DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[FXES1111090FEDR–256–FF09E21000]

Endangered and Threatened Wildlife and Plants; Three Species Not Warranted for Listing as Endangered or Threatened Species

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notification of findings.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce findings that three species are not warranted for listing as endangered or threatened species under the Endangered Species Act of 1973, as amended (Act). After a thorough review of the best available scientific and commercial information, we find that it is not warranted at this time to list the bog spicebush (*Lindera subcoriacea*), Edward's Aquifer diving beetle (*Haideoporus texanus*), and Texas screwstem (*Bartonia paniculata* ssp. *texana*). However, we ask the public to submit to us at any time any new information relevant to the status of any of the species mentioned above or their habitats.

DATES: The findings in this document were made on [**INSERT DATE OF PUBLICATION IN THE *FEDERAL REGISTER***].

ADDRESSES: Detailed descriptions of the bases for these findings are available on the internet at https://www.regulations.gov under the following docket numbers:

Species	**Docket Number**
bog spicebush	FWS–R4–ES–2024–0104
Edwards Aquifer diving beetle	FWS–R2–ES–2024–0105
Texas screwstem	FWS–R2–ES–2024–0109

Those descriptions are also available by contacting the appropriate person as specified under **FOR FURTHER INFORMATION CONTACT**. Please submit any new information,

materials, comments, or questions concerning this finding to the appropriate person, as specified under **FOR FURTHER INFORMATION CONTACT**.

FOR FURTHER INFORMATION CONTACT:

Species	Contact Information
bog spicebush	James Austin, Field Office Supervisor, Mississippi Ecological Services Field Office, 601–540–2576, james_austin@fws.gov
Edwards Aquifer diving beetle	Karen Myers, Field Supervisor, Austin Ecological Services Field Office, 512–937–7371, karen_myers@fws.gov
Texas screwstem	Catherine Yeargan, Project Leader, Texas Coastal and Central Plains Ecological Services Field Office, 512–363–6862, catherine_yeargan@fws.gov

Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

SUPPLEMENTARY INFORMATION:

Background

Under section 4(b)(3)(B) of the Act (16 U.S.C. 1531 et seq.), we are required to make a finding on whether or not a petitioned action is warranted within 12 months after receiving any petition that we have determined contains substantial scientific or commercial information indicating that the petitioned action may be warranted ("12-month finding"). We must make a finding that the petitioned action is: (1) not warranted; (2) warranted; or (3) warranted, but precluded by other listing activity. We must publish a notification of these 12-month findings in the *Federal Register*.

Summary of Information Pertaining to the Five Factors

Section 4 of the Act (16 U.S.C. 1533) and the implementing regulations at part 424 of title 50 of the Code of Federal Regulations (50 CFR part 424) set forth procedures for adding species to, removing species from, or reclassifying species on the Lists of Endangered and Threatened Wildlife and Plants (Lists). The Act defines "species" as including any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or

wildlife which interbreeds when mature. 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 any species is an endangered species or a 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.

These factors represent broad categories of natural or human-caused actions or conditions that could have an effect on a species' continued existence. In evaluating these actions and conditions, we look for those that may have a negative effect on individuals of the species, as well as other actions or conditions that may ameliorate any negative effects or may have positive effects.

We use the term "threat" to refer in general to actions or conditions that are known to or are reasonably likely to negatively affect individuals of a species. The term "threat" includes actions or conditions that have a direct impact on individuals (direct impacts), as well as those that affect individuals through alteration of their habitat or required resources (stressors). The term "threat" may encompass—either together or separately—the source of the action or condition or the action or condition itself.

However, the mere 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 determining whether a species meets either definition, we must evaluate all identified threats by

considering the species' expected response 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. The Secretary determines 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.

