



Review

Possible similarities between the folk medicine historically used by First Nations and American Indians in North America and the ethnoveterinary knowledge currently used in British Columbia, Canada



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ABSTRACT

Aims of the study: This paper compares sixty-four plants used as ethnoveterinary remedies in British Columbia with First Nations folk medicine.

Materials and methods: In 2003, I conducted semi-structured interviews with 60 participants obtained using a purposive sample. The data was then compared with historical documents on First Nations plant use.

Results: Exact parallels between First Nations/native American folk medicine and ethnoveterinary remedies used for farm animals and horses were *Acer macrophyllum* Pursh, *Epilobium angustifolium* L. and *Lonicera involucrata* (Richardson) Banks ex Spreng., used as stimulants and tonics for goats; *Achlys triphylla* DC. as a fly repellent in barns, *Alnus rubra* Bong., for rabbits' dental care, *Berberis repens* Lindl., *Rumex crispus* L., to treat sores and rashes on horses, *Pinus ponderosa* Douglas ex C. Lawson for stomach problems and *Bovista pila* Berk. and M. A. Curtis and *Dolichousnea longissima* (Ach.) Articus used on wounds.

Conclusion: This study revealed the parallel uses between sixty-four plants used as ethnoveterinary medicines in British Columbia and the folk medicines used by the First Nations peoples and by native American groups.

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1. Introduction

Ethnoveterinary research documents and validates traditional veterinary practices (Köhler-Rollefson and Bräunig, 1998). There are many historical records of ethnoveterinary remedies used in North America (Steedman and Teit, 1930; Speck, 1917). Vanilla leaf (*Achlys triphylla* DC.), and strong-smelling plants like big

sagebrush (*Artemisia tridentata* Nutt.), were used as insect repellents (Turner, 2001a). Dogs and horses were often healed with the same plants that British Columbia's Thompson Indians used on themselves (Steedman and Teit, 1930). The Gosiute of Utah used *Galium aparine* L. for horses (Chamberlin, 1911). The Ojibwa treated horses with *Artemisia ludoviciana* Nutt. (Moerman, 1982). Horses with distemper were treated with smoke from *Echinacea angustifolia* DC. (Gilmore, 1991). The Meskwaki used *Artemisia ludoviciana* Nutt., to smoke ponies with distemper (Smith, 1928b). The Apache and Navajo also used plants to treat their horses and the Hidatsa

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used *Artemisia* spp., during the gelding operation. Pregnant mares were given chicory roots (*Cichorium intybus* L.) to encourage them to drink more water and improve their condition (Lawrence, 1996; 1998). Ethnoveterinary remedies include those of the Pawnee, Omaha and Dakota who used a boiled tea of juniper berries and leaves (*Juniperus communis* L.) for coughs in their horses. Indians of the Missouri river region used a leaf and fruit decoction of *Pinus murrayana* Balf., for coughs in horses (Gilmore, 1991). Alder and birch barks (*Alnus incana* (L.) Moench and *Betula nigra* L., were used for skin conditions on horses and people. In British Columbia, the Okanagan used chocolate tips (*Lomatium dissectum* (Nutt.) Mathias & Constance) as a fish poison and an insecticide for livestock.

This paper traces the possible cultural origins of sixty-four plants used as ethnoveterinary remedies in British Columbia (BC) by comparing their uses with First Nations and Native American ethnobotany. The comparison study was undertaken because one respondent claimed to be the originator of the medicinal remedies used for goats in British Columbia. However during the validation process in which a manual was prepared and given to each research participant (Fig. 1), I noticed that I was replicating the already published work of others except in rare cases where an animal had been observed using a plant. During public presentations of the research (Lans and Boepple, 2003; Lans et al., 2004), noted ethnobotanist Professor Nancy Turner of the University of Victoria (who was also the research supervisor), remarked that many of the plant uses originated in First Nations plant lore. Professor Turner also brought a traditionally wrapped vanilla leaf insect repellent (*Achlys triphylla* DC.) to a public discussion in 2003. Her observations predated the concern of Leonti (2011) who wrote that field based studies run the risk of repeating information and knowledge that informants have gleaned from publications.

2. Background and methods

Information on Ethnoveterinary remedies used in British Columbia was collected over a six-month period in 2003. The research area included Vancouver Island as far north as Port Alberni, the Lower Mainland of British Columbia (BC), and areas in the Interior (Armstrong, Chase, Salmon Arm, Kelowna, Cawston and Fauquier). British Columbia's farms are located mainly in the Lower Mainland and the North Okanagan Valley and on Vancouver Island. Fig. 1 is the cover of the manual given to each participant at the end of the research and it includes two maps of the research area. All available literature about livestock farmers and the secondary literature on ethnomedicinal plants, folk medicine and related fields in British Columbia was reviewed.

