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AN INVESTIGATION OF THE EDIBLE AND MEDICINAL PLANTS
USED BY THE FLATHEAD INDIANS

By

Ron D. Stubbs

B.A. University of Montana, 1965

Presented in partial fulfillment of the requirements
for the degree of

Master of Arts

UNIVERSITY OF MONTANA

1966

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AUG 1 1966

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ACKNOWLEDGMENTS

During the past three years I have had the good fortune to become intimately acquainted with many of the Flathead Indians residing on the Flathead Indian Reservation in Western Montana. Beginning with the Lewis and Clark Expedition these Indians have established a long record of friendship and generosity with the whites although in many instances the latter can scarcely be said to merit it. The continued friendship and cooperation of my Flathead informants have made the field work for this study a pleasure instead of a drudgery.

I am particularly indebted to Jerome and Agnes Vanderburg of Arlee, Montana. Without their extensive knowledge of the plants used by the Flathead for food and medicine, I would have been unable to make this study.

I wish to thank Drs. Carling Malouf and Dee C. Taylor for their valuable assistance and criticisms which they have offered during the course of this study. I have welcomed their advice.

Dr. Verne Dusenberry, formerly of the University of Montana, now at the Glenbow Foundation, Calgary, Alberta, guided the preliminary research and field work of this study. I have appreciated his suggestions which minimized many of the problems that I later encountered.

Drs. Leroy Harvey and Sherman Preece have been very

helpful, aiding in plant identification and mounting. Dr. Harvey has contributed much to my understanding of the plant ecology of this area.

Finally I would like to thank my wife, Betty Stubbs, for her help during the field work for this study and in typing and proofreading.

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CHAPTER I

INTRODUCTION

The Flathead Indians are a tribe living in Western Montana on the Confederated Salish and Kutenai Indian Reservation.¹ They speak a dialect of the Salishan language family which is intelligible to neighboring Salishan tribes such as the Pend d'Oreille, Spokane, and to a lesser extent, the Coeur d'Alene Indians. At present the Flathead Indian Agency at Dixon, Montana, has approximately two hundred and fifty "full blood" Flathead Indians on the tribal rolls, plus almost three thousand other Indians of mixed ancestry. Kutenai, Nez Percé, Kalispel, and other Indian tribes are also represented on the reservation. Considerable inter-marriage has occurred between the Flathead, other Indian tribes, and whites. Most of the Flathead full bloods live on the reservation, but almost one-half of the total Indian population resides outside the reservation for reasons such as employment and marriage.

The Status of Ethnobotanical Investigation Among the Flathead Indians and Surrounding Tribes

References concerning the use of various plants by

¹It is popularly called by its former name, The Flathead Indian Reservation, and for expediency I shall hereafter use this term to refer to it.

the Flathead Indians and most neighboring tribes cannot be profitably pursued in historical literature prior to the time of the Lewis and Clark Expedition. A few explorers such as Vérendyre and Alexander MacKenzie had made valuable ethnographic observations among Indian tribes of the Northwest Territory during the eighteenth century, but their writings contain few specific references to native use of plants and none concerning the Flathead Indians.

The first detailed and systematically recorded ethnographic data concerning the Indian tribes of the upper Missouri and Columbia Rivers was collected by the Lewis and Clark Expedition, 1804-1806. In addition to the journals of Captains Lewis and Clark, several enlisted men of the Expedition also kept a diary of their daily experiences and observations. The diary of Patrick Gass, the Expedition's carpenter, is a very useful supplement to the journals of Lewis and Clark since he sometimes noted features of the immediate landscape, including the occurrence of various flora, which Lewis and Clark failed to mention.

In preparation for the Expedition Captain Meriwether Lewis had studied botany and zoology at the Academy of Natural Sciences in Philadelphia. President Jefferson's instructions for the Expedition, addressed to Captain Lewis, advised him to notice "the soil and face of the country, it's growth & vegetable productions; especially those not

of the U.S.," as well as the food the Indians used and "the diseases prevalent among them, & the remedies they use."² The exact number of plant specimens collected by Captain Lewis is unknown because some were lost, but there are over two hundred remaining specimens located at the Academy of Natural Sciences in Philadelphia. Over fifty of these plants are type specimens of hitherto unknown plants, mainly collected in the Missouri and Columbia River drainages.³

There are several reliable accounts of white contacts with the Flathead and surrounding tribes in the Rocky Mountains shortly after the Lewis and Clark Expedition. Most of these were written by men associated with the fur trade such as David Thompson, Ross Cox, Alexander Ross, and Warren Ferris. These early writings, along with the journals of the Lewis and Clark Expedition, are the essence of the pre-1850 ethnographic data available on the Flathead Indians.

The writings of the early trappers and traders usually contain only casual references to the various plants which were important in the economic life of Indian tribes. For example, Warren Ferris observed that the Flathead, camped in late summer near the Bitterroot River on Lolo Creek,

²Bernard DeVoto (ed.), The Journals of Lewis and Clark (Boston: Houghton Mifflin Company, 1963), p. 483.

³Velva E. Rudd, "Botanical Contributions of the Lewis and Clark Expedition," Journal of the Washington Academy of Sciences, Vol. 44, No. 11 (November, 1954), p. 353.

"bring in daily horse loads of berries, and several kinds of roots."⁴ At first glance, little can be gleaned from such statements other than that the Flathead were picking berries and digging roots, but a study of the berries and roots which are ready for harvest in the area during late summer offers possible clues to Ferris's statement. A limited study of the phytogeography of an area is sometimes useful in understanding similar references by other authors. In this manner I have attempted to determine the identity of a few unnamed plants later in this study.

The writings of the Jesuits and subsequent travelers, Indian agents, etc., mention very little new ethnobotanical data pertaining to the Flathead Indians which is not available in earlier accounts. Undoubtedly Fathers DeSmet, Mengarini, and other Jesuits were in a position to record many Flathead medical practices, but they are seldom mentioned in their writings.

Shortly after the advent of the twentieth century several ethnographers began their first major field researches. Herbert Spinden studied the Nez Percé, Alfred Kroeber the Gros Ventre, Clark Wissler the Blackfoot, Skinner the Cree, and Robert Lowie began his initial work with the Northern Shoshone. In addition, George Bird

⁴Warren A. Ferris, Life in the Rocky Mountains (Denver: The Old West Publishing Company, 1940), p. 218.

Grinnell and Walter McClintock, nonprofessional but keen observers, were living with and observing the Cheyenne and Blackfoot ways of life. All of these ethnographers noted some details of the Indians' uses of plants and their preparation, but only Grinnell and McClintock made any sizeable field collections. Kroeber faithfully recorded the Gros Ventre names of many plants and their uses, but since he failed to make any field collections suitable for identification, they remain unidentified. Lowie almost completely disregarded ethnobotany in his field work among the Shoshone. I do not wish to detract from these early monographs, but rather point out the absence of ethnobotanical investigations among the Indian tribes of this general region.

In 1905, J. W. Blankinship, a botanist at the Montana Agricultural College in Bozeman, published a paper entitled The Native Economic Plants of Montana. Blankinship's work still remains the most complete assessment of the native plants of Montana which were used by the Indian tribes of Montana and surrounding states, but its usefulness is limited by his frequent omission of sources of data and the identity of the Indians who used various plants.

The only complete ethnobotanical study of any Indian tribe, who in historic times considered part of

the present state of Montana as their territory, was made shortly after 1900 by James Teit among the Thompson Indians. The Thompson Indians occupied a corner of southeastern British Columbia and ranged a few miles into the northwestern corner of Montana. Although they had no direct contact with the Flathead Indians, both tribes occupied similar geographical terrains and utilized many plants for similar purposes. Except for Teit's work, the nearest studies in ethnobotany are Ralph Chamberlin's Ethno-botany of the Gosiute Indians of Utah and Erna Gunther's Ethnobotany of Western Washington. Both of these studies deal with floral environments and cultural adaptations considerably different from that found in the territory of the Flathead.

Two monographs have been written on the Flathead Indians. The first study, by James Teit, The Salishan Tribes of the Western Plateaus, examines the Flathead Indians as part of a larger "Flathead Group" inhabiting the Western Plateaus. Teit recorded very little information on Flathead ethnobotany, but he did identify some of the plants used by the Spokane, Coeur d'Alene, and Okanagon, three Salishan speaking groups living in Eastern Washington and Idaho along tributaries of the Columbia River.

The second study, made by H. H. Turney-High during the 1930's, contains a few references to the food and

medicinal plants used by the Flathead Indians. Turney-High claims eight years of field research among the Flathead, but some of his statements regarding bitterroot and camas indicate that he probably never observed them being harvested or even cooked.⁵ This statement is not meant as a blanket criticism of Turney-High's work. I found most of his ethnobotanical observations limited, but perfectly sound. Of the eleven medicinal plants he lists, I collected all but two, "nták'tu" and "tatakné',"⁶ which my informants had never heard of, but some of the other medicines he recorded are still used by the older Flathead.

Purpose and Description of the Study

Ethnobotany has been defined as "the study of the importance of plants to primitive peoples."⁷ A complete ethnobotanical study of a primitive culture normally includes the collection and study of all plants recognized or used within the culture. The uses of these plants

⁵Harry Holbert Turney-High, The Flathead Indians of Montana (Memoirs of the American Anthropological Association, No. 48. Menasha, Wisconsin: American Anthropological Association, 1937), pp. 6, 111; Turney-High, "Cooking Camas and Bitter Root," The Scientific Monthly, XXXVI (March, 1933), pp. 262-263.

⁶Turney-High, The Flathead Indians of Montana, Nos. 7 and 10, p. 141.

⁷Alfred F. Whiting, Ethnobotany of the Hopi (Museum of Northern Arizona, Bulletin 15. Flagstaff: Northern Arizona Society of Science and Art, July, 1950), p. 1.

usually fall into fairly broad categories, arbitrarily devised by the ethnologist. For example, some plants are ordinarily used for ceremonial purposes, others are part of the food supply, some are used for technological purposes as in bowmaking or basketry, while another group of plants is normally used for medicinal purposes, etc. A few plants sometimes have multiple or restricted uses, making it difficult to systematically classify them.

This study is devoted to two main categories of plant utilization among the Flathead Indians and is not a complete ethnobotanical study of all the plants used by them. The purpose of this study is to identify the plants formerly used for food and medicine by the Flathead Indians, to describe their collection, preparation and use, and, whenever possible, to record any rituals, beliefs, and myths associated with specific plants. I will attempt to show the relationship of these plants to the larger contexts of the former food economy and medical practices of the Flathead Indians. I will also present a few plants used for toiletries which cannot be categorized as either food or medicinal plants. Although secondary to the purpose of this study, I will draw pertinent references concerning plant uses from ethnographic studies of other Indian tribes in the Plains and Plateau areas.

In the field research for this study I have placed

primary emphasis on the previous culture of the Flathead Indians. I have made no attempt to collect or describe any food plants presently cultivated by the Flathead Indians. Previous to white influence the Flathead subsisted by hunting and gathering, and with the possible exception of raising tobacco (discussed later in this study), they cultivated no plants. During the past century the Flathead have made sporadic attempts at agriculture, but since their crops are the same as the common vegetables, grains, and hay grown by the surrounding white farmers and gardeners, they are not essential to this study.

The medicinal plants presented in this study include plants used by the Flathead for veterinary purposes as well as plants used only for human medication.

The Flathead Indians and Their Environment

The Bitterroot Valley in Western Montana was the traditional home of the Flathead Indians during the nineteenth century before they entered the Flathead Indian Reservation. This fertile valley gradually widens from a narrow canyon into a valley about five miles wide which extends from the vicinity of Darby, Montana, to the confluence of the Bitterroot and Clark Fork Rivers near Missoula, Montana. High mountain peaks border the west side of the valley, and mountain foothills range along its eastern side. Before white settlement the valley floor

was partially covered with scattered groves of ponderosa pine, most of which were subsequently cut for firewood, lumber, and to clear land for farming. Sagebrush covered many areas of the valley before they were plowed. The mountains are predominantly forested with ponderosa pine and western larch trees, with some white pine, lodgepole pine, fir, and spruce. The high peaks of several mountains overlooking the Bitterroot Valley are above timberline and snow-capped most of the year. Quaking aspen and other deciduous trees grow in scattered groves in the valley, mountain foothills, and higher valleys, while many cottonwood trees grow along the banks of the Bitterroot River and its many tributary streams. Choke cherries, service berries, hawthorn berries, gooseberries, raspberries, currants, and other edible wild fruits grow near stream courses and in well watered areas of the valley and foothills. Huckleberries can be found almost anywhere on the forested mountain slopes.

Bitterroot previously grew on most of the low open foothills and plains of the Bitterroot Valley. The Flathead Indians usually harvested enough bitterroot for their purposes from the semiarid flats surrounding the present towns of Florence, Lolo, and Missoula, Montana. Camas grew in many areas of the Bitterroot Valley. The Flathead often gathered their winter's supply in marshy areas surrounding Como and Moose Lakes near Darby, Montana.

The big game animals hunted by the Flathead in the Bitterroot Valley and surrounding areas included deer, elk, moose, bear, and possibly a few antelope. Bighorn sheep and mountain goats were hunted at higher elevations in the mountains during the summer and in the mountain foothills during the winter.⁸ Buffalo seldom, if ever, crossed to the western side of the Continental Divide during the historic period.

However, the natural environment of the Flathead was not restricted to the Bitterroot Valley. They often traveled throughout a much larger portion of Western Montana hunting and gathering roots and berries. The journal of Captain Meriwether Lewis for July 4, 1806, relates that the Nez Percé Indians, who had accompanied the Expedition over the Lolo Pass to the vicinity of present-day Missoula, Montana, "were about to descend Clark's river several days journey in search of the Shale's [Flathead] their relations. . . ."⁹ Many other reliable sources also confirm Flathead travels over a

⁸The Flathead had a belief, not mentioned elsewhere, that if a hunter passed up a grouse or fool hen while he was hunting big game, thinking that it was too small to bother with, he would be unsuccessful in hunting because of his greediness for the larger animal. This disagrees with Turney-High's conclusions regarding bird hunting (Turney-High, The Flathead Indians of Montana, p. 113). It is uncertain whether this belief also applied to other upland game birds such as prairie chickens which were encountered on buffalo hunts.

⁹Ruben Gold Thwaites (ed.), Original Journals of the Lewis and Clark Expedition, 1804-1806 (Vol. 5; New York: Dodd, Mead, and Company, 1905), p. 188.

large part of Western Montana. The Flathead also ranged into portions of Idaho, especially areas accessible by ascending the West Fork of the Bitterroot River, Lolo Pass, and Lost Trail Pass. They usually made a midsummer trip into Idaho via either the West Fork of the Bitterroot River to the Salmon River in the vicinity of Shoup, Idaho, or over the Lolo Pass to the Lochsa and Clearwater Rivers to catch and dry salmon and hunt deer and elk. On September 14, 1805, the Lewis and Clark party, descending Glade Creek, a tributary of the Clearwater River, passed two fishing wiers used by the Flathead Indians to catch salmon.¹⁰

The full extent of Flathead travels east of the Continental Divide is still unknown. The Nicholas Biddle Notes pertaining to the Lewis and Clark Expedition contain the following tantalizing observations by Captain Clark.

No particular facts as to Indian emigration. Our Indian woman said & it is generally known that the Shoshonees, Liatans & other snakes of the Mountains formerly lived in the plains on this side & by war were obliged to take refuge in mounts. The Ootlashoots [Flathead Indians] too say that they once were in the plains & were forced to retire.¹¹

Unfortunately Captain Clark was not clear concerning the length of time that the Flathead occupied the Plains, but

¹⁰Ibid., Vol. 3, p. 66.

¹¹Donald Jackson (ed.), "The Nicholas Biddle Notes," Letters of the Lewis and Clark Expedition (Urbana: University of Illinois Press, 1962), p. 528.

the reference suggests a longer period of time than the Flathead spent during their annual winter bison hunts.

In his ethnographic work among the Blackfoot Indians, Clark Wissler found that:

The Piegan claim that before the white man dominated their country (an uncertain date, probably 1750-1840) the Blackfeet, Blood, and Piegan lived north of Macleod; the Kootenai in the vicinity of the present Blood Reserve; the Gros Ventre and the Assiniboine to the east of the Kootenai; the Snake on the Teton River, and as far north as Two Medicine River; and the Flatheads on the Sun River. These traditions were so definite and consistent that consideration must be given them.¹²
[emphasis supplied]

David Thompson also noted that before Blackfoot dominance the plains of central Montana were in the possession of the Kutenai and the Salish and their allies.¹³

If the Flathead Indians attempted to establish permanent Plains residency after their acquisition of the horse, which Haines dates at about 1710-1720,¹⁴ it was probably a short-lived venture of a few years at most.

¹²Clark Wissler, Material Culture of the Blackfoot Indians (Anthropological Papers of the American Museum of Natural History, Part I, Vol. V. New York: Published by Order of the Trustees, 1910), p. 17.

¹³David Thompson, David Thompson's Narrative of his Explorations in Western America, ed. J. B. Tyrrell (The Publications of the Champlain Society, No. 12. Toronto: The Champlain Society, 1916), pp. 327-328.

¹⁴Francis Haines, "The Northward Spread of Horses Among the Plains Indians," American Anthropologist, Vol. 40 (July-September, 1938), p. 435.

But even if the Blackfoot first encountered the Flathead during their annual bison hunts which usually lasted several months, it argues for an extended geographical range and flora for the Flathead before Blackfoot hostilities.

There is some ethnographic evidence that during the first quarter of the eighteenth century the Flathead began their major bison hunting expedition to the Plains in mid-summer, returned during the fall, and wintered in the milder climates of the Bitterroot Valley and lower Clark Fork River areas. For example, the journal of David Thompson contains the following entry for October 11, 1808, while he was residing at Saleesh House located near the present town of Thompson Falls, Montana.

Three Saleesh young Men came to inform us, that the great Camp of the Saleesh Indians, with their Allies, were returned from hunting the Bison, and were two days march from us, had plenty of provisions, and had seen no enemies.¹⁵

During the subsequent winter David Thompson journeyed up the Clark Fork and Bitterroot Rivers in search of birch bark suitable for building canoes. He stayed at several Flathead camps along the Clark Fork River and in the Bitterroot Valley, but made no mention of the absence of any Flathead Indians on a winter bison hunt. Instead he speaks of about one hundred Flathead men at one camp and "twenty

¹⁵Thompson, op. cit., p. 417.

one tents of Saleesh Indians" in another.¹⁶

Varied accounts of traders, fur trappers, and explorers indicate that by 1825 at the latest the Flathead and their allies began making their major annual bison hunting expeditions east of the Continental Divide during midfall and continuing on the Plains throughout the winter. I believe that this change in pattern probably resulted from increased Blackfoot military hostilities rather than a desire of the Flathead to brave the more severe midwinter Plains environment. It seems reasonable that the Flathead were trying to avoid engagements with the militarily superior Blackfoot by venturing onto the Plains during the winter when hostilities were apt to be hampered by climatic conditions.

