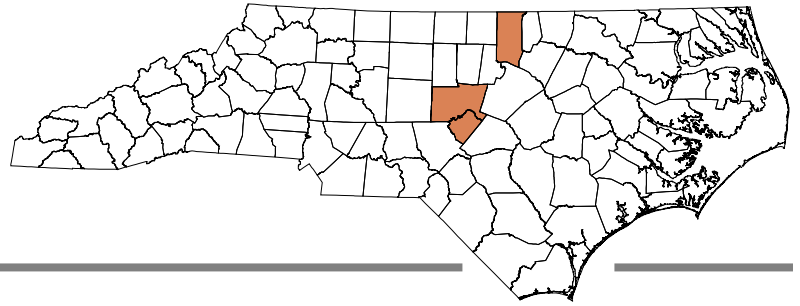


Harperella

Ptilimnium nodosum (*Harperella nodosa*)

(Bishop's weed)

Endangered (September 28, 1988)



Description: Harperella is an annual plant ranging from 6-36 inches (0.15-1 m) in height, with weak stems. Leaves are hollow, quill-like structures. The plant is aromatic and smells like dill. Flat clusters of small white flowers top the stems, similar to Queen Anne's lace (*Daucus carota*). They bloom intermittently from May until the first frost. Seeds are elliptical and laterally compressed, up to 0.08 inch (2.0 mm) long.

Life History: Flowering begins in May in pond habitat populations, and in late June or July in riverine populations and continues until frost. The pollination process has not been studied, but seed set appears to be profuse since populations can achieve high density and numbers of individuals in localized areas each year, especially along rivers. This plant tolerates, and may require, a very specific water regime, which includes moderately intensive spring floods that scour gravel bars and rock crevices where competing vegetation may take hold. After floodwaters recede, seeds germinate in shallow rocky crevices and complete their life cycles with root systems submerged or saturated. Late summer high water facilitates seed dispersal and vegetative rooting and protects young plants throughout the winter.

Habitat: Habitat in North Carolina consists of rocky or gravelly shoals of clear, swift-flowing streams. In the coastal plain, it grows at edges of pineland ponds, damp meadows, and soggy ground around springs. It can tolerate heavy shade.

Distribution: Has an arc-shaped, scattered distribution from western Maryland and West Virginia south to North Carolina, South Carolina, Georgia, Alabama, and into Arkansas. Found in the eastern piedmont and western coastal plain of North Carolina in Chatham, Granville, and Lee* counties.

Threats: Because harperella's life cycle depends on water levels fluctuating at appropriate times in the growth cycle, it can be easily extirpated from an area by seemingly minor perturbations, either natural or human-caused. Degradation and loss of habitat from ditching and draining of ponds, dredging, impoundments, siltation from construction and mining activities and excessive nutrient loading of streams affect the survival of this species. Bank stabilization for boater access also destroys plants and habitat. Over half of the historically known populations have been eliminated by such factors.

Management Recommendations: Protection of species and habitat. Education of landowners about habitat and life cycle of plant.

* No record has been reported in this county in the past 20 years.

Sources: Jackson et al. 1992, Lowe et al. 1990, Radford et al. 1964, USFWS 1992a.

