Pygmy fringe-tree
(*Chionanthus pygmaeus*)

5-Year Status Review: Summary and Evaluation

Photo: Klyn Nurseries

U.S. Fish and Wildlife Service
Southeast Region
Florida Ecological Services Field Office
Vero Beach, Florida

July 2025

5-YEAR STATUS REVIEW
Pygmy fringe-tree (*Chionathus pygmaeus*)

GENERAL INFORMATION

Current Classification: Endangered

Lead Field Office: Florida Ecological Services Field Office, Emily_Bauer@fws.gov, (772)-226-8133

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Reviewers:
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Date of original listing: February 20, 1987 (Effective Date); January 21, 1987 (52 FR 2227, Publication Date)

Methodology used to complete the review: In accordance with section 4(c)(2) of the Endangered Species Act of 1973, as amended (Act), the purpose of a status review is to assess each threatened species or endangered species to determine whether its status has changed and if it should be classified differently or removed from the Lists of Threatened and Endangered Wildlife and Plants (50 CFR 424.11). The U.S. Fish and Wildlife Service (Service) evaluated the best available information about the pygmy fringe-tree's biology, habitat, and threats to inform this status review. We announced initiation of this review in the Federal Register on June 6, 2024 (89 FR 48437), with a 60-day comment period and received no comment(s). The primary sources of information used in this analysis were the 1987 final listing rule (52 FR 2227), the 1999 recovery plan, peer-reviewed reports, agency reports, unpublished survey data and reports, and personal communication with recognized experts. This review was completed by the Service's Florida Ecological Services Field Office, Vero Beach, Florida. All literature and documents used for this review are on file at the field office. All recommendations resulting from this review are the result of thoroughly reviewing the best available information on pygmy fringe-tree, along with information and data received from state agencies.

FR Notice citation announcing the species is under active review: June 6, 2024 (89 FR 48437)

Species' Recovery Priority Number at the start of the 5-year review (48 FR 43098): 2. Pygmy fringe-tree is a species with a high degree of threat and a high recovery potential.

Review History: Previous 5-year reviews that recommended no status change were published on August 17, 2010 (Service 2010), and May 28, 2021 (Service 2021).

REVIEW ANALYSIS

Listed Entity

Taxonomy and nomenclature

We are not aware of any changes to the taxonomy of this entity, and it is still considered valid by the Service and the Integrated Taxonomic Information System (2024).

Distinct Population Segment (DPS) (61 FR 4722)

The Act defines species as including any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate wildlife. This definition limits listing of a DPS to only vertebrate species. Because the species under review is not a vertebrate, the DPS policy is not applicable

Recovery Criteria

Recovery Plan

South Florida Multi-Species Recovery Plan; May 18, 1999 (Service 1999)

Preceding iterations:
Recovery Plan for Nineteen Florida Scrub and High Pineland Plant Species; June 20, 1996 (Service 1996)
Recovery Plan for Eleven Florida Scrub Plant Species; January 29, 1990 (Service 1990)

Recovery plans are not regulatory documents and are intended to provide guidance to the Service, States, and other partners on methods of minimizing threats to listed species and on criteria that may be used to determine when recovery is achieved. If the recovery criteria defined in the plan are still valid, meeting recovery criteria can indicate that the species no longer requires protections under the Act. However, when recommending whether a listed species should be delisted, the Service must apply the factors in section 4(a) of the Act (84 FR 45020).

Chionanthus pygmaeus may be considered for delisting when: 1) enough demographic data are available to determine the appropriate numbers of self-sustaining populations required to ensure 95 percent probability of persistence for 100 years; 2) when these populations, within the historic range of *C. pygmaeus*, are adequately protected from further habitat loss, degradation, and fire suppression; 3) when these sites are managed to maintain the seral stage of xeric oak scrub to support *C. pygmaeus*; and 4) when monitoring programs demonstrate that these sites support sufficient population sizes, are distributed throughout the historic range, and are sexually or vegetatively reproducing at sufficient rates to maintain the population.

