

Peer Review of Scientific Information

Proposed rule to list the Florida bonneted bat (*Eumops floridanus*) as endangered

About the Document

Title: Proposed rule to list the Florida bonneted bat as endangered

Summary: We, the U.S. Fish and Wildlife Service (Service), have proposed to list the Florida bonneted bat (*Eumops floridanus*), as endangered under the Endangered Species Act of 1973, as amended (Act). The Florida bonneted bat is a large, insectivorous, free-tailed bat (Molossid) endemic to south and southwest Florida. Available data and information indicate that the species occurs in limited numbers in a restricted range. The core range primarily consists of habitat within Charlotte, Lee, Collier, Monroe and Miami-Dade Counties, but recent data also suggest use of portions of Okeechobee and Polk Counties and possible use of areas within Glades County. Acoustical information and other observations indicate that the species uses forests, wetlands, and other natural habitats; it has also been found in residential and urban areas. At present, no active, natural roost sites are known. All known roost sites are artificial structures (bat houses).

This bat, previously known as the Florida mastiff bat (*Eumops glaucinus floridanus*), was identified by the Service as a formal candidate for protection in 2009. In this proposed listing action, we have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to the Florida bonneted bat. Habitat loss, degradation, and modification from human population growth and associated development and agriculture have impacted the Florida bonneted bat and are expected to further curtail its limited range. Environmental effects from climatic change, especially sea level rise, are expected to become severe in the future, resulting in additional habitat losses that are expected to place the species at greater risk.

The Florida bonneted bat is also currently threatened by a wide array of natural and manmade factors. Effects of small population size, restricted range, few colonies, slow reproduction, low fecundity, and relative isolation contribute to the species' vulnerability. Other aspects of the species' natural history (e.g., aerial-hawking foraging, tree-roosting habits) and environmental stochasticity may also contribute to its imperilment. Multiple anthropogenic factors (e.g., impacts or intolerance by humans, wind energy projects) are also threats of varying severity. As an insectivore, the species is also likely exposed to a variety of pesticides and contaminants through multiple routes of exposure; pesticides may also affect its prey base. Given its vulnerability, disease and predation have the potential to impact the species. Finally, existing regulatory mechanisms, due to a variety of constraints, do not provide

adequate protection for the species. Overall, impacts from increasing threats, operating singly or in combination, place the species at risk of extinction.

We have determined that designation of critical habitat is prudent for the Florida bonneted bat. Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12), require that, to the maximum extent prudent and determinable, we designate critical habitat at the time we determine that a species is endangered or threatened. Our regulations (50 CFR 424.12(a)(1)) state that the designation of critical habitat is not prudent when one or both of the following situations exist: (1) the species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of threat to the species, or (2) such designation of critical habitat would not be beneficial to the species. We do not anticipate that identification of critical habitat would be expected to increase the degree of threat to the Florida bonneted bat. Designation of essential habitat, particularly roosting sites, could actually reduce the degree of threat to the species, and would offer other benefits to the species.

Our regulations (50 CFR 424.12(a)(2)) further state that critical habitat is not determinable when one or both of the following situations exist: (1) Information sufficient to perform the required analysis of the impacts of the designation is lacking, or (2) the biological needs of the species are not sufficiently well known to permit identification of an area as critical habitat. When we find that critical habitat is not determinable, the Act provides for an additional year to publish a critical habitat designation (16 U.S.C. 1533(b)(6)(C)(ii)). Based on our evaluation, we are currently unable to identify the physical and biological features essential for the conservation of the Florida bonneted bat because information on those features for this species is not known at this time.

Key features of the basic life history, ecology, reproductive biology, and habitat requirements of many bats, including the Florida bonneted bat, are unknown. Species-specific ecological requirements have not been determined (e.g., natural roost sites, seasonal changes in roosting habitat, dietary needs, seasonal changes in diet, prime foraging habitat). Population dynamics, such as species interactions and community structure, population trends, and population size and age class structure necessary to maintain long-term viability, have not been determined. As we are unable to identify many physical and biological features essential to the conservation of the Florida bonneted bat, we are unable to identify areas that contain features necessary for long-term viability. Therefore, we find that critical habitat for the species is not determinable at this time.

At this time, we are seeking information from the public regarding which physical or biological features or specific areas may be essential to the conservation of the Florida bonneted bat. We are particularly in need of information on location of natural roosts, roosting and foraging habitat preferences, dietary requirements, and foraging distance. Information gleaned from the public comment period, as well as from ongoing research efforts we are employing with the help of our partners (new

survey techniques, dietary analysis, etc.), will hopefully yield sufficient new information on those physical and biological features essential to the species to allow us to propose critical habitat in the future.

Proposed rule: The proposed rule, supporting documents, and comments received to date can be found at <http://www.regulations.gov>, under Docket # FWS-R4-ES-2012-0078

Type of Review: Influential

Timeline of the Peer Review:

Draft proposed rule published: October 4, 2012

Peer review initiated: By October 5, 2012

Peer review completed by: December 3, 2012 (end of comment period)

Estimated final agency determination date: September 30, 2013

About the Peer Review Process:

The Service will solicit written comments from 10 independent scientific reviewers. Formal request for peer review will be made by individual letters to experts from various backgrounds at several universities, institutions, and agencies. Reviewers have been selected by the Service for their recognized expertise with bats, particularly molossid, as well as general expertise with bat ecology and conservation. We are following our national policy on peer review and our regional approach for peer review for rulemakings. In selecting peer reviewers, we considered four key factors – expertise, balance, independence, and avoidance of conflict of interest. This review is occurring concurrently with the public comment period for the proposed action. The public comment period is now open and will close on December 3, 2012. The Service will use the information received from the peer review process, as appropriate, to develop the final listing rule for the species indicated above.

The Service will provide each peer reviewer with information necessary to complete the peer review. We have requested that reviewers use the Southeast Region's guidance to ensure that reviews comply with the 1994 policy statement for listing and critical habitat designation under the Act. Peer reviewers are expected to: review all material provided; identify, review, and provide other relevant data; and, provide written comments on relevance and soundness of data, analysis or assumptions of data, and whether we have used the best available science in making the proposed determination. Peer review comments will be public documents.

About Public Participation:

Public comments on the proposed listing of the Florida bonneted bat as endangered was sought with the Federal Register announcement on October 4, 2012, and by the distribution via email and press release of this announcement to interested parties. This comment period will end 60 days from the date it published in the Federal Register (i.e., end on December 3, 2012). The peer review plan is made available on this website to allow the public to comment and monitor our compliance with the Office of Management and Budget's "Final Information Quality Bulletin for Peer Review."

Contact:

Paula Halupa, U.S. Fish and Wildlife Service, South Florida Ecological Services Office, 1339 20th Street, Vero Beach, FL 32960; telephone: 772-469-4257; facsimile: 772-562-4288; email: Paula_Halupa@fws.gov.