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LATIN NAME: Alnus rubra Bong. (287-72)

OTHER LATIN NAMES: Syn: *A. oregana* (287-72); (342-369)

COMMON NAMES: Red Alder

Red Alder, Oregon Alder (287-72); Luwi (Coastal Tsimshian, 243-65); K'us (Central Carrier ( - 295); Tag Alder, Common Alder, Smooth Alder (124-125); Tl'axwimes (Kwakiutl, 150-279); Kal (Red Alder, 220-25); Wainiik (Aleut, 'parts of bush or tree used in banya, or steam bath', 339-128), Veyniki (Russian, 339-128); Namaasaluwi (Alder bark, Coastal Tsimshian, 243-78), Luux or Am Luux (Alder Tree, Coastal Tsimshian, 358-8).

#### PLANT DESCRIPTION:

##### GENERAL:

New twigs not puberulent, generally glabrous; trees up to 25 m;(287-72) Rapidly growing deciduous tree up to 80 ft. tall (generally 15 to 20 feet tall), with thin bark, greenish on younger trees, turning gray to whitish with maturity. The inner bark and fresh wood tend to turn deep red-orange on exposure to air. (44-119); Tree up to 10 (rarely 15) meters tall, with stem up to 40 cm in diameter, sometimes a shrub forming into dense thickets; bark smooth, grayish; (342-369); A fast-growing, straight-trunked, deciduous tree up to 25 m (about 80 ft) tall, with trunks up to 8 dm (30 in.) in diameter. The bark when young is smooth and greenish, becoming coarse and grey or whitish with age. The bark and wood tend to turn deep red or orange when exposed to moist air. (137-190) The stems are numerous, and from six to fifteen feet high. (124-125)

##### BARK:

##### LEAVES:

Leaf blades broadly elliptic to ovate-elliptic, 5-15 cm, sinuate, margins slightly revolute, much paler (rusty-gray) beneath than above; (287-72) Bright green, oval-shaped, pointed, and coarsely toothed, serrated edges. (44-119); Leaves dark green and nearly glabrous above, paler and rusty-pubescent below, elliptic to ovate, with revolute margin, shallowly lobed, the lobes coarsely toothed and glandular-denticulated; (342-369); The

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leaves are bright green, lighter beneath, oval-shaped, pointed, and coarsely toothed. (137-190) It has elliptic-ovate leaves that are dark green on top and rusty-haired underneath. (195-123)

BUDS:

FLOWERS:

Catkins develop and flower before the leaves, on twigs of previous year; Clusters of separate sexes - long, pendulant male catkins and short, woody female cones. Both types are green and resinous when immature. The male catkins, when ripe in early spring, are reddish; ripe female "cones" are brown. (44-119) and clustered (137-190). When ripe, the male catkins release large clouds of pollen (early spring) (137-190). Catkins are formed in Autumn. Blossoms in March & April. (124-125). The male flowers are borne in long, hanging, clustered catkins, which release large clouds of pollen when they ripen in early spring. The female flowers are borne in long, hanging, clustered catkins, which release large clouds of pollen when they ripen in early spring. The female flowers are borne in short, clustered, egg-shaped "cones", green and resinous when immature, brown and woody when ripe. (137-190). Blossoms in March and April. (124-125)

REPRODUCTION CYCLE:

FRUIT/SEEDS:

Fruit with wing 1/5-1/2 as wide as nutlet (287-72); Cones short-peduncled; nutlets narrowly winged. (342-369); The fruits or nutlets are small, flat, and slightly winged laterally. (137-190)

HABITAT:

Moist lowlands. (287-72) Moist woods, swampy areas, and recently cleared ground. (44-119) River banks. Forming thickets on borders of ponds, rivers, and swamps. (); Wet places, river bottoms, along creeks. (342-369).

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RANGE:

Alaska south, West Cascades and on Olympic Peninsula, to California, also in Idaho. (287-72) Common west of the Coast and Cascade Mountains along the entire Coast, and also occurs sporadically in the Southern and Central Interior (137-190). Indigenous to Europe and America. (124-125) It is found in evergreen and redwood forests from Northern California to Alaska. (195-123)

VARIETIES:

KEY TO VARIETIES

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SOME SIMILAR SPECIES:

1. *Alnus sinuata* (Regel) Rydb.

OTHER LATIN NAMES: Syn: *Alnus crispa* (Ait.) Pursh subsp. *sinuata* (Regel) Hult., *A. viridis* var. *sinuata* Regel (342-369); *A. sitchensis* (Regel) Sarg. (137-190).

COMMON NAMES: Sitka Alder, Wavy-leaved Alder (287-72); Slide Alder, Green Alder, Mountain Alder (137-190);

APPEARANCE:

Catkins developing and flowering with the leaves, on twigs of current year; fruits with thin, membranous wings at least half as wide as nutlet; leaf blades ovate, 3-10 cm, not revolute, only slightly paler beneath than above, finely 1-2 serrate and more or less sinuate; winter buds sharply acute; shrubs, 2-4 (8) m; moist places, lowland to subalpine; Alaska south, in Cascades and Olympic mountains, to northern California, east through Washington and Oregon to much of Idaho and Montana; (287-72) Similar to subsp. *crispa*, (5) but leaves are larger and broader, more or less lobed. Occurs in a more distinct subalpine region along the coast. The branches are bowlike and pressed along the slopes by the snow, forming almost impenetrable thickets on the mountainsides, especially in the coastal zone. An extreme variation with lacinated, sharply serrulated or

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double-serrulated leaves is var. *laciniata* Hult. Subsp. *sinuata* introgrades with subsp. *crispa*; (32-369) Broadly winged nutlets and sharply acute winter buds (137-190). Often forms dense patches on slide areas and avalanche runs in the mountains. (137-190) Grows in appropriate habitats throughout B.C. (137-192).

FLOWERS:

FRUIT:

TWIGS:

BARK:

HABITAT:

RANGE:

OTHER:

2. *Alnus incana* (L.) Moench (Mountain Alder)

OTHER LATIN NAMES: Syn: *A. occidentalis*, *A. rugosa* (DuRoi) Spreng., *A. incana* var. *occidentalis* (Dippel) Hitchc. (Grows in B.C.), *A. tenuifolia* Nutt. (287-73, 137-190); *Betula alnus* var. *incana* L., *A. incana* var. *virescens* S. Wats.; *A. incana* subsp. *tenuifolia* (Nutt.) Breitung (342-370); *A. serrulata* (269-181 ?).

