

Rota White-eye or Nosa Luta
(Zosterops rotensis)

5-Year Review
Summary and Evaluation

U.S. Fish and Wildlife Service
Pacific Islands Fish and Wildlife Office
Honolulu, Hawaii

5-YEAR REVIEW

Species reviewed: Rota White-eye or Nosa Luta (*Zosterops rotensis*)

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5-YEAR REVIEW
Rota White-eye or Nosa Luta / *Zosterops rotensis*

1.0 GENERAL INFORMATION

1.1 Reviewers

Lead Regional Office:

Region 1, Endangered Species Program, Division of Recovery, Jesse D`Elia,
(503) 231-2071

Lead Field Office:

Pacific Islands Fish and Wildlife Office, Loyal Mehrhoff, Field Supervisor, (808)
792-9400

Cooperating Field Office(s):

N/A

Cooperating Regional Office(s):

N/A

1.2 Methodology used to complete the review:

This review was conducted by staff of the Pacific Islands Fish and Wildlife Office (PIFWO) of the U.S. Fish and Wildlife Service (USFWS) between June 2008 and July 2009. The final recovery plan for the Rota white-eye was used as the primary source for this review. However, updates on the status and biology of the species were also obtained from published and unpublished reports and personal communications with researchers and managers. The draft five-year review was then reviewed by the Vertebrate Recovery Coordinator, Assistant Field Supervisor for Endangered Species and Acting Deputy Field Supervisor before submission to the Field Supervisor for approval.

1.3 Background:

1.3.1 FR Notice citation announcing initiation of this review:

USFWS. 2008. Endangered and threatened wildlife and plants; initiation of 5-year status reviews for 70 species in Idaho, Montana, Oregon, Washington, and the Pacific Islands; Notice of Review. Federal Register 73(83):23264-23266.

1.3.2 Listing history

Original Listing

FR notice: USFWS. 2004. Endangered and threatened wildlife and plants; determination of endangered status for the Rota bridled white-eye (*Zosterops rotensis*) from the Commonwealth of the Northern Mariana Islands; final rule. Federal Register 69:3022-3029.

Date listed: January 22, 2004

Entity listed: Species

Classification: Endangered

Revised Listing, if applicable

FR notice: N/A

Date listed: N/A

Entity listed: N/A

Classification: N/A

1.3.3 Associated rulemakings:

USFWS. 2006. Endangered and threatened wildlife and plants; designation of critical habitat for the Rota bridled white-eye (*Zosterops rotensis*) from the Commonwealth of the Northern Mariana Islands; final rule. Federal Register 71:53589-53605.

1.3.4 Review History:

Species status review (FY 2009 Recovery Data Call (September 2009))

Recovery achieved:

1 (0-25%) [FY 2007 Recovery Data Call] (last year reported)

1.3.5 Species' Recovery Priority Number at start of this 5-year review:

2

1.3.6 Current Recovery Plan or Outline

Name of plan or outline: Recovery Plan for the Nosa Luta or Rota Bridled White-eye (*Zosterops rotensis*)

Date issued: September 7, 2007

Dates of previous revisions, if applicable: NA

Indicate if plan is being used: Yes. Several of the recovery actions outlined in the recovery plan have been initiated and completed while others are still ongoing.

2.0 REVIEW ANALYSIS

2.1 Application of the 1996 Distinct Population Segment (DPS) policy

2.1.1 Is the species under review a vertebrate?

 X Yes

No

2.1.2 Is the species under review listed as a DPS?

Yes

No

2.1.3 Was the DPS listed prior to 1996?

Yes

No

2.1.3.1 Prior to this 5-year review, was the DPS classification reviewed to ensure it meets the 1996 policy standards?

Yes

No

2.1.3.2 Does the DPS listing meet the discreteness and significance elements of the 1996 DPS policy?

Yes

No

2.1.4 Is there relevant new information for this species regarding the application of the DPS policy?

Yes

No

2.2 Recovery Criteria

2.2.1 Does the species have a final, approved recovery plan containing objective, measurable criteria?

Yes

No

2.2.2 Adequacy of recovery criteria.

2.2.2.1 Do the recovery criteria reflect the best available and most up-to date information on the biology of the species and its habitat?

Yes

No

2.2.2.2 Are all of the 5 listing factors that are relevant to the species addressed in the recovery criteria?

Yes

No

2.2.3 List the recovery criteria as they appear in the recovery plan, and discuss how each criterion has or has not been met, citing information:

The threats affecting this species (Factors A, C and E¹) are discussed in detail in section 2.3.2 and the 2007 Recovery Plan. Factors B and D are not considered threats at this time.

