



Billing Code 4333–15

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R2–ES–2016–0130; FXES11130900000-178-FF09E42000]

RIN 1018–BB90

Endangered and Threatened Wildlife and Plants; Reclassifying Tobusch Fishhook

Cactus from Endangered to Threatened and Adopting a New Scientific Name

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), reclassify Tobusch fishhook cactus (*Sclerocactus brevihamatus* ssp. *tobuschii*; currently listed as *Ancistrocactus tobuschii*), from endangered to threatened on the Federal List of Endangered and Threatened Plants. This determination is based on a thorough review of the best available scientific and commercial information, which indicates that the threats to this plant have been reduced to the point that it is no longer in danger of extinction throughout all or a significant portion of its range, but it remains threatened with becoming endangered within the foreseeable future. In addition, we accept the new taxonomic classification for Tobusch fishhook cactus as the subspecies *Sclerocactus brevihamatus* ssp. *tobuschii*.

DATES: This rule becomes effective [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

ADDRESSES: This final rule is available on the Internet at <http://www.regulations.gov>

under Docket No. FWS–R2–ES–2016–0130 and the Service’s websites at http://www.fws.gov/southwest/es/AustinTexas/ESA_Species_news.html and <http://www.fws.gov/Endangered>. Comments and materials received, as well as supporting documentation used in the preparation of this rule, are available for public inspection, by appointment, during normal business hours at: U.S. Fish and Wildlife Service, Austin Ecological Services Field Office, 10711 Burnet Road, Suite 200, Austin, TX 78727; telephone 512–490–0057; facsimile 512–490–0974. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service at 800–877–8339.

FOR FURTHER INFORMATION CONTACT: Adam Zerrenner, Field Supervisor, U.S. Fish and Wildlife Service, Austin Ecological Services Field Office (see **ADDRESSES**) telephone 512–490–0057, or by facsimile 512–490–0974. Individuals who are hearing impaired or speech-impaired may call the Federal Relay Service at 800–877–8339 for TTY assistance.

SUPPLEMENTARY INFORMATION:

Background

Under the Endangered Species Act of 1973, as amended (Act; 16 U.S.C. 1531 et seq.), a species is an endangered or threatened species based on any one or a combination of the five listing factors established under section 4(a)(1) of the Act: (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.

After conducting a review of its biological status and threats, we have determined that Tobusch fishhook cactus is no longer in danger of extinction throughout all or a significant portion of its range; however, the subspecies is likely to become endangered within the foreseeable future as a result of changes in vegetation and wildfire frequency (Factor A), insect parasites and feral hog rooting (Factor C), and the demographic and genetic consequences of small population sizes and densities (Factor E).

We sought comments from independent specialists to ensure that our determination is based on scientifically sound data, assumptions, and analyses. We invited these peer reviewers to comment on our reclassification proposal, and we considered all comments and information received during the public comment period.

This rule finalizes the reclassification of Tobusch fishhook cactus from an endangered to a threatened species, and adopts the latest taxonomic assignment of the scientific name, changing it from *Ancistrocactus tobuschii* to *Sclerocactus brevihamatus* ssp. *tobuschii* on the Federal List of Endangered and Threatened Plants.

Previous Federal Actions

We published a final rule to list Tobusch fishhook cactus as an endangered species under the Act on November 7, 1979 (44 FR 64736). At that time, we also determined that it was not prudent to designate critical habitat. On March 18, 1987, we finalized a recovery plan for Tobusch fishhook cactus. On January 5, 2010, a status review (“5-year review”) was completed under section 4(c)(2)(A) of the Act, which recommended that Tobusch fishhook cactus be reclassified from endangered to threatened (Service 2010).

On July 16, 2012, we received a petition dated July 11, 2012, from The Pacific Legal Foundation, Jim Chilton, the New Mexico Cattle Growers' Association, New Mexico Farm & Livestock Bureau, New Mexico Federal Lands Council, and Texas Farm Bureau requesting that Tobusch fishhook cactus be reclassified as threatened based on the analysis and recommendation contained in the 5-year review. The Service published a 90-day finding on September 9, 2013 (78 FR 55046), that the petition contained substantial scientific or commercial information indicating that the petitioned action may be warranted. On November 20, 2015, the Service received a complaint (*New Mexico Cattle Growers' Association et al. v. United States Department of the Interior et al.*, No. 1:15-cv-01065-PJK-LF (D. N.M.)) for declaratory judgment and injunctive relief from the New Mexico Cattle Growers' Association, Jim Chilton, New Mexico Farm & Livestock Bureau, New Mexico Federal Lands Council, and Texas Farm Bureau to compel the Service to make a 12-month finding on the petition. On December 29, 2016, the Service published a combined 12-month warranted finding and proposed rule to reclassify Tobusch fishhook cactus from endangered to threatened (81 FR 95932).

Summary of Biological Status and Threats

We prepared a Species Status Assessment (SSA) for Tobusch fishhook cactus (Service 2016; available at <http://www.regulations.gov> and http://www.fws.gov/southwest/es/AustinTexas/ESA_Species_news.html), which includes a thorough review of the subspecies' taxonomy, natural history, habitats, ecology, populations, and range. We used the best available scientific and commercial data to analyze individual, population, and subspecies requirements, as well as factors affecting the subspecies' survival and its current conditions, to assess the current and future

viability of Tobusch fishhook cactus in terms of resilience, redundancy, and representation. We solicited peer review of the draft SSA Report from three objective and independent scientific experts, and considered their comments in finalization of the SSA Report. The following is a summary of our results and conclusions. Please refer to section IV of the SSA Report for a more detailed discussion of the factors affecting Tobusch fishhook cactus (Service 2016, pp. 38–46).

Description

Tobusch fishhook cactus is a rare, endemic plant of the Edwards Plateau of central Texas that is armed with curved “fishhook” spines. In the wild, this globose or columnar cactus rarely exceeds 5 centimeters (2 inches) in diameter and in height (Poole and Janssen 2002, p. 7).

