METHODS

We have conducted interviews with 23 Gitksan elders and other knowledgable Gitksan people about medicines and plant use[4]. Interviews were in Gitksan and English, and written notes and tape recordings made. Photographs were taken in the field of significant plants and herbarium specimens were collected. Identifications were verified by informants from growing or fresh material. Supplemental verification of plant identity was made from photographs or line drawings. Plant determinations were made by Gottesfeld and Gitksan language interviews were conducted by Anderson. Botanical specimens, photographs, and tape recordings are housed in the Gitksan-Wet'suwet'en Tribal Council Archives and Library in Hazelton British Columbia. A set of voucher specimens is housed in the British Columbia Provincial Museum Herbarium in Victoria.

MEDICINAL PLANTS

Use of medicinal plant preparations forms an important part of Gitksan traditional medicine. Medicinal plant preparations are used as tonics, purgatives and emetics, expectorants and demulcents, wound dressings and antiseptics, poultices, opthalmic and aural preparations, as skin washes, and as fumigants. Herbal preparations are used to prevent illness and promote health, to treat specific symptoms of disease, for purification, and for protection from witchcraft. In the Gitksan concept, illness results from an imbalance in the individual or the environment. Purification has as its aim the restoration of the disturbed balance, the cleansing of the affeeted individual. Likewise, there is a strong emphasis in treatment of disease by purgatives or emetics, which drive out the impurity or illness, leaving the body clean and ready for the return to normal body function.

A number of plants have been used by the Gitksan for medicinal purposes in the past and at present. Important and widely used plants include Devil's club *(Oplopanax horridum* (Smith) Miq.), yellow pond lily *(Nuphar polysepalum* Engelm.), soapberry *Shepherdia canadensis* (L.) Nutt.), lodgepole pine *(Pinus contorta* Dougl. *ex* Loud), subalpine fir *(Abies lasiocarpa* (Hook.) Nutt.) and spruce *(Picea engelmannii* Parry and *glauca* (Moench) Voss.), False or Indian hellebore *(Veratrum viride* Ait.) red elderberry *(Sambucus racemosa* L.), cow parsnip *(Heracleum lanatum* Michx.), common juniper *(Juniperus communis* L. subsp. *nana* (Willd.) Syme) and wild calla *(Calla palustris* L.). These plants are used alone or as mixtures for a wide variety of conditions. They are administered as poultices, decoctions, infusions, external washes, or as smudges.

Devil's Club.—***Wa'uumst, Hu'ums*** *(Oplopanax horridum* (Smith) Miq.] (Fig. 3). Devil's club is a sprawling deciduous shrub 1 to 5 m high which grows in moist coniferous and mixed forests, and in avalanche tracks. It is eommon in northwest British Columbia. The stems can be gathered after the leaves senesce or when the plant is dormant, but not in spring when it is just leafing out. It is not "ripe" or ready then. One elder stated it should be gathered after the first snowfall in October.

The leafless spiny stems are the part used by the Gitksan. For most uses the inner bark or cambium layer is scraped off of the stems. The prepared inner bark ean be used fresh to prepare an infusion or decoction; it can be chewed, or applied as a poultice for dressing woulds (Wilson *et al.* 1984), or dried and stored as "chips" for later use. The pliable fresh bark strips are sometimes formed into "pills" for later chewing. Some recipes which involve boiling devil's club do not require scraping the inner bark from the stems. Some elders boil chunks of fresh, unpeeled devil's club stems to make decoctions of devil's club.

FIG. 3.—Elder Elsie Morrison gathering Devil's Club (***hu'ums,*** *Oplopanax horridum).*

The inner bark of Devil's club is used fresh or dried for rheumatism, respiratory ailments, as a general tonic, for stomach ulcers and stomach pain, and for gynecologic cancers. The fresh inner bark is used as a dressing for open wounds (Wilson *et al.* 1984). Regular chewing of fresh devil's club inner bark is believed to maintain good health. Good health and vigor among older people has been attributed to regular use of devil's club. An infusion of fresh devil's club bark is a tonic and "energizer." An infusion of dried devil's club bark is used to treat stomach pain and ulcers. Devil's club tea was also drunk in conjunction with fasting in certain purification rituals. Devil's club is generally used by hunters and trappers to improve their luck and because bathing in a solution of devil's club is reputed to remove human scent (Wilson *et al.* 1984). Regular chewing of (preferably fresh) devil's club bark is reported to be helpful in treating rheumatism or stiffness of the joints. An elder from Kitwancool reported that he was able to cure arthritis in his right shoulder in one month by chewing devil's club every day. The chewed bark is swallowed by the user.

