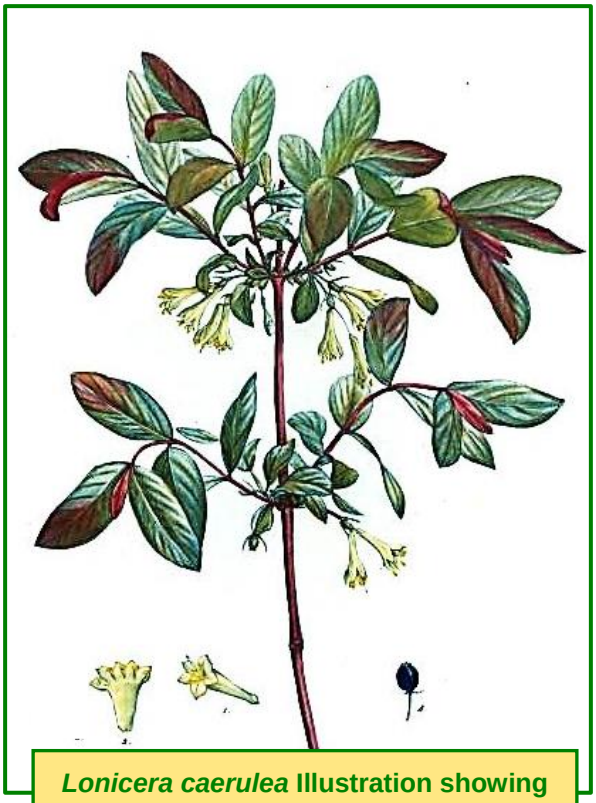
Scientific Name: *Lonicera caerulea* L. **Family:** *Caprifoliaceae*

Common Names: blue fly honeysuckle, mountain fly honeysuckle, sweetberry honeysuckle, honeyberry



***Lonicera caerulea* Illustration showing the flowers (left) and the fruit (right) of the plant.**

Plant Description

Low, erect shrub up to 1 m tall; hairy young stems; reddish brown to grey bark on older twigs; simple, opposite leaves mostly oblong and blunt at apex, 2 to 6 cm long, pubescent beneath; pairs of yellow flowers on short stalks from leaf axils enclosed at base by linear-subulate bracts longer than the ovaries, corolla 10 to 15 mm long (Moss 1994).

Fruit: Blue berry, up to 1 cm long covered with blue bloom, variable shape (round, oval, ovate, long and thin) (Moss 1994).

Seed: Flat, ovoid, brown 1.5 to 2.0 mm long (Moss 1994).

Habitat and Distribution

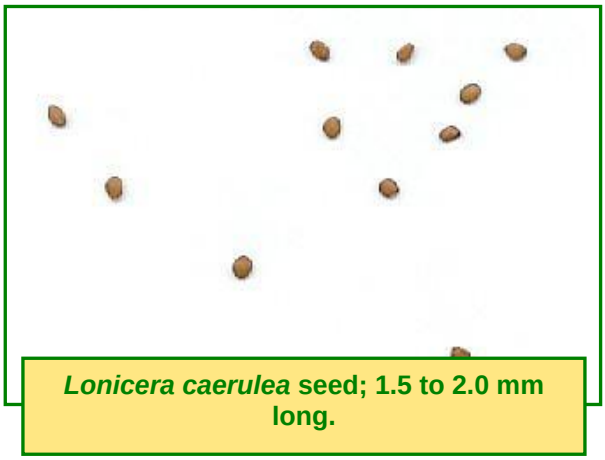
Found in swamps, bogs, treed fens and stream banks across the boreal forest of prairie provinces.

A non-dominant species often in association with high organic matter containing soils and where deciduous trees are doing poorly. Also along wetland edges and climax forests. Few plants usually seen at each location (Bors pers. comm.).

Soils: Adapted to acid soils (pH 5 to 7) and require mesic soils for optimum growth (Thompson 2006).

