

BOOK REVIEWS

BUGGY BOOKS: A GUIDE TO JUVENILE AND POPULAR BOOKS ON INSECTS AND THEIR RELATIVES, by Gary A. Dunn. 1990. Published by Young Entomologists' Society, Inc., 1915 Peggy Place, Lansing, Michigan 48910-2553. 120 pp. Soft cover, 21 × 28 cm, no ISBN, \$12.95 (plus \$2 S&H).

Asked by a clergyman what his many years of studying biology had taught him about the Creator, the great scientist J. B. S. Haldane reportedly replied "An inordinate fondness for beetles." Apocryphal or not, this anecdote underscores the fact that the insect order Coleoptera is the most species-rich group of animals on earth, currently numbering about 350,000 named species. Extending Haldane's logic, we must surmise that the Creator prefers beetles over butterflies and moths by a three-to-one margin; the Order Lepidoptera numbers about 120,000 named species, barely edging out Diptera (flies) for a distant second place. Hymenoptera (ants, bees, and wasps) comes in fourth at about 100,000 species before the insects relinquish fifth place to the Mollusca (a Phylum, no less) at around 80,000 species. Order Hemiptera (true bugs) ranks sixth at 60,000 species, followed by spiders (Class Arachnida—55,000 spp.), vertebrates (Phylum Vertebrata—54,000 spp.), and crustaceans (another Class—45,000 spp.), before we arrive at the Order Orthoptera (grasshoppers, crickets, roaches) in tenth place with 20,000 species. (These numbers are taken from Southwood, T. R. E., 1978, *The components of diversity*, pp. 19-40, in Mound, L. A. & N. Waloff (eds.), *Diversity of Insect Faunas*, Symposia of the Royal Entomol. Soc. London, No. 9; Blackwell Sci. Pub., Oxford, 204 pp.)

These numbers and rankings are useful in evaluating the attention given different groups in popular publications on insects. Does popularity have anything to do with diversity? Assessing the relative popularity of insect orders in books for the general public recently has been made easier by Gary Dunn, who has compiled a list of 736 juvenile and popular books on insects and their relatives. *Buggy Books* covers only non-fiction works (fictional books on arthropods number an additional several hundred titles and will be covered in a future publication), but stretches back to 1900 to cover 90 years of publishing.

The heart of *Buggy Books* is an alphabetical listing by title in two parts. Part 1 treats non-insect arthropods; Part 2 treats insects. In each Part, following the alphabetical book list, is a subject index, age appropriate index, and an author index. For each book entry the following information is given: author; name, place, and date of publication; number of pages and illustrations; ISBN; price at the time of publication; an age appropriateness abbreviation; a quality rating symbol; and a brief description (2-3 lines). Age appropriateness designations are based on publisher recommendations and Dunn's own evaluations. Intended as guidelines, not absolutes, the five age categories range from PRE/BEG (=Read-aloud and Early Reader Books, ages 3-6) to INT/ADV (=Books for Adolescents and Adults). The quality ratings are Dunn's personal opinion of the quality and usefulness of the book. They range from one star (Books of POOR Quality = little use) to five stars (Books of EXCELLENT Quality = highly useful). A significant minority of titles were unavailable for review and are labeled NR (=not rated).

The indices add greatly to the usefulness of *Buggy Books*. For example, in the Age Appropriateness Index, titles are grouped alphabetically under each of the five categories and are followed by the quality rating, providing easy identification of the best books appropriate for children of classrooms of any age group. In the Subject Index, titles are listed alphabetically under subject headings (5 subject categories in Part 1; 24 categories in Part 2), and each title is followed by the age appropriateness designation. My one suggestion for improvement of *Buggy Books* would be to add the quality ratings to titles listed by subject. This would allow someone interested in a particular group—butterflies and moths, for example—to scan for the top quality books about those insects.

Dunn, Executive Director of Y.E.S. (Young Entomologists' Society), has tried to make *Buggy Books* as complete as possible, but admits that it is unlikely that he has uncovered every non-fiction arthropod book ever published in English (books published in other languages have not been included). Even so, nothing else approaches the comprehen-

siveness of this compendium. For parents and teachers, *Buggy Books* is an invaluable resource for locating quality books (and avoiding inferior ones) that will stimulate young naturalists and introduce them to the animal groups that display the greatest diversity in species, life histories, and behavior. To be sure, many titles are out-of-print, but "collecting" these rarities can be as challenging and exciting for the bibliophile as swinging a net is for the field lepidopterist. Many in-print titles are available by mail from Y.E.S.'s Buggy Bookstore, or by special order from any good bookshop. To locate out-of-print titles, Dunn suggests checking your local public or school library (ask for a search through interlibrary loan if the book is unavailable locally) or exploring used bookstores.

Let's return to our original question: Does popularity (number of titles) have anything to do with diversity (number of species)? Here's the score for the Orders of insects:

Order	(Rank)	Percentage of species in Class Insecta	Number of books published on Order since 1900	Percentage of total books published	(Rank)
Coleoptera	(1)	44.2%	39	10.8%	(3)
Lepidoptera	(2)	15.1%	137	37.9%	(1)
Diptera	(3)	15.0%	13	3.6%	(6)
Hymenoptera	(4)	12.6%	113	31.3%	(2)
Hemiptera	(5)	7.6%	6	1.7%	(7)
Orthoptera	(7)	2.5%	38	10.5%	(4)
Other Orders	(6)	3.0%	15	4.2%	(5)
Totals		100.0%	361	100.0%	

The great popularity of the Lepidoptera probably results more from public appreciation of the beauty and grace of butterflies than from the sheer number of species, most of which are small dull-colored moths. Indeed, most of the books treat butterflies, which account for only about 15% of the Lepidoptera. No doubt the mystical symbolism of metamorphosis contributes as well, as many books dwell on the "magic" and "wonder" of the transformation from caterpillar to adult. (Of course, the four most species-rich orders are all holometabolous, but the immature stages of beetles, flies, and hymenopterans are usually much more cryptic than woolly bears, horned devils, and cutworms.) Hymenoptera surely owes its boost in the rankings in part to its venomous nature (killer bees and warrior ants are favorite book subjects) and perhaps to widespread envy of the industrious nature of ubiquitous ants. Flies would probably rank higher if they weren't generally perceived as pests and carriers of disease. That domestic species tend to breed in disgusting places doesn't help.

I could go on, but in keeping with the spirit of self-discovery encouraged by *Buggy Books*, I'll let you ponder the numbers and draw your own conclusions.

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