

Hawaiian Stilt or Ae`o
(*Himantopus mexicanus knudseni*)

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: Hawaiian Stilt or Ae`o
(*Himantopus mexicanus knudseni*)

TABLE OF CONTENTS

1.0	GENERAL INFORMATION	1
1.1	Reviewers	1
1.2	Methodology used to complete the review:.....	1
1.3	Background:	1
2.0	REVIEW ANALYSIS.....	2
2.1	Application of the 1996 Distinct Population Segment (DPS) policy	2
2.2	Recovery Criteria	3
2.3	Updated Information and Current Species Status	5
2.4	Synthesis.....	7
3.0	RESULTS	7
3.1	Recommended Classification:	7
3.2	New Recovery Priority Number:	8
3.3	Listing and Reclassification Priority Number:	8
4.0	RECOMMENDATIONS FOR FUTURE ACTIONS.....	8
5.0	REFERENCES.....	8
	Signature Page	1

5-YEAR REVIEW
Hawaiian Stilt or Ae`o/*Himantopus mexicanus knudseni*

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) beginning June 2008. The draft revised recovery plan for Hawaiian waterbirds, second draft of second revision (USFWS 2005), was the primary source of information for this five-year review of the Hawaiian stilt or ae`o (*Himantopus mexicanus knudseni*). Updates on the status and biology of this species were also obtained from additional sources, including local agencies and researchers recently or currently working on this species. 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 submittal to the Field Supervisor for approval.

1.3 Background:

1.3.1 FR Notice citation announcing initiation of this review:

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. Federal Register 73(83):23264-23266.

1.3.2 Listing history

Original Listing

FR notice: U.S. Fish and Wildlife Service. 1970. Conservation of endangered species and other fish or wildlife. Federal Register 35(199): 16047.

Date listed: October 13, 1970

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 rule makings: None

1.3.4 Review History:

Species status review [FY 2010 Recovery Data Call (August 2010)]: Stable

1.3.5 Species' Recovery Priority Number at start of this 5-year review: 9

1.3.6 Current Recovery Plan or Outline

Name of plan or outline: Draft revised recovery plan for Hawaiian waterbirds, second draft of second revision.

Date issued: May 2005

Dates of previous revisions, if applicable: First revision approved 1985, first draft of second revision released May 1999.

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?

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 draft revised recovery plan for Hawaiian waterbirds includes the following criteria for downlisting and delisting of Hawaiian stilt or ae`o:

Downlisting criteria

Criterion 1: All core wetlands listed in Table 10 of the recovery plan on the islands of Kaua`i/Ni`ihau, O`ahu, Maui/Moloka`i, and Hawai`i, are protected and managed in accordance with the management practices outlined in the recovery plan;

Criterion 2: Of the supporting wetlands listed in Table 11 of the recovery plan on the islands of Kaua`i/Ni`ihau, O`ahu, Maui/Moloka`i/Lāna`i, and Hawai`i, 25 percent are protected and managed in accordance with the management practices outlined in the recovery plan;

Criterion 3: A population viability analysis has been conducted to determine the population size necessary for long-term viability of the species. The statewide surveyed number of Hawaiian stilts shows a stable or increasing trend at a number greater than 2,000 birds (or an alternative target based on the population viability analysis) for at least 5 consecutive years; and

Criterion 4: There are multiple self-sustaining breeding populations, including multiple populations present on at least Kaua`i/Ni`ihau, O`ahu, Maui/Moloka`i/Lāna`i, and Hawai`i.

Delisting criteria

Criterion 1: All core wetlands listed in Table 10 of the recovery plan on the islands of Kaua`i/Ni`ihau, O`ahu, Maui/Moloka`i, and Hawai`i, are protected and managed in accordance with the management practices outlined in the recovery plan;

Criterion 2: Of the supporting wetlands listed in Table 11 of the recovery plan on the islands of Kaua`i/Ni`ihau, O`ahu, Maui/Moloka`i/Lāna`i, and Hawai`i, 75 percent are protected and managed in accordance with the management practices outlined in the recovery plan;

Criterion 3: The statewide stilt population shows a stable or increasing trend at a number greater than 2,000 birds for at least 10 consecutive years; and

Criterion 4: There are multiple self-sustaining breeding populations, with populations present on Kaua`i/Ni`ihau, O`ahu, Maui/Moloka`i/Lāna`i, and Hawai`i.

None of these down- or delisting criteria have been met. Of 17 core wetlands, 14 are currently protected and of 34 supporting wetlands, six (17 percent) are currently protected. Hawaiian stilt or ae`o numbers have fluctuated under 2,000 for the past five years during summer and winter counts. However, Hawaiian stilt or ae`o are generally doing well and appear to be showing an increasing population trend. Hawaiian stilt or ae`o occur on all the main Hawaiian islands except Kaho`olawe.

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:

Recent waterbird surveys indicate Hawaiian stilt or ae`o numbers are fluctuating under 2,000 in winter and summer. The overall population trend appears to be increasing based on biannual waterbird surveys.

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:

No new information.

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.):

No new information.

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

Over the past several years, Huleia National Wildlife Refuge on Kaua`i has been considerably expanded to provide additional habitat for the Hawaiian coot or `alae ke`oke`o as well as other wetland species.

