Common Name: STARFLOWER

Scientific Name: *Trientalis borealis* Rafinesque

Other Commonly Used Names: none

Previously Used Scientific Names: none

Family: Primulaceae (primrose) or Myrsinaceae (myrsine)

Rarity Ranks: G5/S1S2

State Legal Status: Endangered

Federal Legal Status: none

Federal Wetland Status: FAC

Description: Perennial **herb**, 1 - 10 inches (3 - 25 cm) tall, usually around 6 inches (15 cm), with small **bracts** at mid-stem and 4 - 7 lance-shaped **leaves**, 1 - 4 inches (3 - 11 cm) long, in a whorl at the top of the stem; leaves may be different sizes and shapes on a single plant. **Flowers** up to ½ inch (1.4 cm) wide, 1 - 3 per plant, with 5 - 7 white, pointed, spreading, petal-like lobes;

on slender stalks up to ¾ - 2 inches (2 - 5 cm) long rising above the whorl of leaves. **Fruit** about ¼ inch (6 - 8 mm) wide, round, with 5 segments opening to release many tiny seeds.

Similar Species: Young plants of Indian cucumber-root (*Medeola virginiana*) have a single whorl of leaves at the top of the stem, all more or less the same size and shape. Older plants have two whorls of leaves, the top whorl much smaller than the lower. The leaves have several parallel veins. The wiry stem of Indian cucumber-root is covered with cobwebby hairs, and the flower is a small, greenish-yellow, 6-parted, lily-like flower.

Related Rare Species: None in Georgia.

Habitat: Moist, deciduous northern hardwood forests and boulderfields.

Life History: Starflower is a perennial herb that reproduces primarily by vegetative means. In early summer, rhizomes emerge from a tuber at the base of the plant. Over the course of the summer the rhizomes spread as much as 3 feet (1 meter) from the parent plant and develop starch-filled tubers at their tips, each tuber bearing root and shoot buds. The parent plant and the connecting rhizomes wither and die by late fall leaving behind several new – but genetically identical – plants in a patch up to 3 feet wide. To a lesser extent, starflower also reproduces sexually. Its flowers have several features that discourage self-pollination, and it will set fruit only after cross-pollination. The flowers are pollinated by bees which must transport pollen between flowers from genetically different patches in order to effect cross-pollination. The lack of successful cross-pollination may account for the low rate of sexual reproduction.

Survey Recommendations: Surveys are best conducted during flowering and fruiting (May–June).

Range: Georgia, Tennessee, North Carolina, and north into Canada.

Threats: Logging, clearing, and road-building.

Georgia Conservation Status: Eight populations are known, all in the Chattahoochee National Forest.

Conservation and Management Recommendations: Avoid logging, clearing, road-building, and other mechanical disturbances in rich hardwood forests and boulderfields.

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