If at one time the Flathead began their major annual bison hunt sometime during the summer and returned to the Bitterroot Valley area in midfall as David Thompson indicated, it is readily apparent that they were absent from Western Montana during the season when they collected their main berry crops. Teit's research among the Flathead shortly after 1900 supports this assumption stating that:

Fishing, digging of roots, and gathering of berries became of less importance, because these industries could not always be prosecuted when buffalo hunting. Good berrying and root digging

¹⁶Ibid., pp. 419-420.

grounds were not usually places best suited for buffalo hunting, and people often found themselves far away at the proper season for berrying and root digging. Thus there arose a tendency to neglect these sources of food supply, as well as the hunting of other game. A certain amount of roots and berries were gathered and cured by old people, who did not go with the regular buffalo hunting parties.¹⁷

However, it is entirely possible that instead of neglecting the collection of roots and berries in favor of bison hunting expeditions as Teit indicated, the Flathead instead began exploiting some of the berry and root crops available on the Plains. This possibility is supported by present-day Flathead informants who recall that "old-timers" talked of bringing home dried berries which they had picked on hunting trips along the Yellowstone River.

Thus in considering the flora of the area inhabited by the Flathead Indians prior to their reservation life, it is not sufficient to include only the Bitterroot Valley and immediate vicinity. Instead their floral environment must be visualized as consisting of those plants common to the Flathead territory in Western Montana, plus certain plants, most of unknown identity, which they personally obtained from distant regions in Montana and Idaho.

An accurate picture of the former Flathead floral

¹⁷James A. Teit, "The Flathead Group," The Salishan Tribes of the Western Plateaus, ed. Franz Boas, Forty-fifth Annual Report of the Bureau of American Ethnology (Washington: Government Printing Office, 1930), p. 346.

environment is further complicated by other factors which must be considered. The diffusion of the horse into the Plateau and Plains area resulted in more subtle changes than the often discussed increased mobility and resultant expanded food sources. The introduction of the horse also altered the plant ecology through overgrazing since some plants will thrive under grazing conditions while others will not. Consequently, hundreds of head of horses grazing near Indian camps had substantially changed the original plant ecology in the valleys of Western Montana even by the time the Lewis and Clark Expedition passed through them in 1805-1806.¹⁸ It is reasonably certain that the Indians' added mobility resulting from the advent of the horse in Western North America also helped accelerate the diffusion of many plants which had been introduced into North America from Europe and Asia or which were indigenous but existing only in limited areas.

The increasing heterogeneity of the Flathead population during the nineteenth century further complicates any consideration of their floral environment during that period. In December of 1853, Dr. George Suckley, a U.S. Army physician traveling by canoe from St. Mary's Mission to Vancouver, B.C., wrote in the report compiled by Isaac

¹⁸Personal communication with Dr. Leroy Harvey, University of Montana.

I. Stevens that:

The Flatheads number about forty-five lodges. These are not all inhabited by Flatheads, there being but very few pure Flatheads left, the race having been almost exterminated by the Blackfeet. The mass of the nation now consists of Kalispelms, Spokanes, Nez Perces, and Iroquois, who have come among them, together with their descendants. Pierre Baptise, the old Iroquois at Fort Owen, thinks that there are about sixty lodges among the Flatheads, but says that many of them are only inhabited by old women (widows) and their daughters.¹⁹

Governor Isaac I. Stevens also visited the Bitterroot Valley in 1853 and paraphrasing Dr. Suckley observed that:

The Flatheads number about sixty lodges, but many of them are only inhabited by old women and their daughters. The tribe has been almost exterminated by the Blackfeet, and the mass of the nation consists of Pend d'Oreilles, Spokans, Nez Perces, and Iroquois. I estimate their number at 350.²⁰

Intermarriage between the Flathead and surrounding tribes is well documented by nineteenth century writers. Considering this, it is logical to assume that the presence of Indians of neighboring tribes among the Flathead probably effected some changes in the variety of plants used in

¹⁹Isaac I. Stevens, "Explorations for a Route for the Pacific Railroad," Reports of Explorations and Surveys to Ascertain the Most Practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean, Vol. I of 12 vols. (Washington: Beverly Tucker, Printer, 1855), p. 295.

²⁰Ibid., p. 150.

their food economy and for medicinal purposes. Their presence among the Flathead also provided a greater stimulus for trade and contact with their respective tribes. Actually, some of the food and medicinal plants presented in this study quite probably were at one time unique to the Nez Percé, Kalispels, Spokans, etc., but through continued trade, intermarriage, and alliances, they gradually became part of the Flathead culture.

Continued white settlement and interest in Western Montana culminated in the Stevens Treaty of 1855. The provisions of this treaty are readily available and need not be considered here.²¹ Under the treaty the Flathead enjoyed a few brief moments of respite from the marauding Blackfoot, but their traditional economy was succumbing through depletion of their wild game and root crops by the whites. In 1872, under provisions of the new Garfield agreement, the Flathead war chief, Arlee, and his followers agreed to move to the newly created Flathead Indian Reservation, where they were settled in the Jocko and Mission Valleys. The head chief of the Flathead, Charlot, refused to sign the Garfield agreement which consisted of provisions for moving the Flathead Indians from the Bitterroot

²¹See Peter Ronan, Historical Sketch of the Flathead Indian Nation (Helena, Montana: Journal Publishing Company, 1890).

Valley to the Flathead Indian Reservation. Charlot felt that the Flathead had a hereditary right to the Bitterroot Valley as well as the right to remain there under the Stevens Treaty of 1855; therefore, Charlot and about 360 of his followers stayed in the Bitterroot Valley instead of moving to the reservation.²²

The two decades from 1872 to 1891 were very hard times for the Flathead who remained with Charlot in the Bitterroot Valley. By 1875, the bison were so scarce that it was unprofitable to hunt them. Other big game animals were less numerous due to increased hunting pressure and land usage by white settlers. The government did not fulfill its treaty obligations. After persuading the Flathead to farm, the government adopted a program of passive hinderance by not giving any aid to the Indians remaining in the Bitterroot Valley. Most of them were unable to buy enough plows, harnesses, and other equipment to be successful farmers. As their equipment gradually wore out they were unable to replace it. Almost all Flathead farming activity in the Bitterroot Valley had ceased after a few years without government aid, and the Flathead were again relying on hunting and gathering for their major food supply, under the handicap of increased competition for

²²Ibid., pp. 57-60.

nature's various foods. Due to the hardships of existence, the Flathead in the Bitterroot Valley retained more of their old culture traits than those who had earlier moved to the Flathead Reservation with Arlee in 1872.

The last five or six years were filled with utter poverty for the remaining Flathead Indians in the Bitterroot Valley. Very few, if any, Indians were steadily employed. Most of the people were willing to go to the reservation, but Chief Charlot held out to the last. Finally in 1891 (October 14 to 17) Charlot moved his people, now numbering slightly over 200, to the Jocko Valley on the Flathead Indian Reservation where they settled on unclaimed lands around the town of Arlee, Montana.²³

At present there are less than six living Flathead men and women who were born and lived in the Bitterroot Valley before 1891. Thus, knowledge of the old Flathead camping, root digging, and berrying grounds in the Bitterroot Valley is restricted to only a handful of the oldest members of the tribe who, during their early life, often journeyed with their parents back to the Bitterroot Valley and the old Flathead haunts in Idaho.

The Jocko Valley is quite similar to the Bitterroot Valley in many respects. Both valleys are bordered by

²³Ibid., pp. 72-74.

foothills and high mountain peaks, which are drained by small streams emptying into the Jocko and Bitterroot Rivers flowing through their respective valleys. For purposes of comparison, including the geographical features, flora, and fauna, it is useful to consider the Jocko Valley as a miniature Bitterroot Valley.

The Flathead Indians were well acquainted with the Jocko Valley and surrounding country even before they moved from the Bitterroot Valley. Consequently, they quickly became acquainted with new locations of various plants which they used in their everyday life. However, a few of the plants which grew in the Bitterroot Valley have never been found on the reservation.

The Flathead have a name for every plant in their environment which they recognize as a separate species. Some plants may have two names, one descriptive name which indicates some general characteristic of the plant or location where it is found, the other being the general name for the plant.

They consider most plants as having three parts: (1) foliage, (2) flowers or seeds, and (3) roots. In identifying various plants they usually first examine the foliage, then the color and shape of the flower if it is in bloom. If they are still uncertain in their identification, they pull or dig up the root and examine it as to

general shape and size. Often in identifying various plants they will taste them, usually the root but sometimes the stems. The Flathead very frequently use the sense of smell in identifying plants, especially those used for medicines. They usually smell the root of the plant, but they sometimes crush the stem or leaves between their fingers to obtain the characteristic odor of the plant.

The Flathead Indians who have an interest in nature appear to have a much better knowledge of wild plants than most nonprofessional white naturalists. However, as in our society, some Flathead take little interest in nature and their knowledge is quite meager, as would be expected. My informants readily recognize individual plants at all stages of growth, including the immature foliage of early spring and the dead stalks in winter. They also differentiate between various species of plants very well although this is not always apparent in their names for plants. Colors and odors are often their dividing line between separate species. For example, they distinguish different species of wild onions by the color of the membrane covering the bulb, some being red, others yellow, and some green.

Methods and Techniques of Research for the Study

Field research for this study was begun in January of 1965 after preliminary investigations indicated that a considerable amount of information concerning plants used for

edible and medicinal purposes was still available from a few Flathead informants.

The primary sources of information regarding plants and their uses were Jerome and Agnes Vanderburg. Both are "full-blood" Flathead Indians²⁴ whose parents and grandparents before them lived in the Bitterroot Valley, the traditional home of the Flathead Indians.



Mr. and Mrs. Jerome Vanderburg

Before marriage Agnes Vanderburg was a member of the Adams family. Her maternal grandparents (Finleys) built

²⁴According to the tribal records located at Flathead Indian Agency, Dixon, Montana.

one of the first houses at St. Mary's Mission in the Bitterroot Valley. Agnes's grandmother, Mary Finley, was a respected herb doctor among the Flathead, especially skillful in treating parturition patients. Mary Finley died a few years ago at the age of one hundred eleven. Agnes's parents were born and raised in the Bitterroot Valley.

Jerome Vanderburg is the son of Victor Vanderburg who, in the Bitterroot Valley, was second in command of the Flathead under Chief Charlot. His grandfather, Louis Vanderburg, was one of the first Flathead to begin farming in the Bitterroot Valley under the influence of the Jesuits. The Vanderburg name may possibly be traced to a fur trapper who was in Montana Territory in the early 1800's and was killed by the Blackfoot Indians on the Madison River near Three Forks, Montana.

Two other principal informants were Jerome Vanderburg's sister, Louise Charlot, who aided in the collection of plants obtained from the Bitterroot Valley, and Agnes Vanderburg's sister, Harriet Whitworth, who collaborated with Agnes in locating many plants, identifying them, and recalling their uses.

The plant specimens collected during this study were obtained during the spring, summer, and fall of 1965 and the spring and summer of 1966. I collected the majority



Mrs. Louise Charlot digging bitterroot, Camas Prairie, Montana



Mrs. Harriet Whitworth

of the plants during field trips with informants, but as their interest in the study increased they often collected plants to show me during my next visit to the reservation. As I collected each plant I recorded information concerning its method of collection, use, preparation, preservation, etc., on a data sheet expressly designed for this purpose. I often found this preliminary information to be incomplete as my informants contributed additional information during later field trips and interviews.

Several years ago during my first field work among the Flathead I found that many questions asked informants were answered with an affirmative "yes" even though the informants were unsure or did not know. Therefore, in the field research for this study I attempted to let informants volunteer information whenever possible instead of plying them with questions.

Many of the plants collected during this study have not been used for many years, and informants recalled them very gradually, usually by seeing them on field trips or through the process of association. I was able to collect several dozen food and medicinal plants in a relatively short period of time, but by midsummer of 1965 my informants assured me that I had collected almost all of the plants which were formerly used by the Flathead Indians. However, since that time the number of plants which I have collected

has almost doubled. Collecting specimens has passed the point of diminishing returns, but my informants still occasionally inform me of a new plant. Therefore, the plants listed in this study are not the sum total of those used in the previous Flathead culture, but I believe they represent a fairly complete and accurate cross section of the plants still known at present.

Whenever possible I had at least two informants identify each plant and its uses. As knowledge of my study became known on the reservation, many curious and interested Indians asked me if I had collected various plants or told me of different uses for plants which I already had. This afforded an unexpected opportunity to verify my informants' information. My informants also expressed an intense desire to make sure that I recorded information concerning each plant correctly. After describing a plant's uses and preparation, they often asked me to read what I had written to make sure it was correct.

My informants and I were able to obtain most plant specimens within the Jocko River drainage, but we obtained some plants from the Bitterroot Valley, Camas Prairie, and areas near Seeley Lake, Montana.

Each plant specimen which I collected has been pressed, dried, and mounted on standard herbarium sheets. Drs. Leroy Harvey and Sherman Preece of the University of

Montana Botany Department were responsible for identifying the plants. I have placed the complete plant collection on permanent loan with the University of Montana Anthropology Department.

I have attempted to phonetically transcribe the Flathead plant names, but these must not be considered as completely accurate since I have had no training in field linguistics. The transcriptions are not intended for the professional linguist and will be of only minor use to him. However, I believe that they will be helpful for future ethnological studies among the Flathead Indians. I was unable to collect the names of a few specimens which my informants had forgotten.

PHONETIC KEY²⁵

Vowels and Approximate Sounds

a	as in father	ä	as in but
ä	as in hat	ε	as in met
e	as a in fate	i	as in pin
<u>i</u>	as in pique	o	as in not
<u>o</u>	as in note	u	as in put
<u>u</u>	as in rule		

²⁵Adapted from the Phonetic Transcription of Indian Languages (Smithsonian Miscellaneous Collections, Vol. 66, No. 6. Washington, D.C.: Smithsonian Institution, 1917), pp. 2-7.

Diphthongs

ay as in high
 aw as in now
 uw as in boot

(a[•]) = vowels or consonants of
 long duration
 (a[˘]) = vowels or consonants of
 short duration
 (a^ʰ) = aspirated
 (a^ʔ) = glottalized

Consonants

Stops

	<u>Voiced</u>	<u>Voiceless</u>	<u>Glottalized</u>
Bilabial	b	p	p ^ʔ
Dental	d	t	t ^ʔ
Frontal Palatal	ɕ	ç	
Palatal	g	k	k ^ʔ
Velar	g	q or k [•]	q ^ʔ or k ^ʔ

qw = labialized velar k

Fricatives

Bilabial	v	f	f ^ʔ
Dental Sibilant	z	s	s ^ʔ
Prepalatal Sibilant	j	c	c ^ʔ
Palatal		x	x ^ʔ
Velar		x	x ^ʔ
Glottal		h	h ^ʔ

Affricatives

Bilabial	pf	
Dental	ts	ts ^ʔ
Prepalatal	tc	tc ^ʔ
Palatal	kx	kx ^ʔ
Velar	qx or kx [•]	qx ^ʔ or kx ^ʔ

Laterals

l ɭ

Nasals

Bilabial m
 Dental n

Glides w

Organization of the Following Chapters

The remainder of the thesis is divided into four chapters. Three separate chapters are devoted to plants used for food, medicines, and toiletries. At the beginning of each of these chapters I have included a short introduction to the data contained in it.

The standard reference used for plant identification in this study was Ray Davis's Flora of Idaho although at times it was necessary to consult other references to obtain the common names of plants or to determine the areas of their origin. The plants discussed in Chapters II, III, and IV are arranged alphabetically according to their botanical family. Since I collected very few mushrooms, mosses, and lichens during this study, I have included them in the general alphabetical sequence of plants rather than devoting a separate section to them. The names of all genera and species are indicated by underlining. The common name of each plant is listed along with the Flathead names. I have indicated the areas in which the plants were collected as well as the preparation and uses of each plant. Whenever possible I have indicated the origins of plants not native to the United States. Similar uses of individual plants by neighboring Indian tribes are cited from ethnological literature. In Chapter III, dealing with Flathead medicinal plants, the recognized medicinal values of plants, according

to various pharmacognosies, are listed when they correspond or are related to Flathead medicinal uses.

The final chapter of this thesis is composed of a brief summary of the data contained in previous chapters and conclusions which I have drawn from the study.

Appendix I is a sample of the data sheets which I used in the field research of this study. Maps which locate the major areas in which I collected plant specimens during the field research for this study are included in a map pocket.

CHAPTER II

PLANTS USED FOR FOOD BY THE FLATHEAD INDIANS

Introduction

The food economy of the Flathead Indians was based upon the hunting of big game animals and the collection of root and berry crops. A fairly strict sexual division of labor regulated the duties of men and women in procuring food. The men engaged in hunting, which required stamina and skill and was often dangerous, while the women and children gathered edible roots and berries. Meat was considered somewhat of a prestige food by the Flathead Indians, and the family who possessed a good hunter was considered fortunate. Since a man had more prestige than a woman in Flathead society, it was natural that the fruit of his labors was more highly regarded than those of a woman. This emphasis upon meat was not limited to the Flathead alone, but was characteristic of Plains Culture in general.

Although meat was the preferred food of the Flathead Indians, a large portion of their diet consisted of vegetal foods. Several minor foods were eaten as described later in this chapter, but the principal vegetal foods were root and berry crops. These were very important since, in addition to being eaten fresh, they could be preserved for later use. The Flathead gathered three major berry crops:

service berries (Amelanchier alnifolia), huckleberries (Vaccinium membranaceum), and choke cherries (Prunus virginiana), but several other less important berries were also collected in quantity, especially if late frosts, hail, or other natural features resulted in a poor yield of service berries or huckleberries. Camas (Camassia quamash), bitterroot (Lewisia rediviva), wild carrot (Perideridia gairdneria), and desert parsley (Lomatium cous) were the main root crops.

Plant ceremonial practices have been largely forgotten by the present-day Flathead. The Bitterroot Ceremony has been revived in recent years by several of the older women who still collect bitterroot, but much of its former meaning is gone. In former times the Bitterroot Ceremony was necessary to insure a good harvest of bitterroot; the modern ceremony is merely an optional ritual. To the best of my knowledge a Camas Dance has not been held for many years. It is almost certain that at one time there was a considerable body of minor beliefs, rituals, and observances surrounding the collection and preparation of vegetal foods. For example, in regard to cooking food, Turney-High stated that "the presence of men was tabued while the women were baking in the pit lest bad luck and famine overtake all."¹

¹Harry Holbert Turney-High, The Flathead Indians of Montana (Memoirs of the American Anthropological Association,

Pregnant Flathead women did not pick berries near where a bear had browsed for fear of having a slobbering infant.² However, most of these beliefs are now forgotten, and I was able to collect only a few minor examples which are given later in this chapter under the appropriate plants.

