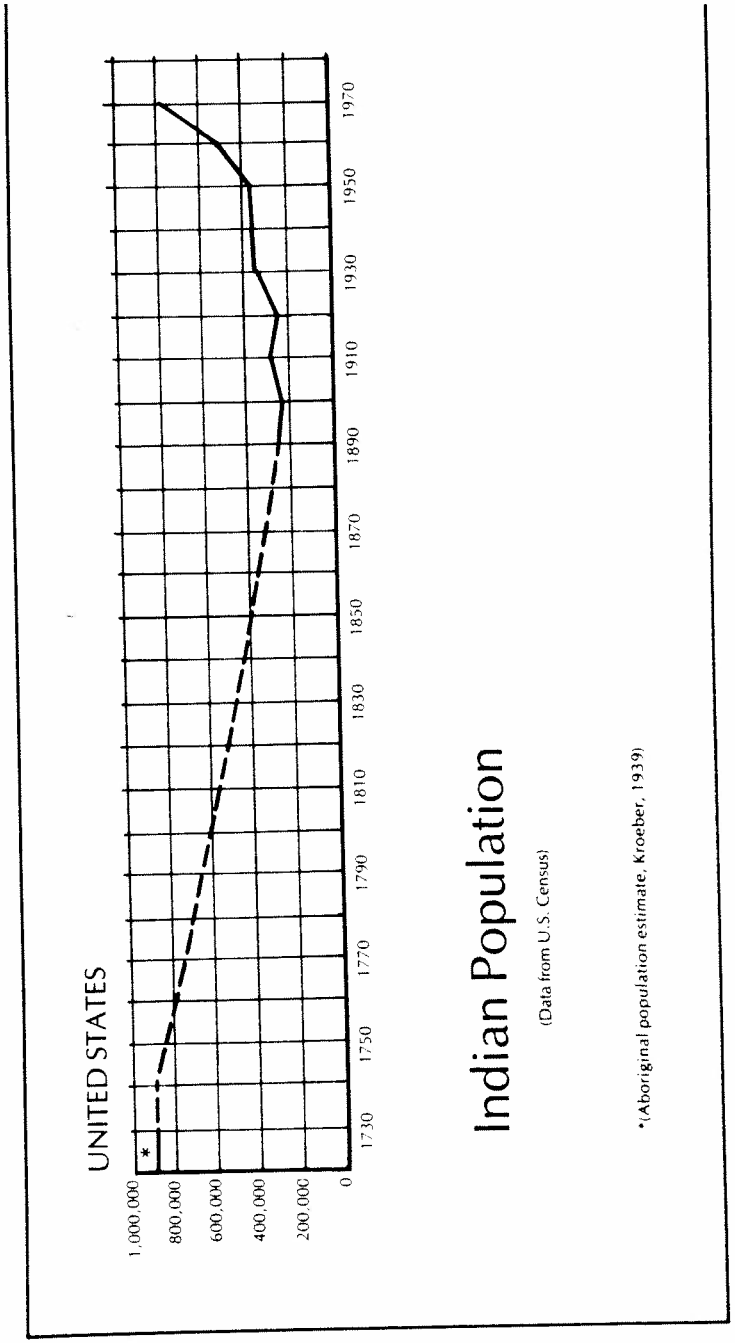

Fig. 2.1. Indian population trends (reprinted from *Oregon Indians*, Zucker et al. 1983:152, with permission of the Oregon Historical Society Press).

continent at the southern edge of the great northern forests, portaging from Lake Superior to Lake Winnipeg and thence up the Saskatchewan and Athabaska rivers toward the Rocky Mountains. Alexander Mackenzie crossed the divide in 1793 exploring for this company, and Simon Fraser persevered down the Fraser to its mouth in 1808. David Thompson laid the foundation for the Northwest Company's dominant trading position in the northern Plateau during his travels of 1807–11, a truly remarkable exploration and careful mapping of the Columbia's headwaters. His maps are of striking detail and accuracy. He also established good working relations with local native peoples and founded a series of posts in Kootenai, Flathead, Spokane, and Pend Oreille territory before pushing down the Columbia River to Astoria in 1811.

These British companies, relying heavily on French-Indian trappers who had learned the fur business during an earlier period of French colonial hegemony, were busily engaged in setting up long overland supply routes and communication lines (the NWC's route passed through Red Deer and Montreal, to London while the HBC's route went via York Factory on Hudson Bay, thence by ship to London). Simultaneously, the Americans were pursuing a daring alternative bankrolled by John Jacob Astor. Astorian ships (of the Pacific Fur Company) out of New York rounded Cape Horn, touched base in Hawaii (the "Sandwich Islands") where native seamen were recruited (some of whom subsequently married Northwest Indian women and were absorbed into local Indian society), then turned northwest seeking out the Columbia River mouth. After crossing the river's treacherous bar, Astor's ships docked at their outpost, Astoria, established in 1811 just before Thompson's arrival from upriver.

Northwest furs were collected here from throughout the Columbia drainage basin for shipment to China. There they were exchanged for rare spices, silks, and tea for resale in New York and Boston (see fig. 2.2). Thus, the Americans came to be known to the Indians as "Boston men" (páštin).

The Astorian operation involved an overland link for rapid communications. The first Astorian overland party met a series of misadventures seeking a way down the Snake River, but it eventually won through to the Columbia. In the process the party discovered the South Pass route and defined what subsequently became the Oregon Emigrant Trail, artery of Northwest colonization. The budding rivalry between Britons and Americans for the Northwest fur trade was aborted by the War of 1812. Astor, fearful of a British blockade, chose to sell his entire Columbia operation to

traditional indeterminacy as to the b ned and died before they could bring
tity. This indeterminacy today has
"tribal" membership has become th The Methodists sent Jason Lee with
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Outside Impac

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his Northwest Company rivals. Many of Astor's employees stayed on to work for the NWC, notably Alexander Ross, David Stuart, and Donald Mackenzie, important figures in the next two decades of Northwest fur trade history (Meinig 1968:48–95).

The Columbia Department never proved a great producer of furs. In part this may be attributed to the fact that a good fraction of the territory is not forested and supported relatively few fur bearers. Equally significant is the fact that Plateau Indian people were simply not interested in trapping furs for trade (G. Simpson in Merk 1968:42, 54). Nez Perces considered it beneath their dignity; they "spurned the idea of crawling about in search of furs" as a life "only fit for women and slaves" (quoted in Meinig 1968:52). More important perhaps is the fact that mid-Columbia River Indians relied primarily on roots and fish for an ample subsistence, while hunting and trapping had been much more central to the aboriginal subsistence strategies of the boreal forest Indians with whom the fur traders had been dealing east of the Rockies.

The Plateau was nevertheless strategically located for fur extraction from the highly productive New Caledonian (forest region of the headwaters of the Fraser, Yukon, and Peace rivers) and upper Snake River territories. Furs from New Caledonia could be shipped more economically via a short portage at Kamloops to the Okanogan and by that river to the Columbia, down the Columbia to the sea and to market by ship, than overland to the east.

Meanwhile, following the 1818 agreement between Britain and the United States to share the "Oregon country," the Northwest Company embarked on an aggressive Snake River strategy designed to deny that region's furs to the Americans (G. Simpson in Merk 1968:46). "Brigades" of trappers (not local Indians) were provisioned each summer at Astoria (renamed Fort. George after the British takeover in 1813 and moved to Fort Vancouver in 1825 under Hudson's Bay Company control). They packed their provisions up the Columbia to the Walla Walla by canoe, then loaded their goods on horseback for the overland passage to the upper Snake. Here they devoted the winter to intensive trapping on all the Snake's tributaries, returning with their furs to Astoria (or Fort Vancouver) in June of the following year. (The journals of several Snake River brigades have been published, as, for example, that of John Work for 1826–27.) At Astoria the joint fur production of New Caledonia, the upper Columbia, and the upper Snake was loaded on a London-bound ship.

The Plateau Indians' role in this operation was more that of spectator than participant, though they were essential sources of horses used by the overland brigades and—curiously—they were major providers of venison for fur company personnel, who disdained fish and native roots. The Columbia River was the main link in these commercial chains and Fort Nez Perce—established at the mouth of the Walla Walla River by Donald Mackenzie in July of 1818—eventually became the nerve center of the entire inland operation, located as it was at the strategic junction of the Snake and Columbia-Fraser shipping routes. Fort Nez Perce retained this importance until the 1846 treaty established 49° N as the U.S.–Canadian boundary. The post here—"fort" is a more descriptive term—became known as the "Gibraltar of the Columbia" and saw some of the most intense Indian-white interactions of the period.

Indian–fur trader relations were relatively benign, since the goal of the trade was a profitable business in furs. To that end the Indians had to tolerate the traders' presence, even be willing to assist by providing trading posts with horses and venison. The Indians were otherwise free to pursue their seasonal rounds and traditional social relations. Traders actively discouraged intergroup warfare, however, as an impediment to free movement of the trapping brigades. (This warfare was originally inspired—or at least exacerbated—by the guns and ammunition provided to the Indians by the traders.)

Social and cultural impacts were substantial, but largely unintentional. Foreign diseases have been mentioned as one consequence of the fur traders' presence. Also important and unintended was the sometimes fatal attraction that fur posts had for nearby Indian people as a source of material goods and food. Fur posts soon formed the nucleus of large winter concentrations of Indians, as many found it easier to rely on the obvious abundance in the fur traders' larder than on their own subsistence efforts. Crowds of poorly nourished Indian people provided ideal conditions for the spread of influenzas, and increased winter mortalities were noted in the neighborhood of the fur posts as early as 1810 (Boyd 1985:341–48).

Marriages between Indian women and European or Métis trappers had the effect of expanding the Plateau Indian social network to include individuals of radically different world views. Some twenty Catholic Iroquois trappers married into Flathead society about 1820 and are credited with providing the eastern Plateau Indians with their first instruction in Christian ritual practice (Frisch 1978). The openness to intermarriage continues today, as shown by Walker's Nez Perce marriage statistics (1967c), maintaining the

traditional indeterminacy as to the boundaries of "tribal" and Indian identity. This indeterminacy today has new consequences because ethnic or "tribal" membership has become the legal basis for access to a variety of valuable rights and property.

Outside Impacts IV: Missionaries

Fur traders were at least nominally Christian and, as we will see in chapter 7, provided models for the emerging prophet dance rituals of worship, superficial but conspicuous borrowings. The fur traders' resistance to diseases that decimated the Indians was attributed to their spiritual powers and to the power of the writing in their books. Following the Hudson's Bay Company's takeover in 1821 and HBC Governor Simpson's inspection tour of the Columbia Department in 1825 (Merk 1968), several chiefs' sons were brought to the Company's Red Deer headquarters to be educated in the English manner.[2] Disease took the lives of most of these young men, but one, "Spokan Garry," returned to a position of influence bolstered by his ability to read from the Book and to communicate with the foreigners in their own language (Jesset 1960).

Inspired by Garry's success, a delegation of four Nez Perce and Flathead young men set out eastward intending to petition directly to the whites for a teacher of their own (Haines 1937; Smith in Drury 1958:106–7). They straggled into St. Louis in the summer of 1832, riding a cresting wave of messianic zeal and piety that spread throughout the young United States in the wake of the publication of William Walker's "Macedonian cry" (1833; Haines 1955:57–70).[3] Historical accounts indicate that these Plateau emissaries were well received by none other than William Clark, of Lewis and Clark fame, now elevated to the rank of general. Yet, the spectre of disease intrudes again. All four of the petitioners sickened and died before they could bring their news back home.

The missionary societies responded. The Methodists sent Jason Lee with Nathaniel Wyeth's fur brigade in 1834. Lee took one look at the arid Plateau and proceeded apace to the lush (and largely Indianless, thanks to the "fever and ague" of 1830–33) Willamette Valley, where he established a mission that served the immigrants. The rival ABCFM (American Board of Committees for Foreign Missions, a joint Presbyterian, Congregational, and Dutch Reform effort, active in Hawaii since 1820) sent Samuel Parker and Marcus Whitman with an 1835 brigade. Parker visited the Nez Perces while Whitman returned overland to recruit a permanent missionary contingent for the following year.

Parker explored mission opportunities among the Nez Perces' neighbors before proceeding down the Snake River to the Columbia and Fort Vancouver where he caught a ship for home. His published travelog (1846 [1838]) is of ethnohistorical value, but was of no help to the Whitmans and Spaldings who returned overland in the summer of 1836 just as Parker was setting sail.

The Whitmans established their mission on the Walla Walla in Cayuse territory; the Spaldings moved on to Lapwai to address the Nez Perces. In 1838 the Walkers and Eellses arrived to set up the Tshimakain mission to the Spokanes, and the Methodists sent Perkins to join with Jason and Daniel Lee in founding a station at The Dalles. Like the Hudson's Bay posts, the mission compounds were supported by farming operations. Self-sufficiency, however, was only a secondary goal of the missionary farmers. Uppermost in their minds was the goal of transforming their nomadic charges into "civilized" farmers. As Henry Spalding noted, "no savage people . . . have ever become Christianized on the wing . . ." (quoted in Meinig 1968:123). The Indians' mobility was a great impediment to the missionaries' efforts at schooling the Indian children in "civilized ways" and in eradicating sinful practices, such as the polygamy of chiefs and other influential men. As spiritual shepherds they were intent on corraling their restless flock.

Whitman and Spalding had considerable initial success. By 1843 they reported 234 children in school and 140 Nez Perces farming wheat, corn, and potatoes at Lapwai, and 60 Cayuses farming at the Waiilatpu mission (Meinig 1968:136). Perkins and Lee are credited with 1,000 conversions in their great winter revival of 1839–40 at The Dalles (Perkins 1843, 1850). However, settled farming life represents a radical break from the social and ecological patterns familiar to hunting-gathering peoples, and the Indians

2. Simpson also encouraged—rather, demanded—that HBC posts establish farms to reduce the cost of provisioning personnel and at the same time reduce their dependence on the local Indians for food. To that end he ordered the headquarters of the Department moved from Astoria (known as Fort George since the British buyout in 1813) to Fort Vancouver, where the land was better suited to farming.

3. As Christopher Miller (1985) has shown, the apocalyptic visions of the Indian prophets were strangely reflected in the apocalyptic visions of the Americans of that day, who saw in the heathen Indians a golden opportunity to prove that America was to be the governmental seat of the Millennium before Christ's triumphant and eagerly awaited return.

soon reverted to their time-tested seasonal rounds, leaving the missionaries with empty pews.

Yet the missionaries' example was not ignored and Indians miles from the missions took up farming and the rearing of cattle as an adjunct to their traditional economic activities. (They were already highly knowledgeable about plants, their life cycles, and the conditions favoring plant growth.) Joel Palmer, subsequently named Indian agent for Oregon, noted in 1845 that Indians camped on the Umatilla River were peddling their farm produce to passing immigrants on this branch of the Oregon Trail (1906 [1847]:111). Clearly, in this case the Indian farmers had no intention of growing all their own food but rather adopted farming as a means to obtain the white man's goods through exchange.

