

THE TWO SIDES OF NATURE BOOKS ✓

Wild mammals of Canada, Frederick H. Wooding. Illus. Peter Carsten. McGraw-Hill Ryerson Ltd., 1982. 272 pp. \$34.95 cloth. ISBN 0-07-082973-X; *Wild mammals of western Canada*, Arthur and Candace Savage. Western Producer Prairie Books, 1981. 209 pp. \$34.95 cloth. ISBN 0-88833-078-2; *A reference book of urban ecology*, Anne Innis Dagg. Illus. Harry Warr. Otter Press, 1981. 196 pp. \$5.00 paper, \$10.00 cloth. No ISBN; *Amphibians of Canada*, Barbara Froom. McClelland and Stewart, 1982. 120 pp. \$12.95 paper. ISBN 0-7710-3207-2; *Discovering life on earth*, David Attenborough. William Collins Sons & Co. Ltd., 1981. Reprinted 1982. 224 pp. \$14.95. ISBN 0-00-195148-3.

Non-fiction nature books serve a dual purpose. They can be, and probably should be enjoyable enough for straight pleasure reading. At the same time, they should be well-organized enough to serve as reference books for home, school, or library. In order to serve well in these two capacities, a number of criteria should be met. Some criteria which we consider to be important are as follows:

1. Amount of information provided and its accuracy
2. Clarity of language and suitability for the intended readership
3. Inclusion of references to guide the reader to further sources of information
4. Provision of study aids such as range maps, photos, drawings for explanation and detail, illustration of prints for tracking, and even a picture representation of the animal's vocalization
5. Appropriate choice of subject items to be included or omitted
6. Inclusion of a table of contents and detailed index to aid the reader in finding a specific topic efficiently
7. Use of enough interesting or unusual details to make the book more than merely encyclopedic.

Not all of these criteria need be satisfied in every type of nature book. Range maps, for instance, would be unworkable in a highly theoretical book such as Attenborough's, while in other books the maps are essential.

Two books which fulfill these criteria are Frederick H. Wooding's *Wild mammals of Canada* and Arthur and Candace Savage's *Wild mammals of western Canada*. Both are excellent. One would normally need to consult a reference work to find the detailed information in books and scientific journals. The texts in each are well written, describing the animals' life history and including, now and then, an anecdote or phrase which hints at the author's presence or injects a subtle note of humour or irony.

The format of these two fine books differs in a number of ways. *Wild mammals of western Canada* works in large articles which discuss several related species, and features all colour photos. The range maps include the entire North American continent and sometimes show the ranges of more than one species, with the overlap.

Wild mammals of Canada, however, uses smaller, more subdivided articles, with a heading in most cases for each separate species. Its study aids include excellent photos in colour and black and white, pencil drawings showing detail and examples of behaviour, paw prints, silhouettes, and individual range maps which extend part way into Mexico.

Of course, no book of this kind can deal exhaustively with each species in the targeted group. *Wild mammals of Canada* chose to discuss in detail the "mammals which because of their economic value or interesting habits, are best known or most frequently seen." Its section, "Other Wild Mammals," includes the smaller mammals which are shy and often nocturnal. The section on bats appears here and has a good general discussion as well as a full species list. Two references are suggested in the text for the avid student. Paragraph-length articles, with a few illustrations, describe the lesser known species. Most of the animals receive from one to five pages of text with several study aids. Wooding's book lists in its index every mammal species which occurs in Canada, even if the reference in the text is quite small. The animals are even listed separately by the common and scientific names. The index section is also divided conveniently into two sections, one for the mammals, and another for people, places, and things.

The reader seeking information on an obscure mammal will have a little trouble with *Wild mammals of western Canada* until the checklist on pp. 177-6 is located. This list includes the names of all mammals residing within the area of Western Canada, and indicates the extent to which the book covers them. Mammals not discussed in the book are not listed in the index. A better method might have been to list all of the mammals in the index with at least a page reference to the checklist. Otherwise, the reader might assume that the unlisted mammal does not live within the designated boundaries. The animals which are not covered are almost always animals whose ranges within Canada are extremely small. All of the carnivores, cloven-hoofed mammals, and lagomorphs are covered, as well as most of the rodents and some insectivores. Both books deal with the seals, but only the Savages' book includes information on whales.

The reference section of *Wild mammals of western Canada* is very useful in that it is divided by species. There are, for example, thirteen references under weasel, and seventeen under wapiti. The reference section of *Wild mammals of Canada*, while smaller and not categorized, is adequate. Wooding's book also includes a section on mammal watching which has helpful suggestions for sighting and studying these elusive animals.