Classification

The taxonomic classifications of Tobusch fishhook cactus include several published synonyms. We listed it as a species, *Ancistrocactus tobuschii* (44 FR 64736, November 7, 1979), and retained this classification for the recovery plan (Service 1987). However, recent phylogenetic evidence supports classifying Tobusch fishhook cactus as subspecies *tobuschii* of *Sclerocactus brevihamatus* (Porter and Prince 2011, pp. 40–47). It is distinguished morphologically from its closest relative, *S. brevihamatus* ssp. *brevihamatus*, on the basis of yellow versus pink- or brown-tinged flowers, fewer radial spines, and fewer ribs (Marshall 1952, p. 79; Poole et al. 2007, p. 442; Porter and Prince 2011, pp. 42–45). Additionally, *S. brevihamatus* ssp. *tobuschii* is endemic to limestone outcrops of the Edwards Plateau, while *S. brevihamatus* ssp. *brevihamatus* occurs in alluvial soils in the Tamaulipan Shrublands and Chihuahuan Desert. A recent

investigation confirmed genetic divergence between the two subspecies, although they may interact genetically in a narrow area where their ranges overlap (Rayamajhi 2015, pp. 67, 98; Sharma 2015, p. 1). We officially accept the new scientific name of Tobusch fishhook cactus as *Sclerocactus brevihamatus* ssp. *tobuschii*.

Reproduction

Tobusch fishhook cactus grows slowly, reaching a reproductive size of about 2 centimeters (0.8 inches) in diameter after 9 years (Emmett 1995, pp. 168–169). It flowers between late January and mid-March, and its major pollinators are honey bees and halictid bees (Emmett 1995, pp. 74–75; Lockwood 1995, pp. 428–430; Reemts and Becraft 2013, pp. 6–7; Langley 2015, pp. 21–23). The breeding system is primarily out-crossing, requiring fertilization between unrelated individuals; relatively few viable seeds are produced from self-fertilized flowers (Emmett 1995, p. 70; Langley 2015, pp. 24–28). Reproductive individuals produce an average of 112 seeds per year (Emmett 1995, p. 108). Ants may be seed predators, dispersers, or both (Emmett 1995, pp. 112–114, 124). Mammals or birds may also accomplish longer distance seed dispersal (Emmett 1995, pp. 115–116, 126). There is little evidence that seeds persist in the soil (Emmett 1995, pp. 120–122).

Habitats

When listed as endangered in 1979, fewer than 200 individuals of Tobusch fishhook cactus were known from 4 riparian sites, 2 of which had been destroyed by floods (44 FR 64736, November 7, 1979; Service 1987, pp. 4–5). We now understand that those riparian habitats were atypical; the great majority of populations that have now been documented occur in upland sites dominated by Ashe juniper-live oak woodlands

and savannas on the Edwards Plateau (Poole and Janssen 2002, p. 2). Soils are classified in the Tarrant, Ector, Eckrant, and similar series. Within a matrix of woodland and savanna, the subspecies occurs in discontinuous patches of very shallow, gravelly soils where bare rock and rock fragments comprise a large proportion of the surface cover (Sutton et al. 1997, pp. 442–443). Associated vegetation includes small bunch grasses and forbs. The subspecies' distribution within habitat patches is clumped and tends to be farther from woody plant cover (Reemts 2014, pp. 9–10). The presence of cryptograms, primitive plants that reproduce by spores rather than seeds, may be a useful indicator of fine-scale habitat suitability (Service 2010, p. 17). Wildfire (including prescribed burning) causes negligible damage to Tobusch fishhook cactus populations (Emmett 1995, p. 42; Poole and Birnbaum 2003, p. 12). The subspecies probably does not require fire for germination, establishment, or reproduction, but periodic burning may be necessary to prevent the encroachment of woody plants into its habitats.

Populations and Range

A population of an organism is a group of individuals within a geographic area that are capable of interbreeding or interacting. Although the term is conceptually simple, it may be difficult to determine the extent of a population of rare or cryptic species, and this is certainly the case for Tobusch fishhook cactus. Thorough surveys on public lands, such as State parks and highway rights-of-way, have detected groups of individuals, but since the vast majority of the surrounding private land has not been surveyed, we do not know if these are small, isolated populations, or parts of larger interacting populations or metapopulations. In instances where we are unable to define

the extent of the local population, we often informally use the terms “site,” referring to a place where the subspecies was found, and “colony,” referring to a cluster of individuals.

Populations of Tobusch fishhook cactus are now confirmed in eight central Texas counties: Bandera, Edwards, Kerr, Kimble, Kinney, Real, Uvalde, and Val Verde. The Texas Native Diversity Database (2016, pp. 1-202) listed 97 element occurrences, areas in which the plant was present (EOs; NatureServe 2002, p. 10), of Tobusch fishhook cactus, totaling 3,336 individuals. In addition, recent surveys conducted through Section 7 consultations and at preserves managed by The Nature Conservancy, that are not included in the TXNDD report, bring the total number of documented individuals to approximately 4,500. Although the numbers of individuals at each site fluctuate over time, due to the combined, continuing effects of mortality and recruitment of new individuals, our best estimate of the total live individuals at all documented sites at any one time is 4,500.

Summary of Subspecies Requirements.

Tobusch fishhook cactus plants occur in patches of very shallow, rocky soil overlying limestone. The immediate vicinity of plants is sparsely vegetated with small bunch grasses and forbs and there is little or no woody plant cover. Individual plants require an estimated 9 years to reach a reproductive size of about 2 centimeters (0.8 inches) in diameter. Reproduction is primarily by out-crossing between unrelated individuals, and the known pollinators include honey bees and halictid bees. Out-crossing requires genetically diverse cactus populations within the foraging range of pollinators, and is less likely to occur in small, isolated populations. Healthy pollinator populations, in turn, require intact, diverse, native plant communities. Halictid bees are

frequent natural pollinators of Tobusch fishhook cactus. We expect the foraging range of these bees, given their relatively small size, to be fairly limited. Therefore, the health and diversity of native vegetation within the vicinity of Tobusch fishhook cactus plants (a range of 50 to 500 meters (164 to 1,640 feet)) may be particularly important for successful cactus reproduction. Healthy pollinator populations also require the least possible exposure to agricultural pesticides within their foraging ranges.

