

# Huckleberries and Bilberries

Danny L. Barney, Ph.D.

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For more information on these crops and the huckleberry industry, check out the **Western Huckleberry and Bilberry Association**.



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## What are Huckleberries and Bilberries?

Confused about what a huckleberry or bilberry is? Don't feel alone. These common names are applied to many different plants growing around the world.

### Eastern Huckleberries

Two species commonly called huckleberries are found in eastern North America. Black huckleberry (*Gaylussacia baccata*) is widespread from the southern United States into Canada. Box huckleberry (*G. brachycera*) is found in the entral Appalachians. The fruits resemble blueberries and western huckleberries, but the flavor is typically poor to fair and the fruits contain ten large, hard seeds. Although widespread in eastern North America, the fruits have not proven commercially important. When it came time to domesticate blue fruits for eastern North America, breeders chose highbush, rabbiteye, and lowbush blueberries. Like western huckleberries and domestic blueberries and cranberries, *Gaylussacia* huckleberries are acid-loving plants found in the heath family (Ericaceae).

The University of Idaho is not conducting research on eastern huckleberries.

### **Garden Huckleberries**

"Garden huckleberries" are closely related to tomatoes and nightshade, and are commonly available from garden seed suppliers. Whether they are "true huckleberries" or not depends on who you talk to. Suffice it to say, they do not resemble and are not related to eastern or western huckleberries. *Solanum melanocerasum* is most commonly called garden huckleberry, but other *Solanum* species are, as well. These annuals or short-lived perennials grow quickly from seed, producing abundant crops of blue berries in a few months. The flavor is often described as less than palatable and the berries can be toxic if not fully ripe and prepared properly. Commercial prospects are poor. For more information on garden huckleberries, [click here](#).

### **Western Huckleberries and Bilberries**

In western North America, the common names huckleberry, bilberry, whortleberry, and blueberry are largely interchangeable. It is not unusual for a single plant to be called by two or more of these names. It is also not unusual for a single plant to have many different common names. And contrary to some, these plants rate as true huckleberries.

Like their cousins in eastern North America, western huckleberries and bilberries are woody, perennial shrubs in the heath family. Also like their eastern cousins, western huckleberries and bilberries require acidic soils.

Unlike their eastern cousins, western huckleberries and bilberries are found in genus *Vaccinium*, as are domestic highbush and lowbush blueberries, as well as cranberries. Worldwide, there are approximately 400 species of *Vaccinium*, about 26 of them being native to North America. The 26 North American species are further divided into taxonomic sections. If you are interested in botany and taxonomy, read ***The Genus Vaccinium North America*** by Dr. S.P. Vander Kloet (Publication 1828, Canadian Government Publishing Centre).

Western huckleberries are in different taxonomic sections (*Myrtillus*, *Vaccinium*, and *Pyxothamnus*) than highbush and lowbush blueberries (*Cyanococcus*). Section *Myrtillus* species produce single berries in the axils of leaves on new shoots, while section *Vaccinium* and *Pyxothamnus* species produce small clusters of fruits. Highbush and lowbush blueberries develop relatively large clusters of berries on one-year-old wood, producing greater yields than do huckleberries. The section *Myrtillus* contains eight species. Sections *Vaccinium* and *Pyxothamnus* each contain one species. Some species are found not only in North America, but also in Europe, Asia, and Greenland.

While western huckleberry and bilberry species are not threatened with extinction, they do represent a dwindling resource. These crops were historically and remain today very important to some Native Peoples in western North America. They have been harvested commercially from the wild in the northwestern United States for more than a century for culinary products.

Today, market demand is increasing sharply, nationally and internationally, for both culinary and nutritional uses. At the

same time, harvests from wild stands have declined due to protection of endangered species, such as caribou and grizzly bear; forest management practices; and residential and commercial development. Increasing demands and declining wild harvests have led to overharvesting in some areas. This demand, however, also creates opportunities for commercial production on managed forest stands and in field cultivation. Both production systems can provide economic benefits to rural areas hurt by declining logging, mining, and other natural resource industries. Producing fruits from managed stands and field cultivation can also help protect sensitive environmental resources now being threatened by overharvesting.

Beginning in 1994, the University of Idaho began a program to better manage wild stands of huckleberries and to develop improved varieties and cultural practices that enable people to grow these crops as we do blueberries. Our research has two basic goals:

- Protect wild stands from overharvesting and preserve the berries for recreational pickers, tribal uses, and small-scale processors.
- Produce fruit commercially from managed forest stands and in field cultivation for processors and export.

For more information on our huckleberry research, [click here](#).



#### **Evergreen, Shot, or Blackwinter Huckleberry**

*Vaccinium ovatum* is native along the Pacific coast from southern California to Central British Columbia and belongs to *Vaccinium* section *Pyxothamnus*. This species is found in coniferous forests along roadsides and the edges of clearings. The bushes grow one to twelve feet tall and form dense stands. The stiff, serrated leaves make the plant commercially valuable for floral arrangements and foliage is harvested from wild stands. Evergreen huckleberry is occasionally grown on small farms along the Pacific coast. The black berries ripen late in the fall and contain very high concentrations of anthocyanins and antioxidants. Fruit yields are low. Adaptation to areas away from the coast remains to be determined.



#### **Red Huckleberry or Red Bilberry**

*V. parvifolium* is native to western Oregon, Washington, California, and British Columbia. Scattered populations have also been reported in interior and eastern British Columbia. This section *Myrtillus* species grows from sea level to 3,500 feet elevation in and around clearings. The bushes grow from three to more than twenty feet tall. The red, waxy fruits were popular in jams and preserves with all coastal Indian tribes, although the flavor tends to be sour. Berries can hang on the branches until early winter. The fruit contains low concentrations of anthocyanins and low antioxidant capacity, although it is rich in p-hydroxybenzoic acid. Red huckleberries would probably be among the easiest of the western species to cultivate and there is some commercial demand for the fruits.