A purposive sample of livestock farmers was necessary to target key informants with the knowledge sought. The sample size was 60. The sample was obtained from membership lists of organic farmers, horse and dog breeders and trainers, horse stables, sheep, cattle and goat breeders, naturopaths, farm women's networks, meat processors, other specialists in alternative medicine and holistic veterinarians. Of these, nine chicken and turkey and rabbit farmers and three herbalists provided ethnoveterinary remedies used for poultry and rabbits. The poultry farmers were either organic (commercial operations) or farm-gate producers. The researchers saw Asian specialty chicken on one farm. Interviewees with horses comprised one naturopath, four horse breeders/trainers, two herbalists, one farmer and one headmistress with horses at her school (for girls). Seven of the participants had goats and a few had cows. Information on pets came from 2 naturopaths, 10 herbalists, 5 dog trainers, breeders and pet shop owners, 9 holistic veterinarians and 6 of 27 organic farmers.

Two visits were made to each farm or respondent. A draft

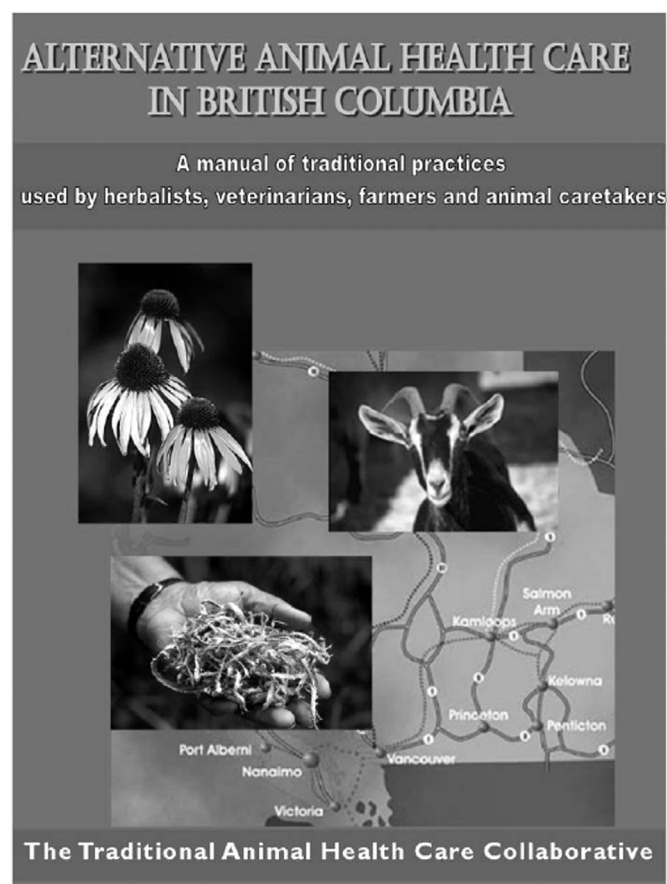


Fig. 1. Manual of Alternative Animal Health Care Practices given to each research participant.

outline of the respondent's ethnoveterinary remedies was delivered and discussed at the second visit in order to establish that dosages were accurately noted, for input on content, and to clarify any points. The respondent-approved drafts were compiled into a draft outline. The draft outline was then posted to the relevant address and a second phone interview or visit confirmed the information collected in the first interview was accurate. Medicinal plant specimens were collected where possible by two student ethnobotanists and two herbalists and were identified and deposited as vouchers in the University of Victoria herbarium (UVIC). Some plants were always used as purchased products and these plants could not be collected. In the cases where purchased products were used by respondents, the species used and active ingredient contents were checked on the product label and confirmed on the using the United States Department of Agriculture (USDA) Natural Resources Conservation Service Plants Database (<http://plants.usda.gov/index.html>) to confirm that their geographical distribution included British Columbia. Some manufacturers use non-native species in their products because the German Commission E monographs provide details on European and well-known Asian species, so it is easier to standardize products based on those species. This paper includes introduced species because they may have obtained new uses in their new locations. For example *Solidago virgaurea* ssp. *minuta* was one of several seeds exchanged at an event in Vancouver (<http://www.agc-bc.ca/archive/2007-seedlist.asp>). There is no physical border between Washington State in the United States and British Columbia in Canada that would prevent seed dispersal.

The plant-based remedies were evaluated for safety and efficacy with a non-experimental method, prior to including them in the draft outline. Published sources such as journal articles and

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