These criteria for pygmy-fringe tree have not been met. Population trends and the numbers of self-sustaining populations needed for a 95 percent probability of persistence is not known. Nearly one-third of the populations have not been observed in over two decades, and roughly 32 percent of the known populations occur on unprotected lands. The criterion for management of the seral stage of xeric oak scrub does not include other xeric uplands such as sandhills, scrubby flatwoods, xeric hammocks, and mesic flatwoods where the species is also found. To fully meet these criteria, more data is needed on long-term population trends and the appropriate habitat management regimes.

Biology and Habitat Summary

A detailed review of the species biology and habitat information can be found in the listing rule (52 FR 2227; Service 1987), Recovery Plan (Service 1999), and previous 5-year review (Service 2021). The pygmy fringe-tree is a long-lived, clonal, woody perennial whose lifespan is unknown but is likely measured in decades. The species is deciduous, with leaf-out occurring mid-March and flowering peaking in March and April (Menges et al. 2019). Fruits mature in late summer, with seed dispersal in the fall (Gill and Pogge 1974), but fruits may remain on the plants well into winter (Stout 1989). Seed dormancy is complex with some seeds having long-term viability (Eads 2010). Reproduction can also be clonally via shoots that arise from the plant's rootstock. The pygmy fringe-tree is endemic to central Florida and occurs in a range of fire dependent, upland habitats including scrub, sandhill, xeric hammocks, scrubby flatwoods, and mesic flatwoods (Christman 1988; Weekley 1999; Menges et al. 2019), primarily on yellow sands (Menges et al. 2007). It is not as sensitive to fire frequency as other endemic species (Stout 1989) and can tolerate a wide fire return interval, anywhere from 10 to 50 years (Menges et al. 2019).

Florida Natural Areas Inventory (FNAI; 2025) reported 59 extant populations (this excludes 1 possibly failed to find, 1 failed to find, 3 possibly extirpated, and 3 extirpated occurrences) of pygmy fringe-tree; however, 20 (34 percent) of these populations have not been observed in over two decades (Table 1). Pygmy fringe-tree occurs on protected lands at 40 (68 percent) of the extant populations. FNAI (2025) also ranked the estimated viability of the reported populations based on size and condition of the population and the condition of the surrounding landscape. Of the 31 populations that were assigned a viability ranking, 26 (84 percent) had an estimated viability from fair to excellent. In comparison, the previous 5-year review (Service 2021) reported 49 occurrences (including 3 possibly extirpated and 1 failed to find occurrences) with 53 percent on protected lands. Of the previous reported occurrences, 18 had a viability ranking from fair to excellent.

In 2023, level 3 monitoring at Lake Wales Ridge State Forest found 71.1 percent overall plant survival since 2020 monitoring (Florida Department of Agriculture and Consumer Services [FDACS] 2023). Lake Wales Ridge State Forest does conduct habitat management including oak reduction and controlled burns and staffing and funding allows; however, even in units burned localized overgrown habitat conditions (i.e., dense scrub with some conversion to hickory hammock) and its constraint on carrying fire is thought to contribute to pygmy fringe-tree populations with lower survival (FDACS 2024). Monitoring has consistently show higher average plant height, crown diameter, and flowering in mesic versus xeric sites (FDACS 2024). One consideration on survey results for the pygmy fringe-tree is the possibility of misidentification of *C. pygmaeus* as *C. virginiana* (white fringetree) or *C. pygmaeus* hybrids, which are more common in mesic habitats and must be in flower for accurate identification (FDACS 2024).

We are not aware of any additional new biology or habitat information since the most recent species review that impacts the status of the species, and all of information provided in the last 5-year review remains valid (Service 2021).