In regard to family jurisdiction over berrying and root-gathering grounds, Turney-High stated that:

Each family returned to its same grounds year after year, and it is certain that families considered themselves vested with property rights in such grounds.³

If this statement was meant to be taken in the broadest sense, it may be acceptable, but my informants did not agree with it. Berry and root crops in a given locality vary from season to season. For example, in the summer of 1964 the huckleberry crop in the drainage of the South Fork of the Jocko River was excellent, and thousands of gallons went unharvested. Last summer in the same area there were scarcely enough huckleberries to feed the birds. Major root crops such as bitterroot and camas also varied from year to year. Unusually dry weather, extensive digging in previous years, etc., could cause a poor stand of plants in some areas while they were plentiful in other

No. 48. Menasha, Wisconsin: American Anthropological Association, 1937), p. 127.

²Ibid., p. 66. ³Ibid., p. 112.

areas. In the past and today when such conditions prevail, the Indians go where the best digging or berrying grounds are for that year. This does not mean that favored berrying and digging grounds were not visited year after year if the harvest was good, but it is questionable whether these grounds were regarded as private property. It is more likely that they were considered communal property since several families often harvested the crop of one digging or berrying ground.

The Flathead usually gathered berries in baskets, preferably made of cedar bark, but sometimes the bark of a young fir tree was used. Typical baskets were about eighteen to twenty inches long and eight to ten inches in diameter. Their shape was of the truncated pyramidal type in which the basket tapered from a round top to a pointed rectangular bottom. They were made from a rectangular slab of bark about twice the length of the desired basket. The bark was folded in half crosswise, and two cuts about two inches long were made from each edge of the fold toward the center. The bark was then bent into a cylindrical shape, and the seams were trimmed and fitted until they overlapped each other about an inch. The seams were either pierced and pinned together with small twigs or sewn together with willow bark. A willow hoop was sewn inside the top of the basket to make it circular. These baskets,

if well made, could be waterproofed by smearing the inside with pitch. Similar baskets were made by many Indians in the Northwest, e.g., the Kutenai,⁴ Plains Cree,⁵ Middle Columbia Salish,⁶ and Indian tribes of Western Washington



Bark basket used for gathering wild berries.

⁴Harry Holbert Turney-High, Ethnography of the Kutenai (Memoirs of the American Anthropological Association, No. 56. Menasha, Wisconsin: American Anthropological Association, 1941), p. 79.

⁵David G. Mandelbaum, The Plains Cree (Anthropological Papers of the American Museum of Natural History, Vol. XXXVII. New York, 1941), p. 213.

⁶James A. Teit, The Middle Columbia Salish, edited by Franz Boas (University of Washington Publications in Anthropology, Vol. 2, No. 4. Seattle: University of Washington Press, 1929), p. 113.

and the Pacific Coast.⁷

The Flathead usually gathered root crops in flat woven wallets obtained from the Nez Percé. These wallets resembled an ordinary shopping bag. They were often two to three feet long and fifteen to twenty inches wide.⁸ Many of them were decorated before acquired from the Nez Percé, and the Flathead sometimes added extra painted decorations. Dried roots and berries were usually stored in rawhide parfleches.

The Flathead prepared most of their vegetal foods by baking or boiling. The hot pit method of baking is described later in this chapter. The usual method of boiling foods, described by Turney-High,⁹ was a leather bag sunk in the earth in which the water was heated with hot rocks. However, wood boiling and utility pots, not mentioned by Turney-High, were often used in permanent camping grounds. They were made by hollowing out large burls which are sometimes found on the trunks of pine,

⁷H. K. Haeberin, James A. Teit, and Helen H. Roberts, Coiled Basketry in British Columbia and Surrounding Area, Forty-first Annual Report of the Bureau of American Ethnology (Washington: Government Printing Office, 1928), p. 138.

⁸Herbert Joseph Spinden, The Nez Percé Indians (Memoirs of the American Anthropological Association, Vol. II, Part 3. Lancaster, Pa.: The New Era Printing Company, 1908), pp. 191-192.

⁹Turney-High, The Flathead Indians of Montana, pp. 127-128.

fir, and larch trees. The wood of these burls usually contained a large amount of pitch so that it did not deteriorate rapidly. Some of these pots were large enough to hold several gallons of liquid. Food was boiled in them by the usual hot rock method, but they had every advantage over the hide bag, other than being difficult to transport. Wooden pots were generally left at the camp site where they were made, to be used during subsequent return trips. Although they were individually owned, they were sometimes used by other Indians. My informants said that at one time there were many of these wooden pots in use at various Flathead camping grounds, but the only one known of in recent times was at a camping ground near Placid Lake.

Before the introduction of farming about 1850, the Flathead Indians lived by hunting and gathering and grew no crops. The one possible exception to this statement may be the former cultivation of tobacco. My informants have no knowledge of tobacco ever being cultivated by the Flathead Indians. They believe that long ago it was obtained from other Indian tribes, but they do not know which ones. They said that shortly after 1800 the Flathead began getting tobacco from some trapper near the present town of Three Forks, Montana. However, in his work on the "Flathead Group," James Teit noted that, "According to some informants tobacco was raised long ago in some places by the Pend

d'Oreilles, Flathead, and probably by the other tribes also."¹⁰ To the best of my knowledge this statement was never further substantiated, but it is known that the Kutenai to the northwest of the Flathead did grow an unidentified species of tobacco.^{11, 12}

Plants Used for Food

AGARICACEAE (Mushroom Family). Armillaria mellea (Cottonwood Mushroom). [p'at'kret'nɛ].

Place of Collection - Vanderburg Farm.

Mushrooms were prepared by removing the pilus and boiling the cap in a rich meat broth. Cottonwood mushrooms were the main variety gathered. They grew on or near damp rotten logs, and they were obtainable from spring to late fall. The Flathead recognized some mushrooms as being poisonous, and they were very careful not to pick these. No varieties of puffballs or morels were considered edible, and my informants were quite surprised when I gathered a hatful of puffballs to take home. Mushrooms

¹⁰James A. Teit, "The Flathead Group," The Salishan Tribes of the Western Plateaus, edited by Franz Boas, Forty-fifth Annual Report of the Bureau of American Ethnology (Washington: Government Printing Office, 1930), p. 344.

¹¹Turney-High, Ethnography of the Kutenai, pp. 171-172.

¹²Thain White, Kutenai Pipes (Western Anthropology, No. 1. Missoula, Montana), p. 11.

were not a very important food and were not dried for later use.

AGARICACEAE (Mushroom Family). Collybia sp.
[p'at'kret'nɛ].

Place of Collection - Little Prairie.

This very small mushroom was prepared in the manner stated above.

AGARICACEAE (Mushroom Family). Russula sp.
[p'at'kret'nɛ].

Place of Collection - Black Lake Campground.

This is a rather large mushroom that was prepared as above.

CAPRIFOLIACEAE (Honeysuckle Family). Sambucus
glauca Nutt. (Blue-berried Elder). [sqĩk'].

Place of Collection - Below Dixon, Montana.

Elderberries were prepared for eating by boiling. If they were intended for later use, they were first boiled and then sun-dried.

CAPRIFOLIACEAE (Honeysuckle Family). Symphoricarpos
occidentalis Hook. (Snowberry). [stɛmtũmĩa].

Place of Collection - Little Prairie.

The only indication that the Flathead Indians may have used the snowberry for food at one time was noted

early in the nineteenth century by Warren Ferris when his party was camped near the mouth of Lolo Creek where they were trying to establish trade relations with the Flathead. He mentioned a gift of fruit given to his party by the Flathead women commenting that,

The lovely hillock, composed of Whortle, Service, Hawthorn, and White berries, rapidly disappeared before the united efforts of eight¹³ hearty and hitherto half starved lads. . . .

It is possible that the "White berry" referred to by Ferris is the snowberry which grows very abundantly in this region. The only other berries I know of growing in this region which are white when mature are those found on some unidentified bushes growing along river banks. My informants do not consider either the snowberry or the unidentified white berries edible although they do use the latter for fish bait. Erna Gunther found that the Squaxin, a tribe in Western Washington, did eat and dry another species of snowberry,¹⁴ but they are seldom mentioned as a food in literature.

¹³Warren A. Ferris, Life in the Rocky Mountains (Denver: The Old West Publishing Company, 1940), p. 216.

¹⁴Erna Gunther, Ethnobotany of Western Washington (University of Washington Publications in Anthropology. Seattle, Washington: University of Washington Press, 1945), p. 47.

CHENOPODIACEAE (Goosefoot Family). Chenopodium sp.
(Pigweed, Lamb's Quarter). [sūmqa'let'].

Place of Collection - Camas Prairie.

The Flathead Indians gathered young pigweed plants and boiled them much the same as we cook spinach. Apparently the Flathead never used the seeds of mature plants, but in his journal of the Lewis and Clark Expedition, Patrick Gass noted that the neighboring Shoshone

make much use of sunflower and lambs-quarter seed,
. . . which with berries and wild cherries pounded
together, compose the only bread that they have
any knowledge of, or in use.¹⁵

COMPOSITAE (Composite Family). Balsamorhiza
sagittata (Pursh.) Nutt. (Balsam-root, "Sunflower").
[ūmt'čūε].

Place of Collection - Evaro Hill.

In the spring the Flathead peeled and ate raw the young tender flowering stem of the balsam-root. It still remains a great favorite of young children who often eat it. The long tough roots of this plant were also dug, peeled, and baked in a pit in the same manner as camas for at least three days. It must be cooked at least this long to soften the tough woodlike fibers. In taste the

¹⁵Patrick Gass, A Journal of the Voyages and Travels of a Corps of Discovery (Minneapolis: Ross and Haines, Inc., 1958), p. 154.

root resembles sweet potatoes. The Flathead did not eat the seeds of B. sagittata although they remember that the Snake and other Indian tribes used them.

COMPOSITAE (Composite Family). Cirsium hookerianum Nutt. (Thistle, Indian Thistle). [sk'altámwxa] [ūmlatlp'ir].

Place of Collection - Liberty Meadows.

I collected two specimens of this plant which the Flathead regard as separate species, but probably they are only variations of one species. This thistle is normally an annual, but apparently if the root does not store enough energy to grow a flowering stem they live for two years. The Flathead called the thistles without a flowering stem "Indian turnips." Many of these roots are quite large. They were collected, peeled, and baked in a hot pit for two or three hours. They were not dried.

The Flathead Indians peeled the young flowering stems of these thistles and ate them much like celery. After the stems mature they become tough and hollow. My informants said that some species of thistle which look similar to this one are poisonous if eaten.

COMPOSITAE (Composite Family). Matricaria matri-
carioides (Less.) Porter (Pineapple Weed, Dog Fennel).
[msât̚sāt̚x'q'e].

Place of Collection - North Fork of the Jocko Road.

In addition to the medicinal uses listed in Chapter III, pineapple weed was used to keep flies and bugs away from drying and stored meat and fruit. The Flathead used at least three different plants for this purpose: Monarda fistulosa (wild bergamot), Mentha arvensis (wild peppermint), and pineapple weed. At first glance these plants may seem rather unimportant, but actually they were vitally essential in the process of preserving meat and berries.

The Flathead had no direct access to salt until the late 1800's, and my informants doubt if they ever obtained it in any quantity before then. Preserving meat in the traditional Indian manner of dessication by hanging it over a fire or sun-drying it does not fully protect it against spoilage by insects and bugs unless salt or some equally good repellant is used.

The common method of using these plants was to dry them, crumble them into powder, and sprinkle them over fresh meat or berries. In addition, the entire pineapple weed was put in parfleches in alternate layers with dried meat or berries. One of my informants said that the Snake Indians used the seeds of Balsamorhiza sagittata (balsam-root) in the same manner when drying salmon.

COMPOSITAE (Composite Family). Tragopogon dubius Scop. (Goat's Beard). [t'äqäɛ].

Place of Collection - Camas Prairie.

T. dubius, which is a native of Europe,¹⁶ was a favorite source of chewing gum. The stem and leaves were broken and turned upside down toward the sun. The hardened milky sap which exuded was collected and chewed, especially by children.

Grinnell stated that a species of milkweed, Asclepias speciosa, was used by the Cheyenne in the same manner.¹⁷ Teit found that Tragopogon sp. was chewed by the Thompson Indians.¹⁸

CRUCIFERAE (Mustard Family). Rorippa nasturtium-aquaticum (L.) Schinz. & Thell. (Water-cress).
[snō·pləwhə].

Place of Collection - Vanderburg Farm.

Water-cress was introduced from Eurasia and is now present over most of North America.¹⁹ The Flathead cooked it like spinach. The raw stalk was occasionally eaten like celery.

¹⁶Ray J. Davis, Flora of Idaho (Debuque, Iowa: Wm. C. Brown Company, 1952), p. 798.

¹⁷George Bird Grinnell, The Cheyenne Indians--Their History and Ways of Life (Vol. II. New York: Cooper Square Publishers, Inc., 1962), p. 184.

¹⁸Elsie Viault Steedman (ed.), based on field notes by James A. Teit, Ethnobotany of the Thompson Indians of British Columbia, Forty-fifth Annual Report of the Bureau of American Ethnology (Washington: Government Printing Office, 1930), p. 493.

¹⁹Davis, op. cit., p. 351.

ELAEAGNACEAE (Oleaster Family). Shepherdia cana-
densis (L.) Nutt. (Russet Buffaloberry). [hōsū].

Place of Collection - Near Liberty Meadows.

The Flathead Indians call these "ice cream berries." They were gathered in mid-August, and some were dried for winter use. Ten or twelve berries were put in a bowl with a little water and beaten into a stiff froth. A bunch of short willow twigs, split on one end and tied in a bundle, was used as a beater. The dried berries were prepared in the same manner after having been soaked in water for a few minutes.

Steedman, in recording the same use by the Thompson Indians, says the plant contains a small amount of saponin which when dissolved in water forms a froth.²⁰

ERICACEAE (Heath Family). Arctostaphylos uva-ursi
(L.) Spreg. (Kinnikinick, Larb, Manzanita). [sq&dlse].

Place of Collection - Jocko Road near Little Prairie.

In August after kinnikinick berries turned a bright red they were gathered and either eaten raw or fried, the latter being preferred. To fry the berries they were mixed with a small amount of grease and shaken while heating until they split open. Fried kinnikinick berries taste sweet and agreeable, much like a very mellow apple. The berries were

²⁰Steedman, op. cit., p. 472.

not dried or used to any great extent by the Flathead, but they stayed on the bushes throughout the winter and could be used as a hedge against hunger in hard times.

The Flathead believed that if there were only a few kinnikinnick berries, it would be an easy winter; but on the other hand, if there were lots of berries, a hard winter could be expected.

According to Turney-High the Kutenai prepared kinnikinnick berries by boiling,²¹ and this is probably the method used by the Flathead before the introduction of metalware.

ERICACEAE (Heath Family). Ledum glandulosum Nutt. (Labrador Tea, "Mountain Tea"). [sčtačīlītī].

Place of Collection - Liberty Meadows, Boulder Lake Trail.

The Flathead Indians drank this tea extensively until the introduction of coffee. Some Indians still prefer it over "store-bought" teas. It was prepared by steeping a few sprigs of the leaves in hot water for several hours. For stronger, more flavorful tea the leaves were left in overnight. The strength of the tea can be judged by its color--the weak tea being green and the strongest tea a deep red color. Several pounds of the tea leaves were ordinarily dried by each family for

²¹Turney-High, Ethnography of the Kutenai, p. 35.

winter use. It is still used to a limited extent by a few Indian families.

Several species of Labrador tea grow in the bogs of high mountains throughout the Northern United States, but it is seldom found below an elevation of 6,000 feet. This is the same genus of tea that the Colonists made extensive use of after the Boston Tea Party. In his study of edible wild plants Medsger wrote that "L. glandulosum is said to be poisonous."²² It appears that his source of information was erroneous.

ERICACEAE (Heath Family). Vaccinium membranaceum
Doug. ex. Hook. (Huckleberry). [st'sxa].

Place of Collection - South Fork of the Jocko Road.

Huckleberries were picked from mid-July until early September. Next to the service berry, Amelanchier alnifolia, the huckleberry was the most important berry gathered. Fresh huckleberries were generally eaten raw. Large quantities of them were sun-dried and put away for winter use. Dried huckleberries were prepared by boiling. They were eaten with various roots, but the Flathead did not mix them with meat or pemmican.

Today dried huckleberries are sometimes boiled with

²²Oliver Perry Medsger, Edible Wild Plants (New York: The Macmillan Company, 1939), p. 217.

flour and water, similar to the old-time sailor's duff. During Prohibition the Flathead learned to make wine from huckleberries and choke cherries by mashing them and letting them ferment.

ERICACEAE (Heath Family). Vaccinium scoparium
Leiberg (Grouse-berry). [sipt'].

Place of Collection - Liberty Meadows.

These small red huckleberries, although much superior in taste to the larger ones, were seldom picked. An industrious person could not pick much over a quart in a day. They were mainly eaten as a tasty snack when traveling on horseback. When the Indians came to an exceptionally good patch, they often dismounted and gathered a bunch of branches and leisurely picked off the berries as they rode along.

LABIATAE (Mint Family). Mentha arvensis L. (Mint, Wild Peppermint). [honhane].

Place of Collection - Vanderburg Farm.

The leaves of wild peppermint were dried and crumbled over meat and fruit while drying and before storage. Its primary function was as a preservative, but it also served to some extent as a flavoring agent in the absence of salt and common spices.

According to McClintock the Blackfoot used a

different species of peppermint, Mentha canadensis, to flavor dried meat and to make a beverage tea.²³ Turney-High recorded the same use of peppermint by the Kutenai and also noted its use as a preservative.²⁴

LABIATAE (Mint Family). Monarda fistulosa L. var. menthaefolia (Grah.) Fern. (Wild Bergamot). [t'it'ūī].

Place of Collection - Little Prairie.

Wild bergamot was used as a preservative the same as wild peppermint above. Its medicinal uses are listed in Chapter III.

LILIACEAE (Lily Family). Allium cernuum Roth (Wild Onion). [qāl̥eriā].

Place of Collection - Little Prairie.

This is one of several species of wild onion which was used by the Flathead Indians, but the only one we were able to find. They were collected from early spring until the ground froze in the fall and used for flavoring soups and meats or eaten raw. They were not dried for winter use.

Apparently onions enjoy only a recent popularity. Dr. George Suckley, writing in 1853 concerning the mission farm at St. Ignatius, commented that: "The Indians are

²³Walter McClintock, "Medicinal and Useful Plants of the Blackfeet Indian" (mimeographed paper), p. 8.

