

bers", Gray Jays are widespread and Wilson's Warblers are "common in moist areas". The foregoing are just a few examples of inaccuracies which could have been readily avoided, and which are bound to mislead the

potential reader. All in all, this is not a book I can recommend.

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## Frogs of Australia: An Introduction to Their Classification, Biology and Distribution

By James R. Turner. 2004, Pensoft, Sofia-Moscow. 163 pages. Price not available.

Australia is renowned for its mammals, unique as a consequence of that continent's long separation from the other land masses. Of the amphibians, only frogs are represented; both the caecilians of other southern continents and the salamanders characteristic of northern continents, are absent.

*Frogs of Australia* presents 218 forms (213 species, one divided into 5 subspecies and one into 2); 110 of these named since 1960. The five families represented contain 29 genera. Three families are held in common with Canada. Hylidae occurs in the Americas, Europe, Asia and northern Africa but its 76 Australia species are often separated as the Pelodyadidae). Bufonidae is represented only by the Cane Toad, *Bufo marinus*, introduced from Hawaii in 1935 which, despite its near legendary reputation for decimating the native Australian frog and small mammal fauna, has spread only in the eastern edge of the continent, occurring in the Northern Territory, Queensland, and New South Wales. Ranidae, of the Americas, Eurasia and Africa, occurs only marginally with a single species only in the Cape York Peninsula in the northeast. Surprisingly, the latter resembles our Canadian Wood Frog, *Rana sylvatica*, in pattern (dark mask) and call ("like the sound of a duck but lacks a musical quality"). Of the other three families, two are not represented in Canada: the Myobatrachidae 118 species (formerly included in the southern western hemisphere Leptobatrachidae) and Microhylidae 18 species (widely distributed in southern western hemisphere, Africa and Asia).

Most forms are given a vertical half page column, but six have two columns (two with consecutive half pages; four on one entire page each). A problem for the non-Australian (and perhaps even some Australians) is that the forms are sequenced in alphabetical order by English names, rather than being grouped by family or genus. Thus, in one case two subspecies with distinctive common names are separated by 100 pages.

The only other subspecies fortunately have a base common name, each form with a modifier, so all five occur consecutively.

Every form is illustrated in colour and accompanied by a range map. The text accounts are very brief: Latin name, Synonyms, Family name, Habitat, Distribution, Length, Abundance, Status, Meaning (of Latin name), Behaviour (generally breeding and call), Development (number of eggs, where laid), and Locality (political divisions it occurs in). Although all are by the author, the illustrations vary from superb to less so, with those in which a bit of substrate is included more deftly done while the others give the effect of crude cutouts. But as Dr. T. J. Hawkeswood points out in the Forward they "add a 19<sup>th</sup> century feel to the book". No variations are depicted. The maps apparently give a background of regional elevation in dark green, light green and tan though this seem not to be explained anywhere and the colours could be taken for vegetation zones. Superimposed, the purple depiction of range effectively stands out for all but the most restricted distributions. The superb layout facilitates flipping through for an overall impression of variation and ranges.

Additional text is minimal. A Quick Find Index lists families and contained species by scientific name and page number of account, and an Introduction covers topics such as How Old Are Frogs (at least 180 million years), Common and Scientific names, Species and subspecies, descriptions, distribution. A page of diagrams depicts Diagnostic Characters of Frogs, four pages list the characters of the families and genera with comments on conservation. An outline map gives the eight political divisions and a two or three letter code for each (but West and South Australia are both designated WA whereas the latter is properly SA in the text). The book concludes with a two-page Glossary (address to xeric) a 20 pages of references and a three-page index to common and scientific names.

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## Experimental Approaches to Conservation Biology

By Malcolm S. Gordon and Soraya M. Bartol. 2004. University of California Press. Berkley, California. xv + 343 pages, \$75 US.

The papers collected together in this volume were originally prepared for a conference of the same name held in 2001. The editors have brought together research that emphasizes both basic and applied scien-

tific experiments related to conservation, particularly those at the organism level.