Table 1. Summary of FNAI (2025) element occurrence (EO) records including EO number, EO rank, last observation date, management unit, county, and EO size (acres) for pygmy fringe-tree. EO rank is an estimate of viability with the following categories: A = excellent; AB = excellent or good; AC = excellent, good, or fair; B = good; B? = possibly good; BC = good or fair; BD = good, fair, or poor; C = fair; C? = possibly fair; CD = fair or poor; E = verified extant, viability not assessed; F = failed to find; F? = possibly failed to find; X = extirpated; X? = possibly extirpated.

EO #	EO RANK	LAST OBSERVATION DATE	MANAGEMENT UNIT	COUNTY	EO SIZE (Acres)
14	A	2023-08-08	Saddle Blanket Scrub Preserve	POLK	136.2
48	A	2024-03-13	Carter Creek, Lake Wales Ridge Wildlife and Environmental Area, Lake Wales Ridge National Wildlife Refuge	HIGHLANDS	632.5
58	A	2012-04-30	Sun Ray Scrub	POLK	53.4
57	AB	2020-04-12	Lake Wales Ridge State Forest, FX Bar Ranch Conservation Easements	POLK	4.6
80	AB	2021-03-25	Lake Wales Ridge Wildlife and Environmental Area	HIGHLANDS	1.0
85	AB	1987-10-21	Tiger Creek Preserve	POLK	5.6
62	AC	2014-04-25	Lake Wales Ridge State Forest	POLK	2.2
10	B	1990-10-17	None	POLK	49.7
37	B	2012-04-11	Lake Marion Creek Horseshoe Scrub Tract	POLK	2.8
72	B	2023-08-09	Lake Wales Ridge Wildlife and Environmental Area	POLK	0.2
61	B?	2023-04-03	Lake Wales Ridge State Forest	POLK	3.2
73	B?	2018-04-04	Little Manatee River State Park	HILLSBOROUGH	0.1
75	B?	2020-05-24	Lake Wales Ridge State Forest	POLK	0.6
76	B?	2016-06-08	Lake Wales Ridge State Forest	POLK	1.0
77	B?	2006-02-06	Lake Wales Ridge State Forest	POLK	0.0
78	B?	2024-03-30	Lake Wales Ridge State Forest	POLK	4.0
24	BC	1998-08-20	None	POLK	2.8
36	BC	2012-10-24	Lake Wales Ridge National Wildlife Refuge	HIGHLANDS	314.5
56	BC	1998-04-02	None	LAKE	2.8
65	BC	2018-05-19	Lake Wales Ridge Wildlife and Environmental Area	HIGHLANDS	0.5
66	BC	2013-04-09	Sandhill Preserve	ORANGE	2.9
92	BC	1996-03-25	Upper Lakes Basin Watershed, Reedy Creek Mitigation Bank	POLK	151.2
39	BD	2023-08-07	Upper Lakes Basin Watershed	POLK	3.0
28	C	2012-10-08	Allen David Broussard Catfish Creek Preserve State Park	POLK	2.8
34	C	2012-10-25	Tiger Creek Preserve	POLK	2.8
40	C	2009-03-31	None	POLK	371.8
15	C?	2017-02-20	Lake Wales Ridge Wildlife and Environmental Area	HIGHLANDS	6.7
38	CD	2023-03-13	None	HIGHLANDS	31.5
41	CD	2022-04-05	None	HIGHLANDS	47.8
70	CD	2012-04-10	Scrub Point Preserve	LAKE	0.0

