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Fish and Wildlife Service Proposes Adding White Fringeless Orchid to Threatened and Endangered Species List

Cookeville, TN – Though the plant is found in five states, populations of white fringeless orchid are small, isolated, and face a wide array of threats across their range, leading the Fish and Wildlife Service to propose adding the plant to the federal list of threatened and endangered species as a threatened species. Because of the threat of collection, the Service will not designate critical habitat for this plant.

Under the Endangered Species Act of 1973, a plant or animal can be listed as endangered, meaning it's in danger of becoming extinct, or threatened, which is one likely to become endangered within the foreseeable future. While the Service has determined the orchid is not facing extinction, low numbers have been observed at more than half the orchid's known locations, while threats are present throughout the plant's range. Less than 20 percent of occurrences have ever been observed to have more than 100 flowering plants during a single growing season. Left unmanaged, the plant's range and abundance will likely continue to diminish.

“In proposing to list the white fringeless orchid as threatened, we are acknowledging the severity of the threats it faces, and hopefully sounding a warning that will bring the increased conservation efforts needed to recover the plant before it's situation becomes more dire,” said Cindy Dohner, the Service's Southeast Regional Director.

In 1999, the white fringeless orchid was designated a candidate for the threatened and endangered species list, meaning it warranted addition to the list, but doing so was precluded by higher priorities. In May 2004, the Service was petitioned by the Center for Biological Diversity to place white fringeless orchid on the federal list of threatened and endangered species. As part of a court-approved work plan under Multi-District Litigation, an agreement with the Center for Biological Diversity and WildEarth Guardians, the Service committed to evaluate the orchid in 2015, and either propose listing or determine listing isn't needed.

There are 58 known occurrences of the orchid, spanning five southeastern states. Of the 58 occurrences, 32 are located entirely, or in part, on lands owned or managed by local, state, or federal governments. There are an additional 21 sites in the five southeastern states with known populations, where the plant is suspected to occur, though in most cases positive identification, which requires the plant's flower, has not recently been made. There also is one suspected occurrence in South Carolina. The orchid's distribution is concentrated in the Cumberland Plateau of Alabama, Tennessee, and Kentucky, and extends into South Carolina, Georgia, and Mississippi, with isolated populations scattered across the Blue Ridge Mountains, Piedmont, and

Coastal Plain. Most occurrences are in forested wetlands; though, some are in utility or transportation rights-of-way, where the plant sometimes thrives in the well-lit, open conditions.

Compounding the orchid's plight is the fact that it appears to rely on a limited number of butterflies and a single species of fungi to complete its life cycle, making it susceptible to anything that threatens these butterflies as well. Like most terrestrial orchids, white fringeless orchid has small, wind-dispersed seeds that lack nutrient reserves, so the young plants depend on a fungus to enhance sprouting and promote early growth and establishment. Though the orchid can self-pollinate, it has only three known external pollinators, all butterflies – the silver spotted skipper, spicebush swallowtail, and eastern tiger swallowtail.

Habitat destruction and modification from development; forestry practices; alteration of water flow, such as beaver dam removal; right-of-way maintenance; and invasive species also have resulted in the plant's disappearance from 10 sites and affected dozens of others. For example, a population in Winston County, Alabama, disappeared following the removal of beaver dams. One white fringeless orchid occurrence was eliminated from a site in Henderson County, North Carolina, which was nearly completely destroyed by construction of a building. A third site from which the species is considered extirpated, in Roane County, Tennessee, was severely disturbed during highway construction. In addition to loss of white fringeless orchid habitat and occurrences due to pond construction at three Tennessee sites, hydrology was altered in wetland habitats down slope of ponds at two other Tennessee sites, where white fringeless orchid's status is now uncertain.

Over a third of the known occurrences have seen flowers eaten, presumably by deer, a factor threatening most white fringeless orchid populations, because of the risk of plant mortality and lost potential for seed production. Plants at the largest known occurrence have been dug and eaten by feral hogs. The effects of these threats are intensified by the small size of most populations – they are simply so small and isolated that something as seemingly innocuous as being eaten by wildlife poses a threat. Plant consumption can be controlled by trapping feral hogs, and deer can be stopped by fences. However, the long-term goal is to increase the plant's populations, so that hogs or deer are no longer threats.

Collection is an historical and ongoing issue. Hundreds of specimens were collected in the 1940s. A 1992 status survey for the species included reports of two nurseries collecting white fringeless orchid plants for resale. More recently, evidence of collecting was observed at a Georgia site in 2004; and, in 2014, biologists from the Service and the State of Tennessee documented the loss of 52 plants to collecting from a roadside occurrence in Tennessee.

While lands owned by local, state, or federal governments may be the lynchpin for the plant's recovery, few conservation actions have been undertaken to address these threats to the species' habitat, and they have been met with limited success.

Some of these conservation actions include:

- The U.S. Forest Service has attempted to restore water flow at one site and managed invasive plants at other sites in the Daniel Boone National Forest. Fences have been erected to exclude feral hogs from the two sites on the Cherokee National Forest, including the largest known population, which the Forest Service monitors annually. The Forest Service also is working with the Atlanta Botanical Garden to propagate plants in captivity and manage habitat on Forest Service lands.
- The Commonwealth of Kentucky and University of Kentucky have investigated the influence of vegetation and water flow on a population in that state.
- Deer exclusion fencing has been erected at one Tennessee State Park site.
- The Commonwealth of Kentucky, and the states of Tennessee, Alabama, Georgia, and Mississippi monitor populations in their respective states at varying frequencies.
- The Atlanta Botanical Garden and numerous partners received an Environmental Protection Agency grant to fund propagation, habitat management and augmentation of several small Georgia populations, and reintroduction into a single site.

The continuation and expansion of such conservation efforts are keys to the orchid's recovery.

Public comments on the proposed listing can be submitted through November 16, 2015. Requests for a public hearing must be made in writing in 45 days by October 30, 2015. To request a public hearing, please contact Peggy Shute, Cookeville Ecological Services Field Office at 446 Neal Street, Cookeville, TN 38501; phone at 931/528-6481, or e-mail at peggy_shute@fws.gov.

Comments on the proposed listing should be submitted by one of the following methods:

- Federal eRulemaking Portal: <http://www.regulations.gov> - Follow the instructions for submitting comments on Docket No. FWS-R4-ES-2015-0129.
- U.S. mail or hand-delivery: Public Comments Processing, Docket No. FWS-R4-ES-2015-0129, Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 North Fairfax Drive, Suite 222, Arlington, VA 22203. All comments, including personal information, will made be available on <http://www.regulations.gov>.

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