

BWSR Featured Plant

Plant Name: Bottle Gentian (*Gentiana andrewsii*)

Plant Family: Gentian



Individual flowers are closed, resembling a bottle (Image by Dave Hanson)

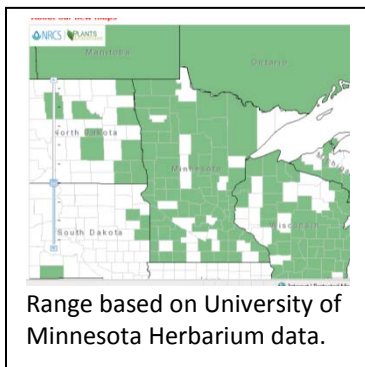
Bottle gentian is unique in that it has a close association with bumblebees to help ensure efficient pollination and seed production. The species has closed petals resembling a bottle that most insects are not able to enter. Bumblebees are strong enough to force the petals open so they can crawl inside, reaching the rich pollen and nectar. The petals are also a vibrant blue color that is easily visible by bumblebees, and the species blooms late in the season after many other plants attractive to bumblebees are done flowering. Gentians are slow to establish from seed, so they are most commonly planted from containers or from the separation of clumps. They add to the aesthetics of stormwater and shoreline plantings while also helping to sustain bumblebee populations.

Identification

Individual plants have multiple, unbranched stems that grow 1-2 feet tall. The leaves are waxy, lance shaped, and opposite on the stem. They are often whorled at the top of the stem, supporting a cluster of flowers. The species blooms late summer into fall and provide winter interest. The petals are closed together and are usually a vibrant violet color, but may also be shades of blue, pink or even white. The tiny seeds (280,000 seeds per ounce) have papery wings, and are carried by wind or water.



Less common light blue flower color (Image by Dave Hanson)



Range

The species is found in northeast United States and Canada. It is also found across most of Minnesota. It generally grows in full to partial sun in moist, rich soils but does not prefer standing water. The wetland indicator of the species is FAC in the Great Plains and FACW in the Midwest Region. It is found in wet meadows, wet prairies, ditches and shrub swamps, and moist forests. Two varieties are found in Minnesota, var. *dakotica* and var. *andrewsii*. Other gentiana species are found in Minnesota including *G. affinis*, *G. flavida*, *G. puberulenta* and *G. rubricaulis*. Around 400 species are found worldwide.

Uses

Primary Uses:

- Pollinator Habitat
- Erosion control
- Aesthetics

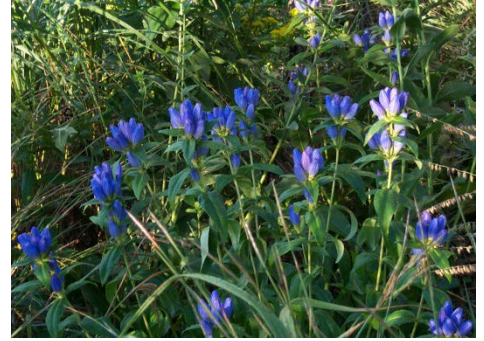
With a large taproot the species is effective at stabilizing soils. It is also a good source of nectar for bumblebees and is valued for its aesthetics in raingardens, biofiltration areas and shoreline plantings. As a medicine the species has been used for the treatment of snakebites, headaches, sore eyes, digestive disorders, and for stimulating the liver and gall bladder.

Planting Recommendations

Planting Methods

- Containerized plants
- Transplanting
- Broadcast Seeding

Bottle gentian can be difficult to grow from seed, as individual seeds are tiny and the seedlings grow slowly and are susceptible to drought. Each plant can produce a large number of seeds, so many seeds can be collected and be dispersed from one plant. When seeds are broadcast they are usually lightly raked and may be rolled as a final step to improve seed to soil contact. Most lakeshore, wet meadow and bioretention projects use containerized plants, as the species is too unpredictable from seed. The species can also be separated in early spring but doesn't usually divide into too many plants.



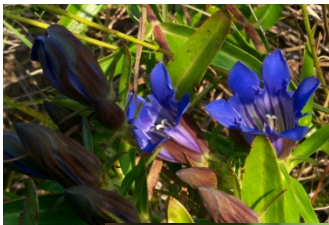
References

Minnesota Wildflowers: http://www.minnesotawildflowers.info/search?scientific_name=Gentiana&wh

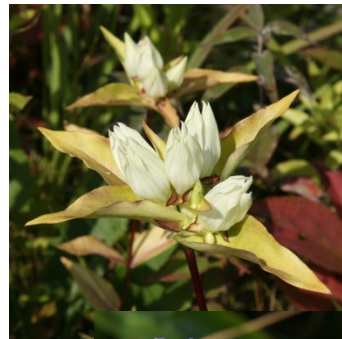
Lady Bird Johnson Wildflower Center: http://www.wildflower.org/plants/result.php?id_plant=GEAN

Minnesota Wildflowers: http://www.illinoiswildflowers.info/prairie/plantx/bt_gentianx.htm

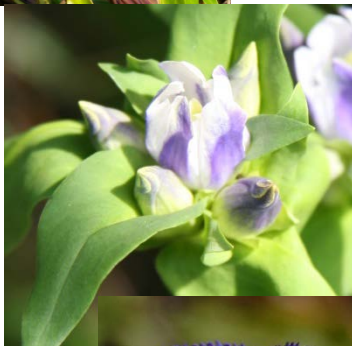
Similar Species



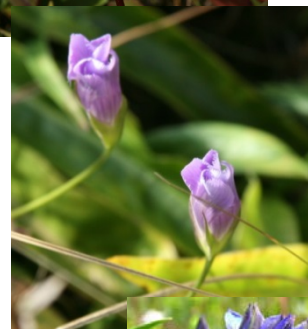
Gentiana puberulenta
(Prairie Gentian, image by Dave Hanson)



Gentiana flavida
(Yellowish Gentian, image by Dave Hanson)



Gentiana rubricaulis
(Rose-stemmed Gentian, image by Dave Hanson)



Gentianopsis crinita
(Fringed Gentian, Image by Dave Hanson)



Gentianopsis procera
(Lesser Fringed Gentian, image by Peter Dziuk Minnesota Wildflowers)



Gentiana affinis
(Pleated Gentian, image by Southwest Colorado Wildflowers)