

chemistry" (40 pages), M. Szwarc; "Nuclear quadrupole resonance in irradiated crystals" (20 pages), Jules Duchesne; "Correlation problem in many-electron quantum mechanics. I. Review of different approaches and discussion of some current ideas" (116 pages), Per-Olov Löwdin; "Correlation problem in many-electron quantum mechanics. II. Bibliographical survey of the historical developments with comments" (43 pages), Hiroyuku Yoshizumi; "The problem of barriers to internal rotation in molecules" (27 pages), E. Bright Wilson, Jr.

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**Exotic Zoology.** Willy Ley. Viking, New York, 1959. xii + 468 pp. Illus. \$4.95.

The art of writing a book with two primary objectives in mind has been attained by Willy Ley in his new book on natural history. Instead of making new editions of *The Lungfish, the Dodo, and the Unicorn* (1941, revised 1948), *Dragons in Amber* (1951), and *Salamanders and Other Wonders* (1955), Ley has selected the most pertinent and interesting portions of each of these books, rewritten some of the sections, and brought them all up-to-date. This material makes up about one-half of the new book, *Exotic Zoology*; the remainder consists of new material not previously published in book form. Thus, a blending of the old and the new has produced one of the most enchanting books on natural history to appear in recent years.

This is the age of the specialist, and such a person should be able to take any chapter of *Exotic Zoology* and write it to death. Instead of this, Ley investigates a number of subjects from two points of view—their historical development in the knowledge of man, and their place, if any, in the evolutionary pattern of life as a whole. This use of both historical and zoological data gives the reader the impression that this is a well-rounded and authoritative book without giving him the feeling that he is reading a textbook. However, no textbook that I have read has the range of factual material that this book has.

*Exotic Zoology* is divided into five parts. The first part is appropriately

titled "Myth?" It discusses the unicorn in legend and fact, the legends of the survival of large reptiles (dinosaurs?), the Abominable Snowman, and the various legends of the little people—not fairies, but real little people. Pygmies exist, true, but do the descendants of the australopithecines still live in the deep forests of Africa?

The second part, "Records in stone," develops the dragon myths in fact and fiction and includes a very good discussion of the woolly mammoth. A side diversion on the flying dragons—the early bird-reptiles (or is it reptile-birds)—completes this section.

In part three, "Oceanic mysteries," we rove among the strange stories of the Kraken and the scientific basis for belief in huge cuttlefish types in the sea. The sea serpent is treated in a manner that is sympathetic, scholarly, and scientific. The almost unbelievable, large coco-de-mer nut and its strange struggle for existence is one of the botanical puzzles of the world, and it is told here. The spawning habits of the eel complete this section on natural history puzzles.

We find in part four, "Some fabulous islands," the stirring accounts of the extinct moas, and to me, the always intriguing stories (both factual and legendary) of the poison Upas tree. However, the man-eating tree is traced back to a well spun yarn. On the other hand, the Dodo did exist. It played a part in the history of exploration, similar to the role played by the large number of huge tortoises on the islands off the coast of South America.

To conclude this fascinating book, the author (in part five), delves into "Witnesses of the past." Such a hidden treasure house is Australia and its various fauna. Even today, mysteries unfold—such as the discovery of the 200-million-year-old coelacanth—and assure us that adventure is not dead.

To end this journey through space and time, Willy Ley takes us to the continent of mystery, Africa, and the strange and unsuspected animals that turn up there. Such a large animal as the okapi was unknown before 1900. Other primitive types have been found, and the concluding sentence, "And the Congo peacock raised again the old but still open question: what else may be hiding in the Rainy Forest . . . ?" expresses my sentiments completely.

The personal anecdotes, the almost homey treatment, and above all, the careful erudition of Willy Ley will at-

tract the natural and the physical scientist, as well as the layman.

The appendixes contain tables that aid in reading the book, namely, "Sequence and duration of geological periods," and "Animals and climate in northern Europe during the Pleistocene period." Olga Ley's well-done and wisely chosen illustrations add a great deal to the pleasure of reading this book. If you are interested in the world about you, you will like Willy Ley's *Exotic Zoology*.

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**Navaho Art and Culture.** George Mills. Taylor Museum, Colorado Springs Fine Arts Center, Colorado Springs, Colo., 1959. 221 pp. Illus. + plates.

To what extent does the art of a people reflect the values and the character of the society that produces it? George Mills, dissatisfied with the intuitive nature of previous studies of this problem, has sought a more objective method of attacking it. Choosing as his people for study the Navaho Indians of the American Southwest, he first seeks to analyze each of four of their artistic media—the traditional arts of weaving, silverwork, ceremonial dry-painting (commonly referred to as sand-painting), and a series of freehand, crayon drawings made for him in 1951–52 under conditions he imposed. He finds some 20 artistic traits which are common to all four media and designates them significant from the viewpoint of cultural values.

Mills then summarizes the major premises of the Navaho way of life as he has determined them from analysis of the literature on the tribe, written by cultural anthropologists. He then seeks to find psychological interpretations for the 20 Navaho artistic traits in the literature on the psychology of art in which the meanings of similar traits in the art of non-Navaho peoples are considered. And finally, he compares these interpretations with the major premises of Navaho life as revealed in the writings of students of the whole culture.

These correlations, for the most part, are very striking. They suggest that Navaho art is, indeed, an integral part of Navaho culture, which reflects the psychological characteristics and cultural values of these people. Furthermore, Mills finds that interpretations