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BOOK REVIEWS

New Zealand's Extinct Birds.

Brian Gill and Paul Martinson, 1991. Random Century New Zealand Ltd. Auckland. 210 x 280 mm, hardback. 109 pages. NZ\$49.95.

A large format book which is easy to read with 25 attractive colour plates from paintings by Paul Martinson, and well produced.

There are 57 known extinct New Zealand birds. Some were extinct before the arrival of humans and undoubtedly more fossil remains will be found. A unique terrestrial fauna evolved in the absence of competition for food and predation by mammals. A feature was the many species of flightless birds which included the now extinct moas, species of which are the largest known flightless birds, and their extinct avian predator, the New Zealand Eagle which is the largest known eagle.

Polynesians and native rats arrived 1000 years ago, forest clearance began and a third had been removed by the time European settlement began in 1840. Polynesians ate the fauna, as did the native rats, and killed birds for their plumage.

Thirty-two species were extinct before Europeans arrived and deforestation was accelerated together with changing the habitat by agricultural practices. Also, other rats, mice, cats, ferrets, stoats and weasels were introduced, and a further nine species and several subspecies have since become extinct. Aspects of the biology of some of the extinct species, such as moas, can be described because preserved stomach contents have been found.

The book is interesting and an excellent background reading for the exciting work of a new generation of New Zealand ornithologists bent on saving further species from extinction.

M. D. Murray

Acta XX Congressus Internationalis Ornithologica.

New Zealand Ornithological Trust Board, Wellington. 160 x 240 mm, soft back, vols I-IV, 2568 pages. U.S.\$300, NZ\$500.

These volumes record the activities of the 20th Congress held in Christchurch, New Zealand in December 1991.

Papers are given in full, and include seven plenary lectures, listed below, and several from 48 symposia. Clearly this massive contribution to ornithological knowledge cannot be reviewed in detail in a small space. Pleasing is the scattering of contributions from the host country, New Zealand, and impressive are the recent studies. These demonstrate that mammalian predators can be eliminated from small islands and thus enable the establishment of focal populations of endangered species, that forest browsers such as possums can be eradicated from islands with consequent rapidly apparent benefits, and that biological manipulations can do much to save species from immediate extinction.

The plenary lectures were: *Phylogeny and classification of birds from DNA comparisons*, C. G. Sibley; *An ornithological glimpse into New Zealand's pre-human past*, I. A. E. Atkinson and P. R. Millener; *Recent avifaunal changes and the history of ornithology in New Zealand*, B. D. Bell; *Communal breeding along the changing face of theory*, J. L. Craig; *Applied ornithology: putting theory and practice together*, E. H. Butcher; *Respiration of avian embryos at high altitude*, C. Carey; *Ecological and physiological constraints on reproduction in albatrosses*, J. P. Croxall.

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