***Lonicera caerulea* flowers in bloom.**

Grows in soils with high organic matter (Bors pers. comm.).
Distribution: Circumpolar: British Columbia to California; Alberta to Newfoundland south to Minnesota, Wisconsin, Michigan, Pennsylvania (Moss 1983).



***Lonicera caerulea* seed; 1.5 to 2.0 mm long.**

Phenology
Flowers in May to June (Johnson et al. 1995).

Pollination
Cross-pollination and limited self-pollination. Honeybees, mason bees (*Osmia lignaria*) and bumblebees are recognized pollinators (Thompson 2006).

Seed Dispersal
Spread mainly by frugivorous birds (Munger 2005).

Genetics
2n=18, 36.

Seed Processing
Collection: Collect fruit by hand.
Seed Weight: 0.3929 to 0.6531 g/1,000 seeds (0.5263 g/1,000 seeds average).
Fruit/Seed Volume: 1,850 to 3,370 fruit/L, 2,450 fruit/L average (24,500 seeds/L fruit).
Fruit/Seed Weight: 3,410 to 5,880 fruit/kg, 3,940 fruit/kg average (43,500 seeds/kg fruit).
Average Seeds/Fruit: 10 seeds/fruit.
Harvest Dates: Late July.
Cleaning: Place fruit for a few hours in small polyethylene bag in aqueous solution containing several drops of pectinase enzyme. Massage softened fruit in bag until well disintegrated, and then decant solution containing mashed fruit (a second or third rinsing and decanting may be necessary). The seeds, being heavier, drop to the bottom of the container free of fruit tissues (Thompson 2006).
Longevity: Germination percentages drop after one year of storage (Smreciu and Gould 2009).

Propagation
Natural Regeneration: By seeds.
Germination: Smreciu et al. (2006) obtained 61% germination after 30 days with fresh seeds and 21% after 30 days with one year old seeds.
Pre-treatment: Four weeks cold stratification.
Micro-propagation: Can be propagated by tissue culture. Adding diluted mineral supplies to the micro-cuttings increases the root systems by allowing more root elongation. Continuous auxin treatments accelerate the induction of rooting and produce more primary roots (and possibly larger ones) and more lateral root branches (Karhu 1997).
Micro-propagation leads to high health status and multiplication rates (Dziedzic 2008). Higher root and shoot mass was attained in a study by Dziedzic (2008) when acclimatization took place in peat medium with Agro-AquaGel® supplements.
Softwood cuttings provide satisfactory results (Dziedzic 2008).

Aboriginal/Food Uses
Food: Fruit are eaten fresh, are very high in vitamin C content and possess antioxidant properties.
Medicinal: Used in cardiovascular disease therapy, reduces blood pressure, and can have curative effects for malaria and gastrointestinal diseases (Thompson 2006).

Wildlife/Forage Usage

Wildlife: Early ripening berries may be food source for birds and mammals (Bors pers. comm.).

***Lonicera caerulea* shrub showing upright nature.**

Commercial Resources

Availability: Not available commercially must be wild harvested.

Cultivars: Numerous horticultural cultivars are known but none are suitable for reclamation purposes.

Uses: Ornamental shrub, a potential new berry crop. Fruit are used in Japan for making juice, assorted candies, jam, jelly, gelatin, ice cream, yogurt, fruit cake, tarts, soda pop, wine, canned fruit, tea, berry bars, chewing gum (Thompson 2006).

Notes

Lonicera caerulea is listed as 99% intact (less occurrences than expected) in the Alberta oil sands region (Alberta Biodiversity Monitoring Institute 2014).

In Siberia, northern China, Hokkaido, and the northern island of Japan, where the edible-fruited subspecies are native, large quantities of berries are wild collected by local people. However, here in North America blue honeysuckle have inferior quality fruit. For this reason, the berry has not been a point of interest for fruit researchers or consumers here (Thompson 2006). Work is currently being done at the University of Saskatchewan on developing a gene bank of blue honeysuckle and breeding Canadian plants with those collected from Japan and Russia.

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Line Diagram: Pierre-Joseph_Redouté @Wikimedia commons.

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