Only interim downlisting criteria were developed in the 2007 recovery plan due to data limitations and potential uncertainties associated with attempting to define more specific and quantitative recovery criteria. At present, these interim criteria include:

(1) arrest the decline in abundance of nosa Luta, as evidenced by a stable or increasing population growth trend (finite rate of population increase or λ greater than or equal to 1.0) averaged over a minimum of 5 continuous years, and restore the population to at least 10,000 individuals (Factor E);

(2) reduce the decline of intact nosa Luta habitat in the species' core range to help prevent further population declines and range restrictions, and develop and implement restoration techniques to increase the amount of nosa Luta habitat available for sustaining a population of at least 10,000 individuals (Factor A);

(3) assess the impact of black drongos and rats on the nosa Luta population and develop and implement effective methods to control these species, if needed, to decrease their impacts on the nosa Luta as demonstrated by a significant reduction in predation events (determined by research on black drongo and rat impacts), over 10 years (Factor C); and

(4) implement measures to prevent the brown treesnake and other threats, such as west Nile virus, from becoming established on Rota to reduce threats to the nosa Luta population (Factor C, E).

At this time, none of the interim downlisting criteria have been met. Incidental observations indicate that the nosa Luta population may have increased and expanded (Ha *et al.* 2008; P. Luscomb, Honolulu Zoo, pers. comm., 2009). However, a range-wide survey has not been conducted to determine if there has been a significant population increase and range expansion. Also, efforts to restore nosa Luta habitat have not been undertaken and fires and development pressure still threaten the remaining habitat. Finally, the impact of introduced

¹ Threats are classified as the following five factors:

- A. Present of threatened destruction, modification or curtailment of its habitat or range;
- B. Overutilization for commercial, recreational, scientific, or educational purposes;
- C. Disease or predation;
- D. Inadequacy of existing regulatory mechanisms;
- E. Other natural or manmade factors affecting its continued existence.

predators on nosa Luta is still being assessed, and efforts to manage these predators have not been undertaken.

2.3 Updated Information and Current Species Status

2.3.1 Biology and Habitat

2.3.1.1 New information on the species' biology and life history:

No new information.

2.3.1.2 Abundance, population trends (e.g. increasing, decreasing, stable), demographic features (e.g., age structure, sex ratio, family size, birth rate, age at mortality, mortality rate, etc.), or demographic trends:

Incidental observations of the nosa Luta population increasing since the early 1990s have been reported (P. Luscomb, Honolulu Zoo, pers. comm., 2009). However, a quantitative assessment of the entire population has not been undertaken to confirm this increase, and analysis of monitoring data collected on established transects within the species' range indicate no significant change in detections from 2002 to 2005 (Ha and Ha 2006).

2.3.1.3 Genetics, genetic variation, or trends in genetic variation (e.g., loss of genetic variation, genetic drift, inbreeding, etc.):

No new information.

2.3.1.4 Taxonomic classification or changes in nomenclature:

The common name of the nosa Luta was changed from Rota bridled white-eye to Rota white-eye (Wiles 2005).

2.3.1.5 Spatial distribution, trends in spatial distribution (e.g. increasingly fragmented, increased numbers of corridors, etc.), or historic range (e.g. corrections to the historical range, change in distribution of the species' within its historic range, etc.):

Incidental observations of the nosa Luta population expanding since 1999 have been reported by Ha *et al.* (2008). However, a quantitative assessment of the entire population has not been undertaken to confirm this expansion.

2.3.1.6 Habitat or ecosystem conditions (e.g., amount, distribution, and suitability of the habitat or ecosystem):

No new information.

2.3.1.7 Other:

No new information.

2.3.2 Five-Factor Analysis (threats, conservation measures, and regulatory mechanisms)

2.3.2.1 Present or threatened destruction, modification or curtailment of its habitat or range:

No new information.

2.3.2.2 Overutilization for commercial, recreational, scientific, or educational purposes:

No new information.

2.3.2.3 Disease or predation:

Nest monitoring has resulted in additional observations of predation by native avian species (Berry and Taisacan 2008; S. Faegre, University of Washington, pers. comm. 2009). However, new information on introduced predators has been limited.

2.3.2.4 Inadequacy of existing regulatory mechanisms:

No new information.

2.3.2.5 Other natural or manmade factors affecting its continued existence:

No new information.

2.4 Synthesis

The nasa Luta or Rota white-eye is endemic to the island of Rota. As of August 1999, the population on Rota was approximately 1,000 birds and the species' core range consisted of approximately 254 hectares (628 acres) of forest. Incidental observations indicate the size and range of the population may have increased. However, this has not been confirmed by a range-wide population survey. The recovery plan lists as the primary threats to the species habitat loss and degradation, susceptibility of the single small population to random catastrophic events, such as typhoons, and introduced predators. No new information is available about changes in these threats since the

publication of the recovery plan. However, research is being undertaken to assess the role of some of these threats in the species' decline.

