

Assomption Island: Importance for biodiversity

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Assomption Island is of great importance to biodiversity in Seychelles in its own right, and in terms of its relationship with and potential to impact the biodiversity of Aldabra Atoll.

Relationship with Aldabra: Assomption Island is situated 27km southeast of Aldabra Atoll, which means that the predominant south-east trade winds blow directly from Assomption to Aldabra. For this reason, Assomption needs to be kept “clean” because any toxic pollutants, or invasive species (especially birds and insects) will be carried from Assomption to Aldabra by wind and surface currents. (It is for this reason that the Seychelles Islands Foundation mounted an expensive, labour-intensive, and successful campaign to eradicate two species of invasive birds – Red-whiskered Bulbul and Madagascar Fody -- from Assomption to prevent them colonising Aldabra and competing with the endemic birds).

Physical Features: Assomption, 1,171 hectares in area, is 6km long and 1.6km wide, with a total coastline of 17km.

Beaches: Nearly half (46%) of the 17km coastline comprises white calcium carbonate beaches totalling 7,820m in length. A single unbroken beach, 6,000m in length, spans most of the west coast of Assomption. It is arguably the most beautiful beach in all of Seychelles with clear turquoise waters immediately offshore — a potential paradise for tourism.

Dunes and wind-swept beaches: On the south east coast are several high sand dunes, rising to 30 metres above sea level which are a special natural feature of the island that host unique communities of plants and animals. (See following sections). The dunes are situated adjacent to another remarkable beach 1,450m in length.

Approximately seven smaller beaches, ranging from 25 to 150 metres in length are scattered along the ruggedly beautiful, wild and windswept eastern coast.

Human history: Originally, Assomption had a remarkable fauna and flora, similar to that of Aldabra. It hosted massive populations of breeding sea birds and green turtle nesting populations that rivalled those of Aldabra. A population of Abbott’s Booby (now extinct in the Western Indian Ocean) roosted in tall trees leeward of the dunes. It had giant tortoises and flightless rails (*tyomityo*).

Guano mining began at the turn of the 20th Century, and by 1945 more than 160,000 tonnes of guano (sea bird droppings) had been scraped off the island. Some deposits were recorded as being 15 metres thick. Removal of the plants caused the demise of the sea birds. Guano workers also heavily exploited the nesting green turtles (see following section).

Biodiversity remaining today: In spite of major and tragic losses, much of the biodiversity has survived and there is potential to rehabilitate the island.

Birds: Many of the endemic birds of Aldabra also used to occur on Assomption including a race of flightless rail *Dryolimnas cuvieri abbotti*, said to be “very common” in 1908 but exterminated by 1937. Likewise all other endemic land birds with the exception of a race of Souimanga Sunbird were exterminated due to habitat destruction in the wake of guano mining. Assomption also held significant seabird colonies but all species have been exterminated including most notably Abbott’s Booby, which survives today only at Christmas island (eastern Indian Ocean). Pied Crow may still breed but may have been exterminated in recent times due to the mistaken belief it is a recent introduction to Seychelles.

There is the potential to reintroduce several of endemic land bird species from Aldabra and indeed vagrant records of Comoro Blue Pigeon, Madagascar Coucal and Madagascar Kestrel suggest that natural colonisation may one or more species is a possibility. Many migratory species have been recorded and in total significantly more species of birds have been recorded here than anywhere else south of the Amirantes with the exception of Aldabra (Assomption 76, Cosmoledo 59, Astove 48, Farquhar 53, Providence 42, St Pierre 40).

Sea turtles: When guano exploitation first began in the early 1900s, Aldabra and Assomption may have hosted similar-sized green turtle nesting populations. In fact, with 7.8km of high quality nesting beach at Assomption, compared to only 5.2km at Aldabra, Assomption may have the potential to host more nesting sea turtles than Aldabra. Assomption, however, suffered a much steeper population decline than Aldabra, because the human settlement was located immediately adjacent to the 5km-long principal nesting beach, thus giving the labourers easy access to the nesting turtles at a time when calipee was fetching high prices on the international market. In the early 1900s, at peak season, at Assomption, as many as 200-300 females were reportedly turned per night.

The turtles of Aldabra have been well protected since 1968, while exploitation at Assomption continued for some time. In 1984, Mortimer estimated the annual nesting population at Aldabra to be ~2000 females, and at Assomption ~200 females. Both populations have increased since then with protection. Aldabra now hosts the largest green turtle nesting population in the Western Indian Ocean (WIO) region. Given adequate protection of turtles and habitat, the Assomption nesting population can be expected to continue to rise in a similar manner.

Giant tortoises: During the period of guano mining, giant tortoises were eliminated from Assomption, but some were later re-introduced from Aldabra. Today a breeding population of at least several hundred giant tortoises inhabits Assomption, especially in the vicinity of the dunes where stretches of “tortoise turf” can be found.

Lizards: One endemic species, the Abbott’s day gecko occurs on Assomption, along with the native Bouton’s snake eyed skink.

Plants & insects: The native *Tournefortia argentea* (bwa taba) is one of the dominant plants in the dune habitat and elsewhere on Assomption. This is the unique food plant

of the endemic day-flying moth *Utetheisa lactea aldabrensis*, endemic to Assomption, Aldabra, Cosmoledo, Farquhar, Providence and the Glorieuses islands. A special form *assumptionis* was described from Assomption in 1919.

The grasshopper *Ptenoscirtus aldabrae*, endemic to Assomption, Aldabra, Cosmoledo and Europa, is among the insects that live in the vicinity of the sand dunes. A large diversity of mud-dauber and mud-potter wasps frequent the marshy area next to the dunes.

A number of plants with a very restricted distribution are found on Assomption (see accompanying table).

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