

may be more suited to the serious student of Alberta's fishes – there is an extensive list of references (24 pages compared to only 11 references in Joynt and Sullivan). The book reviewed here has accounts for 65 species while Nelson and Paetz have a more complete analysis of 59 species and a further 29 species recorded as rare or doubtful for Alberta.

Literature Cited

Nelson, J. S., and M. J. Paetz. 1992. *The Fishes of Alberta*. The University of Alberta Press, Edmonton and the University of Calgary Press. 2nd Edition, 437 pages.

BRIAN W. COAD

Canadian Museum of Nature, P.O. Box 3443, Station D, Ottawa, Ontario K1P 6P4 Canada

Sharks

By Andrea and Antonella Ferrari. 2002. Firefly Books, Toronto, Ontario. 256 pages. \$24.95. ISBN 1-55209-629-7.

Sharks are the most popular of fishes for publications as people seem to have a fascination for organisms that can eat you (although more sharks are killed by people than the reverse). This is one of many that have appeared on this topic.

Despite its title, the book covers the appearance and behaviour of 120 species of sharks and rays. Coverage is therefore not complete as sharks and rays number over 1000 species (as the Foreword states), the aim being to give an overview of the main groups by selecting typical and unusual or fascinating species. Four species of rabbitfishes (out of about 31 species in the Chimaeriformes) are also mentioned.

The book has an Introduction of 77 pages with descriptions of anatomy and biology. Three pages are devoted, deservedly, to explaining the ampullae of Lorenzini, an important feature of shark anatomy and biology, first discovered by an Italian scientist in the seventeenth century and, surely by coincidence, this book has Italian authors and is a translation from an Italian version. This is followed by how to avoid sharks, how to assist them (by not eating them or buying shark teeth), marine organisms more dangerous than sharks (mostly venomous sea snakes, cone shells, sea urchins, jellyfishes and fishes, but also fish that bite divers enthusiastically), and personal accounts of shark encounters. The Entries section describes the sharks, rays and rabbitfishes (153 pages), the Appendices (17 pages) give a Classification of Sharks (but not rays or rabbitfishes), an Index, Bibliography and Websites (each a page long), and Photographic Credits. The websites "Catalog of Fishes" and "FishBase" are not quoted, although these give entry to much of the names, biology and literature on sharks and rays world-wide for the more serious student. There are pictorial keys to

the shark and ray orders but not any for families or species so the book cannot be used, nor is it meant, as a field guide.

The Entries section describes each selected species, allotting half to two pages per species. There is an annoying symbol system at the top of each account to indicate when the shark is active and its danger level with respect to humans. This information could

easily have been included in the text. A distribution map is given but at 1 × 2 cm can only convey a general impression of where these sharks and rays are found. The map for the Bluntnose Shark is inaccurate, for example, showing it in Canadian Arctic waters when it was first caught at its northern limit in Nova Scotian waters in 1989 (Gilhen and Coad 1991). The common and scientific names are given but the

author and date of the scientific name is always in parentheses (here and in the Classification of Sharks). The authors (or text editor?) seem not to be aware that parentheses are only used when the species is placed in a genus other than the one it was originally described under. The text comprises the Family to which the shark or ray belongs, Range, Habitat, Size, and Habits. All parts of the book are richly illustrated with colour photographs, over 450 in all.

Despite the comments above, this book is a good general introduction to sharks and rays. It is lavishly illustrated, as all such books must be, of a convenient size, and with a reasonable price.

Literature Cited

Gilhen, John, and Brian W. Coad. 1991. The bluntnose sixgill shark *Hexanchus griseus* (Bonnaterre, 1788), new to the fish fauna of Atlantic Canada. Proceedings of the Nova Scotian Institute of Science, 39 (1989): 75-77.

BRIAN W. COAD

Canadian Museum of Nature, P.O. Box 3443, Station D, Ottawa, Ontario K1P 6P4 Canada

In Search of the Golden Frog

By Martha Crump. 2002. University of Chicago Press, 5801 Ellis Avenue, Chicago, Illinois 60637 USA. xiv + 298

military, industrialists and rioting natives that disrupt her life.

As I started to read this book I became very disconcerted. In the past few years I have looked for amphibians and reptiles in tropical jungles on many occasions. My success rate is very low. The author travels to the same locations in South America and immediately starts finding many individuals of multiple species. My estimation of my frog finding prowess dropped page by page. By the time the author reaches the 1990s, however, her success rate has plummeted. By 1996 she says "we hug and screech with excitement" on finding one frog. I realize that my lack of success is due less to my incompetence than to the rapid loss of frogs in my lifetime. This is even more depressing. When I go to Monteverde next spring I have little hope of seeing the fabulous Golden Frog. On 7 April 1987 this author saw "over one hundred dazzling bright golden toads" at one small pool at Monteverde.

The author also deserves another accolade for, while she is pursuing her scientific research, she is also being a parent to two children. I was delighted with the way she involved them in her work and gave them opportunities to broaden their knowledge. This may have made her life harder and certainly caused her concerns, but I am sure these children will benefit.

So if you want to find out about the life of a field

pages, Cloth US\$27.

Any young person thinking of taking a degree in one of the biological sciences, particularly if they plan to become a field biologist, should read this book. The author, currently Adjunct Professor of Biology at Northern Arizona University, chronicles her life from her postgraduate work in 1968 through various projects to 1998. The book concentrates on the field programs that are the real love of Professor Crump's life. Her main interests are reptiles and amphibians, but her passion is frogs.

Taking advantage of an opportunity offered by her discerning professor, she joins a team going to the Amazon section of Ecuador. From this exposure which reinforces her desire to work in the field, she returns repeatedly to work in South America. Her narrative includes her excitement at being a scientist and making discoveries to contribute to her profession. She also chronicles some of the problems she encounters. These do not include frightening encounters with large or dangerous animals. The hazards fall into two categories. The small pests, mosquitoes, chiggers, chigoes, bot flies and ants, causes plenty of discomfort. But it is the large pest, humans, that causes the greatest levels of concern. She notes the ordinary people are by and large, friendly and helpful. It is the bandits, police,

researcher read this entertaining book. Follow the trials of first reaching the field locations using often unreliable local transport. Join in meals that are good, bad, or bizarre. Meet local people, many of whom care greatly about their environment. Find out how a scientist collects data and uses it to create a new understanding of our planet.

ROY JOHN

2193 Emard Crescent, Ottawa, Ontario, K1J 6K5 Canada