EO #	EO RANK	LAST OBSERVATION DATE	MANAGEMENT UNIT	COUNTY	EO SIZE (Acres)
71	CD	2012-09-17	Lake Wales Ridge National Wildlife Refuge	POLK	7.0
1	E	1981-03-23	None	LAKE	2.8
16	E	2005-04-13	Highlands Hammock State Park, Miller Conservation Easements, Sandy Gully Agricultural and Conservation Easement	HARDEE / HIGHLANDS	9238.9
17	E	1983-09-06	None	HIGHLANDS	2.8
19	E	1983-09-20	None	HIGHLANDS	2.8
23	E	1986-09-24	Lake Wales Ridge Wildlife and Environmental Area	HIGHLANDS	241.9
27	E	1986-04-23	None	HIGHLANDS	320.7
29	E	1988	Allen David Broussard Catfish Creek Preserve State Park	POLK	2.8
30	E	2024-05-26	Tiger Creek Preserve	POLK	124.1
4	E	2020-04-03	Lake Livingston Conservation Bank	POLK	126.3
44	E	1987-09-27	None	HIGHLANDS	20.9
45	E	1986-09-25	None	HIGHLANDS	69.1
46	E	2020-03-21	None	HIGHLANDS	29.9
5	E	1987-06-04	None	HIGHLANDS	5.6
53	E	1987-05-29	None	HIGHLANDS	494.8
60	E	2023-04-15	None	POLK	14.3
69	E	2010-08	Serenoa Preserve	POLK	4.2
7	E	1962-06-26	None	HIGHLANDS	25.0
74	E	2011-03-29	Upper Little Manatee River	HILLSBOROUGH	0.9
81	E	2020-12-29	Lake Wales Ridge Wildlife and Environmental Area	HIGHLANDS	0.5
82	E	2013-09-16	Palatlakaha River Park	LAKE	7.7
84	E	1987-12-05	Tiger Creek Preserve	POLK	30.9
86	E	2020-07-02	Everglades Headwaters National Wildlife Refuge and Conservation Area	POLK	29.6
87	E	2021-04-04	Upper Lakes Basin Watershed	POLK	0.6
88	E	1945-04-03	Archbold Biological Station	HIGHLANDS	493.7
9	E	1960-04-27	None	HIGHLANDS	1125.2
93	E	1996-04-05	T. Mabry Carlton, Jr. Memorial Reserve, Deer Prairie Creek Preserve (Sarasota County)	SARASOTA	658.1
95	E	2022-03-04	Lake Apopka Restoration Area	LAKE	10.4
99	E	2024-04-01	None	HIGHLANDS	18.1
59	F	1998-09-24	Lake Wales Ridge Wildlife and Environmental Area	HIGHLANDS	2.8
11	F?	2015-05-12	Lake Wales Ridge State Forest	POLK	2.8
89	X	1962-06-26	None	HIGHLANDS	30.9
90	X	1895-07-10	None	LAKE	493.7
91	X	1992-03-29	None	HIGHLANDS / POLK	493.7
2	X?	1987-11-18	None	OSCEOLA	58.6
50	X?	2011	None	HIGHLANDS	20.9
6	X?	1964-03-27	None	HIGHLANDS	123.6

Threats (Five-Factor Analysis) Summary

The status of a species is determined from an assessment of factors specified in section 4(a)(1) of the Act, including: Factor A: the present or threatened destruction, modification, or curtailment of its habitat or range; Factor B: overutilization for commercial, recreational, scientific, or educational purposes; Factor C: disease or predation; Factor D: the inadequacy of existing regulatory mechanisms; Factor E: other natural or manmade factors affecting its continued existence. A summary of this assessment is detailed below.

Factor A (Present or Threatened Destruction, Modification, or Curtailment of its Habitat or Range): As identified in previous 5-year reviews (Service 2010, 2021), habitat loss through development and land conversion, inadequate fire management, and non-native plant species continue to remain threats for the pygmy fringe-tree throughout its range. Development and land conversion are especially likely on private or non-conservation lands (Carr and Zwick 2016). Even on protected conservation sites, inadequate fire management remains a threat.

Factor B (Overutilization for Commercial, Recreational, Scientific, or Educational Purposes): The final listing rule (52 FR 2227) considered the pygmy fringe-tree as vulnerable to overharvesting as an ornamental. There is no current indication that the overutilization for commercial, recreational, scientific, or educational purposes is a significant threat to the pygmy fringe-tree.

