

## Skookum Root: Ethnobotany of Hellebore (*Veratrum viride*) in Northwest British Columbia

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**Abstract** This research considers some of the uses and harvest protocols of one of the most important medicinal plants for Indigenous peoples throughout British Columbia, *Veratrum viride* (skookum root, green false hellebore, Indian poke, Indian hellebore). The medicinal qualities of *V. viride* are well respected given its equally powerful ability to paralyze and kill. Using botanical, ethnographic, ethnohistoric, and linguistic data, a broad overview of hellebore is provided for the northwest coast of North America, followed by an in-depth consideration of Gitksan harvest protocol, witnessed through participant observation.

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### Introduction

Wild Hellebore (*Veratrum viride* var. *eschscholzianum*; skookum root, green false hellebore, Indian poke, Indian hellebore, herein hellebore) is a native perennial herbaceous plant that grows throughout British Columbia, Canada and is valued by all First Nation communities where it grows (Turner 1995). Combining ethnographic, historic, linguistic, and ecological information, this research provides an overview of the utilitarian, spiritual, and cultural uses of hellebore on the Pacific Northwest coast.

The focus of this research is on the western variety of hellebore, *Veratrum viride* var. *eschscholzianum*, which grows in moist areas such as riverbanks and wetland meadows and in the subalpine (average 1330 m elevation) (Klinkenberg 2013). Hellebore grows from large rhizomes that produce new shoots each year. The stems can grow up to three metres, with branched, terminal inflorescences of pale green or yellow-green star-shaped flowers, and barrel-shaped capsule fruits (Figure 1). All species have broad oblong to elliptical shaped leaves with obvious parallel veins that clasp at the base. Not to be confused with the unrelated *true* Hellebore (*Helleborus* L. spp.; Ranunculaceae), *V. viride* is a member of the Melanthiaceae family (previously Liliaceae) and before

flowering it is often confused with similar looking species which tend to grow nearby such as false Solomon's seal (*Maianthemum racemosum* L.) and twisted stalk (*Streptopus* spp.).

Indigenous Peoples throughout British Columbia recognize hellebore as an important medicinal plant and as one of “the most violently poisonous plants on the Northwest Coast” (Pojar and McKinnon 1994:113; Turner 1995). Several poisonous alkaloids are especially present in young shoots and there are myths about careless people bathing with hellebore who then experienced violent seizures and even death (Jaffe et al. 1990). In Chinook, (a historical trade language in the Pacific Northwest), hellebore is known as *skookum root* (translated as strong and powerful), referring to the potent properties of the *V. viride* rhizome and roots. Given its lethal, curative, and spiritual properties, harvest protocol and uses of hellebore among First Nation communities are highly specified and respected.

### Methods

In northwest British Columbia, all Indigenous communities report the use of *V. viride* for medical and supernatural or spiritual purposes (Burton 2012; Gottesfeld and Anderson 1988; Turner 2004). Using ethnographic and historic documents, an overview



**Figure 1** Wally Morgan (Gitxsan) standing with a large thicket of *V. viride*. Photo by Chelsey G. Armstrong.

and compilation of *V. viride* uses and nomenclature in northwest British Columbia is provided. To supplement and build on this work, I participated in a traditional harvest of the plant in August 2016 and paired this participant observation with semi-structured interviews with two Gitxsan knowledge-holders. Because harvest protocols differ from community to community and because few people even harvest the plant anymore, I present a qualitative reflection on a one-time *V. viride* harvest. As such, I make no claims to universal or objective harvest protocols.