The heyday of this first round of missionary activity on the Plateau was brief, beginning with Whitman and Spalding's arrival in 1836 and ending abruptly after the death of the Whitmans in 1847. The "massacre" at Waiilatpu led to the precipitous abandonment of most existing mission stations, Protestant and Catholic alike. It marked the beginnings of military pacification, the forced Indian resettlement on reservations, and the onslaught of white settlement, a process essentially complete in the Plateau by the early 1880s.

Indian disillusionment with the missionaries, who first had been hailed as the miraculous realization of hopeful prophecy, was due to several factors. Foremost among these must be counted the progressive certainty in the Indians' minds of the association of epidemic disease and the presence of whites, an association interpreted quite reasonably as resulting from the superior spiritual forces controlled by the missionaries. This belief that an excess of spiritual power leads to *murderous* power is a deep article of Plateau Indian faith. An Indian doctor with too much power eventually becomes a watay-ɬam, "one who kills people with power." So the Cayuses killed Whitman in self-defense to prevent the final extermination of the Indians by his power. As Smohalla said, "Dr. Whitman many years ago made a long journey to the east to get a bottle of poisen (*sic*) for us. He was gone about a year [1842–43], and after he came back strong and terrible diseases broke out among us. The Indians killed Dr. Whitman, but it was too late. He had uncorked his bottle and all the air was poisened" (Mooney 1896:724–25). Disease was simply the symptom of a deeper spiritual cause.

In truth, in 1842 Whitman had returned to ABCFM headquarters in Boston to appeal the board's order dismissing Spalding and closing the missions at Waiilatpu and Lapwai (Drury 1958:241, 335). This radical decision on the part of the ABCFM Prudential Committee had been transmitted in a letter of February 1842, received at the Oregon missions that October. The decision—rescinded the following year—was based largely on a series of highly critical letters sent to the ABCFM by Asa Smith, an ABCFM missionary sent west in 1838 to join the Whitmans and Spaldings. He pushed for an independent station and was authorized to establish a mission at Kamiah, upstream from Spalding's mission at Lapwai and deep in the heart of Nez Perce country.

Smith's letters reveal a deep skepticism about the entire Northwest Indian missionary enterprise, doubts not entirely reducible to Smith's ingrained pessimism. Smith was a well-educated man trained in Latin and Greek, and he took the task of learning the native language seriously. "Without a knowledge of the language we are useless," he intoned, and "the difficulty of translation seems almost insurmountable" (Drury 1958:104, 138). He worried at length over how to faithfully convey the true meaning of such words as "baptism" (Drury 1958:112). (Perkins at The Dalles similarly puzzled over how to translate "prophet," "hallowed," and "blessed" into Sahaptin, n.d. [1838–43], Book 1:6–8.) Smith chastised Spalding for admitting two Nez Perces, Timothy and Joseph (father of Chief Joseph of later fame), into the church: ". . . those individuals were admitted to the church without any articles of faith or covenant *in their language* [author's emphasis] & no one is able to explain the articles of faith & covenant satisfactorily in the Nez Perce language. Consequently they know not what they are required to believe" (Drury 1958:143).

Smith finally despaired of his mission to the Nez Perces because of the language problem. He calculated that it would require years of effort at substantial expense to translate the scriptures into a language which he estimated was spoken by less than 2,500 people and which was, in his judgment, doomed soon to die out altogether. (A prophecy not yet realized!) How could such a mission be justified when, "The same array of means . . . is necessary here for 3000, as needed for the millions of Siam, or of China" (Drury 1958:141).

Smith also took issue with Spalding's insistence on converting the Nez Perce Indians to a settled farming life. He argued on the basis of a rather astute ecological analysis that settling the Nez Perces would prevent them from providing for their own subsistence, which he correctly judged required a highly dispersed and mobile settlement pattern (Drury 1958:134–35, 182). The missionaries would thus be forced to feed them as well, at

great expense and at the cost of destroying their self-reliance, a moral value esteemed highly by the Calvinist denominations of the ABCFM. Clearly, Smith's doubts were worthy of serious consideration by the mission board, ad hominem attacks aside.

Smith's departure from the mission field in the spring of 1841, however, removed an irritant from the Plateau mission community, and the Cayuse and Nez Perce missions were allowed to continue, despite increasingly hostile relations with the local Indians.

Schisms among Christian denominations were another source of Indian disillusionment. Other Protestants were tolerated by Whitman and Spalding, but Catholics were viewed as agents of the anti-Christ. Papal paranoia was a strong force in the early American world view, and the successes of the itinerant "black robes," as the missionary Catholic priests were known to the Indians, inspired Protestant missionaries to ever more aggressive proselytizing. Catholic influence originated with the French Canadian fur trappers in the Hudson's Bay Company's employ long before Fathers F. N. Blanchet and M. Demers passed through the Plateau in 1838. Subsequent Catholic missions were established along the Flathead River in the Bitterroot Valley, on the St. Joe River in Coeur d'Alene country, on the Umatilla River (where Father A. N. Blanchet moved in with a chief's family), and on Ahtanum Creek among the Yakimas. They also set up camp opposite the Methodist mission at the Dalles, making the mid-Columbia a battleground for Indian allegiance (see fig. 2.3).

Religious conflicts masked underlying national rivalries, pitting Protestants, symbolic of American "Manifest Destiny," against Catholics who symbolized European colonial control. Some historians suspect that Whitman's return at the head of a party of 1,000 emigrants was part of an official strategy of American preemptive settlement of the (then) disputed Oregon Territory (Miller 1985:142–43)—which was not incorporated into the United States until 1846—to forestall British designs there. So Whitman did bring back the "bottle of poison" in his role as emigrant guide and host. His mission at Waiilatpu—and Perkins' at The Dalles also—came to be primarily a travelers' hostel, until the Cayuses took their desperate action.

Though Ogden of the Hudson's Bay Company ransomed the Whitman hostages, the HBC was already in the process of selling its assets south of the 49th parallel and redirecting its coastal transshipment operation via Fort Langley on the Fraser delta. So ended both the era of the early missions and the era of the fur trade. So began the hegemony of the United States.

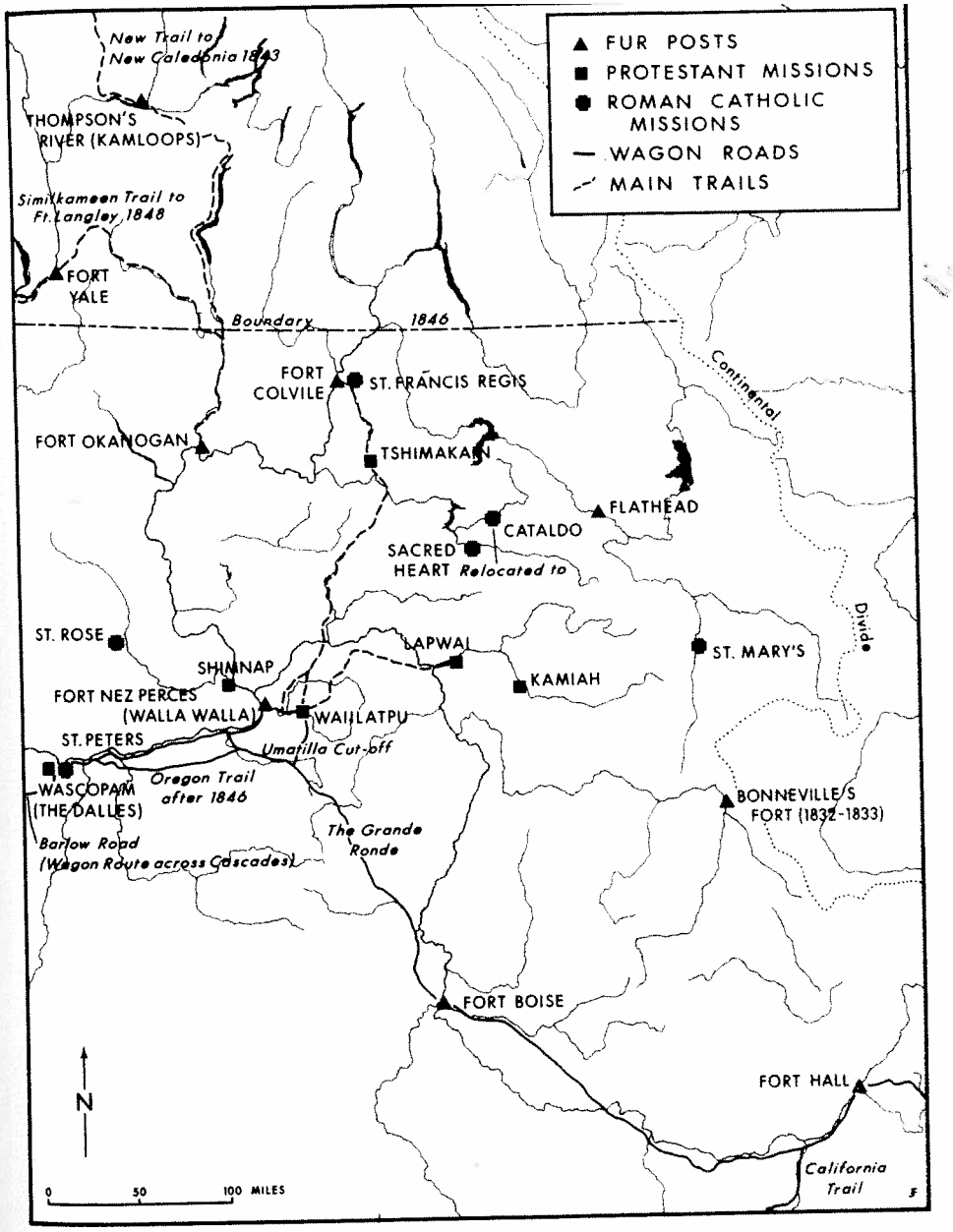

Fig. 2.3. Early missions and fur posts (Meinig 1968:113).

The "Indian wars" of the Northwest have fascinated history buffs for a long time and the literature on the subject is voluminous. The Indians' fate, however, was already sealed before those conflicts began. The heroism of Chief Joseph of the Nez Perces and of the Yakima leader Kamiakin must be understood in the context of their despair at the destruction already accomplished by virus and protozoan. A "different kind of man" had come and the world was indeed falling to pieces (Miller 1985:ii). Governor Isaac I. Stevens of the recently created Washington Territory (carved in 1853 from the Oregon Territory that had been established in 1848) was motivated by one goal, to gain legal title to the land so that settlement might proceed unhindered by the "dying race" of Indians. The chiefs who signed Stevens' treaties had no chips left with which to bargain. They did not know how the paper they were marking with their "X" marks would determine the fate of their twentieth-century descendants. How could they? They knew well that the whites coveted their lands. They also sensed the hopelessness of their position as defenders of their ancestral homes. Selling their birthright in the name of their fellow Indians was certainly an act they could scarcely contemplate or understand. We will never know what was in the chiefs' thoughts as they made those marks on the treaty papers. We do know, however, what those marks mean today.

Treaties

Between 1778 and 1871 the government of the United States negotiated and signed 371 treaties with Indian groups of the present-day United States (Zucker, Hummel, and Høgfoss 1983:69). Many were never ratified by the U.S. Senate, the body constitutionally empowered to make treaties in the name of the United States. Others were rescinded, modified, misapplied, or ignored in the years that followed, until Congress voted in 1871 that "no treaties shall hereafter be negotiated with any Indian tribe within the United States as an Independent Nation or People." Subsequent Indian reservations were established (and rescinded) by executive order (as in the case of the Colville, Spokane, and later Nez Perce reservations).

The earliest treaties reflected the reality of a balance of power between *sovereign* Indian governments and the still-tenuous power of the youthful United States. By the mid-1800s the balance of power had shifted dramatically, and treaty-making had degenerated into a legal ritual directed by government agents as a means to acquire title to the Indian land base. Newly appointed Washington Territorial Governor Isaac Stevens had a carefully laid plan that in just one or two years would free up the entire territory for white settlement, leaving the surviving Indians tucked safely away on reservations off the lines of travel and land development. This plan reflected both Stevens' ambition and his Washington, D.C., superiors' instructions. Then federal Indian Commissioner George Manypenny wrote to Stevens directing him to "enter at once upon negotiations . . . having for principle [*sic*] aim the extinguishment of the Indian claims to the lands . . . so as not to interfere with the settlement of the territories" (in Relander 1962:39). Stevens responded that "the large reserve [i.e., that of the Yakima] is in every respect adapted to an Indian reservation. . . . It is off from the wagon route to the sound over the Cascades" (Relander, p. 44).

The treaties he offered the chiefs and headmen who gathered to hear his proposals in the Walla Walla Valley in June 1855 were virtually word-for-word the same as those offered the previous year to western Washington tribes at Medicine Creek, Point Elliot, and Point No Point. Only the signatories' names, the boundaries, and a few compromise provisions differed. The boundaries of the lands to be ceded to the United States (see Appendix 5, Article I) were already drawn so that, if and when all his proposed treaties were signed, every square inch of the territory would be covered (see fig. 2.4). These land cessions were to be granted *by the Indians* in exchange for a guarantee of exclusive use of a reservation and its resources (see Appendix 5, Article II) and of *use in common* with the settlers of traditional resources at "usual and accustomed places" (Article IV), plus grants of technical and economic support (Articles IV and V).

The special relationship established by treaty between the members of an Indian "tribe" and the federal government has been defined more precisely by a series of court cases—most notably a decision of the U.S. Supreme Court handed down in 1832 by Chief Justice John Marshall in the case of *Worcester* vs. *State of Georgia*. These "consider the several Indian nations as distinct, political communities within which their authority is exclusive, and having a right to all the lands within those [reservation] boundaries, which is not only acknowledged, but *guaranteed* [my emphasis] by the United States" (in Zucker, Hummel, and Høgfoss 1983:68). Subsequent Supreme Court decisions declared the fundamental principle that whatever rights were not specifically ceded by treaty were reserved by the signatory Indians.