Factor C (Disease or Predation): As previous 5-year reviews (Service 2010, 2021) indicated, researchers have observed predation on the pygmy fringe-tree by white-tailed deer (*Odocoileus virginianus*), a moth (*Palpita illibalis*), an unidentified weevil, and an unidentified thrips (Stout 1989; Weekley 1999; Stout 2010, pers. comm.; Rosner-Katz 2019, pers. comm.; Wetsch 2024, pers. comm.). The degree of this threat is not fully known and requires more research. At this time, there is no research on disease in the pygmy fringe-tree.

Factor D (The Inadequacy of Existing Regulatory Mechanisms): Pygmy fringe-tree is listed as endangered by the State of Florida on the Regulated Plant Index (FDACS Rule 5B-40). This law regulates the taking, transport, and sale of listed plants. However, property owners are not prohibited from destroying populations of listed plants nor are they required to manage habitats to maintain populations. In conclusion, there are no existing regulatory measures that reduce or remove the threat of loss of populations or removal/destruction of plants on private property and existing regulatory mechanisms are inadequate to protect this species.

Factor E (Other Natural or Manmade Factors Affecting its Continued Existence): As discussed in the last 5-year review (Service 2021), climate change factors including increased average annual temperatures, changes in precipitation patterns, severity of tropical storms and hurricanes, and sea-level rise are anticipated to alter habitat conditions throughout the pygmy fringe-tree's range (Runkle et al. 2022; Sweet et al. 2022). Higher temperatures and changes in precipitation patterns could alter relative humidity levels and evapotranspiration rates, leading to the potential for more frequent and intense droughts and wildfire events. Scrub species, in general, can tolerate drought conditions, but it is unclear how this threat will fully affect species like pygmy fringe-tree. In addition, it is unknown how these changes will influence pollinators, the seed bank, or the ability to implement prescribed fire. While rising seas will not directly impact pygmy fringe-tree habitat, it will likely move development further inland to the higher elevation area, such as the central Florida ridges within the range of the species (Volk et al. 2017).

Synthesis

Pygmy fringe-tree occurs within a limited and fragmented geographic range in central Florida, predominantly in the Lake Wales Ridge. Great improvement has been made since the time of listing in the acquisition of protected sites. Protected areas encompass over two-thirds (68 percent) of the reported populations. However, nearly one-third (34 percent) of the reported pigeon wings populations have not been observed in over 20 years and their status is largely unknown. Additional surveys are needed to assess the status of these populations. While populations on some of the protected sites do receive habitat management including prescribed fire and oak thinning as staffing and funding allows, appropriate habitat management continues to be a threat for the species. Additionally, the limited geographic range and isolated populations due to habitat loss and fragmentation present additional risk for pygmy fringe-tree. Anticipated climate change factors such as increased temperatures and altered precipitation patterns will likely increase these threats. Due to the probability of continued populations losses at unprotected sites and the lack of adequate habitat management at many sites, pygmy fringe-tree continues to meet the definition of endangered under the Act.

RECOMMENDED FUTURE ACTIVITIES

Recovery Activities

- Work with State, Federal, and other partners to ensure adequate fire and invasive species management is achieved at sites that support pygmy fringe-tree.
- Acquire or secure permanent easements on private sites with existing populations from willing sellers, and restore scrub habitat on these sites, including implementing prescribed fire and vegetation thinning by hand.
- Work with private landowners to conserve extant populations.
- Ensure representation of pygmy fringe-tree at the National Center for Genetic Resources Preservation in Fort Collins, Colorado.
- Strengthen *ex situ* conservation measures by including a wider sample (from numerous sites across the species range) of this species at Bok Tower Gardens, in both stored seed and living collections.

