



DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–HQ–ES–2025–0110; FXES1111090FEDR–256–FF09E21000]

RIN 1018–BH99

Endangered and Threatened Wildlife and Plants; Threatened Species Status with Section 4(d) Rule for the Borneo Earless Monitor

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to list the Borneo earless monitor (*Lanthanotus borneensis*), a lizard species from Borneo, as a threatened species under the Endangered Species Act of 1973, as amended (Act). This determination also serves as our 12-month finding on a petition to list the Borneo earless monitor. After a review of the best scientific and commercial data available, we find that listing the species is warranted. Accordingly, we propose to list the Borneo earless monitor as a threatened species with protective regulations under section 4(d) of the Act (“4(d) rule”). If we finalize this rule as proposed, it would add this species to the List of Endangered and Threatened Wildlife and extend the Act’s protections to the species.

DATES: Comments must be received by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]. Comments submitted electronically using the Federal eRulemaking Portal (see **ADDRESSES**, below) must be received by 11:59 p.m. eastern time on the closing date. We must receive requests for a public hearing, in writing, at the address shown in **FOR FURTHER INFORMATION CONTACT** by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

ADDRESSES: *Comment submission:* You may submit comments by one of the following methods:

(1) *Electronically:* Go to the Federal eRulemaking Portal:

<https://www.regulations.gov>. In the Search box, enter FWS–HQ–ES–2025–0110, which is the docket number for this rulemaking. Then, click on the Search button. On the resulting page, in the panel on the left side of the screen, under the Document Type heading, check the Proposed Rule box to locate this document. You may submit a comment by clicking on “Comment.”

(2) *By hard copy:* Submit by U.S. mail to: Public Comments Processing, Attn:

FWS–HQ–ES–2025–0110, U.S. Fish and Wildlife Service, MS: PRB/3W, 5275 Leesburg Pike, Falls Church, VA 22041–3803.

We request that you send comments only by the methods described above. We will post all comments on <https://www.regulations.gov>. This generally means that we will post any personal information you provide us (see **Information Requested**, below, for more information).

Availability of supporting materials: Supporting materials, such as the species status assessment report, are available at <https://www.regulations.gov> at Docket No. FWS–HQ–ES–2025–0110.

FOR FURTHER INFORMATION CONTACT: Rachel London, Manager, Branch of Delisting and Foreign Species, Ecological Services Program, U.S. Fish and Wildlife Service; rachel_london@fws.gov; telephone 703–358–2171. 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. Please see Docket

No. FWS-HQ-ES-2025-0110 on <https://www.regulations.gov> for a document that summarizes this proposed rule.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule. Under the Act, a species warrants listing if it meets the definition of an endangered species (in danger of extinction throughout all or a significant portion of its range) or a threatened species (likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range). If we determine that a species warrants listing, we must list the species promptly and designate the species' critical habitat to the maximum extent prudent and determinable. We have determined that the Borneo earless monitor meets the Act's definition of a threatened species; therefore, we are proposing to list it as such. Listing a species as an endangered or threatened species can be completed only by issuing a rule through the Administrative Procedure Act rulemaking process (5 U.S.C. 551 et seq.).

What this document does. We propose to list the Borneo earless monitor as a threatened species with a species-specific protective regulation under section 4(d) of the Act.

The basis for our action. Under the Act, we may determine that a species is an endangered or threatened species because of any of five 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. We have determined that the Borneo earless monitor meets the Act's definition of a threatened species due primarily to the threats of overcollection and illegal trade for the pet trade, deforestation, and the inadequacy of existing regulatory mechanisms.

Information Requested

We intend that any final action resulting from this proposed rule will be based on the best scientific and commercial data available and be as accurate and as effective as possible. Therefore, we request comments or information from other governmental agencies, Native American Tribes, the scientific community, industry, or any other interested parties concerning this proposed rule. We particularly seek comments concerning:

(1) The species' biology, range, and population trends, including:

(a) Biological or ecological requirements of the species, including habitat requirements for feeding, breeding, and sheltering;

(b) Genetics and taxonomy;

(c) Historical and current range, including distribution patterns and the locations of any additional populations of this species;

(d) Historical and current population levels, and current and projected trends; and

(e) Past and ongoing conservation measures for the species, its habitat, or both.

(2) Threats and conservation actions affecting the species, including:

(a) Factors that may be affecting the continued existence of the species, which may include habitat destruction, modification, or curtailment; overutilization; disease; predation; the inadequacy of existing regulatory mechanisms; or other natural or manmade factors;

(b) Biological, commercial trade, or other relevant data concerning any threats (or lack thereof) to this species; and

(c) Existing regulations or conservation actions that may be addressing threats to this species.

(3) Additional information concerning the historical and current status of this species.

(4) Information to assist us with applying or issuing protective regulations under section 4(d) of the Act that may be necessary and advisable to provide for the conservation of the Borneo earless monitor. In particular, we seek information concerning:

(a) The extent to which we should include any of the Act's section 9 prohibitions in the 4(d) rule;

(b) Whether we should consider any additional or different exceptions from the prohibitions in the 4(d) rule; and

(c) Information on impacts (conservation and economic) associated with implementing the 4(d) rule.

Please include any supplemental information with your submission (such as scientific journal articles or other publications) to allow us to verify any scientific or commercial information you include.

Please note that submissions merely stating support for, or opposition to, the action under consideration without providing supporting information, although noted, do not provide substantial information necessary to support a determination, as section 4(b)(1)(A) of the Act directs that determinations as to whether any species is an endangered or a threatened species must be made solely on the basis of the best scientific and commercial data available.

You may submit your comments and materials concerning this proposed rule by one of the methods listed in **ADDRESSES**. We request that you send comments only by the methods described in **ADDRESSES**.

If you submit information via <https://www.regulations.gov>, your entire submission—including any personal identifying information—will be posted on the website. If your submission is made via a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this

information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy submissions on <https://www.regulations.gov>.

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on <https://www.regulations.gov>.

Our final determination may differ from this proposal because we will consider all comments we receive during the comment period as well as any information that may become available after this proposal. Based on the new information we receive (and, if relevant, any comments on that new information), we may conclude that the species is endangered instead of threatened, or we may conclude that the species does not warrant listing as either an endangered species or a threatened species. In addition, we may change the parameters of the prohibitions or the exceptions to those prohibitions in the protective regulations issued under section 4(d) of the Act if we conclude it is appropriate in light of comments and new information received. For example, we may expand the prohibitions if we conclude that the protective regulation as a whole, including those additional prohibitions, is necessary and advisable to provide for the conservation of the species. Conversely, we may establish additional or different exceptions to the prohibitions in the final rule if we conclude that the activities would facilitate or are compatible with the conservation and recovery of the species. In our final rule, we will clearly explain our rationale and the basis for our final decision, including why we made changes, if any, that differ from this proposal.

Public Hearing

Section 4(b)(5) of the Act provides for a public hearing on this proposal, if requested. Requests must be received by the date specified in **DATES**. Such requests must be sent to the address shown in **FOR FURTHER INFORMATION CONTACT**. We will schedule a public hearing on this proposal, if requested, and announce the date,

time, and place of the hearing, as well as how to obtain reasonable accommodations, in the *Federal Register* at least 15 days before the hearing. We may hold the public hearing in person or virtually via webinar. We will announce any public hearing on our website, in addition to the *Federal Register*. The use of virtual public hearings is consistent with our regulations at 50 CFR 424.16(c)(3).

Previous Federal Actions

On November 2, 2022, we received a petition from the Center for Biological Diversity to list the Borneo earless monitor as an endangered species under the Act (16 U.S.C. 1531 et seq.). On August 17, 2023, we published in the *Federal Register* (88 FR 55991) a 90-day finding that the petition presented substantial scientific and commercial information indicating that the petitioned action may be warranted. This 90-day finding notice initiated a status review for the Borneo earless monitor.

Peer Review

A species status assessment (SSA) team prepared an SSA report for the Borneo earless monitor. The SSA team was composed of Service biologists, in consultation with other species experts. The SSA report represents a compilation of the best scientific and commercial data available concerning the status of the species, including the impacts of past, present, and future factors (both negative and beneficial) affecting the species.

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 and recovery actions under the Act (<https://www.fws.gov/sites/default/files/documents/peer-review-policy-directors-memo-2016-08-22.pdf>), we solicited independent scientific review of the information contained in the Borneo earless monitor SSA report. We sent the SSA report to three independent peer reviewers and received two responses. The peer reviews can be found at <https://www.regulations.gov> at Docket No. FWS–HQ–ES–2025–0110. In preparing this

proposed rule, we incorporated the results of these reviews, as appropriate, into the SSA report, which is the foundation for this proposed rule.