The Act does not define the term "foreseeable future," which appears in the statutory definition of "threatened species." Our implementing regulations at 50 CFR 424.11(d) set forth a framework for evaluating the foreseeable future on a case-by-case basis which is further described in the 2009 Memorandum Opinion on the foreseeable future from the Department of the Interior, Office of the Solicitor (M–37021, January 16, 2009; "M-Opinion," available online at https://www.doi.gov/sites/doi.opengov.ibmcloud.com/files/uploads/M-37021.pdf). The foreseeable future extends as far into the future as the U.S. Fish and Wildlife Service and National Marine Fisheries Service can make reasonably reliable predictions about the threats to the species and the species' responses to those threats. We need not identify the foreseeable future in terms of a specific period of time. We will describe the foreseeable future on a case-by-case basis, using the best available data and taking into account considerations such as the species' life-history characteristics, threat projection timeframes, and environmental variability. In other words, the foreseeable future is the period of time over which we can make reasonably reliable predictions. "Reliable" does not mean "certain"; it means sufficient to provide a reasonable degree of confidence in the prediction, in light of the conservation purposes of the Act.

In conducting our evaluation of the five factors provided in section 4(a)(1) of the Act to

determine whether the bog spicebush, Edward's Aquifer diving beetle, and Texas screwstem meet the Act's definition of an "endangered species" or a "threatened species," we considered and thoroughly evaluated the best scientific and commercial information available regarding the past, present, and future stressors and threats. We reviewed the petition, information available in our files, and other available published and unpublished information for the species. Our evaluation may include information from recognized experts; Federal, State, and Tribal governments; academic institutions; foreign governments; private entities; and other members of the public.

In accordance with the regulations at 50 CFR 424.14(h)(2)(i), this document announces the not-warranted findings on petitions to list the three species. We have also elected to include brief summaries of the analyses on which these findings are based. We provide the full analyses, including the reasons and data on which the findings are based, in the decisional file for each of the actions included in this document. Below, we describe the documents containing these analyses.

The species assessment forms for the bog spicebush, Edward's Aquifer diving beetle, and Texas screwstem each contain more detailed biological information, a thorough analysis of the listing factors, a list of literature cited, and an explanation of why we determined that these species do not meet the Act's definition of an "endangered species" or a "threatened species." To inform our status reviews, we completed species status assessment (SSA) reports for these species. Each SSA report contains a thorough review of the taxonomy, life history, ecology, current status, and projected future status for each species. This supporting information can be found on the internet at https://www.regulations.gov under the appropriate docket number (see **ADDRESSES**, above).

Bog Spicebush

Previous Federal Actions

On April 20, 2010, we received a petition from the Center for Biological Diversity,

Alabama Rivers Alliance, Clinch Coalition, Dogwood Alliance, Gulf Restoration Network, Tennessee Forests Council, and West Virginia Highlands Conservancy to list 404 species, including the bog spicebush, as an endangered or threatened species under the Act. On September 27, 2011, we published a 90-day finding in the *Federal Register* (76 FR 59836) concluding that the petition presented substantial scientific or commercial information indicating that listing may be warranted for the bog spicebush. This document constitutes our 12-month finding on the April 20, 2010, petition to list bog spicebush under the Act.

Summary of Finding

Bog spicebush is a wetland shrub endemic to the southeastern United States, including the States of Louisiana, Mississippi, Alabama, Florida, Georgia, South Carolina, and North Carolina. The species' current distribution is not substantively reduced from its known historical distribution. Bog spicebush occurs in two general wetland habitats including seepage slopes with frequent fire, and in swamp forests and baygalls (or bay swamps) with less frequent fire. These habitat types are typically embedded within other upland forest ecosystems. Bog spicebush requires soils that are saturated but not permanently inundated. These soils are acidic and high in organic matter (e.g., peaty, or other mucky soils). The wetlands where bog spicebush occurs are situated in landscapes that experience frequent fire that acts to reduce woody competition.

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to bog spicebush, and we evaluated all relevant factors under the Act's five listing factors, including any regulatory mechanisms and conservation measures addressing these threats. The primary threats affecting the bog spicebush's biological status include habitat loss or modification due to urbanization and fire suppression, as well as the future changes to hydrologic regimes, habitat condition, disease, and insect herbivory of this shrub, the latter of which would potentially result from increasing temperatures and subsequent increases in survival and reproduction of insect herbivores. We also examined other factors including the effects of laurel wilt disease, invasive species, mineral and

materials extraction, silviculture, seed predation, and the effects of small, isolated populations, but these factors did not rise to such a level that they affected the species as a whole.