Resilient populations are those that exhibit stable or increasing demographic trends. The assessment of demographic trends, however, depends on how populations are delineated (81 FR 95932, December 29, 2016). For Tobusch fishhook cactus, we conclude that it is more appropriate to track the collective populations of multiple colonies that interact on a landscape scale (i.e., metapopulations). Resilience of metapopulations requires recruitment of new colonies and/or reestablishment at sites of former colonies that previously collapsed. A major cause of mortality is infestation by insect larvae, mainly by an undescribed species of *Gerstaeckeria* (cactus weevil), and one or more species of cactus longhorn beetles (*Moneilema* spp.). The adults of these parasites are flightless, so their dispersal to new colonies is likely to be very limited. When individual colonies of the cactus die off, the parasites also die off, rendering those patches of suitable habitat available for cactus re-colonization. Hence, these periodic infestations of parasite larvae greatly influence the population dynamics of Tobusch fishhook cactus. The distance between colonies has two opposing effects on their persistence. Greater distance reduces susceptibility to parasite infestation, but also reduces the amount of gene flow, by means of pollinators vectoring pollen, or through seed dispersal, between colonies. Thus, the persistence of entire metapopulations would

require fairly large landscapes where discontinuous patches of suitable habitat are distributed and populated at a density just low enough to hold the parasites at bay, but just high enough for halictid bees and other pollinators and seed dispersers to vector genes between them.

One measure of population resilience is minimum viable population (MVP), which is an estimate of the minimum population size that has a high probability of enduring a specified period of time. Poole and Birnbaum (2003, p. 1) estimated an MVP of 1,200 individuals for Tobusch fishhook cactus, using a surrogate species approach (Pavlik 1996, pp. 136–137). Although some Tobusch fishhook cactus individuals live for decades, annual mortality rates are often greater than 20 percent, and relatively few individuals live long enough to reproduce. Mortality within monitored colonies often exceeds recruitment, and some colonies have died out. Nevertheless, even where individual colonies have collapsed, the total documented population sizes at many protected natural areas are stable or increasing, due to discoveries of new individuals and colonies. For this reason, MVP levels are more appropriately applied to metapopulations rather than individual colonies of this cactus.

The degree of genetic diversity within Tobusch fishhook cactus populations is important for several reasons. First, diversity within populations should confer greater resistance to pathogens and parasites and greater adaptability to environmental stochasticity (random variations, such as annual rainfall and temperature patterns) and the effects from climate change. Second, low genetic diversity within interbreeding populations leads to a higher incidence of inbreeding, and potentially to inbreeding depression (reduced biological fitness), which lowers a population's ability to survive and

reproduce. Finally, the breeding system of Tobusch fishhook cactus is primarily outcrossing, so populations with too little genetic diversity would produce fewer progeny.

Fire, whether natural or prescribed, appears to have little effect on individual Tobusch fishhook cactus plants. This outcome is because the plants occur where vegetation is very sparse, and the plants protrude very little above the ground and are protected by surrounding rocks from the heat of vegetation burning nearby. On the other hand, periodic fire is likely to be necessary for population persistence to reduce juniper encroachment into suitable habitats. Furthermore, the diverse shrub and forb vegetation that sustains healthy pollinator populations is maintained by periodic wildfire; without fire, dense juniper groves frequently displace these shrubs and forbs. Hence, if the native plant diversity of entire landscapes surrounding Tobusch fishhook cactus populations succumbs to juniper encroachment, pollinator populations will likely decline, and reproduction of Tobusch fishhook cactus and gene flow between its colonies may be reduced.

In addition to population resilience, we assessed the subspecies' viability in terms of its redundancy (ability to withstand catastrophic events) and representation (ability to adapt to changing environmental conditions). Given that insect parasites are able to devastate large, dense populations, a few large populations are much more vulnerable than many small populations. The viability of Tobusch fishhook cactus derives not merely from the size of metapopulations, but also their density. Metapopulations with a low density of colonies may incur loss of genetic diversity and increased potential for inbreeding. Conversely, vulnerability to insect parasitism increases when metapopulations become too dense, or when individual colonies become too large.

Assessments of resilience (metapopulation size and demographics) and redundancy (number of metapopulations within the subspecies' range) depend on how metapopulations are delineated. We believe that there must be some optimal range of metapopulation density, i.e., the distance between metapopulations, and of colony size, although we do not currently know what those are.

One influence on representation is genetic diversity, both within and among populations, that is necessary to conserve long-term adaptive capability (Shaffer and Stein 2000, pp. 307–308). Genetic diversity within a population can be measured by the numbers of variant forms of genes represented in that population. One measure of this within-population genetic diversity is called heterozygosity; possible values range from 0 (all members of a population are genetically identical for specified genes) to 1.0 (all members of a population are genetically different). Another useful measure is the inbreeding coefficient (F_{IS}), which ranges from -1 (all members of the population are heterozygous, containing two forms of specific genes, and there is no evidence of inbreeding) to 1.0 (all members are homozygous, containing only one form of specific genes, and inbred). Although there are no heterozygosity levels or inbreeding coefficients that are considered healthy for all species, we may assess the genetic health of Tobusch fishhook cactus by comparison to the observed values of reference species, such as other cactus species with similar life histories that are abundant and widespread (Rayamajhi 2015, pp. 56, 63; Schwabe et al. 2015, pp. 449, 454–455).

A study by Rayamajhi (2015, entire) determined that the mean expected heterozygosity (H_e) for nine populations of Tobusch fishhook cactus was 0.59, and the mean observed heterozygosity (H_o) was 0.37 (p. 57). These results indicate relatively

low levels of genetic differentiation among the nine populations; however, this situation is not unusual for endemic taxa and may also indicate a recent divergence of subspecies *tobuschii* from subspecies *brevihamatus*. Through comparison to other columnar cactus species that are endemic or have limited geographic distribution, Rayamajhi (2015) concluded that for Tobusch fishhook cactus, H_e was moderately high and H_o was moderate (pp. 58–61). The moderate H_o may be attributed to small population sizes and elevated levels of inbreeding within populations (p. 57). By comparison, H_e and H_o for *Sclerocactus glaucus*, a federally listed threatened cactus species from Colorado, were 0.66 and 0.47, respectively, while for *Sclerocactus parviflorus*, a relatively widespread cactus species, H_e and H_o were 0.62 and 0.39 (Schwabe et al. 2015, p. 449). Despite low levels of genetic differentiation, the same study found evidence of substantial gene flow among Tobusch fishhook cactus populations and healthy levels of outbreeding, with a mean inbreeding coefficient (F_{IS}) of 0.38 (range of 0.15 to 0.63) for ssp. *tobuschii* and 0.47 for ssp. *brevihamatus* (pp. 63–64). For comparison, the average F_{IS} for *S. glaucus* and *S. parviflorus* was 0.28 and 0.37 (Schwabe et al. 2015, p. 449). These results suggest that Tobusch fishhook cactus currently possesses sufficient genetic representation to conserve long-term adaptive capability.