²⁴Turney-High, Ethnography of the Kutenai, p. 38.

very fond of peas and cabbage, but beets, and particularly onions, they dislike."²⁵

LILIACEAE (Lily Family). Camassia guamash (Pursh.) Greene (Camas). [ks'q'ɪdlɪ].

Place of Collection - Outlet of Placid Lake.

Camas was an important vegetable food among the Flathead, as with many Indians in the Plateau area. Depending on the location, it was dug in July or early August after it had finished blooming and black seeds had formed within the pods. Wood or preferably elk horn digging sticks were used. Most wooden digging sticks were unpractical for digging camas since it grows in moist areas which usually produce a heavy turf. I do not know of any remaining specimens of elk horn digging sticks, but they were probably similar to those used by the neighboring Kutenai.²⁶ Iron digging sticks were quickly adopted when they became available.

Before white settlement and the subsequent prolonged heavy grazing of cattle, camas was very plentiful in the

²⁵Isaac I. Stevens, "Explorations for a Route for the Pacific Railroad," Reports of Explorations and Surveys to Ascertain the Most Practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean, Vol. I of 12 vols. (Washington: Beverly Tucker, Printer, 1855), p. 295.

²⁶Turney-High, Ethnography of the Kutenai, p. 33.

valleys and mountain meadows of the Flathead country. The Lewis and Clark Expedition mentioned several small plains well stocked with camas in the Bitterroot Valley and near Lolo Hot Springs, Montana.²⁷

There is considerable variation in the size of the camas bulb, which may be from approximately one-half inch to well over an inch in diameter. However, the Flathead Indians did not value the size of the bulb as much as its sweetness since before the recent introduction of sugar camas was their principal sweetening agent. Camas Prairie near Camas Hot Springs, Montana, was one of their favorite digging grounds although my informants say that the camas which grew there was not nearly as large as that growing in parts of the Bitterroot Valley or in the vicinity of Seeley Lake, Montana. Instead, it was highly prized for its sweetness.

The usual method of preparation was by baking although camas was sometimes boiled if time was unavailable for baking it. The process of baking camas has been described many times and was essentially the same for all Indians throughout the Northwest. Lewis and Clark gave the first detailed report of this procedure which

²⁷ Ruben Gold Thwaites (ed.), Original Journals of the Lewis and Clark Expedition, 1804-1806 (Vol. 5. New York: Dodd, Mead, and Company, 1905), pp. 170-171.

they observed among the Nez Percé in 1806.²⁸ Turney-High has published a description of the procedure among the Flathead as described to him by a white man.²⁹

In brief form the process as given by my informants is as follows. A rectangular pit about two feet deep and approximately four by six feet was dug and filled with wood. Small river boulders were placed on the wood which was then ignited and allowed to burn until the rocks were literally red hot. The rocks were then covered with a layer of green wood. A layer of small green sticks and leaves about two or three inches thick was placed over the wood. Then a layer of slough grass was added. Several bushels of peeled camas bulbs formed the next layer. A black tree lichen, Alectoria sp., was usually soaked in water and spread over the camas, followed by another layer of slough grass. A layer of leaves was then placed over the grass. This usually filled the pit up to ground level. If no wet moss was baked with the camas, enough water was poured on the leaves to produce a heavy steam. The dirt from the hole was then heaped on the pit. The camas bulbs were usually allowed to bake for three days. A fire was

²⁸Ibid., Vol. 3, pp. 78-79, Vol. 5, pp. 126-127.

²⁹Harry Holbert Turney-High, "Cooking Camas and Bitter Root," The Scientific Monthly, XXXVI (March, 1933), pp. 262-263.

kindled on top every morning and maintained during the day.

Upon removal from the pit camas was ready for eating. The cooked surplus bulbs were usually mashed with a stone pestle and made into round cakes, but sometimes they were left whole. Either way, they were placed in the sun until dry. The modern practice is to run the cooked camas bulbs through a meat grinder instead of mashing them by hand.

Upon baking camas bulbs become much sweeter than in their original state. The Flathead boiled baked camas to make a sweet tasting hot beverage which they used much like coffee. One informant said that in recent times the baked bulbs were also boiled and thickened with commercial flour to make thick gravies.

LILIACEAE (Lily Family). Fritillaria pudica (Pursh.) Spreng. (Yellow Bells). [kowsɛ].

Place of Collection - Jocko Road above Old Agency.

The yellow bell has a bulb at the base of the plant which varies in size from that of a large pea to about an inch across. These bulbs were dug very early in the spring to some extent, but the Flathead women usually collected them at the same time they were digging bitterroot. The women were usually able to tell at a glance which yellow bells had bulbs large enough to be worth digging. They were washed and boiled along with bitterroot. The bulbs were not dried or stored for later use.

LILIACEAE (Lily Family). Zigadenus elegans Pursh.
(Mountain Death Camas). [sqə́ɬɪ].

Place of Collection - Liberty Meadows.

Mountain death camas is slightly poisonous to livestock if eaten in large quantities, but it is the least poisonous of the genus Zigadenus.³⁰ My informants did not distinguish this from Camassia quamash other than that it grew at higher elevations and bloomed later. They have used it in the past with no ill effects although it is apparent that some Flathead avoided it as a food plant altogether.³¹

PINACEAE (Pine Family). Larix occidentalis (Western Larch). [tawqáɬsh].

Place of Collection - Rattlesnake Canyon.

The Flathead peeled the bark from western larch and several other species of pine trees during the spring of the year in order to scrape the sap from the soft cambium layer on the inside of the bark. The solidified pitch which collected on the bark of the trees was chewed for gum.

A sweet tasting syrup was obtained from a few selected larch trees which produced a good flow of sweeter

³⁰Davis, op. cit., p. 201.

³¹Personal communication with Dr. Carling Malouf, University of Montana.

sap than other larch. In order to collect the sap, the trunk of the living tree was hollowed out so that it would hold about a gallon of sap. The sap which collected in the hollow was subject to normal evaporation so that by the time it was full the sap was about the consistency of molasses. This natural evaporation concentrated the sap making it considerably sweeter. The reservoir filled only once or twice a year, depending on the individual tree.

My informants only know where two of these trees are today. One, located near Lolo Hot Springs, has not been visited for several years, and they do not know if it is still standing. The other tree, located just north of Seeley Lake, is believed to be still standing, but it has not been visited for several years. Agnes Vanderburg and I attempted to find it, but we were unsuccessful.

PINACEAE (Pine Family). Pinus contorta (Lodge-pole Pine). [q'q'liip't'].

Place of Collection - Rattlesnake Canyon.

The Flathead Indians sometimes peeled lodge-pole pine and ate the sap, but only sparingly as too much "will give you a bellyache." Lodge-pole pine is extremely easy to peel, and no tools other than a knife were needed. The semihard red bubbles of pitch on the bark were chewed like gum.

PINACEAE (Pine Family). Pinus monticola (White Pine). [ʃeɪp'a].

Place of Collection - Above Shovel Creek Dam, Jocko Canyon.

The tree was peeled to obtain the sap, but it was more important for the nuts which were obtained from the cones. The green cones were thrown in the fire and heated until they cracked open. They were then raked out of the fire with a stick, and the nuts, which had been partially roasted, were removed. The cones of the white pine are generally scarce, but when available in a quantity, the Flathead gathered them and stored the nuts for later use.

The Flathead believed that when squirrels stored the cones of various pine trees deep in the ground, a hard winter was in the offing.

PINACEAE (Pine Family). Pinus ponderosa Dougl. (Ponderosa Pine, Western Yellow Pine). [səptqɪ'p].

Place of Collection - Hungry Injun Camp.

The Flathead Indians peeled the bark from ponderosa pine for the sap more than any other evergreen tree. However, my informants indicated that no sap from evergreen trees was preferred as highly as that obtained from the cottonwood trees growing along the river bottoms.

The peeling of pine trees has not been in general practice for many years. However, all of my older informants

are acquainted with the process. The trees were usually peeled during the spring of the year in late April and May when the spring run of sap was at its highest level.

Before peeling, an incision was made in the bark with an axe or knife and a small piece removed to test the flow and sweetness of the sap. In removing the bark a length of small sapling flattened on one end was used to help pry the bark loose from the trunk. The process is quite like that which Thain White described as being used by the Kutenai.³²

My informants said that another tool which was commonly used in peeling cottonwood trees was equally satisfactory in peeling pine and larch trees. It was made from a rib bone of a large elk or a buffalo. One end of it was flattened for several inches, probably by abrasion. The resulting tool was strong and limber, and because of its natural curvature and pliability it could readily be worked under the bark to loosen it from the tree.

After their removal, the slabs of bark were scraped on the inside to obtain the soft edible cambium layer and the sap it contained. The cambium layer could be rolled up and kept for a few days, but not for a prolonged period

³²Thain White, Scarred Trees in Western Montana (Montana State University Anthropology and Sociology Papers, No. 17. Missoula, Montana: Montana State University Press, 1954), p. 3.

of time since it would dry out and become inedible.



Small deer rib scraper used for peeling trees (length 7 in.).

The Flathead also gathered the cones of ponderosa pine and prepared them in the same way as those of the white pine, but they preferred the latter.

PORTULACACEAE (Purslane Family). Claytonia lanceolata Pursh. (Spring Beauty, "Indian Potato"). [sq̥nq̥l̥].

Place of Collection - Finley Creek, near Arlee.

"Indian potatoes" were the first root crop gathered in the spring by the Flathead Indians. They were dug when they started to bloom, during the middle of April, about a month before the Bitterroot Ceremony and harvest began. Although they were in season only a short while, they were

avidly dug to satisfy the craving for fresh vegetable food. The small round corms were prepared by washing and boiling without peeling. They were not dried, probably because of the immediate hunger for them.

PORTULACACEAE (Purslane Family). Lewisia rediviva Pursh. (Bitterroot). [sp'e·t'läm].

Place of Collection - Camas Prairie.

Bitterroot is found in the plains and hills of Montana to British Columbia and south to Colorado and California.³³ However, it is much more common in some areas than in others. The Flathead, by occupying the Bitterroot Valley, had access to the best bitterroot digging grounds in this region. This was sometimes a source of warfare with neighboring tribes, particularly the Blackfoot.

Bitterroot was dug as soon as the flower buds were visible above the soil. Contrary to Turney-High, they are quite easy to see before they are in bloom and can readily be spotted from a distance of fifty or seventy-five feet.³⁴ The harvest usually began in mid-May, but it could vary a week or two depending on individual years and location.

My informants essentially agreed with Turney-High's

³³Davis, op. cit., p. 277.

³⁴Turney-High, The Flathead Indians of Montana, p. 111.

description of the Bitterroot Ceremony with the exceptions that three older women often officiated at the ceremony instead of two as Turney-High recorded and the ceremony was not always held just north of Hamilton, Montana.³⁵ The ceremony normally lasted for two days, the first day being reserved for the officiating women to dig bitterroot. On the second day it was prepared, cooked, and a small amount distributed to each member of the tribe in a "big feast" as one of my informants put it. The Flathead believed that if they did not observe this ceremony, the bitterroot would become small and scarce.

The Indian women usually twisted the top off from each bitterroot plant as they dug it since it was of no use. Bitterroot was not dug after it had finished blooming, and it was considered past its prime when in full bloom. The reason for this is that after bitterroot has finished blooming the cuticle cannot be slipped from the roots, and they are too small to feasibly peel in any other manner. When the women were finished digging for the day, they peeled the roots and washed them in water to clean them. The roots that were not immediately used were spread out on hides to dry. Some women preferred to remove the inner core or heart of the root which is responsible for the bitter taste, but

³⁵Ibid., pp. 34-35.

this was not the usual practice. Some of my informants say that this taste is the reason they prefer the smaller bitterroot plants which grow in this region over the larger, more tasteless ones growing farther west in Idaho and Washington. My informants vigorously denied Turney-High's statement that the Flathead preferred bitterroot from the Nez Percé country over their own.³⁶

The usual method of cooking bitterroot was to steam it in a kettle or boiling bag. A latticework of small twigs was placed in the bottom of the kettle to hold the bitterroot out of the hot water. Only a few minutes of moderate steaming were required to prepare it. Dried bitterroot was usually boiled in water, often with service berries or huckleberries. The modern practice is to eat bitterroot with sugar, but before sugar was available, dried camas which had been baked and powdered was used as the sweetening agent.

ROSACEAE (Rose Family). Amelanchier alnifolia
Nutt. (Service Berry, Juneberry). [sak].

Place of Collection - Jocko Road near Little
Prairie.

Service berries were the main berry crop of the Flathead Indians. They grow abundantly along the stream

³⁶Ibid., p. 137.

bottoms of this region. After picking, service berries were usually placed in the sun until they were wrinkled but not completely dry and then stored for later use. Some Flathead women preferred to mash them while fresh and form them into small round cakes which they placed on rocks to dry in the sun. The powdered leaves of Monarda fistulosa or Mentha arvensis were usually sprinkled over the drying cakes and berries to keep the flies away.

There are dozens of species of the genus Amelanchier, of which varying numbers can be found in almost any area of the United States and much of Canada. With very few exceptions, service berries were used as a source of food by nearly all of the Indians in the Northwestern United States.³⁷

ROSACEAE (Rose Family). Crataegus douglasii Lindl. var. suksdorfii Sarg. (Hawthorn). [swæne].

Place of Collection - On Jocko Road near Old Agency.

Hawthorn berries were collected and pounded like choke cherries, then sun-dried in small round cakes. They were sometimes mixed with choke cherries. In years when the service berry crop was good hawthorn berries were not gathered very much, but if the service berry crop was poor hawthorn berries were gathered in quantity. A few hawthorn

³⁷Medsgger, op. cit., pp. 37-39.

berries remained on the tree during the winter and could be used in case of famine.

ROSACEAE (Rose Family). Fragaria virginiana
Duchesne var. glauca Wats. (Wild Strawberry). [kret'ākām].

Place of Collection - South Fork of the Jocko Road.

Wild strawberries were eaten fresh, usually as they were picked.

ROSACEAE (Rose Family). Prunus virginiana Nutt.
(Choke Cherry, Western Wild Cherry). [t'ō'stā].

Place of Collection - Jocko Road.

Choke cherries were the last fruit which was collected in the fall. Freezing was believed to improve their flavor and make them sweeter. Choke cherries may be eaten fresh, but mainly they were dried. It was easy work to strip them from the bushes, but preparing them was a tedious process. Each individual choke cherry was placed on a flat rock and pounded with another rock or a stone pestle until the pit was thoroughly pulverized and resembled finely ground coffee. The mashed choke cherries were then formed into small round cakes about three or four inches in diameter and placed on rocks to dry in the sun. Choke cherries were sometimes mixed with pounded hawthorn berries, Crataegus douglasii, before drying.

The Flathead quickly abandoned the old method of

hand pounding choke cherries when meat grinders became available. Grinding them gave practically the same results and was much faster.

ROSACEAE (Rose Family). Pyrus sp. (Possibly Mountain Ash, "Wild Plum"). [četeū].

Place of Collection - Near Old Agency.

Wild plums were eaten fresh or dried for later use. The pit was usually removed before drying. When there was a good crop, large quantities of wild plums were eaten fresh and collected for drying. They were not mixed with other fruits. The dried plums were prepared for eating by boiling.

Grinnell noted that among the Cheyenne wild plums seldom ripened near the camps because the children ate them while they were still green. The women had to go some distance from camp to gather them.³⁸

ROSACEAE (Rose Family). Rosa woodsii Lindl. (Wild Rose). [hūwhīε].

Place of Collection - Vanderburg Farm.

In former times roseberries were possibly used to a very limited extent during hard winters when game was scarce and famine threatened. The older Flathead people

³⁸Grinnell, op. cit., p. 177.

of today do not remember that they were ever used other than for jellies after the introduction of sugar. However, Alexander Ross who was snowbound with a party of trappers and Flathead Indians at what is now known as Ross's Hole near Sula, Montana, recorded in his journal for March 25, 1824, that "All the women [Indian] went off to collect berries."³⁹ Since roseberries are the principal berries which remain on the bushes in quantity throughout the winter, possibly Ross was referring to them. Spinden in his monograph on the Nez Percé also refers to the roseberry as a last resort against famine.⁴⁰ Flannery noted that one of the first solid foods the Gros Ventre gave a baby was a ball of cooked roseberries mixed with grease, and roseberry soup was also considered a good food for growing children.⁴¹

ROSACEAE (Rose Family). Rubus idaeus L. (Red Raspberry). [l'ats].

Place of Collection - Sheep Mountain Road.

³⁹Alexander Ross, "Journal of Alexander Ross--Snake Country Expedition, 1824," Oregon Historical Society Quarterly, Vol. 14, No. 4 (December, 1913), p. 376.

⁴⁰Spinden, op. cit., pp. 204-205.

⁴¹Regina Flannery, The Gros Ventres of Montana: Part I: Social Life (The Catholic University of America Anthropological Series, No. 15. Washington, D.C.: The Catholic University of America Press, 1953), p. 140.

Wild raspberries were of small economic importance. They were eaten fresh but were seldom, if ever, dried. According to Davis this species of raspberry has also been domesticated.⁴²

ROSACEAE (Rose Family). Rubus parviflorus Nutt.
(Thimble Berry, Stockingcap). [p'aɫp'ɛtkɑ̃].

Place of Collection - South Fork of the Jocko Road.

Thimble berries were eaten fresh, but they were seldom plentiful enough to be gathered in any quantity.

RUBIACEAE (Madder Family). Galium boreale L.
(Bedstraw, Cleavers).

Place of Collection - Finley Creek, near Arlee.

When mature these plants bear small seeds resembling peppercorns. Although the Flathead considered the seed edible, they seldom used them.

SALICACEAE (Willow Family). Populus trichocarpa T.
& G. ex. Hook. (Black Cottonwood). [mōls'].

Place of Collection - Vanderburg Farm.

During the spring, particularly in May, the Flathead peeled the bark from the black cottonwood trees growing along the river bottoms to get the sweet sap. They prized the sap of the cottonwood above that of any

⁴²Davis, op. cit., p. 406.

other tree. Usually only young cottonwood trees were peeled since the bark was more difficult to remove from the larger trees. Before peeling, a small strip of bark was removed to see whether the sap was running in the tree and whether it was sweet. From my own experience, cottonwood trees vary greatly in the sweetness of the sap.

If the sap was sweet and good, a strip of bark about six inches wide was loosened until it could be pulled from the tree. The length of the strip varied due to the grain of the bark, knots, etc. A special tool made from the rib of a buffalo or elk was used for removing the bark and scraping the trunk of the tree. The sap was collected by scraping off the soft cambium layer which adhered to the tree. These thin semitransparent strips were chewed and are often described by the Indians as tasting somewhat like pears or pineapple. Children often licked the bare wood with their tongues to get any remaining sap.