Summary of Peer Reviewer Comments

As discussed in **Peer Review** above, we received comments from two peer reviewers on the draft SSA report. We reviewed all comments we received from the peer reviewers for substantive issues and new information regarding the contents of the SSA report. The peer reviewers generally concurred with our methods and conclusions, and provided additional references, clarifications, suggestions, and information on the species' reproductive biology, occurrence records, and presence in both international and domestic wildlife trade. No substantive changes to our analysis and conclusions within the SSA report were deemed necessary, and peer reviewer comments are addressed in version 1.0 of the SSA report (Service 2025, entire).

I. Proposed Listing Determination

Background

The Borneo earless monitor (*Lanthanotus borneensis*; hereafter “earless monitor”) is a lizard species that is endemic to the island of Borneo in Southeast Asia (Das and Auliya 2021, p. 2) and occurs in all three of Borneo's range states: Malaysia, Indonesia, and Brunei Darussalam (Service 2025, p. 3). The species is the only extant member of the monotypic family, Lanthanotidae (Steindachner 1877, p. 160). It is distinguished by a long, brown body covered in six longitudinal rows of keeled scales and several morphological features that make it well adapted for subterranean and semi-aquatic lifestyles, including short limbs, sharp claws, a prehensile tail, small eyes with a translucent lower eyelid, small dorsal nostrils, and no external ear opening (Steindachner 1877, p. 160; McDowell and Bogert 1954, pp. 9–10; Nijman and Stoner 2014, p. 6).

There is limited information available that describes the species' life-history and habitat requirements. Earless monitors are rarely encountered in the wild because they are

nocturnal, fossorial (i.e., adapted to digging and lives primarily underground), semi-aquatic, and capable of entering a semi-torpid state where they may remain hidden for up to 8 days (Das and Auliya 2021, p. 4; Leah et al. 2023, pp. 510–512). Earless monitors are carnivorous (Rehak et al. 2019, p. 32), and their natural diet is known to include earthworms, shrimp, and fish (Shirawa and Bacchini 2015, p. 15; Langner 2017, p. 7), and may also include tadpoles, small frogs, and insects (Arida et al. 2018, p. 88). The species occupies flat, low-lying tropical forests below 300 meters (m) (984 feet (ft)) in elevation (Stoner and Nijman 2015, p. 55). It is known to occur in areas with shallow freshwater streams that are either rocky or sandy and in areas with a closed canopy (Yaap et al. 2012, p. 3069; Langner 2017, pp. 3–4; Das and Auliya 2021, p. 4; Leah et al. 2023, pp. 510–511).

We are not aware of any published studies that describe the reproductive biology of the earless monitor in the wild; however, the species has successfully reproduced in captivity (Shirawa and Bacchini 2015, pp. 15–18). The species can survive in captivity for up to 7.5 years (Mendyk et al. 2015, p. 46) and reaches sexual maturity at approximately 2 to 3 years of age (Sprackland pers. comm. 2025). Earless monitors are oviparous, meaning they reproduce by laying eggs outside of their body, and produce between 2 and 8 oval, leathery-shelled eggs that measure approximately 30 millimeters in length (Das 2013, p. 533; Voronin and Kudryavtsev 2019, p. 61). Eggs take approximately 62 to 90 days to hatch when incubated at 27 to 31 degrees Celsius (°C) (80.6 to 87.8 degrees Fahrenheit (°F)) (Shirawa and Bacchini 2015, p. 18; Voronin and Kudryavtsev 2019, p. 61; Das and Auliya 2021, p. 4; Sprackland pers. comm. 2025). The total time from fertilization to hatching can exceed six months (Das and Auliya 2021, p. 5).

A thorough review of the taxonomy, life history, and ecology of the earless monitor is presented in the SSA report (version 1.0; Service 2025, pp. 2–8).

Regulatory and Analytical Framework

Regulatory Framework

Section 4 of the Act (16 U.S.C. 1533) and the implementing regulations in title 50 of the Code of Federal Regulations set forth the procedures for determining whether a species is an endangered species or a threatened species, issuing protective regulations for threatened species, and designating critical habitat for endangered and 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 any species is an endangered species or a threatened species because of any of the following five 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 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 scientific and commercial data available 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.

Analytical Framework

The SSA report documents the results of our comprehensive biological review of the best scientific and commercial data available regarding the status of the species, including an assessment of the potential threats to the species. The SSA report does not represent our decision on whether the species should be proposed for listing as an endangered or threatened species under the Act. However, it does provide the scientific basis that informs our regulatory decisions, which involve the further application of standards within the Act and its implementing regulations and policies.

To assess the earless monitor's viability, we used the three conservation biology principles of resiliency, redundancy, and representation (Shaffer and Stein 2000, pp. 306–310). Briefly, resiliency is the ability of the species to withstand environmental and demographic stochasticity (e.g., wet or dry, warm or cold years); redundancy is the ability of the species to withstand catastrophic events (e.g., droughts, large pollution events); and representation is the ability of the species to adapt to both near-term and long-term changes in its physical and biological environment (e.g., climate conditions, pathogens). In general, species viability will increase with increases in (and decrease with decreases in) resiliency, redundancy, and representation (Smith et al. 2018, p. 306). Using

these principles, we identified the species' ecological requirements for survival and reproduction at the individual, population, and species levels, and described the beneficial and risk factors influencing the species' viability.

The SSA process can be categorized into three sequential stages. During the first stage, we evaluated the individual species' life-history needs. The next stage involved an assessment of the historical and current condition of the species' demographics and habitat characteristics, including an explanation of how the species arrived at its current condition. The final stage of the SSA involved making predictions about the species' future condition, including responses to positive and negative environmental and anthropogenic influences. Throughout each of these stages, we used the best scientific and commercial data available to characterize viability as the ability of a species to sustain populations in the wild over time, which we then used to inform our regulatory decision.

The following is a summary of the key results and conclusions from the SSA report; the full SSA report can be found at Docket No. FWS-HQ-ES-2025-0110 on <https://www.regulations.gov>.

Summary of Biological Status and Threats

In this discussion, we review the biological condition of the species and its resources, and the threats that influence the species' current and future condition, in order to assess the species' overall viability and the risks to that viability.

Species Needs

Based on the species' biology described above and in the SSA report (version 1.0; Service 2025, pp. 2–8), the earless monitor requires clear flowing freshwater streams with adequate invertebrate food resources; intact, connected lowland forest habitats with a closed canopy; and sufficient conspecific individuals to reproduce with and sustain a

population. Due to the limited data available, our assessment of species-level needs is developed further based on general principles as they apply to lizard biology.

Conservation Efforts and Regulatory Mechanisms

Earless monitors are protected in all three of their range states (Malaysia, Indonesia, and Brunei Darussalam). It is illegal to remove the species from the wild without a permit. “Wild” includes specimens taken from the wild and held in captivity, specimens born in captivity where the parents mated in the wild (such as from fertilized eggs or gravid females collected from the wild), and any specimens for which there is insufficient evidence that the specimen meets the requirements for bred in captivity under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Resolution 10.16 (Rev. CoP19). However, with a permit, it is legal to export individuals bred in captivity, identified using CITES source code C (50 CFR part 23; Service 2025, pp. 9–10). Only one registered captive-breeding facility in Indonesia is permitted to legally harvest earless monitors from the wild to be used as breeding stock. These wild-caught individuals cannot be offered for sale, and only individuals sourced from an F2 generation (i.e., the second generation of offspring resulting from breeding of wild-caught individuals) or subsequent generation may be legally exported (Service 2025, p. 9). The Indonesian government regulates captive breeding of their native reptiles through a captive-breeding production plan, which calculates a quota of animals allowed to be produced by registered captive-breeding facilities and exported with a permit (Janssen and Chng 2018, p. 19). The captive-breeding quota for earless monitors allows for the legal exportation of 20 individuals from Indonesia on an annual basis (Janssen and Chng 2018, p. 22).

Malaysia, Indonesia, and Brunei Darussalam are all parties to CITES, and the trade of CITES-listed wildlife from all three range states is internationally monitored and regulated (Nijman and Stoner 2014, p. 8). Earless monitors were included in Appendix II

of CITES in 2016—a measure that regulates, but does not ban, international trade (Nijman 2021, p. 71). International trade to, from, or through the U.S. in Appendix-II specimens must meet all applicable requirements under U.S. CITES implementing regulations (50 CFR part 23), wildlife import/export requirements (50 CFR part 14), and general permitting requirements (50 CFR part 13).