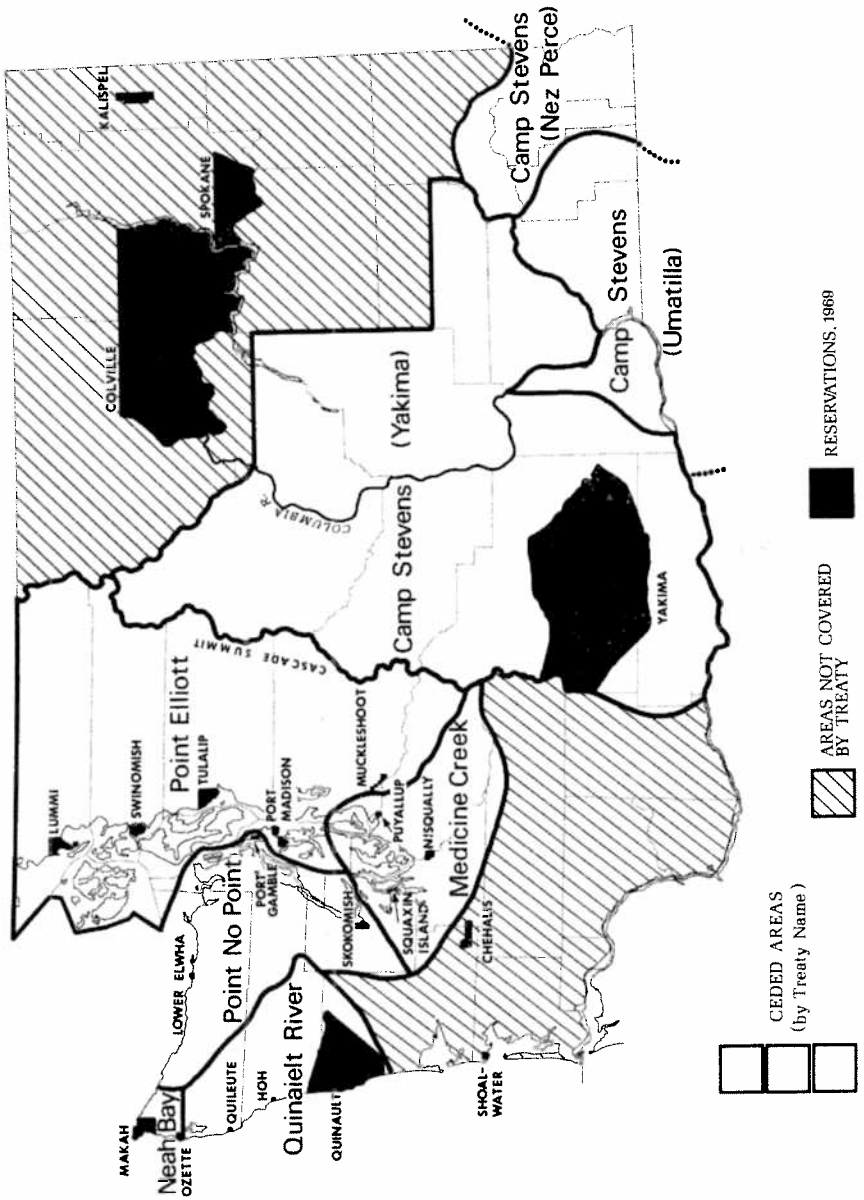

Fig. 2.4. Treaty cessions and reservations (American Friends Service Committee 1970:22).

Thus, the special "privileges" that treaty Indians appear to have been given by the U.S. government are rather their prior and inextinguishable rights, not granted to them on the basis of their "racial" origin—as some contemporary critics of Indian treaty rights assert—but *reserved to them* by virtue of their prior legal claim as "first citizens" of this land.

Opponents of the continued existence of distinct Indian communities make much of the alleged "paternalism" of the government's role as legal guardians of their Indian wards. This is based on a fundamental misconception. Indians are not wards as individuals; rather Indian bands, tribes, and nations are recognized as dependent governments. The Yakima treaty (see Appendix 5, Article VIII) states, "the aforementioned confederated tribes and bands of Indians acknowledge their *dependence* [my emphasis] upon the government of the United States." Wardship is a relationship between governments, with the more powerful and physically encompassing United States government pledging to protect the internal political integrity of the less powerful dependent Indian states.

Opponents of treaty rights also interpret the Indians' special benefits as a form of government *welfare*. This is an even more pernicious misunderstanding. Some of the federal government services reserved for Indian people today may be seen as an attempt to live up to the spirit of the original treaty language. Consider Article V of the Yakima treaty (Appendix 5). In partial compensation for the value of the lands (some 10,000,000 acres) and other rights ceded by this treaty, the U.S. government promised to build and maintain two schools on the Reservation, providing the necessary "furniture, books, and stationary" and teaching staff, to be provided "free to the children of the said confederated tribes and bands of Indians." No expiration date is cited for this commitment. No such schools are being maintained on the Yakima Reservation today. So federal funds that have been made available in support of Indian education through the Johnson-O'Malley legislation of 1934 and subsequent acts of Congress should be seen not as "welfare," a word to raise the hackles of all red-blooded Americans, but as part of the federal government's payment for the ceded lands. This is not welfare; this is a minuscule annual installment paid toward a national debt.

Article V also promises "to build two blacksmith shops to one of which shall be attached a tin shop and to the other a gunsmith's shop; one carpenter's shop, one waggon and ploughmaker's shop, and to keep the same in repair . . ." and furnished with tools and craftsmen, who should instruct

the Indians in these trades. A hospital is also promised, as are medicines and a physician. The personnel are to be maintained at these jobs for twenty years after ratification (which came at last in 1859, by the hand of President James Buchanan). Clearly the language of these standardized treaty agreements presumed a federal interest in and responsibility for preparing the Indian people to deal with the new circumstances they must confront in the post-treaty era, as part of the U.S. government's promise to protect tribal autonomy and continued political existence.

Indian Responses to White Pressure

Indian responses to "treating" with the whites ranged widely. Three positions may be recognized along the continuum of divided opinion. There were intransigents, who held a position that very often led to their early death at the hands of armed whites or by capture and hanging after a preemptory trial. Such was the fate of Qualchan, hotheaded young son of Owhi (NWS: áwxi), a Kittitas chief. Many intransigents appear to have been young men acting out a rite of passage to adulthood recalling Plains Indian bravado. Their deaths were devoid of tragedy, as they were culturally meaningful. Such young men thus avoided being witness to subsequent events. However, their defiance often brought heavy-handed retribution from an equally hotheaded but much more numerous vigilante militia who did not often stop to inquire if they had gotten the right man.

At the opposite extreme were the cooperators. Best known in this role is the Nez Perce chief, Lawyer (Haines 1955:139–40, 159; Drury 1979). Mountain men for whom he served as guide gave him the name Lawyer for his shrewdness. His home village was Kamiah, where he served as Asa Smith's primary linguistic informant (1838–40). Lawyer clearly had established a position as a cultural mediator. It is instructive to note, however, that Smith makes no mention of Lawyer being a "chief," though he does identify others with that title. It seems clear that Lawyer successfully manipulated his position as cultural go-between to enhance his social position. He traded his cooperation at the treaty council (he alone among the Plateau leaders argued for signing the treaties forthwith) for political prominence and control of what ultimately remained as the heart of the Nez Perce Reservation, which included his home at Kamiah, site of the present-day Nez Perce agency (see fig. 2.5).

Lawyer is portrayed by some white historians as a traitor to his people. He

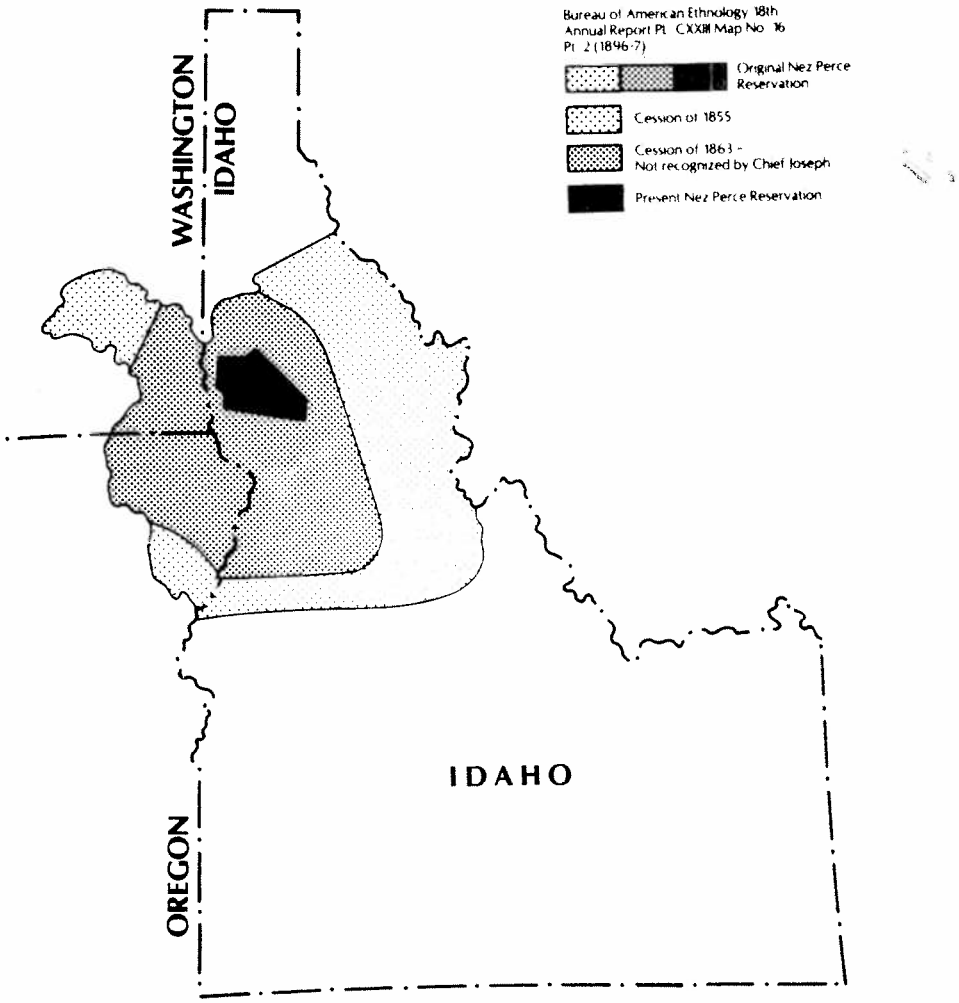

Fig. 2.5. Nez Perce reservation lands and ceded territory (Walker 1985 [1968]:47; reprinted with permission of the University of Idaho Press).

is held up as a contrary example to highlight the proud independence of the young Chief Joseph of the Wallowa band, who led the Nez Perce flight in 1877, eluding for months three United States armies. This judgment presumes that the Indians should have demonstrated their first loyalty to their own "Indian" people; that if they had "all hung together" they might not have each hung separately. This attributes an unrealistic sense of common purpose to Plateau Indian society and leadership and presumes as well that the Indians' defeat was somehow the result of their strategic errors rather than the inevitable consequence of their small numbers.

Had Lawyer withheld his suppport of the proposed treaties at the Walla Walla council, would the course of American history have been deflected from its path of explosive Euro-American expansion? One could more convincingly argue that had the Indians refused to sign in 1855, they would have suffered greater losses in the next decades in confrontations with territorial militias, lawless gold seekers, and the U.S. Army, and would find themselves today with no land base and no legally defensible fishing rights. Ironically, Lawyer's self-serving defection may ultimately have assured the survival of the Plateau Indians.

Lawyer was motivated by no such far-seeing altruism. His acceptance of the treaties and later conversion to Protestantism gave him a leg up in competition with his Nez Perce rivals for the favor of the powerful white "chiefs." He was using Governor Stevens for his own ends, a shortsighted strategy (when considered from certain twentieth-century vantage points), but a familiar and sensible one in the context of the political and cultural realities of his day.

A third stance vis-à-vis the whites was indecision. This was the dominant attitude of Chief Kamiakin of the Yakimas and Paluses and of the Young Chief Joseph of the Nez Perces. Both were mature leaders who felt strongly the heavy responsibility of their chiefly position for the welfare of their respective village groups. They were driven by neither bravado nor ambition to force the issue with the whites, so they hung back, maintaining a "low profile," speaking with painful reserve or keeping silent at the treaty councils. They cooperated with the whites only when they saw that resistance would be disastrous for their people. Both eventually led their people in resistance to the whites when they realized that their cooperation would require that they abandon the heart of their traditional responsibility to their people and to their land.

We are tempted to idealize Indian leaders of this era and to pass moral judgment on their actions. In this regard, it is instructive to solicit the opinions of contemporary Plateau Indians as to the reputations of these famous men among the descendants of their own relatives, allies, and rivals. I was surprised by Mary Jim Chapman's account of the Whitman massacre (generally attributed to the actions of Cayuse intransigents) as self-defense against Whitman's genocidal poisoning campaign—a view she shares with Smohalla. I was equally unprepared for James Selam's pride in the role of his Warm Springs relations as Army scouts in the fight against Captain Jack, leader of the Modoc resistance. James has long pursued a campaign to get the U.S. Army administration to grant at last to these Indian scouts recognition for their military contribution in the Modoc Wars, and thus to award the appropriate pensions to their surviving families. The fact that the Warm Springs scouts contributed to the defeat of their "fellow Indians" carried little weight with James (his ancestors often raided the Klamath-Modoc for horses) as no sense of "racial" common cause governed Indian loyalties at that time.[4] I was also somewhat taken aback when James informed me that Smohalla was distrusted for allegedly abusing his spiritual powers. In each of these cases we see that Euro-American concepts of praiseworthy or contemptible behavior in the political arena are at odds with those of the Plateau Indians' judgments of their own leaders.

4. A sense of common cause as "American Indians" is now strongly developed. In recent years this common cause has been extended to Indians in Central and South America, as shown by the editorial thrust of *America Indigena* and the organization of Native American conferences to generate mutual support and counsel for the struggle of indigenous ethnic minorities throughout the hemisphere.

tribal government, the funding agencies that sponsor such research, and the academic community where the free exchange of information is held as a first principle, with success defined in terms of published output.

In conclusion, language is the key. People are known by the language they speak. The biological necessities of finding food and shelter depend on detailed cultural knowledge of the natural environment, knowledge stored and transmitted by language. Human social life in all its complexity requires language, while moral commitment and spiritual satisfaction come through the inspiration of the spoken word. Let us now explore these further avenues of Indian life on the middle Columbia River.

Ecology

tiičám, "land"

MOUNT HOOD rears its head above the busy Celilo Falls fisheries across the roaring Columbia from the village of sk̓in. From the ancient pit house rings on the greasewood flats where Toppenish Creek joins the Yakima River, Indian ancestors looked west to the icy dome of pátu, "snow peak," as Mount Adams is known at Yakima. The soft outline of the Blue Mountains southeast from the Walla Walla River (from walawála, "little rivers") provided a less dramatic vista for the citizens of Umatilla, Walla Walla, and Snake River villages. Between the extremes of baked-dry riverside flats and cool mountain forests, the people of the mid-Columbia found the full range of resources they needed to sustain their lives and their culture year after year for many centuries (see fig. 4.1).

In summer the low valleys are hot as furnaces with temperatures regularly rising over 100°F (40°C), yet in sight of the perpetual ice of the dozing volcanic summits. Cool huckleberry meadows near timberline provide a refuge from this heat when the mid-summer fish runs slacken. The low valleys receive on average as little as seven inches (175 mm) of precipitation annually. They lie in the rain shadow of the Cascade range which wrings moisture from the Pacific fronts. By contrast, Paradise on Mount Rainier's southwest shoulder averages 50 feet of snow (equivalent to 150 inches of rain) each year and has recorded 100 feet. The air, cooled at high altitude, then descends the east slope of the range, warming and consequently drying out as it falls, absorbing moisture from the land like a sponge. Only well east toward the Rocky Mountains is there a hint of the convectional summer rainfall pattern characteristic of the Great Plains, Southwest, and Eastern Woodlands. The lack of summer rainfall may help explain the fact that agriculture—with the exception of an occasional patch of tobacco (Davies 1980:47)—was unknown in the Plateau.

