



## Harperella (*Ptilimnium nodosum*)

### Common Name

Harperella

### Scientific Name

*Ptilimnium nodosum*

### Status

Harperella is listed by the United States Fish and Wildlife Service as federally **Endangered** but does not occur on any federal land, so the ability to protect the plant from destruction is limited.

### West Virginia Status

Harperella is known to grow along three streams in West Virginia. An additional site was located, but this may be an extension of a previously known site. Harperella is known from less than 20 other sites (all in the U.S.).

### Description

Harperella is an annual plant with a slender, smooth stem and hollow, quill-like leaves. Its flowers are similar in appearance to those of the common roadside plant, Queen Anne's lace. They are small, white, and delicate and are arranged in clusters called umbels. This plant flowers in May and June. Both harperella and Queen Anne's lace are members of the carrot family, where our cultivated carrot comes from.

### Habitat

Harperella grows in wet soil near a body of water and can survive periodic, moderate flooding. In West Virginia harperella grows in rocky or gravelly beds along three clear, swiftly-flowing streams, namely, Sleepy Creek and the Cacapon and Potomac rivers in Morgan County. When these plants are knocked over or uprooted by high water, they can grow new roots from nodes in their stems. Outside of the state harperella also grows in shallow, intermittently-flooded coastal plain ponds. In addition to West Virginia, it is known from Alabama, Georgia, North Carolina, South Carolina and Maryland. Two types of harperella are currently recognized. It is believed that they are slightly different because of the growing conditions where

they occur. The stream-side type, which used to be considered a different species, is generally shorter (20 to 45 cm high), has fewer flowers, and blooms later in the year (July to October) than the pond-side type which is 35 to 95 cm high and has flowers from May to June.

Periodic flooding of streams where harperella grows in West Virginia usually keeps large amounts of soil from building up around the roots. harperella can thrive in small amounts of soil and in shallow water, but this flooding prevents most



(WVDNR Photo)

other plants from growing in the same places and competing with Harperella for resources. Thus, lack of flooding or even reduction in flooding could decrease harperella's chance for survival. Larger floods or longer periods of flooding, however, may be harmful even to the water-tolerant Harperella. The floods may wash away seeds from the soil, too much of the soil, and even the plants themselves. Flooding of the coastal plain ponds or upstream construction and mining activities near the stream sites may cause too much silt to gather around the roots of the plants and choke them. Because Harperella is so dependent on streams or ponds for its survival, it is directly affected by changes in water quality and by many forms of water pollution.

### Threats and Prospects

Harperella is not commercially collected nor under severe threat of collection for recreational, scientific, or educational purposes. No known diseases threaten the species, but some grazing of it by animals occurs along pond populations. Human activities, such as construction and alterations in water quality of streams and ponds, have already destroyed about



half of the known populations of harperella. An Alabama population has been eliminated by excessive siltation; many coastal plain ponds in South Carolina have been drained or severely disturbed. In West Virginia, 10,000 plants were destroyed in 1984 by construction at a housing subdivision. More recently plants have been lost apparently due to situation from highway construction. Because harperella does not occur on

federal land, it receives no direct protection from federal management. Except in Maryland, it is not protected by state law from habitat loss. However, some populations in states other than West Virginia occur on state-owned or state-controlled land or on private preserves. Many states and private groups are working towards protecting these areas to the best of their ability.