Devil's club is also an ingredient of a number of herbal mixtures (Wilson *et al.* 1984; H. Smith 1926). We have collected recipes for tonics which employ devil's club in combination with juniper boughs, alder bark *(Alnus incana),* wild calla stems *(Calla palustris),* subalpine fir bark *(Abies lasiocarpa),* mountain ash bark *(Sorbus sitchensis* or *scopulina)* and spruce bark *(Picea engelmannii* or *glauca).* These decoctions are used as tonics, to prevent or treat influenza, respiratory ailments or tuberculosis, and to achieve spiritual well-being.

The inner stem bark or the root bark of devil's club is widely used by all native groups throughout its range for a variety of medicinal purposes (Table 1) (see review by Turner 1982; and Gunther 1973; Turner *et al.* 1980, 1983; Justice 1966; Smith 1983; Smith 1928; MacGregor 1981). It is generally reputed to be helpful in arthritis and rheumatism, stomach ailments, wound treatment, childbirth or pregnancy, cancer, and respiratory ailments. In addition to the many uses listed in Table 1, it has been reported to control blood sugar levels (Justice 1966). Some modern Gitksan have employed it for control of diabetes after learning about it from Tsimshian relatives. Devil's club is burned as a fumigant to ward off sickness by the Wet'suwet'en or purify a dwelling of bad spirits by the Tsimshian. The Niska'a of the Nass Valley also place high value on it for medicine.

Devil's club was also widely used for its spiritual power in purification rituals and for "luck" (Turner 1982). The Wet'suwet'en, whose territory adjoins the Gitksan to the south and east, place high value on devil's club for purification and luck. Bathing with devil's club, and consumption of devil's club tea formed important parts of the ritual preparation for the winter hunting and trapping. The hunter who completed the extended preparation, it was believed, would be very lucky and successful in his endeavours.

It appears that no definitive investigation of the chemistry of devil's club stem bark has been made. Smith's (1983) review of the pharmacognosy of devil's club states that a 1927 study (Kariyone and Morotomi 1927, cited in Smith 1983) of an ether extract of devil's club roots and stems isolated two oils, a sesquiterpene named equinopanacene, and a sesquiterpene alcohol, equinopanacol. The general constituents of devil's club extracts include oleic and unsaturated fatty acids, glycerides, saponins and tannins (Stuhr and Henry 1944, cited in Smith 1983). Devil's club is in the Araliaceae, the same family as the widely used *Panax* spp. (ginseng). Like the ginsengs, a major use is as a tonic or to promote general health.

Table 1.—Uses of Devil's Club by different Indian groups.

Use	Group	Source[5]
emetic/cathartic/ purgative	Gitksan	Smith 1928
	Tlingit	Smith 1973
	Eyak	Smith 1973
	Bella Colla	Turner 1973; Smith 1928
	Southern Carrier	Smith 1928
	Wet'suwet'en	Smith 1928; Morice 1893
laxative	Haida	Turner 1973
	Tlingit; Kaigani Haida	Justice 1966
	Heiltsuq (Bella Bella)	B. Rigsby in Turner 1982
	Southern Kwakiutl	Turner & Bell 1973
	Tsimshian	MacGregor 1981
	Gitksan	Wilson *et al.* 1984
	Tanaina (Upper Inlet)	Kari 1977
	Tlingit; Kaigani Haida	Justice 1966

Table 1.—Uses of Devil's Club by different Indian groups. (continued)

Use	Group	Source[5]
	Bella Coola	Smith 1928
	Thompson	Turner *et al.* In Press
Arthritis/rheumatism	Gitksan	this study
	Tlingit; Kaigani Haida	Justice 1966; MacGregor 1981
	Haida	Turner 1970
	Bella Coola	Smith 1928
	Chiat Nootka	Rollins 1972
	Nitinaht	Turner *et al.* 1983; Rollins 1972
	Sechelt	Bouchard 1977; Rollins 1972; Turner & Timmers 1972
	Squamish	Rollins 1979
	Upriver Halkomelem	Galloway 1979
	Lilloet	Turner 1972
	Tsimshian	MacGregor 1981
Tonic	Tlingit; Kaigani Haida	Justice 1966
	Haida	Turner 1970
	Bella Coola (with *Ribes*)	Bouchard 1975
	Sechelt	Bouchard 1977
	Cowichan/Halkomelem	Rollins 1972
	Thompson	Turner *et al.* In Press
	Gitksan	this study; Wilson *et al.* 1984
Childbirth	Carrier	Morice 1893
	Skagit (with *Chimaphila* and *Rhamnus*)	Gunther 1973
Fever	Tanaina (Kenai & Upper Inlet)	Kari 1977
Tuberculosis	Tanaina (Upper Inlet)	Kari 1977
	Tlingit; Kaigani Haida	Justice 1966
	Southern Kwakiutl	Turner & Bell 1973
	Nitinaht (with *Abies*)	Rollins 1972
	Skagit with *Chimaphila* and *Rhamnus*)	Gunther 1973
	Okanagan-Colville	Turner *et al.* 1980
	Sahaptin	D. French in Turner 1982
	Gitksan (alone and in mixture)	this study; Wilson *et al.* 1984