The encircling mountains also trap cold air at ground level in winter. For

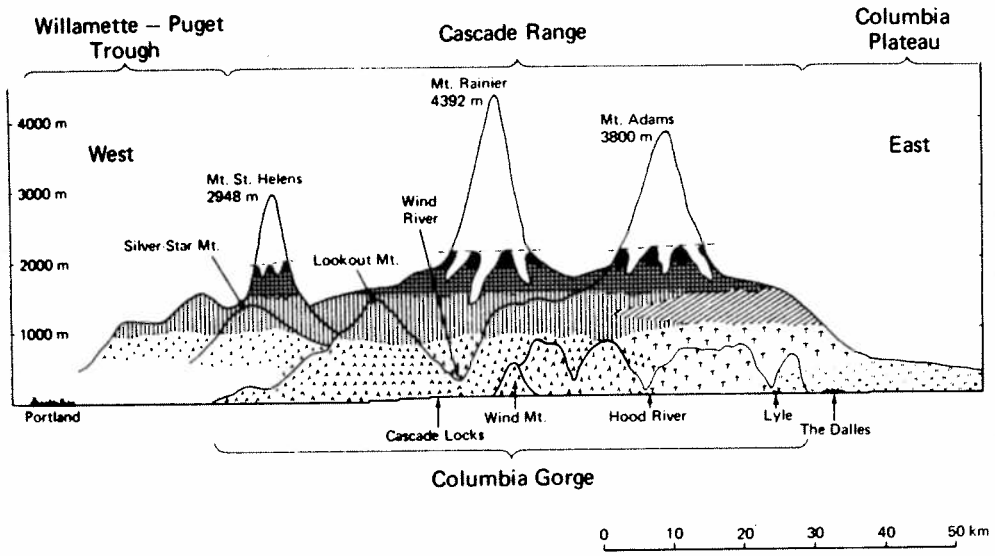

Fig. 4.1. Habitat transect of the Cascade Range (Franklin and Dyrness 1973:311).

weeks on end a monotonous subfreezing overcast reigns, nourishing depression in the people confined to their lodges. Fresh foods are virtually unavailable. No migrant salmon appear between late October and late April, just a few steelhead and resident whitefish which may be caught by hook and line through the ice. The only edible plants at this season are a few tuberous perennials, notably the large-fruited mariposa lily (nuunás; *Calochortus macrocarpus*), found by careful searching amongst the sagebrush near winter villages such as náwawi at the mouth of Alder Creek, where Delsie Selam and Sara Quaempts grew up. This land would support very few people by hunting and gathering were it not for their stores of dried roots, salmon, berries, and venison prepared during many long hard days of spring, summer, and fall, then carefully cached in cellars (wulčí) and in special baskets.

In Sahaptin the earth is tiičám. It is the source of life, the nurturing Mother, on whose breast one's bones are laid at death, in the words of the prophet Smohalla. Death is familiar to the Indians here still. Funerals are the most frequent of ritual performances. Everyone attends or should, as virtually everyone is related to the deceased and owes them this last demonstration of respect. The earth harbors so many of their dead, pulling the living like a magnet to remain close to that special earth.

The sun (an) is Father; water (čuuš), the first sacred food. It is drunk as a sacrament to begin and end each wáašani feast. The winds are each named. The prevailing westerly wind is hulí, which may also be used to refer to wind in general. Myths recount epic battles between the frigid North wind (átya) and the Chinook wind (wináaway), a strong southerly flow of air that can thaw the frozen land in hours and provide relief from the midwinter chill (Beavert 1974:10–24). Hot dry east winds (tx̣áwna) in spring can burn the precious roots, cutting the harvest short. Winds are powers to be reckoned with. Steep temperature gradients in winter and spring between coast and plateau send air rushing through the Columbia Gorge and the lower passes to sweep across the dusty central plain. Indians here may burn the wood of the pallid evening primrose (kaluẋ-mí áčaš, "blueback salmon's eyes"; *Oenothera pallida*)—the blooms of which freckle the sandy slopes at low elevations at the end of spring—as a prayer to halt the forceful play of the winds.

The Columbia River Indians' Knowledge of Nature

The precontact Indians of the middle Columbia—in common with hunter-gatherers everywhere—survived by virtue of a detailed, encyclopedic knowledge of their environment. We have noted their appreciation of the basic elements on which life depends. Prominent landforms and habitats were also named (see fig. 4.2).

Such landforms are useful indicators of the location of plant and animal resources. For example, waláas, a plant (as yet unidentified) that produces balls of "Indian chewing gum" on its roots, grows only on steep clay banks, a habitat called íšx̣ú in Sahaptin. Specific floral associations may also be indicated explicitly in plant names, as in pi̓x̣anu-pamá ttax̣š, "mountain wil-

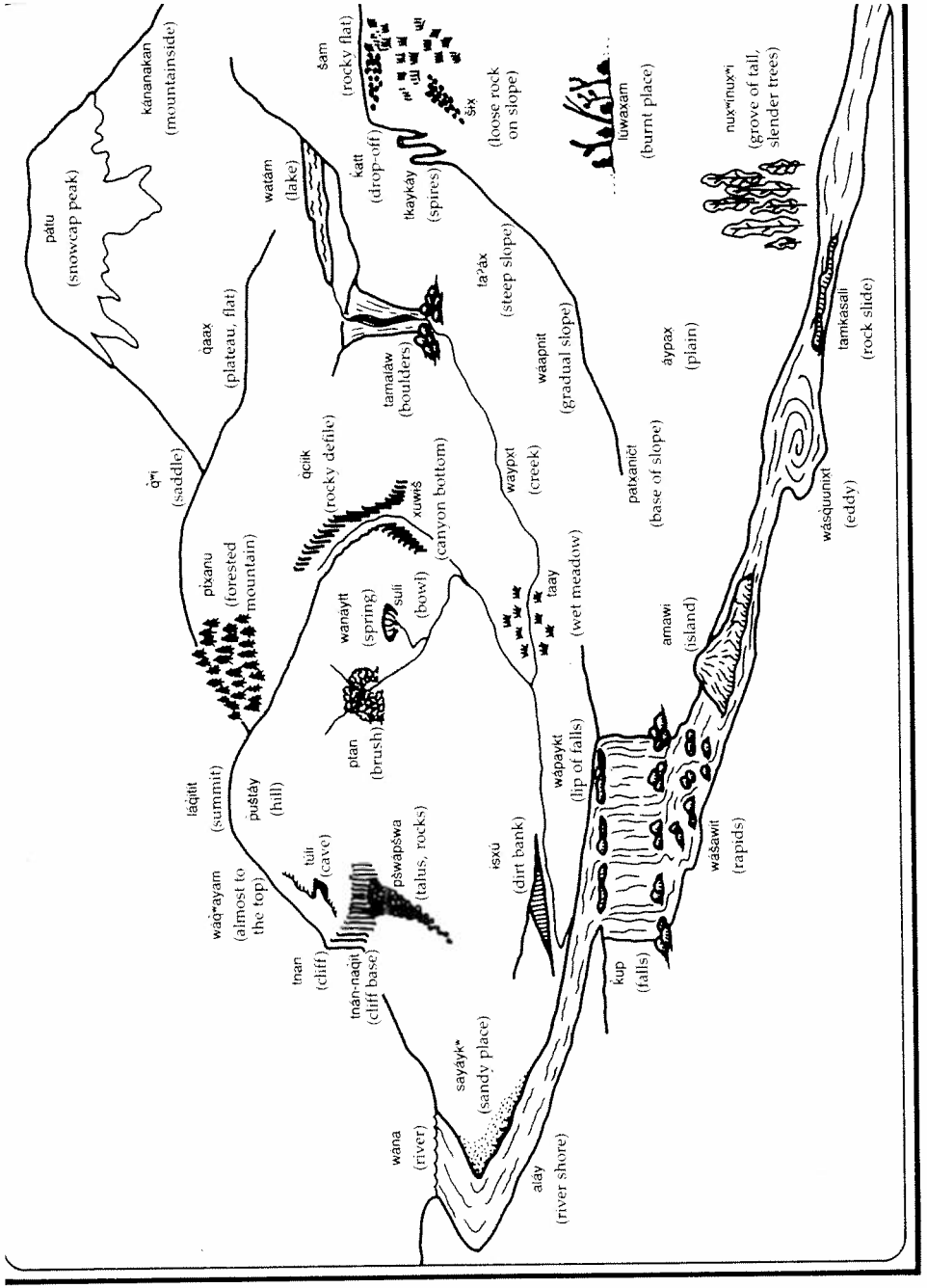

Fig. 4.2. Sahaptin landform terminology.

low" (*Salix scouleri* and/or *S. monticola*). More often it is simply taken for granted where resource species may be found. For example, bitterroot and Canby's lomatium are found in productive abundance usually on šam terrain (lithosols); wáƙamu, or x̣maaš (camas), favors vernal meadows (taay).

Columbia River Indians also named hundreds of specific places. Their ethnogeography differs systematically from the Euro-American in certain telling ways; for example, they did not usually name mountains and rivers as such. For non-Indians, a focus on specific mountains and rivers as things of importance implies a cartographic perspective, one in which the observer is placed above the landscape as if in flight. The Indians' land-based perspective named instead specific places on a mountain or along a river *where things happened*. It was a practical rather than a purely abstract geography, naming culturally significant places, the sites of important events or activities, whether of the present or of the myth age.

The Columbia River was called nčí-wána, which means simply "big river," a name I have borrowed for the title of this book. Indian names adopted by the early western explorers for other major rivers, such as the Yakima, Klickitat, Umatilla, Walla Walla, Wenatchee, Okanogan, Sanpoil, Spokane, and Colville, were names for specific villages or other landmarks on or near those rivers, not names for the rivers themselves. Such names did not exist in the Indian lexicons. Mount Adams and Mount Hood were both called pátu, a generic landform designation rather than a name for a specific peak, though today the term is used as a proper name for Mount Adams, which has acquired special significance for the Yakima Indians as a symbol of their tribal lands and identity. Mount St. Helens and Mount Rainier, by contrast, were given proper names long ago. That for St. Helens, lawilayt-łá, literally, "the smoker," described its active volcanic state, while that for Rainier, taxúma, was likely borrowed from a Coast Salish language.

The degree of elaboration of geographic names in the Indian languages clearly reflected the cultural importance of an area. At the great Celilo Falls fishery dozens of rocky points and ephemeral islands were named (see fig. 5.3 in chapter 5). Each was a valuable fishing station, its time and manner of use governed by the seasonal rise and fall of the Columbia. Traditionally, such points might have been owned by a resident family who erected scaffolding there each year to serve as a fishing platform. Permission to use these facilities—the real limiting resource here being not the salmon but the good fishing places—had to be requested of the owners. The owners felt bound to share their bounty with both relatives and strangers. Strangers

were allowed to catch one fish; elders who came to watch the action were also due a fish as a common courtesy (for the Upper Chinookans at The Dalles, see Spier and Sapir 1930:175).

Indian place names give rich clues to the ecological perceptions of the people (cf. Boas 1934). Many names refer to plants or animals characteristic of the place. For example, the lower Crab Creek area north of Priest Rapids was called taxús-as, which is to say "[place] of Indian hemp" (Relander 1956:312). Though Indian hemp might be found in many low-lying areas closer to home, the hemp there grew higher and straighter, and the long strands produced were prized for the strength of the twine made from them. So special was this resource area that violent conflict (otherwise uncommon) occurred between Wanapam Sahaptins and Columbia Salish over access to the hemp (Relander 1956:312).

Áyunaš was a camping place near Mount Adams visited each August by Indians drawn from many miles around. James Selam recounts traveling there by horse and wagon as a child in the 1920s. In August 1983 we retraced a portion of his route, the track now scarcely discernible under the forest growth. Áyunaš means "lovage place," named for a valuable medicinal root (áyun; *Ligusticum canbyi*, fig. 4.3). The best berrying grounds were nearby at kalamát meadow, a center also for summer social activity, for visiting, trading, horse racing, and gambling. A deep trace of the Indian horse-racing track is still evident, now partially obscured by the passage of backpackers' boots. The place has become a registered historic landmark. Kalamát means "yellow pond lily" (*Nuphar polysepalum*). To my surprise I found a few pond lilies growing in a shallow pool in the meadow, though pond lilies are unusual at such a high elevation (4,500 feet). These plants were not important food for Sahaptins (though the Klamath Indians relied very heavily on them). Perhaps their unexpected occurrence on such a high tarn enhanced the mnemonic value of kalamát as a place name.

Many place names refer imaginatively to prominent landmarks. The Yakima village at Union Gap was called paxutakyúut, literally, "head-to-head," as the steep brows of the ridge cut through here by the river suggest two people in close consultation. The large Sahaptin village on the north bank of the Columbia River at Celilo Falls was formerly called sk̓in, literally, "cradle board," an allusion to the shape of a prominent rock nearby; it is now called "Wishram Station" (a misnomer, as the Upper Chinookan village named wíšxami in Sahaptin [or nixluídix in the Kiksht language of its own inhabitants] was situated several miles downstream, somewhat above The Dalles).

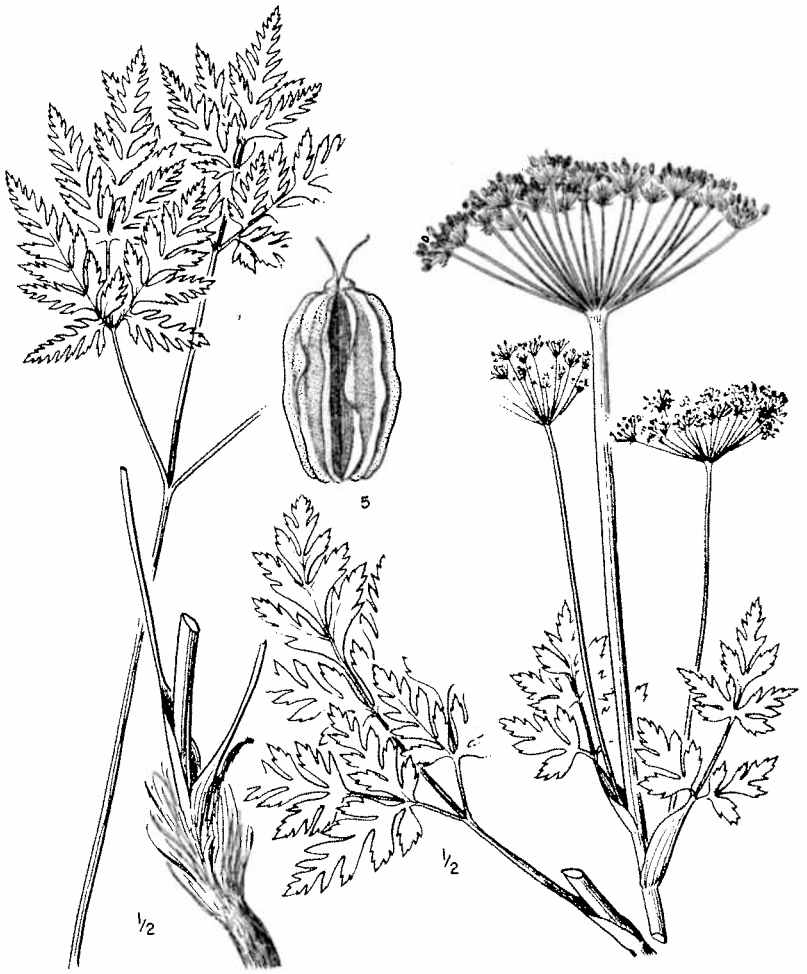

Fig. 4.3. Lovage (*Ligusticum canbyi*; **áyun**).

