



January 3, 2022

Via Electronic and Certified Mail

Deb Haaland, Secretary of the Interior
U.S. Department of the Interior
1849 C Street, NW
Washington, D.C. 20240
exsec@ios.doi.gov

Martha Williams, Principal Deputy Director
U.S. Fish and Wildlife Service
1849 C Street NW, Room 3331
Washington, DC 20240-0001
martha_williams@fws.gov

RE: Sixty-day Notice of Intent to Sue for Violations of the Endangered Species Act

Dear Secretary Haaland and Principal Deputy Director Williams:

The Center for Biological Diversity (“Center”) provides this 60-day notice of intent to sue the U.S. Department of the Interior and U.S. Fish and Wildlife Service (“Service”) for violating the Endangered Species Act, 16 U.S.C. §§ 1531-1544 (“ESA” or “Act”), resulting from the Service’s negative 90-day finding on the Center’s petition to list the Tucson shovel-nosed snake (*Chionactis annulata klauberi*) as threatened or endangered. The Service arbitrarily determined that this snake does not warrant protection under the Act and failed to follow the best available science in violation of the ESA. The Center provides this letter according to the 60-day notice requirement of the ESA’s citizen suit provision. *Id.* §1540(g)(2)(C).

The Tucson shovel-nosed snake is a small, habitat specialist that is struggling for existence because of unabated threats to the habitat it needs to survive. The best available science demonstrates that the snake is in decline. More than 39% of its habitat has been destroyed by development, roads, and agriculture. These threats and others are projected to continue into the foreseeable future, accelerating further losses. Despite finding on three separate occasions that the snake warrants ESA protections and that its limited geographic range is threatened by development, the Service issued a not-warranted finding on the Center’s 2004 petition to list the Tucson shovel-nosed snake, concluding that it is not endangered or threatened. In 2020, the Center submitted a new petition (“2020 Petition”) that addressed why the Service’s not-warranted finding was incorrect and counter to the best available scientific information. The Center provided new and extensive information to support ESA listing protections. The Service responded with a negative 90-day finding. As detailed in this Notice, the Service’s decision is unlawful and failed to rely on the best scientific and commercial data available in several

respects, including by: (1) failing to evaluate the new information in the Center's 2020 petition including Dr. Rosen's 2015 letter and a 2020 habitat and conservation study that found problems with the modeling the Service used to determine the snake's habitat and range which the Service relied on to reach its not-warranted finding; (2) arbitrarily dismissing several elements of the 2020 Petition; and (3) arbitrarily concluding that the snake is not endangered or threatened in a significant portion of its range. The Service's disregard for the legal requirements of the ESA and the best available scientific information about the species led to an arbitrary and unlawful decision. If the Service does not remedy the violations of law outlined in this letter within 60 days, we will file suit in federal court to resolve the matter.

Statutory Framework

The ESA is "the most comprehensive legislation for the preservation of endangered species ever enacted by any nation." *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 180 (1978). The ESA is intended to protect and recover species that the Service determines to be "endangered" or "threatened." 16 U.S.C. § 1533(a). "Endangered" means the species "is in danger of extinction throughout all or a significant portion of its range." *Id.* § 1532(6). "Threatened" means the species is "likely to become an endangered species within the foreseeable future within all or a significant portion of its range." *Id.* § 1532(20). The definition of "species" includes "subspecies" and "distinct population segments of vertebrate or wildlife which interbreeds when mature." *Id.* § 1532(16).

Section 4 of the ESA permits private parties to petition the Service to add a particular species to the Service's formal list of threatened and endangered species. *Id.* § 1533(b)(3)(A). The Service is then directed to make a preliminary finding within 90 days. *Id.* If it finds "substantial information indicating that the petitioned action may be warranted," the Service must publish that finding and proceed to conduct a full scientific review of the species' status. *Id.* Based on that review, the Service has 12 months to either issue a "not warranted" finding (thus rejecting the petition) or a proposed rule adding the species to either the endangered or threatened list. *Id.* § 1533(b)(3)(B). If the Service proposes to list the species under either category, it then has 12 more months to make a final decision. *Id.* § 1533(b)(6)(A).