Monitoring and Research Activities

- Monitor the status of populations with specific emphasis on those populations not recently or routinely observed.
- Determine limiting factors and preferred microsites for seedling recruitment.
- Develop a standard methodology for monitoring pygmy fringe-tree on conservation lands.
- Initiate detailed demographic monitoring (Level 3 monitoring sensu Menges and Gordon 1996) at multiple sites throughout the species' range.
- Conduct a prescribed fire in one or more of the study populations at Tiger Creek Preserve to better understand the response of pygmy fringe-tree and to integrate fire management into population viability models.
- Determine the overall level of threat posed by seed and fruit predators, especially the unidentified weevil.
- Determine the overall level of threat to pygmy fringe-tree posed by the moth larva *Palpita illibalis* and white-tailed deer.

- Conduct basic research on the breeding system and pollination biology of pygmy fringe-tree.
- Initiate studies to determine the genetic structure of pygmy fringe-tree populations throughout the species' range.
- Conduct germination trials on stored seed to determine their long-term viability and factors that affect seed dormancy.

REFERENCES

Carr, M. H., and P.D. Zwick. 2016. Florida 2070. Mapping Florida's Future – Alternative Patterns of Development in 2070. University of Florida. Gainesville, Florida.

Christman, S.P. 1988. Endemism in Florida's interior sand pine scrub. Technical Report, Project Number GFC 84–101. Florida Nongame Wildlife Program. Tallahassee, FL.

Eads, A.L. 2010. Seed and vegetative propagation methods for the rare Florida native species *Chionanthus pygmaeus* (pygmy fringetree). Master's Thesis, University of Illinois.

Florida Department of Agriculture and Consumer Services (FDACS). 2023. Lake Wales Ridge Scrub Plant Monitoring and Management, Florida Statewide Endangered and Threatened Plant Conservation Program 2023 Annual Report from Lake Wales Ridge State Forest. 129 pp.

Florida Department of Agriculture and Consumer Services (FDACS). 2024. Lake Waled Ridge Scrub Plant Monitoring and Management, Florida Statewide Endangered and Threatened Plant Conservation Program 2024. Annual Report from Lake Wales Ridge State Forest. 132 pp.

Florida Natural Areas Inventory (FNAI). 2025. Element Occurrence and Geodatabase. Florida Natural Areas Inventory, Tallahassee, FL.

Gill, J.D., and F.L. Pogge. 1974. *Chionanthus virginicus*. Pages 323–325 in C. S. Schopmeyer. Seeds of woody plants in the United States. Agriculture Handbook No. 450. Forest Service, U.S. Department of Agriculture, Washington, DC.

Integrated Taxonomic Information System. 2024. https://www.itis.gov/ Website Accessed 2 May 2024.

Menges, E.S., and D.R. Gordon. 1996. Three levels of monitoring intensity for rare plant species. Natural Areas Journal 16:227–237.

Menges, E.S., and D.R. Gordon. 2010. Should mechanical treatments and herbicides be used as fire surrogates to manage Florida's Uplands: A Review. Florida Scientist 73:145–172.

Menges, E.S., C.W. Weekley, S.I. Hamzé, and R.L. Pickert. 2007. Soil preferences for listed plants on the Lake Wales Ridge in Highlands County, Florida. Florida Scientist 70:2439.

Menges, E.S., S.M. Koontz, K.T. Charton, and S.A. Smith. 2019. Rare Plant Biology and Management on the Lake Wales Ridge. Report to Florida Fish and Wildlife Conservation

Commission's Lake Wales Ridge Wildlife and Environmental Area. Archbold Biological Station. 63 pp.

Rosner-Katz, H. 2019. Email communication to the U.S. Fish and Wildlife Service. Florida Department of Agriculture and Consumer Services. June 7, 2019.

Runkle, J.E., S.M. Champion, R. Frankson, B.C. Stewart, W. Sweet, and S. Rayne. 2022. Florida State Climate Summary 2022. NOAA Technical Report NESDIS 150-FL. NOAA/NESDIS, Silver Spring, MD, 5 pp.

