

Threatened Birds of Asia:

The BirdLife International Red Data Book

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Recommended citation

BirdLife International (2001) *Threatened birds of Asia: the BirdLife International Red Data Book*. Cambridge, UK: BirdLife International.

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ISBN 0 946888 42 6 (Part A)

ISBN 0 946888 43 4 (Part B)

ISBN 0 946888 44 2 (Set)

British Library-in-Publication Data

A catalogue record for this book is available from the British Library

First published 2001 by BirdLife International

Designed and produced by the **Nature**Bureau, 36 Kingfisher Court, Hambridge Road, Newbury, Berkshire RG14 5SJ, United Kingdom

Available from the Natural History Book Service Ltd, 2–3 Wills Road, Totnes, Devon TQ9 5XN, UK. Tel: +44 1803 865913 Fax: +44 1803 865280 Email nhbs@nhbs.co.uk
Internet: www.nhbs.com/services/birdlife.html

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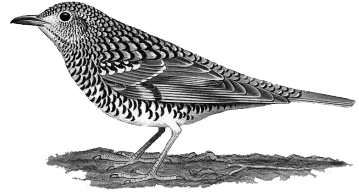
AMAMI THRUSH

Zoothera major

Critical ■ C2b

Endangered □ D1

Vulnerable □ A1c; A2c; C1; D2



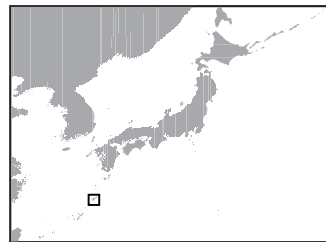
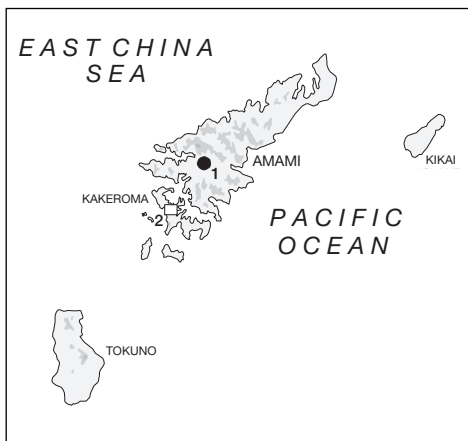
This thrush qualifies as Critical because it has a single, tiny, declining population as a result of deforestation for timber, perhaps compounded through predation by an introduced mongoose.

DISTRIBUTION The Amami Thrush (see Remarks 1) is endemic to the Amami group in the Nansei Shoto islands in southern Japan, where it is recorded as follows:

■ **JAPAN** *Amami-ooshima* island, in the central and western parts, currently (Ishida *et al.* 1994, 1995, also Ogawa 1905 in Brazil 1991), where there have been several recent surveys and ecological studies (e.g. Kobayashi 1930, Higuchi and Hanawa 1985, Sugimura 1988, Abe 1994, Ishida *et al.* 1994, 1995, Amami Ornithologists' Club 1997a,b, Khan and Yamaguchi in press; see Remarks 2);

Kakeroma-jima island, undated (Ishida *et al.* 1994).

POPULATION This species appears to be naturally rare within its tiny range. No specimens were collected on Amami during fieldwork in 1922 (Kuroda 1925); Kobayashi (1930) described it as "rare" there in 1928, and he did not find it on any other islands. There was an aural record in the early 1950s (Hachisuka and Udagawa 1959) and it was thought "extremely rare" in 1974 (Y. Yamashina in King 1978–1979). Only seven individuals were located on Amami during a census in May 1986 (Sugimura 1988), and soon afterwards a population of under 100 was estimated (K. Sugimura in Collar *et al.* 1994). Further censuses there during the 1990s located more individuals: Ishida *et al.* (1994) estimated the density of this species at 2.1 birds per km² of mature broadleaf evergreen forest; Ishida *et al.* (1995) located 32 singing males in mid-March 1995 and estimated that there were not more than 50 breeding males; Amami Ornithologists' Club (1997a,b) counted 29 singing birds in spring 1996, and estimated the total breeding population at a little more than 58 (i.e. 29 × 2) birds. The number of singing birds recorded along the route from Satorindo to Kinsakubaru and the Kamiya in



The distribution of Amami Thrush *Zoothera major*:

(1) Amami-ooshima; (2) Kakeroma-jima.

● Recent (1980–present) □ Undated

central Amami (the core of the range of this species) halved between 1994 and 1995, indicating that a significant decline had taken place (Ishida *et al.* 1995), and fewer birds still were recorded in 1996 by Amami Ornithologists' Club (1997a,b). However, Khan and Yamaguchi (in press) refer to unpublished work by A. A. Khan and M. Takashi which puts the total population of the species at 75 pairs.

ECOLOGY Habitat The Amami Thrush is a shy bird that is often found near moss-covered rocks by forest streams (Kiyosu 1965). It is confined to mature subtropical broadleaf evergreen forest (more than 60 years old) around humid valleys at altitudes of 100–400 m (Higuchi and Hanawa 1985 in Brazil 1991, Ishida *et al.* 1994).

Food Kiyosu (1965) reported that this species feeds on insects and fruits, a diet similar to Scaly Thrush *Zoothera dauma*. Food passed from a male to an incubating female was 95% earthworms, and her consumption rate was recorded as 13–14 a day, this being calculated as involving a minimum of 50 g biomass (Khan and Yamaguchi in press).

