

Common Name: WHITE-TOP PITCHERPLANT

Scientific Name: Sarracenia leucophylla Rafinesque

Other Commonly Used Names: crimson pitcherplant

Previously Used Scientific Names: Sarracenia drummondii Croom

Family: Sarraceniaceae (pitcherplant)

Rarity Ranks: G2/S1

State Legal Status: Endangered

Federal Legal Status: none

Federal Wetland Status: OBL

Description: Perennial **herb** with leaves modified into erect, tubular pitchers. **Pitchers** 10 - 39 inches (25 - 100 cm) tall, narrow at the base and widening to an opening partially covered by a nearly erect hood with ruffled margins; lower part of pitcher green, hood and upper part of

pitcher white with red veins; pitchers do not overwinter. After flowering and when stressed, plants produce many green, flat, narrow, erect, non-pitcher leaves (**phyllodes**), 6 - 8 inches (15 - 20) tall. **Flower stalk** 12 - 31 inches (30 - 80 cm) tall, leafless. **Flower** solitary with 5 drooping, maroon **petals**, 1½ - 2¾ inches (4 - 7 cm) long; 5 maroon **sepals**; and a reddish, umbrella-shaped **style disk** in the center of the flower. Petals fall soon after flowering, but sepals and style disk persist on the plant as the **fruit**, a round, warty capsule up to ¾ inch (2 cm) wide, develops.

Similar and Related Rare Species: All seven of Georgia's pitcherplants are state-protected and included on this web site: yellow trumpets (*Sarracenia flava*), hooded pitcher plant (*S. minor*), white-top pitcherplant (*S. leucophylla*), green pitcherplant (*S. oreophila*), parrot pitcherplant (*S. psittacina*), purple pitcherplant (*Sarracenia purpurea*), and sweet pitcherplant (*S. rubra*).

Habitat: Bogs, wet savannas, sunny openings in red maple-black gum swamps, sphagnum mats along streams.

Life History: Pitcherplants capture and digest insects and other small animals in their pitchers. Nectar is produced by glands around the top of the pitcher, luring animals to the opening with its sweet smell. Stiff, down-pointing hairs line the pitcher, encouraging the animals to slide in and impeding their escape. Enzymes dissolved in water in the base of the pitcher digest the animals, making nutrients, particularly nitrogen, available for absorption by the plant. (Soils of bogs and other permanently saturated wetlands are typically low in nitrogen.) Butterflies have been seen robbing nectar from white-top pitchers without getting caught in the trap. They perch on the lip of the pitchers and, using their long probosci, probe the inner surface of the pitchers where tiny glands produce a sweet, honey-smelling nectar.

Pitcherplants reproduce sexually and also vegetatively by spread of underground stems (rhizomes). The unusual shape of the flowers, with their drooping petals and umbrella-like style disk, promotes cross-pollination by insects. When an insect, usually a bee, pushes its way past the petals to reach nectar on the interior of the flower, it brushes against one of the stigmas, which are at the pointed tips of the "umbrella," and deposits pollen gathered from a previously visited flower. Once inside the petals, it picks up pollen from the anthers and from the inner surface of the umbrella and then carries it to the next visited flower, usually avoiding the stigmas as it leaves the flower. Since it would be a disadvantage to the plant to "eat" its pollinators, many pitcherplants, such as white-top pitcherplant, produce flowers before their pitchers are well developed. Others hold their flowers high above the pitchers on long stalks. Pitcherplants are usually 4 - 5 years old before they flower and may live to be 20 - 30 years old.

Survey Recommendations: White-top pitcherplants bloom from March–April, before the leaves mature, but the pitchers are conspicuous throughout the summer and fall.

Range: Georgia, Florida, Alabama, and Mississippi.

Threats: Conversion of habitat to pine plantations and agriculture. Ditching, draining, and mechanical clearing of wetlands. Fire suppression, canopy closure, and encroachment by woody plants. Off-road vehicle use. Plant poaching. Digging by wild hogs.

Georgia Conservation Status: Once known from four counties, only one population has survived.

Conservation and Management Recommendations: Avoid ditching and draining wetlands. Avoid logging, mechanical clearing, and other soil-compacting activity. Apply prescribed fire every 2 - 3 years or hand-clear to control woody vegetation. Limit access to prevent poaching and off-road vehicle traffic. Eradicate wild hogs.

Selected References:

Botanical Society of America. 2008. Carnivorous plants online. http://www.botany.org/carnivorous_plants/Sarracenia_leucophylla.php

Ceska, J. 2001. Leucos lost and found. Georgia Botanical Society, BotSoc News 75(7): 1-2.

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

Godfrey, R.K. and J.W. Wooten. 1981. Aquatic and wetland plants of southeastern United States, Vol. 2, dicotyledons. University of Georgia Press, Athens.

Honda, M. 2008. Insectivorous plants in the wilderness. http://www.honda-e.com/IPW_3_Description/TX-1PitcherPlants.htm

International Carnivorous Plant Society. 2008. Carnivorous plant FAQ. http://www.sarracenia.com/faq/faq5530.html

McDaniel, S. 1971. The genus *Sarracenia*. Bulletin 9, Tall Timbers Research Station, Tallahassee, Florida.

Minno, M.C. and J.R. Slotten. 1998. Butterflies feed at white-topped pitcher plants. Palmetto 18(3): 9.

NatureServe. 2008. NatureServe Explorer. Arlington, Virginia. http://www.natureserve.org/explorer

Patrick, T.S., J.R. Allison, and G.A. Krakow. 1995. Protected plants of Georgia. Georgia Department of Natural Resources, Natural Heritage Program, Social Circle.

Schnell, D.E. 2002. Carnivorous plants of the United States and Canada, 2nd edition. Timber Press, Inc. Portland, Oregon.

Wang, Z-F., J.L. Hamrick, and M.J.W. Godt. 2004. High genetic diversity in *Sarracenia leucophylla* (Sarraceniaceae), a carnivorous wetland herb. Journal of Heredity 95(3): 234-243.

Weakley, A.S. 2008. Flora of the Carolinas, Virginia, Georgia, northern Florida, and surrounding areas. University of North Carolina Herbarium, Chapel Hill. http://www.herbarium.unc.edu/flora.htm

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