While there are several protected areas within northwestern Borneo, the majority protect high-elevation areas (above 300 m (984 ft)) where earless monitors have not been observed (Service 2025, pp. 10–11). Illegal logging also occurs within many of the protected areas that overlap the earless monitor’s known range (Service 2025, p. 12), so it is unlikely that these areas offer the species reliable protection.

Threats

Collection for International Pet Trade

Rare species with unique taxonomic status are more valuable on the international pet market (Altherr and Lameter 2020, p. 6), and consequently, there is a significant demand for earless monitors in international trade (Arida et al. 2018, p. 83). Shortly after earless monitors were first discovered in Indonesia, individuals were offered for sale online for as much as \$20,000 (Sprackland pers. comm. 2025). However, current prices have dropped to approximately \$2,500 (coldbloodedshop.com, accessed March 12, 2025). The financial reward of successfully smuggling earless monitors out of Borneo likely outweighs the risk of getting caught (Nijman and Stoner 2014, p. 12), incentivizing the illegal smuggling of wild-caught earless monitors into the international market.

While earless monitors have legal protection in all three of their range states (see *Conservation Efforts and Regulatory Mechanisms*, above), wildlife conservation laws in Indonesia are rarely enforced (Shepherd et al. 2004, as cited in Eaton et al. 2015, p. 8), and illegal trade of protected species often goes unpunished (Natusch and Lyons 2012, p. 2902). Wildlife traffickers use a variety of methods to illegally smuggle earless monitors

out of Borneo, such as deliberately concealing them on their bodies, or falsifying the contents of luggage or international shipments (Baderan et al. 2023, p. 156). At least 12 thwarted smuggling attempts between October 2015 and March 2024 resulted in the seizure of 101 earless monitors (Baderan et al. 2023, p. 156; Shepherd 2023, p. 1; Shepherd and Shepherd 2024, p. 1). Smuggling earless monitors out of Borneo carries considerable risk because there is more direct culpability when caught, and earless monitors may die along the way due to the stressful and inhumane conditions they experience (Shepherd 2023, p. 1).

At least 695 earless monitors have been taken from the wild in Indonesia since the species was first discovered there in 2008 (Yaap et al. 2012, p. 3069). This estimate includes earless monitors seized from smugglers (Baderan et al. 2023, p. 156; Shepherd 2023, p. 1; Shepherd and Shepherd 2024, p. 1), offered for sale online (Stoner and Nijman 2015, pp. 55–56; Janssen and Krishnasamy 2018, pp. 3–4), offered for sale in pet shops (Janssen 2018, p. 86), reported in trade databases (Service 2025, pp. 34–35), circulated within Indonesia’s domestic wildlife trade (Nijman pers. comm. 2024), or on exhibit at zoos (Rehak et al. 2019, pp. 30–40, Nijman 2021, pp. 73–74). This number is likely a low estimate because it does not account for individuals that were involved in private transactions or that died along the trade route.

Deforestation

Primary forests in Borneo are quickly declining due to intensive logging, fire, and conversion to agricultural plantations (Gaveau et al. 2014, p. 1). Between 1973 and 2015, approximately 50 percent of the forests in Borneo were cut down and converted to oil palm and other industries (Gaveau et al. 2016, pp. 3–4). All three of the earless monitor’s range states experienced major deforestation during this 42-year period: Kalimantan, Indonesia; Sarawak, Malaysia; and Brunei Darussalam lost 35, 26, and 10 percent of their forest area, respectively (Gaveau et al. 2016, pp. 3–4). While rates of forest loss have

slowed in the past decade, Borneo has continued to lose an annual average of 248,000 hectares of primary forest since 2015 (Service 2025, p. 16). If similar historical deforestation trends continue, only approximately 33 percent of Borneo's tropical forests are projected to remain by 2050 (Trancoso et al. 2022, pp. 6–7), the majority of which will occur in high-elevation areas (above 300 m (984 ft)) that the earless monitor likely does not occupy (Trancoso et al. 2022, p. 7). While the earless monitor's range may be wider than what is currently known (Das pers. comm. 2019, as cited in Das and Auliya 2021, p. 2; Sprackland pers. comm. 2025), any potentially undiscovered subpopulations are likely vulnerable to deforestation because it is a pervasive threat throughout Borneo's low-elevation areas (below 300 m (984 ft)) (Gaveau et al. 2014, p. 5; Service 2025, pp. 16–19), and it directly diminishes many specific habitat features upon which earless monitors are dependent.

Earless monitors rely on low-elevation tropical rainforests with a closed canopy and access to freshwater streams (see **Background**, above). Extensive canopy cover contributes to high rates of evapotranspiration that help maintain a lower air temperature (Bonan 2008, pp. 1444–1445). Deforestation reduces canopy cover (Gorte and Sheikh 2010, p. 3), which results in an average temperature increase of 1.7 degrees Celsius (°C) (3.1 degrees Fahrenheit (°F)), and an increased frequency of extreme temperatures (> 31 °C (87.8 °F)) in deforested areas (McAlpine et al. 2018, p. 7). Many reptile species likely cannot withstand an average temperature increase of 2 °C (3.6 °F) (Johnson 2012, p. 71), and because fossorial lizards are especially vulnerable to deforestation (Theisinger and Ratinarivo 2015, p. 278), temperature increases alone may render deforested areas unsuitable for earless monitors. Deforestation also reduces daily precipitation (McAlpine et al. 2018, pp. 5–7) and contributes to stream channel narrowing, which diminishes the pollution processing capabilities of stream habitats (Sweeney et al. 2004, p. 14134). In addition, forests that are converted to oil palm plantations are often cleared with slash-

and-burn agriculture (Dhandapani and Evers 2020, p. 4), a method that causes riparian areas to quickly lose tree root systems that stabilize stream banks and prevent erosion (Iwata et al. 2003, pp. 468–471). Erosion directly increases the amount of fine substrate in the stream bed, which diminishes abundance and biodiversity of their benthic assemblages (i.e., groups of organisms that live on the bottom sediments of a water body; Iwata et al. 2003, pp. 468–470). These conditions likely reduce food availability for earless monitors because they feed on invertebrates that are present in benthic assemblages, such as worms and crustaceans (see **Background**, above). These invertebrates are likely further diminished by the use of insecticides on oil palm plantations, which are commonly applied to crops (Dearlove et al. 2024, p. 2). Insecticide use in Indonesia increased by approximately 700 percent from 1990 to 2021 (Ritchie et al. 2022, unpaginated), a rise that is likely correlated with the expansion of oil palm plantations in the country. Insecticides are most commonly detected in soil and water (Dearlove et al. 2024, p. 9) and therefore likely cause the mortality of many invertebrates that earless monitors eat.

Nevertheless, the earless monitor may tolerate some limited anthropogenic disturbance. In the 1960s, several specimens were collected from flat coastal areas, some of which were long-cultivated and included rice farms (Harrisson 1963, p. 407). The majority of published 21st century encounters with the species occurred in forests adjacent to human-modified areas, such as oil palm plantations, agricultural fields, and logging camps (Yaap et al. 2012, pp. 3069–3070; Langner 2017, pp. 3–4; Leah et al. 2023, p. 510). Collectively, these published encounters provide evidence that earless monitors are capable of persisting both within and adjacent to human-modified habitats. However, the edge effects (e.g., increased temperature, increased wind exposure, reduced moisture, etc.) resulting from oil palm establishment extend over 300 m (984 ft) into adjacent forests (Nunes et al. 2021, pp. 5–6), and because over 60 percent of the known

earless monitor subpopulations that were historically found near agricultural areas within coastal Sarawak are now considered extirpated (Das and Auliya 2021, pp. 2–4), it is probable that earless monitors were simply persisting near these human-modified areas, and the species is not capable of sustaining populations adjacent to these areas over the long-term.

Earless monitors persisting in diminished habitats adjacent to anthropogenic disturbance are vulnerable to the increased risk of fire associated with these habitats. Deforestation and the subsequent conversion of cleared forest to oil palm plantations increase fire risk (Trancoso et al. 2022, p. 13; Dhandapani and Evers 2020, pp. 3–4), and Borneo has recently experienced an increase in forest fires as a consequence of deforestation (Gaveau et al. 2018, p. 3). Deforestation increases temperature extremes (Trancoso et al. 2022, p. 2; McAlpine et al. 2018, p. 7), and the subsequent conversion of deforested areas to oil palm plantations exacerbates local fire risk because oil palms use more water, lowering the water table and leaving behind highly flammable fuel (Dhandapani and Evers 2020, pp. 3–4). Even selective logging—a practice that is pervasive throughout much of the earless monitor’s known range (Service 2025, p. 19)—increases fire risk (Langner et al. 2007, p. 2338).

