

majority of research that was done by the original biologists was reported in metric. However, all of that was converted to imperial, rounded off and reported as such; parenthetically, the imperial values were reconverted and oft-reported as inappropriately-accurate metric values again, which muddles the original values and makes the reading stumbly. Both the birding and ornithological literature have long used a convention of capitalizing bird names; this avoids some potential confusion when, for instance, referring to "the Northern Hawk Owl" (the species) versus "the northern hawk owl" (the hawk owl found more northerly than others). I find newspapers reticent to adopt this standard, but there's no reason for this book to have done so. Those well-read in bird literature will do mental hiccups frequently while reading this book.

Chapters often start with a journal entry or description of an individual encounter with owls that beautifully sets up the chapter's theme. By doing this, Lynch maintains a personal connection with readers, which then encourages them to continue reading the more-matter-of-fact, but still very well-written material later.

There is a nice 10-page identification guide to the owls, with range maps and a synopsis of information such as habitat preferences, life span, diet and status. Although the text is good, the maps are deceptive. Unlike most field guides, the maps here use only one colour to report the species' ranges. And if you didn't know any better, you'd think the Snowy Owl bred everywhere in Canada, and into the northern tier of the United States (which it doesn't). Johnsgard's book on North American Owls does more justice to the ranges.

The rest of the book is written topic-by-topic, much like Duncan's *Owls of the World*. Other owl books, like Mikkola's *Owls of Europe*, take a more species-by-species account, with a few introductory chapters

on topics like food, anatomy, movements, etc. I don't think one format can be said to be better than the other in general, each excels for different reasons. The approach adopted by Lynch makes for a more coffee-table friendly book; different species can be depicted in any one chapter, making comparisons among, for instance, insectivores to carnivores, readily apparent.

Throughout the book are sidebars containing synopses of topics related to the chapters' contents. I've always liked this approach as it allows for information that is otherwise not readily incorporable to be presented. In this book, the topics range from the pH scale (used to discuss digestion) to brooding behaviour.

Finally...the photographs. Dr. Lynch is perhaps best-known for his stunning photography. There are some awe-inspiring habitat shots, and double-page spreads that leave the reader with a sense that "I must visit that place." The shots of the owls themselves rate with the best I've ever seen and include depictions of some behaviours that are not frequently seen. Not to diminish the writing at all, but the photographs really make this book what it is.

Literature Cited

- Duncan, J. *Owls of the World: Their Lives, Behavior, and Survival*. 2003. Firefly Books, 66 Leek Crescent, Richmond Hill Ontario L4B 1H1 319 pages
 Johnsgard, P. 1988. *North American Owls: Biology and Natural History*. Smithsonian Institution Press, Washington. 298 pages
 Mikkola, H. 1983. *Owls of Europe*. Buteo Books, Vermillion. 397 pages

RANDY LAUFF

St. Francis Xavier University, Antigonish, Nova Scotia B2G 2W5 Canada

Owls of North America

By Frances Backhouse. 2008. Firefly Books Ltd, 66 Leek Crescent, Richmond Hill Ontario L4B 1H1. 215 pages, 34.95 CAD Cloth.

Owls of North America, by Canadian writer Frances Backhouse, is a beautiful book — literally. The first thing I did when it came into my possession was to look at the photographs. A Great Horned Owl silhouetted against a sunset. A close-up of the same species' primary flight feathers. An Elf Owl delivering a cricket to its cactus nest. The large eyespots on the back of a Northern Pygmy-Owl's head. Great Gray Owls engaging in mutual preening. A young Long-eared Owl hanging upside down from a twig. A Short-Eared Owl stretching its leg as a warm-up to hunting.

I would have been thrilled with the book for the photographs alone. When I started reading, it got even better. Eight chapters discuss topics covering a wide range: owl and human relations, owl family groupings, life trajectories, feeding habits, communication, adaptations for nocturnal life, and more. Almost 80 pages

are devoted to relatively comprehensive species profiles that provide photographs, maps, and details on appearance, voice, activity, roosting, distribution, habitat, feeding, breeding, migration, and conservation. A glossary and bibliography complete the information offerings.

The book brought alive owl species I was only vaguely aware of. The Elf Owl of the southwest, the world's smallest owl, which feeds mainly on insects. The Flammulated Owl of the west, also an insect-eater, with ventriloquial abilities that make singers difficult to locate. The Vermiculated Screech-Owl of Mexico, Central and South America, which sings like a toad.