COMMON NAMES: Mountain Alder (287-73); Speckled Alder, Smooth Alder (146-270); White Alder, Thinleaf Alder (137-190); Wadub' (Chippewa, 211-299); Grey Alder (119-47); Tag Alder, Smooth Alder, Red Alder (141-18); Hazel Alder (195-123); Common Alder, Speckled Alder (369-181);

APPEARANCE:

Catkins developing and flower before the leaves, on twigs of previous year; Fruits

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wingless; leaf blades sinuate or not, neither revolute nor rusty-gray beneath; new twigs and petioles strongly puberulent; shrubs to small trees. Leaf blades sinuate or lobed, serrate-denticulate, elliptic or ovate-oblong, 3-7 (11) cm; stamens mostly 4, filaments scarcely 1/2 as long as the anthers; shrubs, 2-5 (12) m; moist to wet places, low to high mountain; Alaska south, Eastern Cascades, to California, east to Nova Scotia, south in Rocky Mountains to New Mexico. (287-73) Large shrub or small tree with first grayish, later reddish, bark; leaves roundish or oblong, ovate, dull grayish-green above, paler beneath, pubescent when young, glabrescent in age, closely toothed, the teeth finely serrated, rounded or subcordate at base; cones short-peduncled; nutlets with thin, narrow margin. Forms thickets along streams. *A. incana* described from Europe, subsp. *tenuifolia* from the Rocky Mountains and the Blue Mountains. Very closely related to *A. rugosa* (Du Roi) Spreng. (*Betula rugosa* Du Roi) of eastern North America and to *A. incana* subsp. *incana* of Europe. (342-370); Blunt winter buds (137-190). Found throughout the Interior east of the Coast Mountains, except in the far northeastern corner of the Province. (137-192) Leaves have pointed tips and are greyish or bluish-green beneath. When young the lower leaf surface bears reddish hairs. Not native to Europe, but sometimes planted either for timber or to form shelter belts. (119-47)

(2a) *Alnus serrulata* Willd. (Tag Alder): A well-known shrub, growing in clumps and forming thickets on the borders of ponds or rivers, or in swamps. It bears flowers of a reddish-green colour in March and April. The bark is blackish gray, with small, corky warts, the inner surface being orange-brown, striated. The taste is astringent and somewhat bitter. (141-18) Shrub or tree with blackish bark that is lightly speckled with small, grayish to orange lenticels, its leaves are elliptic to obovate, finely serrate and usually fine-haired underneath. It can be found from Nova Scotia to Oklahoma, Florida, and Louisiana. (195-123) Tall shrub or tree with leaves that have double teeth or even small lobes, pale green beneath, usually hairy on the veins. The fruit 2-3.5 mm with very narrow wings. Range: Nfld. to Mack. and B.C., south to Md., VA., Iowa, Calif.; also in Eurasia, in wet soil. (369-181)

FLOWERS:



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FRUIT:

TWIGS:

BARK:

HABITAT:

RANGE:

OTHER:

3. *Alnus rhombifolia* Nutt.

OTHER LATIN NAMES:

COMMON NAMES: White Alder (287-73);

APPEARANCE:

Catkins developing and flower before the leaves, on twigs of previous year; Fruits wingless; leaf blades sinuate or not, neither revolute nor rusty-gray beneath; new twigs and petioles strongly puberulent; Leaf blades 1-2 serrate, elliptic or oblong-rhombic, 4-8 cm; stamens 1-3, filaments mostly subequal to anthers; trees, 5-20 mm.; B.C. south, East Cascades, to Baja California, east to western Idaho. (287-73)

FLOWERS:

FRUIT:

TWIGS:

BARK:

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HABITAT:

RANGE:

OTHER:

4. *Alnus crispa* (Ait.) Pursh subsp. *crispa*

OTHER LATIN NAMES: Syn: *Betula crispa* Ait.; *Alnus viridis* Vill. subsp. *crispa* (Ait.) Love & Love. (342-368)

COMMON NAMES: Mountain Alder (342-368); Green Alder (369-181);

APPEARANCE:

Ascending shrub, up to 3 meters tall; leaves glutinous, fragrant, ovate to elliptic, glabrous above, pubescent on nerves below, finely and sharply serrulate or biserrulate; cones on long, slender peduncles. Occupies a somewhat indistinct subalpine region, diminishing in height with increasing altitude, becoming, at its altitudinal limit, a prostrate dwarf shrub (f. *strangula* Fern.) Introgrades with subsp. *sinuata* in the southern part of its range. (342-368) A shrub to 3 m high, the younger leaves more or less glutinous and hairy, the buds without stalks. The leaves with sharp, fine teeth, when mature dark green above. The fruit only 1-2.1 mm wide and surrounded by pale membranous wings. Range: Lab. to Alaska, s. to Mass., N.Y., Mich. to N. Calif.; higher mts of N.C. and Tenn. in bogs, shores and cold woods. (369-181)

FLOWERS:

FRUIT:

TWIGS:

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BARK:

HABITAT:

RANGE:

OTHER:

5. *Alnus Glutinosa* Gaertn.

OTHER LATIN NAMES: Syn: *Betula Alnus* (141-17)

COMMON NAMES: Common Alder (141-17); Black Alder (195-122); European Alder, Owlcr (195-122);

APPEARANCE:

The English Alder is a moderately-sized tree or large shrub of dark colour, usually growing in moist woods or pastures or by streams. The leaves are broadly ovate, stalked, and usually smooth. The catkins are formed in the autumn, the fruiting ones having scales rather like a tiny-fir-cone; the flowers appear in early spring, before the leaves are fully out. Grows in Europe south of the Arctic Circle, including Britain, Western Asia, North Africa. (141-17) A deciduous tree up to 80 feet high. The flowers are segregated by sex into separate catkins, the reddish-purple female ones developing into hard cones that contain the seeds. Two to eight catkins will occur in a cluster on a forked peduncle. (195-122) The young branches are usually sticky with short-stalked buds which are violet. The leaves (3-9 cm) are short-stalked, sticky when young, and rounded with a notched apex and a doubly toothed margin. Catkins appear in the autumn but elongate in February to April. The male catkins (2-6 cm) are in groups of 4 to 6 at the ends of the twigs. The female catkins are short, upright and cylindrical and the fused bracts become woody, changing during maturity into rounded cones. These cones, at first green, become black after pollination by wind, and stay on the tree until the following year, even after the seeds have fallen out. The cones resemble small (1.5 cm) pine cones, but are different botanically. The fruits are small, flattened nutlets with a loosely woven margin which

enables them to float in water. (119-46)

FLOWERS:

FRUIT:

TWIGS:

BARK:

HABITAT:

RANGE:

OTHER:

6.

OTHER LATIN NAMES:

COMMON NAMES:

APPEARANCE:

FLOWERS:

FRUIT:

TWIGS:

BARK:

HABITAT:

RANGE:

OTHER:

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CLASSIFICATION

CLASS: Angiospermae (118-10)

SUBCLASS: Dicotyledoneae (118-10)

SUPERORDER: Hamamelidae (118-14)

ORDER: Fagales (118-59)

FAMILY: Betulaceae (Birch) (118-59)

- 6 genera, 170 species (118-59)

SUB-FAMILY: Betuloideae (118-59)

TRIBE: Betuleae (118-59)

GENUS: Alnus (118-59)

- Appears to be 4 species in B.C.
- 30 species worldwide (118-59) 30 species of deciduous monoecious trees and shrubs widely distributed throughout the northern hemisphere and ranging as far south as Peru. (215-4)
- 10 species in the United States (215-4)

PLANT CHEMISTRY:

CONSTITUENTS:

- 1974 Frances Densmore, How Indians Use Wild Plants for Food, Medicine & Crafts,

303. "Tannin, volatile oil, and resins." (211-303)

TOXICITY:

POISON SYMPTOMS:

TREATMENT:

FOOD USES:

NATURE'S FOOD USES:

NATIVE FOOD USES:

- 1982 Nancy Turner, Food Plants of B.C. Indian's, Part 1, 119. "The slimy cambium layer, between the bark and the wood, was scraped off and eaten by the SECHELT, MAINLAND COMOX, and some other Coast Salish groups. It was eaten fresh, usually with some type of oil, or dried in cakes for winter use. After white contact, the Sechelt mixed it with sugar. The SAANICH sometimes placed the bark in steaming pits with camas bulbs to colour them red. The SWINOMISH SALISH in Washington ate alder cambium, but only during an incoming tide." (44-119)