Climate Change

The Intergovernmental Panel on Climate Change predicts that continued greenhouse gas emissions will likely increase global temperatures to 1.5 °C (2.7 °F) above pre-industrial levels by 2040, even under low-emissions scenarios (Lee et al. 2023, p. 12). In addition, the cumulative effects of deforestation and climate change are projected to increase the average temperature of low-elevation (below 500 m (1640 ft)) areas in Borneo by 3.5 °C (6.3 °F) by the end of the 21st century (Davies-Barnard et al. 2023, p. 4). Reptiles are more susceptible to temperature increases than other taxa due to their limited dispersal ability and reliance on ambient temperature to regulate their body

temperature (Root and Schneider 2002, pp. 20–21). Consequently, many species of reptiles may not be able to withstand temperature increases of 2 °C (3.6 °F) (Johnson 2012, p. 73). Fossorial lizards are particularly sensitive to thermoregulatory constraints caused by temperature increases (Theisinger and Ratinarivo 2015, p. 278), so the earless monitor is likely more susceptible to temperature increases than other reptile species, to the extent that increased ambient temperature increases soil temperatures.

Higher temperatures caused by both climate change and deforestation are also expected to exacerbate fire risk in Borneo (Davies-Barnard et al. 2023, p. 8), further contributing to the loss of earless monitor habitat. Climate change is also expected to increase the frequency of extreme rainfall and winds from tropical cyclones in Southeast Asia (Christensen et al. 2007, pp. 885–887). Extreme rainfall has previously caused mass mortality events in earless monitors (Harrisson 1963, pp. 408), so an increase in frequency of extreme weather events is likely to increase the risk of extirpation of earless monitor subpopulations.

Cumulative Effects

We note that by using the SSA framework to guide our analysis of the scientific information documented in the SSA report, we have analyzed the cumulative effects of identified threats and conservation actions on the species. To assess the current and future condition of the species, we evaluate the effects of all the relevant factors that may be influencing the species, including threats and conservation efforts. Because the SSA framework considers not just the presence of the factors but to what degree they collectively influence risk to the entire species, our assessment integrates the cumulative effects of the factors and replaces a standalone cumulative-effects analysis.

Current Condition

We describe the current condition of the earless monitor based on the needs of the species and their relation to resiliency, redundancy, and representation. Species with high

resiliency are able to withstand environmental, demographic, and genetic stochasticity by having self-sustaining (i.e., large, high fecundity), connected populations occupying suitable habitat across spatial heterogeneous conditions. Resiliency of the earless monitor is primarily influenced by the health of the subpopulations and the extent and connectivity of suitable habitat. While no numerical population data is available to quantitatively assess the status and trends of earless monitors (Das and Auliya 2021, p. 4), we are able to assess the resiliency of the species based on a multitude of factors.

Earless monitors are known from approximately 15 confirmed historical localities, only 5 of which are considered extant (Das and Auliya 2021, pp. 1–2). Unconfirmed reports suggest additional extralimital subpopulations may exist (Das pers. comm. 2019, as cited in Das and Auliya 2021, p. 2; Sprackland pers. comm. 2025). Extant earless monitor subpopulations are likely vulnerable to habitat loss resulting from deforestation, overcollection and illegal trade, and climate change.

Over the past 50 years, the majority of forests in coastal Sarawak have been cleared and subsequently converted to oil palm plantations (Service 2025, p. 17), resulting in the extirpation of earless monitors from these areas (Das and Auliya 2021, p. 2). The cumulative effects of deforestation (e.g., loss of canopy cover, temperature increases, stream narrowing, sediment alterations, increase in fire risk; see *Threats*, above) render the remaining habitat largely unsuitable for earless monitors, and deforestation is likely to blame for the extirpation of the species from coastal Sarawak. It is unknown the specific degree of human disturbance earless monitors are capable of tolerating, and it is probable that subpopulations are simply persisting within and adjacent to agricultural areas, rather than successfully thriving there. At a minimum, stream habitats adjacent to deforested areas are hotter, contaminated by insecticides, have diminished pollution processing capabilities, and contain fewer potential food resources (see *Threats*, above). Yet, some earless monitor encounters in the 21st century have

occurred in forests adjacent to agricultural areas (e.g., Yaap et al. 2012, pp. 3069–3070; Langner 2017, p. 3), and more research is needed to determine if these individuals are successfully reproducing or are simply persisting as a sink population. Earless monitors are also threatened by overcollection and illegal trade for the pet trade, and subpopulations that are targeted by wildlife traffickers cannot adequately replace themselves. Disproportionate exploitation is probable to lead to earless monitors becoming a rarer and more appealing target for wildlife traffickers and may ultimately lead to the extirpation of targeted subpopulations (Janssen and Krishnasamy 2018, p. 2). Overharvesting for the pet trade has caused the extirpation of other reptile subpopulations in the past (Stuart et al. 2006, p. 1137), and earless monitor subpopulations that are targeted by wildlife traffickers are similarly vulnerable. Considering these factors, the earless monitor has low resiliency to adapt to and withstand environmental and demographic stochasticity.

Species with high redundancy are less prone to the negative effects of random, catastrophic, local events because they have many populations that are geographically dispersed over a wide area. The complete range of earless monitors is not known, yet the remaining known extant subpopulations occupy a narrow range (52 square kilometers (20.1 square miles); Das and Auliya 2021, p. 1). Deforestation is removing viable forest habitat throughout the earless monitor's known range, degrading the quality of the remaining habitat and likely isolating remaining earless monitor subpopulations from each other (see *Threats*, above). In addition, climate change is predicted to increase the frequency of extreme fire and flooding events (Davies-Barnard et al. 2023, p. 8; Christensen et al. 2007, pp. 885–887), which will consequently increase the vulnerability of all earless monitor subpopulations to these threats. We have no information on the size or health of the remaining earless monitor subpopulations; however, we consider them to be vulnerable to deforestation, extreme weather events, and overcollection and illegal

trade for the pet trade (see *Threats*, above). While unconfirmed reports of extralimital encounters with earless monitors suggest the potential existence of additional subpopulations (Das pers. comm. 2019, as cited in Das and Auliya 2021, p. 2; Sprackland pers. comm. 2025), we lack information detailed enough to assess the extent to which these subpopulations support redundancy. Considering the five known subpopulations that occupy a limited range, earless monitors likely have limited redundancy; however, we acknowledge that other subpopulations may exist that would contribute to redundancy to some degree.

Representation is improved in species with high genetic variability, or which inhabit a wide range of ecological settings. Both of these characteristics facilitate adaptation to future environmental changes, whether natural or anthropogenic. On the other hand, representation is reduced in the absence of these characteristics. Earless monitors do not occupy a wide range of ecological settings and are restricted to flat tropical forests at low elevations with access to freshwater streams (see **Background**, above). There is no available information about the genetic diversity within or between any earless monitor subpopulations, and there is no information on the degree to which the species exhibits behavioral plasticity. Reptiles tend to have a low dispersal ability (Root and Schneider 2002, pp. 20–21), and if the earless monitor's dispersal ability is also low, then there is likely limited gene flow between the remaining extant earless monitor subpopulations. Earless monitors likely have low representation because they are dependent on a specific habitat type, have a limited dispersal ability, and have a small number of known subpopulations that are not dispersed over a wide area (Das and Auliya 2021, p. 1).

Future Condition

Based on our assessment, we concluded that the primary potential threats to the earless monitor are (1) overcollection and illegal trade for the pet trade and (2) habitat

loss resulting from deforestation and increasing temperatures, both of which are exacerbated by the inadequacy of existing regulatory mechanisms. Because of the high uncertainty associated with the earless monitor's abundance, geographic range, adaptive capacity, and ability to tolerate anthropogenic disturbance, the foreseeable future by which we can assess the threats to this species—and its response to those threats—is relatively short (10 to 20 years).

We expect the collection and illegal trade of earless monitors for the pet trade to continue into the future. As long as earless monitors retain a high market value in the pet trade, they will continue to be targeted by wildlife traffickers. A species' value in the pet trade is often driven by many traits earless monitors possess, such as unique taxonomic status and rarity in the market (Altherr and Lameter 2020, p. 6). These traits increase the potential for overcollection and illegal trade of wild earless monitors from wild populations, making the species even more rare and more valuable in the pet trade. While legitimate captive-breeding efforts may open another avenue for earless monitors to enter the pet trade without harming wild populations, there is limited evidence for these efforts in range states. Therefore, it is reasonable to assume that future harvesting pressure on earless monitors will, at a minimum, continue at the same level as the current condition, and may increase until legitimately bred in captivity earless monitors help alleviate the demand for wild-caught individuals.