Cottonwood trees were sometimes entirely girdled in the process of collecting sap. The trees that died were a good source of firewood, and the cottonwood mushroom, Armillaria mellea, thrived on them.

The Flathead Indians did not peel the quaking aspen, Populus tremuloides, for food as Thain White reported the Kutenai did.⁴³

⁴³White, op. cit., p. 10.

SAXIFRAGACEAE (Saxifrage Family). Ribes aureum
Pursh. (Golden or Flowering Currant). [st&mt'ū].

Place of Collection - Jocko Road near Old Agency.

Wild currants are not numerous in the present reservation area. Formerly they were gathered and eaten, but it is doubtful if they were plentiful enough to dry in large quantities.

SAXIFRAGACEAE (Saxifrage Family). Ribes setosum
Lindl. (Gooseberry). [n't&].

Place of Collection - Little Prairie.

Gooseberries were eaten fresh but were not dried.

UMBELLIFERAE (Carrot Family). Heracleum lanatum
Michx. (Cow Parsnip). [ho'te].

Place of Collection - Jocko Road near Old Agency.

The young stalks of the cow parsnip, before they became pithy, were peeled and eaten raw. After the stalks had matured, the Flathead used them for making elk calls.

Turney-High recorded that a deer calling lure with a reeded mouthpiece was made from the stalks of cow parsnip, but I was unable to verify it.⁴⁴

⁴⁴Turney-High, The Flathead Indians of Montana, p. 113.

UMBELLIFERAE (Carrot Family). Lomatium cous (Wats.)
 Coult. and Rose (Desert Parsely, Biscuit Root). [pt'č'atlū].

Place of Collection - Jocko Road near Little Prairie.

Cous was usually gathered in the spring just after it had finished blooming. The Flathead Indians peeled the root and ate it raw or boiled it, but the peeled roots were usually dried and then made into small round cakes.

In Nez Percé country, where the bitterroot is not as plentiful, cous was one of the principal root foods. According to Spinden,

The harvest season was very early, most of the digging occurring during April and May. The roots, corm-like or tuberous in character, were eaten either raw or cooked. The usual preparation was to dry the roots, scrap off the brown outer skin, and then reduce them to powder in mortars. This meal was made into gruel for immediate use or into bricks for future consumption. The method of making bricks was as follows: the meal was moistened with water and formed into flat, oblong, square-cornered cakes that were suspended on a swinging framework of flat sticks and partly baked over a slow fire. The bricks were pierced with one or more holes in order that they could be strung on a thong, like Chinese money, and hung from the saddle. They bore the imprint of the sticks upon which they had rested, and were sometimes embellished with scratched parallel or crossed lines.

Both the meal and the cakes remained edible a long time. The cakes were either eaten without further preparation or were broken up in water and made into a mucilaginous sort of soup. This root was especially valued as being the first vegetal food to be gathered in the spring.⁴⁵

⁴⁵Spinden, op. cit., p. 203.

The cous in the Nez Percé territory was so much larger and more plentiful than that of the Flathead that it was more profitable for the latter to trade for it with the Nez Percé. Tanned buckskin was usually exchanged for cous.

The Flathead sometimes refer to Lomatium cous by the Nez Percé word for it which is usually spelled cous or cows. This is probably the "unidentified root ká'us" which Turney-High mentions as being scarce in the Flathead country.⁴⁶

UMBELLIFERAE (Carrot Family). Perideridia gairdneri (H. & A.) Math. (False Caraway, "Wild Carrot"). [slōkām].

Place of Collection - Hungry Injun Camp.

In this area wild carrot has a root about one-half the length of a man's little finger. The root was dug in July and either eaten raw or boiled. After boiling, large quantities of it were mashed and formed into small round cakes which were then dried. The Flathead "really liked this," and it was one of their principal root crops.

USNEACEAE. Alectoria sp. (Black Tree Lichen). [sqatlo].

Place of Collection - Rattlesnake Canyon.

⁴⁶Turney-High, The Flathead Indians of Montana, p. 137.

Large quantities of this lichen which grows on pine, fir, and larch trees were picked and carefully cleaned of needles and debris. The usual method of preparation was to soak it in water and bake it with camas as previously explained, but if baked separately it was only left in the oven for one night. When baked, it loses its coarse, stringy appearance and turns into a compact, black, gelatinous mass. It was eaten in this state with camas or partially sun-dried and powdered. This powder was prepared by mixing with powdered camas to sweeten it and adding water until it became a thick paste. It was more of a luxury than a staple food. Turney-High noted that even a small family normally consumed at least twenty-five pounds of this lichen per year.⁴⁷ The gathering, cleaning, and preparation of such an amount would be a substantial task.

Unidentified Vegetal Foods

Some Flathead Indians ate the root of a plant which they descriptively called [msaōyɛ], "stink root." My informants said that it was collected in a small area on the south side of Placid Lake and another area north of Seeley Lake, Montana. They know of no other locations in this area where it grows. It is described as a short plant having small yellow leaves that stand upright, much like

⁴⁷Ibid., p. 111.

skunk cabbage, and white flowers. The roots were baked overnight by the hot pit method. When baked, the roots turned black and resembled the black tree lichen, Alectoria sp. It had a terrible smell, hence the name, but it had an agreeable sweet taste.

According to my informants the Flathead at one time obtained "bullberries" from along the Yellowstone River in the vicinity of Livingston, Montana. They were dried and brought back for winter use. They were prized because they did not lose as much flavor in drying as many berries, and when soaked in water they regained much of their former taste and appearance.

According to my informants, at one time "wild loganberries" grew in areas near Arlee, Montana. However, I believe that they were probably blackberries instead of loganberries.

As recently as thirty years ago several families of the Flathead Indians made an annual fall hunting trip up the West Fork of the Bitterroot River across the Continental Divide into Idaho. A large plant which my informants described as bitterroot with a different colored flower was obtained from this area. The root grew as large as a man's forearm and was much more bitter than ordinary bitterroot, but the Indians, used to the taste, considered it a good food plant.

CHAPTER III

PLANTS USED FOR MEDICINES BY THE FLATHEAD INDIANS

Introduction

There were two types of medical practitioners among the Flathead Indians: the shamans, who were regarded as possessing supernatural power, and the herb doctors, who treated their patients with natural plant remedies. However, the dichotomy was sometimes not as distinct as it appears at first glance since some shamans used plant remedies at times and some herb doctors received their medicines from supernatural sources. The Flathead believe that their plant medicines were revealed in dreams except for some medicines which they have admittedly borrowed from other Indian tribes. In this respect they closely parallel the Kutenai as described by Turney-High.¹ However, unlike the Kutenai, they do not believe that all plants have medicinal value.

Any person, regardless of his status, could dream about a plant and thus acquire a personal medicine of value for a specific illness. However, other people could not use his medicine without permission. If the plant remedy

¹Harry Holbert Turney-High, Ethnography of the Kutenai (Memoirs of the American Anthropological Association, No. 56. Menasha, Wisconsin: American Anthropological Association, 1941), p. 101.

was strong and effective, the person sometimes became an herb doctor specializing in curing one particular illness. In a situation such as this an herb doctor was somewhat akin to the shaman because his personal medicine had both natural and supernatural power to cure sickness. The following incident, which occurred about 1875, was related to me by Agnes Vanderburg, one of my informants. It illustrates how a new, highly successful medicinal practice came into use.

This is about my grandmother. Her name was Mary Finley. While they were camped in teepees somewhere near Bozeman, one night she heard a sick woman going on and on. She asked her husband what was the matter. Her husband told her that the woman was going to have a baby. The woman's labor went on all night, went on all day, went on all the next night and day. Going on the third night Mary went to sleep. Somebody came to her and told her, "Hey, Mary, you get up in the morning and go get that moss up in that tree. Take one of your earpoles from off your teepee and get it." She said, "I looked and I could see the moss hanging there."

Early in the morning she told her husband, "Somebody came here last night and told me to go help that woman." Her husband said, "Well go on," and her husband told his mother. His mother told Mary, "Go on, go get it and help her." So she went out and took one of their earpoles off and went right straight to the tree. Sure enough, there was a little bunch of moss hanging there. She poked it, and it came down. She went back to the teepee and made a tea in a little tin cup. She waited till it boiled.

Mary told her mother-in-law, "You go do it." Her mother-in-law said, "No, I wasn't told to; you go do it." She said, "I'm scared to death." She didn't know what to do, so she took the tea and went to the woman in labor. She was lying there about dead. The woman asked her, "Well, what do you want, Mary?" Mary said, "I came to help you." She tasted the medicine. It was just hot enough not to burn her mouth. She told the woman, "You take this and drink it up." She

drank the medicine. Mary then grabbed the moss in her right hand, and she put it on this woman's legs, on her back, stomach, and all over her. Then she grabbed the woman, and the baby came. Mary was going to jump away, but the mother told her to sit still. After she got through she told her, "Thank you. Why didn't you come sooner?" Mary said, "I dreamed about it. Somebody told me to come and help you."

That's how she got to using that medicine all the time. She was all over in the Arlee Valley. Everybody having a baby, they all went after her.

Some time before Mary Finley died at the age of one hundred eleven, she passed the use of her medicine along to her relatives although it had not been used for many years. The knowledge of most personal herbal medicines has now been forgotten since most of the owners have died.

In addition to shamanistic curing and personal medicines acquired through dreams, there was a group of plant remedies, some known only to a few people, but many of which were fairly common knowledge and used both by herb doctors and as home remedies for sickness.² Turney-High has recorded a few of the widely known plants in his section on Flathead pharmaceutical botany.³

²Similar medicinal practices also occurred among the Gros Ventres. See Regina Flannery, The Gros Ventres of Montana. Part I: Social Life (The Catholic University of America Anthropological Series, No. 15. Washington, D.C.: The Catholic University of America Press, 1953), p. 313.

³Harry Holbert Turney-High, The Flathead Indians of Montana (Memoirs of the American Anthropological Association, No. 48. Menasha, Wisconsin: American Anthropological Association, 1937), pp. 140-141.

As far as I can determine, dreams are believed to be the ultimate source of all plant medicines. At one time they were personal medicines, but many of them were used for so long that they gradually became common knowledge to many people. My informants were unable to recall the origins of any of the most common plant remedies. Possibly this is some indication of their age.

Many personal medicines were effective on a psychological basis no doubt, but the majority of medicinal plants known to my informants have some real medicinal value which often closely parallels the Flathead use. The exact process through which these medicinal values were discovered is unknown. Undoubtedly some of them were discovered by experimentation and trial and error, the least effective being discarded for the more effective.

Flathead herb doctors could be either men or women, but my informants indicated that there was usually a preponderance of women. This was partly because some herb doctors were midwives and women skilled in curing female troubles. As previously explained, the herb doctor often specialized in treating one type of sickness with the help of his personal medicine, but some had excellent knowledge of other medicinal plants. This knowledge was usually passed down through the family so that it was not uncommon for a descendant of an herb doctor to also be skilled in

the profession.

Herb doctors did not seek business; they were summoned when needed. When questioned as to whether some specific sicknesses required a shaman and others an herb doctor, my informants indicated that there was no hard and fast rule. Many illnesses could be treated either naturally or supernaturally, and all people did not agree as to which was best. However, if the efforts of either the shaman or herb doctor failed, the other was often summoned. An herb doctor did not collect a set fee for his services, rather the patient's family gave him whatever they could afford. I was unable to find any evidence of special ceremonies or rituals connected with an herb doctor's ministration to his patients.

Almost all medicinal plants and roots were collected and preserved during the summer and fall for later use. The roots and dried stalks of some plants could be procured during the winter, but they were considered more potent if they were dried while still green. It is still quite common to see strings of various medicinal roots hanging in houses or in the trees outside. When I was collecting herbarium specimens of scarce or out-of-the-way plants with my informants, they often collected a winter's supply for themselves and aged friends or relatives.

With very few exceptions medicinal plants taken

internally were made into a tea by boiling, its strength varying according to the plant and its use. Many of these teas were made from plant roots which are large and tuberous. Unfortunately, I do not know how concentrated most of the medicinal infusions were. They were not boiled a certain number of minutes like we cook an egg, but instead until they "tasted right," or "looked right," or "smelled right." The length of time also depended on whether the foliage or root was green or dry.

The current medical practices and beliefs among the Flathead are a curious mixture of traditional beliefs and modern medicine. Shamans have not been much in vogue for many years, due in part to the influence of the Catholic priests and also the modern hospital facilities available. I know of no practicing herb doctors, but many of the older people still use the traditional plant remedies and encourage the younger generation to do so too. Some of these remedies are thought to be better than those prescribed by the doctors at St. Ignatius, and many of the older generation still sincerely believe in them.

There were also many nonherbal remedies used in treating sicknesses. The practice of sweating was regarded as the best general tonic and cure-all. It was used for numerous sicknesses as well as a general and ceremonial purifier. Many of the Flathead Indians still take a sweat

bath nearly every day.

The Flathead Indians had no herbal cure for headaches as far as my informants could remember. Headaches were stopped by squeezing the bridge of the nose between the thumb and forefinger and pressing with the thumb below the occipital bone at the base of the skull. Turney-High records an elaboration of a similar technique as performed by a shaman.⁴ A bandana was also placed around the head and over the eyes and tightly tied to cure a headache. The Flathead possessed no general body analgesic such as our aspirin.

Broken bones are usually a serious matter for all primitive people since a badly set bone often cripples a person for life. Today the Flathead Indians rely on medical doctors to set their bones, but formerly they depended upon their own skills. Ross Cox, who visited the Flathead a few years after the Lewis and Clark Expedition, commented that:

The Flatheads are a healthy tribe, and subject to few diseases. Common fractures, caused by an occasional pitch off a horse, or a fall down a declivity in the ardour of hunting, are cured by tight bandages and pieces of wood like staves placed longitudinally around the part, to which they are secured by leathern thongs. For contusions they generally bleed, either in the temple,

⁴Ibid., pp. 30-31.

arms, wrists, or ankles, with pieces of sharp flint, or heads of arrows. . . .⁵

Cox also recounted how an old Flathead man cured him of acute rheumatic attacks by a daily midwinter plunge through the ice in waist-deep water. The old man massaged him while ice froze on Cox's bare chest and head.⁶

Snake bites were cured by placing a piece of buckskin, which had just been smoked, on the bite.

When children burned their mouths, an eagle feather, or later cotton flannel, was burned and the ashes put on the tongue and lips. This remedy is still used today, and one of my informants asserted that it is better than any preparation that doctors prescribe.

People who suffered from chronic nosebleeds were cured by catching a live turtle, pulling his tail out from beneath his shell, and rubbing it both over and inside their nose. They told the turtle why they were doing it and asked him not to be angry. The turtle was then released. This method of curing nosebleeds is still used by some young people at the urging of their parents.

There are no clear ideas left as to what the causes of sickness were formerly believed to be. There are a few

⁵Ross Cox, Adventures on the Columbia River (New York: J. & J. Harper, 1832), p. 125.

⁶Ibid., pp. 125-126.

beliefs among the old people such as if an owl hoots near a house someone is going to get sick or die or if dogs howl at night someone is going to die, but the origin of these beliefs may be due to white influence.

I do not believe that the following list of medicinal plants represents more than a fraction of those which were used at one time. However, they may well be some of the most effective ones since they are still used after over one hundred years of competition with white medicines. With the exception of Mary's green tree lichen, Evernia sp., I believe that none of the following plants are personal medicines. However, due to the limited use of these plants in recent years and the limited knowledge about them, it is difficult to know how wide their application was in the past.

Plants Used as Medicines

ANACARDIACEAE (Sumac Family). Rhus glabra L.
(Smooth Sumac). [čhōm].

Place of Collection - Jocko Road above Little
Prairie.

A tea was made from sumac branches and used as a cure for tuberculosis. The Flathead Indians learned of this medicine about fifty years ago from an Indian from the state of Washington. At this time tuberculosis and pneumonia were the leading causes of death on the Flathead

Indian Reservation.⁷

Sumac tea was prepared from either a green or dry branch, the leaves not being essential. The same branch could be used to make several batches of tea, the first being green and the subsequent ones progressively redder in color. A cupful was drunk several times a day.

The patient could not use salt or sugar while using this medicine as they made him cough. He also had to use separate dishes, and they had to be washed separately.

Before a branch could be taken from a sumac bush, it was necessary to give the bush a present which was buried in the ground at its roots.

The sumac bears clusters of berries which turn a bright red in the fall. Three or four of these berries were sometimes used as a physic.

Gunther does not record the use of Rhus glabra among any Indian tribes of Western Washington. According to Teit, the Thompson Indians used it as a remedy for syphilis.⁸ The Cheyenne mixed the leaves of Rhus glabra with tobacco

⁷Ron D. Stubbs, "Causes of Death Among the Flathead Indians, 1920-1954" (Missoula: The University of Montana, 1964), p. 10. (Unpublished manuscript.)

⁸Elsie Viault Steedman (ed.), based on field notes by James A. Teit, Ethnobotany of the Thompson Indians of British Columbia, Forty-fifth Annual Report of the Bureau of American Ethnology (Washington: Government Printing Office, 1930), p. 512.

for smoking.⁹

This is not an official drug in any pharmacopoeia, but the berries of Rhus glabra are made into an infusion for "a very efficient gargle in acute and subacute inflammations of the throat."¹⁰ Sayre lists it as an astringent and refrigerant; a fluid extract or decoction is used as a gargle.¹¹

BERBERIDACEAE (Barberry Family). Berberis repens (Oregon Grape). [o'tts].

Place of Collection - Jocko Road.

The root was made into a tea to help facilitate the delivery of the placenta. It was dug and used at any time during the year, or it was also dried. Some Flathead women drank a strong tea of Oregon grape root as a contraceptive. Venereal diseases, both gonorrhea and syphilis, were treated by drinking a strong decoction of the root.

The berries of Oregon grape were never used for food until sugar became available and then only occasionally.

⁹George Bird Grinnell, The Cheyenne Indians--Their History and Ways of Life (Vol. II. New York: Cooper Square Publishers, Inc., 1962), p. 180.

¹⁰Hobart A. Hare, Charles Caspari, and Henry H. Rusby, The National Standard Dispensatory (New York: Lea & Febiger, 1916), pp. 1397-1398.

¹¹Lucius E. Sayre, A Manual of Organic Materia Medica and Pharmacognosy (fourth edition; Philadelphia: P. Blakiston's Son & Co., 1917), p. 290.

Almost all Indian tribes throughout the Northwest used Oregon grape for a great variety of illnesses. B. aquilifolium was the most widely used, but it is quite scarce in Flathead country.

