

Bog Blueberry / Alpine Blueberry

Botanical Name: *Vaccinium uliginosum* L.

Family: Ericaceae – Heath family

Common Names: bog blueberry, alpine blueberry, lowbush blueberry, bilberry

Indigenous Alaskan Names: *asiavik* [Inupiaq]; *qiuq, curaq* [Yup'ik]; *cuawak* [Alutiiq]; *ugiidgin* [Unangam Tunuu (Aleut)]; *kanat'a* [Tlingit]; *nilyagh* [Deg Xinag Athabaskan]; *gega, gegashla* [Dena'ina Athabaskan]; *gege, nelyaage* [Koyukon Athabaskan]; *gigi gheli* [Ahtna Athabaskan]



Vaccinium uliginosum berries

Photo by Mary Hopson

Taxonomic synonyms in literature: *Vaccinium uliginosum* L. ssp. *alpinum* (Bigelow) Hultén, *Vaccinium uliginosum* L. ssp. *microphyllum* Lange, *Vaccinium uliginosum* L. var. *salicinum* (Cham.) Hult.

Description: Low shrub, 6"-16" high, prostrate and mat-forming, or erect; strongly branched, the branchlets rounded in cross-section. Leaves dark green above and paler underneath, less than ¾" long, leathery, obovate, oblanceolate, or oval with smooth margins, broadest above the middle and strongly veined underneath. Leaves are deciduous, turning red-purple before falling. Flowers dark pink to white-pink, egg or urn shaped with 4 (sometimes 5) lobes. Fruit a dark blue round or barrel shaped berry covered with fine waxy bloom, 5-10 mm. in diameter.

Related species: *Vaccinium caespitosum* (dwarf blueberry, dwarf bilberry): Dwarf blueberry is another low-growing shrub similar to bog blueberry. It may be distinguished from bog blueberry by its leaves, which are shiny green on both sides, and its finely serrated leaf margins. *Vaccinium ovalifolium* (early blueberry, oval-leaf blueberry, blue huckleberry): This and the following species are taller shrubs (24"- 48") than bog blueberry or dwarf blueberry. Both have stems that are angled in cross-section. Early blueberry has flower stalks that are short and curved. *Vaccinium alaskaense* (Alaska blueberry): This species is even taller than early blueberry with larger leaves. It has flower stalks that are straight and longer than early blueberry.

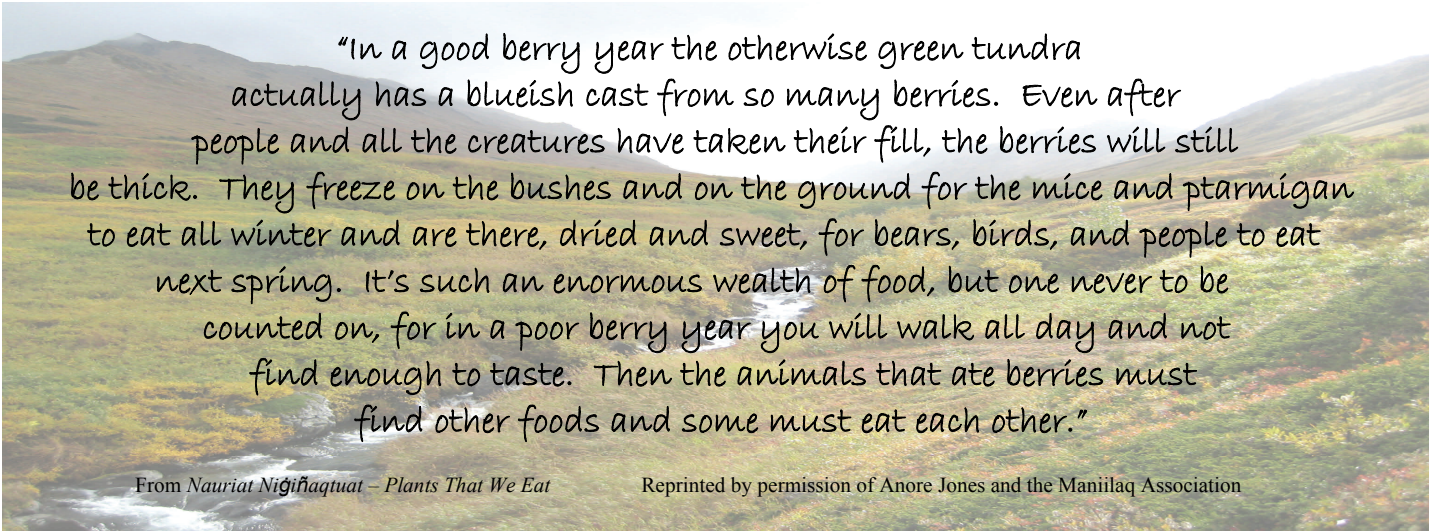
Range: All of Alaska except portions of the northern coastal plain and western Aleutians. Bog blueberry is the most widespread of Alaskan blueberries.

Habitat: Subalpine heath, dry to moist rocky alpine tundra, low elevation bogs, open woods.

Regeneration: Plants are perennial, producing new growth each spring. Natural regeneration is mostly by adventitious rooting of above-ground stems where they contact the soil. Greenhouse propagation is mainly by seeds which require a cold moist stratification period to germinate. Propagation by stem cuttings has been successful using current year's growth with bottom heat and 0.3% IBA powder.