Written, audio, photo, and video recordings were used to document the two-day harvest and processing with Tony Mclean, a Gitxsan language speaker and knowledge holder. Like other ethnographic research that focuses on the first-hand knowledge of a single practitioner (e.g., Deur et al. 2015), I report on the techniques and protocols that Mclean was raised on and practiced. The harvest was conducted with the Tam Giist cultural camp, a traditional “back to the

land” camp in a remote area on Wilp Guksen Lax‘Yip (Guksen House Territory). Two camp participants, a male (40 years old) and a young woman (14 years old) also joined the harvest. Before driving to the subalpine location where the plant was harvested, Mclean demonstrated the proper protocols and techniques for harvest and processing. When we arrived at the harvest location, we watched Mclean harvest the plant. Then the young woman and I went to harvest the plant together in a separate location. The rhizome was processed as a group activity the following day.

Mclean approved all notes and recordings and the manuscript was presented to him for consent before submission to publication. Mclean’s knowledge is not proprietary Gitxsan knowledge, and as such wider consent (e.g., from all seven Gitxsan villages/provincial municipalities), was not sought. The harvesting methods and protocols reported here are specific to Mclean, his Gitxsan cultural heritage, and the bioregion he inhabits. This is a qualitative study



**Table 1** Practices and uses of Hellebore in the Northwest British Columbia

People	Name <sup>1</sup>	Practices/Uses	Sources
Gitksan	sganjiks, sk'an ts'iks (plant) and mel-g'asx'w malg'asx'w (root, "something burnt")	Root is mashed, wet, and applied for blood poison, boils, ulcers, leaves used in sweat bath for "lame places"	Smith 1926
		Grated root added to laundry water to purify and cleanse clothing.	Gottesfeld and Anderson 1988
		Root ground and used as snuff for sinus	Johnson 1997
		Root/Rhizome steeped in bath for skin conditions	Wilson et al. 1984
Gitksan	sgan ts'iks and mulgwasxw are variant spellings used in text as they are from a Gitksan-specific orthography.	Root/Rhizome burnt and smoke used for bad dreams, flu, and rheumatism	Smith 1926
		Smoke used to assist the spirit of sleepwalkers to return to the body properly.	Gottesfeld and Anderson 1988
Heiltsuk	aʔaúx̣'w súli	Smudge used to treat stroke or mental illness and to counteract or repel	Johnson 2006
		Rhizome used for luck and as skin wash, compress for sprains, bruises and	Edwards 1980
		Used internally with great care	Edwards 1980
Haisla	hʔáúx̣'w suli, hʔáúx̣'w siwali	Clean and dried, used to ward off bad medicine and for joint and pain relief	Elroy White, personal communication 2018
		Rhizome used as amulet for luck	Lloyd Star (Leslie Main Johnson personal communication 1987)
		Rhizome is burnt as a smudge to drive away evil spirits,	Lloyd Star (Leslie Main Johnson personal communication 1987)
Haida	gwaayk'yaa, gwaayk'ya (root) and gwaayk'ya hlk'a'ii (plant)	Root infusions were used to treat victims of the 1918 influenza epidemic	Turner 2014
		Used as a tranquilizer and pain killer	Turner and Davidson 2004
		One report of a person who was cured of tuberculosis by placing dried root under the tongue	Pojar and Mackinnon 1994
Nisga'a	ts'iks	Used medicinally by shamans and for protection	Turner 2004
		Small portion of the root used for toothaches	Pojar and Mackinnon 1994
		Applied topically as anaesthetic to ease pain. Simmered root vapours inhaled coughs. Roots mashed into salve to help skin disorders. Baths with the root help relieve itching, for relaxation.	Burton 2012
Tlingit	shíksh ("hollow stemmed plant")	Root/rhizome mixed with devil's club to smudge before hunting. Seeds	Burton 2012
		Decoction of the root was used for menstrual cramps, to treat baldness,	Emmons 1991
		Medicine used for colds	Pojar and Mackinnon 1994
Tsimshian	huutens	Infusion with root was drunk as an intoxicant for a deep sleep	Emmons 1991
		Rhizome was used with "fern roots" to make powerful supernatural medicine of wolferine	Cove and MacDonald 1987:80-81
		Tsimshian of Southeast Alaska (originally, Metlakatla, British Columbia) used the root for scalp disease and snuff for sinus infections and treat insanity	Gottesfeld and Anderson 1988

<sup>1</sup>While most communities have their own orthography and norms for spelling, in order to be consistent all plant names listed here are based on an adapted APA system (see Turner 2014:Appendix 2B). Gitksan specific referents are used in text.

with one key expert interlocutor. Given the lethal nature of the plant, the harvest and use of *V. viride* should not be undertaken without proper expertise, nor should universal harvest protocols be inferred from this research.