EUROPEAN FOOD USES:

LIQUEURS:

TEAS:

RECIPES:

MEDICINAL USES:

MODE OF ACTION:

NATIVE MEDICINAL USES:

- 1884 E.M. Holmes, Notes on recent donations to the Museum of the Pharmaceutical Soc. London, The Pharm. J. & Trans. Oct. 302-304, Hudson Bay CREE 303. "Napatihé or Green Alder. This is the bark of *Alnus viridis*. It consists of thin shreds which have evidently been scraped off the young branches. The inner surface is of a pale dull brown and the exterior greenish brown. It has a very astringent taste with a slight bitterness and a flavour recalling that of the leaves of *Arbutus Uva-Ursi*. It is used in dropsy." (369-182)
- 1915 Frank G. Speck, Medicine practices of the Northwestern Algonquians. Proceedings Intern Congress of Americanists. xix; 303-32. PENOBSCOT 309. "Alder (*Alnus* sp.) bark boiled in water stops cramps and retching..312. A concoction of seven herbs is taken as a sudorific before entering the sudatory (sweat bath); alder bark, witch hazel twigs, fir twigs, cedar boughs, sweet-flag, prince's pine, lambkill and a kind of brake"...MONTAGNAIS 315. "Twigs of alder are boiled and drunk for impure blood...Alder bark is used as a brew in small quantities for fever." (369-182)
- 1915 Frank G. Speck, Medicine practices of the Northwestern Algonquians. Proceedings Intern Congress of Americanists. xix; 303-32. Tantaquidgeon MOHEGAN 319. "Twigs of speckled alder are steeped and used for bathing purposes, for sprains, bruises, headache, and backache." (369-182)
- 1922 W.D. Wallis, American Anthropol. 24;24-30, Medicines used by the Micmac Indians. MICMAC used the bark for bleeding, hemorrhage of lungs, diphtheria. (369-182)
- 1923 Huron H. Smith, Ethnobotany of the Menomini, Bull. Pub. Mus. Milwaukee 4;1-82, page 26. "The bitter inner bark of this alder is used for poultices to reduce swellings. For more power from the alder, the Menomini employ the root bark...When the mucus is too loose in a cold, then it will be congested somewhat by drinking an infusion of the root bark. This infusion may also be used as a wash for sores, being astringent and healing..As a wash to cure saddle gall in horses...The inner bark is made into an infusion which is used as an alternative. (This last is given under *A. rugosa* and the first part under *A. incana*, which are now considered one species)." (369-182)

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- 1926-27 Frances Densmore, Uses of Plants by the Chippewa Indians, Forty-fourth annual Report of Bur. Am. Ethn. Smithsonian Inst., page 328. "An informant said that the only regulation concerning the scraping was that the root of alder must be scraped toward the plant"...346. The inner bark of the alder and arrow wood (*Viburnum acerifolium*). "In preparing these, scrape the stalks carefully, removing only the thin outer covering and using the green part underneath. Put the scrapings of this bark from both trees in boiling water to make decoction to be drunk as an emetic...359. The root of the alder. In preparing this remedy the root must be scraped upward. A weak decoction is made from a few inches of the root and a pint of water. The following ingredients are added to this: 4 bumblebees are caught and put in a box to die of themselves. In catching the bees they must be stunned but not injured. It destroys the efficacy if the bees are treated otherwise. The bees are dried, ground to a powder, and put in a leather packet until needed. When the medicine is to be used, a pinch of this powder, and put in a small teacup of the above decoction. The dose is a tablespoonful. Two doses are usually sufficient for difficult labor (in childbirth). A specimen of the bee was obtained and identified as a common bumblebee"...360. A decoction of equal parts of the roots of alder, red-osier dogwood and alternate-leaved dogwood as a wash or compress for sore eyes." (369-182)
- 1928 Arthur C. Parker, Indian Medicine and Medicine Men, 36th Ann. Archeolog. Rep 1928;9-26 Min. of Educ. SENECA 11. "Tag alder used as a diuretic." (369-182)
- 1928 Huron H. Smith, Ethnobotany of the Meskwaki, Bull. Pub. Mus. Milwaukee 4;189-274, page 206. "Specimen 5137 of the Dr. Jones collection is the root of *Alnus incana*. This is boiled and drunk by children who pass blood in their stools." (369-182)
- 1932 Huron H. Smith, Ethnobotany of the Ojibwe, Bull. Pub. Mus. Milwaukee 4;348-433, page 358. "The Flambeau Ojibwe use the root for its hemostatic qualities. When one passes blood in his stools, the root tea will act as an astringent and coagulant..The eclectic (white) practitioner in the United States and Canada employ it in a powdered condition for dusting upon chafed body surfaces. (369-182)
- 1933 Huron H. Smith, Ethnobotany of the Potawatomi, Bull. Pub. Mus. Milwaukee



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7;32-127, page 43. "The Potawatomi scrape the inner bark...and use the juice obtained to rub on the body to cure the itch. A bark tea is made for flushing the vagina and to make a rectal application with their home-made form of syringe as described previously, to shrivel the anal muscles and thus cure cases of piles. Potions of the bark tea are also drunk to cure the flux. The powdered inner bark of the speckled alder is used to sprinkle upon the galled spots of their ponies to cure them. Nickell (white) says that the bark has alterative, emetic and astringent properties. The Herbalist says that the bark has been used in the treatment of scrofula and has been considered as alterative and emetic." (369-183)

- 1945 Erna Gunther, *Ethnobotany of Western Washington*, 46. "The QUILEUTE make a steam bath by putting leaves in an alder tub with hot rocks and sitting on it, and cover themselves with elkskin or bearskin." (46-46)

- 1945 Jacques Rousseau, *Le folklore botanique de Caughnawaga*, *Etudes Ethnobotaniques quebecoise. Contrib. Inst. Bot. Univ. Mon.* 55;7-74. MOHAWK transl. pg 38. "To calm the pain resulting from blows, drink every two hours an infusion of fragments of one year old plants. While it is boiling add water three times. When the urine is thick drink a decoction of the twigs of the alder and the roots of *Agropyron repens* (twitch grass)."

- 1959 W.H. Mechling, *The Malecite Indians with notes on the Micmacs. Anthropologica* 8;239-263. MALECITE of maritime provinces of Canada used the bark of the black alder, 'A. incana' for ulcerated mouths. (369-183)

- 1975 Catharine McClellan, *My Old People Say*, 228. TAGISH "A brew of boiled water and alder bark is a good cure for the "trench mouth" that children sometimes get from eating too much snow and ice." (296-228)

- 1977 Virgil Vogel, *American Indian Medicine*, 270. "Alnus species: Josselyn reported in 1672 that "an Indian bruising and cutting of his knee with a fall, used no other remedy than alder-bark, chewed fasting, and laid to it; which did soon heal it." He pronounced a decoction of alder "also excellant, to take the fire out of a burn or scald." (146-270)