When making listing determinations, the ESA requires the Service to determine whether any species is an endangered species or a threatened species because of five enumerated factors:

- (A) the present or threatened destruction, modification, or curtailment of a species' habitat or range;
 - (B) overutilization for commercial, recreational, scientific, or educational purposes;
 - (C) predation or disease;
 - (D) the inadequacy of existing regulatory mechanisms; and
 - (E) other manmade or natural factors affecting the species' continued existence. *Id.*
- § 1533(a)(1).

If a species meets the definition of "endangered" or "threatened" because of any one or a combination of these five factors, the Service must list the species. *Id.*; 50 C.F.R. § 424.11(c). In evaluating these factors, the Service must make listing determinations "solely on the basis of the best scientific and commercial data available." 16 U.S.C. § 1533(b)(1)(A).

The threshold for a positive 90-day finding—the preliminary step in the listing process—is low. The “specific question . . . is not whether there is conclusive evidence to establish that the petitioned action is warranted, but merely whether there is enough information to lead a reasonable [person] to believe that the petitioned action may be warranted.” *Ctr. for Biological Diversity v. Kempthorne*, Civ. No. 07-38, 2008 U.S. Dist. LEXIS 17517, * 34-35 (D. Ariz. Mar. 6, 2008). “In other words, the 90-day review of a listing petition is a cursory review to determine whether a petition contains information that warrants a more in-depth review.” *Id.* at * 25; see also *Moden v. U.S. Fish & Wildlife Serv.*, 281 F. Supp. 2d 1193, 1204 (D. Or. 2003) (standard for making 90-day finding “is not overly burdensome, does not require conclusive information, and uses the ‘reasonable person’ to determine whether the substantial information has been presented to indicate that the action may be warranted.”).

In instances such as this, where the Service has issued a decision on a previous petition to list a species, substantial information is generally limited to “new information not previously considered.” 50 C.F.R. § 424.14(h)(iii).

Factual Background

The Tucson Shovel-nosed Snake and Threats to its Continued Existence

The Tucson shovel-nosed snake is a small, beautiful snake that depends on specific habitat requirements, including flat, sandy soils found on level terrain of valley floors. It has a long, slender, and slick body that is adapted to swim through these soils using its spade-shaped snout, a unique behavior known as “sand swimming.”

The Tucson shovel-nosed snake is endemic to just three counties in the upper Sonoran Desert of south-central Arizona: Pima, Pinal, and Maricopa. These counties include Phoenix and Tucson, and they are experiencing some of the most rapid development and population growth in the entire country. At least 39 percent of the snake’s habitat has been destroyed by development, roads, and agriculture. Much of the snake’s remaining habitat remains unprotected, while rapid urbanization and other development within its range is expected to continue. The Tucson shovel-nosed snake is also vulnerable to additional threats, including industrial solar development, wildfires, climate change, and drought.

2004 Listing Petition

In response to these threats, and the lack of adequate existing regulatory mechanisms to address them, the Center submitted a petition to list the Tucson shovel-nosed snake on December 15, 2004. On July 29, 2008, the Service issued a positive 90-day finding that protection of the species may be warranted under the ESA. 73 Fed. Reg. 43,907.

On March 31, 2010, the Service issued its 12-month finding, determining that listing was warranted based on the snake’s “limited geographic distribution” and its finding that because the snake’s “entire range lies within the path of future development,” it is likely to become in danger

of extinction within the foreseeable future. 75 Fed. Reg. 16,058. However, instead of protecting the snake, the Service determined that ESA-protections were precluded by higher priority listings and placed it on the candidate list. *Id.* The Service subsequently issued annual warranted but precluded findings in 2011, 2012, and 2013. 76 Fed. Reg. 66,396 (October 26, 2011); 77 Fed. Reg. 70,018 (November 21, 2012); 78 Fed. Reg. 70,123 (November 22, 2013).

On September 9, 2011, the Center reached a settlement with the Service requiring the agency to make overdue decisions on 757 species, including the Tucson shovel-nosed snake. Under the settlement agreement, the Service was required to issue its 12-month finding for the species by the end of Fiscal Year 2014.