The ribald humor of the Columbia River Indians is seen at play in such place names as simtay-wáakuł, literally, "resembles pubic hair," for a triangular patch of riparian woods at the head of a tributary stream of Satus Creek southwest of Toppenish. The high point of Toppenish ridge south of White Swan is known as čáynač, or "groom" (see fig. 4.4). From certain vantage points, the sensuous curves of the ridges below the peak, silky with golden

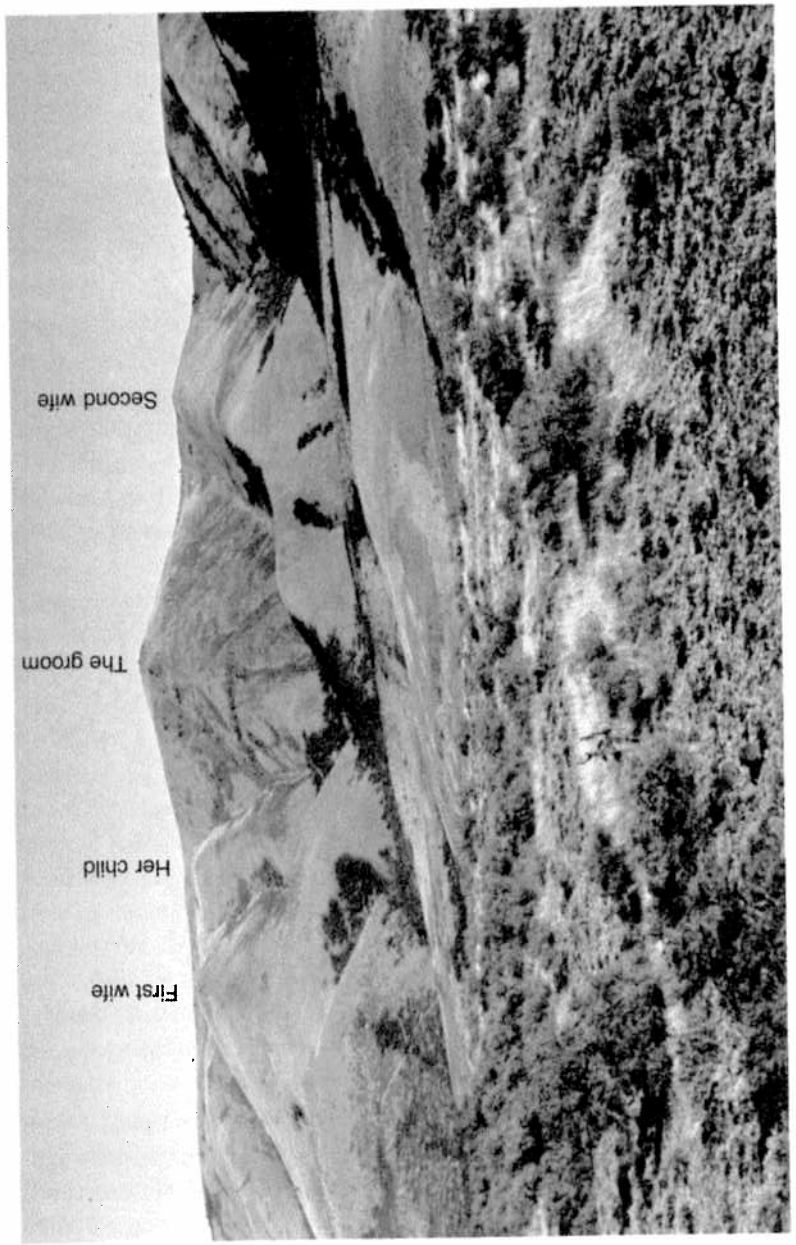

Fig. 4.4. Satus Peak, the "groom" with his brides.

summer grass, suggest a young man flanked by two graceful and naked wives, the "younger" with babe at breast. Such features, imaginatively perceived, might be brought to life in myths (e.g., Beavert 1974) that account dramatically for the feature's creation. Their's is a vivid landscape, still alive for the elders.

The sheer weight of geographical terminology as a component of Sahaptin vocabulary suggests a long period of stable residence on this stretch of river. Clearly indigenous Sahaptin geographic terminology exists for features south as far as Fox Valley (called ɨmáayi) and the Metolius River (from Sahaptin mɨ́ɬúla, "spawned-out" or "dog salmon") in central Oregon (cf. Suphan 1974a, 1974b), north to the Wenatchee River ("come out quickly," see Table 5, p. 75) in Interior Salish territory, west nearly to old Fort Vancouver, where a meadow is called alašík ("turtle"), and east to the Palouse. Such indigenous terms sketch the boundaries of the land frequented by Sahaptin speakers. An interesting example of the use of place name origins to discover prehistoric language shifts is in Kinkade (1967). He notes that Methow geographic terms are largely of southern Okanaganlinguistic affinity and argues for a rather recent replacement of an Okanagan dialect there by the Methow dialect of Columbia Salish.

Such inferences from Indian place names to historic migrations must be supported by careful comparative linguistic analysis, as superficial resemblances of inaccurately transcribed place names have given rise to mistaken conclusions in the past. The most notorious example is James Teit's theory (1928) that Salish speakers occupied the Columbia River down to near The Dalles in the immediate precontact period. In Teit's scheme the Columbia Salish were but recently displaced on the mid-Columbia by Sahaptin speakers, who had in turn been pushed north by pressure from expanding Numic populations in the Great Basin. The equation by Teit of the "pisch quit pás" of Lewis and Clark (Thwaites 1959 [1904], 3:137)—identified with a village a few miles below and opposite the Umatilla River mouth—with the "pisquouse" of the 1855 treaty—the latter a Columbia Salish self-designation—compounded the error (Rigsby 1965:221–28). "Pisch quit pás" might be a poor attempt at spelling Sahaptin pɨ́šx̣u-pa, literally, "rabbitbrush place" (after a common local shrub, *Chrysothamnus* spp.), which might appropriately describe the terrain about the village of the so-called "Pisch quit pás" of Lewis and Clark, a name no longer recognized by local Indians. Though the mystery of the "Pisch quit pás" remains unsolved, it provides no support for a theory of Salish occupation of the Columbia River below Priest Rapids.

Flora and Fauna

As an ethnobiologist I have pursued a primary interest in the nature and scope of Sahaptin knowledge of their native flora and fauna. An ethnobiological investigation is deceptively simple at first glance. One compares the native name for a plant or animal with the Latin of the biological scientist (appending an English equivalent, if such exists). If every speaker (user) of a language, whether English, Latin, or Sahaptin, used words in the same way, and if everyone, regardless of cultural training, recognized the same categories of living organisms, the task would be reduced to the matching of labels. According to Edward Sapir, a founder of anthropological linguistics, people do not live "in the same world with [just] different labels attached" but rather in different worlds conditioned by the unique perspective acquired in learning their native language. (As noted above, this assertion of linguistic relativity has come to be known as the Sapir-Whorf hypothesis, after Sapir and his pioneering colleague, Benjamin Lee Whorf.)

Ethnobiological evidence, however, sharply qualifies this relativistic position. Close agreement between folk and scientist in the naming of plants and animals is evident. Natural species have an undeniable reality which it can be dangerous to ignore and which it is certainly useful to recognize. On the other hand, there are simply too many species of plants, birds, and insects to justify naming them all, even in the language of modern science (Raven, Berlin, and Breedlove 1971). It is thus of great interest to learn which species are recognized and which ignored or casually dismissed by the folk biologists of a culture, in this case, by the Sahaptin folk biologist.

I have so far recorded names in Sahaptin for approximately 240 basic kinds of animals and for 215 of plants. This is not an overwhelming total, as subsistence farmers in Mexico, Peru, and the Philippines are known to catalog 500 to 1,000 in each kingdom (see Brown 1985 for a cross-cultural summary). The size of the Sahaptin inventory is nevertheless impressive compared to that of the average modern-day Euro-American and is in keeping with the diversity of the local biota, their dependence on hunting, fishing, and gathering for subsistence, and the degree of attrition the language has suffered as a result of Euro-American contact and domination (Hunn and French 1984).

The botanical expertise of the traditional mid-Columbia Indians is best exemplified by their recognition of the many species of "lomatiums," plants all classed in Latin in the genus *Lomatium*, literally, "winged seeds." Hitchcock and Cronquist's regional flora (1973) lists forty species of lomatiums, which constitute nearly 50 percent of all the native species of the Umbelliferae, a large family including such familiar plants as carrots, parsley (hence the name "desert parsley" for some lomatiums), celery, dill, and coriander. The genus *Lomatium* includes a total of some eighty species found throughout the western half of the United States and the southern edge of Canada. Botanists consider it a difficult group to analyze taxonomically. Unlike other genera of comparable size and complexity such as the willows (*Salix*) and lupines (*Lupinus*), the various lomatiums are refreshingly stable, rarely if ever hybridizing in nature. The difficulty scientists have had with the genus—which is apparent in the errors of classification that have crept into Cronquist's expert summary[1]—is perhaps primarily because many *Lomatium* species are restricted in range, being rare and little known relict populations.

Sahaptin-speaking Indians had no such difficulty learning to distinguish and name these species. Fourteen "folk species" are named in Sahaptin (see Table 6), including two "varieties" each of *Lomatium canbyi* (Canby's lomatium), *L. farinosum*, and "*L. gormanii*." In the last instance the Indians distinguished between Gorman's lomatium proper and Piper's lomatium (*L. piperi*, fig. 4.5), a distinction Hitchcock and Cronquist judged too subtle to be worthy of scientific recognition. Sahaptin speakers who know both plants—now restricted to a few elderly women—find the distinction not all that subtle. To them Piper's desert parsley is mámin and is considered a choice root food, a necessary ingredient of high quality root cakes (sapíl). Gorman's lomatium (the name applied here in the restricted sense) is called sasamíta and is considered food fit only for "ground hogs" (that is, marmots). Mark Schlessman's doctoral thesis (1980) confirms the Indians' judgment in documenting numerous fundamental (if not obvious) differences between these two species.

The summit of Dalles Mountain commands a sweeping view of the Big

1. Cronquist's treatment of the genus *Lomatium* in Hitchcock et al. (1961) should be amended as follows: *Lomatium farinosum* should now include *L. hambleniae* as *L. farinosum hambleniae* (Schlessman 1978); *Lomatium gormanii* should be restricted to those plants with papillate ovaries and seeds, and the smooth seeded plants should be recognized as *L. piperi* (Schlessman 1980); *L. orogenioides* should be renamed *Tauschia tenuissima* (Schlessman 1980); the range of *L. tuberosum* should be extended to include the Priest Rapids area of Benton, Grant, and Yakima counties, and it should be noted that the illustration on page 567 is of *L. columbianum*, not *L. tuberosum*; finally, a new species, *L. quintuplex* must be added (Schlessman and Constance 1979).

Scientific name	(PNRR*)	Sahaptin name/s	Uses	Distribution
L. canbyi C. & R. Type A	(38/39)	sikáywa, sikáwiya (NW) lúkš (CR) lamúš (NE)	Staple, tuber eaten, boiled or dried whole or as "finger cakes"	Lithosols, n. w. Nev n. to Douglas Co. Wash., where ove laps Type B
Type B		škúlkul (NW, CR, NE)	Staple, tuber eaten, baked underground	Lithosols, Douglas t Spokane Cos., Wash.
L. columbianum M. & C.	(0/17*)	axúla (yk)	Plant avoided	Talus slopes, locally Yakima Co., Was to Hood River Co Oreg.
L. cous (S. Wats.) C. & R.	(16/16)	xáwš (NW, CR, NE)	Staple, tuber, eaten, boiled or dried whole or as "finger cakes"	Lithosols, Whitman Co., Wash., s. an w. through Blue Mtns. to e. base (gon Cascades
L. dissectum (Nutt.) M. & C.	(12/15)	čalúkš (NW, CR, NE)	Medicine for people and horses, fish stupefactant, hide tanning agent, shoots and young roots eaten by Salish and Nez Perce Indians	Talus slopes, throu out
L. farinosum (Geyer ex Hook.) C. & R.	(0/0*)	nikaptát (NE)	Tubers eaten	Lithosols, c. Colum basin of Wash. e
var. *farinosum* var. *hambleniae* (M. & C.) Schlessman	(2/14)	maxšlí, maxšní (NE)	Tubers eaten	Lithosols, w. of va *farinosum* to e. b Wash. Cascades Yakima Co., loc Wasco Co., Ore
L. gormanii (Howell) C. & R.	(4/13)	sasamíťa, sasamíťaya, łałamíť'a (NW, CR, NE)	Tubers eaten (NW) or avoided (CR)	Lithosols, e. c. Wa w. rarely to e. sl Cascade Mtns., n. Oreg.
L. grayi C. & R.	(16/21)	xásya (NW) latítlatit (CR) atuná (NE)	Sprouts are the first "Indian celery" available in late winter, root eaten formerly	Talus slopes, throu out
L. macrocarpum (H. & A.) C. & R.	(26/33)	púła (NW, CR, NE)	Tuber eaten formerly	Lithosols and slop throughout
L. minus (Rose) M. & C.	(4/6)	nak'únk (jd, um)	Tuber eaten formerly, boiled	Basalt drainage ch nels, n. c. Oreg.
L. nudicaule (Pursh) C. & R.	(28/30)	xamsí (NW, CR, NE)	Peduncles and leaf shoots eaten fresh, seeds used as insect repellent, perfume, and medicine	Dry open areas, throughout

TABLE 6 (*continued*)

Scientific name	(PNRR*)	Sahaptin name/s	Uses	Distribution
L. piperi C. & R.	(28/31)	mámin, mámiɬs (NW, CR, NE)	Favorite, tuber eaten, mixed with *cous* or *canbyi* to make "finger cakes"	Lithosols, e. slope Cascade Mtns
L. triternatum (Pursh) C. & R.	(4/30)	ɬáqimaš (te, ty)	Formerly used as food and medicine, ignored by other Sahaptin speakers	Dry open areas, throughout

Lomatium species clearly named by Sahaptin speakers. Indian language orthography follows Rigsby (n.d.). Distribution of native terms co as follows: NW, Northwest dialect cluster; CR, Columbia River dialect cluster; NE, Northeast dialect cluster; jd, John Day dialect; te, Te dialect; ty, Tygh dialect; um, Umatilla dialect; yk, Yakima dialect. Uses and habitats cited are the most typical only. Information on uses by S and Nez Perce Indians is from Marshall (1977), Turner et al., n.d., and Turner, Bouchard, and Kennedy (1980). Plant nomenclature foll Hitchcock et al. (1961).

*PNRR = Positive Naming Response Ratio. This is the ratio of instances of confident recognition and naming of individual specimen individual informants to all instances in which an informant was shown a specimen of *Lomatium*. In cases citing no positive naming respor the referential range of the Sahaptin term is inferred from secondary data.

River above the famed Celilo Falls fishery. It was no doubt a goal of spring root-digging expeditions by nearby Indians in centuries past. *Lomatium piperi* and *L. gormanii* grow here side by side without hybridizing and may be closely compared when blooming in late March and April.