The book consists of four sections. The first section, Introduction, consists merely of a five-page introduction along with a one-page list of conservation-related websites. The list of web resources is very basic and is limited to five government sites (one Canadian and four American) along with a number of major NGOs

such as the Nature Conservancy and World Wildlife Fund. Each of the remaining sections begins with an overview of the section and then papers on that topic. The second part of the book consists of seven papers on the theme of "Conservation of Endangered Species." The papers cover a variety of species (e.g., tree snails, rock iguanas, New Zealand birds, Australian marsupials) and topics (e.g., *ex situ* propagation, amphibian decline, conservation endocrinology). Section three, "Control or Elimination of Exotic and Intensive Species" features three papers on the subjects of California grasslands, tree invasions and the use of biological controls on exotic species. The final section of the book, "Policy-related Matters" contains four papers. Topics include the case study of the US Army and the Desert Tortoise and the challenge of biodiversity conservation within African national parks.

As is usually the case in such volumes, the papers vary substantially in their scope and quality. At one

extreme, Michael Hadfield and collaborators provide an overview of the over 20 years of work his lab has done on the conservation of Hawaiian tree snails of the genus *Achatinella*. Their work has combined mark-recapture field studies, devising field enclosures to protect populations, developing protocols to maintain populations in the lab, and developing conservation priorities through the use of genetic markers. In contrast, other papers focus on a single issue or experiment. In addition, although all the papers were prepared for this book they vary in format, with only some of the papers including a summary. Nonetheless, this is a strong collection of papers, displaying the breadth of experimental conservation biology.

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## Gulls of North America, Europe, and Asia

By Klaus Malling Olsen and Hans Larsson. 2004 \$55.00 Cloth.

My reaction on opening this book was akin to the one I had when I first saw *Seabirds*<sup>1</sup> – this is a giant leap forward. It is a glorious wad of text accompanied color paintings (by Larsson), wonderful range maps and a multitude of color photographs. The authors say they cover forty-three species of gull. I found there are 50 species of gull worldwide that have generally been accepted in the recent literature. Of the 43 covered in this book 37 are on the world list. The remaining species are splits made and justified by the authors. These are Thayer's, American Herring, Caspian, Vega, Heuglin's and Common Gulls. Adding these in would bring the world total to 56. Also included are three South American vagrant species that are covered by a short text and a couple of photos. This means the book covers three-quarters of the world's gull species.

Each species is described in extensive detail, with a full description of all plumages at all life stages and racial variations. The accompanying illustrations support the text in these details. Additionally there are some comparison plates comparing similar species.

So this is a book of detail and it is in the detail we find the devil. Gull taxonomy is notoriously complex, poorly understood and subject to argument. I decided to examine first the Herring Gull and the newly-split American Herring Gull. Comparing the descriptions with the author's illustrations of the adult, I found it difficult to discern the majority of the "differences." I have noted similar bird-to-bird variations in single flocks of each one of these "species." I quickly realized I was concentrating on the photos and not the paintings, as I found the depictions too pale. The photos were closer to the pearl grey of my memory. There are comparison plates of large gull taxa (a good idea) where the American Herring Gull is shown as paler than an Iceland Gull. This is not an error as it is set in the middle of Glaucous

and Glaucous-winged Gulls, and not with the European Herring and Yellow-legged Gulls.

The comparison of the non-adult plumages is even more difficult. Picking your way through the myriad of details of multiple plumages for each species is time consuming and can be tedious. This is not a criticism nor a question of right and wrong, but more the part of an ongoing debate. It has prompted me to look more carefully at the local American Herring Gulls this year.

Nowhere does this taxonomic debate emerge more clearly than with Thayer's Gull. The author notes "Taxonomic status not fully clarified." Many years ago I went through three trays of study skins at the Canadian Museum of Nature in Ottawa. The first tray contained Iceland gulls. The second contained Thayer's Gulls. The problem was the third tray had birds that looked like one of these species on their left side and the other species from the right side. In addition, during my years in Nova Scotia the commonest winter bird in my backyard was the Iceland Gull and I soon realized that it was a very variable species.

Next I turned my attention to the adult Great Black-backed Gull. This raised further questions. The text says "Legs flesh, sometimes with a grey or creamy (rarely yellow or extremely orange) *tinge*." (my emphasis). Legs flesh, sometimes with a grey or creamy tinge certainly fits the birds I have seen. I have found a yellow-legged bird. The next species is the Kelp, also large and black-backed. The adult's feet are yellow but could be greyish-olive or greenish. When I, carefully (you do not want to damage the fine photos), curl the photos back so I can see the two birds side by side they are very similar, separated by their feet colour. If we had a grayish-footed Kelp Gull wander north would we notice it and would I get excited at a yellow footed Black-back? Yellow legs is the classic mark for separating the Lesser Black-back Gull.