Review of the Recovery Plan

Section 4(f) of the Act directs us to develop and implement recovery plans for the conservation and survival of endangered and threatened species unless we determine that such a plan will not promote the conservation of the species. Recovery plans identify site-specific management actions that will achieve recovery of the species, measurable

criteria that set a trigger for review of the species' status, and estimates of the time and cost to recovery.

Recovery plans are not regulatory documents; instead they are intended to establish goals for long-term conservation of listed species and define criteria that are designed to indicate when the threats facing a species have been removed or reduced to such an extent that the species may no longer need the protections of the Act, as well as actions that may be employed to achieve reaching the criteria. There are many paths to accomplishing recovery of a species, and recovery may, at times, be achieved without all criteria being fully met or all actions fully implemented. Recovery of a species is a dynamic process requiring adaptive management that may, or may not, fully follow the guidance provided in a recovery plan.

The Tobusch fishhook cactus recovery plan was approved by the Service on March 18, 1987 (Service 1987). Delisting criteria were not established in the recovery plan. However, the recovery plan did establish a criterion of 3,000 individuals in each of 4 safe sites for reclassification from endangered to threatened. The explanation for how this level was calculated is not included in the recovery plan, and to date this criterion has not been met. No individual colonies have reached this size, and we now understand that insect parasites are able to devastate large, dense populations of Tobusch fishhook cactus. Thus, the downlisting criterion of 3,000 individuals per population may be unattainable or unsustainable. Such large cactus populations would eventually host very large parasite populations, leading to their collapse (Service 2017, p. 40).

Currently, many small populations exist, and surveyors have documented a total of approximately 4,500 Tobusch fishhook cactus individuals in 8 counties of the Edwards

Plateau. Monitored populations, ranging from 34 to 1,090 individuals, occur on 12 properties managed either by the State or conservation organizations. We conclude that a few large cactus populations are much more vulnerable than many small populations, and we will consider revision of the 1989 recovery plan to include delisting criteria based on our new understanding of Tobusch fishhook cactus demographics.

Summary of Changes from the Proposed Rule

We have made no changes from the proposed rule.

Summary of Comments and Recommendations

In the proposed rule published on December 29, 2016 (81 FR 95932), we requested that all interested parties submit written comments on the proposal by February 27, 2017, and we reopened the public comment period from June 13, 2017, to July 13, 2017 (82 FR 27033, June 13, 2017). We also contacted appropriate Federal and State agencies, scientific experts and organizations, and other interested parties and invited them to comment on the proposal. Newspaper notices inviting general public comment were published in the San Antonio Express News on June 13, 2017. We did not receive any requests for a public hearing. All substantive information provided during comment periods has either been incorporated directly into this final determination or is addressed below.

In accordance with our peer review policy published on July 1, 1994 (59 FR 34270), we solicited expert opinions from three knowledgeable individuals with scientific expertise that included familiarity with Tobusch fishhook cactus and its habitat, biological needs, and threats. We received responses from all three of the peer reviewers that they concurred with our decision to reclassify Tobusch fishhook cactus as a

threatened subspecies. We received a total of five comments on the proposed rule; one from the State of Texas and four from the public. We did not receive comments from other Federal agencies or Tribes. We reviewed all comments received during the two public comment periods for substantive issues and new information regarding the proposed reclassification of Tobusch fishhook cactus. Four commenters were in favor of the proposed reclassification, and one commenter was in support of delisting Tobusch fishhook cactus. Substantive comments we received are addressed below.

(1) *Comment:* Although locating new populations of Tobusch fishhook cactus does not yet ameliorate or offset the many threats to the subspecies, Tobusch fishhook cactus does fit the definition of threatened and warrants downlisting. As stated in the SSA, Tobusch fishhook cactus requires continued conservation, management, and protection. Downlisting Tobusch fishhook cactus to threatened will allow for these continued efforts.

Our Response: We concur and look forward to continuing cooperative efforts to conserve and recover Tobusch fishhook cactus.

(2) *Comment:* The reclassification of Tobusch fishhook cactus is fully supported; however, the downlisting should also exempt the subspecies from the take prohibition of the Act.

Our Response: The Act does not prohibit the taking of either endangered or threatened plant species that occur on private lands. While the Act prohibits the taking of endangered and threatened plant species that occur on lands under Federal jurisdiction, the subspecies is not known to occur on any Federal lands.

(3) *Comment:* We believe that the SSA, representing the Service's understanding of the best available scientific and commercial information, instead leads to a scientifically supportable conclusion that Tobusch fishhook cactus is neither threatened nor endangered with extinction within the foreseeable future throughout all or a significant portion of its range. We recommend that the Service modify its proposed rule to instead remove Tobusch fishhook cactus from the Federal List of Endangered and Threatened Plants on the basis that the original listing was in error. Such a conclusion is both consistent with and directed by the SSA developed by the Service.

Our Response: The best available scientific information indicates that the subspecies remains at risk of extinction in the foreseeable future. Our analysis indicates that Tobusch fishhook cactus is likely to continue to be negatively affected by factors such as changes in vegetation and wildfire frequency, infection from parasites, feral hog rooting, and the demographic and genetic consequences of small population sizes (see discussion under **Reclassification Analysis** below). The subspecies persists but requires continued management, conservation, and protection under the Act to fully alleviate these threats.