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- 1977 Virgil Vogel, American Indian Medicine, 270. "He (Dr. Clapp) further remarked on the use of alder by the Indians. Dr. Clapp added that it was useful, externally and internally, in decoction or infusion, for diseases of the skin, "especially those of the herpetic kind." (146-270)
- 1977 Virgil Vogel, American Indian Medicine, 270. ""Common alder" was an ONONDAGA remedy for ague and inflammation. The PENOBSCOTS boiled the bark of alder species in water to make a drink to stop cramps and retching, while the MONTAGNAIS boiled the twigs and drank the brew for "impure blood". The same tribe steeped red-alder bark for an infusion to stop cholera. Speck also reported the use of alder by the CATAWBAS for children's constipation. The POTAWATOMIS scraped the inner bark of speckled alder (*Alnus incana* [L] Moench) and used the juice to rub the body to cure itch. A bark tea was made for flushing the vagina and to make rectal application with a homemade syringe, to shrivel anal muscles, and to cure piles. Potions of bark tea were drunk to cure flux, and the powdered inner bark was used to sprinkle upon galled spots of ponies. The MESKWAKIS boiled the bark of the same species and gave the decoction to children with bloody stools. The MENOMINEES used the inner bark for poultices to reduce swellings, and an infusion of bark was given to solidify loose mucus in a cold and for a wash in sores. It was considered astringent and healing. An infusion of the inner bark of smooth alder (*A. rugosa*) was used in this tribe as an alterative. The DELAWARES once chewed the bark of this species for a poultice." (146-270)
- 1978 John Riley. Personal communication from G. Fireman of Attawapiskat, James Bay. His CREE mother still used the inner bark of alder as a moist poultice to stop heavy bleeding from wounds. (369-183)
- 1983 George Deagle, Haida Medicine, 26. "*Alnus rubra*: Strips of the bark of this tree were collected, often in spring, to be used as an ingredient of several medicines made up from either "all different kinds of plants you find", or "four different kinds of trees". All informants mentioned the rich orange to reddish-teak color produced in medicine by this bark and one elderly male stated his wife used the bark "just to add a little color". Several informants stressed the importance of collecting the bark early in the morning, before eating, from relatively new growth on the trees. Another common convention was to take the bark from the part of a tree first exposed to the rays of the

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rising sun, at dawn. Taylor's work mentions the use of alder bark as an eye poultice. Recollections of her informant suggested that this was learned from the Kaigani Haida of Alaska. Clinical descriptions obtained in this research suggested that conjunctivitis (reddened eyes with purulent discharge) was the usual indication for a decoction made solely of alder bark. The more usual use of the bark was in combination with other agents." (220-26)

- 1986 Norma Meyers (Red Alder, *Alnus rubra*): "Steep the bark of the red alder tree (*alnus rubra*), to make a tea that is most beneficial to lungs and skin. (Do not boil, or it will be over-strong and acrid.) My husband's great aunt used it as her daily tea, to give lung strength for long sessions of dancing at potlatch feasts, and for strength to gather food, (fish, berries, roots and barks) on two long canoe trips each day. Her strength stayed with her till she moved to Alert Bay and changed to store-bought foods and did without the alder tea. A pharmacist's son at Alert Bay had asthma. This red alder tea recommended by a local chief cured him. The chief's daughter contracted T.B. The red alder tea cured her when the white doctor gave up. A young lady had eczema of the hands. Red alder hand baths were the curative remedy. A child had pimples on his bottom. The local medical remedies did not work. But sitting him in red alder tea did! Best of all - sleeping under a red alder tree brings good dreams. And wearing a spray of red alder leaves under a cap, or as a head wreath, brings clean thinking and clears away brain fatigue." (HANDOUT)

EUROPEAN MEDICINAL USES:

- 1633 John Gerarde, *The Herball or general history of plants gathered by John Gerarde of London, Master in Chirurgie*. 1477-78. "The leaves of Alder are much used against hot swellings, ulcers, and all inward inflammations, especially of the Almonds and kernels of the throat."

- 1640 John Parkinson, *Theatrum Botanicum*, "The inner barke hereof boiled in vinegar, is an approved remedy to kill lice, to cure the itch, and take away scabbies, and drie them up in a very short space: The same also is singular good to wash the teeth, both to take away the paines, to fasten those that are loose, to cleanse them from corruption and to keepe them firm. (345-26)

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- 1640 John Parkinson, Theatrum Botanicum, "The leaves put under the bare feete of travellers, that are sublated with travelling, are a great refreshing unto them: the said leaves while they have the morning dew on them, laid in a chamber troubled with fleas will gather them thereinto, which being quickly cast out, will ridde the chamber of them: of the barke is made a black dye. (345-34)

- 1640 Nicholas Culpeper, Culpeper's Complete Herbal, 24. "Government and Uses: It is a tree under the dominion of Venus, and of some watery sign or other, I suppose Pisces, and therefore the decoction, or distilled water of the leaves, is excellent against burnings and inflammations, either with wounds or without, to bathe the plabe grieved with, and especially for that inflammation of the breast, which the vulgar call an ague. If you cannot get the leaves, which in winter is impossible, make use of the bark in the same manner. The leaves and bark of the alder tree are cooling, drying, and binding. The fresh leaves laid upon swellings dissolve them, and stay the inflammations. The leaves put under the bare feet galled with travelling, are a great refreshing to them. The said leaves gathered while the morning dew is on them, and brought into a chamber troubled with fleas, will gather them thereunto, which being suddenly cast out, will rid the chamber of these troublesome bed-fellows." (140-24)

(Nicholas Culpeper, 1616-1654, English astrologer-physician)

- 1748 Peter Kalm, Travels in North America, Philadelphia October the 14th. 104. "A Swedish inhabitant of America told me that he had once cut his leg to the very bone, and that some blood had already congested within; that he had been advised to boil the inner bark, and to wash the wound often with the water; that he had followed this advice, and had soon got his leg healed, though it had been very dangerous at first." (369-181)

- 1799 Wiliam Lewis, The New Dispensatory Containing the Elements of Pharmacy and the Materia Medica, 6th Edition, pg. 83. "Leaves and bark of European alder a bitter styptic of disagreeable taste. Used in intermittent fevers. A decoction of the bark for inflammation of tonsils. Leaver chopped and heated efficacious for dispersing milk in the breast as a cataplasm." (369-181)

- 1830 C.S. Rafinesque, Medical Flora, Vol 2. Samuel C. Atkinson, Philadelphia, pg.188. "Alnus serrulata. Near streams from Canada to Florida. Leaves vulnerary and

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astringent, repel the milk when bruised and applied to the breast. Bark styptic, dies brown, and with vitriol black. The cones also die black. The inner bark of the root is emetic and dies yellow. The wood produces a light charcoal, the very best for gunpowder...called Sulling by the Canada tribes, who use the bark in poultice for swellings and strains. (369-182)

- 1931 M. Grieve, A Modern Herbal 18. "Medicinal Action and Uses (*A. serrulata*): Alterative, tonic, astringent, emetic. A decoction or extract is useful in scrofula, secondary syphilis and several forms of cutaneous disease. The inner bark of the root is emetic, and a decoction of the cones is said to be astringent, and useful in haematuria and other hemorrhages.

When diarrhoea, indigestion and dyspepsia are caused by debility of the stomach, it will be found helpful, and also in intermittent fevers.

It is said that an excellent ophthalmic powder can be made as follows: bore a hole from 1/2 to 1 inch in diameter, lengthwise, through a stout piece of limb of Tag Alder. Fill the opening with finely-powdered salt, and close it at each end. Put into hot ashes, and allow it to remain until the Tag is almost charred (three to four days), then split it open, take out the salt, powder, and keep it in a vial. To use it, blow some of the powder upon the eye, through a quill.

