Mound-builders

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REVIEW

Mound-Builders

Darryl Jones and Ann Göth

CSIRO Publishing, 2008. Collingwood, Victoria Australia. ISBN 9780643093454. 119 pp., Paperback. AU$39.95.

The long-standing commitment that the authors Darryl Jones and Ann Göth have to the scientific discovery and conservation of the megapodes is evident in their recent book "Mound Builders". The Family Megapodiidae are unique amongst birds in that they use an environmental form of heat to incubate their eggs (Frith 1959). These 'non-incubating' birds can be grouped into those that simply use heat sources from the land by digging burrows into warm sand or near volcanic activity (burrow nesters), and those that build mounds out of organic material and utilise the metabolic heat from bacterial decomposition. Recent phylogenetic analysis has supported this grouping with only one exception, the Maleo, *Macrocephalon maleo*, a burrow nester that is genetically closer to the mound builders (Birks & Edwards 2002).

The term 'mound builders' has generally been used to refer to all megapodes that build mounds (including the genera *Alectura*, *Aepypodius*, *Leipoa*, *Megapodius* and *Talegalla*; Birks & Edwards 2002). However, the authors have specified that in this book they collectively refer to the 3 extant Australian megapodes as the 'mound builders' and to the rest of the family as 'megapodes'. This potential confusion may have been clarified had the title been "Australian mound builders".

This book forms the first summary of the 3 Australian species of megapode – the Australian brush turkey (*Alectura lathami*), the orange-footed scrubfowl (*Megapodius reinwardt*) and the malleefowl (*Leipoa ocellata*). It outlines the current scientific knowledge of the 3 species and provides a collective and comparative summary of information and scientific progress on the study of the Australian mound-builders to date. Many megapode species remain relatively unknown and there are still many unanswered questions concerning even Australian mound builders, which are the 3 most intensely studied species in the family. However, Jones and Göth provide a clear direction for studying what is still unknown and beg for comparisons with other megapode species.

The introductory chapters focus on the taxonomy and distribution of the 22 extant and extinct species of megapodes, while the following chapters concentrate on comparing the 3 Australian mound-builders in terms of their behaviour, ecology and conservation. A thorough summary of appearance and ecology, mound building and incubation, the special adaptations of the eggs and embryos, parental care, reproductive behaviour and the conservation of the Australian mound builders, is presented. Short sub-headings make the text easy to read and follow. Clear illustrations and dynamic colour photographs ensure the reader is engaged and enthused throughout the book. Quotations from Harry Frith at the start of each chapter provide an interesting background and insight to each following passage.

Although this book hails from a scientific background, it is an easy to read text that will provide useful summary information for scientists, managers and all interested parties.

LITERATURE CITED

Frith, H.J. 1959. Incubator birds. *Scientific American 201*: 52-58.

Birks, S.M.; Edwards, S.V. 2002. A phylogeny of the megapodes (Aves: Megapodiidae) based on nuclear and mitochondrial DNA sequences. *Molecular Phylogenies and Evolution 23*: 408-421.

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