

HARPOOTLIAN, P. J. 2001. Scarab beetles (Coleoptera: Scarabaeidae) of South Carolina. Biota of South Carolina 2L 1-157. ISBN 0-9712527-0-X. Available from Public Service Room, 96 Poole Agricultural Center, Clemson University, Clemson, SC 29634-0129, or see <<http://cufan.clemson.edu/>> Soft cover. \$37.50.

It is a general trend that as scientific studies become more advanced they involve smaller and smaller details of the subjects. Even in some branches of taxonomy, we forget it is whole organisms we are studying and lose track of basic details like how to tell them apart, where are they found, and what do they do; minor details the public wants to know. With a growing interest in biodiversity, we are again realizing how important faunal studies are to our total knowledge of the environment and how little we actually know. *Scarab beetles of South Carolina* is an important step toward correcting that deficiency.

In the introduction, Harpootlian states, "This manual is intended primarily as a guide for identifying adult scarabs of South Carolina." *Scarab beetles of South Carolina* covers what North Americans traditionally call "scarabs," omitting the scarabaeoid families Lucanidae and Passalidae. The book begins with a brief introduction to scarabs, the ecological regions of South Carolina, a scarab illustration with body parts labeled, and a checklist of species. Then it presents keys allowing the user to identify any species known to occur in South Carolina. The entire book is packed with varied illustrations of taxa and distinguishing characteristics which help make the keys user friendly. There is even a glossary of terms to aid the user.

Most of the text is devoted to individual species accounts. These accounts are brief and include a synonymy, diagnosis, biology or comments, and distributions. Considering the fascinating biologies of some scarabs, the species accounts appear too brief. For many, however, that is the state of our knowledge.

Harpootlian expended a great deal of effort to confirm the nomenclature presented. This led to a few new synonymies and changes in authorship of some taxa. These changes are discussed as necessary to present the case. The general public may find that these discussions distract from the book's purpose as an identification guide. Specialists should be grateful he included them.

South Carolina has a tremendous diversity of habitats, from the Appalachians to the coastal dunes, and as such, has a tremendous diversity of scarabs. Most of the species covered have widespread distributions. Although it is not intended to do so, Harpootlian's work can actually be used to identify the vast majority of the scarabs occurring throughout the southeastern coastal plain states (except peninsular Florida). There is no

single reference available which can boast such a coverage for any of the other southeastern states.

This book's most obvious shortcomings are in the brevity of coverage and in the varied styles and quality of illustrations. The book contains many wonderful habitus illustrations originally used in the *Scarab beetles of Florida* (Woodruff 1973), plus a myriad of original photographs and line drawings. Line drawings of body parts like legs and genitalia appear to be professionally produced. On the other hand, many of the dorsal habitus drawings appear distorted and only give a diagrammatic representation of the beetle.

This reference work is not up to the quality and coverage of *Scarabs beetles of Florida* (Woodruff 1973; Woodruff & Beck 1989), nor *Scarab beetles of Nebraska* (Ratcliffe 1991). This is because of the brevity with which all of the subjects are covered. For example, larvae are entirely omitted. However, keep in mind that the reference was intended to be an identification guide for adult beetles, to aid others who wish to study scarabs. The *Scarab beetles of South Carolina* more than meets that goal.

Insect identification is difficult only because there are so few references like *Scarab beetles of South Carolina*. This book is a must for anyone interested in scarabs from the southeastern United States. My congratulation to Phil Harpootlian for having produced a much needed resource I will use for years to come!

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