The best available scientific and commercial data suggests that if the current rates of deforestation continue, the majority of Borneo's low-elevation areas will be deforested by 2050 (Trancoso et al. 2022, pp. 6–7), and most of the remaining forests will occur in high-elevation areas that earless monitors do not occupy. Because the remaining known extant earless monitor subpopulations occupy a narrow range, this amount of forest loss would equate to a significant loss of habitat for the species. Furthermore, climate change is projected to increase global temperatures by at least 1.5 °C (2.7 °F) above pre-

industrial levels by 2040 (Lee et al. 2023, p. 12), and on Borneo, by 3.5 °C (6.3 °F) in elevations below 500 m by the end of this century (Davies-Barnard et al. 2023, p. 4). Among reptiles, fossorial lizards such as the earless monitor are particularly susceptible to temperature increases (Theisinger and Ratinarivo 2015, p. 278). Given that an increase of 2 °C (3.6 °F) will render much of Borneo's lowlands climatically unsuitable for many native reptile species (Johnson 2012, p. 71), it is likely that earless monitors will be unable to withstand the temperature increases projected within the foreseeable future.

In summary, earless monitors will continue to face the threats of habitat loss and overcollection and illegal trade for the pet trade, and these threats may increase in the future. Deforestation was a contributing factor in the extirpation of over 60 percent of the historical earless monitor subpopulations (Das and Auliya 2021, p. 1), and it is expected to continue to remove suitable forest habitat, diminish the quality of the remaining forest habitat, increase fire risk, and reduce the connectivity between the remaining known extant earless monitor subpopulations and other unconfirmed subpopulations, affecting viability within the foreseeable future (see *Threats*, above). In addition, should collection pressure from wildlife traffickers continue or potentially increase as anticipated in the future, overexploitation may lead to the extirpation of targeted subpopulations (Janssen and Krishnasamy 2018, p. 2). Although the earless monitor currently maintains subpopulations, including in disturbed areas, and reportedly occupies additional areas within Borneo, the species' resiliency, redundancy, and representation are likely to decrease within the foreseeable future as they continue to be affected by threats of deforestation and overcollection and illegal trade.

Determination of Borneo Earless Monitor's Status

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 an endangered species or a threatened species. The Act defines an "endangered

species” as a species in danger of extinction throughout all or a significant portion of its range and a “threatened species” as a species 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 an endangered species or a threatened species because of any of the following five 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.

Status Throughout All of Its Range

After evaluating threats to the species and assessing the cumulative effect of the threats under the factors in section 4(a)(1) of the Act, we determined that ongoing deforestation and overcollection and illegal trade for the international pet trade will likely reduce the viability of the earless monitor within the foreseeable future.

The complete range of the earless monitor is unknown, due in part to the species’ cryptic nature and limited number of occurrence records (see **Background**, above). In the past decade, demand from the international pet trade has driven a renewed effort to locate the species, and because at least 695 individuals have entered the pet trade since 2012 (see *Threats*, above), the existence of additional subpopulations beyond those that are known is plausible. However, the threat of habitat loss from deforestation and land use change is so pervasive throughout the lowlands of Borneo that any potentially undiscovered subpopulations are likely vulnerable to these threats. The earless monitor’s ability to sustain populations long-term in forested habitats adjacent to anthropogenically disturbed areas is likely limited because the majority of historical subpopulations that have occupied similar areas are presumed to be extirpated. Furthermore, we expect many of the negative impacts associated with deforestation (e.g., increased temperature,

increased fire risk, reduced precipitation, etc.) to be exacerbated by climate change (see *Threats*, above). The projected increase of these threats in the foreseeable future is likely to reduce the species' viability to a point that it lacks sufficient resiliency, representation, and redundancy for its continued existence to be secure.

The threats of ongoing deforestation and overcollection and illegal trade for the international pet trade are further exacerbated by the inadequacy of existing regulatory mechanisms (see *Threats*, above). Wildlife traffickers are known to illegally smuggle earless monitors out of the wild for international trade (Baderan et al. 2023, p. 156; Baderan et al. 2023, p. 156; Shepherd 2023, p. 1; Shepherd and Shepherd 2024, p. 1).

Thus, after assessing the best scientific and commercial data available, we conclude that the earless monitor is not currently in danger of extinction but is likely to become in danger of extinction within the foreseeable future throughout all of its range due to habitat loss and degradation (Factor A), overcollection and illegal trade for the pet trade (Factor B), and the inadequacy of existing regulatory mechanisms (Factor D).

Status Throughout a Significant Portion of Its Range

Under the Act and our implementing regulations, a species may warrant listing if it is in danger of extinction or likely to become so within the foreseeable future throughout all or a significant portion of its range. The court in *Center for Biological Diversity v. Everson*, 435 F. Supp. 3d 69 (D.D.C. 2020) (*Everson*), vacated the provision of the Final Policy on Interpretation of the Phrase "Significant Portion of Its Range" in the Endangered Species Act's Definitions of "Endangered Species" and "Threatened Species" (hereafter "Final Policy"; 79 FR 37578, July 1, 2014) that provided if the Service and the National Marine Fisheries Service (NMFS) (collectively, "the Services") determine that a species is threatened throughout all of its range, the Services will not analyze whether the species is endangered in a significant portion of its range.

Therefore, we proceed to evaluating whether the species is endangered in a

significant portion of its range—that is, whether there is any portion of the species’ range for which both (1) the portion is “significant” and (2) the species is in danger of extinction in that portion. We can choose to address either question first. Regardless of which question we address first, if we reach a negative answer with respect to the first question that we address, we do not need to evaluate the other question for that portion of the species’ range.

Following the court’s holding in *Everson*, we now consider whether the species is in danger of extinction throughout a significant portion of its range. In undertaking this analysis for the earless monitor, we choose to address the status question first.

We evaluated the range of the earless monitor to determine if the species is in danger of extinction throughout any portion of its range. The range of a species can theoretically be divided in an infinite number of ways. We focused our analysis on portions of the species’ range that may meet the Act’s definition of an endangered species. For the earless monitor, we considered whether the threats or their effects on the species are greater in any biologically meaningful portion of the species’ range than in other portions such that the species is in danger of extinction in that portion.

We examined the following threats: habitat loss from deforestation and overcollection and illegal trade for the pet trade, including cumulative effects.

Because habitat loss from deforestation and land use change is such a pervasive threat throughout the lowlands of Borneo, its impact is ubiquitous across all portions of the earless monitor’s range. Overcollection and illegal trade for the pet trade can occur wherever earless monitor subpopulations are found. Thus, we found no biologically meaningful portion of the earless monitor’s range where threats are impacting individuals differently from how they are affecting the species elsewhere in its range such that the status of the species in that portion differs from any other portion of the species’ range.

Therefore, no portion of the species' range provides a basis for determining that the species is in danger of extinction in a significant portion of its range, and we determine that the species is likely to become in danger of extinction within the foreseeable future throughout all of its range. This finding does not conflict with the courts' holdings in *Desert Survivors v. U.S. Department of the Interior*, 321 F. Supp. 3d 1011, 1070-74 (N.D. Cal. 2018) and *Center for Biological Diversity v. Jewell*, 248 F. Supp. 3d 946, 959 (D. Ariz. 2017) because, in reaching this conclusion, we did not apply the aspects of the Final Policy, including the definition of "significant" that those court decisions held to be invalid.

Determination of Status

Based on the best scientific and commercial data available, we determine that the earless monitor meets the Act's definition of a threatened species. Therefore, we propose to list the earless monitor as a threatened species in accordance with sections 3(20) and 4(a)(1) of the Act.

Available Conservation Measures

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.

Conservation measures provided to species listed as endangered or threatened species under the Act include recognition as a listed species, planning and implementation of 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, foreign governments, private organizations, and individuals. The Act encourages cooperation with the States and other countries and calls for recovery actions to be carried out for listed species. The protection

required by Federal agencies, including the Service, and the prohibitions against certain activities are discussed, in part, below.

Section 7 of the Act, titled “Interagency Cooperation,” mandates all Federal action agencies to use their existing authorities to further the conservation purposes of the Act and to ensure that their actions are not likely to jeopardize the continued existence of listed species or adversely modify critical habitat. Regulations implementing section 7 are codified at 50 CFR part 402.