According to Youngken, Oregon grape root, Berberis repens, contains alkaloids which stimulate smooth muscle tissue such as that in the uterus.¹² Stuhr lists a different species of Oregon grape, B. aquilifolium, as a bitter tonic, antiperiodic, and alterative.¹³ Steinmetz says that a fluid extract of B. aquilifolium is used in diseases arising from impurity of the blood.¹⁴

BORAGINACEAE (Borage Family). Lithospermum ruderales (Gromwell, Puccoon).

Place of Collection - Jocko Road.

The Flathead used a tea made from the foliage of this plant as a remedy for diarrhea.

In modern medicine Lithospermum ruderales is being

¹²Robertson Pratt and Heber W. Youngken, Pharmacognosy (Philadelphia: J. B. Lippincott Company, 1951), p. 319.

¹³Ernst T. Stuhr, Oregon Drug Plants--A Survey of the Official Medicinal Plants of Oregon (Monograph from the Press of the American Pharmaceutical Association, 1931), p. 5.

¹⁴E. F. Steinmetz, Materia Medica Vegetabilis (Vol. I. 3 vols.; Amsterdam, Holland, 1954), p. 78.

experimented with as an oral contraceptive.¹⁵

CAPRIFOLIACEAE (Honeysuckle Family). Lonicera
involucrata (Bear Berry Honeysuckle). [ĪsamqarsĪsĪs].

Place of Collection - Outlet of Placid Lake.

Three or four bear berries were eaten as a powerful laxative. When the Flathead camped near bear berry bushes, young children were watched to make sure that they did not eat any of the berries.

The Thompson Indians used a decoction of bear berry leaves as a liniment and to reduce swelling. They believe that the berries are poisonous if eaten.¹⁶

There are over one hundred species in the genus Lonicera. Over a dozen of these are used medicinally. The berries generally have emetic-cathartic properties.¹⁷

CAPRIFOLIACEAE (Honeysuckle Family). Symphoricarpos
occidentalis Hook. (Snowberry). [stɛmtūmĭa].

Place of Collection - Little Prairie.

The stem of the snowberry was boiled and made into a tea to help deliver the placenta of the mother. The medicine was effective whether the stem was green or dry. The white

¹⁵Personal communication with Dr. Sherman Preece, University of Montana.

¹⁶Steedman, op. cit., pp. 457, 489.

¹⁷Hare, Caspari, and Rusby, op. cit., p. 398.

berries were mashed and put on scabs of cuts and burns so they would not leave a scar. The Flathead boiled the root of the snowberry into a highly concentrated tea for venereal disease.

Turney-High may be referring to the snowberry in his Kutenai monograph when he says that,

After the child is born and the cord is cut, the wise-woman does give her an infusion made from a shrub with white berries which grows by the river banks . . . to help expel the afterbirth.¹⁸

COMPOSITAE (Composite Family). Achillea millefolium L. (Yarrow). [ūncqa].

Place of Collection - Camas Prairie, Placid Lake.

The stem and leaves of yarrow were boiled and made into a bitter tea for colds. It was also used as a "band-aid" plant. The leaves, which are long and fernlike, were either wound around the wound or they were mashed with water and plastered on it to stop the bleeding. They were often dried and used the same way. Spider web was also used to control bleeding.

The Thompson Indians drank a tea of yarrow as a general tonic, or crushed it and mixed it with water for cracked hands, rashes, pimples, etc.¹⁹ The Okanagon made

¹⁸Turney-High, Ethnography of the Kutenai, p. 113.

¹⁹Steedman, op. cit., p. 460.

it into a wash for sore eyes and other uses much like the Thompson Indians.²⁰

A decoction of yarrow is a blood purifier and an excellent remedy for coughs and colds.²¹ Yarrow is used for healing external wounds and sometimes as an internal remedy for hemorrhages and mucous discharges as in tuberculosis.²²

COMPOSITAE (Composite Family). Artemisia dracunculus L. (Wormwood, Tarragon). [t'rīt'rīpfp'].

Place of Collection - Jocko Road above Old Agency.

Wormwood was used to reduce swelling in feet and legs. The foliage was boiled in water which was then cooled until lukewarm. The patient placed his feet in the water and rubbed the boiled wormwood plant over his legs and feet. The Flathead also dried and powdered A. dracunculus for use on open sores.

Steedman records that the Thompson Indians used A. dracunculus by steaming the plants in a sweat lodge for rheumatism, stiffness, and aching bones and muscles. Women bathed in a decoction of the plant after childbirth.²³

²⁰James A. Teit, "The Okanagon," The Salishan Tribes of the Western Plateaus, edited by Franz Boas, Forty-fifth Annual Report of the Bureau of American Ethnology (Washington: Government Printing Office, 1930), p. 293.

²¹Steinmetz, op. cit., Vol. II, p. 302.

²²Sayre, op. cit., p. 430.

²³Steedman, op. cit., pp. 463-464.

The genus Artemisia contains over two hundred species. At least sixty of these species have some medicinal use. It is generally used as a tonic, stimulant, or to expel worms, but it is also an excitant to the circulation.²⁴ Another species of wormwood, A. absinthium, is used externally as an anesthetic for rheumatism.²⁵ A. dracunculus, also found in Europe, is the common tarragon herb used in flavoring condiments, vinegars, and wines.

COMPOSITAE (Composite Family). Artemisia ludoviciana Nutt. (Western Mugwort). [kap'ākāp'āte].

Place of Collection - about one mile southwest of Arlee.

This species of sage was made into a very strong-tasting tea for colds. My informants seldom used it. They said it was too strong and bitter. Its principal use probably was in the making of buckskin. Before the hides were put into water to soak for several days, they were well rubbed with the foliage to prevent them from souring.

Western mugwort is sometimes used as an inferior substitute for wormwood. It was also used by mountainmen

²⁴Hare, Caspari, and Rusby, op. cit., p. 3.

²⁵David M. R. Culbreth, A Manual of Materia Medica and Pharmacology (seventh edition; Philadelphia: Lea & Febiger, 1927), p. 611.

and frontiersmen to treat Rocky Mountain fever.²⁶

COMPOSITAE (Composite Family). Artemisia tridentata
(Big Sage, Sagebrush). [p'ōp'ōnɛ].

Place of Collection - Near Seeley Lake.

A tea made from sagebrush leaves was used by some Flathead as a remedy for colds and pneumonia. My informants consider it too bitter to use.

COMPOSITAE (Composite Family). Artemisia sp.
(Wormwood). [p'ōp'ōnɛ].

Place of Collection - Obtained from the Spokane Indians.

The Flathead obtained this plant from the Spokane Indians. It was made into a tea used for colds and as a hair rinse for dandruff. According to my informants the Spokane Indians used it as a preservative in tanning green hides in the same manner as the Flathead used Artemisia ludoviciana.

COMPOSITAE (Composite Family). Gaillardia aristata
Pursh. (Blanket Flower).

Place of Collection - Finley Creek, near Arlee.

At one time this was a Flathead medicine plant, but my informants have forgotten its use.

²⁶Hare, Caspari, and Rusby, op. cit., p. 4.

COMPOSITAE (Composite Family). Grindelia howellii
 Steyererm (Gum-plant). [shĩtk'a].

Place of Collection - Outlet of Placid Lake.

The gum-plant, called "Indian horseshoe" by the Flathead, was rubbed on horses' hooves to toughen and protect them. It was also used as a remedy for tuberculosis. A tea was made from the whole plant.

The species which I collected is not the usual one found in this area although it looks exactly the same except to the trained botanist. Until I collected it at Placid Lake, it was "known only from the type collection, on dry rocky bluffs along the St. Maries River, 'Kootenai' County, Idaho."²⁷

Since I collected it at an old Indian camping ground, it is very probable that the seeds were carried by horses or humans from one site to the other. The species of gum-plant commonly occurring in this area are G. nana and G. squarrosa. The Flathead did not distinguish them from G. howellii, however, and used them for the same purposes.

The Blackfoot Indians boiled the root of G. squarrosa and took it internally for liver trouble.²⁸

²⁷Ray J. Davis, Flora of Idaho (Debuque, Iowa: Wm. C. Brown Company, 1952), p. 749.

²⁸Walter McClintock, "Medicinal and Useful Plants of the Blackfeet Indian," p. 5. (Mimeographed paper.)

Another species, G. robustus,

is expectorant and very largely employed in America in asthma and bronchitis, also in hay-fever and whooping cough; it reduces the violence and frequency of paroxysm.²⁹

COMPOSITAE (Composite Family). Matricaria matricarioides (Less.) Porter (Pineapple Weed, Dog Fennel). [msät̥sät̥x'q'e].

Place of Collection - North Fork of Jocko Road.

A tea made from the foliage of pineapple weed and a green tree lichen, Evernia sp., or often only from pineapple weed, was drunk by the confined mother to help deliver the placenta. As my informant put it, the pregnant woman is not sick, i.e., misses her menses, for nine months, and the tea clears out nine months of sickness. A tea of pineapple weed was also given to young girls when they had menstrual cramps.

This and several other species of Matricaria have mild tonic qualities.³⁰

COMPOSITAE (Composite Family). Tanacetum vulgare L. (Tansy).

Place of Collection - Near Stevensville.

Tansy was used as a burn medicine by crushing the

²⁹Steinmetz, op. cit., Vol. I, p. 219.

³⁰Hare, Caspari, and Rusby, op. cit., p. 1008.

leaves and placing them on the burn. It is a native of Europe.

The Cheyenne used tansy tea when they felt weak and dizzy.³¹

In medicine tansy tea is used to reduce fever, to correct hysterical disorders, and to restore menstrual disorders. Large doses are extremely poisonous. It contains tannic acid.³²

ERICACEAE (Heath Family). Arctostaphylos uva-ursi (L.) Spreng. (Kinnikinick, Larb, Manzanita). [sq&dlse].

Place of Collection - Little Prairie.

The dried leaves of kinnikinick were powdered for use on burns to help promote rapid healing. For earache the dried leaves were tamped into a pipe and smoked until the stem of the pipe became hot. A person then took a mouthful of smoke, removed the stem of the pipe, and forced the hot smoke through the stem into the patient's ear.

The Cheyenne used a tea made from the foliage for pains in the back.³³ The Thompson drank the same tea as a diuretic and tonic for the kidneys.³⁴

³¹Grinnell, op. cit., p. 190.

³²Hare, Caspari, and Rusby, op. cit., p. 1614.

³³Grinnell, op. cit., p. 183.

³⁴Steedman, op. cit., p. 458.

Kinnikinick has several recognized medicinal uses. It is an astringent, tonic, and diuretic used in treating ulcerations of the kidneys, bladder, and urinary tract.³⁵

GERANIACEAE (Geranium Family). Geranium viscosissimum F. & M. (Wild Geranium). [čēīčī].

Place of Collection - Hungry Injun Camp.

The Flathead Indians removed warts and corns by boiling the large tuberlike root of the wild geranium until a scum similar to cream rose to the surface. A small pad was saturated with this cream and tied over the wart or corn for several days until it softened and could be removed. If the plant was fresh, the milky sap was squeezed from the stem and used in the same way. Milk fever and painful swollen breasts of lactating women were reduced by mashing the hot root and placing it on a strip of buckskin or cloth which was then tightly bound around the breasts.

Horses were doctored by rubbing some of the cream on sores, cuts, or rope burns. In cases of distemper and pneumonia, thin shavings were pared from the dry root and burned. The horse was forced to inhale the smoke.

G. viscosissimum had medicinal value among the Thompson, but Teit learned no specific use for it.³⁶

³⁵Pratt and Youngken, op. cit., p. 65.

³⁶Steedman, op. cit., p. 461.

GRAMINEAE (Grass Family). Hierochloe odorata (L.)
Beauv. (Sweetgrass). [hsɛstĩä].

Place of Collection - Along Bitterroot River, near
Stevensville.

In addition to being used as a perfume and purifier
(see Chapter IV), sweetgrass was sometimes mixed with the
seeds of Thalictrum occidentale, meadow-rue, and made into
a tea for colds. The hot tea reportedly helped clear con-
gested nasal passages.

Lowie found that among the Northern Shoshone, "Large
braids of sweet-grass were commonly suspended from the wall;
they are . . . boiled and drunk for colic."³⁷

LABIATAE (Mint Family). Mentha arvensis L. (Wild
Peppermint, Mint). [honhane].

Place of Collection - Vanderburg Farm.

A tea was made from peppermint as a remedy for colds.
Turney-High also mentions this use.³⁸ For toothache the
green leaves were packed in and around the carious tooth.
My informants say the peppermint usually burned worse than
the toothache.

³⁷Robert H. Lowie, The Northern Shoshone (Anthropo-
logical Papers of the American Museum of Natural History,
Vol. II, Part II. New York: Published by Order of the
Trustees, January, 1909), p. 227.

³⁸Turney-High, The Flathead Indians of Montana,
No. 4 under pharmaceutical botany, p. 140.

The Gros Ventre used the stem and leaves of a species of peppermint for headaches.³⁹ It was used as a beverage tea by many Indian tribes.

LABIATAE (Mint Family). Monarda fistulosa L. var. menthaefolia (Grah.) Fern. (Wild Bergamot). [t'it'ũĩ].

Place of Collection - Jocko Road at Little Prairie.

The flower, stem, and leaves were made into a tea for fever, colds, and coughs although it was not considered as good a remedy for coughs and colds as Osmorhiza obtusa, sweet cicely. It was also used as a general tonic as Turney-High records.⁴⁰ The leaves of wild bergamot were also used for toothache.

Wild bergamot is used as a substitute for quinine, and in large doses it induces perspiration.⁴¹ Thymol is obtained from Monarda. It has beneficial antiseptic uses on skin and in nasal and pharyngeal passages.⁴²

LABIATAE (Mint Family). Nepta cataria L. (Catnip).

Place of Collection - Vanderburg Farm.

³⁹A. L. Kroeber, Ethnology of the Gros Ventre (Anthropological Papers of the American Museum of Natural History, Vol. I. New York, 1908), p. 226.

⁴⁰Turney-High, The Flathead Indians of Montana, No. 2 under pharmaceutical botany, p. 140.

⁴¹Sayre, op. cit., p. 376.

⁴²Pratt and Youngken, op. cit., p. 240.

This plant was introduced from Europe and spread over most of temperate North America.⁴³ The Flathead obtained this plant from the Cree who called it "twenty-minute fever medicine." The stems and leaves were boiled to make a tea. The patient was given a cupful to make him sweat, and in ten to twenty minutes the fever would break.

Catnip has a smell similar to peppermint although not as strong. The tea made from it smells the same and has a rather pleasant taste.

Medical literature cites many uses for N. cataria. Steinmetz says that it induces peaceful sleep, is a good nerve tonic for children when made into a tea, and is a good remedy for coughs and colds. It also induces perspiration.⁴⁴

LILIACEAE (Lily Family). Veratrum viride Alt. (False Hellebore). [tsa].

Place of Collection - Jocko Road below Jocko Lake.

The root was dried and powdered for use as a decongestant. The Flathead name means sneeze root. A pinch of the powder, when snuffed up the nose, caused violent sneezing and cleared the nasal passages.

Sometimes a small amount of the dried root was also

⁴³Davis, op. cit., p. 602.

⁴⁴Steinmetz, op. cit., Vol. II, p. 315.

mixed with tobacco or kinnikinnick and red willow bark and smoked.

The use of false hellebore as a "sneeze root" was known to many Indian tribes in the Rocky Mountains. Teit mentions the use of V. viride as a decongestant by the Okanagon Indians which parallels that of the Flathead.⁴⁵ The Blackfoot collected it in the mountains and used it for head colds.⁴⁶ In his Ethnology of the Gros Ventre, Kroeber made a possible reference to V. viride stating that:

A root . . . is obtained from other tribes. The plant is said not to grow in the Gros Ventre country. It is pounded and used as a snuff in order to clear the head in case of cold or headache.⁴⁷

This plant was "introduced into domestic medicine by early settlers in America who obtained it from the American Indians."⁴⁸ The dried rhizomes and roots are used in the manufacture of veratrine, a drug used to treat diseases of the heart and circulatory system, particularly high blood pressure.⁴⁹ V. viride is a powerful sedative to nervous,

⁴⁵Teit, op. cit., p. 294.

⁴⁶McClintock, op. cit., p. 3.

⁴⁷Kroeber, op. cit., p. 226.

⁴⁸William Thomas Corlett, The Medicine Man of the American Indian (Springfield, Illinois: Charles C. Thomas, 1935).

⁴⁹Pratt and Youngken, op. cit., p. 346.

respiratory, and circulatory systems.⁵⁰

LYCOPERDACEAE (Puffball Family). Lycoperdon ssp.
[sīlē].

Place of Collection - Jocko Road at Little Prairie.

The brown, powdery spores of puffballs were rubbed on the cheeks and eyelids of infants to put them to sleep. The Flathead did not distinguish between the various species of puffballs they used for this purpose.

NYMPHAEACEAE (Water-lily Family). Nuphar sp.
(Water-lily).

Place of Collection - Near Placid Lake.

The Flathead Indians used the roots of water-lilies for infected sores. They baked the roots in a pit, peeled and mashed them, and applied them as a poultice.

ORCHIDACEAE (Orchid Family). Goodyera oblongifolia
Raf. (Menzie's Rattlesnake Plantain). [nōs'ūs].

Place of Collection - Shovel Creek Camp.

The Flathead call the rattlesnake plantain the "leaf that comes apart." When one of the leaves is rubbed between the thumb and forefinger, it separates into two pieces. The leaf was separated and plastered on burns.

Rattlesnake plantains are not a standard dispensatory

⁵⁰Hare, Caspari, and Rusby, op. cit., p. 1748.

drug, but "they enjoy some domestic reputé as alteratives."⁵¹

PINACEAE (Pine Family). Abies grandis (Dougl.) Lindl. (Grand Fir, Great Silver Fir). [ma'ne'mp't'].

Place of Collection - Black Lake Campground.

The bark of the grand fir is covered with small bubbles containing pitch. The Flathead pricked these bubbles and rubbed the pitch on the throat and chest for colds. The pitch smells like mentholatum. An eyewash was prepared by bruising the needles and boiling them in a small amount of water.

The Thompson Indians used a decoction of the bark as a wash for sore eyes. They also put a little piece of the gum in the corner of each eye at night for sore eyes. The bark and gum were boiled to make a physic; highly concentrated it was used as a remedy for gonorrhea.⁵²

PINACEAE (Pine Family). Juniperus scopulorum Sarg. (Rocky Mountain Juniper). [p'ū'mfp'].

Place of Collection - Jocko Road.

A tea was made from the branches and needles for a cold remedy. When dogs barked all night the Flathead

⁵¹Ibid., p. 1187.

⁵²Steedman, op. cit., p. 462.

believed that sickness was coming around. They put juniper branches in hot ashes to smoke and purify the room and ward off the sickness.