#### **Grouse Whortleberry, Small-leaved Huckleberry, Dwarf Red Whortleberry, or Red Alpine Blueberry**

*V. scoparium* is native throughout western North America in alpine and subalpine meadows and at edges of coniferous woods from 3,000 to 11,000 feet elevation. It belongs to section *Myrtillus*. The rhizomatous plants grow three to eighteen inches tall, forming dense, extensive colonies. The berries are tiny with fair to good flavor. They are not harvested commercially due to small fruit size and soft berries.



#### **Dwarf Huckleberry, Dwarf Blueberry, Dwarf Bilberry, or Dwarf Whortleberry**

*V. caespitosum* is native throughout North America and belongs to section *Myrtillus*. The plants grow three to twenty-four inches tall and bear bright blue berries with excellent flavor. This species is adaptable and is found on dry or wet acidic sites from sea level to 10,000 feet. It can form extensive colonies. Although used for food and trade by Native Americans, commercial pickers do not presently target it due to small berry size.

The University of Idaho is presently conducting research on this species and developing cultivated varieties. The most likely immediate application will probably be for edible landscaping, rather than commercial fruit production.



### **Bilberry, Dwarf Bilberry, Dwarf Huckleberry, or Whortleberry**

*V. myrtillus* is native to North America, Europe, and Asia. It is found in open, moist woods, usually above 2,000 feet elevation in North America. In Europe, this species grows to near sea level and often forms large, dominant colonies. Plants grow six to twenty-four inches tall. The berries contain antioxidants and compounds beneficial to human health and are popular in Europe for culinary and medicinal use.

Although bilberry is not presently harvested commercially in North America, it is harvested commercially from the wild in Finland and other European countries. Limited attempts have been made to grow the crop in cultivation. Commercial prospects for medicinal and nutritional supplement products are promising.

The University of Idaho is working to develop cultivated varieties of this crop and we presently have 28 early or advanced selections in our cultivar development program.



### **Alpine Bilberry, Bilberry, Bog Bilberry or Tundra Bilberry**

*V. uliginosum* is native to North America, Europe, and Asia from 38° to 78° north latitudes and from sea level to 9,000 + feet elevation. It belongs to genus *Vaccinium* section *Vaccinium*. This species grows on wet or dry, acidic, organic or mineral soils and is often found at the edges of lakes and streams. The plants grow from several inches to about 36 inches tall, bearing single berries or clusters of two or three glaucous, blue berries one-fourth inch in diameter. The flavor is good, but yields are often low. Alpine bilberry is harvested from the wild for domestic and commercial use in Asia and northern Europe. Some attempts have been made in Europe to cultivate the crop. Alpine bilberry is not presently a commercially important crop in North America.

The University of Idaho is conducting research on this crop and we presently have one early selection in our cultivar development program.



**Cascade Huckleberry, Cascade Bilberry, or Blue Huckleberry**

*V. deliciosum* is native to California, Oregon, Washington, and British Columbia in alpine meadows and subalpine coniferous woods at elevations from 2,000 to 6,000 feet. It belongs to section *Myrtillus*. The plants grow six to thirty-six inches tall, although the procumbent canes can be six feet long or longer). The large, bright blue, glaucous berries have outstanding flavor and aroma due to high concentrations of esters and ketones. Yield potential may be low due to the fruit being borne only at the ends of the canes, although this problem should be manageable through occasional pruning.

Adapted to wet soils and often found at edges of ponds, Cascade huckleberry also grows on drier upland soils and can form dense heaths covering hundreds to thousands of square feet. The berries are very popular for commercial use, but the small, scattered populations limit available volumes.

University of Idaho is conducting research on this crop and we have three advanced selections in our cultivar development program.



**Oval-leaved Bilberry, Oval-leaved Blueberry, Alaska Blueberry, or Highbush Blueberry**

*V. ovalifolium* is native across the northern United States, southern Canada, and parts of Asia and Europe from sea level to 6,500 feet elevation at the edges of forest clearings and under light to moderate canopies. This species belongs to section *Myrtillus*. The plants grow 1.5 to 12 feet tall. The berries are glaucous blue and rich in anthocyanins and antioxidant capacity. The flavor is mild to sour due to low esters and ketones, but the crop has commercial applications for botanical extracts and nutritional supplements.

The University of Idaho is conducting research on this crop. We presently have 20 advanced selections of oval-leaved bilberry in our cultivar development program.



**Mountain Huckleberry, Mountain Bilberry, Black Huckleberry, Tall Huckleberry, Big Huckleberry, Thin-leaved Huckleberry, Globe Huckleberry, or Montana Huckleberry**

*V. membranaceum* is native to the northwestern U.S. and western Canada, with outcroppings in Arizona and Minnesota. It belongs in section *Myrtillus*. The plants are usually found in coniferous woods from 2,000 to 11,000 feet elevation, primarily in or around clearings. Canes grow one to nine feet tall. The bushes are rhizomatous (grow from underground stems) and transplant poorly from the wild.

The berries are red, blue, purple, black, or rarely yellow to white and have good to excellent flavor and aroma. Named Idaho's state fruit in 2000. The berries are harvested from the wild for commercial processors and represent the most widely harvested western huckleberry.

The University of Idaho is conducting research on this crop. We presently have 26 early or advanced selections in our cultivar development program.