The second instance of Sahaptin taxonomic refinement is the case of *Lomatium farinosum*, which is divided into two named varieties. Maxšní has yellow flowers and a western distribution; nikapłát has white flowers and the more easterly range. The first term applies to the scientific variety *hambleniae* (treated as a distinct species by Hitchcock and Cronquist), while the second names the variety *farinosum* (Schlessman 1978).

Maxšní is widely known to modern-day Sahaptin root diggers, by name if not by firsthand experience, though its range is largely restricted to the lands traditionally exploited by Kittitas and Priest Rapids groups. It is a rather small plant with a tuberous root that averages just 3.5 grams (compared to the 12-gram average weight for roots of *Lomatium canbyi* and *L. cous*). Children are sent to dig for it on the windswept, thin-soiled flats where it grows in greatest abundance, while adults focus their efforts on more productive and more highly valued species. The white-flowered variety grows east of Priest Rapids and the Grand Coulee. The Nez Perce call it laqáptat (likely the source of the Sahaptin name) and collect its roots as a secondary food item (Marshall 1977:52). Mary Jim, born and raised on the lower Snake River, is the only person I met who knows both, having been raised on the borderline between the ranges of the two varieties.

The third instance in which Sahaptin-speaking Indians surpass the professional botanist in discriminating lomatiums remains something of a mystery. The species "split" in this case is Canby's lomatium, known as a key food source by Indians from northeastern California to southern British Columbia. Its value is rivaled only by "cous" (that is, *Lomatium cous*), made famous by Lewis and Clark. (Cous is the most abundant edible lomatium in the northern Rocky Mountain area and is valued next to camas and bitterroot throughout its range. See fig. 5.12.) Canby's lomatium is known by many Indian names, having gained recognition in at least six Indian languages (see fig. 4.6 and Table 7), but Northeast Sahaptin speakers are unique in dividing Canby's lomatium into two distinct folk species, škúlkul and lamúš (see also Washington n.d. [1976]). The first is described as the larger, its foliage more fern-like, its tuber distinctively shaped. Most important, the oil content of the škúlkul root is high, making sun-drying difficult. For this reason škúlkul must be baked underground after the fashion of

Fig. 4.5. Piper's lomatium (*Lomatium piperi;* **mámin**) (labeled *L. gormanii* in Hitchcock et al. 1961:557).

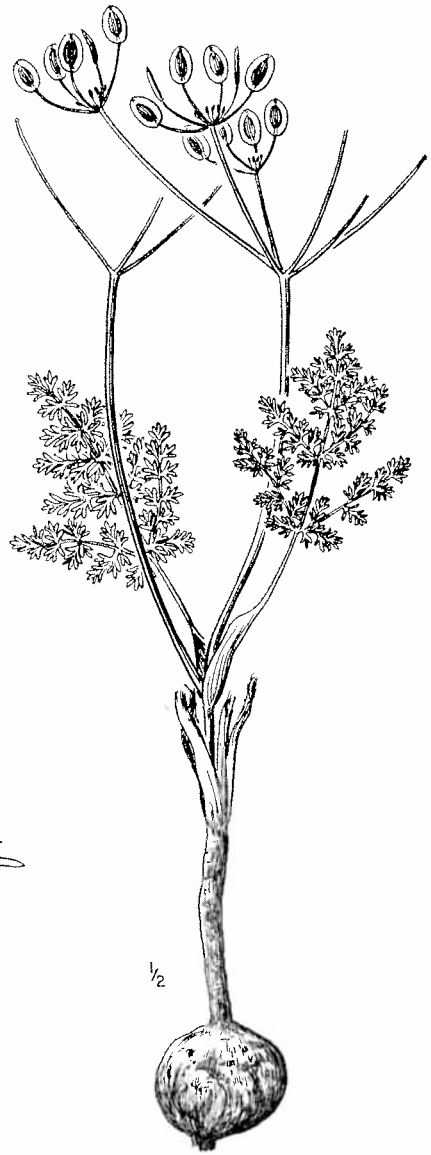

Fig. 4.6. Canby's lomatium (*Lomatium canbyi;* **lukš**).

TABLE 7
The Many Names of Canby's Lomatium

Columbia River Sahaptin	lukš (+ škúlkul)
Northwest Sahaptin	sikáywa (+ škúlkul)
Taitnapam Sahaptin	sikáwiya (+ škúlkul)
Northeast Sahaptin	
variety A	lamúš
variety B	škúlkul
Nez Perce	q̓eq̓íit (Marshall 1977:48–49)
Upper Chinookan	wa-q̓ʷát
Klamath	"ɬhe-hăs" (Coville 1904:102)
Harney Valley Northern Paiute	cana cuka, literally, "sweet cous" (Couture 1978:43)
Columbia Salish	c̓əxʷəl̓úsaʔ (Kinkade 1981)
Okanagan-Colville Salish	c̓exʷl̓úsa (Turner, Bouchard, and Kennedy 1980:64)

camas. Lamúš, smaller and less oily, is dried whole by stringing on a cord of Indian hemp. Mary Jim asserts that škúlkul and lamúš may be found side by side on Badger Mountain and about Soap Lake, root-digging grounds shared by Northeastern Sahaptins and the Okanagan Salish. As yet I have been unable to obtain definitive collections of these variants and thus cannot say what objective basis exists for the Indians' distinction.

Whatever the biological basis for the recognition of škúlkul, the practical implications of making the distinction are clear. A more elaborate and labor-intensive mode of preparation is called for by škúlkul, which (as in the case of camas, as we will see) precipitates a social event. The underground oven (tamáyč) requires cooperative efforts of adults of both sexes. Thus, preparing the plant for storage or consumption requires careful planning and coordination. The payoff may well have been both "economies of scale" in the production of winter food supplies and social "profits" derived from mutual assistance.

Škúlkul's reputation as a distinctive and valued food of the Wanapum or Priest Rapids people may explain Lewis and Clark's "Sokulk" tribe, which they placed on the Columbia River above the Yakima's mouth. The intriguing resemblance between "Sokulk" and škúlkul, first noted by Relander (1956:28), suggests that the "Sokulks" were Priest Rapids people. In the 1980s škúlkul is

still known as a specialty of the Wanapum people worth a trip to Priest Rapids. The abundance of lukš—as Canby's lomatium is known in the area from Yakima south—is irrelevant. It is no substitute for škúlkul.

Lukš—note another odd linguistic coincidence; škúlkul is lukš spelled backwards, then duplicated—is one of three or four root staples of the traditional mid-Columbia Indian diet. It is abundant on lithosols—"bald" patches of exposed basalt with just a thin grout of soil among the rocks—and flowers with the first hint of spring, usually in early March, though unusual weather conditions may stimulate a precocious flowering in January. It is a perennial that has adapted to survival on thin soils in a land alternately frozen, then baked. It succeeds here by storing energy as starch in a tuberous swelling of the root a few inches beneath the ground surface. These plants can "sleep" through the summer drought period as well as through the winter freeze, then draw on their energy bank account to finance a burst of new growth, a mantle of finely dissected leaves that hug the ground, out of the wind but receptive to the sun's energy. The root's store of energy combined with the photosynthetic efforts of the new leaves provide the force for flowering and seed production. By April or early May the seeds are ripe as the leaves turn to the task of replenishing the root's "tanks" for the plant's next period of dormancy.

Enter the Indian in search of food. If the root can store energy for the plant, it can store energy for people as well. And so it does, unwittingly. However, for maximum benefit it is important to know the plant's life cycle well. The root is packed with carbohydrates throughout its dormant period. But at this time it is in hiding, the leaves and seeds having blown away in the dry winds that sweep the Columbia Basin each spring. During the early phase of its growth cycle the root goes "soft," expending much of its stored resources to generate the plant's early spurt of growth. At maturity of the seeds the roots again reach their full capacity, while the plants remain conspicuous. The soil at this time is neither too muddy nor yet baked too hard for easy digging. These optimal conditions for harvest last but a few days at a given locality, as hot east winds in a matter of hours can dry the tops and blow them away, "burn" the roots, and bake the soil to hard pan.

Timing of the harvest is thus critical, as is a careful reading of microhabitat effects on plant growth. Plants mature first on sunny south-facing slopes (án-kni, "sun-ward") and are retarded in their development on shady northfacing slopes (šqíš-kni, "shade-ward"). This opens the harvest "window" a bit wider at each digging site. For an adequate annual harvest, however, a strategy of seasonal upslope mobility is employed. Lukš—and its companion pyaxí (bitterroot, *Lewisia rediviva* [Portulacaceae], fig. 4.7)—may be ready for harvest in early April at 500 feet (150 m) elevation, where it is readily accessible from riverside fishing villages, and is still harvestable in late June at 6,000 feet (1,800 m) elevation on mountain ridges several days' journey from the river. Camps were traditionally established progressively further from and higher above the river from April through June, thus extending the harvest so that a family of four might collect a supply of dried roots sufficient for 60 percent of its winter caloric needs (Hunn 1981; see Table 8 and Table 9).

Lomatiums provide more than calories. The nutritional new year begins with the first "Indian celeries." Along the mid-Columbia and in the Yakima Basin, sprouts of Gray's lomatium (*L. grayi*, fig. 4.8) fill this role. The cultural value ascribed to Gray's lomatium, like that of Canby's, is reflected in the profusion of names applied to the plant. Columbia River Sahaptins call it latít-latit (literally, "little flowers"); Northwest Sahaptins call it xásya; while in northeastern dialects it is known as atuná, a term applied to the plant's (barely) edible root in the other dialects.

At flowering these plants highlight many a dry arroyo with their gray-green, fragrant foliage crowned by golden umbels. The common English vernacular name, "spring gold," captures this aesthetic appeal. By flowering time, however, the plant's food value has dropped sharply as the ascorbic acid (Vitamin C) rich shoots become dry and fibrous. As the plant's economic role is transformed so is its name. Latít-latit becomes wáʔwinu, no longer the source of that delicious, spiced salad centerpiece at the thanksgiving feast held in its honor each year in March at the Rock Creek longhouse.

The "Indian celery" role is played by other lomatiums in other sections of the Plateau, reflecting complex phytogeographic patterns. Nez Perce Indians gather the rare and localized *Lomatium salmoniflorum* from rocky talus slides in the Snake River canyon for their first fresh greens, often as early as February (NP: ilq̓úulx̣; Marshall 1977:48–49). This species is found only between the Palouse and the Salmon rivers. Thompson and Okanagan Indians, who live north of the centers of abundance of Gray's lomatium, harvest the underground shoots of fern-leaved lomatium (*Lomatium dissectum*), a widespread species normally restricted to medicinal uses because of its toxicity. The underground shoots are apparently safe, though readers are warned that the root of this species is a potent fish poison.

By April Gray's lomatium is past its prime, but the bare-stemmed

lomatium (*L. nudicaule*) is now flowering virtually everywhere in the Cascade foothills (fig. 4.9). Both flower stalks (xamsí) and leaf petioles (pǐšpǐš) are eaten. Xamsí is featured at the April salmon-and-root feasts held throughout the Plateau. It is relished by Indian children today as a seasonal snack. The key nutrient in these sprouts and stalks is Vitamin C, a water-soluble vitamin readily lost when foods are cooked or stored for extended periods. Vitamin C may have been a nutrient in short supply in late winter for Plateau peoples who had subsisted for several months on a diet of dried foods. Xamsí stalks contain up to 67 milligrams/100 grams when harvested early in the flowering cycle—the Indian preference. A sample of mature stalks contained only 11 mg/100 grams (Benson et al. 1973). Such "spent" stalks are called aśwaníya, literally, "slaves," which is to say they are worthless, inedible.

Fig. 4.7. Bitterroot (*Lewisia rediviva*; **pyaxí**).

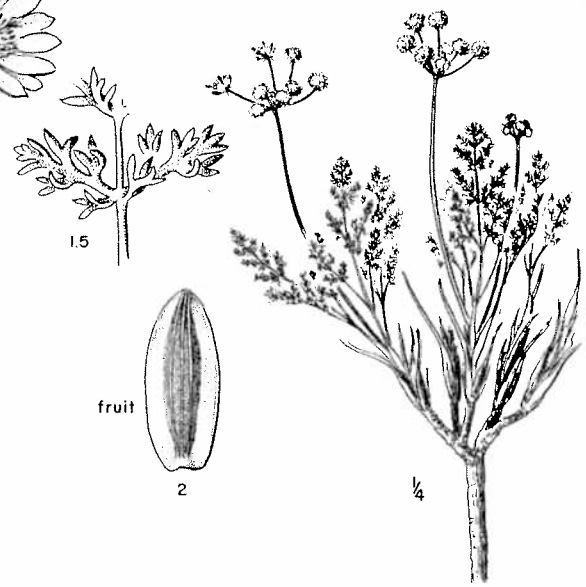

Fig. 4.8. Gray's lomatium (*Lomatium grayi*; **latít-latit**).

TABLE 8

Estimates of Plant Food Harvest Rates (kg/woman/day), Total Harvests (kg/woman/year), and Caloric Yields (kcal/person/day) (from Hunn 1981:130–31)

Species	Estimated Daily Harvest	Harvest Period/ Days	Total Annual Harvest	Kcal Yield	Locale
Spring:					
Lomatium canbyi	30	30–40	1050	800	Sanpoil[1]
Lomatium cous	22.7–34.1	ca. 40	1136	988	Nez Perce[2]
	33.3*	ca. 30	999	869	Umatilla[3]
Lewisia rediviva	30.3*	ca. 60	1818	1121	Umatilla[3]
	6.5	7	45	28	Kutenai[4]
Early Summer:					
Camassia quamash	36.4–40.9	14–21	677	524	Nez Perce[2]
	18.2–22.7	14–21	358	277	Nez Perce[2]
			2160	1672	Flathead[5]
Late Summer-Fall:					
Vaccinium spp.		28–42	63.9–80.2	31	Tenino-Wishram[6]
			98	42	Umatilla[3]

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Sources: 1. Ray 1933, 2. Marshall 1977, 3. Hunn and French 1981, 4. Hart 1976, 5. Geyer 1845–46, 6. Perkins n.d. [1838–43].

*Based on extrapolation to 8-hour days. If the average spring root harvest suppled 900 kcal/person/day for the year, the camas harvest added 400 kcal, and berries another 50, the plant food contribution would total 1,350 kcal, or 67.5 percent of needs.

Before leaving the subject of the lomatiums I should note also their medicinal value. It is often the case that the same plant families which are major sources of human food are also rich in toxic plants with high concentrations of physiologically active chemical compounds. Such is the case for the Solanaceae, the family of the white potato, tomato, and chili pepper. This

TABLE 9

Contribution of Root Foods to the Diet of the Mid-Columbia River Indians: Plant Food Proximal Analyses Used, per 100 gm (from Hunn 1981:130–31)

Species	Water (gm)	Protein (gm)	Fat (gm)	Carbohydrate (gm)	Kcal
Lomatium canbyi					
av. 6 dried root samples[1]	11.68	2.58	1.48	82.41	352
same, adjusted for water content	71.9	0.9	0.47	26.22	112
1 fresh sample[2]	71.9	0.8	0.12	25.9	108
Lomatium cous					
1 fresh sample[2]	67.9	1.0	0.4	30.0	127
Lewisia rediviva					
1 fresh sample[2]	76.6	0.7	0.1	21.6	90
Camassia quamash					
1 fresh sample[2]	70.0	0.7	0.23	27.1	113
Vaccinium spp.					
blueberries, raw[3]	83.2	0.7	0.5	15.3	62

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Sources: 1. Washington n.d. [1976], 2. Benson et al. 1973, 3. Watt and Merrill 1963.

family also gives us tobacco, deadly nightshade, jimson weed, and belladonna, plants that have the power to alter dramatically how our bodies and minds function, with potentially fatal consequences. Consider also the Leguminosae, the family of the garden pea, chickpea, soy bean, and many varieties of common beans. Yet sweet peas, vetches, and lupines may be poisonous.