### Historical and Ethnographic Overview

There is no known paleoethnobotanical evidence of hellebore in the archaeological record. This is likely due to preservation biases—the rhizome and roots utilized by most communities would not likely preserve given their fleshy organic form. However, historically the use of *Veratrum* species is known around the world. Toxicologists suggest that Alexander the Great may have died as a result of ingesting the closely related white hellebore (*Veratrum album*) (Schep et al. 2014). A similar species of California hellebore (*V. californicum*) was among the list of new plants first recorded in the early settler chronicles of Lewis and Clark (1997). During his fieldwork in the early 1920s, Harlan Smith noted the ubiquitous use of the false green hellebore rhizome among both upriver and downriver Gitksan communities (Smith 1926). While some people, like Mclean, continue to harvest the plant, its use in recent years has declined. Lieutenant George Thornton Emmons, who carried out ethnographic fieldwork with Tlingit Peoples in the 1880s and 1890s, recorded the use of hellebore as an intoxicant (Emmons 1991). Anthropologists Marius Barbeau and William Beynon (Ts'ymesen/Tsimshian) reported on the use of hellebore among Ts'ymesen *halayt* (shaman, medicine person) in very sacred and powerful ways (Cove and MacDonald 1987). However, Ts'ymesen people who are not considered *halayt* today utilize hellebore for medicinal and spiritual purposes.

In Gitksan, the term *sgan ts'iks* refers broadly to the entire hellebore plant, while the word *mulgwasxw* is reserved more specifically for the rhizome once it is harvested and used for medicine (Johnson 1997). While it has been recorded that some First Nation Peoples have used the leaves as a poultice, the rhizome and fleshy roots that grow from the rhizome are the most used and desired parts of the plant. Most of the active compounds reported on in Western medical literature for *V. viride* are from the roots rather than rhizome (Johnson 2006).

An overview of the practices and uses of hellebore in northwest British Columbia is presented in Table 1. Hellebore roots have anti-lice and fungicidal properties, which make it effective for

treating various skin ailments. Tonics, infusions, and teas are made by some people for internal cleansing (Turner 2014). There are also analgesic and counterirritant chemicals present that make it a valuable topical treatment for arthritis, swelling, aches, and pains (Johnson 1997; Turner 2014). In the recent past, the most frequently reported medical use in Gitksan country was as a snuff to clear sinuses. Johnson (1997) also observed violent sneezing followed by excessive mucous discharge after her Wet'suwet'en friends inhaled the powdered rhizome.

Haida peoples believe that almost any disease can be cured by hellebore (Pojar and Mackinnon 1994) and it is considered one of the most important herbs in use among Gitksan peoples (Gottesfeld and Anderson 1988). However, today, the rhizome is most commonly used for cleansing and as a fumigant (or smudge). As a Gitksan knowledge holder, Tony Mclean notes that “people smudge with sage or sweetgrass, but that's not our way...*mulgwasxw* [hellebore] is what we smudge with, it's what grows here.”

Gottesfeld and Anderson (1988) noted its use as a stovetop smudge among Gitksan Elders for purifying the home (or to kill germs). It is also used to smudge before hunting and trapping. Mclean notes that he smudges his gun with *mulgwasxw* before using it to hunt. It is not only used for utilitarian medical purposes but also for spiritual protection. The root/rhizome is carried as an amulet for luck by many Coastal Peoples (Turner 2014). Nisga'a literature also notes both medicinal and spiritual uses of hellebore (see Burton 2012). Sim'oogit Ginwax, Abraham Davis said that,

...the part that is soaked for medicine is the roots. The way it is used as a rubbing liquid. You rub ts'iks [hellebore] all over your body and it protects or immunizes you from getting injured: or it neutralizes any other medicine, which might be used on you by someone else, like your enemies for instance. This medicine has been used by the Nisga'a since time immemorial, especially during the war-times.