We also recognize that the subspecies may be more abundant than previously estimated at the time of listing; however, calculations of true population size are difficult to make. In the SSA, we estimated that the total subspecies population is about 480,000 individuals, and total estimated potential habitat ranges over 5 million acres. However, this estimate may overstate the actual population size, as only 4,564 Tobusch fishhook cactus individuals were actually detected from 2003 to 2015. In Appendix B of the SSA Report, we explained that the estimate of the total population size of Tobusch fishhook

cactus is a simple extrapolation of the average population density within surveys of potential habitat to the total amount of potential habitat. The extremely uneven distribution of this cactus complicates estimates of the true population size (Service 2016, p. 21). In the SSA Report, we also stated that the estimated population size is not a precise determination, but is the best estimate we are currently able to make with available quantitative data that has been obtained from a small number of areas (Service 2016, p. 32). One peer reviewer of the SSA stated that the general approach we used to estimate the total number of plants was sound, but because the areas surveyed were a biased sample of potential habitats, our approach likely overestimated the amount of potential habitat and population size. This overestimate is because State parks and other areas surveyed are not representative of all areas of potential habitat within the subspecies' range. We concur with these comments. The survey sample size was small and was unavoidably biased, and the method we used did not establish confidence limits to the estimate. Due to the drastic collapse of many large colonies from insect parasites, we require statistically rigorous estimates of metapopulation trends to project long-term viability.

Although the available data do indicate that both the subspecies' viability and population sizes are greater than when it was listed and that it is not currently in danger of extinction, threats to the subspecies remain unabated and Tobusch fishhook cactus is likely to become endangered with extinction in the foreseeable future.

Reclassification Analysis

Under section 4 of the Act, we administer the Federal Lists of Endangered and Threatened Wildlife and Plants, which are set forth in title 50 of the Code of Federal

Regulations at part 17 (50 CFR 17.11 and 17.12). We can determine, on the basis of the best scientific and commercial data available, whether a species may be listed, delisted, or reclassified as described in 50 CFR 424.11. Tobusch fishhook cactus was listed as endangered in 1979 due to: few known populations, habitat destruction, and altered stream flows (Factor A); illegal collection (Factor B); and very limited geographic range, small population sizes, restricted gene pool, and lack of reproduction (Factor E). We now know there are many more populations over a much wider area; approximately 4,500 individuals have been documented at more than 97 EOs and other monitoring sites. Most habitats are relatively secure, given that they are in remote, rocky areas that are unsuitable for growing crops. However, the great majority is on private lands that are becoming increasingly fragmented and may be subject to destruction or modification. Many of the known populations are small and isolated, and the monitored portions of numerous populations have declined. Demographic population viability analyses predict an overall future decline in subspecies' viability. However, we do not know how well these analyses project the demographic trends of metapopulations distributed over larger landscapes. We know that insect parasites are a major cause of mortality and may naturally reduce populations to low densities. Many populations have sufficient genetic diversity to confer long-term adaptive capability, but some small, isolated populations have higher levels of inbreeding and may be affected by reduced fitness and reproduction. It is likely that projected climate changes will affect Tobusch fishhook cactus, but we do not currently know whether such changes will have a net positive or negative effect on its viability.

Using the SSA framework, we have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to Tobusch fishhook cactus to consider what the subspecies needs to maintain viability. We have determined that Tobusch fishhook cactus is currently no longer in danger of extinction, because it has larger, more numerous populations that are much more widely distributed than we previously understood, and therefore the subspecies has greater resilience, redundancy, and representation. Nevertheless, it is likely to become endangered within the foreseeable future because the following threats have not been fully ameliorated and are expected to continue into the foreseeable future: habitat destruction and modification due to changes in vegetation and wildfire frequency (Factor A), insect parasites and feral hog rooting (Factor C), and the demographic and genetic consequences of small population sizes and densities (Factor E). In the SSA Report, we projected what the future viability of Tobusch fishhook cactus could be using the timeframe 2050 to 2074. This is the same timeframe that has been used to project future climate conditions for Edwards County, Texas (U.S. Geological Survey 2015), and although climate change is not likely a direct stressor to Tobusch fishhook cactus viability, the effects from climate change on the threats to Tobusch fishhook cactus are likely to impact the future viability of the species. We used the National Climate Change Viewer (NCCV; U.S. Geological Survey 2015) to compare past and projected future climate conditions. The baseline for comparison was the observed mean values from 1950 through 2005, and 30 climate models were used to project future conditions. The NCCV generates projections for three timeframes: 2025 to 2049, 2050 to 2074, and 2075 to 2099. We chose the intermediate timeframe of 2050 to 2074 for our projections of the

species status in the foreseeable future because relatively few changes may be apparent in the earlier timeframe, and projection uncertainty is greatest in the later timeframe.

Below we present our analysis of threats to Tobusch fishhook cactus. For a complete discussion of all threats, including those considered significant at the time of listing and those considered potential future threats, please refer to the SSA Report (Service 2016).

Changes in Vegetation and Wildfire Frequency (Factor A)

Bray (1904, pp. 14–15, 23–24) documented the rapid transition of grasslands to woodlands in the Edwards Plateau occurring more than a century ago; he attributed this change to overgrazing, the depletion of grasses, and the cessation of wildfires. Fonteyn et al. (1988, p. 79) state that savannas covered portions of the pre-settlement Edwards Plateau, and since 1850 were transformed to shrubland or woodland “primarily by suppression of recurring natural and anthropogenic fires and the introduction of livestock.” They list the fire-sensitive Ashe juniper (*Juniperus ashei*) as the most successful of many woody plants that have invaded grasslands. Reemts (2014 p. 1) lists the encroachment of woody plants into the rocky, open habitat as one of several remaining habitat-related threats that endanger Tobusch fishhook cactus. In synthesis, unlike the mountainous conifer forests of the arid southwest, where fire frequency has increased, in the Edwards Plateau of Texas, poor rangeland management depleted the grass and forb cover, and the lack of fine fuels reduced the incidence of wildfire. Juniper trees that were formerly limited by relatively frequent wildfires have now greatly increased in abundance and cover, and the proportion of ground that is shaded has increased. Since Tobusch fishhook cactus thrives in full sun, but does not tolerate dense

shade, these changes in vegetation cover, wildfire frequency, and juniper cover threaten this cactus. Replacement of a diverse shrub and forb community with monocultural (growth of a single plant species) stands of juniper also reduces pollinator populations, which in turn may reduce reproduction of Tobusch fishhook cactus and gene flow between colonies (Service 2017, p. 37). We expect these threats to continue at least through the 2050 to 2074 projection period (described above), which we define as the foreseeable future for this threat.

