

SHORT COMMUNICATION

Drastic decline of territorial male Daito Scops Owls on Minami-daito Island in 2006**ORNITHOLOGICAL
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of Japan 2007Masaaki TAKAGI[#], Kana AKATANI, Atsushi SAITO and Shin MATSUI*Division of Biology and Geosciences, Graduate School of Science, Osaka City University, Sugimoto, Osaka 558–8585 Japan*

The Elegant Scops Owl *Otus elegans* is included in the 2004 IUCN Red List of Threatened Species as Near Threatened (BirdLife International 2004). Four subspecies of Elegant Scops Owls are recognized, composed of many separate island populations (see Köning et al. 1999). One of these subspecies, the Daito Scops Owl (*O. e. interpositus*) is endemic to Minami- and Kita-daito Islands, 360 km off Okinawa Island (25°50'N, 131°14'E) in Okinawa prefecture (Ornithological Society Japan 2000). The Daito Scops Owl is also listed as Endangered in the Red Data Book of Okinawa (Okinawa Prefecture 1996). The population on Kita-daito Island was considered to have been extirpated (Kenji Takehara & Kazuo Nakamura personal communication), while the number of male Daito Scops Owls was estimated to be 245 on Minami-daito Island during the 2005 breeding season (Takagi et al. 2007). Research on the same island in 2006 revealed a drastic decline in the number of Daito Scops Owls on Minami-daito Island. The purpose of this study was to describe the population on Minami-daito Island in 2006, and to discuss population estimates of Daito Scops Owls.

METHODS

The Daito Scops Owl, a small owl weighing approximately 85 g, is now resident only on Minami-daito Island. Monogamous pairs and solitary males hold territories year round. Cavities in Australian pine *Casuarina equisetifolia* provide important sites available for either nesting and roosting. The species is single-brooded, with egg-laying taking place mainly in April. The clutch consists typically of 2–3 eggs, which the female incubates for approximately 26 days. After hatching, both parents feed the

nestlings for approximately 30 days (Takagi et al. 2005).

Minami-daito Island is a hilly raised atoll with an area of about 30 km², situated in the sub-tropical region of southern Japan. The island's hills reach approximately 15 m in elevation and are about 1 km from side to side. Forests comprise only 3.9 km² of the island, and although fully mature trees reach about 15 m in height, forests at the periphery of the island reach only 5 m. Within the ring of hills most land is devoted to growing sugarcane. The island has a population of 1,400 people.

The study was conducted from sundown (until 24:00 on 35 nights from 25 March to 10 May 2006). The 245 sites at which male responses were detected in 2005 were revisited in 2006 (see Takagi et al. 2007), as these represent almost the entire area of habitat suitable for the Daito Scops Owls to breed in on Minami-daito Island. We used playback of owl hoots, at a rate of 35 hoots per min, or duet-calls by a pair, in order to stimulate owls into responding at each site. The hoot-calls used during the playback had previously been recorded in the study area; the calls were broadcast for about three minutes at each of the 245 sites, and responding males were located on a map. Although females sometimes call like males, they also have calls described as funi or funya, allowing calling females to be distinguished from males by their hoarseness and brevity. Playback was conducted with either a Marantz PMD670 or PMD660 IC recorder via a Toshiba BK-701 portable speaker.

We monitored breeding at two nests in 2002, five nests in 2003, nine nests in 2004, and 17 nests in 2005. All the nests were in natural tree cavities. We also confirmed whether or not nests that had been occupied one year were occupied in subsequent years. We captured owls at each nest site (although it was not always possible to catch both members of the

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