

5-YEAR REVIEW

Short Form Summary

Species Reviewed: Nightingale Reed-warbler (*Acrocephalus luscini*)

Current Classification: Endangered

Federal Register Notice announcing initiation of this review:

[USFWS] U.S. Fish and Wildlife Service. 2013. Endangered and threatened wildlife and plants; initiation of 5-year status reviews of 44 species in Oregon, Hawaii, Guam, and the Northern Mariana Islands. Federal Register 78(24):8185-8187.

Lead Region/Field Office:

Region 1/Pacific Islands Fish and Wildlife Office (PIFWO), Honolulu, Hawaii

Name of Reviewer(s):

Annie Marshall, Fish and Wildlife Biologist, PIFWO

Marie Brueggemann, Recovery Plant Coordinator, PIFWO

Kristi Young, Programmatic Deputy Field Supervisor, PIFWO

Methodology used to complete this 5-year review:

This review was conducted by staff of the Pacific Islands Fish and Wildlife Office of the U.S. Fish and Wildlife Service (USFWS), beginning on March 6, 2013. The review was based on a review of current, available information since the last 5-year review for the Nightingale Reed-warbler (USFWS 2010) as well as information from the recovery plan (USFWS 1998). The evaluation, coordinated by Annie Marshall, Fish and Wildlife Biologist, was reviewed by the Plant Recovery Coordinator. It was subsequently approved by the Programmatic Deputy Field Supervisor.

Background:

For information regarding the species listing history and other facts, please refer to the Fish and Wildlife Service's Environmental Conservation On-line System (ECOS) database for threatened and endangered species (http://ecos.fws.gov/tess_public).

Review Analysis:

Please refer to the Recovery Plan for the Nightingale Reed-warbler (USFWS 1998) and the previous 5-year review for the Nightingale Reed-warbler published on July 8, 2010 (available at http://ecos.fws.gov/docs/five_year_review/doc3251.pdf) for a complete review of the species' status, threats, and management efforts. No new threats or no new information regarding the species biological status have come to light since listing to warrant a change in the Federal listing status of the Nightingale Reed-warbler as endangered.

The Nightingale Reed-warbler, known locally as ga' ga' karisu (bird of the reeds) on Saipan, once occurred on Guam, Aguiguan, Tinian, Saipan, Alamagan, and Pagan (USFWS 1998). Nightingale Reed-warblers now occur only on Saipan and Alamagan. Little management occurs within the species habitat on Saipan, and none occurs on Alamagan. Threats to the species continue, including habitat loss and degradation,

predation by non-native species, fire, and human disturbance. The current status for the Nightingale Reed-warbler is provided in Table 1 below.

New status information:

- There is no new information on the status of this species.

New threats:

- There are no new threats known at this time. Habitat loss and degradation as well as predation by introduced mammals continue to be the primary threats to this species.

New management actions:

- Climate change degradation of habitat – Climate change is believed to pose a threat to this species. However, current climate change analyses in the Pacific Islands lack sufficient spatial resolution to make predictions on impacts to this species. The Pacific Islands Climate Change Cooperative (PICCC) has currently funded climate modeling that will help resolve these spatial limitations. We anticipate high spatial resolution climate outputs by 2015.

Synthesis:

Downlisting, and delisting objectives are provided in the recovery plan for Nightingale Reed-warbler (USFWS 1998). To be downlisted, Nightingale Reed-warbler populations on Saipan and Alamagan should be secure from threats and maintained at their current numbers or increasing for at least 5 consecutive years. The most recent estimates we have indicate the Saipan population has decreased by more than half between surveys in 1982 and 2007 (Camp *et al.* 2009). Although there was no significant difference between the 2000 and 2010 population estimates of the Nightingale Reed-warbler on Alamagan, the native forest there is currently being overgrazed by feral ungulates, and will eventually lead to habitat loss and a decline in the population there (Marshall *et al.* 2010). In addition, Nightingale Reed-warblers remain on only two of the six islands in the Mariana Archipelago where they once occurred. Delisting goals include having secure populations of the Nightingale Reed-warbler on at least 3 additional islands, as well as on Saipan and Alamagan and there have been no studies to determine the appropriateness of the islands suggested for translocation (USFWS 1998).

The downlisting goals for this species have not been met (Table 1), not all threats are being managed, and some threats may be increasing, including storms, tsunamis, and sea level rise due to climate change (Table 2). Therefore, the Nightingale Reed-warbler meets the definition of endangered as it remains in danger of extinction throughout its range.