The lily family gives us onions, leeks, and garlic, and provides the Plateau Indians with many nutritious bulbs and corms, notably the staple camas (wáḱamu or x̣maaš; *Camassia quamash*, fig. 4.10) and numerous supplementary foods. Yet death camas (*Zigadenus* spp.) and false hellebore (*Veratrum* spp.) can be deadly. Both of the latter are known to Sahaptins for their medicinal values, mimún (false hellebore) used as a hair rinse for lice, and alapíšaš (death camas) to treat skin sores. (See Appendix 4.)

The Umbelliferae provide yet another example of this ethnobotanical duality. In the past Plateau peoples obtained a substantial fraction of their annual food energy in the form of *Lomatium* roots, but were exposed as well to

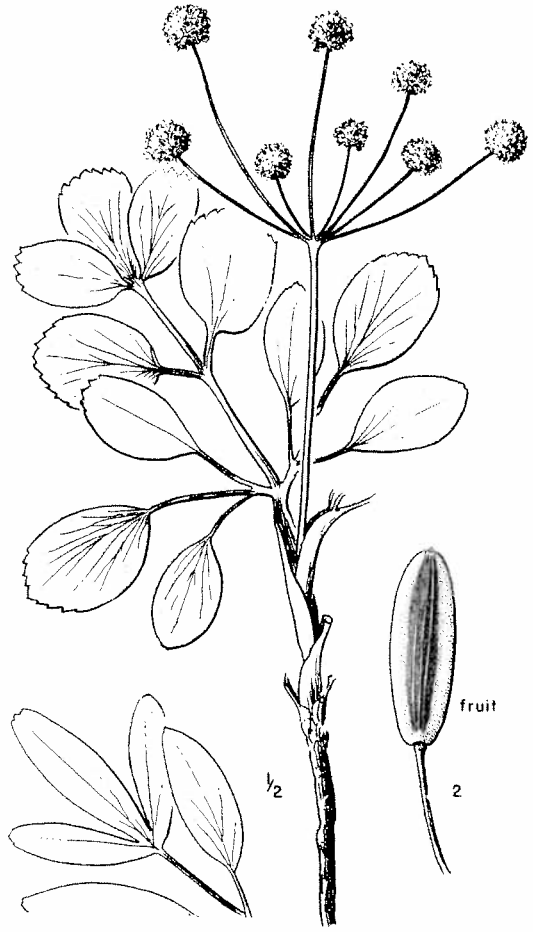

Fig. 4.9. Bare-stemmed lomatium (*Lomatium nudicaule;* **x̣amsí**).

Fig. 4.10. Camas (*Camassia quamash;* **xmaaš** or **wákamu**).

a threat of sudden, violent death if they were so careless as to confuse deadly water hemlock (alamíla; *Cicuta douglasii*) with foods such as cow's parsnip (txu; *Heracleum lanatum*) or water parsley (*Sium suave*). Sahaptin speakers today have no special term for plants of the umbel genus *Angelica* though these are common and quite edible. Perhaps the plant's seductive resemblance to deadly water hemlock, from which it is not readily distinguished, discouraged further experimentation on their part.

Even the genus *Lomatium* has toxic species, most notably, the fern-leaved lomatium (čalúkš; *Lomatium dissectum*, fig. 4.11). Though eaten sparingly in the sprouting stage by Interior Salish Indians, as I noted above, it is respected as a powerful medicine from California to Canada and from the Pacific to the high plains east of the Rockies (Meilleur, Hunn, and Cox n.d. [1989]). Its primary medicinal applications are external. The root is mashed and the pulp applied as a poultice to draw out infection. It may be effective as well as a bactericidal agent. It is considered effective against saddle sores in veterinary medicine. An infusion is drunk for symptoms of cold and flu or applied as a hair rinse for dandruff. At Warm Springs the root is used in processing buckskin (D. French, personal communication).

Columbia River and Yakima Indians use the root as a fish poison. A quantity of the root mashed on streamside rocks will shortly reduce the resident fish to a state of stupefaction. This technique is workable only in small, quiet streams with still pools where the poison will have time and sufficient concentration to operate. James Selam claims that this technique allowed the selection of preferred fish while sparing the rest, as the fish soon recover from the effects of the poison as it is flushed from the stream.

Little is known of the biochemical basis for this toxicity. A preliminary study by Rachel Cox at Reed College (1983) has verified the plant's power to stun and kill fish and has isolated a chemical fraction from the root with coumarin-like properties as most likely containing the active ingredients. Cox describes its effect on fish—mosquito fish (*Gambusia affinis*) and fingerling silver salmon (*Oncorhynchus kisutch*) studied under laboratory conditions—as follows:

> "It took less than one minute for the fish [*Gambusia*] at 1.0 g[ram]/l[iter] (raw, undried root) to show symptoms of intoxication. Affected fish displayed an interesting behavioral fluctuation. At first they were extremely hyperactive, exhibiting furtive bursts of energy, jumping out of the water, displaying overactive gill motion, and frequently hitting against the sides of the bowl. Subsequently, they would slow down, begin to lose equilibrium, float with bellies

up, and sometimes begin to sink. . . . appeared dead, but when nudged gently, they could be coaxed back to hyperactivity. (Cox 1983:50–51)

Another *Lomatium* valued as an Indian medicine is the bare-stemmed lomatium. The seeds of this plant are valued to the point of being a hot trade item on Vancouver Island well northwest of the species' natural limits in the Fraser River delta and along Puget Sound shorelines (Turner and Bell 1973). The highly aromatic seeds have a powerful anise odor and are used on the middle-Columbia as "moth balls" to protect precious ceremonial regalia from the ravages of insects.

Two other lomatiums are considered to be poisonous by my Indian consultants. *Lomatium columbianum*, a robust species found in a limited area from near the eastern end of the Columbia Gorge north to the Naches River west of Yakima, superficially resembles the fern-leaved desert parsley. Josephine Andrews calls it axúla and recounts how her grandmother cautioned her that it was a "bad plant." *L. columbianum* contains columbianin, another chemical compound of the coumarin group notable for their effect as smooth muscle relaxants (Call and Green 1956). Still mysterious is the case of the plant known as háti, described as deceptively similar in outward appearance to the staple food root xawš. I learned of this plant quite by chance while on a root-collecting expedition to the traditional Blue Mountain haunts of my John Day and Alderdale consultants. We camped at Anson Wright county park, once an Indian campsite now used as a base of operations for the spring harvest of pyaxí and xawš. The campsite was pleasantly quiet with little traffic on the state highway that climbs past into the mountains. Set at the base of a north-facing hill covered with ponderosa pine and Douglas fir, the camp has a sweeping view of hillsides carpeted with grass and wildflowers. Along the willow bordered stream we glimpsed an otter in the early morning and James caught a red-sided shiner (p̓ała-lí) with a short line and hook baited on the spot with xam̓túy—a caddisfly larva we discovered beneath a rock in the stream.

Elsie Pistolhead interpreted the conversations of a nearby meadowlark that sang from the phone lines on the roadside. Meadowlark is a truth-sayer as well as a tease, a key character in Coyote stories. That evening Mrs. Pistolhead carefully set out soap and matches to appease the "stick Indians" (Sasquatch-like creatures that may romp through camp by night). Elsie Selam and Sara Quaempts, reminiscing, told how as young girls they had learned to avoid confusing xawš (*Lomatium cous*), primary object of local root digging efforts, with the notorious háti. A girl one time came down the hillside opposite, digging stick in hand and wápas bags full. She proudly presented the contents of her bag to her elders only to be rebuked for bringing down a load of háti. As with axúla I was able to learn only that it was a bad plant, not the precise cause of its ill repute. I spent hours scouring that hillside—rather too steep for the women to negotiate at their age—and found besides *Lomatium cous* two other similar *Lomatium* species not otherwise nomenclaturally accounted for in Sahaptin. These were *L. donnellii*, which was common on the hillside, and *L. vaginatum*, of which but a few specimens were found. Háti apparently refers to one or the other or both of these plants; however, I know of no evidence that they are either inedible or toxic. It may simply be that the Indian people recognized them as different from the well-known and loved xawš, but had insufficient opportunity to test their potential as food. A strongly reinforced aversion to things "familiar but different" may have survival value where foods and poisons are similarly packaged.

Plateau Indians survived as hunters and gatherers for ten thousand years in a land of strong contrasts by virtue of their encyclopedic knowledge of the local environment. Their knowledge of lomatiums demonstrates that their perceptual and analytical capacities are on a par with those of a modern-day professional botanist. Yet their knowledge of their local ecosystem is in certain key respects quite unlike what the modern professional ecologist or wild-plant enthusiast might choose to learn about the same biogeographical terrain. Literally hundreds of species of "wildflowers" that grow here are known to the Indians as "just flowers" (áwtya ay latít). Some few wildflowers are named on the strength of their peculiar beauty or conspicuousness, as is the case for the scarlet gilia (*Gilia aggregata*), called in Sahaptin "hummingbird's food" (qmámsali tkʷátat), the shooting star (*Dodecatheon* spp.), literally "curlew's beak" (k̓ʷayk̓ʷaynmí núšnu), and the diminutive first-of-spring gold star (*Crocidium multicaule*, see fig. 4.12), which as papc̓iláw plays an important role in the myth of "Coyote's eyes."[2]

By contrast, the showy native wild iris (*Iris missouriensis*) goes unrecognized by many Sahaptin speakers (though it is consistently referred to as

2. The flower in this myth is sometimes referred to in English as "buttercup." At Warm Springs the cognate term papc̓ilú is sometimes applied to *Crocidium*, sometimes to the sagebrush buttercup, *Ranunculus glaberrimus*. Both flowers contribute a splash of color to the rocky flats frequented by the root diggers in early spring.

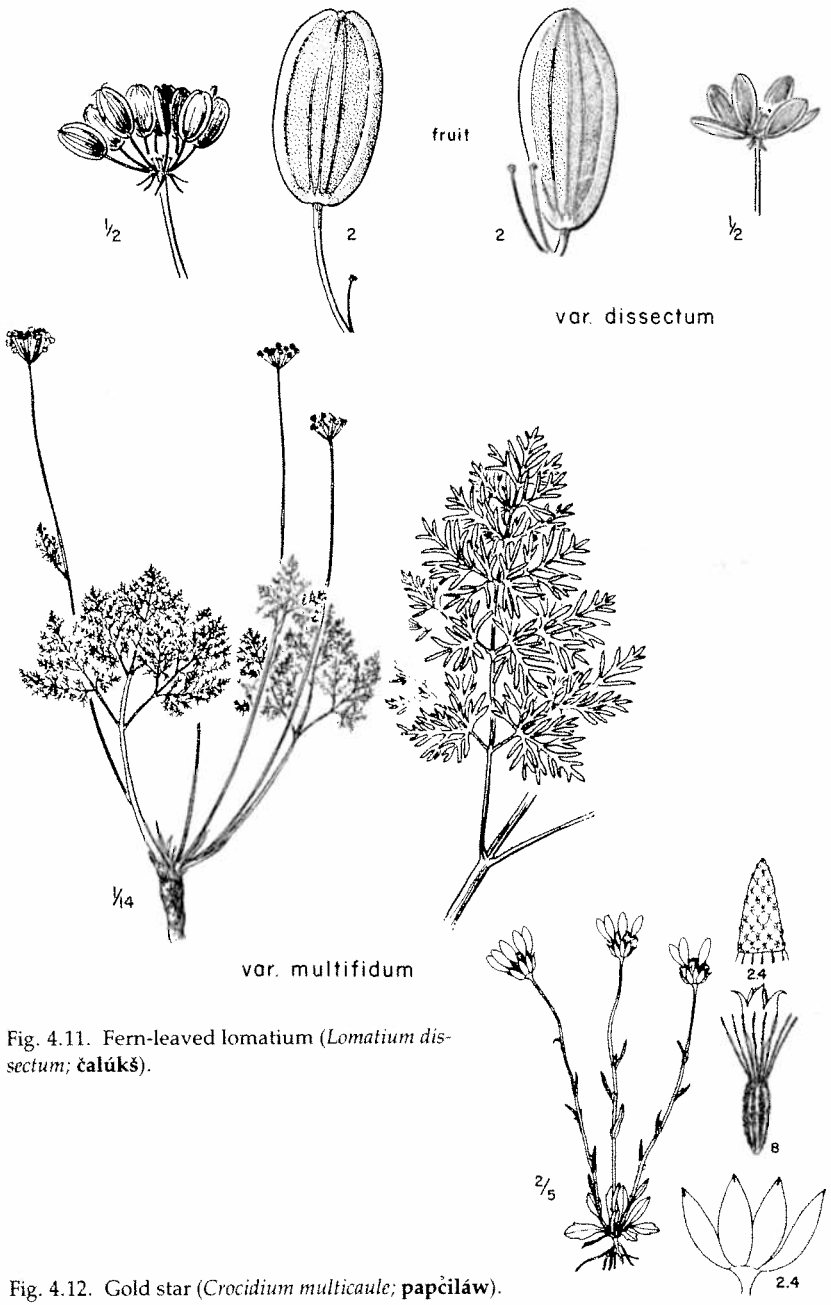

Fig. 4.11. Fern-leaved lomatium (*Lomatium dissectum;* **čalúkš**).

Fig. 4.12. Gold star (*Crocidium multicaule;* **papčiláw**).

nuunas-wáakuł, "mariposa lily-like," on the Warm Springs Reservation [D. French, personal communication] and may once have been employed to treat smallpox [Gibbs 1978 [1854]:14]). Nor do the windflowers (*Sisyrinchium* spp.) or violets (*Viola* spp.) have standard names. Showy buckwheats (*Eriogonum* spp.) dominate the sagebrush hills in June as fully as the lomatiums do in April, yet none is named.[3]

We might see in this dismissal of so many pleasing plants as "just flowers," a hard-nosed practicality deficient in aesthetic sensitivity. However, I question the validity of such a judgment. I know the Indian people have a deep reverence for their homeland. I suspect rather that survival placed a premium on knowlege of utilitarian value and a price on knowledge motivated solely by a compulsion to name every living thing. James Selam would never say that a plant "has no use," for he firmly believes that every plant and animal has both a name and a significant role to play in the overall economy of nature. This is an article of his faith. It is just that, in his view, he was born too late and never had the opportunity to learn the true names of these "nameless" organisms.

