

## HIGHBUSH BLUEBERRY

*Vaccinium corymbosum* L.

Plant Symbol = VACO

Contributed by: USDA NRCS National Plant Data Center & the Biota of North America Program



Botany Dept., NMNH, Smithsonian Institution  
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### Alternate Names

Northern highbush blueberry, southeastern highbush blueberry, Maryland highbush blueberry, black highbush blueberry, American blueberry, New Jersey blueberry, rabbiteye blueberry, swamp blueberry, tall huckleberry, mayberry, whortleberry

### Uses

Highbush blueberry is the major blueberry of commerce. It is extensively cultivated in New Jersey, Michigan, North Carolina, and Washington and to a lesser extent in Georgia, Florida, Indiana, Ohio, Pennsylvania, New York, Massachusetts, British Columbia, Ontario, Quebec, and Nova Scotia. In 1989, there were over 100,000 acres in commercial fruit production in North America. More than 50 cultivars highbush blueberry have been developed, primarily based on selections for commercially valuable fruit characteristics and seasonality. Good summaries of information relating to commercial fruit production are available (see Reiger 2000; Garrison 1998). A few selections are used in landscaping, especially where they might be planted in wet places and to attract wildlife.

The berries are eaten raw, smoke-dried, sun-dried, boiled, and baked -- in a wide variety of culinary settings. They have one of the highest concentrations

of iron of the temperate fruits. The fruits provide important summer and early fall food for numerous species of game birds, songbirds, and mammals.

### Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status, such as, state noxious status and wetland indicator values.

### Description

*General:* Heath family (Ericaceae). Native shrubs 2-3(-4) meters tall, crown-forming, forming dense colonies, the twigs warty and yellow-green, glabrous. Leaves deciduous, alternate, simple, narrow to broadly elliptic or ovate, 3.8-8.2 cm long, pubescent at least on the veins beneath, slightly waxy above, the edges smooth and ciliate to toothed. Flowers 8-10 in a cluster, 6-12 mm long, urn-shaped, white, with 5 petals. Fruits berries are 5-12 mm wide, blue to blue-black and many-seeded. The common name refers to the relatively tall stature of these plants.

*Variation within the species:* The highbush blueberry complex is highly variable and includes diploids, tetraploids, hexaploids, and various hybrid combinations. Recent studies (Vander Kloet in 1980 and 1988) have recommended treating the complex very broadly, using only the single name *V. corymbosum*, but not all authors have accepted that (for example, see Uttall 1986, 1987). As treated in the PLANTS database, the complex includes a group of interrelated species that have generally been recognized as "highbush" blueberries – these species\* (or hybrids), with synonyms, are listed below.

- \* *Vaccinium X atlanticum* Bicknell
- \* *Vaccinium corymbosum* L.  
synonym: *Vaccinium constablaei* Gray
- \* *Vaccinium formosum* Andr.  
synonym: *Vaccinium australe* Small
- \* *Vaccinium fuscatum* Ait.  
synonym: *Vaccinium arkansanum* Ashe  
synonym *Vaccinium atrococcum* (Gray) Heller  
synonym *Vaccinium fuscatum* Aiton
- \* *Vaccinium simulatum* Small
- \* *Vaccinium virgatum* Ait.  
synonym: *Vaccinium amoenum* Aiton  
synonym: *Vaccinium ashei* Reade

Highbush blueberry (*V. corymbosum*) hybridizes with one of the "lowbush" blueberries (*V. angustifolium* Ait.). Hybrids used in commercial fruit production are *V. corymbosum* X *V. darrowi* (southern highbush blueberry), (*V. arboreum* X *V. darrowi*) x *V. corymbosum* (pollen donor), and southern highbush blueberry hybrids X *V. simulatum*.

**Distribution:** Widespread in eastern North America, from Nova Scotia, New Brunswick, Quebec, and Ontario, Maine to Wisconsin, southward to South Carolina and Georgia and along the Gulf coast to Arkansas, Louisiana, east Texas, and Oklahoma. It has been introduced outside of its natural range for commercial berry production in Wisconsin, Washington, British Columbia, and New Brunswick. For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site.

#### **Adaptation**

Highbush blueberry grows best and most commonly in moist or wet peat of moderate to high acidity – in and around marshes, swamps, and lakes, often with extended flooding, as well as on floodplains, sheltered slopes, and ravines. It also occurs in drier areas – dunes and barrier beaches, rocky hillsides, oak woods, and pine woods. It occurs as a dominant or co-dominant on Appalachian "heath balds." All of these are more or less open sites, and because of its shade intolerance, highbush blueberry can be eliminated as shading increases with overstory cover. Flowering (February-)March-June, sporadically in the southern portion of its range; fruiting (April-)May-October, about 62 days after flowering.

#### **Establishment**

Highbush blueberry produces abundant fruit every year. Bees are the primary pollinator. The seeds may be widely dispersed in bird and mammal droppings, but germination success can be reduced up to 15% after passing through an animal gut. In the southern portion of its range, highbush blueberry seeds have thick seed coats and require cold stratification before germination. Those from northern regions produce thinner seed coats and germinate in the autumn after dispersal.

Some reports describe vigorous sprouting from the root-crown in highbush blueberry after top-kill by fire or disturbance, while others note that sprouting is uncommon. This perhaps reflects the variability (and perhaps the taxonomic uncertainty) that exists within the species complex. Plants also have been noted to occasionally produce root sprouts 1-2 meters away from the parent.

#### **Management**

Seeds or cuttings can propagate plants of highbush blueberry. Ideal soil for cultivation is moist, high in organic matter, highly acidic (4.5-5.5), and well drained. The plants grow in full sun to partial shade, but those in open sites produce more flowers and have brighter fall foliage color. Highbush blueberry (*V. corymbosum*) is self-fertile, but cross-pollination increases fruit set and results in larger, earlier berries with more seeds (see Agriculture Western Australia 2000). Other species of the complex are partially or completely self-incompatible.

#### **Cultivars, Improved and Selected Materials (and area of origin)**

These plant materials are readily available from commercial sources. Contact your local Natural Resources Conservation Service (formerly Soil Conservation Service) office for more information. Look in the phone book under "United States Government." The Natural Resources Conservation Service will be listed under the subheading "Department of Agriculture."

#### **References**

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