Stout, I.J. 1989. Investigation of the ecology and management of the pigmy fringe tree, *Chionanthus pygmaea*. Final report to The Nature Conservancy. Winter Park, FL. 53 pp.

Stout, I.J. 2010. Email to Dave Bender. Comments on draft five-year review. University of Central Florida. Orlando, Florida. June 10, 2010.

Sweet, W.V., B.D. Hamlington, R.E. Kopp, C.P. Weaver, P.L. Barnard, D. Bekaert, W. Brooks, M. Craghan, G. Dusek, T. Frederikse, G. Garner, A.S. Genz, J.P. Krasting, E. Larour, D. Marcy, J.J. Marra, J. Obeysekera, M. Osler, M. Pendleton, D. Roman, L. Schmied, W. Veatch, K.D. White, and C. Zuzak. 2022. Global and Regional Sea Level Rise Scenarios for the United States: Updated Mean Projection and Extreme Water Level Probabilities Along U.S. Coastlines. NOAA Technical Report NOS 01. National Oceanic and Atmospheric Administration, National Ocean Service. Silver Spring, MD. 111 pp. https://oceanservice.noaa.gov/hazards/sealevelrise/noaa-nos-techrpt01-global-regional-SLR=scenarios-US.pdf

Weekley, C.W. 1999. *Chionanthus pygmaeus* at Lake Wales Ridge State Forest. Monitoring Report No. 2. Florida Division of Forestry. Tallahassee, Florida.

Wetsch, O. 2024. Email communication to the U.S. Fish and Wildlife Service. Florida Department of Agriculture and Consumer Services. March 26, 2024.

U.S. Fish and Wildlife Service (Service). 1987. Endangered and Threatened Wildlife and Plants; Determination of Endangered or Threatened Status for Seven Florida Scrub Plants. Federal Register.

U.S. Fish and Wildlife Service (Service). 1990. Recovery Plan for Eleven Florida Scrub Plant Species. Atlanta, Georgia.

U.S. Fish and Wildlife Service (Service). 1996. Recovery Plan for Nineteen Central Florida Scrub and High Pineland Plants (revised). Atlanta, Georgia.

U.S. Fish and Wildlife Service (Service). 1999. South Florida Multi-Species Recovery Plan. Atlanta, Georgia.

U.S. Fish and Wildlife Service (Service). 2010. Pygmy fringe-tree (*Chionanthus pygmaeus*) 5-Year Review: Summary and Evaluation. U.S. Fish and Wildlife Service.

U.S. Fish and Wildlife Service (Service). 2021. Pygmy fringe-tree (*Chionanthus pygmaeus*) 5-Year Review: Summary and Evaluation. U.S. Fish and Wildlife Service.

Volk, M.I., T.S. Hoctor, B.B Nettles, R. Hilsenbeck, F.E. Putz, and J. Oetting. 2017. Florida Land Use and Land Cover Change in the Past 100 Years. In: Florida's Climate: Changes, Variations, & Impacts. http://purl.flvc.org/fsu/fd/FSU_libsubv1_scholarship_submission_1515440747_56b1ed92

Status Recommendation: On the basis of this review, we recommend the following status for this species (50 CFR § 424.11). A 5-year review presents a recommendation of the species status. Any change to the status requires a separate rulemaking process that includes public review and comment, as defined in the Act.

__X__ No change needed

FIELD OFFICE APPROVAL:

Acting Division Manager, Florida Ecological Services Field Office, U.S. Fish and Wildlife Service

NICOLE COLANGELO Digitally signed by NICOLE COLANGELO Date: 2025.07.24 12:39:49 -04'00'

Approve _____ Date _____

* In the Florida Ecological Services Field Office, the Classification and Recovery Division Manager has delegated authority to approve 5-year reviews that do not recommend a status change.