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Bivalve Seashells of Tropical West America

Marine Bivalve Mollusks from Baja California to Perú

by

Eugene V. Coan and Paul Valentich-Scott



Bivalve Seashells of Tropical West America is the most comprehensive book ever written on tropical Pacific Ocean bivalves.

The culmination of a nine year study, it treats all bivalve mollusks living from northern Baja California, México to northern Perú. A total of <u>890 species</u> are described and illustrated with over 5,000 color photographs and detailed drawings. **All habitats** in the region are included from the intertidal splash zone to the abyssal depths of the ocean basins.

The book has over 5,000 complete bibliographic references to the bivalves including citations on the biology, physiology, ecology, and taxonomy of this commercially and biologically important group. Character tables and dichotomous keys assist the reader in identification. Also included in the 1258 page book is an illustrated key to the superfamiles of the region, and a complete glossary.

This is a "must have publication" for tropical malacologists, paleontologists, archeologists, libraries, shellfishery and environmental scientists, and shell collectors.



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BOOK NEWS

BIVALVE SEASHELLS OF TROPICAL WEST AMERICA

Marine Bivalve Mollusks from Baja California to Northern Perú.
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Bivalve Seashells of Tropical West America is the most comprehensive book ever written on tropical Pacific Ocean bivalves. Dozens of malacological books and monographs appear every year, usually treating a particular molluscan subgroup or providing a more or less complete treatment of species-level diversity in a given region. Few of them are destined to become instant classics that need a prime spot on the malacological bookshelf. This work is undoubtedly one of the latter.

The two authors, Eugene Coan and Paul Valentich-Scott, leading bivalve systematists who know the eastern Pacific bivalve fauna better than anybody else, tailored this work to match their earlier (2000) Bivalve Seashells of Western North America, which was coauthored with the late Frank Bernard and provided geographic coverage from the Arctic coast of Alaska to Baja California in Mexico. The present volume, again published by the Santa Barbara Museum of Natural History (SBMNH), extends the range to northern Peru (or Perú as the authors like to call it with a nod to their Spanish language skills) and thus is the long-awaited and much expanded successor of Myra Keen's classic (1971) work covering the same region some forty years ago. The new book's goals are defined as three chief purposes (p. 10): (1) to aid in identification of tropical eastern Pacific bivalves, (2) to provide access to the published information about these and similar taxa, and (3) to pose questions that the authors feel require additional study.

Two things quickly become obvious about this latest contribution: It very closely follows the style of the earlier work, but with 1,258 pages containing over 5,000 photographs, this two-volume tome contained in a sturdy slipcase is much more extensive. The large work is conveniently split into two continuously paginated volumes, each repeating the table of contents and a very detailed index. The introductory material highlights the newly introduced taxa (pp. 3, 4), gives a brief history of Panamic malacology (pp. 9, 10), and introduces the bivalve shell (pp.



Front cover of Volume 1.

11-18). Ten pages (21-31) are dedicated to an excellently illustrated key to superfamilies. The core of the work, beginning on page 32, is dedicated to the group-by-group taxonomic treatment of the regional bivalve fauna in phylogenetic order. The second volume continues the taxonomic section, beginning with the superfamily Tellinoidea. Following the taxonomic treatment, the authors provide an extremely well-researched literature section, including a guide to the bivalve literature (pp. 1034-1044), a massive literature cited section (pp. 1045-1171), and a handy guide to locality names with associated latitudes (pp.

1173-1178). Rounding out the scholarly treatment of the topic, an appendix of image sources is provided that details locales, museum collection numbers, and specimen dimensions of the illustrated shells – thus making every specimen tractable for future research (pp. 1179-1209). The book concludes with a textual glossary of terms (pp. 1210-1222).

A noticeable and welcome shift from the earlier volume is the employment of color photography throughout, all in very good quality and resolution. Patricia S. Sadeghian and Adrianne Calbreath, both of SBMNH, are credited with the excellent digital imaging and page layout, respectively. Minimally, the right outside and left inside valves are shown for each treated species, but in most cases all four views plus an umbonal aspect is provided. In addition, outlines of pallial lines are provided for Tellinidae and Semelidae. Small shells (e.g., in Nuculidae) are represented by scanning electron micrographs. The oblique lighting employed for the color photographs has worked very well, except for the inside of deeper-cupped shells; in groups such as Arcidae, Cardiidae, and Veneridae, interior detail is obscured by the resulting shadows. Technical production is as nearflawless as such a giant tome can be. These authors and their supporters certainly know how to proof-read and cross-reference a publication.

The book concentrates on unraveling and representing species-level diversity in the targeted region, and does so exclusively based on shell-based taxonomy, often illustrating type material. As reflected in the detailed acknowledgment section, input by group specialists was sought where necessary and available. Eighteen new taxa (15 species and three genera) are introduced, often named in honor of bivalve specialists for their contributions to the field. The authors set out to develop a comprehensive guide to the identification of bivalve mollusks in the Panamic Province, and they delivered it exceedingly well.

Throughout the book, the authors are "all taxonomic business" and do not attempt to synthetize the wealth of

cited information to venture into more general biological or human interest topics. There is little reference to, and no illustration of, the living animals. Geographic, depth, and fossil record ranges are provided for each species, but no indication of whether the species is rare or common (such data are often difficult to come by, but some of the treated species probably are exceedingly common, whereas others are rarely encountered). The larger and more common ones have probably been exploited for food in the region - which of these many hundred species play or have played a part in the local industrial or artisan fisheries? Questions such as these will be much more readily and accurately addressed with the solid foundation here provided. Between the extremely well-researched taxonomic treatments and the wealth of information linked in the form of thousands of literature citations. Gene Coan and Paul Valentich-Scott have made an amazing contribution to the infrastructure to our field.

This is a must-have for anybody seriously interested in bivalve systematics or the invertebrate fauna of the eastern Pacific. Congratulations to the authors – who will hopefully tackle even more eastern Pacific coastline with the next project. The rest of us better make space on our top shelves. This one requires approximately 3 inches (or 7.5 cm) of shelf. And don't forget to add an extra support bracket for the eleven-pound (!) addition.

Literature cited

COAN, E. V., P. VALENTICH-SCOTT & F. R. BERNARD 2000. Bivalve seashells of western North America: marine bivalve mollusks from Arctic Alaska to Baja California. Santa Barbara Museum of Natural History, viii + 764 pp.

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