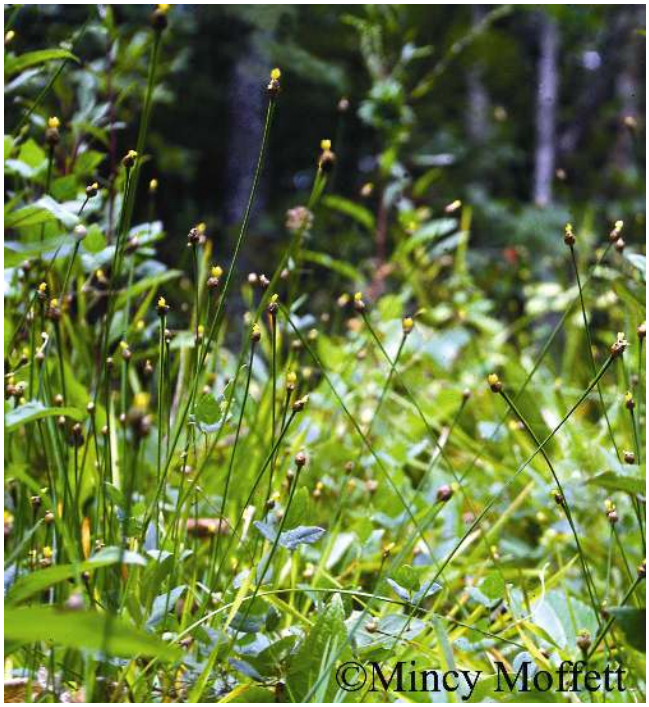

Common Name: TENNESSEE YELLOW-EYED GRASS

Scientific Name: *Xyris tennesseensis* Kral

Other Commonly Used Names: none

Previously Used Scientific Names: none

Family: Xyridaceae (yellow-eyed grass)

Rarity Ranks: G2/S1

State Legal Status: Endangered

Federal Legal Status: Endangered

Federal Wetland Status: OBL

Description: Perennial **herb** with a fleshy, bulbous base, usually occurring in small clumps. **Leaves** are 5½ - 18 inches (14 - 45 cm) long, ¼ - ⅜ inch (0.5 - 1 cm) wide, erect, flat or slightly twisted with swollen, pink or purple leaf bases overlapping up to one-third the length of the blade. **Flower stalk** is 12 - 28 inches (30 - 70 cm) tall, straight, unbranched, ribbed, and slightly flattened in cross-section; the upper stalk is angled or winged; a reddish-brown sheath, shorter than the leaves, encircles the base of the stalk. A single, cone-like **flower spike**, ⅜ - ⅝ inch (1 - 1.5 cm) long and bluntly oval, is held at the top of the flower stalk; it is composed of many tan,

rounded, overlapping **bracts**; spikes usually produce only 1 flower per day, from the rounded tip of a bract. The flower has 3 oblong, yellow **petals**; sepals do not show above the tip of the bract.

Similar Species: Carolina yellow-eyed grass (*Xyris difformis*) has rough leaf surfaces and flat leaf bases. Twisted yellow-eyed grass (*X. torta*) has swollen leaf bases but its leaves are less than ¼ inch (0.5 cm) wide, twisted, with strongly raised veins. Both may occur with Tennessee yellow-eyed grass.

Related Rare Species: See Drummond's yellow-eyed grass (*Xyris drummondii*) on this website.

Habitat: Sunny, wet habitats over calcareous bedrock such as spring runs, edges of shallow streams and ponds, seeps, wet meadows, and swales.

