

Book Review

by Harry G. Lee, MD

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Oliva Shells

The genus *Oliva* and the Species problem



L'INFORMATORE PICENO
Italy
BOSQUE BMT, S.A.
Costa Rica

Olive shells The genus Oliva and the species problem by Bernard Tursch and Dietmar Greifeneder. L'Informatore Piceno, Italy and Bosque B. M. T., S. A., Costa Rica. pp. 1-569 (including numerous b&w plates, text photographs, & drawings) + x + 48 color plates. 215 x 296 mm. Hard-bound. ISBN 86070-17-9, 2001 (in English).

Very seldom does a taxonomic monograph explicitly guide its reader through the basic philosophy and process which underpin any work of this sort. Yet Tursch and Greifeneder, in the course of providing an exhaustive account of the biology and taxonomy of this important gastropod genus, have exploited their study as a heuristic model with far wider applicability – and they've done so in a uniquely captivating, illuminating, and user-friendly manner.

The text of this *magnum opus* spans 469 pages and is divided into 15 chapters. The stamp and tone of the work is set in the first paragraph of page 1, which outlines the seminal importance of the *Oliva* as a study group. The style boldface passages, itemized “bullets,” and simplified vocabulary leaps out and invites the reader to share the opportunities and challenges faced by the authors, who actually seem to be having fun with this project.

No less than 30,000 *Oliva* shells, including all available type material) were examined by the authors; 100,00 measurements were made on 3,000 shells, and definitive taxonomic criteria were painstakingly teased from these data by a mix of inductive and deductive massages – tempered by a (combined) half-century of their prodigious familiarity with many biological aspects of the group.

As the presentation progresses through the first three chapters, myriad topics from basic human nature to the marginalization and denigration of taxonomy (dubbed the “queen and handmaiden of all other biological disciplines”) in modern scientific society to dealing with the pratfalls of false assumptions, imprecision, convergences, illogic, (im)probability, to the disjunction of Linnean vs. evolutionary classification to mention only a significant minority, are met with charming candor. Basic works by the likes of thinkers Stephen J. Gould, Ernst Mayr, Carl Sagan, Gaylord Simpson, and Edward O. Wilson are cited in the process. The style is often homespun (on environmental variation; “you have a nice suntan.”), slightly impious (on nonscience: “we have a very high opinion of ourselves. Therefore many people still find it hard to swallow that *Homo sapiens* is not the pet project of the Mesopotamian high god Maduk or one of his junior synonyms”), acerbically logical (on the modern scientific community regarding gadgetry-unenriched taxonomy *demodé*: “then what about mathematics?”), but it is always illuminating.

Chapters 4 through 11 deal with collecting these animals, various aspects of their life history, shell structure, and coloration. The next two chapters treat the technical aspects of shell measurement and the careful dissection of the data thus obtained to exclude shell features imparted by a host of misleading forces (from collector bias to non-isometric growth to “adaptive“ characters, etc.). Much of this work has been published in an extensive series papers in the formal scientific literature over the last decade, but all this information is essential to understanding the classification that follows.

The taxonomic treatment of constituent species takes up most of chapter 14. Taxa are grouped into 16 species groups (to aide in identification only; not necessarily with taxonomic rigor). Each taxon is presented by its scientific name, author, date, report of

twelve formatted sets of shell characters which include the newly-defined “subchannel pattern,” “cloak pattern,” “plications plate,” and “shoe.” A diagnosis section differentiates the taxon from similar ones. Habitat characteristics are reported, and a distribution map is referenced. Those who haven’t read earlier works by Tursch *et al.* (exemplified by their consolidation of the *O. fulgurator* complex in 1998) may be dumbstruck by the scant number of taxa recognized - only 74 - without use of subgenera and with nearly total abandonment of subspecies (only 5 for the 69 nominate species), each parsimony defended in earlier chapters. Only one new species, *Oliva fijiana*, is introduced. Given the authors’ acknowledgement of a few less than 500 proposed names referable to *Oliva*, this gives a ratio of less than 1 in 6 of these as morphospecies meeting their criteria for validity.

The next section, sentimentally entitled “Le tombeau des *Oliva*,” is an alphabetical list of each relevant species-level name (including various misspellings, etc.) which has appeared in the literature. Original reference, type material, synonymy, and various other random topics related to nomenclature and taxonomy are addressed name by name. Virtually all types are illustrated in the 29 black-and white type material plates, containing about 600 images, that immediately follow the listing. In many instances syntypes are shown without a designation of a lectotype.

At the back of the book are 48 color plates preceded by the extensive bibliography and followed by subject and systematic indices. These plates contain about 1000 crisp accurate images all told, at least a few for each species, in nearly the same sequence as the text treatment, and especially selected to depict variability (when appropriate). Some of the principles of shell coloration discussed in early chapters are shown in the first three of these; the last six feature living animals.

This work is both a and original and trenchant primer in taxonomy, conveniently written in the idiom of conchology, **and** a beautifully-executed monograph which is as magnificent an iconography as one can imagine in the context of a scientific treatise. Very few shell-collectors (who can afford it) should pass this by. For those who are still skeptical or especially frugal, we reiterate the dual value of the work as well as the number of pages and plates.

This work is available for about 110 U. S. dollars from several booksellers.

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