

Herpetofauna Assessment of Long Island, Wallabi Group – 8 November 2005



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MBS Environmental

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Introduction

Long Island lies in the Wallabi Group of the Houtman Abrolhos and is roughly 11 ha in extent with a maximum elevation of 2 m. It is part of the Long Island chain in the centre of the Wallabi Group and is a composite island consisting of unconsolidated coral rubble and some smaller areas of sand. The vegetation and relationship to other islands has been well documented by Harvey *et al.* (2001).

The reptiles of Houtman Abrolhos were first documented by Alexander (1922) and subsequently by numerous surveys of the islands by Storr and the Aquinas College, Perth, which were summarized and re-evaluated by Storr *et al.* (1983). More recently there has been extensive research on the reptiles of the Wallabi Islands and opportunistic examination of several islands in the Pelsaert Group that has been summarized by How *et al.* (2004). The Abrolhos islands are the type locality of six reptile taxa, *Pogona minor minima*, *Heteronotia binoei*, *Christinus marmoratus*, *Strophurus spinigerus*, *Egernia stokesii stokesii* and *Eremiascincus richardsonii*.

This report examines the herpetofauna of Long Island, the site for a new nature-based resort development.

Methods

A search for herpetofauna on Long Island was undertaken on the 8th of November 2005, by four expert herpetologists. It was conducted between 1130 and 1530 hours and followed an earlier survey that day to East Wallabi Island to clear pitfall trap lines and conduct a search for reptiles there. The weather for November 8th was strong southeasterly winds during a clear day with a maximum temperature in the low 20's.

The four herpetologists undertook opportunistic searching of all identified vegetation types (Harvey *et al.* 2001) along the entire length of the island. Opportunistic searching involved raking litter, rubble and rubbish, examining hiding places under coral slabs and old stumps and walking through denser vegetation looking for reptile movement. All areas of sand were searched for tracks that could indicate the presence of reptiles.

All Western Australian Museum records of specimens from the Abrolhos islands have been collated to document earlier survey information on Long Island. The notebooks of Ron Johnstone of the Western Australian Museum were consulted for reptile

information covering the numerous visits to Long Island made between 1977 and 1983 in the course of his studies on sea-bird breeding and Ric How examined the Island on September 1st 1977.

Results

During the sampling period six observations were made of the skink, *Menetia greyii*. All individuals were under slabs or litter and two were captured for later examination of their DNA to ascertain the likely source of origin of this isolated population. No other lizards were seen and no tracks of lizards were recorded from the two major areas of fine sand that were encountered.

The collections of the Western Australian Museum have a record of the King Skink, *Egernia kingii*, from Long Island that was collected by Aquinas college students during August 1970. No other reptile species have been vouchered from Long Island previously.

There was less breeding bird activity noted on the island than was expected. The only active nest encountered was that of the Grey-breasted White-eye, *Zosterops lateralis*, in which a large and nearly fully-fledged chick was seen. There was no indication that breeding was still in progress for any of the Bridled, Caspian, Fairy or Crested Terns recorded, although flightless chicks of the Pacific Gull, *Larus pacificus*, were noted.

Discussion

These results represent the first record of *Menetia greyii* from Long Island. The only previously known record of *M. greyii* from the Wallabi Group of islands was that collected on Eastern Island by Aquinas College students in August 1975; Eastern Island is a composite coral rubble island similar to Long Island. There have not been any records of *M. greyii* from either East or West Wallabi Islands, although the species is regularly encountered on the composite islands of the Easter and Pelsaert Groups and has been recorded on North Island (How *et al.* 2004).

This very restricted reptile fauna of Long Island is characteristic of the islands that are comprised of coral rubble. A previous intensive survey of Keru and Suomi Islands, both consisting only of coral rubble and located in the Easter Group, recorded a single individual of *Menetia greyii* on each (How *et al.* 2004).

The Museum specimen of the King Skink from Long Island indicates that they were recorded from the island, however, the current survey suggests that their continued presence is unlikely. This is particularly so given the intensity of the search, the lack of obvious tracks of the species in sandy areas and the lack of any movement indicating their presence. This is contrasted with the situation encountered only 45 minutes earlier on the same day at East Wallabi where *E. kingii* were actively foraging and their tracks recorded in numerous sandy habitats.

The total reptile fauna of the Houtman Abrolhos comprises 23 species, twenty of which are known from the Wallabi Group islands with 19 of these from West and 16 from East Wallabi Islands (How *et al.* 2004). Our most recent pit fall trapping survey of both of the larger Wallabi islands has added a further two species to the list of known reptiles from the Houtman Abrolhos. West and East Wallabi Islands are mainland in origin, consisting of Cretaceous and Tertiary limestone, siltstone and marl, and have been isolated by rising sea levels for between 6000-8000 years (Harvey *et al.* 2001). The herpetofauna is a subset of the adjacent mainland.

Long Island is 4 km from Eastern Island, between 20-25 km from the Easter Group and North Island and over 50 km from the mainland, on which *M. greyii* is known to be present. It is unknown how this species has come to inhabit the island but DNA analysis of tissue from the animals captured on the island may answer the question of population origin.

References

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