Recommendations for Future Actions:

- Strategic planning – Develop an island-wide Nightingale Reed-warbler conservation plan for Saipan. The plan should include actions needed to protect and manage upland habitat as well as protect and restore important wetland habitat.
- Strategic planning – Develop and implement plans to protect and manage upland habitat on Alamagan for Nightingale Reed-warblers.
- Population viability monitoring and analysis – Conduct regular monitoring of the Nightingale Reed-warbler populations on Saipan and Alamagan utilizing established survey methodology (Camp *et al.* 2009, Marshall *et al.* 2010).
- Predator / herbivore monitoring and control – Develop plans for predator control in key areas, keep abreast of research on improvements in predator control, and implement improved methodology.
- Conservation finance – Continue work in the Saipan Upland Mitigation Bank (SUMB Addendum 2009).
- Population viability monitoring and analysis – Conduct a population viability analysis to determine the minimum viable population number and the number of populations across the Mariana Islands necessary for long-term survival and recovery.
- Habitat and natural process management and restoration – Develop and implement a native forest restoration plan for Alamagan. Plan should include removing feral ungulates, pigs (*Sus scrofa*), goats (*Capra hircus*), and cattle (*Bos taurus*), from the forest areas restored for Nightingale Reed-warblers on Alamagan as well as weed control and native plant outplanting.
- Population biology research – Research the environmental factors and management actions that directly affect demographic parameters (*e.g.*, habitat use of the Nightingale Reed-warbler on Saipan versus on Alamagan).
- Predator / herbivore monitoring and control – Continue brown treesnake interdiction to protect Saipan.
- Reintroduction / translocation – Develop and implement a plan for establishing Nightingale Reed-warblers populations on at least three additional islands (see recovery plan USFWS 1998).
- Outreach and education – Develop public support for the protection of this endemic species.

Table 1. Status and trends of the Nightingale Reed-warbler from listing through current 5-year review.

Date	No. adult wild individuals	Downlisting Criteria identified in Recovery Plan	Downlisting Criteria Completed?
1970 (listing)	Unknown	No recovery plan developed yet.	N/A
1998 (recovery plan, USFWS 1998)	6,225 to 6,230 individuals distributed over 3 islands (Aguiguan (1-6), Saipan (4,225), and Alamagan (2,000)) (Engbring <i>et al.</i> 1986, USFWS 1998)	1. Populations on Saipan and Alamagan are secure from threats and maintained at their current numbers or increasing for at least 5 consecutive years.	No
2010 (5-year review)	1,125 birds on Alamagan (Camp <i>et al.</i> 2009, DFW 2000), 2,742 birds on Saipan (Camp <i>et al.</i> 2009)	1. Populations on Saipan and Alamagan are secure from threats and maintained at their current numbers or increasing for at least 5 consecutive years.	No
2015 (5-yr review)	946 birds on Alamagan (Marshall <i>et al.</i> 2010), 2,742 birds on Saipan (Camp <i>et al.</i> 2009)	1. Populations on Saipan and Alamagan are secure from threats and maintained at their current numbers or increasing for at least 5 consecutive years.	No

Table 2. Threats to the Nightingale Reed-warbler and ongoing conservation efforts.

Threat	Listing factor	Current Status	Conservation/ Management Efforts
Habitat loss and degradation	A	Ongoing	Partial: Restoration efforts in place for only a few wetlands. Saipan Upland Mitigation Bank established for the conservation of this species.
Invasion of habitat by non-native plants	A	Ongoing	Partial: Some restoration efforts in only a few areas.
Predators	C	Ongoing	No
Accidental introduction of new predators, such as the brown treesnake (<i>Boiga irregularis</i>)	C	Ongoing	Partial: Brown treesnake interdiction efforts on Guam, Rota, Tinian, and Saipan.
Disease	C	Insufficient data	No
Typhoons	E	Ongoing	No
Contaminants	E	Insufficient data	No
Fires	E	Ongoing	No
Human Disturbance	E	Ongoing	No
Small population size/genetic diversity loss/stochastic vulnerability	E	Ongoing	No
Climate change and sea level rise	A, E	Increasing	No

References:

See previous 5-year review for a full list of references (USFWS 2009). Only references not listed in that document are provided below.

Marshall, A. F. Amidon, and P. Radley. 2010. Nightingale Reed-warbler surveys on Alamagan. Appendix 1 *in* Status of the Micronesian Megapode in the Commonwealth of the Northern Mariana Islands *in* Marianas Expedition Wildlife Surveys 2010. Unpublished report prepared for U.S. Marine Corps, Naval Facilities Engineering Command, Pacific, Pearl Harbor, Honolulu, HI by U.S. Fish and Wildlife Office, Pacific Islands Fish and Wildlife Office, Honolulu, HI.

U.S. Fish and Wildlife Service. 2010. Nightingale Reed-warbler (*Acrocephalus luscini*) 5-year summary and evaluation. U.S. Fish and Wildlife Service, Honolulu, HI. 14 pp.

U.S. Fish and Wildlife Service. 2013. Endangered and threatened wildlife and plants; initiation of 5-year status reviews of 44 species in Oregon, Hawaii, Guam, and the Northern Mariana Islands. Federal Register 78(24):8185-8187.

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Pre-1996 DPS listing still considered a listable entity? N/A

Recommendation resulting from the 5-year review:

- Delisting
- Reclassify from Endangered to Threatened status
- Reclassify from Threatened to Endangered status
- No Change in listing status

Appropriate Listing/Reclassification Priority Number, if applicable: _____

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