First record of Torotoroka Scops Owl *Otus madagascariensis* nesting on the ground

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Première observation de nidification au sol du Petit-duc de Madagascar *Otus madagascariensis*. La nidification au sol du Petit-duc de Madagascar *Otus madagascariensis* a été observée pour la première fois le 25 novembre 2007. L'oiseau couvait quatre œufs de couleur blanche placés dans une petite dépression dans le sous-bois de la Réserve Spéciale de Berenty, dans le sud de Madagascar.

Summary. The Malagasy endemic Torotoroka Scops Owl *Otus madagascariensis* was recorded for the first time nesting on the ground. The bird was incubating four white eggs placed in a small depression in the forest substrate at Berenty Special Reserve, southern Madagascar, on 25 November 2007.

Torotoroka Scops Owl *Otus madagascariensis* (Rasmussen *et al.* 2000) is one the smallest of the seven species of owls in Madagascar, with a mean weight of 108 g (*n*=8 individuals) in the Antsalova region of western Madagascar (Ramamonjisoa 2007). Ravokatra *et al.* (2003) reported a mean weight of 100.9 g (*n*=28) for Madagascar Scops Owl *O. rutilus*, but this study did not separate *O. madagascariensis* and *O. rutilus*. Torotoroka Scops Owl is a common nocturnal species in forest and wooded habitat along western and southern coasts of Madagascar (Rasmussen *et al.* 2000, Schulenberg 2003). The species' natural history is poorly known, except for a recent study of its breeding ecology and diet by Ramamonjisoa (2007) in deciduous forest of central western Madagascar. Langrand (1990) reported nesting in November and December for Madagascar Scops Owl, which probably includes both species since this predates their specific separation. Nests are placed in tree cavities, and occasionally in 'abandoned nests'. Clutch size ranges from 2–5 eggs (Langrand 1990, Ramamonjisoa 2007).

During November 2007, L-ARdR visited Berenty Special Reserve (BSR) in southern Madagascar. BSR is in the southern biogeographic domain and is characterised by sparse and irregular annual rainfall, averaging 500 mm, and supports an endemic vegetation of spiny forest with some riparian gallery forests (Langrand 1990). Within a gallery forest at 16.35 hrs on 25 November, L-ARdR observed an adult Torotoroka Scops Owl flush from the ground, exposing four white eggs in a small depression on the forest floor. The leaf litter had been pushed or scraped away from the nest to leave a depression. The depth of the nest was 20 mm, and no nesting material was found in the nest or supporting the eggs (see Fig. 1). After taking photographs of the eggs, L-ARdR moved 25 m from the nest and after five minutes the adult returned, settled on the eggs and commenced incubating (Fig. 2). The bird incubated until 17.40 hrs, whereupon L-ARdR left the site and owl undisturbed. He did not have the opportunity to return to the nest site in order to determine if the eggs hatched. Madagascar Scops Owl, and probably Torotoroka Scops Owl, are known to nest in tree holes (cavities), and infrequently in abandoned stick nests (Langrand 1990, König *et al.* 1999). Madagascar Scops Owls have also been observed occupying tree cavities in the humid rainforest of the Masoala Peninsula for roosting (pers. obs.), whilst in the dry deciduous Tsimembo Forest of the Antsalova region of central western Madagascar, Torotoroka Scops Owls nested in natural tree holes averaging 5.8 ± 2.2 m (*n*=7) above the ground, with a mean clutch size of 2.4 ± 0.9 eggs (*n*=5) (Ramamonjisoa 2007). There have been no other reports of ground-nesting by either Madagascar or Torotoroka Scops Owls, and ground-nesting by *Otus* spp. has not previously been documented, making this the first record of such behaviour for the genus (König *et al.* 1999).

This observation of ground-nesting by Torotoroka Scops Owl suggests a possible shortage of natural tree cavities in the Berenty region due to the forest structure and type of trees or to intra-

Figure 1. Ground nest of Torotoroka Scops Owl *Otus madagascariensis*, Berenty Special Reserve, Madagascar, 25 November 2008 (Lily-Arison Rene de Roland)

Nid au sol du Petit-duc de Madagascar *Otus madagascariensis*, Réserve Spéciale de Berenty, Madagascar, 25 novembre 2008 (Lily-Arison Rene de Roland)

Figure 2. Incubating Torotoroka Scops Owl *Otus madagascariensis*, Berenty Special Reserve, Madagascar, 25 November 2008 (Lily-Arison Rene de Roland)

Petit-duc de Madagascar *Otus madagascariensis* en train de couver, Réserve Spéciale de Berenty, Madagascar, 25 novembre 2008 (Lily-Arison Rene de Roland)

and interspecific competition (e.g. by Madagascar Kestrel *Falco newtoni* and Broad-billed Roller *Eurystomus glaucurus*). Other possible causes for this ground-nesting attempt might be a low density of terrestrial predators in the area permitting ground nesters to survive, or that this was an inexperienced pair that did not select a tree cavity for nesting. It would be interesting to search BSR and other gallery forests in the dry southern biogeographic region to determine whether Torotoroka Scops Owls might regularly make ground-nesting attempts, and if they are successful.

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