

## SCHWEINITZ'S SUNFLOWER

Listed as endangered in 1991, this perennial herb grows 3 to 6 feet tall from a cluster of carrot-like tuberous roots. From September to frost, Schweinitz's sunflower blooms with comparatively small heads of yellow flowers. It can be distinguished from other eastern North American sunflower species by the small flower head, which is usually less than half an inch across.

Schweinitz's sunflower is found only on the piedmont of the Carolinas. The U.S. Fish and Wildlife Service 1991 listing rule indicated that the flower survived in 13 populations distributed across five North Carolina counties (Union, Stanly, Cabarrus, Mecklenberg and Rowan) and one county (York) in South Carolina. As of 2006, the Service recorded about 78 populations in North Carolina and eight in South Carolina. The plant's distribution now includes 13 North Carolina counties (the original five plus Anson, Davidson, Gaston, Montgomery, Randolph, Richmond, Stokes and Surry) and two counties in South Carolina (York and Lancaster).

In 1991, 11 of the 13 known populations occurred in roadside or power line rights-of-way. Status surveys conducted in 2003 revealed that this pattern continues, with more than 80 percent of known populations occurring in road, railroad and utility rights-of-way. These sites are at risk of extirpation from inappropriate management. The North Carolina Department of Transportation launched a program to put up signs near population sites warning about the presence of the plants and has managed these areas with mowing and/or herbicides applied during the plant's dormant season. Nevertheless, 28 of 63 sites in Department of Transportation rights-of-way were adversely affected by inappropriate vegetation management, development or road-improvement projects at least once as of 2003.

Eleven of 13 surviving populations known in 1991 were generally confined to a 65-mile radius around Charlotte, North Carolina. The greater Charlotte-Gastonia-Concord area of North Carolina and South Carolina ranks among the 35 fastest growing large metropolitan areas in the nation. Expansion of the sunflower's known range beyond the greater Charlotte

metropolitan area has enhanced the potential for recovery in other parts of the species' range. However, threats to the species continue to escalate with rapid urbanization and suburban sprawl in the greater Charlotte area and throughout the Carolina Piedmont.



The species appears to require some form of habitat disturbance, such as fire and/or grazing by native animals, to maintain its open habitat. However, repeated mowing during the flowering and fruiting season, as has happened to several North Carolina roadside populations in recent years, further endangers the species. Many of the remaining populations also are threatened by residential and commercial expansion and by invasions of nonnative plants. The North Carolina Botanical Garden has initiated seed collections from all the North Carolina populations, following the Center for Plant Conservation's guidelines for conservation of genetic material.

Funding from all government sources for Schweinitz's sunflower recovery ranks the species number 424 out of 1,311 species, according to the U.S. Fish and Wildlife Service fiscal year 2004 report (the most recent available) to Congress, *Federal and State Endangered and Threatened Species Expenditures*. Total recovery funding for the sunflower from all government sources that year was about \$58,400, with \$20,500 coming from the Service.