DOSAGE: Of fluid extract, 1/2 to 1 drachm. Infusion of 1 oz. of bark in 1 pint of boiling water - in wineglassful doses. Alimim, 4 to 10 grains." (141-18)

- 1931 M. Grieve, A Modern Herbal 17. *Alnus glutinosa* (Common Alder). "CONSTITUENTS: The bark and young shoots contain from 16 to 20 percent of tannic acid, but so much colouring matter that they are not very useful for tanning. This tannin differs from that of galls and oak-bark, and does not yield glucose when acted upon by sulphuric acid, which, it is stated, resolves it into almine red and sugar." (141-18)

- 1931 M. Grieve, A Modern Herbal 17. *Alnus glutinosa* (Common Alder). "MEDICINAL ACTION AND USES: Tonic and astringent. A decoction of the bark is useful to bathe swellings and inflammations, especially of the throat, and has been known to cure ague. Peasants on the Alps are reported to be frequently cured of rheumatism by being covered with bags full of the heated leaves." (141-18)

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- 1955 J. Auguste Mockle, Contributions a l'etude des plantes medicinales due Canada. Paris ed. Jouve. Quebec transl. 34. "Alnus crispa (green alder), the bark is astringent and febrifuge, containing 9 to 10% of tannin. The inner bark of the root is emetic. The fresh leaves are used to apply to tumors and inflamed tissues...Alnus incana the bark astringent." (369-183)
- 1972 Jeanne Rose, Herbs & Things, 36. "Alder (Alnus glutinosa - common alder or A. nigra - black alder). A decoction of alder bark boiled with agrimony, wormwood, dodder, hops, some fennel with smallage, endive, and succory roots is used to strengthen and cleanse the liver and spleen. Drink four ounces daily for some time. Use the dried bark, as fresh bark will cause one to vomit. Boil the inner bark in vinegar and rub this solution on the body to kill lice, cure scabies, and dry up scabs. If rubbed on the teeth it will cleanse them. Place alder leaves in corners and on the floor to ward off fleas." (314-36)
- 1973 Nancy Turner, The Ethnobotany of the Southern Kwakiutl Indians, 279. "Alder bark was an important medicine. It was peeled from the young trees in the spring, scrubbed, cleaned, and dried in the sun, and stored for future use (Brown, 1969; Johnson, 1969). If a woman had tuberculois and spat blood, she would suck four pieces of alder bark in her mouth. She usually got well after this (Boas, 1930). An extract of the bark, made by pouring boiling water over it, was drunk for tuberculosis and asthma, and was rubbed on the skin for sores and eczema (Brown, 1969; Roberts, 1969). A poultice for sores and aches was made by mixing broken-up alder bark with 'Fucus', black twinberry bark (Lonicera involucrata), and tobacco (Nicotiana sp.) (Cranmer, 1969)." (150-279).
- 1926-27 Frances Densmore, Uses of Plants by the Chippewa Indians, Forty-fourth annual Report of Bur. Am. Ethn. Smithsonian Inst., page 303. "Alnus incana (L.) Moench. Speckled Alder. The bark is alterative, astringent, and emetic." (211-299) Medicine for diseases of women. (211-286)
- 1977 Virgil Vogel, American Indian Medicine, 270. "Brickell (1737) reported that the leaves and bark of black alder were cooling and binding and were used in "hot Swellings and Ulcers in the Body." Barton, mentioning black alder under the names of Virginia winterberry (Prinos verticillatus L., and Prinos Gronovii Michx.), reported that the bark

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was astringent, bitter, and pungent; that the berries were bitter; that it was long a popular remedy, ordinarily employed as a decoction in intermittent fevers, dropsy, and gangrene, in the last of which it had "great efficacy." It was also given internally, and externally as a wash. Dr. Porcher held that the berries were tonic and astringent and were used in intermittent fever and diarrhea, while the leaves were a substitute for tea. Wooster Beach found a decoction of black-alder bark good for worms and "to purify the blood." He claimed that a minister was cured by this remedy from a lung infection which rendered him unable to preach. Black Alder, (*Prinos verticillatus* L.) was official in the USP, 1820-94, and was used as an astringent and tonic." (146-270).

- 1979 Joseph Meyer, *The Herbalist*, 125. "The bark is commonly known to be an alternative and an emetic. DOSE: 1 teaspoonful to 1 cup of boiling water. Drink cold 1 or 2 cups a day; of the tincture, 1/2 to 1 fluid dr." (124-125)
- 1983 John Lust, *The Herb Book*, 122. "PROPERTIES AND USES: Astringent, bitter, emetic, hemostatic. Fresh alder bark will cause vomiting, so use dried bark for other than emetic purposes. A decoction of the bark makes a good gargle for sore throat and pharyngitis. The powdered bark and the leaves have been used as an internal astringent and tonic, and the bark also as an internal and external hemostatic against hemorrhage. Boiling the inner bark in vinegar produces a useful external wash for lice and for skin problems such as scabies and scabs. You can even use the liquid to clean your teeth. Preparation and Dosage: Decoction: Boil 1 tsp. of bark or leaves in 1 cup of water. For internal use, take 1 to 2 cups a day, in mouthful doses. Tincture: A dose is from 1/2 to 1 tsp. Powder: A dose is from 8 to 12 grains. (195-122,123) *Alnus glutinosa*, *Alnus ruba*, *Alnus serrulata*. Medicinal Parts: Leaves & bark.
- 1983 Rick Langshaw, *Medicinal Herbs & Edible Plants of the Canadian Rockies*, 6. "Alder bark boiled in vinegar is a good remedy for lice and their associated symptoms - approximately 1/8 oz of bark per cup of vinegar. This also makes an excellent mouth-wash when distilled with tap water. Use a half & half ratio." (291-6)
- 1983 Rick Langshaw, *Medicinal Herbs & Edible Plants of the Canadian Rockies*, 6. "Gather the outer and inner bark, drying & aging it for up to several weeks. WARNING: Unaged bark will provoke vomiting and pains in the stomach. After aging, the bark's

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effect is similar to that of rhubarb for constipation. Mix approximately 1/8 cup of powdered bark to one cup of brown apple-cider. Take one teaspoon 3 times a day after meals for about 3 days or until relief is obtained." (291-6)

- 1985 Frances Graham, Plant Lore of an Alaskan Island, 128. "The INNER BARK has been used for several purposes. Boil it and drink the tea to reduce high fever or to get rid of gas. This tea may also be taken as a gargle for a sore throat or laryngitis. The same bark, boiled in vinegar, may be effective as a wash to kill lice or for other skin problems. Dried alder bark acts as an astringent. The FEMALE FLOWER CLUSTERS, which don't look like flowers at all, are green, then brown late in the year; oblong; and less than 1 inch in length. They can be boiled into a tea and taken in small quantities for relief from diarrhea. In the plant-screening program of the National Cancer Institute it was found that red alder, which does not grow in our area of Alaska, contains two anti-cancer agents. We were unable to determine if our species of alder was also tested.

RUSSIAN MEDICINAL USES:

- 1969 Alma Hutchens, Indian Herbage of North America, 4. (Black Alder) "MEDICINAL PART: Bark. SOLVENT: Boiling water. BODILY INFLUENCE: Tonic, Alterative, Astringent, Cathartic. USES: Very similar in action to Cascara when used for constipation. Alder is an agent used for jaundice, diarrhoea, gangrene, dropsy and all disease with symptoms of great weakness. It has had success in treatment of dyspepsia, combined with 2 drams of powdered Golden seal (Hydrastis) infused in 1 pint of boiling water and when cold taken in wine glass doses periodically throughout the day and repeated daily.

