

Meadow Closed Gentian, Meadow Bottle-gentian

Gentiana clausa

Family: Gentianacea

by Deborah VanDam

According to Pliny, the gentians are named after King Gentius of Illyria, who discovered the medicinal properties of a common species. In the past a tonic liquor was extracted from gentian roots.

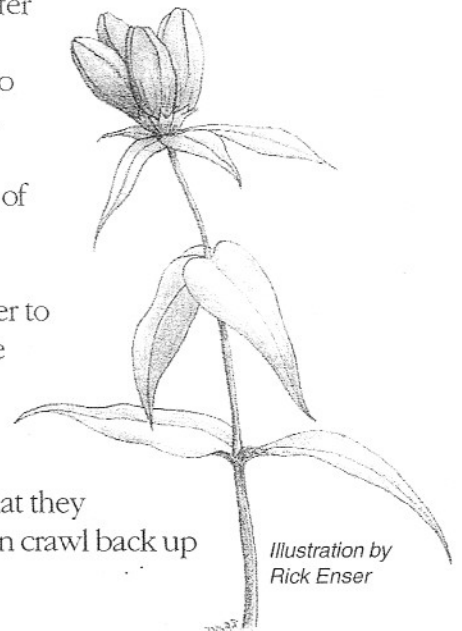
Many people associate gentians with the alpine regions of the world. In the mountains they cling tightly to the rocky soil and lift their spectacularly blue, trumpet-shaped flowers to the sun. This gentian, the Bottle-gentian (*Gentiana clausa*) is very different from the alpine ones. Its clusters of blooms, which resemble little inflated bottles, stay closed throughout their bloom period, always looking as if they're going to burst open at any moment. The Bottle-gentian produces the most vibrant blue-violet flowers in our local flora. It blooms in late summer and early fall.

Thoreau wrote, "bluer than the bluest sky, [Bottle-gentians] lurk in the moist and shady recesses of the banks." His description contains two of the most important conditions for gentians' growth: shade and plenty of moisture. They prefer growing along shady forest edges and stream banks and in wet meadows where they receive some shade from taller plants. They do need some sun, so part shade is the best place for them in gardens. Too much sun can cause the leaves to burn or bleach.

Gentiana clausa grows one to two feet high and has sessile leaves of light green. Its roots are white, fleshy, and thick. The plants resent disturbance but can be transplanted or divided in the spring. The flowers are borne in terminal clusters. Four petals are fused together to form the "bottle," which looks like an old-fashioned Christmas tree light. The petals have extra folds along their seams that act as expansion joints to allow bees to climb down into the flower. The bottle facilitates cross-pollination by leading bees down past the stigma as they search out the nectar at the base of the flower, so that they deposit on the stigma any pollen they may have carried in. They then crawl back up past the anthers, receiving a new dusting of pollen as they go by.

Description

The Bottle-gentian has violet-blue to purple, bottle-like, inflated flowers, closed at the tips and arranged in tight clusters atop leaf-bearing stems and in the axils of the upper leaves. The flowers are 1 to 1½ inches long. They bloom in late August and September. The leaves are 2 to 4 inches long, lanceolate, and sessile, with smooth edges. They form a whorl just beneath the flower cluster, but are opposite down the length of stem.



Plant Descriptions

Viburnum acerifolium Maple-leaved Viburnum

A sparsely branched shrub growing 4-6 feet tall and 4 feet wide. Leaves are opposite, simple, usually 3-lobed, similar to Maple leaves. They are round to cordate at base. Foliage is bright to dark green in summer and changes to reddish purple in fall. Flowers are flat-topped, terminal cymes, yellowish white, and all fertile. They appear in early to mid-summer and are 1 to 3 inches in diameter. They are held upright on long stalks. The fruit starts as red, ellipsoidal, drupes, which ripen to black by September. They may persist into winter.

Viburnum nudum Witherrod

A dense shrub, compact and rounded, that grows 5-6 feet tall with equal spread. Slightly arching branches. Leaves are opposite, simple, lance-shaped, 1 ½ to 3 ½ inches long to ¾ to 2 ¼ inches wide. Margins are smooth or finely toothed.

Dull, dark green foliage changes to orange-red, crimson and purple in the fall. Young leaves may have bronze or purple tint. The 2-5 inch diameter flowers are flat-topped, cymes, creamy white, appearing in June to early July. The fruit changes from green to pink then from red to blue before becoming black in September. Often all colors are present in the same cluster.

Viburnum dentatum Northern Arrowwood

A multi-stemmed dense, rounded shrub, 6-8 foot height with 6-15 foot spread. Leaves are opposite, simple, ovate, coarsely toothed, 2-4 inches long, 1 to 4 inches wide. The foliage is dark green and at times the leaves have a shiny appearance. Fall color yellow, glossy red to reddish purple. Flowers are flat-topped white cymes appearing in June. The fruit is a striking blue or black.

Viburnum lentago, Nannyberry, Sheepberry

Can be a large shrub or a small tree, 15 to 18 feet in height, but may reach up to 30 feet. Leaves are opposite, simple, elliptic, and finely toothed. Autumn color is purplish red. Flowers are small, white, flat-topped terminal cymes which are slightly fragrant, 2-5 inches across. Fruits are blue-black drupes and edible.



Nannyberry or Sheepberry

Propagation

All these species of Viburnums are easily reproduced from softwood cuttings or by layering. Softwood and semi-hardwood cuttings taken in June and July and treated with an appropriate rooting compound such as IBA (indolebutyric acid) are very successful. Layering is best done in the spring. Bend young, flexible stems onto the ground. Nick the underside of the stem. Press the nick gently into the soil. Cover with mulch or flat stone. Rooting should occur within six to eight weeks. The rooted area can be left in ground until following spring. To transplant cut off the newly rooted area leaving approximately one foot of old stem still attached. Transplant whole section to pot or nursery area. Allow the plant to mature for the entire summer and then transplant to final location.

Seed propagation is a long process taking 3 months to a year, depending on species for germination. Alternating cold and warm periods are needed. See Dirr for further information.

Through all four seasons and with little care Viburnums can add much to your landscape; Spring flowers, Winter fruit, vivid Fall foliage, and Summer scent. They provide food and shelter for wildlife, survive harsh conditions and contribute to the character of any garden. What more could you ask from a plant? But a special bonus is that they give you a lovely and easy way to support the survival of a native plant species.

References

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