The book also deepened my understanding of owls which are more familiar to me. The Great Horned Owl, that consumes a greater diversity of prey — from grasshoppers to great blue herons — than any other North American owl. The Great Gray Owl, which is benefiting from nesting platforms; one study revealed that nesting success was higher on platforms than natural nest sites.

The Eastern Screech Owl which, in Texas, brings live Texas blind snakes to its nest to eat the soft-bodied larvae of insects attracted to pellets, fecal matter, uneaten food, and occasional dead nestling accumulated in the cavity. The Burrowing Owl, which produces a sound remarkably like a rattlesnake's rattling buzz — a sound that may have evolved to deter predators such as badgers and weasels from entering nest holes. It has also, the author writes with a twist of humour, "definitely proven effective on occasion in discourag-

ing ornithologists from reaching blindly into burrows."

Owls, the book clearly communicates, are fascinating earth residents with unique skills and adaptations that equip them for important ecological roles. As such, they deserve admiration, respect, and help in reversing the habitat loss from which virtually all owl species suffer.

RENATE SANDER-REGIER

3, 11th Line, Bristol, Quebec J0X 1G0 Canada

The Tree of Life: A Phylogenetic Classification

By Guillaume Lecointre and Herve Le Guyader. 2006. The Belknap Press of Harvard University Press, Cambridge, Massachusetts. 560 pages. 39.95 USD.

Here is a textbook to usher in the 21st Century based on the use of cladistics and the steadily increasing data from molecular biology. These have been gradually changing systematic biology over the past 30 years. It may not be the last word in this dynamic field but it certainly is in the current mainstream. It presents a genealogical approach to classification of the diversity of all life on earth through the phylogenetic analysis increasingly promoted by many researchers as the successor to the Linnean System. The latter was outlined for plants in 1735 and for all organisms in 1758 and thereafter long universally adopted and taught throughout the world. The Linnean system accepted the concepts of its time — divine creation and the Great Chain of Being, each individually created group of organisms, from single celled to human, conceived of as progressively "higher" with *Homo sapiens* as the culmination. After a hundred years, in 1858, Charles Darwin outlined descent with modification by natural selection which showed how evolution could occur. Shortly after, in 1866, Ernst Haeckel coined the term phylogeny but it was nearly a hundred years later before Willi Hennig outlined the comprehensive application of an objective cladistics approach (phylogenetic systematics) published in German in 1950 and in English in 1966.

The Tree of Life outlines major groupings for the present estimated 1 749 577 described and currently recognized organisms. After a preface and introduction there are 15 chapters. The initial one on "Life" is followed by Eubacteria, Archaea, Eukaryotes, Chlorobionta, Embryophyta, Metazoa, Protostomia, Mollusca, Eurarthropoda, Deuterostomia, Sarcopterygii, Mammalia, Primates, Actinopterygii. Some group names are familiar from traditional classifications, some will be new and strange to most naturalists. Abolished are familiar classification categories (Kingdom, Class, Order, Family) to be replaced by dia-

grams (dendrograms) depicting relationships. Also vanished are what are now regarded as mixed groupings such as reptiles and fish.

Each chapter is subdivided and a chart presented of the relationships of the included forms discussed. Each grouping has line drawings of example organisms and features, a brief general description of included forms and sections on ecology, some unique derived features, and examples of included forms. A sidebar gives number of species, oldest known fossils, and current distribution.

The book concludes with 13 Appendices of "trees" showing the cladistic view of relatedness, and including "Where are they" giving the new positions of major traditional groups of both one-celled and multi-celled life, Sequenced Genomes (listing organisms for which the genome is entirely sequenced or almost so as of January 2006), a one-page General Bibliography, a Glossary of 70 entries from Alignment to UPGMA (Unweighted Pair Group Method Using Arithmetic Average), Index of Common Names and Index of Latin Names.

The intent of the volume is to move this phylogenetic approach to classification out of its currently restricted academic position and bring it into the mainstream to replace the traditional teaching now rendered archaic, at least in the view of the presenters. The authors are well suited to the task, thoroughly immersed in the modern concepts and teaching. Lecointre is Professor and Research Scientist at the Museum National d'Histoire Naturelle and Le Guyader is Professor of Evolutionary Biology at the University of Pierre and Marie Curie, both in Paris, France. The book was originally published as *Classification phylogenetique du vivant* (third edition, Editions Belin, Paris, 2006) and translated by Karen McCoy. It is illustrated by Dominique Visset.

FRANCIS R. COOK

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