Make sure you age the outer and inner bark, as the green bark will provoke strong vomiting, pain and gripping in the stomach. Let the decoction stand and settle two or three days, until the yellow colour is changed to black. In this manner it will strengthen the stomach and procure an appetite.

The 'berries' are cathartic and vermifuge when combined with apple cider, a pleasant and effective worm medicine for children. Plan on giving this when the moon is full, as they are most conducive to treatment. Fast the patient before going to bed and give a herbal laxative, fasting again in the morning, and repeat Alder medication. Repeat again after four weeks as the larvae will still be present.

DOSE: 1/2 dram of powdered bark to 1 dram of apple cider; 1 teaspoonful three times a day,



for three days in a row, or as above." (215-4)

- 1969 Alma Hutchens, Indian Herbalogy of North America, 4. (Black Alder)

"EXTERNALLY: The decoction forms an excellent local application in gangrene, indolent ulcers and in some affections of the skin. The inner bark boiled in vinegar is an approved remedy to kill head lice and to relieve the itch and take away scabs by drying them up in a short time. For oral hygiene, it is cleansing to the teeth and to take away pain, at the same time firming to the gums."(215-4)

- 1969 Alma Hutchens, Indian Herbalogy of North America, 4. (Black Alder)

"HOMOEOPATHIC CLINICAL: Tincture of the bark of the young twigs and the bark of *Alnus rubra*, Tag Alder, and *Alnus glutinosa*, Common Alder of Europe, is clinically used for Amenorrhoea and Leucorrhoea, Enlarged Glands, Gleet, Haemorrhage, Psora, Rheumatism, Scrofula, Syphilis and many kinds of skin sickness such as Herpes, Impetigo, Prurigo." (215-5)

- 1969 Alma Hutchens, Indian Herbalogy of North America, 5. (Black Alder) "RUSSIAN USE: Three species of *Alnus incana* (Olha), black, grey, and white, have a prominent place in Pharmacopoeia and Folk Medicine. Parts used: Cones (*Fructus Alni*), bark of the young twigs (*Cortex Alni*), Leaves (*Folia Alni*). These parts of Alder contain 16% of Tannin, which gives predominant characteristics as an astringent. USES: As a tea it is used for loose stomach (diarrhoea) and bleeding thereof. DOSE: 3 to 4 cups a day, a mouthful at a time. Can be combined with other herbal teas for astringent and tonic uses. The extract in alcohol or Russian vodka can be used before meals, 25 to 40 drops 3 times a day. (215-5)

CHINESE MEDICINAL USES:

INDIAN (AYURVEDIC) USES:

HOMOEOPATHIC MEDICINE:

PREPARATION & DOSAGES:

COLLECTING & DRYING:

VETERINARY MEDICINE:

MATERIAL USES:

PREPARING THE BARK FOR USE:

BASKETS:

- 1979 Nancy Turner, Plants in B.C. Indian Technology, 194. "BASKETRY: They (the THOMPSON) sometimes used the young twigs for basket imbrication, while the OKANAGAN made cordage from the bark of young alders and occasionally used the roots as a substitute for red cedar roots in making coiled baskets. They were peeled, split, and soaked in water to make them pliable for weaving. The CARRIER wove fishing nets of alder bark, then dyed them black by boiling them in their own juice." (137-194)

BURIAL PRACTICES:

COSMETICS:

- 1979 Nancy Turner, Plants in B.C. Indian Technology, 194. "PERFUME: The Thompson used the fragrant stems of mountain alder as a scent or perfume." (137-194)

- 1979 Nancy Turner, Plants in B.C. Indian Technology, 193. "TATTOO: The SAANICH, a Straits Salish group, mixed red alder bark with cedar bark and Indian paint fungus, burned them to a powder, and inserted this under the skin with a needle, as a tattoo. They also put the bark in steaming pits to colour their camas bulbs pink. The HAIDA used the charcoal from the wood for tattooing and put about half a cup of the bark in their wash water as a bleach substitute." (137-193)

CULTIVATION:

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- 1979 Nancy Turner, Plants in B.C. Indian Technology, 190. "Alnus rubra: Red Alder is a common "Pioneer" species of recently logged areas." (137-190)

- 1985 Frances Graham, Plant Lore of an Alaskan Island, 129. "Alder is the first tree to grow back on a logged or burned area; it was the first tree to grow in Alaska after the glaciers retreated. It served an important purpose in future plant development because it adds nitrogen to the soil." (339-129)

DYEING:

- 1633 John Gerarde, The Herball or general history of plants gathered by John Gerarde of London, Master in Chirurgie. 1477-78. "The barke is much used of poor country Diers, for the dying of course cloth, cappes, hose, and such like into a blacke colour, whereunto it serveth very well." (369-181)

- 1748 Peter Kalm, Travels in North America, Philadelphia October the 14th. 104. "I found afterwards, myself, that the alders in some places of Canada were but little inferior to the Swedish ones. Their bark is employed here in dyeing red and brown." (369-181)

- 1931 M. Grieve, The Modern Herbal, 17. *Alnus glutinosa* (Common Alder). "DYEING: The bark is used as a foundation for blacks, with the addition of copperas. Alone, it dyes woollens a reddish colour (Aldine Red). The Laplanders chew it, and dye leathern garments with their saliva. An ounce dried and powdered, boiled in three-quarters of a pint of water with an equal amount of logwood, with solution of copper, tin, and bismuth, 6 grains of each, and 2 drops of iron vitriol, will dye a deep boue de Paris. Both bark and young shoots dye yellow, and with a little copper as a yellowish-gray, useful in the half-tints and shadows of flesh in tapestry. The shoots cut in march will dye cinnamon, and if dried and powdered a tawny shade. The fresh wood yields a pinkish-fawn dye, and the catkins a green." (141-17)

- 1945 Jacques Rousseau, Le folklore botanique de Caughnawaga, Etudes Ethnobotaniques quebecoise. Contrib. Inst. Bot. Univ. Mon. 55;7-74. MOHAWK transl. pg 84. "The alder was used formerly to make a brown dye for wool, more intense than that

obtained with labrador tea." (369-183)

- 1977 Judy McGrath, Dyes From Lichens & Plants, 55. "DYEING (leaves): Colors ranging from Tan, caramel, yellow, gold, red, green, brown, gray, and black. (111-55) Use method 3. Crush leaves by hand before using as a dyebath. Use 1 to 2 lbs of leaves per pound of fiber. Place leaves in a pot and cover with lukewarm water. Let stand several hours or overnight. Bring slowly to a boil and simmer 30 minutes for small leaves or 45 minutes to 1 hour for large leaves. Strain leaves out of dyebath and cool. Add clean, wet, alum-treated fiber and simmer 30 minutes or more, depending on desired shade of color. Remove fiber and rinse well. The dyebath from leaves can be used several times. The larger, tougher leaves available to most dyers will need to be cut or chopped." (111-50)

- 1977 Judy McGrath, Dyes From Lichens & Plants, 55. "DYEING (Bark): Colors Tan to gray-brown. (111-57) You will usually need 1 lb. of any root or bark to dye 1 lb. of fiber. Place finely chopped roots or bark in a pot and cover with lukewarm water. Let stand overnight or longer. Bring to a boil and simmer at least 8 to 12 hours. The dyebath can be turned off overnight and reheated the next day, simmering for another day to obtain a stronger color. The roots and bark can often be re-used a second time for a weaker but still effective, pleasant dyebath. Strain the roots or bark from the dyebath. Add clean, wet, untreated or alum-treated fiber and simmer for 8 hours or more. The dyebath can be turned off overnight with the fiber remaining in the bath and reheated the next day, thus getting as strong a color as possible from the dye." (111-52)

