

TOP 10 NOMINATION FORM

LACEY ACT

2020 Topic: Illegal wildlife (plants and animals) trafficking and unsustainable trade

Species must meet these qualifications:

- Must be native U.S. species or international species with significant U.S. demand
- Must be experiencing substantial decline (do not have to be threatened/endangered listed)
- Must be directly or indirectly impacted
 - Direct: exploited as trophies, pets, medicines, etc.
 - Indirect: impacted by imported exotics or imported disease vectors (e.g., chytrid)

Your Name: Emily B. Roberson

Organization: Native Plant Conservation Campaign

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Nominated Species (Common Name & Scientific Name):

Venus Flytrap (*Dionaea muscipula*)

Question 1: Threat to the Species

How is the species and/or its habitat threatened by illegal wildlife trafficking and/or unsustainable trade? Note the extent of the threat and whether it is direct or indirect. Include references to relevant scientific studies. Does the species face any associated political threats?

The Venus flytrap is native only to longleaf pine forests in southeastern North Carolina and northeastern South Carolina. In the wild, the plant can only be found in a [75](#)-square-mile area of these states. This represents [less than a third](#) of species' historic range. Only [302,000](#) Venus flytraps remain from a wild population of [4 million](#) in the 1970s. It is classified as "imperiled" (G2) by [NatureServe](#).

The main threat to this species is habitat loss due to fire suppression and development, but poaching is a secondary threat. Fire suppression leads to shrub and tree encroachment and a gradual decline in the quality of Venus flytrap habitat. Other threats include conversion to agriculture or tree plantations, and residential and commercial development, all of which destroy or alter habitat.

Overcollection from the wild is a significant secondary threat to this species. Because propagated plants are relatively inexpensive and available at many nurseries and garden centers, [it is somewhat unclear what is driving large scale poaching of Venus flytraps](#), but it is large scale and widespread.

Venus flytraps are under review for federal listing, but currently have no federal status. The NC Plant Conservation Program, within the NC Department of Agriculture and Consumer Services, lists Venus flytrap as Special Concern - Vulnerable due to the high potential for poaching. Venus flytrap is a CITES Appendix II listed species. The North Carolina General Assembly passed a law in 2014 making the poaching of Venus flytraps a felony.

Customs agents at Baltimore-Washington International Airport once [intercepted a suitcase containing 9,000 poached flytraps](#) bound for the Netherlands, where they presumably would have been propagated or sold. Many populations are now monitored by cameras. Nevertheless, poaching continues. In March 2019, officers with the NC Wildlife Resources Commission caught a man [poaching 216 Venus flytraps](#). He was charged with 73 felonies and held on a \$750,000 bond.

Finally, roadside occurrences of Venus flytraps are threatened by vehicular activities, road maintenance, and road expansions.

Fish and Wildlife Service species description for Venus flytrap-
<https://www.fws.gov/southeast/wildlife/plants/venus-flytrap/>

Question 2: Role of the Species

What is the ecological and/or scientific importance of the species? Note if it is a keystone species and describe its role in its environment. Include references to relevant scientific studies.

Charles Darwin described the Venus flytrap as "the most wonderful plant in the world." Some of its early collection history is described in the book: [Dionaea: The Venus's Flytrap](#).

Venus flytrap is not a keystone species. In good habitat, it is a significant member of the forest floor's herbaceous layer. However, longleaf pine savannas are very diverse with many species occupying a square meter.

Venus flytrap is also host plant to a the rare insect the Venus Flytrap Cutworm moth (Hemipachnobia subporphyrea). The cutworm is believed to be much more rare than Venus flytrap. Biologists with the NC Natural Heritage Program are conducting surveys for the cutworm in conjunction with their ongoing Venus flytrap surveys.

Question 3: Message

What is the most important message about this species for decision-makers and the public?

Biologist and attorney Katrina Outland, who has [proposed changes to the laws](#) protecting Venus flytraps and other plants from poaching, notes that "[w]hat sets the problem of plant poaching apart from the more well-known crimes of wildlife poaching is the fact that the law tends to value plants less than animals." Federal laws such as the Endangered Species Act as well as state species conservation laws should equally protect imperiled plants and animals. The

[Native Plant Conservation Campaign's Equal Protection for Plants Project](#), proposes equal protection under the federal Endangered Species Act.

Carnivorous plants, like the Venus flytrap are examples of how specialist species can adapt to survive seemingly inhospitable environments. These plants thrive in nutrient-starved soils where few other plants can endure. Venus flytrap conservation requires habitat conservation and active habitat management, primarily through fire. Fire management is critical to managing this species and to conserving as well as to restoring the longleaf pine ecosystem that it depends upon.

In order to combat poaching, Venus flytrap buyers should try to purchase plants that have not be wild collected. When purchasing Venus flytraps and other carnivorous plants, buyers should try to use nurseries and garden centers that sell ethically grown plants which were not harvested from the wild. Uniformity of size is one indication that plants are sustainably tissue culture or nursery propagated. When purchasing plants, customers should examine the entire tray. Plants which vary in size may have been poached. Purchasers should also look closely at the soil and determine if it looks like soil from nature or from a nursery (often shredded peat moss). Sometimes poached plants contain a mixture of both. Finally, purchasers should look for other species growing in the same pot. If a pot looks "weedy," that is an indication that the plants were wild harvested.

The term "poverty poaching" has been coined because a great deal of poaching of both wildlife and plants is carried out by the very poor. Laws like North Carolina's felony poaching law disproportionately target poachers themselves, rather than the dealers whom poachers supply with plants and who drive demand. Outland has [called for](#) stiffer penalties for dealers in Venus flytraps and other poached plants in order to more equitably distribute penalties for poaching along the supply chain, and to reduce dealer demand for wild poached plants.

[Studies show](#) that more than 98 species of insects and spiders visit Venus flytrap flowers in North Carolina; however, Venus flytraps very rarely eat their pollinators.

What can be done to protect Venus flytrap and other poached plants in the wild?

- Purchase tissue cultured plants from reputable nurseries and garden centers.
- Report suspected poaching to local law enforcement, do not approach poachers.
- Do not post geotagged photos or Venus flytrap location information on social media or the internet.
- North Carolina residents can purchase a Venus flytrap license plate. Proceeds go toward carnivorous plant conservation work at the NC Plant Conservation Program and the North Carolina Botanical Garden.

Species experts and contacts knowledgeable on this subject:

Lesley Starke [Lesley.starke@ncagr.gov] director of the NC Plant Conservation Program, administers the state law and manages some VFT preserves

Hervey McIver [hmciver@tnc.org], NC Chapter of The Nature Conservancy
Johnny Randall and Michael Kunz, NC Botanical Garden, conservation, genetics research
Elsa Youngstead and Laura Hamon, NC State University, status survey, research, pollinator
study
Angie Carl and Deborah Maurer The Nature Conservancy, preserves and management

Final Selections

If my nomination is selected for inclusion in the report, I would like the first draft of the species profile for the report to be written by (choose one):

You (ESC), and then my NGO will edit the profile and approve the final draft.

Me (my NGO). I understand that I (and other participating writers) will need to adhere to ESC's writing guidelines.

Deadline: May 8, 2020

Send to: top10@endangered.org