



Common Name: HARPERELLA

Scientific Name: *Ptilimnium nodosum* (Rose) Mathias

Other Commonly Used Names: Harper's bishopweed

Previously Used Scientific Names: *Harperella nodosa* Rose

Family: Apiaceae/Umbelliferae (carrot)

Rarity Ranks: G2/S1

State Legal Status: Endangered

Federal Legal Status: Endangered

Federal Wetland Status: OBL

Description: Annual **herb** with erect stems up to 3 feet (1 m) tall; size of plants varies greatly depending on rainfall. **Leaves** up to 12 inches (30 cm) long near the base of the plant, becoming shorter up the stem, round in cross-section and hollow except for cross-partitions, tapering to a point, alternate. **Flowers** in flat-topped clusters (**umbels**) composed of 5 - 15 smaller umbels. Flowers with 5 tiny, white **petals**, curving up and strongly inward; tips of the stamens (**anthers**) are dark pink. **Fruits** are oval with 6 - 10 ribs. All parts of the plant smell faintly of dill.

Similar Species: Harperella grows with common bishop-weed (*Ptilimnium capillaceum*), a similar species with rounded, rather than flat-topped, flower clusters and flat leaves divided into 3 very narrow segments.

Related Rare Species: Eastern bishopweed (*Ptilimnium costatum*, Special Concern) occurs in the Coosa Valley Prairies and calcareous flatwoods in Floyd County. It has flat, crowded leaves divided into many, very narrow segments, and 20 - 24 small flower clusters per umbel. Also see mock bishopweed (*P. ahlesii*) on this website.

Habitat: In Georgia, harperella occurs in a wet savanna and on the edge of a cypress pond in the Coastal Plain, and in seeps on a granite outcrop in the Piedmont. In other states, it grows in the flooded margins of rocky streams.

Life History: Harperella is an annual herb that reproduces sexually and produces seed only from cross-pollination. (In cultivation, plants persist for two years and produce large amounts of seed that readily germinate.) As with other members of the umbel family, its flowers are probably pollinated by a variety of insects. Its seeds are dispersed by gravity, water, and small animals.

Survey Recommendations: Surveys are best conducted during flowering (late May–early July) and fruiting (fruits July–August); plants disintegrate soon after fruiting.

Range: Georgia, Alabama, South Carolina, North Carolina, Arkansas, Virginia, and West Virginia.

Threats: Quarrying, trash dumping, mulching, and off-road vehicle traffic on granite outcrops; ditching, draining, and filling wetlands; fire suppression in uplands surrounding ponds.

Georgia Conservation Status: Only 2 sites are currently known; neither are protected.

Conservation and Management Recommendations: Protect granite outcrops from quarrying, trash dumping, vehicle traffic, and other disturbance. Avoid draining wetlands. Allow fires in uplands to burn into edges of cypress ponds.

Selected References:

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.

Kral, R. 1981. Notes on some quill-leaved umbellifers. *Sida* 9: 124-134.

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.

Kress, W. John, G.D. Maddox, and C.S. Roesel. 1994. Genetic variation and protection priorities in *Ptilimnium nodosum* (Apiaceae), an endangered plant of the eastern United States. *Conservation Biology* 8(1): 271-276.

Marcinko, S.E. 2007. Pattern and process in rare plant conservation: an assessment of the southeastern U.S. M.S. Thesis, University of North Carolina, Chapel Hill.

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

North Carolina Natural Heritage Program. 2001. Guide to federally listed endangered and threatened species of North Carolina. North Carolina Natural Heritage Program, Raleigh, North Carolina. <http://www.enr.state.nc.us/NaturalHeritage/Images/87.pdf>

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.

USFWS. 1990. Harperella (*Ptilimnium nodosum*) recovery plan. U.S. Fish and Wildlife Service, Newton Corner, Massachusetts.