There are several historical and ongoing stressors to the species. However, the best available information indicates that the current distribution of the species is not substantively reduced from its known historical distribution. Habitat loss and modification due to urbanization and fire suppression is the primary factor influencing the species rangewide. The species is known from 123 populations historically with 9 documented extirpations distributed across 5 States, including the only known population in Louisiana. Of the 114 assessed populations, 19 (16.7 percent) exhibit high current resiliency and 76 (66.7 percent) exhibit moderate current resiliency, with multiple high and moderately resilient populations distributed across the 6 States and 3 ecoregions it occupies in the southeastern United States, providing good species' redundancy. In addition, 84 of the 114 populations (74 percent) occur on conservation lands where protection from development and some level of habitat management is expected, and of these populations, more than 95 percent (80 of the 84 populations) have high or moderate current resiliency. Overall, the majority of populations have the ability to withstand stochastic events. Additionally, current representation may be slightly reduced from historical due to loss of nine extirpated populations. However, it is currently moderate and sufficient to support species' viability. To date, the best available information indicates that the threats to the bog spicebush have not significantly affected viability. The SSA report describes uncertainties regarding potential threats and the species' response to these potential threats, but the best available information indicates the risk of extinction is low. Therefore, we conclude that the bog spicebush is not in danger of extinction throughout all of its range. Thus, we proceed with determining whether the species is likely to become endangered within the foreseeable future throughout all of its range.

The future scenarios through 2075 in the SSA report encompass the best available information for future projections of changes in suitable burn window, changes in forest and

wetland land cover classes, and how the geospatial aspects of a population area may provide some protection against changing environmental conditions across two plausible future scenarios (high and low impact). We projected that more than half of bog spicebush populations (66 to 70 populations; 57.9 to 61.4 percent) are projected to remain moderately to highly resilient, even under the higher impact scenario in 2075. These high and moderate resiliency populations are expected to have the ability to withstand stochastic events. Under each scenario, high and moderate resiliency populations are distributed across the range of the species except for the 10 populations in Alabama (7 populations) and Georgia (3 populations). Of the populations on conservation lands, between 73.8 and 76.2 percent are projected to exhibit moderate to high resiliency in the foreseeable future. However, populations not on conservation lands are projected to decline in resiliency, with between 24 and 26 of 30 populations projected to exhibit low resiliency. The future redundancy of the bog spicebush is expected to decrease somewhat as the resiliency of some populations declines. However, populations with moderate to high resiliency are projected to be distributed across the range of the species under both future scenarios and timesteps. We expect that future redundancy of the bog spicebush, although decreased from current levels, will remain sufficient to support species' viability. Therefore, after assessing the best available information, we conclude that the bog spicebush is not likely to become endangered within the foreseeable future throughout all of its range.

We also evaluated whether the bog spicebush is endangered or threatened in a significant portion of its range. We did not find any portions of the bog spicebush's range for which both (1) the portion is significant, and (2) the species is in danger of extinction in that portion, either now or within the foreseeable future. Thus, after assessing the best available information, we conclude that the bog spicebush is not in danger of extinction in a significant portion of its range now or within the foreseeable future.

After assessing the best available information, we concluded that the bog spicebush is not in danger of extinction or likely to become in danger of extinction within the foreseeable future

throughout all of its range or in any significant portion of its range. Therefore, we find that listing bog spicebush as an endangered species or threatened species under the Act is not warranted. A detailed discussion of the basis for this finding can be found in the bog spicebush species assessment form and other supporting documents on https://www.regulations.gov under Docket No. FWS–R4–ES–2024–0104 (see **ADDRESSES**, above).

