Common Name: ALABAMA LEATHER FLOWER

Scientific Name: *Clematis socialis* Kral

Other Commonly Used Names: none

Previously Used Scientific Names: none

Family: Ranunculaceae (buttercup)

Rarity Ranks: G1/S1

State Legal Status: Endangered

Federal Legal Status: Endangered

Federal Wetland Status: none

Description: Perennial **herb** with leaning stems 8 - 20 inches (20 - 50 cm) tall, often forming dense colonies of many stems. **Lower and middle leaves** 1¼ - 6 inches (3 - 15 cm) long, simple, opposite, linear to lance-shaped, with short or no leaf stalks. **Upper leaves** opposite, with 3 - 5 leaflets, each leaflet shaped like one of the lower leaves. **Flower** ¾ - 1¼ inches (2 - 3 cm) long, usually solitary, nodding at the tip of a long stalk, bell-shaped, with 4 blue or purple **sepals** spreading or curving upwards at the tips; there are no petals. **Fruits** about 1 inch (2.5 - 3 cm)

long including the curved and elongated beak, flattened, hairy, grouped into a “curly-head” at the tip of a long stalk.

Similar Species: Four other species of leather flower (*Clematis crispa*, *C. glaucophylla*, *C. reticulata*, and *C. viorna*) have similar flowers and leaves; they are climbing or sprawling vines with all leaves (both upper and lower) having 3 - 9 leaflets. *Clematis glaucophylla* leaves are pale and waxy on the lower surface. None of these common species form colonies of low, erect plants with single- or few-flowered stems.

Related Rare Species: See Fremont’s leather flower (*Clematis fremontii*) on this website.

Habitat: Sunny, grassy openings in Coosa Valley flatwoods with wet to moist, circumneutral or basic, silty-clay soils.

Life History: Alabama leather flower reproduces vegetatively by sprouting from an extensive network of underground stems (rhizomes). It also reproduces sexually, although less successfully. Successful flowering depends on adequate sunlight, which is often lacking due to shading by other plants. The flowers require insects – primarily bees – to effect cross-pollination, but apparently insects do not visit the flowers frequently enough or fail to complete pollination when they do. Even when flowering and fruiting is successful and seeds are produced, the seeds are heavily eaten by mice.

Survey Recommendations: Surveys are best conducted during flowering and fruiting (late April–May); plants are hard to see in tall grasses but “curly-head” fruits are distinctive all summer.

Range: Floyd County, Georgia, and 3 counties in northeastern Alabama.

Threats: Inappropriate roadside right-of-way maintenance, including mowing during flowering and fruiting, use of herbicides, and soil disturbances. Invasion by exotic pest plants. Encroachment by woody shrubs in the absence of fire or other natural disturbance.

Georgia Conservation Status: Only one population with approximately 200 plants is known; it occurs on state conservation land.

Conservation and Management Recommendations: Protect plants from clearing, development, and use of herbicides. Avoid mowing during growing season. Use hand-clearing or prescribed fire to control competing woody plants and to create sunny openings. Eradicate exotic pest plant species.

Selected References:

Boyd, R.S. and C.D. Hilton. 1994. Ecologic studies of the endangered species *Clematis socialis* Kral. Castanea 59: 31-40.

Chafin, L.G. 2007. Field guide to the rare plants of Georgia. State Botanical Garden of Georgia and University of Georgia Press, Athens.

Govus, T.E. 1999. Survey for *Clematis socialis* and significant calcareous flatwoods. Georgia Natural Heritage Program, Social Circle, Georgia.

Kral, R. 1982. A new *Clematis* from northeastern Alabama. Rhodora 84:285-291.

Kral, R. 1983. A report on some rare, threatened, or endangered forest-related vascular plants of the South. Technical Publication R8-TP2. United States Forest Service, Atlanta.

NatureServe. 2007. NatureServe Explorer. Arlington, Virginia.
http://www.natureserve.org/explorer

Timmerman-Erskine, M. 1992. Reproductive ecology of *Clematis socialis*. Auburn University. Thesis, Auburn, Alabama.

Timmerman-Erskine, M. and R.S. Boyd. 1999. Reproductive biology of the endangered plant *Clematis socialis* (Ranunculaceae). Journal of the Torrey Botanical Society 126(2): 107-116.

USFWS. 1989. Alabama leather flower (*Clematis socialis*) recovery plan. U.S. Fish and Wildlife Service, Jackson, Mississippi.

USFWS. 1991. Alabama leather flower (*Clematis socialis*) – species account. U.S. Fish and Wildlife Service, Washington, D.C. http://endangered.fws.gov

Wall, M.A, M. Timmerman-Erskine, R.S. Boyd. 2003. Conservation impact of climatic variability on pollination of the federally endangered plant, *Clematis socialis* (Ranunculaceae). Southeastern Naturalist 2(1): 11-24.