The potent and powerful properties of this special plant warrant careful use and harvest. In most ethnographic references to hellebore, it is emphasized that ingesting the roots will paralyze and kill (Burton



**Figure 2** Tony Mclean loosens soil around the base of the plant. Photo by Chelsey G. Armstrong.

2012; Emmons 1991; Johnson 1997; Smith 1997). The plant contains numerous poisonous/toxic alkaloids (e.g., veratrine, verastrasine, veratramine, and veratrin) that can cause burning sensations, hallucinations, headaches, and central hypotension causing death (Jaffe et al. 1990; Kingsbury 1964). Ingesting even a small amount of the plant can cause a loss of consciousness, followed by death (Turner 1995:139). A Heiltsuk woman reported to me in 2014 that in the early twentieth century, her kin once used too much of the root infusion in his bath, whereupon he was paralyzed and died immediately.

In Western medicine, *V. viride* was previously used as an anti-hypotensive. In the mid-twentieth century, clinical trials showed that ingesting the powdered rhizome significantly reduced elevated blood pressure in patients with essential hypertension (Elek et al. 1953; Fried et al. 1950). Its use fell out of favour because of adverse effects (e.g., seizures and temporary paralysis; see Jaffe et al. 1990 and Senthilkumaran et al. 2014). Various species of *Veratrum*, including *V. viride* were also used as a garden insecticide called “Hellebore”, used against hemipteran and homopteran pests of fruits and vegetables (Shepard 1951).

### Harvest

In the last seventy years, the influence of residential schools, ongoing colonialism and displacement of people from their homelands and territories has probably shifted how hellebore is perceived and used. However, traditional remedies continue to be used by Elders and community knowledge holders in Gitxsan country today.

Some Gitxsan Peoples continue to harvest hellebore in the late summer and early fall. Gottesfeld and Anderson (1988) note that the root was harvested in conjunction with hunting trips after its leaves senesce. At the end of August 2016, I joined three Gitxsan community members to harvest hellebore rhizomes/roots, *mulgwaxsw*. Following strict protocol from Mclean’s experiences, we fasted the day of the harvest and bathed in cold water the morning before the outing (full submersion in Kitsegucla Lake). Two experienced men led the harvest and one young Gitxsan woman took part in the harvest for her first time. After prayers, and smudging with *mulgwaxsw*, we began the harvest.

We drove for two hours from the Tam Giist cultural camp, up an old logging road, and into to the subalpine. After exiting the truck, Mclean made a digging implement from a young alder tree (*Rubus incana*). This improvised digging stick was important, as Mclean told the group before the harvest, because “you cannot use metal to dig the root, once metal touches the root it loses its power”.

We targeted a hellebore plant that grew in a high elevation meadow surrounded by three dozen other hellebore plants in a large thicket on a southwest-facing slope above Kitsegucla Lake. The plants were particularly large, growing up to 2.5m when they usually grow <1m. On the same mountainside, black huckleberry (*Vaccinium membranaceum*) and soapberry (*Shepherdia canadensis*) were in full fruit and we picked the berries into old yogurt containers as we watched Mclean begin the *mulgwaxsw* harvest. He began by cutting the large leaves down from the plant before making contact with the soil. Mclean loosened the soil with the alder digging stick for twenty minutes before getting on the ground and digging into the earth with his hands (Figure 2).