2014 SSA and Not-Warranted Determination

In 2014, the Service completed a Species Status Assessment Report (“SSA”) to inform its required 12-month determination regarding the Tucson shovel-nosed snake. In the SSA, the Service relied heavily upon a genetic study that at that time was in press (Wood *et al.* 2014) to expansively redraw and expand the species’ range. *See, e.g.*, SSA p. 49 (“Based on recent genetic work . . . the range of the Tucson shovel-nosed snake is substantially larger than previously thought.”). The SSA also presented a new and inaccurate characterization of the species as a habitat generalist. (“The Tucson shovel-nosed snake appears to be a habitat generalist within the broad biotic community described above.”). Based upon its incorrect description of the Tucson shovel-nosed snake as a habitat generalist with a much larger range than previously believed, the SSA thus “conclude[s] that the current condition of the Tucson shovel-nosed snake, rangewide, is more than adequate for what the subspecies need to maintain longterm viability.” (p. 49).

Based on the SSA findings, rather than issuing a proposed listing rule, the Service reversed course from its earlier warranted determinations and issued a not-warranted determination. 79 Fed. Reg. 56,731 (September 23, 2014).

Dr. Philip C. Rosen, PhD 2015 Letter

Dr. Phil Rosen, a preeminent expert on the species, wrote the Service on March 16, 2015 to identify “five problems with the agency’s ‘not warranted’ finding and the SSA Report.” As detailed in that letter, these five problems are: (1) the Tucson shovel-nosed snake, like all members of the *C. occipitalis* complex, are habitat specialists, not generalists as stated by the Service; (2) the Tucson shovel-nosed snake has experienced severe population declines and extirpation in the core of its genetic distribution, contradicting statements by the Service; (3) the Tucson shovel-nosed snake is vulnerable to habitat fragmentation; (4) the Service’s habitat model overestimates the distributional boundaries of the taxon; and (5) “most critically,” the Service’s assumed extent and shape of the Tucson shovel-nosed snake’s range is arbitrarily large, and inconsistent with the key source referenced (Wood *et al.* 2014). Based on these errors, Dr. Rosen recommended that the Service re-evaluate the status of the species based on a “narrower” and “geographically restricted” concept of the taxon.

2020 Habitat and Conservation Status Study

Dr. Rosen also co-authored a peer-reviewed study on the habitat and conservation status of the Tucson shovel-nosed snake published in 2020 (Bradley and Rosen 2020). This study found that the model used by the Service in its 2014 not-warranted determination yielded an estimated area of suitable habitat 2.4 times greater than the authors' estimates. The authors identified several reasons for the Service's overestimation of habitat, including the Service's model inclusion of areas up to 1,500 meters (4,921 feet) in elevation, which is over twice the maximum elevation for any Tucson shovel-nosed snake record within Arizona. The study also noted that the Service failed to address the species' extirpation in Avra Valley and corresponding range reduction in its 2014 not-warranted determination. It concludes that more than 60 percent of the remaining suitable habitat is vulnerable to urbanization and the Interstate-11 proposal.

2020 Listing Petition

On September 24, 2020, the Center submitted a second petition to list the Tucson shovel-nosed snake as threatened or endangered under the ESA. The 2020 Petition incorporates the Rosen 2015 letter, Bradley and Rosen 2020 habitat and conservation status study, as well as new information regarding habitat threats not previously considered by the Service in its 2014 not-warranted determination. As detailed in the 2020 Petition, this previously unconsidered new information shows that the Service's 2014 decision adopted an overly expansive definition of the Tucson shovel-nosed snake's range based on an erroneous interpretation of the genetics study (Wood *et al.* 2004), as well as other errors.

2021 Negative 90-Day Finding

On September 29, 2021, the Service issued its negative 90-day finding, determining that the 2020 Petition did not "present substantial scientific or commercial information" or any "new information not previously considered" that would indicate listing the Tucson shovel-nosed snake may be warranted. 86 Fed. Reg. 53,937.

Notice of ESA Violations: Unlawful Negative 90-Day Finding

An agency's finding is unlawful if it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). The finding is arbitrary and capricious "if the agency relied on factors Congress did not intend it to consider, entirely failed to consider an important aspect of the problem, or offered an explanation that runs counter to the evidence before the agency or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." *The Lands Council v. McNair*, 537 F.3d 981, 987 (9th Cir. 2008).