- 1985 Frances Graham, Plant Lore of An Alaskan Island, 171. "Tree bark should be collected in the spring, as the sap is highest then. Gather from young trees that are free of moss. (Do not peel bark all the way around the tree - this will kill the tree.) Dry the bark. It can then be kept for several years if stored in a dry place. As almost all tree barks contain tannic acid, the addition of iron salts gives dark colors. Alder (*Alnus crispa*): Gather branches and strip off outer and inner bark. (Use 2 pounds bark to 4 gallons water.) Cut bark into small strips and soak overnight in water to cover. Boil for 2 hours in the same water. Strain, add enough water to make 4 gallons, add 1 pound yarn, and simmer 1 hour. No mordant: Brown. With 2 ounces alum mordant (2/3 ounce cream of tartar): Shades varying from ice green to orange. With Copperas mordant: Gray brown. (339-171)

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DYEING: (NATIVE)

- 1916 F.W. Waugh, Iroquois Foods and Food Preparation, Mem. 86 Anthrop. ser. 12 Can. Dept. Mines. Ottawa. pg. 68. "Decoctions of hemlock bark and roots, also the bark of the alder, are used in colouring spoons and other wooden articles a deep red. These become further darkened and polished by usage." (369-182)
- 1923 Huron H. Smith, Ethnobotany of the Menomini, Bull. Pub. Mus. Milwaukee 4;1-82, page 26. "Alder bark is boiled to yield a reddish brown dyestuff. The cloth or other material to be colored is immersed in the boiling liquid." (369-182)
- 1926-27 Frances Densmore, Uses of Plants by the Chippewa Indians, Forty-fourth annual Report of Bur. Am. Ethn. Smithsonian Inst., page 373. "Yellow dye, light yellow. Use only the inner bark of the alder, though both inner and outer bark can be used. Either green or dried bark can be used. Pound the bark until it is in shreds and steep it, putting in the material while the dye is hot and letting it boil up. Nothing is needed to set the color." (369-182)
- 1932 Huron H. Smith, Ethnobotany of the Ojibwe, Bull. Pub. Mus. Milwaukee 4;348-433, page 425. "The Flambeau Ojibwe use the inner bark for dyeing a light yellow, or with other ingredients to get a red, red brown or black. In occasional cases where sweet grass is dyed yellow, the woman chews the inner bark and draws a wisp of sweet grass through her mouth weaving it in for color." (369-182)
- 1935 Diamond Jenness, The Ojibwa Indians of Parry Island, their social and religious life. Nat. Mus. Can. Bull. 78 Anthrop. ser. 17 Ottawa. Parry Island OJIBWA Lake Huron 114. "Red dye from boiled alder bark." (369-183)
- 1945 Marcel Raymond, Notes ethnobotaniques sur les Tete de Boule de Manouan. transl. 119. "The alder was the only dye plant known to Neweiacitic. The inner bark gives a clear yellow." (369-183)
- 1945 Erna Gunther, Ethnobotany of Western Washington, 20. "QUILEUTE: Dyed with alder

juice to give it a rich red-brown color." (46-20)

- 1973 Nancy Turner, The Ethnobotany of the Southern Kwakiutl Indians, 279. "DYEING: The bark was chewed and boiled in urine to make a bright red dye for staining canoes, masks, totem poles, cedar bark mats and ceremonial cedar bark rings (Boas, 1909; Brown, 1969; Cranmer, 1969). Many Kwakiutl myths describe how a person feigned bleeding by chewing alder bark and spitting out the juice (Boas, 1909)." (150-279)
- 1975 Catharine McClellan, My Old People Say, Part 1, 315. "TAGISH: Alder bark used for dark wine colour." (296-315)
- 1979 Nancy Turner, Plants in B.C. Indian Technology, 192. "Alders were extensively utilized by B.C. Indians, for dyeing, for carving, and for fuel. As a source of dye they are known to native peoples across the continent. In the Province (B.C.) virtually every Indian group used alder in this capacity. Red alder was used along the Coast and in some areas of the Interior where it could be found; otherwise mountain alder or occasionally Sitka alder was used. Both wood and bark were employed. Colours ranging from almost black to dark brown to russet to bright orange-red were obtained by varying the preparation techniques. Basket materials, cedar bark, ropes, fishing nets and lines, wooden articles, mountain goat wool, feathers, porcupine quills, human hair, and buckskin were all dyed with alder. It was even used for tattooing." (137-192)
- 1979 Nancy Turner, Plants in B.C. Indian Technology, 192. "NATIVE DYEING: The simplest method of preparing alder dye was to boil the bark and/or wood in a small quantity of water, and then to steep the material to be coloured in the solution. This procedure usually yielded a reddish-brown dye, suitable for fishing nets and basket materials. It had the effect of making nets and lines invisible to fish under water. The HAIDA, NOOTKA, and KWAKIUTL produced a brighter red for cedar bark by chewing the alder bark, spitting the saliva into a container, and bringing it to a boil by adding red hot rocks." (137-192)
- 1979 Nancy Turner, Plants in B.C. Indian Technology, 193. "NATIVE DYEING: The KWAKIUTL, TLINGIT, and BELLA COOLA often used urine as a mordant to obtain a bright red dye. The TLINGIT carved vessels out of red alder trunks and filled them with children's

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urine, allowing it to stand for a time until it absorbed the red colouring from the alder wood, then dipped the material to be dyed into the solution. The BELLA COOLA used the following procedure: In summer they used scrapings from the inner bark, in winter large pieces of the bark with the wood attached. They placed water into a vessel, then added urine and alder bark. Using red hot rocks they heated this mixture gradually to the boiling point, stirring it occasionally. When it boiled, some of the bark was taken out and more added. This process was continued until the solution was a deep red. It was allowed to stand for a few minutes, then the cedar bark or other material to be dyed was put in, gently worked until saturated, and finally hung up to dry. Several pieces of cedar bark could be dyed in the same solution provided more bark and stones were added at intervals to maintain the proper strength and temperature. T.F. McIlwraith, who recorded this procedure in his book, *The Bella Coola Indians* (1948), stated that it was still being followed in the 1940's and that even at that time hot rocks were used to heat the solution, because it was believed that heating on a stove would produce inferior results." (137-193)

- 1979 Nancy Turner, *Plants in B.C. Indian Technology*, 194. "TREATMENT OF HIDES: The Interior peoples commonly used alder bark to treat animal hides. The LILLOOET rubbed skins on peeled alder trees to darken their colour from yellowish to reddish-brown. The OKANAGAN simply rubbed them with the fresh bark. They made a concentrated red paint by boiling the wood in water for a long time, until the liquid had nearly evaporated, then adding a few drops of fish oil, stirring constantly, and finally removing it from the heat and powdering it on a piece of alder bark. This could be used on wood and hides, or as a body paint. The SHUSWAP sometimes mixed the bark with Saskatoon berries to make a dark purple dye for hides. They made a black dye by boiling the bark with roasted iron pyrites. The regular reddish-brown colouring, reportedly the most commonly used pigment of the SHUSWAP, was employed for dyeing gambling sticks, porcupine quills, hair, feathers, straw, dressed skins, and buckskin clothes. These items were simply soaked in an alder bark solution, taken out and wrung or squeezed dry, then resoaked until the desired shade was obtained. The FLATHEAD of Montana used alder dye to tint moccasins yellow, feathers reddish-brown, and human hair a flaming red." (137-194)