Peer Review

In accordance with our joint policy on peer review published in the *Federal Register* on July 1, 1994 (59 FR 34270), and our August 22, 2016, memorandum updating and clarifying the role of peer review in listing actions under the Act, we solicited independent scientific reviews of the information contained in the bog spicebush SSA report. We sent the SSA report to four independent peer reviewers and received one response. Results of this structured peer review process can be found at https://www.regulations.gov under Docket No. FWS–R4–ES–2024–0104 and https://www.fws.gov/office/mississippi-ecological-services/library. We incorporated the results of these reviews, as appropriate, into the SSA report, which is the foundation for this finding.

Edwards Aquifer Diving Beetle

Previous Federal Actions

On June 25, 2007, we received a petition from Forest Guardians (now WildEarth Guardians) to list 475 species, including the Edwards Aquifer diving beetle, as endangered or threatened species under the Act. On December 16, 2009, we published a 90-day finding (74 FR 66866) that the petition presented substantial scientific information indicating that listing may be warranted for the Edwards Aquifer diving beetle. This document constitutes our 12-month finding on the June 25, 2007, petition to list Edwards Aquifer diving beetle under the Act.

Summary of Finding

The Edwards Aquifer diving beetle (also referred to as the Texas cave diving beetle) is a small subterranean aquatic insect that lives underground in the southern segment of the Edwards

Aquifer. The diving beetle has been expelled from four artesian wells and springs at two of the largest spring ecosystems in this segment: San Marcos Springs in Hays County, Texas, and Comal Springs in Comal County, Texas. The species exhibits subterranean morphological traits, feeds on resources found at deeper levels within the Edwards Aquifer near the freshwater/saline-water interface, and is infrequently captured compared to other subterranean taxa and congener species. The best available information suggests the species inhabits deeper aquifer habitat (as opposed to hyporheic zone, springs, or surface habitats). The presence of diving beetles expelled from the San Marcos artesian well, which reaches depths of 60 meters (197 feet), suggests that their habitat extends to at least this depth, if not deeper.

Aquifer habitats are characterized by the absence of light and relatively stable physiochemical properties, and they can be buffered against abrupt changes, depending on their distance from surface and the amount of terrestrial inputs. The Edwards Aquifer is recognized for its unique biodiversity in part explained by the abundant energy sources supported through chemolithoautotrophy (i.e., a process when microorganisms convert inorganic compounds into energy) at the freshwater/saline water interface. Interstitial pore spaces serve as microhabitats for subterranean invertebrates, and thus the sizes of the pore space select for smaller and more elongated invertebrates with certain physiological characteristics. The diving beetle is highly specialized to navigate these passageways and, having no wings, may be isolated in subterranean waters where movement is restricted by geologic barriers, such as faults. The diving beetle has never been directly observed in its natural subterranean habitat due to limitations in accessibility of these habitats to humans. The best available information does not currently indicate the size and range of preferred water-filled void spaces, nor the preferred water quality.

Edwards Aquifer diving beetles are opportunistically predaceous and are primary consumers. The food sources for the Edwards Aquifer diving beetle vary between the populations from the two spring ecosystems, with San Marcos Springs and Comal Springs individuals having 92 percent and 27 percent, respectively, of their stomach contents from

chemolithoautotrophic organic matter. We assume this difference in what the diving beetles in each of these populations consume is influenced by where they live. The population at San Marcos Springs is underground in the artesian zone where a more impervious rock layer separates the surface from the groundwater habitat. This physical separation makes the San Marcos Spring population less likely to access food from the surface. The population at Comal Springs is in the recharge zone of the aquifer, where the less impervious rocks at the surface are exposed and would introduce surface-derived food resources more readily.

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to the Edwards Aquifer diving beetle, and we evaluated all relevant factors under the Act's five listing factors, including any regulatory mechanisms and conservation measures addressing these threats. The primary threats to the Edwards Aquifer diving beetle's biological status that we evaluated include reductions in water quantity through groundwater pumping and development, water quality, effects of extreme droughts and increased temperatures, and mortality from groundwater wells.