Section 7(a)(2) states that each Federal action agency shall, in consultation with the Secretary, ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Each Federal agency shall review its action at the earliest possible time to determine whether it may affect listed species or critical habitat. If a determination is made that the action may affect listed species or critical habitat, formal consultation is required (50 CFR 402.14(a)), unless the Service concurs in writing that the action is not likely to adversely affect listed species or critical habitat. At the end of a formal consultation, the Service issues a biological opinion, containing its determination of whether the Federal action is likely to result in jeopardy or adverse modification.

With respect to the earless monitor, no known actions require consultation under section 7(a)(2) of the Act. Given the regulatory definition of “action” at 50 CFR 402.02, which clarifies that it applies to activities or programs carried out “in the United States or upon the high seas,” the earless monitor is unlikely to be the subject of section 7 consultations because the entire life cycle of the species occurs in terrestrial areas outside of the United States and the species is unlikely to be affected by Federal actions. Additionally, no critical habitat will be designated for the earless monitor because, under

50 CFR 424.12(g), we will not designate critical habitat within foreign countries or in other areas outside of the jurisdiction of the United States.

Section 8(a) of the Act (16 U.S.C. 1537(a)) authorizes the provision of limited financial assistance for the development and management of programs that the Secretary determines to be necessary or useful for the conservation of endangered or threatened species in foreign countries. Sections 8(b) and 8(c) of the Act (16 U.S.C. 1537(b) and (c)) authorize the Secretary to encourage conservation programs for foreign listed species, and to provide assistance for such programs, in the form of personnel and the training of personnel.

Additional requirements apply to activities with the earless monitor, separate from their proposed listing as a threatened species. As a CITES-listed species, all international trade of earless monitors by persons subject to the jurisdiction of the United States must also comply with CITES requirements pursuant to section 9, paragraphs (c) and (g), of the Act (16 U.S.C. 1538(c) and (g)) and to 50 CFR part 23. As “fish or wildlife” (16 U.S.C. 1532(8)), earless monitor imports and exports must also meet applicable wildlife import/export requirements established under section 9, paragraphs (d), (e), and (f), of the Act (16 U.S.C. 1538(d), (e), and (f)); the Lacey Act Amendments of 1981 (16 U.S.C. 3371 et seq.); and 50 CFR part 14. Questions regarding whether specific activities with the earless monitor would constitute a violation of section 9 of the Act should be directed to the Service’s Division of Management Authority (managementauthority@fws.gov; 703–358–2104). Section 9(a) of the Act provides a specific list of prohibitions for endangered species but does not provide these same prohibitions for threatened species. Instead, pursuant to section 4(d) of the Act, for any species listed as a threatened species, the Secretary must issue protective regulations that are “necessary and advisable to provide for the conservation of such species” (these are referred to as “4(d) rules”).

Additional measures for the earless monitor are described below (see **Protective Regulations Under Section 4(d) of the Act**, below).

We may issue permits to carry out otherwise prohibited activities involving threatened wildlife under certain circumstances. Regulations governing permits for threatened wildlife are codified at 50 CFR 17.32, and general Service permitting regulations are codified at 50 CFR part 13. With regard to threatened wildlife, a permit may be issued for scientific purposes, to enhance propagation or survival, for economic hardship, for zoological exhibition, for educational purposes, for incidental taking, or for special purposes consistent with the purposes of the Act. The statute also contains certain exemptions from the prohibitions, which are found in sections 9 and 10 of the Act.

The Service may also register persons subject to the jurisdiction of the United States through its captive-bred wildlife (CBW) program if certain established requirements are met under the CBW regulations (see 50 CFR 17.21(g)). Through a CBW registration, the Service may allow a registrant to conduct certain otherwise prohibited activities under certain circumstances to enhance the propagation or survival of the affected species, including take; export or re-import; delivery, receipt, carriage, transport, or shipment in interstate or foreign commerce in the course of a commercial activity; or sale or offer for sale in interstate or foreign commerce. A CBW registration may authorize interstate purchase and sale only between entities that both hold a registration for the taxon concerned. The CBW program is available for species having a natural geographic distribution not including any part of the United States and other species that the Service Director has determined to be eligible by regulation. The individual specimens must have been born in captivity in the United States.

The provisions in section 9(b)(1) of the Act (16 U.S.C. 1538(b)(1)) provide a limited exemption from certain otherwise prohibited activities regarding wildlife specimens held in captivity or in a controlled environment on the pre-Act date (for

species first listed after the enactment of the Endangered Species Act, the pre-Act date is the date of publication in the *Federal Register* of the final regulation adding such species to the List of Endangered and Threatened Wildlife for the first time), provided that such holding and any subsequent holding or use of the wildlife was not in the course of a commercial activity (commonly referred to as “pre-Act” specimens) (96 Stat. 1426–27 (1982); H.R. Rep. No. 97–835, 97th Cong., 2nd Sess., at 35 (1982) (Conf. Rep.); S. Rep. No. 97–418, 97th Cong., 2nd Sess., at 24–25 (1982)). Specifically, section 9(b)(1) of the Act states that the prohibitions of sections 9(a)(1)(A) and 9(a)(1)(G) shall not apply to any fish or wildlife which was held in captivity or in a controlled environment on (A) December 28, 1973, or (B) the date of the publication in the *Federal Register* of a final regulation adding such fish or wildlife to any list of species published pursuant to section 4(c) of the Act (as relevant to listed wildlife, the List of Endangered and Threatened Wildlife at 50 CFR 17.11(h)) that such holding and any subsequent holding or use of the fish or wildlife was not in the course of a commercial activity.

Therefore, for pre-Act wildlife, there is a limited exemption from the prohibitions associated with: (1) import into, or export from, the United States of any endangered wildlife, or (2) violation of regulations pertaining to endangered or threatened wildlife. Other prohibitions of section 9—including those at section 9(a)(1)(B)–(F) regarding take of endangered wildlife, possession and other acts with unlawfully taken wildlife, interstate or foreign commerce in endangered wildlife, and sale or offer for sale of endangered wildlife—continue to apply to activities with qualifying endangered pre-Act wildlife specimens. Specimens born after the pre-Act date and specimens taken from the wild after the pre-Act date do not qualify as “pre-Act” wildlife under the text of section 9(b)(1) of the Act. If a person engages in any commercial activity with a pre-Act specimen on or after the pre-Act date, the wildlife would immediately cease to qualify as

pre-Act wildlife and become subject to the relevant prohibitions because it has been held or used in the course of a commercial activity.

II. Protective Regulations Under Section 4(d) of the Act

Background

As discussed above under **Available Conservation Measures**, section 9(a) of the Act provides a specific list of prohibitions for endangered species but does not provide these same prohibitions for threatened species. Instead, pursuant to section 4(d) of the Act, for any species listed as a threatened species, the Secretary must issue protective regulations that are “necessary and advisable to provide for the conservation of such species” (referred to as “4(d) rules”). Section 4(d) of the Act contains two sentences. The first sentence states that the Secretary shall issue such regulations as they deem necessary and advisable to provide for the conservation of species listed as threatened species. “Conservation” is defined in the Act to mean the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary. Additionally, the second sentence of section 4(d) of the Act states that the Secretary may prohibit by regulation, with respect to any threatened species, any act prohibited under section 9(a)(1), in the case of fish or wildlife, or section 9(a)(2), in the case of plants. With these two sentences in section 4(d), Congress delegated broad authority to the Secretary to determine what protections would be necessary and advisable to provide for the conservation of threatened species, and even broader authority to put in place any of the section 9 prohibitions, for a given species.

Courts have recognized the extent of the Secretary’s discretion under section 4(d) to develop regulations that are appropriate for the conservation of threatened species. For example, courts have upheld, as a valid exercise of agency authority, rules developed under section 4(d) that included limited prohibitions against takings (see *Alsea Valley*

Alliance v. Lautenbacher, 2007 WL 2344927 (D. Or. 2007); *Washington Environmental Council v. National Marine Fisheries Service*, 2002 WL 511479 (W.D. Wash. 2002)).

Courts have also upheld 4(d) rules that do not address all of the threats a species faces (see *State of Louisiana v. Verity*, 853 F.2d 322 (5th Cir. 1988)). As noted in the legislative history when the Act was initially enacted, “once an animal is on the threatened list, the Secretary has an almost infinite number of options available to him [or her] with regard to the permitted activities for those species. He [or she] may, for example, permit taking, but not importation of such species, or he [or she] may choose to forbid both taking and importation but allow the transportation of such species” (H.R. Rep. No. 412, 93rd Cong., 1st Sess. 1973).