Vegetation and fire frequency may also be influenced by climate changes. The means of 30 climate models project increasing temperatures for the Edwards Plateau of Texas over the 2050 to 2074 projection period (U.S. Geological Survey 2015). However, these models do not simulate well the projected patterns of regional precipitation (IPCC 2013, p. 11). Average precipitation may increase or decrease, seasonal rainfall patterns may change, and annual variation in rainfall may increase. Consequently, we do not know what the net effect of climate changes will be on vegetation and wildfire frequency nor how these changes might affect the viability of Tobusch fishhook cactus.

Overutilization for commercial, recreational, scientific, or educational purposes (Factor B)

The listing of Tobusch fishhook cactus as an endangered species (44 FR 64736) included collection from wild populations for the commercial cactus trade as a threat to the species. Subsequently, we have detected very little evidence of illicit collection from wild populations; this potential threat has not substantively affected the species survival.

Insect Parasites (Factor C)

The Tobusch fishhook cactus weevil (*Gerstaeckeria* spp.) and cactus longhorn

beetle (*Moneilema* spp.) parasitize and kill Tobusch fishhook cactus plants. Populations of these parasites increase rapidly in large, dense cactus colonies and have caused drastic declines in many of the larger populations (Calvert 2003, entire). Conversely, since the parasites are flightless, smaller, widely dispersed colonies may be less susceptible to parasite infestation. Periodic outbreaks of insect parasitism appear to be an unavoidable natural cycle that may exacerbate population declines from other causes, and currently there are no management practices to prevent or minimize insect parasitism. Therefore, this threat remains unabated, and we expect it will continue at least through the foreseeable future (described above), which we define as the foreseeable future for this threat.

Other Herbivory (Factor C)

The incidence of herbivory by jackrabbits, rodents, and other native herbivores on Tobusch fishhook cactus is relatively minor (Poole and Birnbaum (2003, pp. 11–12). However, introduced feral hogs are abundant throughout the subspecies' range and have damaged and destroyed Tobusch fishhook cactus individuals and habitats in many sites (Reemts 2015, p. 1). Feral hog populations remain undiminished in Texas despite active hunting and trapping efforts. Therefore, this threat remains unabated, and we expect it will continue at least through the 2050 to 2074 projection period (described above), which we define as the foreseeable future for this threat.

The inadequacy of existing regulatory mechanisms (Factor D)

Only a very small fraction of the potential habitat of Tobusch fishhook cactus occurs on state parks or other public lands where the habitat could be directly managed through regulatory mechanisms. Regulatory mechanisms cannot ensure habitat

management and species conservation on the great majority of the species habitats that occur on privately owned land. Thus the habitat-related threats and feral hog issues described above are anticipated to continue to impact the species regardless of existing regulatory mechanisms.

Demographic and Genetic Consequences of Small Population Size and Density (Factor E)

Small populations are less able to recover from losses caused by random environmental changes (Shaffer and Stein 2000, pp. 308–310), such as fluctuations in recruitment (demographic stochasticity), variations in rainfall (environmental stochasticity), or changes in the frequency of wildfires. Poole and Birnbaum (2003, p. 1) estimated a minimum viable population (MVP) size of 1,200 individuals for Tobusch fishhook cactus (Service 2016, section II.7.5, available at <http://www.regulations.gov> under Docket No. FWS–R2–ES–2016–0130). Since the subspecies has a predominantly out-crossing breeding system, the probability of successful fertilization between unrelated individuals is reduced in small, isolated populations. The remaining plants would produce fewer viable seeds, further reducing population recruitment and engendering a downward spiral toward extirpation. The demographic consequences of small population size are compounded by genetic consequences, because reduced out-crossing corresponds to increased inbreeding. In addition to population size, it is likely that population density within metapopulations also influences population viability; density must be high enough for gene flow within metapopulations, but low enough to minimize parasite infestations. Small, reproductively isolated populations are also susceptible to the loss of genetic diversity, to genetic drift (random fluctuations in the numbers of gene variants), and to

inbreeding. The loss of genetic diversity is likely to cause a loss of fitness and lower chance of survival of populations and of the subspecies. Genetic drift may also cause the loss of genetic diversity in small populations. Inbreeding depression is the loss of fitness among offspring of closely related individuals. Rayamajhi (2015, pp. 63–64) found relatively high inbreeding coefficients in three of eight populations, which he attributed to mating of close relatives within small, isolated populations. We conclude that small population sizes, low densities, and isolation of populations threaten the survival of Tobusch fishhook cactus. We expect that abatement of these threats could not be overcome for one or more lifespans. Tobusch fishhook cactus is able to reproduce after about 10 years, and may live 50 years or more. Therefore, we define the foreseeable future for this threat to be a period of about 50 years.

Determination

Section 4 of the Act (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 Act 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 Act requires that we determine whether a species meets the definition of “endangered species” or “threatened species” because of any of the following factors: (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 same factors apply whether we are analyzing the species' status throughout all of its range or throughout a significant portion of its range.

On July 1, 2014, we published a final policy interpreting the phrase “significant portion of its range” (SPR) (79 FR 37578) (SPR Policy). Aspects of that policy were vacated for species that occur in Arizona by the United States District Court for the District of Arizona. *CBD v. Jewell*, No. CV-14-02506-TUC-RM (Mar. 29, 2017), *clarified by the court*, Mar. 29, 2017. Since the Tobusch fishhook cactus does not occur in Arizona, for this finding we rely on the SPR Policy, and also provide additional explanation and support for our interpretation of the SPR phrase. In our policy, we interpret the phrase “significant portion of its range” in the Act’s definitions of “endangered species” and “threatened species” to provide an independent basis for listing a species in its entirety; thus there are two situations (or factual bases) under which a species would qualify for listing: A species may be in danger of extinction or likely to become so in the foreseeable future throughout all of its range; or a species may be in danger of extinction or likely to become so throughout a significant portion of its range. If a species is in danger of extinction throughout an SPR, it, the species, is an “endangered species.” The same analysis applies to “threatened species.”

