BWSR Featured Plant

Name: Purple-stemmed Angelica (*Angelica atropurpurea*)

Plant family: Carrot (*Apiaceae*)

Purple-stemmed Angelica grows in moist conditions in full sun to part shade, reaching as tall as 9 feet.
Photo Credit: Karin Jokela, Xerces Society

Plant Stats

INDICATOR STATUS: OBL

PLANTING METHODS: Bare-root, containers, seed

A striking 6 to 9 feet tall, purple-stemmed Angelica is one of Minnesota's tallest wildflowers. This robust herbaceous perennial grows along streambanks, shores, marshes, calcareous fens, springs and sedge meadows — often in calcium-rich alkaline soils. The species epithet "atropurpurea" comes from the Latin words āter ("dark") and purpūreus ("purple"), in reference to the deep purple color of the stem. Flowers bloom from May to July. Like other plants in the carrot family, the flowers provide easy-to-access floral resources for a wide diversity of flies, bees and other pollinators. Although not confirmed for this species, the nectar of other members of the Angelica genus can have an intoxicating effect on insects. Both butterflies and bumble bees are reported to lose flight ability, or fly clumsily, for a short period after consuming the nectar. Purple-stemmed Angelica is a host plant for the Eastern black swallowtail butterfly (*Papilio polyxenes asterius*) and the umbellifera borer moth (*Papaipema birdi*).

Uses

Purple-stemmed Angelica has a long history of human use. All parts of the plant — especially the root — are used medicinally, particularly to settle the stomach and treat stomach disorders. The aromatic root can be burned in a smudge, and has widespread use as a purification herb among Native American cultures. The plant also has many culinary uses: the flavorful stems are similar in texture to celery and can be used, along with the leaves, in salad, stir-fry, or soups. The stems are also candied and used by pastry chefs to decorate cakes and desserts. Seeds are used as a seasoning, or in liquors and confectionary. **WARNING:** Any harvest of this plant for consumption must be done with **EXTREME CAUTION.** The similar water hemlock and poison hemlock are both **DEADLY POISONOUS** and have caused the death of foragers. Several plants in this family also cause severe skin irritations if handled. Angelica is also valued for its attractive flowers and striking growth form, both in its natural habitat and in restoration projects. Restorationists appreciate its ability to tolerate wet soils, part shade and high weed pressure (especially when starting from plants or roots). The nectar it produces attracts many pollinators. The leaf tissue feeds the Eastern black swallowtail butterfly (Papilio polyxenes asterius) and the umbellifera borer moth (Papaipema birdi).

The green flowers form a large rounded umbel composed of smaller rounded umbellets. **Photo Credit:** Karin Jokela, Xerces Society

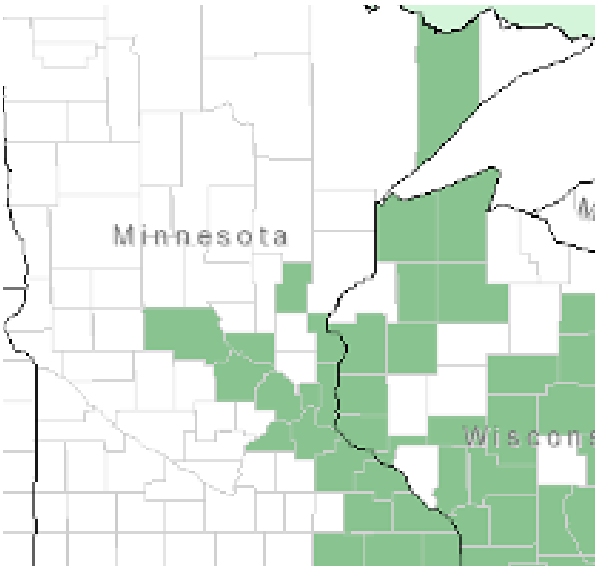
Identification

The greenish flowers occur in rounded clusters (umbellets) that are grouped into rounded umbels 4 to 8 inches wide. The 6- to 9-foot-tall stems are hollow, smooth and purple or streaked with purple. Leaves are alternate and compound. The elongated leaf stalks have a large green-to-purple sheath at the base. Lower leaves, with three to five leaflets, measure up to 2 feet long including the long petioles. Upper leaves are smaller, less compound and on shorter petioles. Leaflets are up to 4 inches long and ovate to lance-shaped, sometimes with one or two deep lobes. Leaflets have sharp-toothed margins and smooth surfaces. Fruits are up to a quarter-inch long, and flat with thin, winged edges.

Lower leaves are up to 2 feet long with three to five leaflets. **Photo Credit:** Sarah Foltz Jordan, Xerces Society

Planting Recommendations

Angelica should be planted in wet to medium-wet soils in full sun to part shade. It is a good choice for low-maintenance rain gardens, streambanks and lakeshore plantings, as it will persist and compete well with other plants. This species is easiest to establish from bare root or container plants. Bare roots should be planted in fall or spring. Container plants provide more flexibility in timing the installation — as long as plants have sufficient shade and can be watered as needed. Planting also can be accomplished by direct seeding, although the seed requires a complicated stratification process (cold moist followed by warm moist followed by cold moist). If planted outdoors without stratification, the seed will take two years or longer to germinate. Propagation can be accomplished via division or seed. Division can be done on 2- to 3-year-old plants in early spring as new growth emerges. This plant readily self-seeds; successful self-seeding can be encouraged by ensuring that there is bare ground around the plant for ripe seed to fall onto.



Range map source: *The range is based on University of Minnesota Herbarium data.*

Range

The species is found in a variety of moist sites, primarily in the southeastern part of the state. It is more widespread in neighboring Wisconsin, and also occurs across much of the Northeast plus eastern Canada. Minnesota is on the western edge of the species' range.

Left: *Cow parsnip (Heracleum maximum) has palmately compound leaves and flowers with notched petals.* **Photo Credit:** Dave Hanson
Center: *Poison hemlock (Conium maculatum) (deadly) has finely divided, fern-like leaves.* **Photo Credit:** Katy Chayka, Minnesota Wildflowers
Right: *Common water-hemlock, (Cicuta maculata) (deadly) has narrower leaves, smaller and more slender stature, and a flat (rather than spherical flower cluster.* **Photo Credit:** Katy Chayka, Minnesota Wildflowers

Similar Species

Purple-stemmed Angelica is the only member of the Angelica genus native to Minnesota. However, this species is often confused with other large-statured members of the carrot family, including cow parsnip (*Heracleum maximum*), common water hemlock (*Cicuta maculata*) and poison hemlock (*Conium maculatum*). Since the latter two are deadly poisonous, knowing how to distinguish purple-stemmed Angelica's look-alikes is essential. Cow parsnip can be distinguished by the palmately compound softly hairy leaves, hairy stem, flat umbel, and individual flowers with distinctive white petals that are notched at the tip — especially prominent on the outer edge of the umbel. Poison hemlock has leaves that are much more finely divided (fern-like), and occurs in just a few disjunct counties in Minnesota where it has been introduced. Common water hemlock is native and very widespread across Minnesota, but has narrower leaflets than Angelica (1¼ inch rather than 2 inches across) and the umbel is fairly flat in shape (rather than spherical). It is also more slender and smaller in stature — 3 to 6 feet tall.

References

Minnesota Wildflowers: https://www.minnesotawildflowers.info/flower/angelica
Illinois Wildflowers: http://www.illinoiswildflowers.info/wetland/plants/grt_angelica.html
USDA PLANTS Database: https://plants.usda.gov/core/profile?symbol=ANAT

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