

**ATOLL RESEARCH BULLETIN
NO. 495**

**BIODIVERSITY SURVEYS AND CONSERVATION POTENTIAL OF INNER
SEYCHELLES ISLANDS**

EDITED BY

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Aerial views of islands in the inner Seychelles: *Upper*: Granitic islands; Cousin and Cousine. *Lower*: Bird, a coralline island on the edge of the Seychelles Bank. Photos © Seychelles Tourism Marketing Authority.

PREFACE

The Republic of Seychelles is made up of 115 islands spread over an Exclusive Economic Zone (EEZ) of 1,374,000 km² (99.97% of which is sea) in the western Indian Ocean. The islands fall into three main groups, each with a different geological character: the central or inner islands (actually the northernmost group), most of which are predominantly granitic; the low-lying sand cays of the Amirantes and Farquhar to the South; and the raised limestone islands of the Aldabra group (Aldabra and Cosmoledo atolls, Astove and Assumption) and St Pierre. Aldabra is closer to Madagascar (450 km away) than it is to the granitic islands (Mahé is around 1,150 km away). The inner islands and Aldabra atoll support a fauna and flora rich in endemic forms (because of the distance between the groups, few endemics are shared). Both sites have been recognised as 'Endemic Bird Areas' by BirdLife International.

Aldabra atoll (which makes up approximately a third of the land area of the Seychelles) is a World Heritage Site, with a tiny human population employed by the Seychelles Island Foundation in the conservation of the site. Because of the remote and relatively inhospitable nature of the atoll, it has never been permanently settled and exploitation has been less intensive than in the other island groups of the nation. In contrast, the inner Seychelles islands were settled in 1770 and now support around 80,000 people (on a total land area of 232 km²). In the past 230 years the inner islands have seen extensive habitat change with the conversion of coastal forests to coconut plantation and loss of mangroves and hill forests for timber, fuel, and the production of cinnamon. Although vertebrate extinctions appear to have been minimal when compared to other remote archipelagos, eight bird species of the granitic islands are today listed as globally threatened.

Plantation agriculture in the Seychelles has through much of its history been only marginally profitable, primarily due to poor transport links with markets and the small scale of production. In the late twentieth century, falling world copra prices led to the abandonment of many plantations and the largest sectors of the economy today are fish processing for export and the tourist trade. In Seychelles, the low-volume, high-value tourist market is based on the apparently unspoilt environment of the islands and there is undoubtedly potential for ecotourism, already developed on islands such as Cousin and Bird. Ecotourism may in turn provide opportunities for increasing the amount of land devoted to conservation in Seychelles through active management of tourist islands, although it should not be seen as a panacea; on small islands, even low-volume tourism can have significant environmental impacts, and very few tourists actually make the long journey to Seychelles to observe the endemic wildlife.

Economic changes in Seychelles have coincided with a period of increased concern for the environment and flagship species in particular; today, further human-induced extinctions of Seychelles endemic vertebrates seem unlikely. The Seychelles Magpie Robin Recovery Programme initiated by Nature Seychelles in 1990 is a good example of long-term commitment that has led to a major increase in population and range of this endangered bird. However, the intense pressure of development and stochastic events, such as the introduction of novel alien species, are real threats to habitats and endemic species in Seychelles.

The work described in this volume was carried out as part of the project 'Management of Avian Ecosystems in Seychelles', funded by the Global Environment Fund through the World Bank and implemented by Nature Seychelles. The aim of the island assessment programme was to survey a range of medium-sized islands in the inner Seychelles in order to assess their current biodiversity value and potential to support endangered endemic vertebrates, particularly birds. The standardised survey methods were carried out on 10 islands (of 40 in the island group), making this the most extensive such survey in the Seychelles since the early twentieth century when expeditions in 1905 (the Percy Sladen expedition) and 1908 (led by J. Stanley Gardiner) contributed greatly to the understanding of the flora and fauna of Seychelles (although the objectives of these expeditions were largely taxonomic).

The collection of papers in this volume presents the results of the island assessments. The first chapter gives a summary of the methods used and provides further background to the project. In the following chapters, each island is treated in turn, with data on the biodiversity of each island, in addition to its historical and geographical context, and conservation recommendations to enhance its biodiversity value. In a final summary chapter, the potential importance of each to conservation of Seychelles endemic vertebrates is discussed.

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Nature Seychelles (formerly BirdLife Seychelles)
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Fieldwork was carried out by a team of four to six people, and on each island the core team of three was joined by several workers, most from the Seychelles Ministry of Environment and Transport, the Ministry of Culture or Nature Seychelles. These included: Pierre-André Adam, Eugene Annacoura, Majella Athanase, Terence Athanase, Allain Camille, Perley Constance, Laura Davis, Marcel Dufrène, Joseph Francois, Barbara Hoareau, Camille Hoareau, Marline Isodore, Terry Jules, Victorin Laboudallon, Allan Marguerite, Charles Morel, Roland Nolin, George Ravinia, Dr Gerard Rocamora, Andy Roucou, Roland Tambarra, Jose Tirant, Terence Valentine, and Roy Youpa. The work described in this volume would have been impossible without the assistance of these field workers.

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Specimens collected in the course of fieldwork were identified by John Noyes of the Natural History Museum, London (wasps), Michael Saaristo of the Zoological Museum, University of Turku (spiders), Pat Matyot (beetles, Orthoptera, phasmids) and Gillian Watson of Commonwealth Agriculture Bureau (CABI: soft bugs).

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