The Service's 90-day finding is arbitrary and capricious in several respects. First, the Service uniformly ignored and refused to address extensive new scientific information regarding the Tucson shovel-nosed snake's habitat and conservation status, including the detailed critique contained in the Rosen 2015 letter, and the 2020 study (which was in press at the time the 2020 Petition was submitted).

This new information contradicts several fundamental aspects of the Service's not-warranted determination, including the agency's findings regarding the size of the species' range, its habitat preferences, and the extent of its population declines. The Service should have directly addressed this scientific information regarding the conservation status and habitat of the Tucson shovel-nosed snake and determined whether it satisfied the low "substantial information" standard for 90-day findings. See *Conner v. Burford*, 848 F.2d 1441, 1454 (9th Cir. 1988) (Service "cannot ignore available biological information.").

The Service did not evaluate the new information, however. Instead, the negative 90-day finding mischaracterizes the 2020 Petition, stating that the agency "stand[s] by our previous determination that genetic analysis is a better scientific method than color patterns for determining which subspecies a shovel-nosed snake belongs to." 86 Fed. Reg. at 53,941. The Center, however, has never argued that color patterns are superior to genetic analysis in determining taxonomy. The 2020 Petition makes no such argument, nor does the Rosen 2015 letter, 2020 study, or any of the other new information. This *non sequitur* of a response cannot obscure the fact that the Service simply ignored the substantial amount of contradictory scientific information undermining its 2014 not-warranted determination.

This new information regarding the snake's conservation status and habitat is more than enough to meet the low threshold for 90-day "may be warranted" determinations. The Service's negative 90-day finding contained additional errors, however, including a failure to acknowledge new information and data regarding the continued and foreseeable threats to the species from urbanization and roads, agriculture, and climate change. Instead, the Service repeats its previous findings and wrongly concludes that these threats were already analyzed.

The Service's finding also arbitrarily dismisses several additional elements of the 2020 Petition. For instance, the Service entirely dismisses the threats of disease to the snake. In 2019, a snake fungal disease was documented in Arizona for the first time. Although the Service claims there wasn't an "overlap" with the Tucson shovel-nosed snake, it did not evaluate this threat even though the disease appears to target snakes indiscriminately. See Petition Review (8-9) and 2020 Petition (18-19). In addition, the Service completely disregarded threats of commercial trade because the petition did not include "specific information" indicating "collection of Tucson shovel-nosed snake." See Petition Review (5). Yet, the Center included a likely situation where the snake may be collected given its attractive pattern and the fact that there is limited legal enforcement to protect the Tucson shovel-nosed snake from collection.

Finally, the Service's 90-day finding violates the ESA's substantive mandate to make listing determinations "solely on the basis of the best scientific and commercial data available." 16 U.S.C. § 1533(b)(1)(A).

Conclusion

The Service's negative 90-day finding for the Tucson shovel-nosed snake is arbitrary, capricious, an abuse of discretion and otherwise not in accordance with the ESA within the meaning of the APA, 5 U.S.C. §§ 701-706. The Service should therefore withdraw its negative 90-day finding and commit to reconsidering the 2020 Petition and preparing a new 90-day finding within an expeditious timeframe.

Please contact me if you have any questions or if you would like to discuss this matter further.

Sincerely,

/s/Camila Cossío
Camila Cossio
Center for Biological Diversity
Staff Attorney
P.O. Box 11375
Portland, OR 97211
ccossio@biologicaldiversity.org

REFERENCES

- Bradley, C.B., and P.C. Rosen. 2020. Defining suitable habitat and conservation status for the Tucson shovel-nosed snake (*Chionactis annulata klauberi*) in the Sonoran Desert. *Sonoran Herpetologist* 33 (4).
- Wood, D.A., R.N. Fisher, and A.G. Vandergast. 2014. Frayed boundaries: color and gene flow patterns among parapatric subspecies of the Western Shovel-nosed Snake (*Chionactis occipitalis*). *PLOS ONE* 9: 1489-1507.