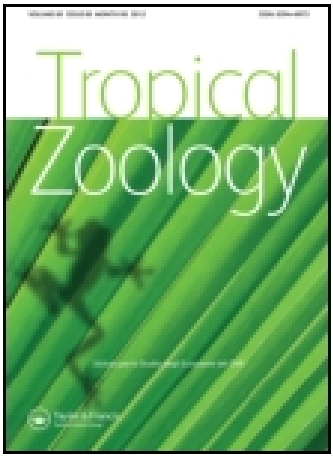

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Book reviews

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Book reviews

The natural history of Enewetak Atoll.
Volume I, The Ecosystem: environments, biotas, and processes. DOE/EV/00703-T1-Vol. 1 (DE87006110), 1987, XVIII + 228 pp.
Volume II, Biogeography and systematics. DOE/EV/00703-T1-Vol. 2 (DE87006111), 1987, XVIII + 348 pp.
Edited by: D.M. DEVANEY, E.S. REESE, B.L. BURCH, and P. HELFRICH.
(U.S. Department of Energy, Office of Scientific and Technical Information, Oak Ridge, Tennessee, U.S.A.).
Price code A99, current price for the set of two volumes US $ 50.95.
Available from: NTIS Energy Distribution Center, P.O. Box 1300, Oak Ridge, Tn 37831, U.S.A.

Under the impetus of the cold war, Enewetak Atoll, Marshall Islands, was the theater of the 1940s and 1950s nuclear testing program carried out by the U.S. Atomic Energy Commission. In the post-war climate of national urgency and security, the AEC was also concerned with the long-term consequences of the application of nuclear technology. There was a need for a more complete knowledge of the biogeochemical processes which might lead to the transport of radioactive contaminants from the atoll system to man. More fundamental, the feeling of unpredictability surrounding certain aspects of the system most likely to be perturbed by test activities together with the acknowledged inadequacy of the understanding of the systematic and ecology of the atoll biota called for a broad spectrum of investigations. This rationale led to the establishment of the Enewetak Marine Biological Laboratory in 1954 and the start of a 30 year long research program, to which several hundreds of scientists contributed with the publication of over 220 fundamental papers concerning the biology and geology of atolls. In 1974, with the clean-up of Enewetak nearing completion and the return of the atoll's residents imminent, it was decided that the ultimate phase down should follow over the next 2 or 3 years, when research would be extended to the terrestrial environment (the laboratory was renamed the Mid-Pacific Research Laboratory), and it was stated that significant efforts should be devoted to summarizing the research product of the laboratory's entire history into a publishable work.

«The natural history of Enewetak Atoll» is the excellent result of this synthesis. The first volume summarizes the great diversity of research carried out by many scientist on geology, subtidal and intertidal environments and ecology, reef processes and trophic relationship. In addition, there are chapters on meteorology and oceanography, as well as on the history of Enewetak Atoll and its people. Chapters 7 and 8, by Alan J. Kohn and Patrick L. Colin respectively, give an excellent treatment of the ecology of the subtidal and intertidal environments and deserve special mention, as does chapter 11 by one of the editors, Ernst Reese, which discusses terrestrial ecology and in particular the role played by terrestrial decapods, including *Birgus latro,* the robber or coconut crab.

The second volume provides information on the taxonomy of the animals and plants known to occur on Enewetak Atoll. Each chapter gives a succint summary of the biota with respect to endemism, range extension and other features that set the Enewetak biota apart from others one might expect to find on equivalent Indo-Pacific islands. Of particular interest are chapters 14 on molluscs, by E. Alison Kay and Scott Johnson, chapters 17 on stomatopod crustaceans by Marjorie L. Reaka and Raymond B. Manning, and chapters 22 and 23 on decapods, by the late Dennis M. Devaney and A.J. Bruce, and by John S. Garth, Janet Haig and Jens W. Knudsen. In addition to the algae, fungi, vascular plants and the animal groups mentioned above, coverage is given to Foramini-

fera, sponges, coelenterates, bryozoans, sipunculas, echiurans, platyhelminthes, Nemertea, nematods, polychaetes, insects, pycnogonids, several entomostracan groups, echinoderms and protochordates. A check list of the vertebrate classes is also supplied. The price of the two volumes is extremely reasonable, although the quality of the illustrations obviously suffered as a result since they are sometimes inadequate for such an important work and do not always meet the high standards of the text. However, coverage is amazingly complete and thorough, considering that this book is the most comprehensive documentation of a coral atoll ever attempted. Only Aldabra Atoll in the Indian Ocean has been the subject of similar intensive study, but no single work has ever been published to date aimed at giving a comprehensive summary of the total research effort. This synthesis represents a landmark for those scientists studying the biota of coral atolls, and also for all students of tropical ecosystems, as it is a precious bibliographical and methodological source of information. Moreover, fulfilling Reese's expectations, the books serves its purpose best precisely when the reader comes away with more questions than answers, and with the desire to find the answers to those questions in future research on the natural history of coral reefs and islands.

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