Table 1.—Uses of Devil's Club by different Indian groups. (continued)

Use	Group	Source[5]
Respiratory ailments/ coughs/colds	Gitksan	this study; Wilson *et al.* 1984
	Tanaina (Upper Inlet)	Kari 1977
	Tlingit; Kaigani Haida	Justice 1966; MacGregor 1981
	Haida	Turner 1970
	Squamish	Bouchard & Turner 1976
	Cowichan/Halkomelem	Rollins 1972
	Cowlitz	Gunther 1973
	Okanagan-Colville	Turner *et al.* 1980
	Tsimshian	MacGregor 1981
Poultice or wound dressing/disinfectant/ topical analgesic	Tlingit	Smith 1973
	Tlingit; Kaigani Haida	Justice 1966
	Central Carrier	Central Carrier Linguistic Comm 1973
	Gitksan	this study; Wilson *et al.* 1984
	Wet'suwet'en	unpublished study of authors
Cancer	Tlingit; Kaigani Haida	Justice 1966
	Gitksan	this study
	Tsimshian	MacGregor 1981
General sickness; flu	Haida	Turner 1970
	Carrier	Central Carrier Linguistic Comm 1973
	Bella Coola	Bouchard 1975-77 in Turner 1982
	Thompson	Annie York in Turner 1982
	Kootenay	Hart *et al.* 1981
Diabetes	Heiltsuq (Bella Bella)	MacDermott 1949
	Sechelt	Bouchard 1978
	Squamish (with *Abies*)	Bouchard & Turner 1976
	Tsimshian	Large & Brocklesby 1938; unpublished study of authors
Skin Wash	Mainland Comox	Bouchard 1973
	Sechelt	Rollins 1972; Turner and Timmers 1972
	Gitksan	Wilson *et al.* 1984

Table 1.—Uses of Devil's Club by different Indian groups. (continued)

Use	Group	Source[5]
Ashes or charcoal for sores burns or swelling	Tlingit	Krause 1956
	Southern Kwakiutl	Boas 1966
	Sechelt	Bouchard 1977
	Thompson	Steedman 1930
Purification	Haida	Newcombe unpub. notes ca 1901 (in Turner 1982)
	Gitksan	this study
	Wet'suwet'en	unpublished study of authors
	Tlingit	Krause 1956
Amulet (protection)	Haida	Turner 1970
	Bella Coola	Turner 1973
Luck (hunting or gambling)	Haida	Newcombe unpub. notes ca 1901 (in Turner 1982)
	Wet'suwet'en	unpublished study of authors
	Tsimshian	Boas 1916
	Gitksan	Wilson *et al.* 1984
Scent removal	Gitksan	Wilson *et al.* 1984, this study
	Tsimshian	M. Seguin in Turner 1982
Fumigant	Bella Coola	Bouchard 1975
	Wet'suwet'en	unpublished study of authors
	Tsimshian	unpublished study of authors

Yellow Pond Lily.—**Gahldaats** (*Nuphar polysepalum* Engelm.]) (Fig. 4) Yellow pond lily is a rooted aquatic growing in small ponds and shallow lakes and marshes in 1 to 2 m of water. The leaves emerge in early May and senesce in the fall. The thick rootstock or rhizome, the portion used by the Gitksan overwinters, rooted in the muddy pond bottom. The rhizome is the portion of the plant used. It is laborious to dig. Because of this, floating rhizomes loosened by beavers are used if possible. According to one elder yellow pond lily should be harvested in May, or after flowering, in the fall. Other informants feel that the time of gathering during the growing season is not significant. The cortex and adhering leaf bases are peeled off of the fresh rhizome, it is sliced, and the slices strung on a stick to dry. They are stored in this manner until needed or powdered when dry and stored in sealed glass jars. It is necessary to rehydrate the root slices to use them; powdered root can be infused in boiling water for use. Powdered root can also be sprinkled on food and eaten.