CORDAGE:

CHARCOAL (GUNPOWDER):

- 1931 M. Grieve, A Modern Herbal, 17. "The branches make good charcoal, which is valuable for making gunpowder." (141-17)
- 1975 Dr. Triska, The Hamlyn Encyclopedia of Plants, 47. "Charcoal from the wood is used in the manufacture of gunpowder." (119-47)

FODDER:

- 1586 Rembert Dodoens, Kruidboeck (Dutch Herbal), "The leaves (Black Alder) be good fodder or feeding for kine (cows), and cause them to yeeld store of milke." (345-59)
- 1931 M. Grieve, A Modern Herbal, 18. *Alnus Glutinosa*. "Horses, cows, sheep and goats are said to eat it, but swine refuse it. Some state that it is bad for horses, as it turns their tongues black." (141-18)

INK:

IMPLEMENTS:

- 1633 John Gerarde, The Herball or general history of plants gathered by John Gerarde of London, Master in Chirurgie. 1477-78. "The European alder...the wood or timber is not hard, and yet it will last and indure verie long under the water, yea longer than any other timber whatsoever: wherefor in the fenny and soft marish grounds they do use to make piles and posts thereof, for the strengthening of the walls and such like. This timber doth also serve very well to make troughs to convey water instead of pipes of lead." (369-181)
- 1931 M. Grieve, The Modern Herbal, 17. *Alnus glutinosa*. "The trees are often grown in coppices, which afford winter shade for stock on mountain grazings without appearing to injure the grass beneath, and can be cut down for poles every nine or ten years. The wood is much used. When young it is brittle and very easily worked. When more mature it is tinted and veined; in the Highlands of Scotland it is used for making handsome chairs, and is known as Scottish mahogany. It has the quality of long endurance under water, and



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so is valuable for pumps, troughs, sluices, and particularly for piles, for which purpose it is said to have been used in sixteenth-century Venice and widely in France and Holland. The roots and knots furnish good material for cabinet-makers, and for the clogs of Lancashire mill-towns and the south of Scotland the demand exceeds the supply, and birch has to be used instead. It is also used for cart and spinning wheels, bowls, spoons, wooden heels, herring-barrel staves, etc. On the Continent it is largely used for cigar-boxes, for which its reddish, cedar-like wood is well adapted. After lying in bogs the wood has the colour but not the hardness of ebony." (141-17)

- 1975 Dr. Triska, The Hamlyn Encyclopedia of Plants, 47. "The wood of the alder is soft, light and easy to split. Originally white, it changes its colour quickly to red if exposed to the air. The wood is rich in tannic acid and therefore resistant to water; it is often used in constructions which are placed in or near water." (119-47)

- 1975 Dr. Triska, The Hamlyn Encyclopedia of Plants, 47. "The wood is also used for woodcuts, pencils, ornamental boxes and bowls." (119-47)

#### PEST CONTROL:

- 1833 George Howard, A rare and choice collection of well-tried and invaluable recipes for healing human beings and likewise horses, cows, sheep, dogs &c.&c, Quebec 44. "To Kill Fleas and Bugs. Cover the floor with leaves of alder gathered while the dew hangs upon them. - Adhereing to these, they are killed." (369-182)

- 1931 M. Grieve, A Modern Herbal, 17. "They are clammy, and if spread in a room are said to catch fleas on their glutinous surface." (141-17)

#### NATIVE WOOD USES:

- 1973 Nancy Turner, The Ethnobotany of the Southern Kwakiutl Indians, 279. "CARVING: Alder wood is straight grained and easy to carve. The Kwakiutl used it to make dishes of all sizes, from small bowls for individuals to large tubs for tribal feasts. The dish maker would select a straight tree six spans at the base, with no low branches, chop it down, and cut it to the desired length. He would then split the log down the middle, and

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carve the dish with an adze in such a way that the heartwood formed the bottom of the dish. The rim of the dish was painted with charcoal mixed with oil (Boas, 1921). Alder wood was also used to carve spoons, rattles, masks, headdresses, nose and ear pendants, and labrets (Boas, 1909). The rotten wood was used to carve figures and for smoking salmon (Boas, 1935). Alder wood was an excellent fuel because of its hot smokeless flame (Boas, 1921). (150-279)

- 1979 Nancy Turner, Plants in B.C. Indian Technology, 194. "CARVING: The absence of pitchy flavour in the wood and its smooth, evengrained texture made it ideal for carving spoons, and serving platters. Some of the finest examples of Northwest coast bowls and feast dishes are made of red alder. It was also used to carve rattles, masks, head-dresses, arrowpoints, pendants, labrets (ornaments worn on a pierced lower lip), canoe bailers, and paddles. In addition, the HAIDA carved spoons, small dishes, masks, and rattles from the smaller Sitka alder, and the KOOTENAY made pipe stems from mountain alder twigs." (137-194)

- 1979 Nancy Turner, Plants in B.C. Indian Technology, 194. "FUEL: It (alder) makes excellent fuel and is considered one of the very best woods for smoking salmon and cooking deer meat because it has a low pitch content and does not impart any unpleasant flavour to the food. The green, fresh wood was not as satisfactory as seasoned or partially rotted wood for this purpose. The CARRIER put alder bark chips in with the hot rocks at the bottom of steam-cooking pits; they would burn for many hours with a slow, steady heat. The OKANAGAN used the burnt ashes of alder and birch to clean their teeth." (137-194)

SMOKING MIXTURE:

TANNING:

- 1931 M. Grieve, A Modern Herbal, 17. "Alnus glutinosa (Common Alder): The leaves have been used in tanning leather." (141-17)

- 1979 Nancy Turner, Plants in B.B. Indian Technology, 194. "The SHUSWAP and THOMPSON steeped buckskins overnight in a cooled solution of alder bark, colouring and tanning them at the same time. (137-194)

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WRITING OR ART MATERIAL:

HISTORY & BELIEFS:

HISTORICAL RECORDS:

SPIRITUAL BELIEFS:

NOMENCLATURE:

RELATIONSHIP TO OTHER LIFE-FORMS:

- 1975 Dr. Triska, The Hamlyn Encyclopedia of Plants, 46. "Coral-like outgrowths form on the roots in clusters. These contain symbiotic bacteria which absorb nitrogen from the air and convert it into nitrogenous compounds. These are subsequently absorbed by the cells of the alder." (119-46)

AGE:

STORIES:

- 1979 Nancy Turner, Plants in B.C. Indian Technology, 193. "Several of the Coastal groups have mythical traditions containing episodes in which the hero of a story feigns bleeding at the mouth by chewing pieces of red alder bark and letting the saliva ooze from his lips, in order to fool his enemies into believing he was dead." (137-193)

ILLUSTRATIONS:

- Good B/W of all 4 species (287-72)
- Excellent B/W of 4 species + distribution map (342-370)
- Good color illustration of *A. glutinosa* (119-47)

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<<WARNING>>

The information in these articles is primarily for reference and education. They are not intended to be a substitute for the advice of a physician. The instructor does not advocate self-diagnosis or self-medication; He urges anyone with continuing symptoms, however minor, to seek medical advice. The reader should be aware that any plant substance, whether used as food or medicine, externally or internally, may cause an allergic reaction in some people.

Maurice L.B. Oates Jr., M.A.  
(Ya'-ga-hlo'o)

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