



Common Name: DWARF HATPINS

Scientific Name: *Eriocaulon koernickianum* van Heurck & Mueller-Argau

Other Commonly Used Names: dwarf pipewort, small-headed pipewort

Previously Used Scientific Names: none

Family: Eriocaulaceae (pipewort)

Rarity Ranks: G2/S1

State Legal Status: Endangered

Federal Legal Status: none

Federal Wetland Status: OBL

Description: Annual or short-lived perennial **herb**, forming tufts or rosettes of small, pointed leaves. **Leaves** $\frac{3}{4}$ - 2 inches (2 - 5 cm) long, very narrow, pale green, with obvious air chambers and clasping, spongy bases. **Flower stalk** 2 - 3 inches (5 - 8 cm) tall, twisted, with 3 - 4 ridges; there may be up to 25 flower stalks per plant. **Sheath** wrapped around base of the flower stalk is about the same length as the leaves. **Flower head** less than $\frac{3}{16}$ inch (3 - 4 mm) across, round or slightly flattened, soft and compressible, gray; flower heads contain both female and male

flowers. **Flowers** are less than $\frac{1}{16}$ inch long, tightly packed into the round head, with the most conspicuous part of the flower being 2 tiny, gray-green sepals bearing white, club-shaped hairs.

Similar Species: When in flower, dwarf hatpins is unmistakable – it is the only member of the pipewort family occurring on Georgia's Piedmont granite outcrops. The narrow, pointed leaves superficially resemble numerous other granite outcrop plants but the air spaces and spongy, clasping leaf bases are distinctive.

Related Rare Species: Texas hatpins (*Eriocaulon texense*, Special Concern) occurs on Altamaha Grit outcrops and in wet pine savannas in Georgia's Coastal Plain. Its leaves are $\frac{3}{8}$ - $2\frac{3}{4}$ inches (1 - 7 cm) long, and flower stalks are 2 - 12 inches (5 - 30 cm) tall; heads are usually less than $\frac{3}{8}$ inch (0.5 - 1 cm) broad, white or gray, soft and compressible; it flowers in the spring. Also see southern bog-buttons (*Lachnocaulon beyrichianum*) on this web site.

Habitat: Seepage areas and wet depressions on Piedmont granite flatrocks, often with horned bladderwort. In other states, dwarf hatpins occurs in wet seeps on sandstone outcrops and in pineland bogs.

Life History: Dwarf hatpins is an annual or short-lived perennial herb that reproduces sexually; it rarely, if ever, reproduces vegetatively. The number of plants in a population fluctuates annually, depending on rainfall. Its flowers depend on outcrossing to effect pollination and, like other members of the genus *Eriocaulon*, have glands inside the flowers that secrete nectar and attract insect pollinators. Seed set is low and few seeds are preserved in a soil seed bank. Dwarf hatpins is a poor competitor and depends on fire and seepage to reduce competition from other plants.

Survey Recommendations: Surveys are best conducted during flowering (late May–June). Plants may not appear in drought years.

Range: Georgia, Arkansas, Oklahoma, and Texas. Georgia's plants are separated by more than 600 miles from the nearest populations in Arkansas.

Threats: Destruction of habitat by quarrying, trash dumping, and off-road-vehicle use. Development around outcrops. Invasion by exotic pest plant species. Fire suppression.

Georgia Conservation Status: Fewer than 18 populations are known, only one on conservation land.

Conservation and Management Recommendations: Protect granite outcrops from quarrying, trash dumping, and off-road vehicle use. Map locations of plans and direct foot traffic away from populations. Eradicate exotic pest plants. Create buffers and limit development around outcrops in order to preserve hydrology. Use fire to limit woody competition.

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