The Cheyenne made a tea from the needles to ease coughing and a tickling throat.⁵³ The Gros Ventre either ate the berries or made a tea from the needles for asthma.⁵⁴ The Blackfoot made a tea from the berries to stop vomiting.⁵⁵ The Thompson sometimes used the berries as a diuretic.⁵⁶

PINACEAE (Pine Family). Pinus ponderosa Dougl.
(Ponderosa Pine, Western Yellow Pine). [s̥aptqī'p'].

Place of Collection - Hungry Injun Camp.

Boughs of pine or fir were sometimes used in the sweat lodge to help relieve muscular pain. The sweaters beat themselves on their backs and shoulders, or other areas which had been under strain, with the green boughs. This is not a current practice, and I was unable to find anyone who had tried it. Apparently it was abandoned many years ago.

Turney-High records that pine needles were heated

⁵³Grinnell, op. cit., p. 170.

⁵⁴Kroeber, op. cit., p. 226.

⁵⁵McClintock, op. cit., p. 5.

⁵⁶Steedman, op. cit., p. 465.

and placed on the mother's abdomen to help deliver the placenta.⁵⁷

Pitch which collects on pine, fir, and spruce trees was also used for backache, rheumatism, etc. The pitch was heated until it melted and then mixed with melted animal tallow. The modern practice is to mix it with lard. The mixture was spread on buckskin or canvas and put on the aching area.

Captain Meriwether Lewis employed a similar remedy for an abscess when the drug supplies of the Expedition ran low. In his journal entry for June 5, 1806, he stated: "I applied a plaster of salve made of the rozen of the long leafed pine, Beas wax and Bears oil mixed, which has subsided the inflammation entirely. . . ."⁵⁸

Teit found that the Thompson boiled the pitch of P. ponderosa and mixed it with bear's fat for inflamed eyes and sores. It was also applied to sores on horses.⁵⁹

PINACEAE (Pine Family). Pseudotsuga menziesii
(Douglas Fir). [s'kɛlpū].

Place of Collection - Jocko Road.

⁵⁷Turney-High, The Flathead Indians of Montana, p. 68.

⁵⁸Ruben Gold Thwaites (ed.), Original Journals of the Lewis and Clark Expedition, 1804-1806 (Vol. 5. New York: Dodd, Mead, and Company, 1905), p. 109.

⁵⁹Steedman, op. cit., pp. 466, 514.

The Flathead made a tea from fir needles for colds.

PLANTAGINACEAE (Plantain Family). Plantago major L.
(Common Plantain). [ūnsamqe tənɛs].

Place of Collection - Vanderburg Farm.

The leaves of the plantain were used to treat infected sores and tumors. They were dipped in hot water which softened them and turned them a darker color. Then they were put on the sore. The leaves acted to draw out the pus so that a smaller scar was left from the wound or infection.

The plantain is not official in any pharmacopoeia. It is believed to have some curative properties in treating skin inflammations, malignant ulcers, etc. The leaves have some value in controlling external bleeding.⁶⁰

PLANTAGINACEAE (Plantain Family). Plantago purshii
(Ribgrass).

Place of Collection - Near Jocko River, one mile above Arlee.

For toothache, ribgrass, either fresh or dry, was packed in the carie and around the tooth to deaden the pain.

POLYGONACEAE (Buckwheat Family). Rumex occidentalis
Wats. (Dock, Sorrel). [kī'p'ɛst'a].

Place of Collection - Vanderburg Farm.

⁶⁰Hare, Caspari, and Rusby, op. cit., p. 1278.

The root of dock and sorrel was boiled to make a strong decoction which was drunk for a syphilis and gonorrhea remedy.

The Blackfoot boiled another specie, R. salicifolius, and used the tea for "many complaints."⁶¹

Dock was formerly an esteemed home remedy among whites. It was taken internally and applied locally in scabies and chronic cutaneous eruptions.⁶²

PORTULACACEAE (Purslane Family). Lewisia rediviva Pursh. (Bitterroot). [sp'e't'läm].

Place of Collection - Camas Prairie.

Within the last few years some of the Flathead have adopted a Cree medical practice of boiling a quantity of peeled bitterroot in water, then throwing the bitterroot away and drinking the decoction. It reportedly kills the pain of heart trouble and pleurisy. A strong tea made of bitterroot was also used to increase lactation in the nursing mother as Turney-High reported.⁶³

RANUNCULACEAE (Buttercup Family). Clematis hirsutissima Pursh. (Virgin's Bower). [skauwp' madlīēr].

⁶¹McClintock, op. cit., p. 2.

⁶²Hare, Caspari, and Rusby, op. cit., p. 1410.

⁶³Turney-High, The Flathead Indians of Montana, p. 67.

Place of Collection - Little Prairie.

This plant which grows in open, moist places was used as an itch medicine. The entire plant was boiled in a little water. The affected skin area was then moistened with the water and rubbed with the boiled plant. This plant was used either green or dried for later use.

C. hirsutissima contains the drug pulsatilla which the ancient Greeks and Arabs used for many morbid diseases such as syphilis, paralysis, and rheumatism. Interest in it has been revived during the last two centuries.⁶⁴

RANUNCULACEAE (Buttercup Family). Ranunculus glaberrimus Hook. var. ellipticus Greene (Buttercup). [sčatlaman].

Place of Collection - Vanderburg Farm.

The buttercup was used by the Flathead Indians to cure "cancer," by which they apparently mean an open running sore or possibly blood poisoning. The whole plant was crushed or mashed, and a poultice was made by putting the crushed plants on a piece of buckskin or canvas. This poultice was applied to the sore. Within a few hours the surface would blister and scab over, subsequently healing.

When Jerome Vanderburg, one of my informants, was a young man, he was pushing a horse-drawn wagon when he

⁶⁴Hare, Caspari, and Rusby, op. cit., p. 1333.

accidentally got his neck caught between the wagon box and the iron rimmed wheel. The resulting abrasion became infected and would not heal. He became very sick so his mother applied a buttercup poultice to his neck. He recovered, but Mr. Vanderburg says no one but an Indian could stand the pain and smarting which accompanies this remedy.

RANUNCULACEAE (Buttercup Family). Thalictrum occidentale Gray? (Meadow-rue). [p'ō''tsū].

Place of Collection - Near Stevensville, Montana.

The dried seeds were stripped from the stalk and boiled to make a tea for colds and chills. Sweetgrass, Hierochloe odorata, was sometimes boiled with the seeds to make a more effective medication.

RHAMNACEAE (Buckthorn Family). Ceanothus velutinus Doug. ex Hook. (Mountain Laurel, Snow Brush). [qwadlič̣iɛ].

Place of Collection - North Fork of the Jocko Road.

The leaves were dried and powdered, then mixed with grease and put on burns and sores.

The Thompson Indians boiled the stems and leaves and either drank the decoction or used it as a liniment to cure dull body pain.⁶⁵

There are about forty species of the genus Ceanothus,

⁶⁵Steedman, op. cit., p. 457.

most of which are found in Western North America. They all contain tannic acid, an excellent astringent.⁶⁶

ROSACEAE (Rose Family). Prunus virginiana Nutt.
(Choke Cherry). [t'õ'sta].

Place of Collection - Jocko Road.

On larger choke cherry bushes dried sap or gum sometimes forms on the bark. The Flathead melted this gum in warm water, strained it, and used it like eye drops.

The Thompson boiled the bark and used the tea for a tonic, especially to strengthen women after childbirth.⁶⁷

ROSACEAE (Rose Family). Prunus sp.

Place of Collection - Finley Creek, five miles above Arlee.

A tea made from the bark of this plant was used by the Flathead as a cure for intestinal worms. They believed that the tree bark had to be removed by peeling it downward instead of up, or else it would be regurgitated. The bark of Prunus is often slightly poisonous which may partially account for this ritualistic belief.⁶⁸

⁶⁶Hare, Caspari, and Rusby, op. cit., p. 888.

⁶⁷Steedman, op. cit., p. 477.

⁶⁸Personal communication with Dr. Sherman Preece, University of Montana.

ROSACEAE (Rose Family). Rosa woodsii Lindl. (Wild Rose). [hūwhīε].

Place of Collection - Vanderburg Farm.

The Flathead Indians made an eyewash by boiling the roots in water. The roots were dug and used at any time during the year.

When children lost their milk teeth they buried them under a rosebush to insure that they would have a set of good strong teeth.

Immediately after a person died rose branches were put all over inside the lodge or house to scare off the ghost of the dead person. The grave was also lined with rose branches. Turney-High says this was done so that a growling sound would not issue from the open grave.⁶⁹ People who had touched the dead person used sweat baths and rosebush tea to purify themselves.⁷⁰

Gunther states that the Skagit, a Salish tribe of Western Washington, used the root of R. nutkana for an eyewash.⁷¹

⁶⁹Turney-High, The Flathead Indians of Montana, p. 142.

⁷⁰Ibid., p. 143.

⁷¹Erna Gunther, Ethnobotany of Western Washington (University of Washington Publications in Anthropology. Seattle, Washington: University of Washington Press, 1945), p. 34.

Medicinally, another species, R. gallica, is used for inflamed eyes.⁷²

ROSACEAE (Rose Family). Rubus idaeus L. (Red Raspberry). [l'ats].

Place of Collection - Sheep Mountain.

The Flathead made a medicinal tea for diarrhea by boiling raspberry stems and leaves.

An infusion of the leaves of R. idaeus is slightly astringent and is used in Europe for diarrhea and dysentery.⁷³

SALICACEAE (Willow Family). Populus tremuloides (Quaking Aspen). [māmātə].

Place of Collection - Jocko Road.

The bark of quaking aspen was made into a tea to help reduce ruptures in both men and women. The Flathead Indians believed that the bark had to be stripped downwards from off the tree, or else the person would vomit it out.

The Okanagon group of Salish drank a decoction of the roots and stems for syphilis.⁷⁴ The Thompson boiled the stem and branches about forty hours to make a remedy

⁷²Culbreth, op. cit., p. 266.

⁷³Steinmetz, op. cit., Vol. II, p. 389.

⁷⁴Teit, op. cit., p. 294.

for syphilis and rheumatism.⁷⁵

SALICACEAE (Willow Family). Populus trichocarpa T. & G. ex. Hook. (Black Cottonwood). [mōls'].

Place of Collection - Vanderburg Farm.

Cottonwood leaves were used either green or dry as a remedy for boils. A leaf was placed directly on the boil and secured. The leaf was replaced each day.

Various species of Populus are important sources of salicin which is used as an analgesic.⁷⁶

SALICACEAE (Willow Family). Salix ssp. (Willow). [t'p'at].

Place of Collection - Vanderburg Farm.

Willow bark was chewed and put on cuts and abrasions to allay the pain and promote rapid healing.

The Thompson used a decoction of Salix sp. as a wash to subdue pain and reduce swelling.⁷⁷

Willow bark also contains the drug salicin, an analgesic.⁷⁸

⁷⁵Steedman, op. cit., p. 464.

⁷⁶Pratt and Youngken, op. cit., p. 51.

⁷⁷Steedman, op. cit., p. 471.

⁷⁸Pratt and Youngken, op. cit., p. 51.

SAXIFRAGACEAE (Saxifrage Family). Heuchera cylindrica
Dougl. ex. Hook. (Alum Root). [sáp'tsū].

Place of Collection - Hungry Injun Camp.

The root of this plant was the Flathead Indian's most power counteractive for diarrhea. Turney-High also mentions its use.⁷⁹ The usual method of preparation was to make a tea from either the fresh or dried root. However, for quicker results the root was peeled and chewed although it is quite unpalatable.

The North American genus Heuchera has about twenty-four species and is noted for its powerful astringent or counter-dysentery properties.⁸⁰

SCROPHULARIACEAE (Figwort Family). Besseya rubra
(Kitten-tails). [č&člū].

Place of Collection - Near Schley, five miles south of Arlee.

A very strong-tasting tea was made from either fresh or dry kitten-tail roots and used for colds. It also acted as a strong physic. Turney-High lists this as a medical plant but gives no use for it.⁸¹

⁷⁹Turney-High, The Flathead Indians of Montana, No. 5 under pharmaceutical botany, p. 140.

⁸⁰Hare, Caspari, and Rusby, op. cit., p. 749.

⁸¹Turney-High, The Flathead Indians of Montana, No. 9 under pharmaceutical botany, p. 141.

UMBELLIFERAE (Carrot Family). Osmorhiza obtusa (C. & R.) Fernald (Sweet Cicely). [hasxs].

Place of Collection - Black Lake Campground.

Sweet cicely was probably the main Flathead remedy for colds and sore throats. A tea was made by boiling the root, or a person could suck on a piece of the root. For an aching tooth a small piece of the root was placed in the carie. Turney-High states that it was also used for stomach ache.⁸²

Sweet cicely root was occasionally powdered and mixed with tobacco.

The Flathead believe that if you wash the roots of sweet cicely in water it will be sure to rain.

Kroeber described two plants' roots, either of which sound much like this species of sweet cicely, which the Gros Ventre chewed for colds. Unfortunately, he had none of his specimens identified.⁸³

UMBELLIFERAE (Carrot Family). Osmorhiza occidentalis (Nutt.) Torr. (Sweet Cicely). [hwe't'].

Place of Collection - Black Lake Campground.

The root of this species of sweet cicely was made

⁸²Turney-High, The Flathead Indians of Montana, No. 1 under pharmaceutical botany, p. 140.

⁸³Kroeber, op. cit., p. 226.

into a tea for children's colds. It has a rather pleasant taste and smells like sassafrass bark from which root beer is made.

I believe that McClintock was referring to O. occidentalis when he mentioned an unidentified plant called "Indian horehound" which grew along mountain streams. The Blackfoot mixed it with other plants and used it for baby colds.⁸⁴

The root of a variant species of sweet cicely, O. longistylis, is used as an aromatic, stomachic, carminative, and expectorant.⁸⁵

URTICACEAE (Nettle Family). Urtica dioica L. ssp. gracilis (Ait.) Seland var. gracilis (Stinging Nettle). [saqep'].

Place of Collection - Vanderburg Farm.

Urtica gracilis (Stinging Nettle).

Place of Collection - Black Lake Campground.

The Flathead Indians recognize these as two different plants although they are only variants of the same species, and their medical properties are very similar. Both of these stinging nettles were introduced from Europe

⁸⁴McClintock, op. cit., p. 3.

⁸⁵Sayre, op. cit., p. 336.

and have become widely scattered over North America.⁸⁶

A tea was made from the leaves of Urtica dioica for "fits," apparently referring to seizures resulting from epilepsy or insanity, or possibly violent temper tantrums.

The foliage of Urtica gracilis was boiled, and the feet were soaked in the water for rheumatism. It was also made into a tea and used for "fits" the same as Urtica dioica.

The Thompson used another nettle, U. lyalli, to relieve stiffness and soreness in joints and muscles.⁸⁷

Steinmetz lists a tea made from the leaves as a remedy for mucous discharge of the chest, hemorrhage, diarrhea, and dropsy. It is used as a blood purifier. It is helpful for gout and rheumatism of the joints and improves circulation as well as being used in cases of paralysis or loss of muscular power. A tea made from the root is used for jaundice and dropsy.⁸⁸

USNEACEAE. Ervenia sp. (Green Tree Lichen).
[sqaliō].

Place of Collection - Jocko Road.

This lichen was a personal medicine belonging to

⁸⁶Hare, Caspari, and Rusby, op. cit., p. 1730.

⁸⁷Steedman, op. cit., p. 471.

⁸⁸Steinmetz, op. cit., Vol. II, p. 461.

Mrs. Mary Finley. Its origin, preparation, and use has already been described.

VIOLACEAE (Violet Family). Viola sp. (Wild Violet).
[ūmsūmsa].

Place of Collection - Black Lake Campground, Stump Prairie near Seeley Lake.

The roots of wild violet were boiled to make an odorless, tasteless tea for children's colds. For mumps the roots of wild violet were boiled, mashed, and used as a warm poultice.

Unidentified Medicinal Plants

[p'īitē].

Place of Collection - Near Schley and at Lucy Finley's Home near Evaro.

This plant was not in bloom when I collected it and could not be satisfactorily identified. It was used for stomach ache and as a general stomach tonic. The Flathead gathered, peeled, and dried a few of these roots during the summer. They were prepared by shaving off a small piece of dried root and steeping it in a cup of warm water.

My informants said this plant has a yellow blossom growing on a long stalk. They believe the Snake Indians sometimes peeled and ate the flowering stalk.

[quadlī].

The Flathead formerly obtained the root of a plant called "quadlī" from Idaho and above Seeley Lake near Condon, Montana. The root was highly prized as a healing medicine for serious flesh wounds. It was prepared by chewing a piece of the root and bandaging it over the wound.



Root of "quadlī," unidentified Flathead medicinal plant.

CHAPTER IV

PLANTS USED AS TOILETRIES BY THE FLATHEAD INDIANS

Introduction

Like other people throughout the world, the Flathead used various preparations for body care, adornment, and personal comfort, which are best characterized as toiletries. Many toiletries were made from mineral or animal products, but several plants were also used for perfumes, shampoos, and smoking.

With the exception of "sweetgrass," Hierochloe odorata, almost all of the perfume plants used by the Flathead Indians served a double purpose both as a perfume and as a bug repellent for clothes. Smoked buckskin was seldom molested by bugs, but the animal sinews used in sewing seams provided a prime target. Considering the laborious hand tailoring of garments, the concern with their preservation can be appreciated.

Except for hair shampoos, the Flathead had no soap or soap substitutes,¹ but the frequent ritual of sweat bathing undoubtedly minimized the need for it.

¹Also mentioned by David Thompson, David Thompson's Narrative of his Explorations in Western America, edited by J. B. Tyrrell (The Publications of the Champlain Society, No. 12. Toronto: The Champlain Society, 1916), p. 415.

Plants Used as Toiletries

BETULACEAE (Birch Family). Alnus incana (L.) Moench.
(Alder). [čqescunstū].

Place of Collection - Shovel Creek Camp.

Alder bark was boiled to make a bright red dye which Flathead men and women sometimes used to dye their hair a flaming orange color. The dye is used very limitedly at present, but my informants introduced me to one woman who still uses it for a hair dye. The antiquity of this practice is unknown.

BRYACEAE (True Mosses). Claopodium crispifolium
(Rock Moss). [sānqi'sp'uw].

Place of Collection - Shovel Creek Camp.

This moss which is found in cool, moist places in the forest was placed in cradleboards as an absorbent.

According to Turney-High pine moss was also used to line cradleboards,² but it would be an inferior absorbent compared to the usual thick, spongy turf of C. crispifolium.

Mandelbaum found that the Plains Cree also used moss as an absorbent for infants.³

²Harry Holbert Turney-High, The Flathead Indians of Montana (Memoirs of the American Anthropological Association, No. 48. Menasha, Wisconsin: American Anthropological Association, 1937), p. 75.