Our final policy addresses the consequences of finding that a species is in danger of extinction in an SPR, and interprets what would constitute an SPR. The final policy includes four elements: (1) if a species is found to be endangered or threatened throughout a significant portion of its range, the entire species is listed as an endangered species or a threatened species, respectively, and the Act’s protections apply to all

individuals of the species wherever found; (2) a portion of the range of a species is “significant” if the species is not currently endangered or threatened throughout all of its range, but the portion’s contribution to the viability of the species is so important that, without the members in that portion, the species would be in danger of extinction, or likely to become so in the foreseeable future, throughout all of its range; (3) the range of a species is considered to be the general geographical area within which that species can be found at the time the Service or the National Marine Fisheries Service makes any particular status determination; and (4) if a vertebrate species is endangered or threatened throughout an SPR, and the population in that significant portion is a valid DPS, we will list the DPS rather than the entire taxonomic species or subspecies.

The SPR policy applies to analyses for all status determinations, including listing, delisting, and reclassification determinations. As described in the first element of our policy, once the Service determines that a “species”—which can include a species, subspecies, or distinct population segment (DPS)—meets the definition of “endangered species” or “threatened species,” the species must be listed in its entirety and the Act’s protections applied consistently to all individuals of the species wherever found (subject to modification of protections through special rules under sections 4(d) and 10(j) of the Act).

For the second element, the policy sets out the procedure for analyzing whether any portion is an SPR; the procedure is similar, regardless of the type of status determination we are making. The first step in our assessment of the status of a species is to determine its status throughout all of its range. We subsequently examine whether, in light of the species' status throughout all of its range, it is necessary to determine its status

throughout a significant portion of its range. If we determine that the species is in danger of extinction, or likely to become so in the foreseeable future, throughout all of its range, we list the species as an endangered (or threatened) species and no SPR analysis is required. The policy explains in detail the bases for this conclusion—including that this process ensures that the SPR language provides an independent basis for listing; maximizes the flexibility of the Service to provide protections for the species; and eliminates the potential confusion is a species could meet the definitions of both “endangered species” and “threatened species” based on its statuses throughout its range and in a significant portion of its range. *See, e.g.,* SPR Policy, 79 Fed. Reg. at 37580-81.

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to Tobusch fishhook cactus. Based on the analysis in the SSA, and information summarized above, we have determined that Tobusch fishhook cactus’ current viability is higher than was known at the time of listing, and we believe that Tobusch fishhook cactus is not in danger of extinction throughout all of its range. However, due to continued threats from the demographic and genetic consequences of small population sizes and geographic isolation, insect parasitism, feral hog depredation, and changes in the wildfire cycle and vegetation, as well as unknown long-term effects of land use changes and climate changes, we find that Tobusch fishhook cactus is likely to become an endangered subspecies within the foreseeable future throughout all of its range.

Consistent with our interpretation that there are two independent bases for listing species as described above, after examining the status of Tobusch fishhook cactus throughout all of its range, we now examine whether it is necessary to determine its status

throughout a significant portion of its range. Per our final SPR policy, we must give operational effect to both the “throughout all” of its range language and the SPR phrase in the definitions of “endangered species” and “threatened species.” As discussed earlier and in greater detail in the SPR Policy, we have concluded that to give operational effect to both the “throughout all” language and the SPR phrase, the Service should conduct an SPR analysis if (and only if) a species does not warrant listing according to the “throughout all” language.

Because we found that Tobusch fishhook cactus is likely to become endangered in the foreseeable future throughout all of its range, per our Service’s Significant Portion of its Range (SPR) Policy (79 FR 37578, July 1, 2014), no portion of its range can be significant for purposes of the definitions of endangered species and threatened species. We therefore do not need to conduct an analysis of whether there is any significant portion of its range where the species is in danger of extinction or likely to become so in the foreseeable future.

Therefore, on the basis of the best available scientific and commercial information, we are reclassifying Tobusch fishhook cactus as a threatened species in accordance with sections 3(6) and 4(a)(1) of the Act.

Under the Act and its implementing regulations, a determination that a species is endangered or threatened also requires the Secretary, to the maximum extent prudent, to specify any habitat of such species which is considered to be critical habitat. The determination that it would not be prudent to designate critical habitat for Tobusch fishhook cactus that was made at the time the plant was listed as an endangered species remains true (44 FR 64737, November 7, 1979). Publication of critical habitat maps and

cactus population locations increases the plants' vulnerability to collection from areas not under Federal jurisdiction, an activity that is not prohibited for plants under the Act.

While there has been no recent evidence of collection of this species, collection is a threat to most cactus species, and is likely to increase if population sites are publicized. Given the predominance of private land ownership patterns for Tobusch fishhook cactus habitats, collection still may become a threat in the foreseeable future.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened species under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing results in public awareness, and conservation by Federal, State, Tribal, and local agencies, private organizations, and individuals. The Act encourages cooperation with the States and requires that recovery actions be carried out for all listed species. The protection required by Federal agencies and the prohibitions against certain activities are discussed, in part, below.

The primary purpose of the Act is the conservation of endangered and threatened species and the ecosystems upon which they depend. The ultimate goal of such conservation efforts is the recovery of these listed species, so that they no longer need the protective measures of the Act. Subsection 4(f) of the Act requires the Service to develop and implement recovery plans for the conservation of endangered and threatened species. The recovery planning process involves the identification of actions that are necessary to halt or reverse the species' decline by addressing the threats to its survival and recovery.

The goal of this process is to restore listed species to a point where they are secure, self-sustaining, and functioning components of their ecosystems.

Revisions of the plan may be done to address continuing or new threats to the species, as new substantive information becomes available. The current Tobusch fishhook cactus recovery plan was approved by the Service on March 18, 1987 (Service 1987). As a result of this reclassification, a revision of the plan is planned to address continuing threats to the subspecies, and will also establish delisting criteria. When completed, a revised draft and final recovery plan will be available on our website (<http://www.fws.gov/endangered>) or from our Austin Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Implementation of recovery actions generally requires the participation of a broad range of partners, including other Federal agencies, States, Tribal, nongovernmental organizations, businesses, and private landowners. Examples of recovery actions include habitat restoration (e.g., restoration of native vegetation), research, captive propagation and reintroduction, and outreach and education. The recovery of many listed species cannot be accomplished solely on Federal lands because their range may occur primarily or solely on non-Federal lands. To achieve recovery of these species requires cooperative conservation efforts on private, State, and Tribal lands.