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. See synthesis below.

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

No new information. See synthesis below.

2.3.2.3 Disease or predation:

West Nile virus and avian flu may pose a risk to the Hawaiian stilt or ae`o if these diseases reach Hawai`i. In 2002, the Hawai`i Department of Agriculture placed an embargo on shipping any birds in to the islands, which may help reduce the risk of these diseases arriving here, but continued vigilance is required. In addition, Hawai`i is currently monitoring birds statewide through a passive morbidity/mortality surveillance strategy for the detection of avian flu; this effort conceivably could also yield early detection of other pathogens.

2.3.2.4 Inadequacy of existing regulatory mechanisms:

No new information. See synthesis below.

2.3.2.5 Other natural or manmade factors affecting its continued existence:

Climate change may also pose a threat to the Hawaiian stilt or ae`o, as its range includes low-elevation habitat. However, current climate change models do not allow us to predict specifically what those effects, and their extent, would be for this species.

2.4 Synthesis

The threats (Factors A, C, and E) affecting this species are discussed in Section 1.D. - Reasons for Decline and Current Threats - of the recovery plan (USFWS 2005). The main threats to the Hawaiian stilt or ae`o are predation by a large variety of introduced species (Factor C: Disease or Predation) and the loss and degradation of habitat, including grazing by feral animals, invasion of habitat by non-native plants, and alteration of hydrology (Factor A: the present or threatened destruction, modification, or curtailment of habitat or range). In addition, avian botulism (Factor C) has been documented at wetlands state-wide and has caused mortality events in this and other waterbird and waterfowl species. Environmental contaminants are considered a threat to birds utilizing wetland habitat; fuel spills, for example, have resulted in direct mortality of birds.

Direct and indirect human disturbance is also considered detrimental, especially during breeding (Factor E: other natural or manmade factors). For example, humans working in wetlands (e.g., to remove alien invasive plant species) or draining or flooding of fields may lead to nest failure. The wetlands utilized most frequently by the Hawaiian stilt or ae`o are coastal wetlands that are vulnerable to global warming and sea level rise. Sea level rise may result in the loss of some wetland habitat and affect the suitability of other wetlands for waterbirds. Overutilization (Factor B) and the inadequacy of existing regulatory mechanisms (Factor D) are not considered to be threats to this species at this time (USFWS 2005).

None of the recovery criteria have been met at this time. Although some wetlands have been protected under Habitat Conservation Plans or Safe Harbor Agreements, of 17 core wetlands, 14 (82 percent) are currently protected and of 34 supporting wetlands, six (17 percent) are currently protected. Hawaiian stilt or ae`o numbers have fluctuated under 2,000 for the past five years during summer and winter counts. Hawaiian stilt or ae`o are generally doing well and appear to be showing an increasing population trend. However, the main threats to the species, wetland loss and predation are on-going. Therefore, the species still meets the definition of endangered.

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: N/A

Brief Rationale:

3.3 Listing and Reclassification Priority Number:

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 a population viability analysis to identify population numbers and time spans to serve as predictors of long term recovery for the Hawaiian stilt or ae`o.
- Continue to work on securing and managing core and supporting wetlands.
- Continue predator control, keep abreast of research on improvements in predator control, and implement improved methodology.
- Continue annual State-wide waterbird counts. These data are currently not analyzed for other than basic status of the species. Directed analysis of the waterbird count data could identify correlations, including use of specific wetlands, time of year, and state of wetlands, that could improve our ability to manage for waterbirds.
- Climate change models to predict sea-level rise and assessment of key wetlands to protect/create in light of the analysis.

5.0 REFERENCES

U.S. Fish and Wildlife Service. 1970. Conservation of endangered species and other fish or wildlife. Federal Register 35(199): 16047.

USFWS. 2005. Draft revised recovery plan for Hawaiian waterbirds, second draft of second revision. U.S. Fish and Wildlife Service, Portland, OR. 155 pp.

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. Federal Register 73(83):23264-23266.

Signature Page
U.S. FISH AND WILDLIFE SERVICE
5-YEAR REVIEW of Hawaiian Stilt or ae'o
(*Himantopus mexicanus knudseni*)

Current Classification: E

Recommendation resulting from the 5-Year Review:

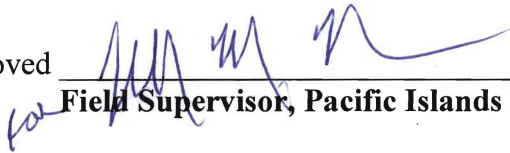
- Downlist to Threatened
- Uplist to Endangered
- Delist
- No change needed

Appropriate Listing/Reclassification Priority Number, if applicable: _____

Review Conducted By:

Joy Hiromasa Browning, Fish and Wildlife Biologist
Ann P. Marshall, Fish and Wildlife Biologist
Holly Freifeld, Vertebrate Recovery Coordinator
Marilet A. Zablan, Assistant Field Supervisor for Endangered Species
Jeff Newman, Acting Deputy Assistant Field Supervisor

Approved



Date **AUG 27 2010**

for **Field Supervisor, Pacific Islands Fish and Wildlife Office**