

## Confirming a new population of the endangered *Paroedura masobe* (Squamata: Gekkonidae) in the relict Betampona low elevation rainforest, eastern Madagascar

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The genus *Paroedura* embraces a diverse radiation of species endemic to Madagascar and the Comoro islands. This group of nocturnal large-eyed geckoes are widely distributed in a great variety of habitats, from the North to the South of the Madagascan territory (Nussbaum and Raxworthy, 2000; Glaw and Vences, 2007).

The largest species of the genus is *Paroedura masobe*, which is so far known only from low elevation sites in the type locality of Zahamena (Nussbaum and Raxworthy, 1994; Glaw and Vences, 2007; Fig. 1). It is a species with a much localized distribution on low elevation primary forest (Nussbaum and Raxworthy, 1994). It is also quite actively searched for the pet-trade, being one of the most attractive terrestrial geckos (IUCN, 2011).

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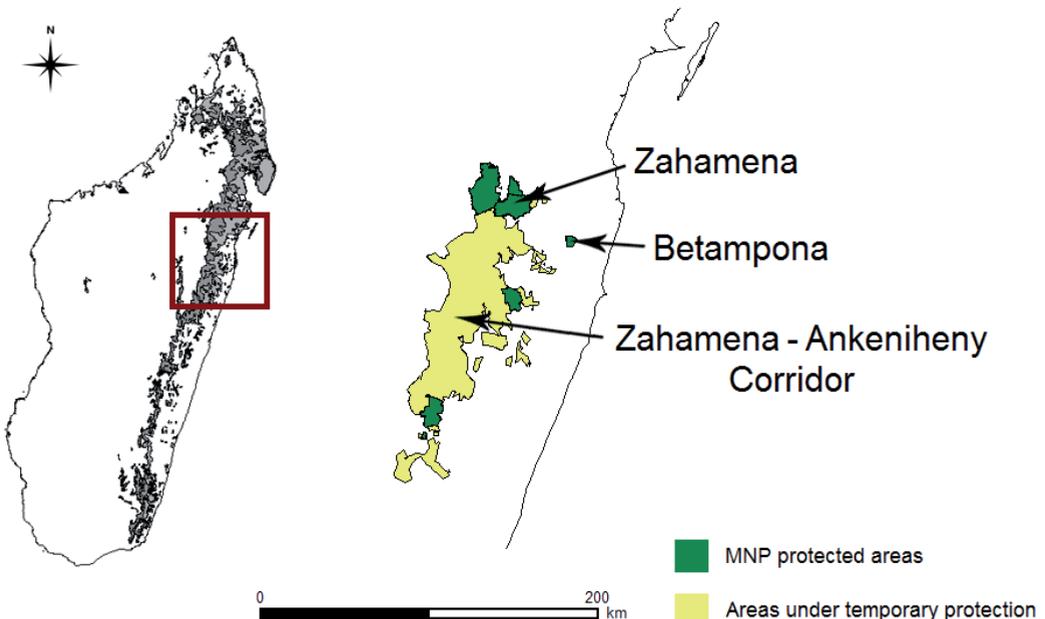
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During intensive herpetological surveys carried out from 2007 at RNI de Betampona (Rosa, 2008; Fig. 1) we found some individuals of *P. masobe*, thus confirming the species presence in this rainforest.

Created in 1927 and currently surrounded by deforested landscapes, the Betampona reserve is a 2,228 ha relict forest fragment located in the northern central east coast of Madagascar. It still holds about 50% of primary-



**Figure 1.** Map showing the current known distribution (Zahamena-Ankeniheny Corridor) and the new isolated locality for *Paroedura masobe* at Betampona, Madagascar. In grey is represented the remaining primary low and mid altitude evergreen humid forests.



**Figure 2.** Individuals of *Paroedura masobe* from Betampona, eastern Madagascar: A. adult male on a vertical branch; B. close up; C. dorsal view of a young adult male. Photos A and B by G. M. Rosa; photo C by F. Andreone.

mature forest, which represents a surviving patch of the former extensive evergreen lowland rainforest (Razokiny, 1985; Britt *et al.*, 2003; Glessner and Britt, 2005).

The first individual, an adult male (SVL of 91 mm and TL of 160 mm; Fig. 2.A,B) was found on the 21 February, 2007 at 21:00 in a site locally known as Maintimbato (17°53.512'S, 49°13.633'E, 320 m

a.s.l.). It was hanging on a vertical branch, about 1.5 m above the forest floor. Surrounding habitat was primary vegetation with an air temperature of 20°C and 98% of humidity. Even with work efforts aimed at searching for herpetofauna that lasted seven months, only one individual was seen. A second observation occurred on the 19 October, 2010 at 21:30: a young adult male (Fig. 2.C) was found on a branch about 0.3 m from the ground

near *Piste Principal* (17°55.217'S, 49°12.015'E, 490 m a.s.l.). Our observations came this way to confirm the previous occasional sight made by the Madagascar Fauna Group (MFG) agent (and co-author) Jean Noël.

The new record of *P. masobe* in Betampona extends the known distribution of the species to the coast, demonstrating that this taxon is not restricted to the Zahamena-Ankeniheny Corridor, but it is also present in isolated forest fragments. The nearest known populations are found at the Zahamena National Park at a distance of approximately 30 km.

A victim of its attractiveness and rarity (Nussbaum and Raxworthy, 1994), *P. masobe* is possibly threatened by collecting for the international pet trade: according to IUCN (2011) there is some illegal collection within Betampona and Zahamena National Park. Recently evaluated and listed as Endangered by IUCN Redlist, *P. masobe* is a species highly dependent on habitat preservation efforts in order to sustain the remnant populations already fragmented (CBSG, 2002; IUCN, 2011). We believe that the finding of this novel population represents a new hope for this species preservation and protection since Betampona is a restricted reserve co-managed by MNP (Madagascar National Parks) but also MFG (Madagascar Fauna Group), a NGO oriented to biodiversity conservation and research. Due to the ongoing high habitat degradation between Betampona and Zahamena, once again we highlight the need for creation of a corridor connecting this two protected areas (Andreone et al., 2010) or integration of Betampona in the Zahamena-Ankeniheny Corridor (Fig. 1).

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