

SHORT NOTE

Persistence of the spotless crane (*Porzana tabuensis*) on Ta'u, American Samoa

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The spotless crane (*Porzana tabuensis*) is a small rail that is widely distributed across the South Pacific, occurring from Australia, New Zealand, New Guinea, and the Philippines eastward to the Marquesas and Pitcairn Is (Pratt *et al.* 1987). Within the Samoan archipelago, it has been recorded from Savai'i, Tutuila, and Ta'u (Muse & Muse 1982). No recent sightings have been noted from Tutuila, and the crane is presumed to have been extirpated.

Ta'u (14.23° S, 169.45° W) is a volcanic island of 44.31 km² with a maximum elevation of 931 m at the summit of Mt. Lata. The spotless crane has been recorded sporadically on Ta'u since it was first discovered there in 1923 (Murphy 1924). It was presumed to have been extirpated from that island until rediscovered in lowland forest near Ta'u Village in 1985 (Engbring & Engilis 1988). The

spotless crane was not recorded again on Ta'u until Rauzon and Fialua (2003) briefly observed one in dense montane scrub at the summit of Mt. Lata in Dec 2001 and again in Dec 2002. It apparently has disappeared from the lowlands; indeed, inhabitants recall its presence several decades ago but no longer recognise it as a member of the local avifauna. There have been no published reports of its occurrence on Ta'u or elsewhere in American Samoa since the brief sightings by Rauzon and Fialua (2003).

We report here the 1st confirmed occurrence of this crane in over 8 years and offer recommendations to promote its conservation. On 21 Jan 2011, while sampling introduced rats at the summit of Mt. Lata, we captured 1 adult spotless crane of unknown sex in a live-trap baited with burnt coconut. The individual was unharmed, and we photographed it before release at its place of capture. We had set a transect of 25 traps on 19 Jan 2011, with 20 m between adjacent traps, commencing below the summit

Received 9 Feb 2011; accepted 28 Feb 2011

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and terminating at the summit. We captured the crake at the penultimate trap station (i.e., near the summit). While setting traps, we heard calls that we suspected were of a crake, but we could not locate it in the extremely dense vegetation, which consisted largely of *Freycinetia storckii*. On the last day of sampling, we captured the crake near where we heard the calls.

During the 2-night sampling period, we captured no rats. We also had no captures at the same sampling stations from 7 to 9 Aug 2010. Thus, in 100 trap-nights, we captured no rats at or near the summit of Mt. Lata in 2010 and 2011. During the same sampling periods, we frequently captured both Polynesian rat (*Rattus exulans*) and Norway rat (*R. norvegicus*) at several forested lowland and mid-elevation sites on Ta'u. By contrast, Rauzon and Fialua (2003) reported "moderate densities" of *R. norvegicus* on the summit of Mt. Lata and suggested that crakes were exterminated by such rats in the lowlands of Ta'u. We suggest that the crakes have persisted in the montane scrub habitat of Mt. Lata due to consistently low densities of *R. norvegicus*.

Ta'u is apparently the last redoubt of the spotless crake in American Samoa. Mueller-Dombois and Fosberg (1998) suggested that the summit vegetation currently present replaced a more diverse cloud forest following 2 powerful hurricanes in 1987 and 1990. Similarly, Hurricane Olaf in 1995 closed the trail to the summit and further altered the vegetation throughout the island. It is noteworthy that the spotless crake has persisted on the summit of Mt. Lata (and perhaps elsewhere on Ta'u) despite the intermittent presence of rats and the periodic occurrence of destructive hurricanes. Efforts therefore should be enlisted to ensure its long-term survival on Ta'u. The summit and lower reaches of Mt. Lata are within the National Park of American Samoa, and curtailment of human activities that degrade the habitat or promote the expansion

of the *R. norvegicus* population would help to sustain existing populations of the crake. Similarly, destructive sampling techniques for vertebrates, such as snap-trapping for rats, should be prohibited to prevent the accidental capture of crakes. Efforts also should be made to conduct a systematic survey of Ta'u to determine the distribution of crakes on the island and their abundance and habitat associations.

ACKNOWLEDGEMENTS

The project was funded by Wildlife and Sport Fish Restoration Program funds to the American Samoa Government, Department of Marine & Wildlife Resources (ASG-DMWR). We thank Ufagafa Ray Tulafono (Director) and ASG-DMWR staff for their support of this work and personnel of the National Park of American Samoa for reopening the trail to the summit. Use of trade, product, or firm names does not imply endorsement by the U. S. Government.

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Keywords spotless crake, sooty crake, *Porzana tabuensis*, distribution, American Samoa, Ta'u