USFWS. 1992. Harperella (*Ptilimnium nodosum*) – species account. U.S. Fish and Wildlife Service, Washington, D.C. <http://endangered.fws.gov>

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>

Weakley, A.S. and G.L. Nesom. 2004. A new species of *Ptilimnium* (Apiaceae) from the Atlantic Coast. *Sida* 21(2): 743-752. <http://www.herbarium.unc.edu/flora.htm>

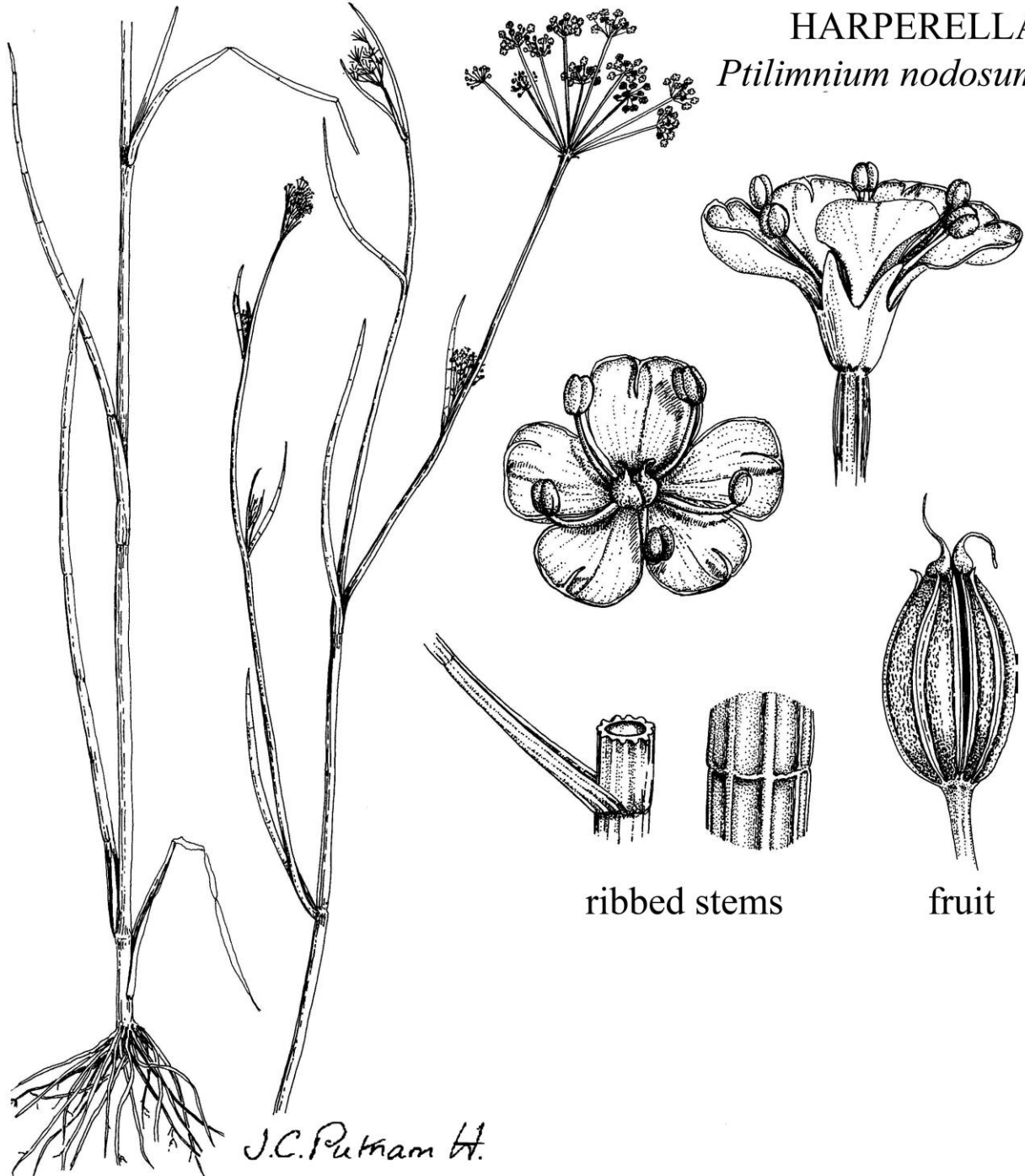
Author of Species Account: Linda G. Chafin

Date Compiled or Updated:

L. Chafin, July 2008: original account

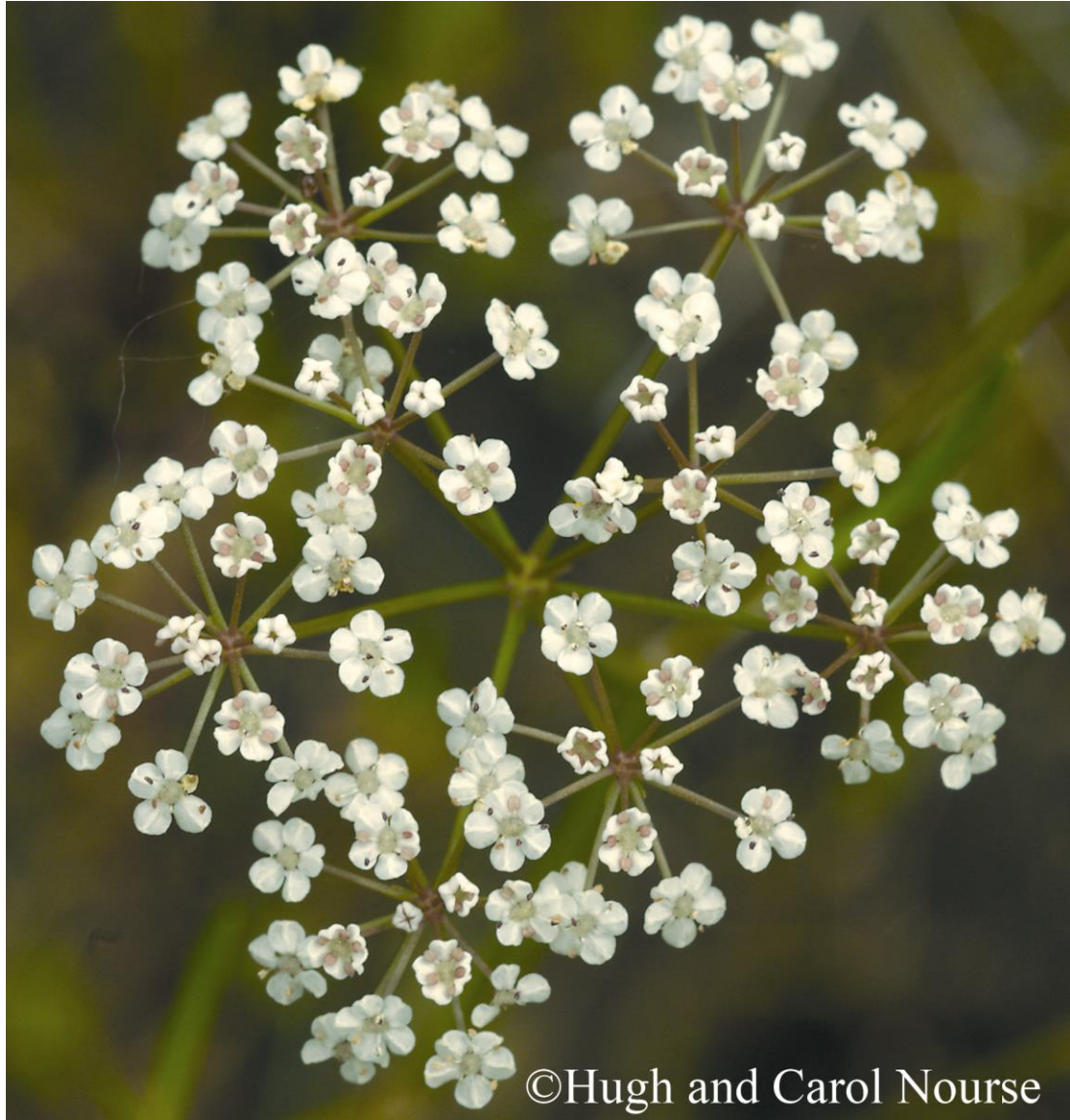
K. Owers, Feb. 2010: added pictures

HARPERELLA
Ptilimnium nodosum



ribbed stems

fruit



©Hugh and Carol Nourse



©Ed McDowell

Fruit