After evaluating threats to the species and assessing the cumulative effect of the threats under the Act's section 4(a)(1) factors, we found that the best available information does not project a negative impact from environmental or anthropogenic factors directly to Edwards Aquifer diving beetle populations, nor does the best available information indicate a change to historic demographic factors. The primary driving factors of Edwards Aquifer diving beetle's viability are water quantity (i.e., groundwater pumping and development) and water quality (i.e., development and impervious cover). The Edwards Aquifer diving beetle has survived significant drought periods (including the drought of record), and despite the ongoing threats, the population has been regularly observed since its initial discovery half a century ago. Groundwater volume extracted from the aquifer has reduced since 2008. The best available information does not indicate that groundwater quantity is impacting the species, and it is not expected to become a stressor because of Texas State legislation and current conservation measures (i.e., the Edwards

Aquifer Authority Act and the associated habitat conservation plan). The absence of long-term declines in aquifer levels suggests that suitable habitat, in terms of water quantity, for the diving beetle has experienced little change from historical conditions and has not declined. It is also unlikely that widespread loss or degradation of water-filled subterranean spaces has occurred due to reduced recharge and groundwater pumping. Flow protection measures have sustained the Comal and San Marcos Spring ecosystems during drought and have provided protection for water levels in deeper portions of the southern segment.

Additionally, the best available information does not indicate that any groundwater contamination is affecting the Edwards Aquifer diving beetle. Past and current urbanization and human population growth have not resulted in significant degradation in water quality at the Comal and San Marcos Spring systems. Despite increases in localized impervious cover, most of the groundwater comes from a much larger regional area that is currently less developed and less impacted by contamination.

Finally, direct mortality through expulsion from groundwater wells is occurring, but the best available information available indicates that expulsion of individuals via wells are infrequent, and the species' likely high reproductive rate results in this level of mortality being unlikely to affect the population's current resiliency. Thus, after assessing the best available information, we conclude that the Edwards aquifer diving beetle is not in danger of extinction throughout all of its range.

The primary driving factors on the Edwards Aquifer diving beetle populations' future viability are water quality (i.e., development and impervious cover) and water quantity (i.e., groundwater pumping and development). Increases in development in the areas of influence would lead to increases in impervious cover, altered recharge rates, and degraded water quality. The lands directly above Edwards Aquifer diving beetle habitat are already developed, although future developments may occur in the areas of influence in the recharge and contributing zones that impact groundwater quantity and quality. Projections indicate that the human populations of

Bexar, Comal, Hays, and Kendall Counties, Texas, will continue to increase over the next three decades. Land-use projections indicate the potential for increases in impervious cover that could degrade water quality and lower recharge capacity for the southern segment of the aquifer. The best available information does not indicate projected levels of impervious cover will affect groundwater quality to a level that it would become unsuitable for the Edwards Aquifer diving beetle.

Water quantity is expected to remain sufficient for the Edwards Aquifer diving beetle. At the depths at which this species occurs in the aquifer, future groundwater extraction and changes in precipitation events are not expected to have significant effects on the species' habitat. Flow protection measures have sustained Comal and San Marcos Spring ecosystems during drought and provide protection for water levels in deeper portions of the southern segment. There is no evidence indicating any threat to the Edwards Aquifer diving beetle under current groundwater management implementation, and if current management of the southern segment continues into the future, aquifer levels should not decline to a level where Edwards Aquifer diving beetle habitat would be affected.

Thus, the best available information does not project a negative impact from environmental or anthropogenic factors directly to the known Edwards Aquifer diving beetle population, nor is there evidence indicating a negative change to demographic factors historically. We expect that resiliency, redundancy, and representation of the species will be maintained into the foreseeable future. After assessing the best available information, we conclude that the Edwards Aquifer diving beetle is not likely to become endangered within the foreseeable future throughout all of its range.

We also evaluated whether the Edwards Aquifer diving beetle is endangered or threatened in a significant portion of its range. We did not find any portions of the Edwards Aquifer diving beetle's range for which both (1) the portion is significant, and (2) the species is in danger of extinction in that portion, either now or within the foreseeable future. Thus, after

assessing the best available information, we conclude that the Edwards Aquifer diving beetle is not in danger of extinction in a significant portion of its range now or within the foreseeable future.

