

# Recovery Planning for “Special Needs” Endangered Species

## [Florida torreya](#) as exemplar • 2023 regulation change as impetus

Recommendation of a new SSA category by [Connie Barlow](#)

founder of [Torrey Guardians](#)

DRAFT of 26 July 2024

**1. CATEGORY DEFINITION AND PARAMETERS:** The “**Special Needs**” designation would be awarded only to species that have long been listed as “endangered” and whose status is deemed “declining.” This designation would be a nonregulatory adjunct for the purpose of assisting the agency in establishing priorities for staff attention and possibly funding.

**1A. TIMING:** This status designation could be added to an existing SSA at any time. If the designation is written into the SSA during a formal “Five-Year Review,” it would also be posted in the status section of the Recovery Plan itself.

**1B. HISTORY AND CURRENT CONDITION:** A candidate species for this category must have spent at least two decades on the list. Based on the trend in its population numbers, range size, and/or health, its status has been certified as “declining.” At least some conservation actions must already have been implemented, but it has been concluded that they have yielded no substantial and enduring success. Ex situ holdings for genetic safeguarding may or may not be doing well. But no interventions have yet halted species decline “in the wild” in its “historical range.”

**1C. ACTION POTENTIAL:** Grounds for “special needs” designation is strongest if agency staff become aware of new types of actions that offer prospects for halting or even reversing decline and that could be achieved without extraordinary levels of staff time and without exposing the agency to legal challenges. Institutions are encouraged to do the groundwork themselves in proposing such actions, in volunteering to implement them, and in securing funding sources from outside the agency budget.

## **2. HOW THE CATEGORY CAN HELP INITIATE “ASSISTED MIGRATION” EXPERIMENTS:**

Agency staff are framing and testing best practices for eventual field application of the 2023 regulatory change that [removed “historical range”](#) as a geographical constraint on siting **experimental populations**. (Barlow’s comment on the proposal [here](#).) Selecting one or more species to initially think-test possible parameters would be assisted by focusing on those already categorized as having “special needs.” According to policy statements issued in support of the new regulation, species whose “historical range” is no longer suitable to its needs (especially if **climate change** or **invasive species** are the ultimate cause) can be authorized new geographical prospects for experimenting toward recovery.

Because “**special needs**” species certifications require specifying one or more suggested actions (1C. ACTION POTENTIAL), choosing from the list a species already paired with “[assisted migration](#)” (more broadly, “[translocation](#)”) would easily match the needs for creating process standards for implementing the new regulation.

## **3. BENEFITS OF APPLYING “SPECIAL NEEDS” FIRST TO PLANTS:**

**3A.** Plants almost always are far **less controversial** for listing and implementation than are animals.

**3B.** Field actions for plants require **less equipment, money, and technical expertise** than do field actions for animals.

**3C.** Opportunities for [volunteer helpers and citizen science](#) are greatest with plants, as are opportunities for actions on private conservation lands secured by [land trusts](#).

**3D. Local landowners** near a prospective experimental site who are hostile to the federal government and/or endangered species policies have little to fear that an endangered plant might walk, fly, or swim over to their properties and thereby invite restrictions on their land use choices. [Torreya Guardians](#) has found that [landowners are thrilled to host specimens of an endangered plant](#). If, however, a plant siting becomes problematic in the recipient ecosystem, all specimens would be easy to remove. Indeed, the experiment would qualify as beneficial for having made clear where *not* to attempt recovery plantings. (Some of the most important [learnings by Torreya Guardians](#) can be attributed to failed experiments that have helped us hone our lists of [best propagation practices](#) that we provide to volunteer planters.)

**3E.** Prospects for accelerating recovery of the **immense backlog of long-listed, small-range or highly disjunct plants** are now available via the **new implementation tool of translocation**. Indeed, any plant that is already characterized as “relictual” is almost certainly capable of living elsewhere. Its preferred habitats should be easy to describe, find, and test. By definition, any “[glacial relict](#)” is a species that was stranded in one or more “[refugia](#)” marked by cooler or moister habitats than its current surrounds. Inhospitable surroundings have thus blocked natural modes of seed dispersal into potentially habitable sites elsewhere, and perhaps has done so for thousands of years. **If a relictual population is declining now, then ongoing climate change ensures its extirpation or outright extinction. Therefore, translocation experiments must begin immediately.** *Note: “Recovery” is, of course, still limited to “historical range.” But success in testing “assisted migration” in new experimental plantings, along with already demonstrated success in established horticultural plantings, will surely make regulatory amendment achievable in the near future*

#### 4. BENEFITS OF CHOOSING FLORIDA TORREYA AS TEST CASE:

**4A.** A “5-Year Review” process was initiated June 5, 2024.

**4B. Barlow plans to submit SSA and Recovery Plan recommendations** for this species by the August 5 deadline. Indeed, the “special needs” idea came to her while working on those recommendations.

**4C. [Florida Torreya ranks as the 5th highest recipient of federal funds](#) of all listed plants.** Listed “endangered” in **1984**. All recovery plan updates conclude it is declining.

• **1984 Federal Register.** EXCERPTS: The Service determines *Torreya taxifolia* (Florida torreya) to be an endangered species pursuant to the Endangered Species Act. This plant is endemic to the Apalachicola River area in Florida and Georgia. **It is endangered by a fungal disease**, which kills trees before they reach seed-bearing size.... An evergreen tree reaching 18 meters tall, *Torreya taxifolia* (Florida torreya) was first discovered in 1834 and formally described in 1838. The Florida torreya and other endemics of the Apalachicola River system have received much attention from scientists and local residents. The **relictual nature of this area** accounts for the presence of many unique species (James, 1967). **During recent glaciations, species migrated southward by way of the Apalachicola River system, which served as a refugium during cooling periods. The Apalachicola River is the only Deep River system that has its headwaters in the southern Appalachian Mountains. With the receding of the glaciers, cool moist conditions persisted on the bluffs and ravines of the Apalachicola River after climatic change rendered the surrounding area much drier and warmer.** The entire Apalachicola River bluff system today is an extremely diverse and unique ecosystem, of which *Torreya taxifolia* is a part. ... All mature viable trees are located in botanical gardens and arboreta. The wild trees do not now have good long-term survival prospects. The initial focus of recovery will be to address controlling the disease. After the disease has been overcome, recovery efforts would address reintroduction of the species into the wild."

**4D.** Torreyia Guardians has already [documented mature horticultural plantings in North Carolina](#). Two of the oldest are fully “naturalized” (wild-dispersed seedlings and saplings nearby). Owners could be approached to have these certified as **pre-existing experimental populations**: [Biltmore Gardens](#) (grove planted in 1939) and [Harbison House](#) (ca. 1922)

**4E.** [Torreyia Guardians is regularly in the media](#) (most recently in [Sierra Magazine](#) and [New York Times Magazine](#)).

**4F.** An opportunity to **restore the good relationship** Torreyia Guardians used to have with the U.S. Fish and Wildlife Service. The good relationship was from 2004 through the “Five-Year Review” in 2010. We were included in the 2010 decision process and were referred to as collaborators in the plan itself. [The bad relationship emerged](#) when staff changes happened at the State Botanical Garden of Georgia and Atlanta Botanical Garden (ca. 2016); the agency necessarily had to maintain good relationships with the two botanical gardens that initiated and managed the ex situ safeguarding locales in northern Georgia. This page on the Torreyia Guardians website provides details of the deterioration: [“Case Study of Agency and Institutional Failures of Endangered Species Management of Florida Torreyia.”](#)

END OF DRAFT DOCUMENT BY CONNIE BARLOW, 18 July 2024