Under our 4(d) authorities, we put in place protections intended to both prevent a threatened species from becoming an endangered species and to promote its recovery. 4(d) rules explain what is prohibited for a threatened species, thus making the activity unlawful without a permit or authorization under the Act unless otherwise excepted in the 4(d) rule and may also include affirmative requirements. Section 4(d) rules are therefore directly related to what actions may require permits in the future. As discussed in **Available Conservation Measures**, permits may be issued for purposes described in our threatened species permitting regulations at 50 CFR 17.32 and 17.72, including for recovery actions. We may also except otherwise prohibited activities through a 4(d) rule itself, in which case threatened species permits would not be required for those activities.

The provisions of this species’ proposed protective regulations under section 4(d) of the Act are one of many tools that we would use to promote the conservation of the earless monitor. The proposed protective regulations would apply only if and when we make final the listing of the earless monitor as a threatened species. The proposed protective regulations would promote conservation of the earless monitor by ensuring

that activities undertaken with this species by any person under the jurisdiction of the United States are also supportive of the conservation efforts undertaken for the species in Indonesia, Malaysia, and Brunei Darussalam, as well as under the CITES Appendix-II listing.

Provisions of the Proposed 4(d) Rule

Exercising the Secretary's authority under section 4(d) of the Act, we have developed a proposed rule that is designed to address the earless monitor's conservation needs. As discussed above under **Summary of Biological Status and Threats**, we have concluded that the earless monitor is likely to become in danger of extinction within the foreseeable future primarily due to habitat loss and overcollection and illegal trade for the pet trade. Section 4(d) requires the Secretary to issue such regulations as he deems necessary and advisable to provide for the conservation of each threatened species and authorizes the Secretary to include among those protective regulations any of the prohibitions that section 9(a)(1) of the Act prescribes for endangered species (*In re: Polar Bear Endangered Species Act Listing and 4(d) Rule Litigation*, 818 F. Supp. 2d 214, 228 (D.D.C. 2011) (citing *Sweet Home Chapter of Cmty. for a Great Or. v. Babbitt*, 1 F.3d 1, 8 (D.C. Cir. 1993), *rev'd on other grounds*, 515 U.S. 687 (1995))). Our necessary and advisable determination includes consideration of conservation and economic impacts (*Kansas Natural Resources Coalition, et al. v. USFWS, et al.* No. 23CV-00159-DC-RCG (W.D. Tex. 2025)). We explain below why we find that, if finalized, the prohibitions and exceptions in this proposed rule as a whole satisfy the requirement in section 4(d) of the Act to issue regulations deemed necessary and advisable to provide for the conservation of the earless monitor.

The protective regulations we are proposing for the earless monitor incorporate prohibitions from section 9(a)(1) to address the threats to the species. The prohibitions of section 9(a)(1) of the Act, and implementing regulations codified at 50 CFR 17.21, make

it illegal for any person subject to the jurisdiction of the United States to commit, to attempt to commit, to solicit another to commit, or to cause to be committed any of the following acts with regard to any endangered wildlife: (1) import into, or export from, the United States; (2) take (which includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) within the United States, within the territorial sea of the United States, or on the high seas; (3) possess, sell, deliver, carry, transport, or ship, by any means whatsoever, any such wildlife that has been taken illegally; (4) deliver, receive, carry, transport, or ship in interstate or foreign commerce, by any means whatsoever and in the course of commercial activity; or (5) sell or offer for sale in interstate or foreign commerce. This protective regulation includes all of these prohibitions because the earless monitor is at risk of extinction within the foreseeable future and putting these prohibitions in place will help to preserve the species' remaining populations.

As discussed above under **Summary of Biological Status and Threats**, overcollection and illegal trade for pet trade is affecting the status of the earless monitor; therefore, regulating activities associated with potential removal of earless monitors from the wild and preventing illegal trade is essential for their conservation. The section 9(a)(1) prohibitions related to trade and commerce through our application of 50 CFR 17.21(b), (e), and (f) will help regulate these activities. As discussed in **Background**, it is illegal to remove the species from the wild without a permit; however, it is legal to export individuals bred in captivity. We are aware of one company that imports earless monitors into the United States and at least two companies with earless monitors in captivity in the United States that engage in interstate commerce with the species. Therefore, we propose to regulate take of individuals within the United States, territorial seas, and high seas (50 CFR 17.21(c)(1)), as well as possession and other acts with unlawfully taken specimens (50 CFR 17.21(d)).

Regulating import and export into, from, and through the United States, take, and interstate and foreign commerce by persons subject to the jurisdiction of the United States would contribute to conservation of the species in its range states and help conserve the species by eliminating the United States as a potential market for illegally taken and traded earless monitors. It would ensure any legal activities with earless monitors under jurisdiction of the United States contribute to enhancing the conservation of the species, and that any domestic demand for earless monitors does not contribute to the decline of earless monitors in the wild.

The proposed 4(d) rule would also provide for the conservation of the species by allowing exceptions that are intended to incentivize conservation actions or that are not expected to rise to the level that would have a negative impact (i.e., would have only de minimis impacts) on the species' conservation. Exceptions to the prohibitions include those set forth in 50 CFR 17.21(c)(2)–(c)(4), (d)(2), and 50 CFR 17.31(c). These exceptions include allowing any person to take earless monitors in defense of their own life or the lives of others and for law enforcement to possess and conduct other acts with illegally taken earless monitors.

We also propose certain exceptions related to import, export, trade, and commerce of earless monitors. While we have determined overcollection and illegal trade are threats to the species, we propose that legal trade and commerce of bred in captivity specimens that meet the requirements of CITES (source code C, 50 CFR part 23), including those that are legally bred in captivity in the United States, can provide a sustainable use alternative to unsustainable or illegal sourcing of wild specimens and breeding stock. We have no information that suggests current legal interstate commerce activities with legally sourced earless monitors are associated with threats to the species or would negatively affect any efforts aimed at the recovery of wild populations of the species. Furthermore, allowing interstate commerce with legally sourced earless monitors is expected to

provide a conservation benefit to the species because the demands of the pet trade can be supplied with bred in captivity specimens sourced from within the United States, which will reduce collection pressure on wild populations in its range states. Therefore, we are proposing exceptions to prohibitions and threatened species permitting requirements for import, export, and interstate and foreign commerce to facilitate legal trade in bred in captivity specimens (source code C) that are in accordance with other applicable regulations, including 50 CFR part 23 regulations implementing CITES. Additionally, under 50 CFR 17.8, import permits are exempted for threatened wildlife species included in Appendix II of CITES so long as certain requirements are met. The requirements at 50 CFR 17.8 for exemption from a threatened species import permit include that the specimen was not acquired in foreign commerce or imported in the course of a commercial activity; the species is included in Appendix II of CITES; the specimen is imported under a valid CITES document and subsequently used in accordance with CITES regulations (50 CFR part 23); at the time of import, the importer must provide to the Service documentation that shows the specimen was not acquired in foreign commerce in the course of commercial activity; and that all applicable requirements of 50 CFR part 14 have been satisfied.

In addition, to further the conservation of the species, any employee or agent of the Service, any other Federal land management agency, the NFMS, a State conservation agency, or a federally recognized Tribe, who is designated by their agency or Tribe for such purposes, may, when acting in the course of their official duties, take threatened wildlife without a permit if such action is necessary to: (i) aid a sick, injured, or orphaned specimen; (ii) dispose of a dead specimen; (iii) salvage a dead specimen that may be useful for scientific study; or (iv) remove specimens that constitute a demonstrable but nonimmediate threat to human safety, provided that the taking is done in a humane manner. Such taking may involve killing or injuring only if it has not been reasonably

possible to eliminate such threat by live capturing and releasing the specimen unharmed, in an appropriate area.

We recognize the special and unique relationship that we have with our State natural resource agency partners in contributing to conservation of listed species. State agencies often possess scientific data and valuable expertise on the status and distribution of endangered, threatened, and candidate species of wildlife and plants. State agencies, because of their authorities and their close working relationships with local governments and landowners, are in a unique position to assist us in implementing all aspects of the Act. In this regard, section 6 of the Act provides that we must cooperate to the maximum extent practicable with the States in carrying out programs authorized by the Act. Therefore, any qualified employee or agent of a State conservation agency that is a party to a cooperative agreement with us in accordance with section 6(c) of the Act, who is designated by their agency for such purposes, would be able to conduct activities designed to conserve the earless monitor that may result in otherwise prohibited take without additional authorization.

In addition, any employee or agent of the Service or of the NMFS, who is designated by their agency for such purposes, may, when acting in the course of their official duties, take those species.