Life History: Tennessee yellow-eyed grass reproduces sexually as well as vegetatively by lateral buds that develop in the axils of leaves at the base of the plant. Plants produce one, or rarely two, flowers per day; flowers open in mid-morning and wither soon after noon. Flowers do not produce nectar, but attract pollinators – primarily bees and flies, but also weevils and skippers – with pollen rewards. During the bud stage, flowers are frequently visited by a species of bee (*Lasioglossum zephyrum*) that has learned to open the buds and remove pollen from the early ripening anthers, thus ensuring that it has first and possibly exclusive access to that flower's pollen. Plants are reported to produce abundant seed, and seeds will readily germinate if exposed to full light in the warm temperatures of late spring and early summer. *Xyris tennesseensis* flowers that are cross-pollinated have the greatest seed set but bagged flowers also produce relatively large numbers of seed, indicating that pollinators are not necessary for reproduction. Self-pollinated flowers produce seeds with higher rates of germination.

Survey Recommendations: Surveys are best conducted during flowering period (August–September) and when flowers are open, mid- to late-morning.

Range: Approximately 25 populations are known, 9 in Georgia, 10 in Alabama, and 6 in Tennessee.

Threats: Road construction, quarrying, logging and clearcutting, soil disturbances, cattle trampling and grazing, exotic pest plants, draining and filling wetlands, stream impoundment, off-road-vehicle use, lowering of water table by groundwater pumping.

Georgia Conservation Status: Nine populations are known, one on state conservation land and 2 on environmentally managed road rights-of-way.

Conservation and Management Recommendations: Protect sites from mechanical disturbances such as road construction, quarrying, and mechanical clearing and from trampling and grazing by cattle. Eradicate exotic pest plants. Avoid draining or filling wetlands. Restore water table to historic levels by reducing groundwater pumping. Purchase or protect sites with conservation easements.

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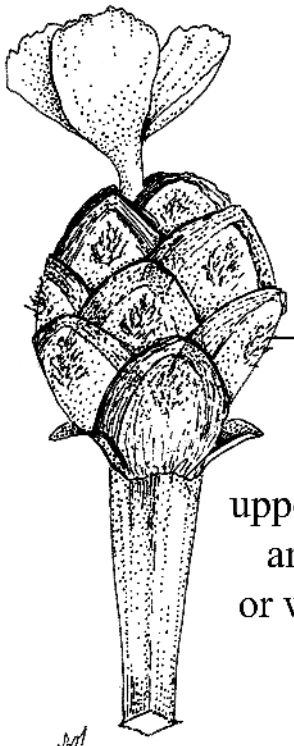
Author of Species Account: Linda G. Chafin
Date Compiled or Updated:
L.Chafin, Nov. 2008: original account
D.Weiler, Jan. 2010: added pictures

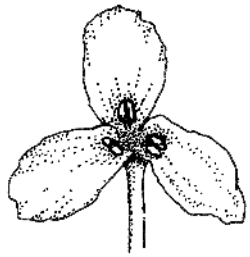
TENNESSEE YELLOW-EYED GRASS

Xyris tennesseensis

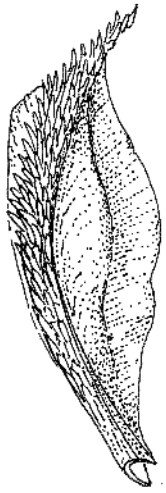


bract

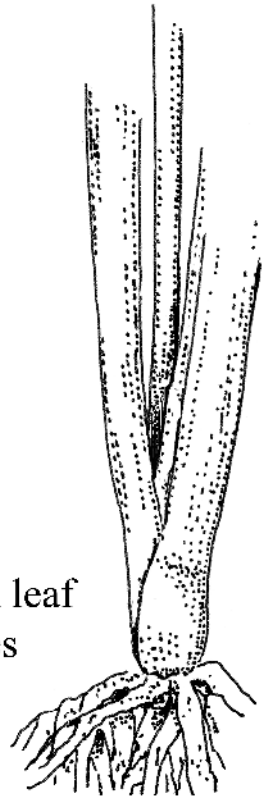
upper stalk
angled
or winged



petals with
attached stamens



sepal with
ragged keel



swollen leaf
bases

J.C. Putnam H.