After assessing the best available information, we concluded that the Edwards Aquifer diving beetle is not in danger of extinction or likely to become in danger of extinction within the foreseeable future throughout all of its range or in any significant portion of its range. Therefore, we find that listing the Edwards Aquifer diving beetle as an endangered species or threatened species under the Act is not warranted. A detailed discussion of the basis for this finding can be found in the Edwards Aquifer diving beetle species assessment form and other supporting documents on https://www.regulations.gov under Docket No. FWS–R2–ES–2024–0105 (see **ADDRESSES**, above).

Peer Review

In accordance with our joint policy on peer review published in the *Federal Register* on July 1, 1994 (59 FR 34270) and our August 22, 2016, memorandum updating and clarifying the role of peer review in the listing actions under the Act, we solicited independent scientific reviews of the information contained in the Edwards Aquifer diving beetle SSA report. We sent the SSA report to three independent peer reviewers and received one response. Results of this structured peer review process can be found at https://www.regulations.gov under Docket No. FWS–R2–ES–2024–0105. We incorporated the results of these reviews, as appropriate, into the SSA report, which is the foundation for this finding.

Texas Screwstem

Previous Federal Actions

On April 20, 2010, we received a petition from the Center for Biological Diversity, Alabama Rivers Alliance, Clinch Coalition, Dogwood Alliance, Gulf Restoration Network, Tennessee Forests Council, and West Virginia Highlands Conservancy to list 404 species, including Texas screwstem, as an endangered or threatened species under the Act. On September

27, 2011, we published a 90-day finding in the *Federal Register* (76 FR 59836) concluding that the petition presented substantial scientific information indicating that listing may be warranted for the Texas screwstem. This document constitutes our 12-month finding on the April 20, 2010, petition to list the Texas screwstem under the Act.

Summary of Finding

The Texas screwstem is a small and inconspicuous plant, usually growing less than 30 centimeters (12 inches) in height. It is native to the Pineywoods region of east Texas with a single occurrence in Louisiana. The species has been documented in 24 locations since it was first described in 1965. Since 2010, it has been observed in 12 of those locations, all occurring in seven counties in east Texas.

The Texas screwstem is a habitat specialist, dependent on the unique baygall habitat (i.e., wetlands with peat substrates at slopes maintained by downslope seepage) found within the broader Texas Pineywoods region. It does not appear to be restricted to specific soil types, climate regimes, or geological substrates, indicating that baygall habitat is the key driver of species presence. Sufficient habitat includes proper hydrology and co-occurring plant communities that create the microhabitats associated with the Texas screwstem.

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to the Texas screwstem, and we evaluated all relevant factors under the Act's five listing factors, including any regulatory mechanisms and conservation measures addressing these threats. The primary threats affecting the Texas screwstem's biological status include habitat loss and degradation due to human development, timber harvest, and invasive species; direct damage from invasive hogs; and severe weather events, including hurricanes. In east Texas, human activity and development has resulted in the loss and degradation of wetlands, including the baygall habitats on which the Texas screwstem is dependent. There are conservation measures that may limit the effects of human development on the Texas screwstem, such as the occurrence of more than half of the populations on federally

owned lands or privately owned lands that are managed for conservation. Other threats, such as feral hog damage and severe weather events, are the most pervasive threats across the range and can reduce the resiliency of populations by directly impacting individual Texas screwstem plants or their habitats.

In our analysis of the species and its threats, we found that the Texas screwstem is known from 24 historical populations, 12 of which have had detections in recent surveys. At least 1 population is extirpated, and another 10 currently have low resiliency, making them vulnerable to stochastic events. However, 11 populations have high resiliency, meaning they have sufficient habitat and demographic characteristics that facilitate persistence. As a narrowly distributed habitat specialist, the Texas screwstem likely had limited redundancy and representation historically. Populations are also found in two of the three ecoregions in which the species historically occurred. However, populations are distributed across three separate hydrological basins, with at least two high resiliency populations in each basin. The presence of multiple populations across most of the historical range and several hydrological basins buffers the Texas screwstem against the potential effects of catastrophic events. These populations continue to be distributed across several ecoregions and most of the historical extent of the species' range, indicating limited declines in adaptive capacity. Overall, the Texas screwstem is composed of multiple high resiliency populations that cover much of the historical range of the species, conferring redundancy and representation. Thus, after assessing the best available information, we conclude that the Texas screwstem is not in danger of extinction throughout all of its range.