Part of Plant Used: Berries – food. Leaves – tea, medicinal.

Harvest times: Mid-July to September



"In a good berry year the otherwise green tundra actually has a blueish cast from so many berries. Even after people and all the creatures have taken their fill, the berries will still be thick. They freeze on the bushes and on the ground for the mice and ptarmigan to eat all winter and are there, dried and sweet, for bears, birds, and people to eat next spring. It's such an enormous wealth of food, but one never to be counted on, for in a poor berry year you will walk all day and not find enough to taste. Then the animals that ate berries must find other foods and some must eat each other."

From *Nauriat Niġiñaquat – Plants That We Eat*

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Harvest methods: Ripe berries are collected by hand or with the aid of a hand-held berry rake – a scoop device with comb-like teeth in the front. See “Points of Concern” below when using these berry harvest devices. Mechanized harvesters have been developed for commercial production of similar species where the berries occur in clusters; however, *V. uliginosum* berries are more widely dispersed on the branchlets, negating its effectiveness. Choose collection containers that will not smash berries or encourage spoilage. Do not harvest more than 1/3 of the berries in the collection site.

Preservation: Berries are eaten fresh, or frozen for later consumption. Native Alaskan methods of preservation include layering blueberries with sugar in a barrel, or mixing with seal oil, lard, or vegetable oil. Jams, jellies, syrups, and use in baked goods are common ways of preserving blueberries. Dehydration is another option for preserving blueberries.

Processing and Storage: Collected berries should be kept dry and cool until delivered for processing. Check with your buyer or processor for specific requirements. Dried blueberries maintain high levels of antioxidants.

Toxicity or Health & Safety Cautions for Harvesters: None.

Land Access for Harvesting: Always obtain permission from the landowner before harvesting, including Native Claims Settlement Act lands. On state general lands, an over-the-counter permit is necessary for harvesting blueberries for other than personal or subsistence use. This permit may be obtained from the Alaska Department of Natural Resources, Division of Mining, Land, and Water.

Points of Concern: Bog blueberry produces its flowers from buds that form the previous year. Blueberry harvesters should be careful not to break off these buds. About $\frac{3}{4}$ of the biomass of bog blueberry lies just below the surface of the ground - its roots and rhizomes. Activities that impact the surface layers of the soil can reduce new growth and limit subsequent harvests.

Official Monographs:

Jacquemart, Anne-Laure. 1996. *Vaccinium uliginosum* L. In *Journal of Ecology*. 1996. 84, 771-785.

Note: This monograph is confined to the British Isles and northern Europe.

Vander Kloet, S. P. 1988. *The Genus Vaccinium in North America*. Research Branch, Agriculture Canada, Publication 1828.

Selected References:

Graae, Bente Jessen; Inger Greve Alsos; and Rasmus Ejrnaes. 2006. *The Impact of Temperature Regimes on Development, Dormancy Breaking, and Germination of Dwarf Shrub Seeds from Arctic, Alpine, and Boreal Sites*. In: *Plant Ecology*, DOI 10.1007/s11258-008-9403-4. © Springer Science+Business Media B.V. 2008.

Holloway, Patricia S. 2006. *Managing Wild Bog Blueberry, Lingonberry, Cloudberry and Crowberry Stands in Alaska*. USDA Natural Resources Conservation Service / University of Alaska, Fairbanks.

Holloway, Patricia S. 2007. *How to Germinate Seeds of Alaska Wild Blueberries and Lingonberries (Lowbush Cranberries)*. *Georgeson Botanical Notes* No. 34. Georgeson Botanical Garden, University of Alaska, Fairbanks.

Holloway, Patricia S.; Roxie Dinstel; and Roseann Leiner. 2006. *Antioxidants in Alaska Wild Berries*. *Georgeson Botanical Notes* No. 35. Georgeson Botanical Garden, University of Alaska, Fairbanks.

Hultén, Eric. 1968. *Flora of Alaska and Neighboring Territories*. Stanford, CA: Stanford University Press.

Jones, Anore. 1983. *Nauriat Nigiñaqtuat – Plants That We Eat*. Kotzebue, AK: Anore Jones, Maniilaq Association.

Kari, Priscilla Russell. 1995. *Tanaina Plantlore: Dena'ina K'et'una*. 4th ed. Alaska Native Language Center, Univ. of Alaska, Fairbanks; Alaska Natural History Association; National Park Service.

Shevtsova, A.; A. Ojala; S. Neuvonen; M. Vieno and E. Haukioja. 1995. *Growth and Reproduction of Dwarf Shrubs in a Subarctic Plant Community: Annual Variation and Above-Ground Interactions with Neighbors*. *Journal of Ecology* 1995, **83**, 263-275.

Stanek, Sheryl and Barbara Butcher. 2007. *Collecting and Using Alaska's Wild Berries and Other Wild Products*. Cooperative Extension Service Pub. FNH-00120. University of Alaska, Fairbanks.

Trehane, Jennifer. 2004. *Blueberries, Cranberries, and Other Vacciniums*. Royal Horticultural Society Plant Collector Guide. Timber Press, Portland, OR.



photo by Lee Tibbitts, USGS

Compiled by Donald R. Ross
State of Alaska
Plant Materials Center
5310 S. Bodenbug Spur Rd.
Palmer, AK 99645
(907) 745-4469