A thick mat of organic litter grew tightly around the rhizome and it took almost one hour for Mclean to free the rhizome from the earth, wavering between his hands and digging stick to untie the soil’s rich networks of microfauna, mycorrhizae, and other organic materials. After observing Mclean, the other female harvester and I went to another plant in the thicket and began the harvesting process on our own. We dug for an hour, taking turns with the digging stick and using our hands, besieged by the dense tree roots enveloping the hellebore. Once the rhizome was removed, we smudged the root, cleaned the digging implement, and back filled the hole (Figure 3). We



**Figure 3** *Mulgwaxsw* (*V. viride* rhizome) after harvest and before processing. Some people will remove the rootlets and let them dry for smudging. Here, the rhizome is the desired part of the plant. Photo by Chelsey G. Armstrong.

were instructed to only take the smallest chunk of the rhizome while the others were returned to the soil where the plant will continue to produce new shoots the following season.

Turner notes widespread selective harvesting of hellebore in other parts of the Pacific Northwest and that the regeneration of hellebore shoots can occur from fragments left in the ground (2014:2–192). During our harvest, we observed that the large and well-spaced plants were doing better than others (i.e., they were larger and looked healthier than other patches of hellebore on the territory). Previous and ongoing harvest of hellebore at this specific location, by other Gitksan Peoples, may have led to phenotypic responses: digging helps aerate the soil and selective harvesting of the small rhizomes (such as what Mclean practiced) over the long-term, may have contributed to increased plant vigour.

After the harvest, we stayed in the subalpine and gathered more berries. After fasting for the harvest,

we were happy to consume the berries and share stories with one another before returning to the camp. Once we drove back to the lake (around dusk) we combined our *mulgwaxsw* and gently washed them with water, then broke them into smaller pieces before they were left to dry. The following day, all the roots, shoots, and buds were broken off the rhizome by hand (Figure 4). While processing the rhizome, youth from the camp were encouraged to watch us work and ask questions about the harvest. Smaller pieces were cut into discs and dried a second time — the discs would be used for smudging. Larger pieces were left as amulets to be stored in dark, dry places. Both types of *mulgwaxsw* (for amulets and for smudging) were split equally amongst the harvesters and the cultural camp participants and instructors.

The harvest practices recorded here are Gitksan specific and come from Tony Mclean's personal experience and teachings. It is widely understood that related communities can have different sets of



**Figure 4** *Mulgwaxw* (*V. viride* rhizome) cleaned after harvest and processing. Note the large terminus scars from old shoots and small scars where rootlets were attached. Photo by Chelsey G. Armstrong.

practices for the same plant, even if they are in the same bioregion (Anderson 2016). For example, Heiltsuk people harvest *aḡaiḡ<sup>w</sup>sili* (hellebore root) in the spring before flowering, while neighbouring and related Haisla people harvest it in the fall. Although diverse practices are recorded, hellebore's distinctive qualities, potentially drastic products, and similarity of uses among many groups suggest that medicinal qualities of hellebore were discovered long ago and spread (shared) rapidly throughout the region (Turner 2014:369).

### Conclusion

The purpose of this paper is to publish some of the intricacies, protocols, and collate references of hellebore harvest for future generations. As settler-colonialism continues to affect numerous communities in British Columbia, community members often ask me about this plant; how it was used, how grandparents harvested it, and how it

protected people from harm. Guided by Tony Mclean's knowledge and experiences, and ethnographic and botanical evidence, this paper provides a brief overview and compilation of information about this special plant for people who wish to know more but cannot freely access the information.

While this is meant to be an informative contribution, it should not be entirely instructive — that is, Elders and knowledge holders should always give harvest guidance with specific knowledge to place and harvest protocol. This compilation is meant to assemble and compare uses of such a powerful plant and share how many communities throughout British Columbia's northwest respect it. Readers are encouraged to appreciate the diversity of practices and respect the profound power found in this remarkable plant.

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### Declarations

*Permissions:* All interviews and participatory observations were conducted with permission by the attendant knowledge holder (Tony Mclean) and under the Simon Fraser University Department of Research Ethics (DORE), [2015s0179].

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