

Herpetofauna of Round Island, Mauritius

Zoltán KORSÓS¹ & Balázs TRÓCSÁNYI²

¹Department of Zoology, Hungarian Natural History Museum, Baross u. 13, H-1088 Budapest, Hungary

E-mail: korsos@zoo.zoo.nhmus.hu

²Department of Conservation, Danube-Drava National Park Directorate, Tettye tér 9, H-7625 Pécs, Hungary

E-mail: balazs.trocsanyi@ktm.x400gw.itb.hu

Abstract

Round Island, north of Mauritius in the Indian Ocean, is inhabited by eight species of reptiles (no amphibians), five of which are endemic. The original vegetation of the island was clear-cut in the 18th century. Introduced goats and rabbits were eliminated relatively recently to protect the remnants of the palm savannah, then the whole island was designated as a nature reserve. A Hungarian team visited the island in November 1999 and April 2001, to carry out herpetofaunal assessments related to all eight species. Whereas no specimen of the Burrowing Boa was encountered, good populations of Telfair's and Bojer's Skinks, as well as of the Ornate Day Gecko, could be estimated. Several specimens of Durrell's Night Gecko, the Keel-scaled Tree Boa, and 33 specimens of Günther's Gecko were observed.

Key words: Round Island, Mauritius, herpetofauna, endemic reptiles, conservation

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INTRODUCTION

The tiny, volcanic Round Island with its 151 hectares lies 20 km to the north of Mauritius in the Indian Ocean. It is inhabited by eight species of reptiles (no amphibians), five of which are endemic, occurring nowhere else in the world.

The original vegetation, hardwood ebony and teak forests, was clear-cut in the 18th century. Introduced goats and rabbits were eliminated relatively recently (in 1979 and 1986, respectively) to protect the remnants of the palm savannah, then the whole island was designated as a nature reserve with extremely limited access for scientific research only. In 1989, a conservation management plan was set up for the island to restore its vegetation, to control the invasion of alien species, and to monitor the population changes of its native and endemic flora and fauna.

The aim of this paper is to summarize in brief the information presently available on the remarkable herpetofauna of Round Island, to give an illustrative list of the eight known reptile species, and to provide a comprehensive literature (without references) to initiate further herpetological studies. The scientific results of our expeditions will be published elsewhere.

MATERIAL AND METHODS

With the help of the local authorities, the National Parks and Conservation Service (NPCS) of the Ministry of Agriculture, Food, Technology & Natural Resources, and the Mauritian Wildlife Fund (MWF), a Hungarian team visited the island in November 1999, and later, with the support of Fauna and Flora International, in April 2001. Five and ten days were spent on Round Island, respectively, the necessary material being carried over by governmental helicopters, following the strict expedition protocol set up previously by NPCS and MWF. There is no

permanent research station on the island at present, so expedition members have to bring everything themselves (incl. food, fresh water, tents, sleeping bags, etc.), and, similarly, have to remove all waste material when leaving the island. Usually there are four management expeditions organized by NPCS every year, with the main purpose being to monitor plant reintroduction and vegetation recovery.

Surveys and censuses of herpetofauna were made every full day during the early morning, late afternoon and evening hours; midday was left out because of the extremely hot period when all reptiles appeared to rest. Günther's geckos were caught and measured on all occasions if possible; the same applied for *Casarea dussumieri*, whereas other geckos and skinks observed were only noted during the census. In the second visit to the island, special methods were used to rediscover *Bolyeria multocarinata*; the results will be discussed in another paper.

RESULTS AND DISCUSSION

Round Island reptiles include three geckos (Gekkonidae), three skinks (Scincidae), and two snake species (the only known members) of the family Bolyeriidae, according to the following list (endemic forms are marked by an asterisk):

Gekkonidae:

Günther's Gecko *Phelsuma guentheri*
Boulenger, 1885*

Ornate Day Gecko *Phelsuma ornata*
Gray, 1825

Durrell's Night Gecko *Nactus serpensinsula durrelli* Arnold & Jones, 1994*

Scincidae:

Telfair's Skink *Leiopisma telfairii*
(Desjardins, 1831)*

Bojer's Skink *Gongylomorphus bojerii*
(Desjardins, 1831)

Bouton's Skink *Cryptoblepharus boutonii*

(Desjardins, 1831)

Bolyeriidae:

Keel-scaled Tree Boa *Casarea dussumieri*
(Schlegel, 1837)*

Burrowing Boa *Bolyeria multocarinata*
(Boie, 1827)*.

Whereas no specimen of the Burrowing Boa was encountered (the last observation of this species dates back to 1974) during our two expeditions, relatively good populations of Telfair's and Bojer's Skinks, as well as of the Ornate Day Gecko could be estimated. Several specimens of Durrell's Night Gecko, the Keel-scaled Tree Boa, and 33 specimens of Günther's Gecko – exceeding the results of all previous expeditions – were observed and measured accordingly. Bouton's Skinks, in accordance with the former observations, seemed to be confined to the rocky shoreline surfaces. The Mauritian nature conservation authorities put enormous efforts into the restoration of the native vegetation of

Round Island, which could help to stabilize the different reptile populations.

During the second expedition (April 2001) our aim was to search for evidence of the presence or extinction of the Burrowing Boa (*Bolyeria multocarinata* (Boie, 1827)). This animal has been seen only four times in the 20th century, and since its last observation in 1974 no signs of its survival have been discovered. Because our searches, too, were unsuccessful in this respect, we consider this snake species to be extinct.

In our detailed reports (available through the National Parks and Conservation Service, Reduit, Mauritius) conclusions were drawn about the status of and the possible threats to the unique herpetofaunal assemblage of Round Island. We also proposed to the Mauritian nature conservation authorities to organize more regular and standardized surveys to follow the changes in the different reptile populations.

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1. Round Island from the air

2. Palm savannah: typical vegetation of the western part of Round Island



3. Günther's Gecko
Phelsuma guentheri
Boulenger, 1885



4. Günther's Gecko
Phelsuma guentheri
Boulenger, 1885

5. Ornate Day Gecko
Phelsuma ornata Gray,
1825



6. Durrell's Night
Gecko *Nactus ser-*
pensinsula durrelli
Arnold & Jones, 1994



7. Telfair's Skink
Leiolopisma telfairii
(Desjardins, 1831)

8. Bojer's Skink
Gongylomorphus bojerii (Desjardins,
1831)



9. Bouton's Skink
Cryptoblepharus boutonii (Desjardins,
1831)



10. Burrowing Round Island Boa *Bolyeria multocarinata* (Boie, 1827)

The only museum specimen in Mauritius



11. Keel-scaled Tree
Boa *Casarea dussumieri* (Schlegel, 1837).
Adult's head



12. Keel-scaled Tree
Boa *Casarea dussumieri*
(Schlegel, 1837).
Juvenile colouration