We project that populations currently in low resiliency will become extirpated. Loss of these populations will result in reductions in redundancy and representation. However, populations currently in high resiliency are projected to remain in that condition in the future. Of the 11 currently highly resilient populations, in the worst-case scenario, 6 populations are projected to continue to remain highly resilient, and 4 populations are projected to decline to moderate resiliency. Thus, we do not project that there will be reductions in resiliency that would

result in rangewide population extirpations. These populations will continue to occur across several hydrological basins and ecoregions, covering much of the historical range. Therefore, we do not project that there will be substantial declines in redundancy and representation that would elevate extinction risk. In total, based on our analysis of the threats that may reduce the viability of the Texas screwstem, we find that the biological status of the species is not projected to change substantially in the foreseeable future. After assessing the best available information, we conclude that the Texas screwstem is not likely to become endangered within the foreseeable future throughout all of its range.

We also evaluated whether the Texas screwstem is endangered or threatened in a significant portion of its range. We did not find any portions of the Texas screwstem's range for which both (1) the portion is significant, and (2) the species is in danger of extinction in that portion, either now or within the foreseeable future. Thus, after assessing the best available information, we conclude that the Texas screwstem is not in danger of extinction in a significant portion of its range now or within the foreseeable future.

After assessing the best available information, we concluded that the Texas screwstem is not in danger of extinction or likely to become in danger of extinction within the foreseeable future throughout all of its range or in any significant portion of its range. Therefore, we find that listing the Texas screwstem as an endangered species or threatened species under the Act is not warranted. A detailed discussion of the basis for this finding can be found in the Texas screwstem species assessment form and other supporting documents on https://www.regulations.gov under Docket No. FWS–R2–ES–2024–0109 (see **ADDRESSES**, above).

Peer Review

In accordance with our joint policy on peer review published in the *Federal Register* on July 1, 1994 (59 FR 34270) and our August 22, 2016, memorandum updating and clarifying the role of peer review in the listing actions under the Act, we solicited independent scientific

reviews of the information contained in the Texas screwstem SSA report. We sent the SSA report to four independent peer reviewers and received four responses. Results of this structured peer review process can be found at https://www.regulations.gov under Docket No. FWS–R2–ES–2024–0109. We incorporated the results of these reviews, as appropriate, into the SSA report, which is the foundation for this finding.

New Information

We request that you submit any new information concerning the taxonomy of, biology of, ecology of, status of, or stressors to the bog spicebush, Edward's Aquifer diving beetle, and Texas screwstem to the appropriate person, as specified under **FOR FURTHER INFORMATION CONTACT**, whenever it becomes available. New information will help us monitor these species and make appropriate decisions about their conservation and status. We encourage local agencies and stakeholders to continue cooperative monitoring and conservation efforts.

References

A complete list of the references used in these petition findings is available in the relevant species assessment form, which is available on the internet at https://www.regulations.gov in the appropriate docket (see **ADDRESSES**, above) and upon request from the appropriate person (see **FOR FURTHER INFORMATION CONTACT**, above).

Authority

The authority for this action is section 4 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.).

Signing Authority

Paul Souza, Regional Director, Region 8, Exercising the Delegated Authority of the Director of the U.S. Fish and Wildlife Service, approved this action on May 16, 2025, for publication. On June 9, 2025, Paul Souza authorized the undersigned to sign the document

electronically and submit it to the Office of the Federal Register for publication as an official document of the U.S. Fish and Wildlife Service.

Madonna Baucum,
Regulations and Policy Chief,
Division of Policy, Economics, Risk Management, and Analytics of the Joint Administrative Operations,
U.S. Fish and Wildlife Service.

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