The Sahaptin Way of Making a Living

Hunting and gathering is an ancient way of life. Our Australopithecine ancestors were hunter-gatherers more than three million years ago. However, a careful study of hunting-gathering as practiced by contemporary humans, as for example the Plateau Indians, proves that the hunting, fishing, and gathering of these Indians differ dramatically in virtually every important respect from the foraging of apes. Some important points of comparison include: tool use, transport, processing of food, sharing and the division of labor, range of food items utilized, and the cultural context of production. While chimpanzees have been shown to construct a few crude implements, such as "termiting sticks" and overnight nests, their technological skills are far surpassed by such "lower animals" as beavers, bower birds, and bees. The technological repertoire of modern hunter-gatherers—like that of our own upper Paleolithic ancestors (I refer here to the peoples of Europe, Asia, and Africa of 35,000 to 10,000 years ago)—is often described as "simple," even as "crude." In comparison to the machinery of the indus-

3. David French reports (personal communication) that tall buckwheat (*Eriogonum elatum*), a conspicuous but scarcely "showy" wild buckwheat, is known as paq̀ilakaš, "basket-covering plant," at Warm Springs.

Plants Picked for Food

Just as spring is defined by the activity of root digging and its product, xnit, so are summer and fall organized around the activity of "picking" plant foods, fruits, berries, nuts, and even a species of tree lichen that is picked from high country conifers, several gunnysack loads at a time, then baked underground and eaten as a confection. All are classed together as tmaanít. A more rigid collecting container is preferred for fruits and berries than the wápas of twined Indian hemp cord normally employed for collecting roots. Berry-picking containers include "Klikitat baskets" of cedar root decorated with bear grass and bitter cherry bark.

The tmaanít harvest begins in some areas with the sweet golden currants and bitter white dogwood fruits that ripen by the end of June at low elevations along the major rivers. To honor the first fruits, thanksgiving ceremonies were held. These have recently been revived in several communities. Mid-August is the traditional time for the huckleberry feast, still widely celebrated in preparation for the annual harvest of the Plateau Indians' number one fruit, the black mountain huckleberry (wíwnu; *Vaccinium membranaceum*).

Between late June and mid-August the harvest focuses on lowland and foothill species, especially chokecherries (tmíš; *Prunus virginiana*) and serviceberries (ččaa; *Amelanchier alnifolia*). Chokecherries come in three distinct color varieties, but Sahaptin speakers ignore these superficial distinctions in their nomenclature. Thompson Salish speakers, by contrast, distinguish by name nearly a dozen varieties of serviceberries, according to size, color, taste, habitat, and life-history (Turner et al., n.d.).

Sahaptin speakers agree with their Interior Salish colleagues that the most important fruit of all is the black mountain huckleberry (Turner 1987:72). It is distinguished by its large size, exquisite flavor, and general abundance in high mountain clearings. The very similar but less abundant Alaska huckleberry (*Vaccinium alaskaense*) was not distinguished by my consultants, but was considered to be a less choice variant found in more shaded habitats. Grouseberry (*V. scoparium*) is a miniature of its taller huckleberry relations, low in stature, with tiny leaves and diminutive red to burgundy berries, traditionally harvested with a special wooden comb. Appropriately, the grouseberry is called wiwlú-wiwlu, "little black mountain huckleberry."

Associated with black mountain huckleberry nearly throughout its range is the blue huckleberry (*Vaccinium ovalifolium*), the berries of which have a thicker skin and lack the fine flavor of wíwnu. The leaves are noticeably different, smooth-edged and pale. It is called q̓šiš-lí, which James Selam suggested might imitate the sound made when you bite into this thick-skinned berry. On the west slope of the Cascades the red huckleberry (*V. parvifolium*) is common. Columbia River Indians rarely ventured so far west and so gave it a variety of descriptive names, such as lúča-luča wíwnu, "red huckleberry," or cicums-lí, "boil-colored," a graphic image for this shocking pink fruit.

Sweetest of all is the low mountain blueberry (*Vaccinium deliciosum*, apparently including *V. caespitosum*), known as ililmúk.[2] Sally Buck, a Klikitat, apparently uses the term ililmúk for the bog blueberry, *V. occidentale*, while David French's Warm Springs consultants apply wiwlú-wiwlu to *V. caespitosum*.

Coincident with the huckleberry harvest is a harvest of black tree lichen (k̓unč; *Bryoria fremontii;* see fig. 5.17). While the huckleberries are dried over a slow fire in the waning warmth of October (Filloon 1952), k̓unč receives the full "camas treatment," baked underground to render the airy strands to a pastelike carbohydrate, much concentrated and reduced in volume (Turner 1977). This lichen was not, as has often been claimed, a famine food, but was appreciated as a culinary treat, an "Indian pudding," worth the substantial effort put into its harvest and preparation. It is still eaten today despite the complexity of its preparation.

Trees

The first white immigrants coming down the Oregon Trail to the Columbia River found the land a despairing sight: ". . . forest trees totally disappear, and nothing larger than the common willow is to be seen. This whole intervening tract is one of gravel and sand, with just soil enough to sustain a scanty covering of grass" (quoted in Meinig 1968:103). This "Great Columbia Desert" appeared bleak, dusty, rock hard, treeless, in a word, a desert. The travelers hurried on to the rich partially wooded bottomlands of the Willamette Valley, a more comfortably familiar habitat.

The Indians at home along this arid stretch of river were not ignorant of trees. Their seasonal travels exposed them to over thirty species, most of

2. The English terms "huckleberry," "blueberry," and "grouseberry" are applied here in no consistent fashion to name various species of the genus *Vaccinium*. This contrasts with standard usage in eastern North America where "huckleberry" is reserved for the large-seeded *Gaylussacia* berries, which do not occur in the West.

Fig. 5.17. Black tree lichen (*Bryoria fremontii;* **k̓unč**).

which were known by distinct names. Many contemporary urban Euro-Americans may know perfectly well what a tree is but are unable to say what *kind* of tree they are looking at. The Indians know well the kind of tree but are a bit unsure as to just what is or is not a "tree" in their language. The closest we can come in translating "tree" in Sahaptin is with the word pátat, which has the literal meaning of "thing standing upright." Is a dead snag or a flag pole a pátat? When I asked this question I got hesitant and conflicting opinions in reply. I believe the truth is that for the Indians the most important fact was what *kind* of tree it was, as there were few occasions when any old tree would do.

The specificity of Sahaptin plant nomenclature is striking if we compare

TABLE 16
Pine Tree Names in Sahaptin

Pine in general	*Pinus* spp.	Ø, tápaš
Ponderosa pine	*P. ponderosa*	tápaš
Western white pine	*P. monticola*	pak̓inák-aas (NWS only)
Lodgepole pine	*P. contorta*	kalám-kalam
Whitebark pine	*P. albicaulis*	ni-níik-aaš

Indian names with the standard English terms for pines, to take just one example (see Table 16).

Each species has its own name; binomials are avoided. The suffix -aaš/-aš/-aas, though it never occurs alone, might be translated "plant." Again, each species is useful to the Indians in particular ways. The whitebark pine is a source of pine nuts, ni-níik, for which the tree itself is named, literally, "pine nut plant." Ponderosa pine produces edible inner bark and sugar, and doubles as a major habitat indicator, marking the lower timberline, called tap̓aš-naq̓ít, "ponderosa pine edge." The lodgepole pine, as the name indicates, was a preferred species for lodge poles due to its straight, branchless growth where it springs up after a fire (this applies to the Indians of the northern Plains, not to the Plateau, as far as has been recorded).

The classification of willows (*Salix* spp.) demonstrates yet more clearly this functional specificity of plant nomenclature. The willows are a diverse genus of woody plants. Some are honest-to-God trees, large, with heavy trunks. Most, however, are spindly shrubs or, in alpine areas, sprawling ground-covering mats. Whether tree or shrub, willows are called ttáxš in Columbia River Sahaptin. This is apparently derived from i-ttáx-ša, "it is growing." There is one exception. The peachleaf willow (*S. amygdaloides*)—a large tree willow of riparian flats east of the Cascades—is singled out as haháw. Like every willow species, this one demonstrates many characteristics shared throughout the willow clan, but it exhibits as well a unique feature that justifies for the mid-Columbia Indians its separate name. It grows straight and tall, upwards for fifty feet sometimes with scarcely a twist or a branch (Peattie 1950:346; see fig. 5.18). In this respect it is quite unlike its large cousin, the Pacific willow (*S. lasiandra*) that is often found

Fig. 5.18. Peach-leaf willow (*Salix amygdaloides;* **haháw**).

with it in streamside groves. It might well have been called the "lodgepole willow" were Sahaptin speakers inclined to use compound names, for its unusual form of growth (for a willow) makes of it the perfect species for constructing longhouse frames. As we have seen, the mid-Columbia people spent their winters in sheltered side canyons just off the big river, an area nearly devoid of trees. Trees that are found here are often sprawling and shrubby like most willows or weak like the cottonwood. The peachleaf willow fills the bill for construction timbers. One need not haul tall, straight trees from the mountain forests at great effort. One need only seek out a good riverside stand of haháw.

If you visit the Yakima Nation Cultural Heritage Center Museum in Toppenish, Washington, you will see a full-sized Plateau Indian longhouse on display. This was built in 1982 by a team including James and Elsie Selam and Sara Quaempts. The women were in charge of making the tule mats (about which more below) and James saw to it that the frame was constructed of peachleaf willow poles in the best traditional manner.

Trees are not often useful as sources of food. I have already noted two that are, the whitebark pine for its nuts and the Ponderosa for its sweet cambium. I must add the Garry oak (ċunípS; fig. 5.19) to this category. It is the only oak that grows naturally this far north on the Pacific slope. It is restricted to the western edge of the Plateau in the Columbia gorge and along the eastern Cascade foothills north to the Naches River. Its acorns (wawačí) are esteemed, though they belong to the bitter white oak group. Leaching is required to eliminate the tannins before they can be eaten. This was traditionally accomplished by burying the acorns in a certain kind of odoriferous mud found along the Columbia at certain spots. They were then baked underground in the manner of camas. If Steller's jays (the local "bluejay"; x̣ʷášx̣ʷay) came to scold the acorn baking party, the acorns would be ruined. Why? A Wasco myth of Raccoon and his grandmother describes how the irresponsible boy, Raccoon, eats up his grandmother's acorn stash, replacing each acorn with his dung to hide his greed. For this antisocial act his grandmother whips him with a stick from the fire: that's how Raccoon got his stripes (see Text, pp. 186–87). (Is it not curious that raccoons are branded as thieves in Sahaptin myth as in Euro-American folklore?) As the saga continues, Raccoon's grandmother, regretting her anger, seeks to make it up with her boy, but he chokes her instead. As she gags, "Kak, kak, kak," she turns into a jay. So the jay is the scolding grandmother, a reminder of the grave necessity to maintain proper familial relations.

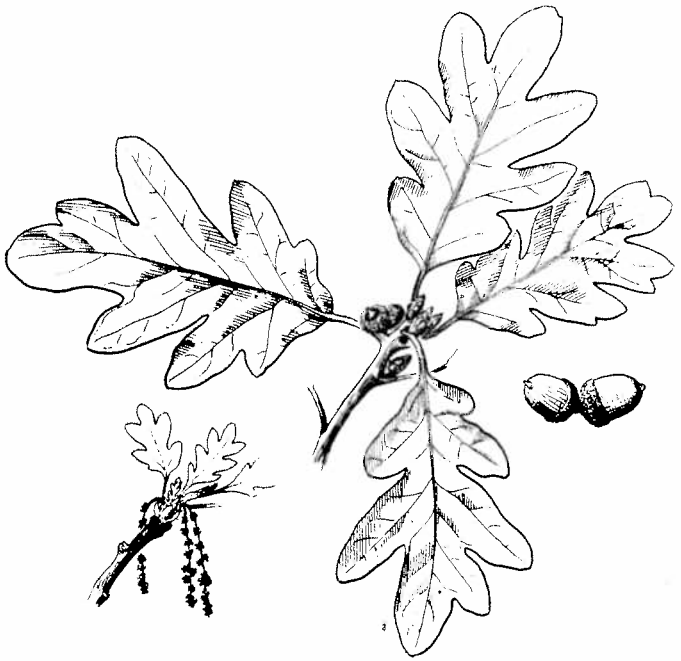

Fig. 5.19. Garry oak (*Quercus garryana;* **čuníps**).

Wood is of great value in native technology, each tree appreciated for the special qualities of its wood. Maple is strong and flexible, ideal for dip net hoops. Hence vine and Douglas maples are called twanú-waaš, literally, "dip-net plant." Hardwoods are singled out for other roles. Ocean spray (*Holodiscus discolor*), for example, is called pix̌wayč-pamá, literally, "[plant] for braces," referring to its preferred use as the crosspiece that gives strength to the dip net hoop. Similarly, oak is occasionally named kápin-aaš, literally, "digging stick plant," as it was favored for digging stick shafts.

The "firewood problem" has been much discussed in the context of Plateau ecological adaptation. Large quantities of wood were required to heat the peoples' winter homes when temperatures might drop to −20°F. It has even been suggested that salmon was burned as fuel in lieu of readily obtainable firewood (based on a surmise in Thwaites 1959 [1904], 3:124). This hypothesis ignores an abundant source of fuel wood ready to hand, sagebrush (*Artemisia tridentata;* tawšá; NWS: pišx̣ú). Nevertheless, firewood supplies were no doubt a key consideration in village site selection with driftwood concentration points highly favored.

Not all woods are of equal value as firewood, however, and some are worthless or worse. Knowledgeable firewood selection is underscored by the belief that to use blue elderberry wood (*Sambucus caerulea;* mitip) or wood of the sumac (*Rhus glabra;* ɬantit) would lead to disaster. Elderberry stems are pulpy with little substance at the core, thus useful as "straws" for venting underground ovens, but useless as firewood. Sumac may in fact produce poisonous smoke as is the case with its highly toxic relatives, poison ivy and oak. The roots are used to treat venereal disease.

Several other trees, especially the conifers, are valued as medicines. Pitch (išx̣í) is highly regarded in the treatment of wounds and sores. The young foliage of Ponderosa pine and larch (kimíla) is boiled to make teas for treating flu and tuberculosis, respectively. The highly aromatic balsam firs (*Abies* spp.; patátwi) are highly regarded for their cleansing powers, cleansing not only the body but purifying the spirit and the house as well. One sits on the flat sprays of grand and silver fir in the sweat lodge and the healing power of the steam is strengthened by the strongest of all the firs, the subalpine (*A. lasiocarpa;* see fig. 5.20).

Trees even play an active role in myth. Hemlock (*Tsuga* spp.; waqutqut-yáy) is credited with Coyote's rescue from drowning. After Otter and Turtle had failed to rescue him, Hemlock succeeded by hooking Coyote from the bottom of the river using its bent lead shoot. This peculiarity of hemlocks is a well-known field mark that at a glance singles out the hemlocks from the mass of Cascade forest trees (see fig. 5.21). The Indians have also seized upon this distinction, reinforcing its value as a distinguishing feature by highlighting it in myth.

Fibers

Plateau peoples were too mobile to find pottery of much use. They made their containers instead of highly portable and durable plant fibers. The value of such plant materials in the manufacture of essential tools can hardly be exaggerated. Foods keep us alive, it's true, but baskets, nets, and bindings make it possible to collect and transport those foods, while mats and clothing protect the body from hypothermia. Survival on the Plateau depended as much on the knowledge of fiber plants as it did on the knowledge of food plants.