Following publication of this final reclassification rule, funding for recovery actions will continue to be available from a variety of sources, including Federal budgets, State programs, and cost share grants for non-Federal landowners, the academic community, and nongovernmental organizations. In addition, pursuant to section 6 of the Act, the State of Texas will continue to be eligible for Federal funds to implement

management actions that promote the protection or recovery of Tobusch fishhook cactus. Information on our grant programs that are available to aid species recovery can be found at: <http://www.fws.gov/grants>.

Please let us know if you are interested in participating in recovery efforts for Tobusch fishhook cactus. Additionally, we invite you to submit any new information on this subspecies whenever it becomes available and any information you may have for recovery planning purposes (see **FOR FURTHER INFORMATION CONTACT**).

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is listed as an endangered or threatened species and with respect to its critical habitat, if any is designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of any endangered or threatened species or destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with the Service.

Federal agency actions within the species' habitat that may require conference or consultation or both, as described in the preceding paragraph, include management and any other landscape-altering activities related to the issuance of section 404 Clean Water Act permits by the Army Corps of Engineers, and construction and maintenance of roads or highways by the Federal Highway Administration.

With respect to threatened plants, 50 CFR 17.71 provides that all of the provisions in 50 CFR 17.61 shall apply to threatened plants. These provisions make it illegal for any

person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of a commercial activity, sell or offer for sale in interstate or foreign commerce, or to remove and reduce to possession any such plant species from areas under Federal jurisdiction. In addition, the Act prohibits malicious damage or destruction of any such species on any area under Federal jurisdiction, and the removal, cutting, digging up, or damaging or destroying of any such species on any other area in knowing violation of any State law or regulation, or in the course of any violation of a State criminal trespass law. However, there is the following exception for threatened plants: Seeds of cultivated specimens of species treated as threatened shall be exempt from all the provisions of 50 CFR 17.61, provided that a statement that the seeds are of “cultivated origin” accompanies the seeds or their container during the course of any activity otherwise subject to these regulations. Exceptions to these prohibitions are outlined in 50 CFR 17.72.

We may issue permits to carry out otherwise prohibited activities involving threatened plants under certain circumstances. Regulations governing permits are codified at 50 CFR 17.72. With regard to threatened plants, a permit issued under this section must be for one of the following: scientific purposes, the enhancement of the propagation or survival of threatened species, economic hardship, botanical or horticultural exhibition, educational purposes, or other activities consistent with the purposes and policy of the Act.

It is our policy, as published in the *Federal Register* on July 1, 1994 (59 FR 34272), to identify to the maximum extent practicable at the time a species is listed, those activities that would or would not constitute a violation of section 9 of the Act. The

intent of this policy is to increase public awareness of the effect of a final listing on proposed and ongoing activities within the range of a listed species. Based on the best available information, the following actions are unlikely to result in a violation of section 9, if these activities are carried out in accordance with existing regulations and permit requirements; this list is not comprehensive:

(1) Normal agricultural and silvicultural practices, including herbicide and pesticide use, which are carried out in accordance with any existing regulations, permit and label requirements, and best management practices; and

(2) Normal residential landscape activities.

Questions regarding whether specific activities would constitute a violation of section 9 of the Act should be directed to the Austin Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Effects of the Rule

This final rule revises 50 CFR 17.12(h) to reclassify Tobusch fishhook cactus from endangered to threatened on the Federal List of Endangered and Threatened Plants, and changes the scientific name from *Ancistrocactus tobuschii* to *Sclerocactus brevihamatus* ssp. *tobuschii*. Because no critical habitat was ever designated for Tobusch fishhook cactus, this rule will not affect 50 CFR 17.96.

On the effective date of this rule (see **DATES**, above), the prohibitions and conservation measures provided by the Act, particularly through sections 7 and 9, continue to apply to Tobusch fishhook cactus. Federal agencies are required to consult with the Service under section 7 of the Act in the event that activities they authorize, fund, or carry out may affect Tobusch fishhook cactus.

Required Determinations

National Environmental Policy Act (42 U.S.C. 4321 et seq.)

We have determined that environmental assessments and environmental impact statements, as defined under the authority of the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*), need not be prepared in connection with listing a species as an endangered or threatened species under the Endangered Species Act. We published a notice outlining our reasons for this determination in the *Federal Register* on October 25, 1983 (48 FR 49244).

Government-to-Government Relationship with Tribes

In accordance with the President's memorandum of April 29, 1994 (Government-to-Government Relations with Native American Tribal Governments; 59 FR 22951), Executive Order 13175 (Consultation and Coordination With Indian Tribal Governments), and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with tribes in developing programs for healthy ecosystems, to acknowledge that tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to tribes.

References Cited

A complete list of all references cited in this rulemaking is available on the Internet at <http://www.regulations.gov> and upon request from the Austin Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this final rule are the staff members of the Austin Ecological Services Field Office, U.S. Fish and Wildlife Service (see **ADDRESSES**).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Regulation Promulgation

Accordingly, we amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361–1407; 1531–1544; and 4201–4245; unless otherwise noted.

2. Amend § 17.12(h) by removing the entry for “*Ancistrocactus tobuschii*” and adding the following entry to the List of Endangered and Threatened Plants in alphabetical order under Flowering Plants:

§ 17.12 Endangered and threatened plants.

* * * * *

(h) * * *

Scientific name	Common name	Where listed	Status	Listing citations and applicable rules
FLOWERING PLANTS				
* * * * *				
<i>Sclerocactus brevihamatus</i> ssp. <i>tobuschii</i>	Tobusch fishhook cactus	Wherever found	T	44 FR 64736, 11/7/1979; 83 FR [Insert <i>Federal Register</i> page where the document begins], [Insert date of publication in the <i>Federal Register</i>].
* * * * *				

Dated: April 20, 2018

James W. Kurth

Deputy Director
Exercising the Authority of the Director
U.S. Fish and Wildlife Service

[FR Doc. 2018-10206 Filed: 5/14/2018 8:45 am; Publication Date: 5/15/2018]