Either of these books would be a wonderful addition to a library or private

collection. The high price of each makes it a major book purchase, but either could give pleasure and information for many years.

A reference book of urban ecology describes the interaction between the natural world and the city. Author Anne Innis Dagg tells the reader why the cities are warmer than the surrounding countryside, why they get more rain and more fog. The reader learns about the impact of such urban paraphernalia as airports, sanitary landfill, artificial lighting, and sewage management systems.

Dagg unflinchingly encourages the creation and maintenance of areas suitable for wildlife in the city. "The ideal habitat for wildlife," she says, "is variety," then proceeds to describe just what kind of plants provide food and shelter for animals. Even garden flowers left standing in the fall can provide food with their seeds.

This book provides detailed information about birds found in urban areas and how to provide them with what they need. The child who wants to build a bird nesting box will find the specifications here. If a bird could be considered a pest, there are helpful suggestions for dealing with it. A section on the swans at Stratford, Ontario, is interesting and particularly Canadian.

Sections on mammals, amphibians, insects, reptiles, and fish include information on their natural history, but also on the contemporary problems of population decline, habitat destruction, and pesticide contamination.

A particularly important section, and one which makes this book even more useful in the home library, is that dealing with wildlife diseases which may be transmitted to humans. Infection may occur by way of a bite of a mammal, insect, or tick, or by more subtle means such as the inhalation of spores or bacteria-laden dust. Foodstuffs and utensils can be contaminated by vermin in the home. A careful examination of the disease descriptions will surely encourage better personal, neighborhood, and home hygiene.

A section on pollution deals with a long list of health-endangering pollutants, their apparent sources, non-technical tests for their presence, and their environmental impact.

A reference book of urban ecology is an inexpensively produced book. The paperback format features an open spine fastened with staples through a heavy paper cover. The book does, however, seem to be able to withstand considerable handling without coming apart.

The table of contents is detailed enough to aid the reader in the location of specific information, but does not obviate the inclusion of an index. A glossary of words used appears at the end of the book, but the definitions are sometimes too vague and other times so case-specific as to hide the full meaning.

Aside from a few sentences which are awkwardly constructed, or whose complexities make them difficult to follow, the book provides an interesting and instructive bit of reading. It is a book in which a child could comfortably underline the facts he felt to be most important for future re-reading, or in whose margins he could jot his own observations. All things considered, A

reference book of urban ecology gives a lot of information for the price.

In her introduction to *Amphibians of Canada*, author Barbara Froom says, "I hope this book will make Canadians aware of the variety of amphibians we have in our country, aware of the importance they play in the balance of nature, aware of their struggle for survival, and of the necessity of preserving their natural habitat." In attempting to fulfill these objectives, she presents information on the evolutionary origin of amphibians, the role of these animals in myth and legend, their general physical characteristics and special adaptations. As well, the book includes specific articles on representative species.

Throughout the text, black and white photos and line drawings serve as illustrations. A good full colour section at the front of the book shows 19 examples of Canadian amphibians. Cross referencing these photos with the articles would have been helpful. Froom's own reminiscences in the introduction set the folksy tone of the book. She recalls losing Oleander the salamander. "He was very angry one evening because I did not give him a slug that was small enough for him." In a later section of the book, referring to the red-spotted newt, which has a land-dwelling stage called the red eft, she writes, "the little Red Eft, like Cinderella, must shed its beautiful woodland apparel and return to the less colourful aquatic form to grow up, never again to be an eft."

The section which deals with amphibians as pets contains much useful information regarding housing, food, ailments, and treatment. Froom devotes her last chapter to conservation. She cites loss of habitat as the major man-induced threat to the survival of amphibians, followed by pollution, pesticide contamination, use in research facilities, and large-scale collection for food.

Amphibians of Canada has some weaknesses. Word usage is not always precise. For instance, the word larva is consistently misconstrued. Froom maintains on pp. 20 and 38 that frog young are tadpoles and salamander young are larvae. In fact, larva refers to an immature form of a number of groups of animals, including all amphibians, and the term tadpole may be used to refer to the young of frogs, toads, or salamanders.

Some statements show a lack of careful editing. As an example, the sentence, "Most surprising is the fact that the Midwife Toad, found in parts of Europe, is a male." Of course, Midwife Toad is the common name for an amphibian species having both males and females, in which the activities of the male give the species its name. Various other sentences are hard to follow because of strange construction and inappropriate conjunctions. A serious typographical error which was overlooked was the misspelling of *Gyrinophilus* on page 66.

