BOOK REVIEW


The genus Heliocopris includes many of the largest dung beetles in the world, with some species approaching 7 cm in length. Of the 50 described species, 45 occur on the African continent, four are Asian, and one is found on both continents. These are rivalled in size by only a few African species of Catharsius and the three species of the South American Coprophanaeus, subgenus Megaphanaeus. Many Heliocopris species feed preferentially upon elephant dung, although some have shifted to bovine and other herbivore dung in response to the historical decline of these majestic pachyderms (Davis et al. 2008).

In spite of their size and popularity with collectors, identification of these impressive bulldozing (earth-moving) beetles has been difficult due to the variation in the horn morphology of major and minor males and the overall similarity of females. The only complete key to species was published in French 70 years ago by the eminent African dung beetle specialist André Janssens (Janssens 1939), who treated 47 species. His brief descriptions included 88 line drawings and black and white photographs of eight species. While this level of illustration was advanced for the time, its utility in determining individual species was problematic without access to an extensive reference collection. This state of affairs is now a thing of the past with the publication of this lavishly illustrated monograph by Pokorny and his coauthors and is a remarkable fusion of science and graphic artistry.

The monograph was designed, written, and published with an exceptional degree of forethought and attention to detail. As an identification guide to a single genus of dung beetles, this volume sets a new standard in design and content. From the colored front and back covers to the authors’ mugshts, Robert Lízler (project director) and Dan Bártta (art director) have done a wonderful job ensuring that the graphics are of high quality and well integrated with the text and captions to minimize blank spaces. The actual number of figures in this volume is well over the listed total of 271, as both male genitalia and habitus figures typically have 2 views, with line drawings having 3 views. For a group of nocturnal beetles that are essentially black, this book has utilized color printing to the fullest by including many habitat and landscape images, plus a few choice pictures of African big game animals. The use of color also allows the reader to appreciate the subtle body tones of black and brown or the scruffy yellow or reddish setae that differ among the species.

The book is divided into 10 sections: Introduction; Checklist of species; Abbreviations; Terminology; Acknowledgments; Key to species; Individual species accounts; Literature; Index; and information about the authors. The introduction covers a discussion of the type species, the morphology of adults, general biology and nesting behavior, fossil history, and biogeography. A key is provided to distinguish Heliocopris from the genera Catharsius, Copris, and Synapsis. The genus Heliocopris is then divided into five species groups on the basis of external morphology. The authors make no attempt to elucidate the phylogenetic relationships among species or species-groups, so no character or molecular analyses are presented.

The checklist of species presents all 77 names that have been assigned to the genus and includes the original combinations, type repositories, and a country distribution list. Valid species are presented in italics while synonyms are depicted in a standard pale font. The abbreviations used in the monograph include 4-letter codens for institutional collections and 3-letter codens for countries. The brief section on terminology clarifies the terms used to describe surface sculpture, as well as pronotal and pygidial margins.

The 14-page key includes all but two species for which the males are unknown. The binary couplets include diagnostic details of both major and minor males, and females when known. Each terminal couplet is accompanied by a habitus image of a male. The authors have no doubt struggled through many identification keys in their days, likely wearing out many favorite volumes by having to flip back and forth between key and illustrations. Although the paper and binding on this volume is of top quality, the authors have alleviated