³David G. Mandelbaum, The Plains Cree (Anthropological Papers of the American Museum of Natural History, Vol. XXXVII. New York, 1941), p. 241.

CAPRIFOLIACEAE (Honeysuckle Family). Lonicera
ciliosa (Pursh.) D. C. (Orange Honeysuckle). [čīlīatla].

Place of Collection - Jocko Road.

This climbing vine was boiled to make a shampoo for washing hair and to make it grow longer. My informants did not distinguish between this and a similar vine, Columbian virgin's bower, Clematis columbiana, but they did remark that the flowers could be either yellow or a light blue.

COMPOSITAE (Composite Family). Achillea millefolium
(Yarrow). [ūncqa].

Place of Collection - Camas Prairie, Placid Lake.

In addition to previously listed medicinal uses, the fresh flowers of yarrow were used as an underarm deodorant by Flathead men and women.

ERICACEAE (Heath Family). Arctostaphylos uva-ursi
(L.) Spreng. (Kinnikinnick, Larb, Manzanita). [sqədlse].

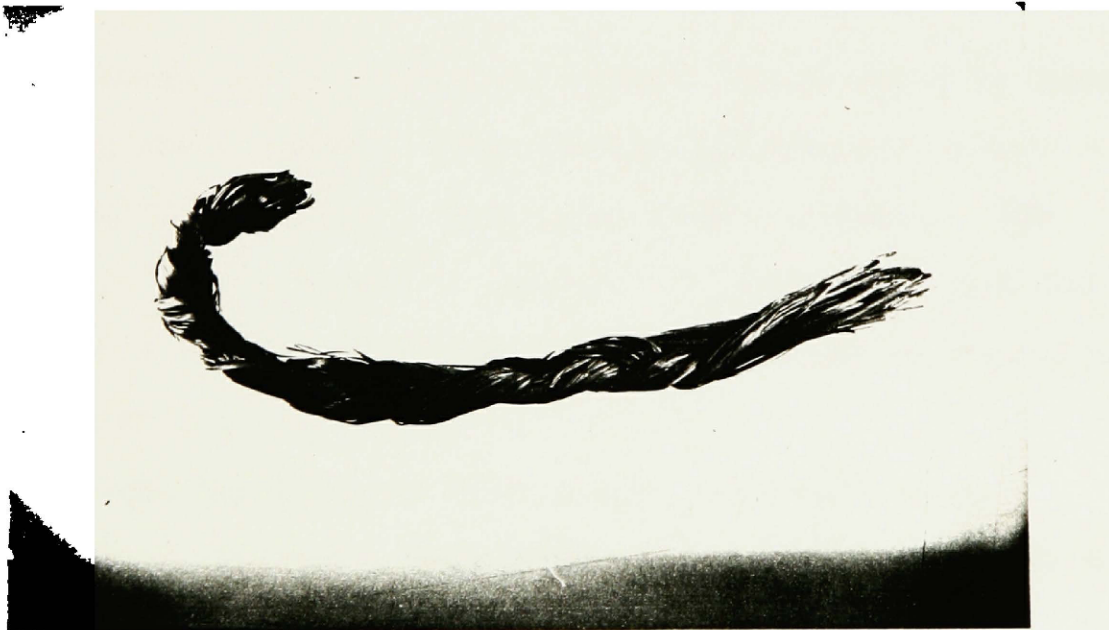
Place of Collection - Jocko Road near Little Prairie.

Various species of Arctostaphylos were the most widely used substitute for tobacco among Indian tribes of the Western United States. Tribes such as the Flathead, who did not cultivate tobacco, made extensive use of it. Since kinnikinnick will not burn well by itself, it was usually mixed with a material having better burning qualities. The Flathead Indians usually mixed the dried leaves

with red willow bark, Salix sp. Parts of other plants such as the roots of false hellebore, Veratrum viride, and sweet cicely, Osmorhiza occidentalis, were sometimes added to kinnikinnick to suit individual tastes.

GRAMINEAE (Grass Family). Hierochloe odorata (Sweetgrass). [hs&stīā].

Place of Collection - Along Bitterroot River near Stevensville.



A short strand of braided sweetgrass (length 12 inches).

The usual method of collecting this sweet smelling grass which grows about two feet high was to twist several blades of the grass together into strands which were braided

into a three ply rope often several feet long. Sweetgrass was placed with clothes "to make them smell good," or the clothes were held over a small fire of sweetgrass to perfume them. Some Flathead also braided sweetgrass into their hair. It was burned to perfume, and possibly to purify, the interior of lodges and houses.

MONOTROPACEAE (Indian Pipe Family). Pterospora andromedea Nutt. (Pine Drops).

Place of Collection - Near Finley Creek, five miles above Arlee.

Pine drops grow in moist wooded areas usually some distance from each other. The mature plants are about three feet tall, straight, and have small leaves. The Flathead call them "Coyote's arrow." When they find one they say Coyote has shot an arrow which stuck in the ground, and he has lost it.

The Flathead boiled this plant together with Columbian virgin's bower, Clematis columbiana, to make a shampoo used for growing hair.

PINACEAE (Pine Family). Abies grandis (Dougl.) Lindl. (Grand Fir). [ma'ne'mp't'].

Place of Collection - Black Lake Campground.

In addition to the medicinal uses already mentioned, the needles of the grand fir were also dried and powdered

for use as a baby powder. This is probably the "rare fir" that Turney-High recorded as being used to powder newborn infants.⁴

PINACEAE (Pine Family). Larix occidentalis Nutt. (Western Larch). [tawqatsh].

Place of Collection - Rattlesnake Canyon.

The soft gummy sap which forms on the bark of larch trees was used to plaster hair in place.

RANUNCULACEAE (Buttercup Family). Clematis columbiana (Nutt.) T. & G. (Columbian Virgin's Bower). [cīlīatla].

Place of Collection - Jocko Road.

The Flathead boiled this climbing vine to make a hair shampoo.

RANUNCULACEAE (Buttercup Family). Thalictrum occidentale Gray? (Meadow-rue). [p'ō'tsū].

Place of Collection - Near Stevensville, Montana.

Although the meadow-rue was used to medicate colds and chills as previously mentioned, it was primarily used as a perfume. The dry seeds were chewed until thoroughly pulverized and then rubbed over the body and through the hair.

⁴Turney-High, The Flathead Indians of Montana, p. 68.

RANUNCULACEAE (Buttercup Family). Thalictrum sp.
(Meadow-rue). [p'ō''tsū].

Place of Collection - Black Lake Campground.

This plant looks much like Thalictrum occidentale only it is smaller. The seeds were dried and put with buckskin or cloth to make it smell good and keep the bugs out. It is possible that the insect repellency of these seeds was more important than their smell.

SCROPHULARIACEAE (Figwort Family). Verbascum
blattaria L.

Place of Collection - Jocko Road above Old Agency.

This plant is a weed introduced from Europe over most of the United States.⁵ The Flathead Indians boiled it in water to make a shampoo which lathered like soap. It turned the hair darker, though not by dye, and made it grow. It could be collected at any time of the year although more of the stalks were needed if dry.

UMBELLIFERAE (Carrot Family). Lomatium sp.
(Desert Parsely).

Place of Collection - Near Jocko Lake.

The foliage of this plant was used by Flathead men

⁵Ray J. Davis, Flora of Idaho (Debuque, Iowa: Wm. C. Brown Company, 1952), p. 638.

as a perfume. They wore it on their chests, similar to modern-day boutonnieres.

Unidentified Toiletries

("Stevensville Lookout Perfume"). [qashlī].

This perfume was gathered by Flathead women in a small area bordering Kutenai Creek near Stevensville, Montana. A specimen of this plant has been collected by Drs. Reuben Diettert and Carling Malouf of the University of Montana. I did not gather a specimen of it, but I did obtain a sample of the perfume which was gathered by Agnes and Anne Mary Parrish many years ago. The perfume was prepared by baking the top of the plant in a pit in the same manner as camas.

CHAPTER V

SUMMARY AND CONCLUSIONS

The Flathead Indians utilized two major categories of food plants: (1) those bearing edible berries, and (2) plants having edible roots or bulbs. The foliage of a few plants was used for spring greens, but was of little economic importance. The major berry crops harvested by the Flathead were huckleberries, service berries, and choke cherries. Their principal root crops were bitterroot, camas, and wild carrot.

Seed bearing grasses were absent among the edible plants I collected, and I found no evidence that they were ever included in the Flathead diet. Only the crudest counterparts of the mano and metate were present in Flathead culture. According to my informants some Indian women used round, oblong hand pestles with one flat end. The upper part was usually bound with rawhide to provide a better grip. These hand pestles were used for pounding roots and berries on flat stones, but they would have been unsatisfactory for milling grass seeds.

The food economy of the Flathead reflects a general orientation towards Plains culture. Few, if any, of the food plants they utilized have the protein content of grass seeds and other plant foods included in the diet of

specialized gathering economies such as those found in the Great Basin. The Flathead usually had a ready supply of protein in wild game. Although plant foods were an important part of their total diet, they often seemed to be oriented towards providing a pleasant variety in their everyday menu. For example, camas, one of their principal vegetable foods, has very little food value but was valued because of its sweetness. Bitterroot was a valuable energy food having a high starch content, but the Flathead also enjoyed its bitter taste as a condiment to accompany meat.

Table I presents a brief summary of Flathead medicinal plants and their uses. Many Flathead medicinal plants have been highly resistant to change and are still used while much of the traditional Flathead previous culture is in a state of dissolution. Even the most thoroughly acculturated Indians know at least a few medicinal plants commonly used by their ancestors, but general knowledge of their past culture has become very limited, and for the most part is available from only a small number of the older people. Although at present the Indians have good medical facilities available to them free of charge, they still have retained some knowledge of, and belief in, their traditional plant remedies.

TABLE I

SUMMARY OF

FLATHEAD MEDICINAL PLANTS AND THEIR USES

Plants Used For:

Colds and Pneumonia

Abies grandis - Grand Fir
Achillea millefolium - Yarrow
Artemisia sp.
Artemisia ludoviciana - Western Mugwort
Besseya rubra - Kitten-tails
Juniperus scopulorum - Rocky Mountain Juniper
Mentha arvensis - Wild Peppermint
Monarda fistulosa - Wild Bergamot
Osmorhiza obtusa - Sweet Cicely
Pseudotsuga menziesii - Douglas Fir
Thalictrum occidentale - Meadow-rue
 often combined with
Hierochloe odorata - Sweetgrass

Infant Colds

Osmorhiza occidentalis - Sweet Cicely
Viola sp. - Wild Violet

Tuberculosis

Artemisia tridentata - Sagebrush
Rhus glabra - Smooth Sumac
Grindelia howellii - Gum-plant
Grindelia squarrosa - Gum-plant

Decongestant

Veratrum viride - False Hellebore

Parturition

Berberis repens - Oregon Grape
Ervenia sp. - Green Tree Lichen
Matricaria matricarioides - Pineapple Weed
Pinus ponderosa - Ponderosa Pine
Symphoricarpos occidentalis - Snowberry

Menstrual Cramps

Matricaria matricarioides - Pineapple Weed

Milk Fever

Geranium viscosissimum - Wild Geranium

Increasing Lactation

Lewisia rediviva - Bitterroot

Contraception

Berberis repens - Oregon Grape

Venereal Disease

Berberis repens - Oregon Grape

Rumex occidentalis - Dock, Sorrel

Symphoricarpos occidentalis - Snowberry

Rupture

Populus tremuloides - Quaking Aspen

Toothache

Mentha arvensis - Wild Peppermint

Monarda fistulosa - Wild Bergamot

Osmorhiza obtusa - Sweet Cicely

Plantago purshii - Plantain, Ribgrass

Earache

Arctostaphylos uva-ursi - Kinnikinnick

Anthelmintic (For Intestinal Worms)

Prunus sp.

Stomach ache

Osmorhiza obtusa - Sweet Cicely

Removal of Warts and Corns

Geranium viscosissimum - Wild Geranium

Burns

Arctostaphylos uva-ursi - Kinnikinnick
Ceanothus velutinus - Mountain Laurel
Goodyera oblongifolia - Menzie's Rattlesnake Plantain
Symphoricarpos occidentalis - Snowberry
Tanacetum vulgare - Tansy

Cuts and Abrasions

Achillea millefolium - Yarrow
Ceanothus velutinus - Mountain Laurel
Salix ssp. - Willows
Symphoricarpos occidentalis - Snowberry

Infected Sores and Tumors

Artemisia dracunculus - Wormwood
Nuphar sp. - Water Lily
Plantago major - Common Plantain
Ranunculus glaberrimus - Buttercup

Boils

Populus trichocarpa - Black Cottonwood

Reducing Swelling

Artemisia dracunculus - Tarragon

Rheumatism

Urtica dioica - Stinging Nettle
Urtica gracilis - Stinging Nettle

Relieving Muscular Pain

Pinus ponderosa - Ponderosa Pine

Pleurisy and Heart Pain

Lewisia rediviva - Bitterroot

Chills

Thalictrum occidentale - Meadow-rue

Mumps

Viola sp. - Wild Violet

Inducing Perspiration and Reducing Fever

Monarda fistulosa - Wild Bergamot
Nepta cataria - Catnip

General Tonic

Monarda fistulosa - Wild Bergamot

Soporific

Lycoperdon ssp. - Puffballs

Eyewash

Abies grandis - Grand Fir
Prunus virginiana - Choke Cherry
Rosa woodsii - Wild Rose

Itch of Poisonous Plants and Insect Bites

Clematis hirsutissima - Virgin's Bower

Seizures Resulting from Epilepsy, Insanity, Temper Tantrums

Urtica dioica - Stinging Nettle
Urtica gracilis - Stinging Nettle

Laxatives

Besseyia rubra - Kitten-tails
Lonicera involucrata - Bear Berry Honeysuckle
Rhus glabra - Smooth Sumac

Diarrhea

Heuchera cylindrica - Alum Root
Lithospermum ruderales - Gromwell
Rubus idaeus - Red Raspberry

Horse Medicine

To Protect Hooves

Grindelia howellii - Gum-plant
Grindelia squarrosa - Gum-plant

Distemper, Pneumonia, Cuts, Abrasions, and Saddle Sores

Geranium viscosissimum - Wild Geranium

There is one important distinction between Flathead plant medicines and those used among some Indian tribes in the Central and Eastern United States. For example, Huron Smith's studies among the Menomini and Ojibwa Indians showed that native herbalists among these tribes often compounded several plants into medicines, but their formulas were jealously guarded.¹ It is possible that Flathead herbalists also used compound medicines, but I found no conclusive evidence to indicate this. However, they often used one plant for several different illnesses.

As shown in Table I, many of the medicinal plants I collected during this study were used for colds and pneumonia. I believe that this may be an indication that the Flathead were unsuccessful in finding a satisfactory remedy for colds and pneumonia and were experimenting with a variety of cures. This possibility is supported by my informant's indication that some plants which gave excellent therapeutic results were the only ones used for particular illnesses. While checking ethnobotanical references of Indians in the Plateau and Plains area I found that a large number of plants were commonly used to treat respiratory

¹Huron Smith, Ethnobotany of the Menomini Indians, Ethnobotany of the Meskwaki, Ethnobotany of the Ojibwe (Bulletin of the Public Museum of the City of Milwaukee, Vol. 4, No. 1. Milwaukee, Wisconsin: The Advocate Publishing Company, Inc., December, 1923).

and venereal diseases, both highly resistant to cure.

There is no evidence of hemeopathic medicine (based on the principle that like cures like) among the Flathead plant medicines which I collected. This assumption has been present in European and American folk medicine for centuries, but apparently Flathead herb doctors did not subscribe to the theory. However, hemeopathic medicine and magic was sometimes practiced by the shamans in curing sickness and in various ceremonies.²

Information regarding medicines used in doctoring horses has almost completely disappeared among present-day informants. Most of the old Flathead men who possessed this knowledge are now dead, and the older women have little knowledge of this primarily masculine occupation. Apparently little attention was paid to the health of most Indian dogs although occasionally some dogs were submitted to special rituals to insure that they would be imbued with desirable qualities. For example, to insure that a young dog would be a good swimmer they rubbed him with a smooth stone from the bed of a stream, or to teach him not to eat too much they burnt a handful of moose or human hair and stuck his nose in the smoke, forcing him to inhale it.

²Harry Holbert Turney-High, The Flathead Indians of Montana (Memoirs of the American Anthropological Association, No. 48. Menasha, Wisconsin: American Anthropological Association, 1937), pp. 30, 37.

These practices resemble sympathetic magic, but I did not collect enough information to properly assess them.

Definite trade routes and patterns formerly existed between the Plains and Plateau areas, but the deaths of many older people during the last ten or fifteen years has resulted in a rapid decrease of information concerning what articles were traded and with whom. Present-day Flathead readily acknowledge that both medicinal and food plants were often traded with the Nez Percé, Shoshone, and Salishan tribes, but most information is second hand and scanty. One of my informants was able to obtain a medicinal plant from the Upper Spokane Indians for me which the Flathead formerly obtained through trade. It belongs to the genus Artemisia and was used for colds. Although it is present in Western Montana, it is much smaller in this region and the Flathead considered its medicinal potency inferior to plants obtained from Washington. My informants agree that at one time several other medicinal plants, used primarily for colds, were obtained from the Upper Spokane Indians.

Several plants which I collected during field research were growing around old Indian campgrounds, and my informants knew of no other places where they were located. At the outlet of Placid Lake, located near Seeley Lake, Montana, we collected a species of gum-plant, Grindelia howellii, previously unreported in Montana. Later field

trips and inquiries indicated that this plant was growing only in a small isolated area around an Indian campground situated on an old horseback trail. At one time many of these well traveled Indian trails ran through valleys and mountain passes in Western Montana. Lewis and Clark often referred to them as roads. This study offers no conclusive proof, but I believe further research may demonstrate a statistically higher incidence of some plants in areas surrounding these historical travel routes and occupational sites which are very common throughout Western Montana.

It is difficult to assess the total significance of this study without further ethnobotanical work in the Plains and Plateau areas. The available evidence strongly suggests that many medicinal and food plants had identical uses among several Indian tribes in Western Montana and close parallels over a much wider area. Perhaps this study will provide a basis for further investigations.

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A P P E N D I X

No. _____

DATA SHEET USED IN FIELD RESEARCH FOR THIS STUDY

Date of Collection _____ Common Name _____

Place of Collection _____ Flathead Name _____

Mature: Yes _____, No _____ Edible _____, Medicinal: _____

Family _____ Human _____, Veterinary _____

Genus _____ Indigenous _____

Species _____ Naturalized _____

Name of Informant _____

Uses of Plant _____

Parts Used _____

Flathead Names of Products from Plant _____

Related Literature _____

Method of Collection/Preparation/Preservation/Application/
etc.

Remarks _____