An additional drawback is the inadequate coverage of the topic. Considering the small number of Canadian amphibian species, a reader should expect *Amphibians of Canada* to contain information on all the Canadian amphibians, but many Canadian species are mentioned only in the species list on pp. 46-48. A reader looking for information on a specific amphibian would be quite frustrated if that species did not happen to be one of those chosen to appear

and thus be listed in the table of contents. There is no index to guide the reader to the article, mention, or picture of his animal. As an example, the pickerel frog receives three sentences on page 100, a warning in the pet section because of toxic skin secretions which will harm other species, and a picture on page 118 in the conservation chapter. The mink frog is allocated one half of a sentence on page 84. This is ironic in that the mink frog is one of the most exclusively Canadian species of frog. The very common green frog is dealt with only briefly.

Since this book might be a child's first exposure to amphibian classification, it is unfortunate that the treatment of this subject is faulty. A species name is a binomial which always includes the genus. The second portion cannot stand alone, as Froom implies on page 44. Also, it is not acceptable to abbreviate the second portion of the name unless that portion has been previously cited. Such abbreviations make the species list woefully inadequate for all but the most knowledgeable reader.

The back cover of *Amphibians of Canada* calls the book "A fact-filled, illustrated, and fascinating guide to Canada's amphibians." This it may well be. The cover write-up also calls the book "comprehensive" and "especially suited for field study." These it certainly is not. A field guide is used to identify animals, helping the user to distinguish between various groups and species of animals. Froom's book simply is not equipped for this kind of use. There are no detailed drawings of the type needed for the more difficult identifications.

Another important tool which is omitted is the range map. There is no easier way to see at a glance just where an animal lives. A full map of the continent with ranges drawn in would help the reader see that some Canadian amphibians also range very far into the United States and Mexico. It would be a source of amazement to see the enormous northern range of the wood frog.

The reason given for omitting species of amphibians is that of space limitation. However, much space is devoted to items of little consequence such as the half page retelling of the story of the frog prince and arduous description of various frog hoaxes.

Amphibians of Canada has brought together much interesting material and will be a source of enlightenment to many readers. It is a shame that it did not deal more completely with its subject and that it did not receive more polishing in its pre-publication stages.

Discovering life on earth is based on the BBC TV series, "Life On Earth," and on David Attenborough's book of the same title. It is, however, a simplified children's version with many added photographs. Because the topics covered are not wholly familiar to many members of the reading public, the book serves as an excellent source of information and entertainment for many adults as well as children.

Discovering life on earth is essentially an evolution primer which outlines the development of life from its simplest forms to its most complex. Attenborough shows how certain characteristics enable living things to exploit each and every

possible niche.

The reader is shown how, in sea, more and more intricate bodies were developed. The fish began as a jawless creature with boney plates, but over time streamlined its form in order to achieve incredible mastery of its watery domain. Changes enabled sea-dwelling creatures to exploit the opportunities of the land. Lungs made possible the breathing of air, but amphibians were still tied to the water by their reproductive patterns and water permeable skin. A beautiful two page spread with 14 colour photos shows the reproductive cycle of the European frog. The following pages give numerous examples of fascinating reproductive strategy designed to free the amphibian from its ties to the water, as well as to give better protection to the offspring.

The chapter on reptiles includes a good discussion of temperature regulation and points out the high price paid by the warm-blooded animals, who use 80% of their food energy just to maintain constant body temperature. As the discussion moves to birds, we are told that the feather is an even better insulator than fur. Because birds need so much energy to fly, very little must be wasted on heat maintenance.

A fine discussion of marsupial and placental development in mammals details the advantages of the latter, which are the elimination of the hazardous journey to the pouch and the ability of the placental mother to provide all of the necessities of life, even to the extreme of gestation and birth at sea.

The list of revelations and explanations goes on and on. *Discovering life on earth* handles complicated subject matter in a way that children can understand. The sentences are short, with good continuity. Sometimes a sentence seems to have been bisected in such a way as to have the second half begin with a contraction which could have been omitted entirely, but the effect is not overly distracting.

The book consists of text and colour photos, with a few paintings which depict scenes and creatures of prehistoric times. All are of such excellent quality that a reader could spend long hours just admiring the stunning display. This is a book to read aloud, discuss, and share with a child.

All of these books encourage in the reader an attitude of respect for and admiration of the natural world.

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QUE L'ESPOIR DEMEURE

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