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REVIEW

Herons, egrets and bitterns. Their biology and conservation in Australia

Neil McKilligan

Australian Natural History Series, CSIRO Publishing, 2005.
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This is the first book to deal exclusively with the Australian members of the Family Ardeidae (collectively, the herons, egrets and bitterns). The work is produced in paperback with 20 colour photographs, 24 illustrations, 144 pages and a bibliography, representing a comprehensive treatment of the family in Australia. Of course, if you still want really detailed information on the ecology of herons of Australasia there is no substitute for HANZAB, *Handbook of Australian, New Zealand and Antarctic birds*. However, the detail and language of the Handbook renders information on herons somewhat inaccessible to the general public and students. McKilligan's book bridges this gap admirably and adds more general overviews about the heron family. It is a very easy-to-read book with accounts of the significance, origins and biogeography of herons, their taxonomic relationships and classification, and a wide range of aspects of their biology. There are plenty of intriguing facts. Did you know that an adult male Australasian bittern can weigh more than a great egret? Importantly, the huge breadth of topics dealt with got me thinking of a wide range of questions and issues I wanted to follow up on and the reference list is comprehensive enough to lead the reader to more information.

It is clear from this book that Neil McKilligan has a passion for herons. He has spent over 30 years studying egrets in Australia, and currently holds an honorary senior lectureship at the University of

Southern Queensland. He writes the book to help redress the dearth of works that focus on families of Australian birds with the aim of reaching a general readership; all those interested in Australian natural history, amateur and professional ornithologists and secondary level and undergraduate students. When reading this book I developed a view of the importance of healthy wetlands generally and a sense of the vastness and variety of the Australian continent, which went beyond the immediate relevance to herons.

The heron fauna of Australia is clearly put in context with the rest of the world with introductory chapters on their basic morphology, distribution, movements and longevity, feeding and food, breeding, population dynamics and conservation. I particularly enjoyed the chapter on breeding, which included details of behaviour and displays as well as the requisite statistics on productivity and breeding success. There is some guidance on the different types of heron (day and night herons, egrets and bitterns) and on field identification and that vexing problem of estimating the size of a solitary 'white' heron. Inclusion of chapters on "What makes herons different" and "The importance of herons" that address not only the utilitarian views of herons, but their "contribution to the quality of human lives" add a dimension absent from similar styled books. There are clear text boxes that include explanations of topics such as taxonomy, wing aerodynamics, feather structure and marking and tracking.

The book devotes a major chapter to the 14 Australian species, from the huge great-billed heron through to the diminutive little bittern, which is not much bigger than a blackbird. The Australian fauna represents nearly a quarter of the world's 62 species of heron. Six species of vagrant, two night herons, three bitterns and one day heron, are also described briefly. There is plenty of relevance to the New Zealand reader. Seven of the 14 species also have populations in New Zealand (cattle egret, great egret, white-faced heron, little egret, reef heron, nankeen night heron, Australasian bittern) and three have occurred as stragglers.

Species accounts cover brief, thumb-nail sketches of their status, distribution, movements, food and feeding, breeding, and, in the case of cattle egret, taxonomy. I must admit, I yearned for more detail on the individual species. The section on cattle egret is more detailed, covers six pages in the species account, and there are numerous case studies referring to this species throughout the general chapters. This treatment is interesting and reflects Neil McKilligan's long history of research on this species, but I am equally interested in the other species as well. Contrast this level of treatment to the two pages on Australasian bittern, which is classed as endangered in both Australia and New Zealand. Admittedly less is known about this bittern, but the same cannot be said for some of the other species described.

Being particularly interested in the conservation of herons and the possible relevance of the book to New Zealand, I looked forward to the chapter on population numbers and conservation. Herons are found in aquatic habitats throughout the temperate and tropical zones, worldwide. Most species tend to be dependent on natural wetlands, which are under threat in many areas. Globally, a few species are highly endangered and have highly restricted ranges. But other species are relatively abundant, use the human dominated landscape, and have large and, in some cases, expanding ranges. Some of Australia's herons have become very scarce in the southern half of the continent and are at risk of national or local extinction. However, in the Northern Territory, heron habitats are largely pristine and the region accommodates large numbers of certain species.

The section that describes herons as good bio-indicators of the quality of wetland habitats is important because they rely on the presence of healthy food supplies and high water quality. Changes to the trophic conditions of wetlands, generally through changes in nutrient levels, pollution and eutrophication, or through modifications to the food sources, have had a

devastating effect on some heron species and threatens many local populations. Everything in a wetland is totally interconnected with factors influencing the surrounding catchment, particularly in terms of quality and quantity of runoff.

While the chapter provides a useful summary of the present status of the Australian herons, some that are thriving and others that are not, I also wanted more detail on what is being done to conserve their numbers. Although issues such as wetland protection and maintaining "environmental flows" are alluded to, there is little treatment of what techniques are being used and where, and how successful the conservation measures have been. A clear list of actions would have been great for empowering the reader to get involved in conservation action. If readers are interested in learning more about the conservation of herons globally, a great starting point is the IUCN Species Survival Commission website for the Heron Specialist Group (<http://www.tourduvalat.org/hsg.htm>).

Overall, the text seems to be error free, although the author has missed the fact that we have seven, not six, species of heron resident in New Zealand (nankeen night herons have bred on the Whanganui River since the 1990s). I have a few niggles with the book. It was useful to have all the resident species illustrated in colour, which aids in identification. However, I was disappointed the grainy reproduction of the colour plates, which otherwise appeared to be excellent photographs. The cover plate was out of focus. In contrast, the black and white photographs were clear and interesting and complemented the text well. There was reasonable use of maps, tables and diagrams, although the hand drawn illustrations of the birds in the species accounts irritated me because they were all in different styles – a personal bias I am sure. Some of the illustrations were somewhat piecemeal. For example, maps of heronries were given for the "Top End" but not for elsewhere in the country.

"The aim of this book is to make Australian herons, egrets and bitterns better understood and more appreciated by birdwatchers, students and indeed anyone who has a particular admiration for these striking members of our avian fauna and a concern for their long-term survival" writes Neil McKilligan in the preface. By its conclusion, I think 'Hérons, egrets and bitterns: Their biology and conservation in Australia' achieves what the author sets out to do.

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