5-YEAR REVIEW

Texas Snowbells (*Styrax platanifolius* ssp. *texanus*)

GENERAL INFORMATION

Listing History

Species: Texas snowbells (*Styrax platanifolius* ssp. *texanus*)
Date listed: October 12, 1984
FR citation(s): 49 FR 40036-40038
Classification: Endangered

Critical habitat/4(d) rule/Experimental population designation/Similarity of appearance listing: Not applicable

Methodology used to complete the review:

The U.S. Fish and Wildlife Service (USFWS) most recently conducted a review of the biology and status of Texas snowbells (*Styrax platanifolius* ssp. *texanus*) on August 21, 2018 (USFWS 2018, entire). For the current review we examined whether new information was available and whether that new information would change the analyses and conclusions we made in the previous status review. We solicited data for this current review from interested parties through a *Federal Register* notice announcing the review on November 14, 2024 (89 FR 90030). We also contacted Texas Parks and Wildlife Department (TPWD) to request relevant information on this species and the most recent update of the Texas Natural Diversity Database (TXNDD) Element Occurrence (EO) records and geographic data for Texas snowbells (TXNDD 2025). Additionally, we conducted literature searches on "*Styrax platanifolius*, *S. texana*, and *S. platanifolius* ssp. *texanus*", and on the scientific publications of authors who previously published research on this species.

FR Notice citation announcing the species is under active review:

89 FR 90030-90032

REVIEW ANALYSIS

Section 4 of the Endangered Species Act (ESA; 16 U.S.C. 1533) and its implementing regulations (50 CFR part 424) set forth the procedures for determining whether a species meets the definition of "endangered species" or "threatened species." The ESA defines an "endangered species" as a species that is "in danger of extinction throughout all or a significant portion of its range," and a "threatened species" as a species that is "likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." The ESA requires that we determine whether a species meets the definition of "endangered species" or "threatened species" due to any of the five factors described below.

A) the present or threatened destruction, modification, or curtailment of its habitat or range; B) overutilization for commercial, recreational, scientific, or educational purposes; C) disease or predation; D) the inadequacy of existing regulatory mechanisms; or E) other natural or manmade factors affecting its continued existence.

The identification of any threat(s) does not necessarily mean that the species meets the statutory definition of an "endangered species" or a "threatened species." In assessing whether a species meets either definition, we must evaluate all identified threats by considering the expected response of the species, and the effects of the threats—in light of those actions and conditions that will ameliorate the threats—on an individual, population, and species level. We evaluate each threat and its expected effects on the species, then analyze the cumulative effect of all of the threats on the species as a whole. We also consider the cumulative effect of the threats in light of those actions and conditions that will have positive effects on the species—such as any existing regulatory mechanisms or conservation efforts. USFWS recommends whether the species meets the definition of an "endangered species" or a "threatened species" only after conducting this cumulative analysis and describing the expected effect on the species now and in the foreseeable future.

Distinct Population Segment (DPS) policy (1996):

Not applicable; DPS is only applicable to vertebrates.

Updated Information and Current Species Status

Biology and Habitat:

In the Species Status Assessment (USFWS 2017, pp. 30–31) for Texas snowbells we described the efforts of J. David Bamberger, a private landowner in Blanco County, Texas, and the Selah, Bamberger Ranch Preserve, a non-profit organization he founded, to conserve and recover Texas snowbells. Beginning in 1994, Mr. Bamberger and staff and volunteers of Selah, Bamberger Ranch Preserve gained the trust of neighboring landowners and were granted access to conduct surveys on more than 120,000 acres of remote, rugged habitats, where they discovered six new populations.

Beginning in 2003, in partnership with the USFWS Partners for Fish and Wildlife Program, the TPWD Landowner Incentive Program, and the National Fish and Wildlife Foundation, they successfully reintroduced 694 Texas snowbells seedlings on 19 ranches and developed cost-effective methods to protect the plants from the threat of browsing by deer and introduced ungulates. Many of the reintroduced populations have now flowered and set seed, and unaided recruitment has occurred in the vicinity of some reintroduction sites; up to 500 new seedlings were documented at one planting site. These landowner outreach, survey, and reintroduction efforts address Recovery Actions 1, 4, and 5 in the Recovery Plan (USFWS 2019, pp. 5-6) and demonstrate that the downlisting criterion (Criterion IV.1) can be realistically achieved.

On April 12—13, 2022, USFWS personnel accompanied Mr. Bamberger and ranch foreman Steve Fulton for annual monitoring of Texas snowbells reintroduction sites at

several private ranches in Real and Edwards counties (Figure 1). On May 19, 2023, USFWS presented Mr. Bamberger and Selah, Bamberger Ranch Preserve with the Region 2 Recovery Champion Award.

