

Species brief

Vaccinium corymbosum High-bush blueberry



Source:

http://upload.wikimedia.org/wikipedia/commons/1/17/Vaccinium_corymbosum%2801%29.jpg

Blueberries are one of the most popular fruits in New England (and elsewhere), and picking them has long been a popular seasonal activity throughout the region. In fact, these berries are devoured by birds, bears, deer, raccoons, foxes, mice, and chipmunks — not to mention hornets and various tiny wasps and flies. Everyone likes blueberries!

The high-bush blueberry is widespread across New England, found in nearly every county in all six states. It mostly favors moist areas — bogs, wetlands, the edges of streams, ponds, and lakes. It can also be found in drier woods, however.

The flowers, in clusters of little waxy bells, are pollinated by bumblebees and some other bees as well. Plants in this family (the Heath family, or Ericaceae) are interesting because they are "buzz-pollinated" — the bee while working on the flower for nectar and pollen buzzes vigorously, which shakes the stamens so that they shed more pollen, which the bee collects for food. But some clings to the bee's fur, and so is carried to another flower.

As you might expect, blueberries get around by traveling inside some creature that has eaten the fruit. When the bird or animal defecates, the tough little seeds are accompanied by the nutrient-rich droppings, and make a start whether on stream bank or hillside.

Since humans have inhabited North America, high-bush blueberries have flowered in late spring, and the berries ripen by mid-to-late July. Research on this species in eastern Massachusetts,

Response type:

Range Shift ♦ Evolution ♦ **Behavior Change** ♦ Community Imbalance ♦ Extinction

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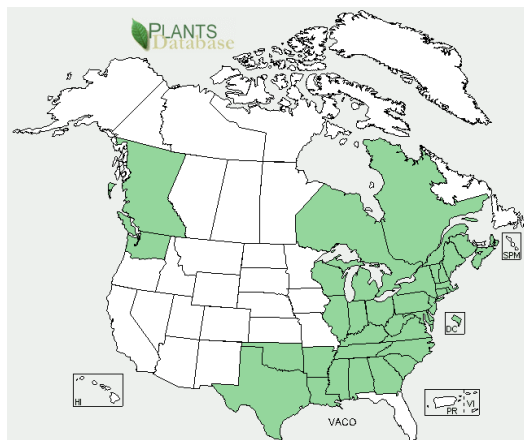
however, suggests that the warming climate is affecting the behavior of this species, particularly with regard to when it flowers.

Ecologists Abe Miller-Rushing and Richard Primack compared observations by botanists in Concord, Massachusetts over 150 years, starting with Henry David Thoreau, and they found that high-bush blueberry is now flowering as much as 21 days earlier (on average) than it did 150 years ago. Of course, from year to year this will vary, because the plants seem to flower earlier depending on how warm the temperatures are in January, and then again in March and April.

Still, that's a dramatic difference. With flowering time moving earlier as winters grow warmer, the plant's whole reproductive cycle may end up out of sync with typical rain patterns or the needs of birds or other organisms that depend on the delicious fruits. If buds start to open before the risk of frost is gone, a whole year's flowers can be damaged. Warmer temperatures also favor the spread of pests, such as the spot-winged drosophila (*Drosophila suzukii*).

More research needs to be done to see if high-bush blueberries are responding in a similar way all across the plant's range, and also to see how (if at all) the change in flowering time affects when berries are ready, and how *that* affects the creatures that dine upon them.

Range of high-bush blueberry



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