Ware, R.T., Sr. 1999. Summary report: survey for *Clematis socialis* and other rare plants of the significant calcareous or Coosa flatwoods in the Ridge and Valley province of northwest Georgia. Georgia Natural Heritage Program, Social Circle.

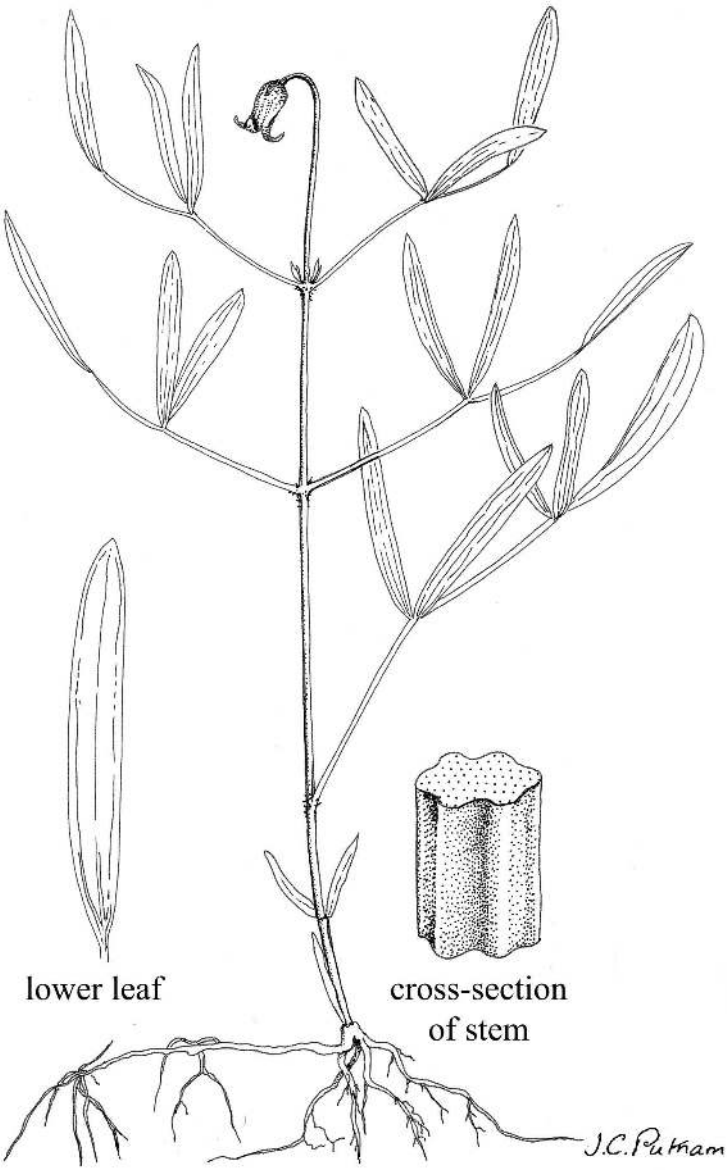
Weakley, A.S. 2007. Flora of the Carolinas, Virginia, Georgia, and surrounding areas. University of North Carolina Herbarium, Chapel Hill.

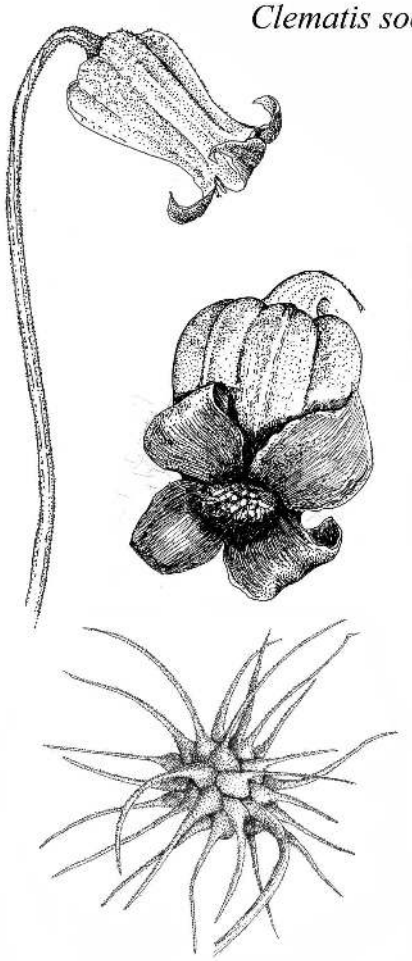
Author of species account: Linda G. Chafin

Date Compiled or Updated:
L. Chafin, June 2007: original account
K. Owers, Jan. 2010: updated status and ranks, added pictures

ALABAMA LEATHER FLOWER

Clematis socialis





"curly-head" of fruits


©Hugh and Carol Nourse