

Book Review

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(with plates by Velizar Simeonovski)

Extinct Madagascar: Picturing the Island's Past

University of Chicago Press, Chicago 2015
296 pp.; USD 45.00
ISBN 978-0-226-14397-2

In this stimulating, stunningly illustrated book, the authors set out to understand 'what happened to an extraordinary assortment of endemic Malagasy animals that no longer roam the Earth?'

Part 1 ('Madagascar in Perspective: Past and Present') is an amply illustrated introduction. A table of bird, mammal and reptile remains from the Late Pleistocene to recent times indicates the scope of what we have lost – giant tortoises, elephant birds, an aardvark-like mammal, many large lemurs, a giant fossa, 3 (dwarf) hippopotamuses, as well as large raptors, couas and rodents. A section on the origins, geology, animal colonisation and modern habitats of the island emphasises the diversity of past and present habitats, which have not remained stable over time. This flux is discussed in relation to climatic change. The history of human colonisation precedes the discussion of human interactions with extinct vertebrates. This leads to a summary of 5 hypotheses for the Holocene extinctions: massive fire, climate change and extensive drought, Pleistocene overkill, hypervirulent disease and synergy. Part 1 ends with a consideration of extinction, conservation and the future for Madagascar's flora and fauna.

If you read no further, part 1 would provide an excellent background to Madagascar. It is written (as is the whole) in an eminently readable style, synthesising expert knowledge in a very accessible way. Throughout there are suggestions as to what additional information would shed further light or allow the testing of competing hypotheses.

However, if you read no further, you would be missing out on the book's heart. In part 2, the authors present their explorations of faunal extinctions based on data from palaeontological and archaeological localities from across the island. There are 20 colour plates accompanying each case study, which illustrate extinct (and extant) fauna in their reconstructed habitat. These carefully thought-out plates function as 'windows into the past' and bring that past to life. For each, different extinction scenarios for that site are discussed. For example, plate 3, based on An-drahoma, covers the Holocene giant tsunami and its ecological impact, plate 4, on Tsimanampet-sotsa, the ecological impact of natural climate change, and plate 12 reviews Ampasambazimba and a now extinct 'Miombo-type' woodland habitat.

The first 18 plates are geographically based, but the last 2 are based on extinct predators. Plate 19 focusses on the carnivore *Cryptoprocta spelea*, an animal ~30% larger than the extant fossa and thus likely to have taken larger prey (e.g. the extinct lemurs). Plate 20 focusses on the eagle *Stephanoetus mahery*, a primate specialist.

This book is a must for anyone interested in Madagascar and its fauna and flora, and especially for primatologists! Primates figure heavily – although many other taxa feature as well. Extinct lemurs are among the most salient and spectacular subfossils. The presence of larger extinct and smaller extant lemurs in the same sites when compared to those still present there or in neighbouring habitats – or now only found hundreds of kilometres away – highlights change. The authors meld detailed analyses with historical and cultural records to provide rich, thought-provoking and scholarly syntheses.

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