Breeding The breeding season is in May and June, when the species nests on low branches c.1.5–3 m above the ground, and lays clutches of 3–4 eggs (Kiyosu 1965). A nest was found in May 1999 11.5 m up in a main fork in a *Schefflera octophylla* tree inside forest (Khan and Yamaguchi in press).

THREATS The Amami Thrush is one of five threatened members of the suite of seven bird species that are entirely restricted to the “Nansei Shoto Endemic Bird Area”, threats and conservation measures in which are profiled by Stattersfield *et al.* (1998).

Habitat loss The main threat to this species has been the clearance of the mature broadleaf forest that it requires, either primary forest or forest that has not been logged for at least 60 years, which only covers 10–15 km² on Amami, less than 5% of the area of the island (Research Center, WBSJ 1995). Forest trees were not heavily utilised locally before 1954, and even in 1971 an official report indicated that 84% of the 720 km² island were “still fairly well forested” (Bruce 1975b); but large areas of mature forest have been clear-cut in the last few decades and replaced by young secondary forests, although this logging is only economically feasible through national and provincial government subsidy (Sugimura 1988; see Remarks 4 under Ryukyu Woodcock *Scelopax mira*). The apparent declines in the numbers of this species during the 1990s were thought to have been caused by the clear-felling of the natural forest favoured by this species (Amami Ornithologists' Club 1997a,b). The situation on Kakeromajima is not at all clear: aerial observation of the island, apparently in the early 1990s, suggested that its forests are “not well developed”, rendering it uncertain “whether breeding birds are still on the island” (Ishida *et al.* 1994).

Introduced predators Another factor that could have contributed to the recent decline of this species is predation by the Javan mongoose *Herpestes javanicus* (or *H. edwardsi*), which was introduced for snake control and it is now found around Naze City (Abe 1994, Ishida *et al.* 1994) but is beginning to colonise the mature forest to the south-west (see Measures Proposed under Ryukyu Woodcock).

MEASURES TAKEN Legislation The Amami Thrush was designated as a Natural Monument in 1971 (Kato *et al.* 1995) and as a “Special Bird” in 1972 (Environment Agency of Japan 1976); it was listed as a National Endangered Species in 1993 (Ishida *et al.* 1995) and it is on the national Red List of Japan. This means that its conservation importance is recognised and it can be used as a reference species in environmental impact assessments for development projects (Environment Agency of Japan *in litt.* 1999).

Protected areas Yuwangatake (3.2 km² including 1.03 km² of Special Protection Area) on Amami was established as a National Wildlife Protection Area mainly for the conservation of Amami Thrush and Amami Jay *Garrulus lidthi* (Environment Agency of Japan *in litt.* 1999).

More recently, Kinsakubaru (3.0 km²) and Kanengotake (1.6 km²) have also been established as Prefectural Wildlife Protection Areas for these two species (SC).

MEASURES PROPOSED *Habitat protection* This species is confined to either primary forest or forest that has not been logged for at least 60 years, and preservation of the few remaining areas of such mature forest in the central and western parts of Amami is vital for its conservation. Logging of mature forest should be stopped (and subsidies that support such activities withdrawn at once), and areas of medium-aged forest allowed to develop into mature forest that may be suitable new habitat for it (see Ishida *et al.* 1995). Sugimura (1988) proposed that on Amami the length of forestry rotation cycles should be increased, in order to improve both the wildlife habitat on the island (i.e. to increase the area of mature forest suitable for this species) and the economic efficiency of local forestry, and that there should be changes in the use of subsidy by the government. Logging on the island should henceforward be restricted to a regime which would result in a permanent mosaic of cut-over and mature stands, and forest road construction should be halted as a means of preventing both further habitat fragmentation and easier access by introduced predators; government subsidies that were previously used in creating employment through logging and farming should be re-directed into work that assists the conservation of the endemic wildlife of the island (Sugimura *et al.* 2000).

Control of introduced predators Control of introduced predators (notably the Javan mongoose) may be important for the survival of this species (and for several other threatened endemic species) (Ishida *et al.* 1995). Comments on this matter are in the equivalent section under Ryukyu Woodcock.

Research The status of the population of this species on Amami should continue to be monitored in a rigorous and replicable manner. Surveys should be conducted on Kakeromajima, where it has been reported to occur, in order to develop appropriate conservation measures there.

Local awareness This species would benefit from a local education campaign, the focus of which might be the Amami Jay but which nevertheless would seek to build pride in and commitment to all the endemic and threatened taxa to be found in Amami's forests (see Remarks 1 under Amami Jay).

REMARKS (1) This taxon has often been regarded as a subspecies of Scaly Thrush *Zoothera dauma* (and was listed in this way as a threatened bird by King 1978–1979), but Ishihara (1986) proposed that it be treated as a full species on the basis of morphological and vocal differences. It was therefore treated as threatened by Collar and Andrew (1988), but under the mistaken name *Zoothera amami*. It has to be noted, however, that the distinctiveness of this form is highly marginal (see, e.g., Takashi *et al.* 1999), and its vocal differences, emphasised by Brazil (1991) as one of the key distinguishing features, do not appear to be unique (see Clement 2001). On the other hand, its status as a full species under Japanese environmental law has an interesting effect in tending to preserve this taxonomic status. (2) If, as indicated under Ecology, this species is mainly restricted to mature forest, then its distribution (or at least the distribution of reproductively active birds) on the island will be very similar to that of the Amami rabbit *Pentalagus furnessi*, focusing south and west of Naze City in an area of approximately 200 km² (see Figure 3 in Sugimura *et al.* 2000).