Threats Analysis (threats, conservation measures, and regulatory mechanisms):

No new information

Synthesis:

After reviewing the best available scientific information, our evaluation of threats affecting the species under the factors in 4(a)(1) of the ESA and our analysis of the status of the species have not changed since our most recent status review (USFWS 2018, entire). We therefore conclude that Texas snowbells should remain an endangered subspecies.

Figure 1. Survey and reintroduction efforts by J. David Bamberger and Selah, Bamberger Ranch Preserve, Real and Edwards Counties, Texas.

a. J. David Bamberger (L) and Steve Fulton (R).
b. Texas snowbells habitat on West Nueces River.
c. Unaided recruitment of Texas snowbells.
d. Recovery Champion Award.
e. Reintroduced Texas snowbells with flower buds.

RESULTS

Recommended Classification:

No change is needed

New Recovery Priority Number:

Not applicable

Brief Rationale:

Not applicable

Listing and Reclassification Priority Number:

Reclassification (from Threatened to Endangered) Priority Number: Not applicable
Reclassification (from Endangered to Threatened) Priority Number: Not applicable
Delisting (Removal from list regardless of current classification) Priority Number: Not applicable

Brief Rationale:

Not applicable

RECOMMENDATIONS FOR FUTURE ACTIONS

Private landowner outreach: Promote awareness of Texas snowbells through written and online sources. Promote the continued efforts of private landowners to conserve Texas snowbells. Provide technical and/or financial assistance, as needed, to support monitoring, surveys, and management actions. Promote conservation easements for long-term protection of habitats and populations among willing landowners.

Reduce ungulate browse pressure: An immediate but short-term objective is to protect vulnerable individuals and small populations, where possible, with deer-fencing or other methods of exclusion. A more permanent objective is management of white-tailed deer and introduced ungulates at densities that do not deplete Texas snowbells and other native vegetation.

Population augmentation and reintroduction: Use nursery-propagated seedlings and/or direct-seeding to augment small populations to a) increase numbers of individuals and genetic diversity within pollinator ranges to ensure high fertilization rates; and b) increase metapopulation size to minimum viable population levels (i.e., increase resiliency). Reintroduce populations into currently unoccupied potential habitats to a) reduce isolation and fragmentation and establish gene flow among populations; and b) establish additional metapopulations (i.e., increase redundancy). Prepare a controlled propagation and reintroduction plan, as required by Service policy (65 FR 56916). Limit augmentation and reintroduction to the upper watersheds of the Nueces, West Nueces, and Devils Rivers; augmentation and reintroduction may also be appropriate in the Frio, West Frio, Dry Frio, and Sycamore Creek watersheds if natural populations are confirmed there.

Pollinator conservation: Promote conservation and management of native bees, butterflies, and other pollinators. This may include management and restoration of diverse native grasslands, shrublands, and savannas.

Search for new populations: Conduct surveys, with landowner permission, in potential habitats throughout the subspecies' range. In particular, the discovery or confirmation of populations in the Frio, West Frio, Dry Frio, or Sycamore Creek watersheds would increase our knowledge of the subspecies' geographic range and adaptability and might confer greater genetic diversity (representation) to the subspecies as a whole.

Develop an improved potential habitat model, using actual slope, distance to-slope, and distance-to-watercourse data (and possibly other factors) collected from plant locations in the field.

REFERENCES

Texas Natural Diversity Database. 2025. Element Occurrence records and Shapefiles for Texas Snowbells (*Styrax platanifolius* ssp. *texanus*). Updated on March 7, 2025.

U.S. Fish and Wildlife Service. 2017. Species Status Assessment for Texas Snowbells (*Styrax platanifolius* ssp. *texanus*). October 2017 (Version 1.0). U.S. Fish and Wildlife Service, Region 2. Albuquerque, New Mexico. 55 pp.

U.S. Fish and Wildlife Service. 2018. Texas snowbells (*Styrax platanifolius* ssp. *texanus* five-year review: Summary and evaluation. Austin Ecological Services Field Office, Austin, Texas. 5 pp.

U.S. Fish and Wildlife Service. 2019. Recovery plan for Texas snowbells (*Styrax platanifolius* ssp. *texanus*). Final Revision. September 2019. U.S. Fish and Wildlife Service, Southwest Region, Albuquerque, New Mexico. 15 pages.

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U.S. FISH AND WILDLIFE SERVICE

5-YEAR REVIEW of Little Aguja (=Creek) Pondweed (*Potamogeton clystocarpus*)

Current Classification: Endangered

Recommendation resulting from the 5-Year Review:

No change needed

Appropriate Listing/Reclassification Priority Number, if applicable: Not applicable

FIELD OFFICE APPROVAL:

Acting Lead Field Supervisor, Fish and Wildlife Service, Austin Ecological Services Field Office, Austin, Texas

Approve MICHAEL WARRINER Digitally signed by MICHAEL WARRINER Date: 2025.04.24 07:03:30 -05'00' _____