The recovery plan included interim downlisting criteria for the nosa Luta which included a stable or increasing population of at least 10,000 individuals, sufficient habitat to sustain this population, and management of introduced predators to achieve this population goal. The most recent survey assessments do not indicate that the population has reached 10,000 individuals and the threats to the species still remain poorly known. Therefore, the nosa Luta meets the definition of endangered as it remains in danger of extinction throughout all of its range.

3.0 RESULTS

3.1 Recommended Classification:

Downlist to Threatened

Uplist to Endangered

Delist

Extinction

Recovery

Original data for classification in error

No change is needed

3.2 New Recovery Priority Number: 2

Brief Rationale: This priority ranking reflects the nosa Luta's status as a full species, high degree of threat, and the high prospects for recovery.

3.3 Listing and Reclassification Priority Number: N/A

Reclassification (from Threatened to Endangered) Priority Number: _____

Reclassification (from Endangered to Threatened) Priority Number: _____

Delisting (regardless of current classification) Priority Number: _____

Brief Rationale:

4.0 RECOMMENDATIONS FOR FUTURE ACTIONS

- Conduct an island-wide population assessment and initiate long-term monitoring program.
- Continue and expand ongoing research on population dynamics and nest predators of the nosa Luta.
- Continue and expand brown treesnake interdiction efforts on Rota.
- Implement efforts to restore native forest habitat within the nosa Luta's range.

- Continue to evaluate the need for a second wild population of nosa Luta.

5.0 REFERENCES

Berry, L. and E. Taisacan. 2008. Nest success and nest predation of the endangered Rota white-eye (*Zosterops rotensis*). *Wilson Journal of Ornithology* 120:618-619.

Ha, R.R. and J.C. Ha. 2006. Progress report (July 1, 2006-November 30, 2006) on the Mariana crow (*Corvus kubaryi*) and the Rota bridled white-eye (*Zosterops rotensis*) on the Pacific island of Rota. Unpublished report to the Commonwealth of the Northern Mariana Islands Division of Fish and Wildlife, Saipan, CNMI. 21 pp.

Ha, R.R., L. Berry, and J.C. Ha. 2008. Annual report (July 1, 2007 – June 30, 2008) on the Mariana crow (*Corvus kubaryi*) and the Rota bridled white-eye (*Zosterops rotensis*) on the Pacific island of Rota. Unpublished report to the Commonwealth of the Northern Mariana Islands Division of Fish and Wildlife, Saipan, CNMI. 52 pp.

U.S. Fish and Wildlife Service. 2004. Endangered and threatened wildlife and plants; determination of endangered status for the Rota bridled white-eye (*Zosterops rotensis*) from the Commonwealth of the Northern Mariana Islands; final rule. *Federal Register* 69:3022-3029.

U.S. Fish and Wildlife Service. 2006. Endangered and threatened wildlife and plants; designation of critical habitat for the Rota bridled white-eye (*Zosterops rotensis*) from the Commonwealth of the Northern Mariana Islands; final rule. *Federal Register* 71:53589-53605.

U.S. Fish and Wildlife Service. 2007. Recovery Plan for the Nosa Luta or Rota Bridled White-eye (*Zosterops rotensis*). Portland, OR. xi + 136 pp.

U.S. Fish and Wildlife Service. 2008. Endangered and threatened wildlife and plants; initiation of 5-year status reviews for 70 species in Idaho, Montana, Oregon, Washington, and the Pacific Islands; Notice of Review. *Federal Register* 73:23264-23266.

Wiles, G.J. 2005. A checklist of the birds and mammals of Micronesia. *Micronesica* 38:141-189.

Personal Communications and Other References

Faegre, Sarah. 2009. University of Washington, Seattle, Washington. Personal communication.

Luscomb, Peter. 2009. Honolulu Zoo, Honolulu, Hawaii. Personal communication.

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U.S. FISH AND WILDLIFE SERVICE
5-YEAR REVIEW
of the
Rota White-eye or Nosa Luta (*Zosterops rotensis*)

Current Classification: Endangered

Recommendation resulting from the 5-Year Review:

- Downlist to Threatened
- Uplist to Endangered
- Delist
- No change needed

Appropriate Listing/Reclassification Priority Number, if applicable: _____

Review Conducted By:

Fred Amidon, Fish and Wildlife Biologist
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Marilet A. Zablan, Assistant Field Supervisor for Endangered Species
Jeff Newman, Acting Deputy Field Supervisor

Approved:  Date **AUG 27 2010**
Field Supervisor, Pacific Islands Fish and Wildlife Office