Furthermore, we may under certain circumstances issue permits to carry out one or more otherwise-prohibited activities, including those described above. The regulations that govern permits for threatened wildlife state that the Director may issue a permit authorizing any activity otherwise prohibited with regard to threatened species. These permits may be issued for the following purposes: scientific purposes, to enhance propagation or survival, economic hardship, zoological exhibition, educational purposes, incidental taking, or special purposes consistent with the purposes of the Act (50 CFR 17.32). The criteria for issuance of threatened species permits to authorize otherwise-

prohibited activities other than incidental taking are found in 50 CFR 17.32(a)(2). The import exemption for threatened wildlife included in Appendix II of CITES (50 CFR 17.8; section 9(c)(2) of the Act) would apply to this species for qualifying specimens and activities. Further, as noted above, we may also authorize certain activities associated with conservation breeding under CBW registrations. We recognize that captive breeding of wildlife can support conservation, for example, by producing animals that could be used for reintroductions. We are not aware of any captive-breeding programs of earless monitors for this purpose. The proposed 4(d) rule would apply to all live earless monitors and dead parts and products of the species and supports conservation management efforts for earless monitors in the wild in their native range.

The statute also contains certain exemptions from the prohibitions, which are found in sections 9 and 10 of the Act.

In summary, we find this proposed 4(d) rule contains all the prohibitions and exceptions necessary and advisable for the conservation of the earless monitor. The 4(d) rule is necessary and advisable to provide for the conservation of the earless monitor because it will regulate activities that pose a threat to the species and provide certain exceptions for activities with legally sourced and traded bred in captivity specimens (source code C) that are otherwise in accordance with relevant regulations, including CITES. In terms of potential economic impacts, there is minimal current legal import, export, trade, or commerce of the earless monitor that would be affected by the 4(d) rule.

Required Determinations

Clarity of the Proposed Rule

We are required by Executive Orders 12866 and 12988 and by the Presidential memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

- (1) Be logically organized;

- (2) Use the active voice to address readers directly;
- (3) Use clear language rather than jargon;
- (4) Be divided into short sections and sentences; and
- (5) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in **ADDRESSES**. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 et seq.), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA; title II of Pub. L. 104–121, March 29, 1996), whenever a Federal agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (i.e., small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended the RFA to require Federal agencies to provide a certification statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

While we do not conduct RFA analyses on our classification determinations under the Act, in accordance with recent caselaw (*Kansas Natural Resources Coalition, et al. v. USFWS, et al.* No. 23–CV–00159–DC–RCG (W.D. Tex. 2025)), we comply with RFA through consideration of conservation and economic impacts when promulgating 4(d) rules.

According to the Small Business Administration, small entities include small organizations such as independent nonprofit organizations; small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents; and small businesses (13 CFR 121.201). Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than \$5 million in annual sales, general and heavy construction businesses with less than \$27.5 million in annual business, special trade contractors doing less than \$11.5 million in annual business, and agricultural businesses with annual sales less than \$750,000. To determine if potential economic impacts to these small entities are significant, we considered the types of activities that might trigger regulatory impacts under this designation as well as types of project modifications that may result. In general, the term “significant economic impact” is meant to apply to a typical small business firm’s business operations.

Under the RFA, as amended, and as understood in light of recent court decisions, Federal agencies are required to evaluate the potential incremental impacts of rulemaking on those entities directly regulated by the rulemaking itself; in other words, the RFA does not require agencies to evaluate the potential impacts to indirectly regulated entities.

As discussed above, in terms of potential economic impacts, there is minimal current legal import, export, trade, or commerce of earless monitor that would be affected by the 4(d) rule. We propose exceptions that would continue to allow import, export, trade, or commerce with legally obtained earless monitors without additional threatened species permits, as described above. Possession of a specimen is not itself a violation and does not require a permit as long as there is not an unauthorized otherwise-prohibited activity, such as take. Additionally, the definition of “harass” in 50 CFR 17.3, when applied to captive wildlife, does not include the following practices, procedures, and

provisions if they are “generally accepted” and “not likely to result in injury to the wildlife” at issue: animal husbandry practices that meet or exceed the minimum standards for facilities and care under the Animal Welfare Act; breeding procedures; or provisions of veterinary care for confining, tranquilizing, or anesthetizing. The take prohibition against harm and kill would apply to earless monitors in the United States, requiring a permit for any such activity, except for qualifying non-commercial acts with pre-ESA wildlife. For the above reasons and based on currently available information, we certify that, if made final, the proposed 4(d) rule would not have a significant economic impact on a substantial number of small business entities. Therefore, an initial regulatory flexibility analysis is not required.

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

Regulations adopted pursuant to section 4(a) of the Act are exempt from the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 et seq.) and do not require an environmental analysis under NEPA. We published a notice outlining our reasons for this determination in the *Federal Register* on October 25, 1983 (48 FR 49244). This includes listing, delisting, and reclassification rules, as well as critical habitat designations and species-specific protective regulations promulgated concurrently with a decision to list or reclassify a species as threatened. The courts have upheld this position (e.g., *Douglas County v. Babbitt*, 48 F.3d 1495 (9th Cir. 1995) (critical habitat); *Center for Biological Diversity v. U.S. Fish and Wildlife Service*, 2005 WL 2000928 (N.D. Cal. Aug. 19, 2005) (concurrent 4(d) rule)).

References Cited

A complete list of references cited in this rulemaking is available on the internet at <https://www.regulations.gov> and upon request from the Branch of Delisting and Foreign Species (see **FOR FURTHER INFORMATION CONTACT**).

List of Subjects in 50 CFR Part 17

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

Proposed Regulation Promulgation

Accordingly, we propose to 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. In § 17.11, in paragraph (h), amend the List of Endangered and Threatened Wildlife by adding an entry for “Monitor, Borneo earless” in alphabetical order under REPTILES to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Common name	Scientific name	Where listed	Status	Listing citations and applicable rules
* * * * *	* * *			
REPTILES				
* * * * *	* * *			
Monitor, Borneo earless	<i>Lanthanotus borneensis</i>	Wherever found	T	[<i>Federal Register</i> citation when published as a final rule]; 50 CFR 17.42(u); ^{4d}
* * * * *	* * *			

3. As proposed to be amended at, 86 FR 62434 (November 9, 2021), 87 FR 58648 (September 27, 2022), 88 FR 68070 (October 3, 2023), 88 FR 68370 (October 3, 2023), and 89 FR 103938 (December 19, 2024), further amend § 17.42 by adding paragraph (u) to read as follows:

§ 17.42 Species-specific rules—reptiles.

* * * * *

(u) Borneo earless monitor (*Lanthanotus borneensis*).

(1) *Prohibitions.* The following prohibitions that apply to endangered wildlife also apply to the Borneo earless monitor. Except as provided under paragraph (u)(2) of this section and §§ 17.4–17.8, it is unlawful for any person subject to the jurisdiction of the United States to commit, to attempt to commit, to solicit another to commit, or cause to be committed, any of the following acts in regard to this species:

(i) Import or export, as set forth at § 17.21(b) for endangered wildlife.

(ii) Take, as set forth at § 17.21(c)(1) for endangered wildlife.

(iii) Possession and other acts with unlawfully taken specimens, as set forth at § 17.21(d)(1) for endangered wildlife.

(iv) Interstate or foreign commerce in the course of a commercial activity, as set forth at § 17.21(e) for endangered wildlife.

(v) Sale or offer for sale, as set forth at § 17.21(f) for endangered wildlife.

(2) *Exceptions from prohibitions.* In regard to this species, you may:

(i) Conduct activities as authorized by a permit under § 17.32.

(ii) Import, export, sell or offer for sale in foreign commerce, or deliver, receive, carry, transport, or ship in foreign commerce in the course of a commercial activity a live Borneo earless monitor, provided the specimen is bred in captivity (see 50 CFR 23.24, source code “C”) and the requirements in 50 CFR parts 13, 14, and 23 have been met.

(iii) Sell or offer for sale in interstate commerce, or deliver, receive, carry, transport, or ship in interstate commerce in the course of a commercial activity a live Borneo earless monitor, provided the specimen was legally imported or bred in captivity in the United States (see 50 CFR 23.24, source code “C”) and the requirements in 50 CFR parts 13, 14, and 23 have been met.

(iv) Take, as set forth at § 17.31(b).

(v) Take, as set forth at § 17.21(c)(2) through (c)(4) for endangered wildlife.

(vi) Possess and engage in other acts with unlawfully taken wildlife, as set forth at § 17.21(d)(2) for endangered wildlife.

(vii) Conduct activities as authorized by a captive-bred wildlife registration under § 17.21(g) for endangered wildlife.

Justin Shirley

Principal Deputy Director

U.S. Fish and Wildlife Service.