

ocean and lithosphere; history of the world ocean; mineral resources of the ocean; energy resources of the oceans; complex regional natural resources of seas and oceans; preservation of resources and change in the character of the world ocean.

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Criteria for Publication

Apples of Immortality from the Cuna Tree of Life. The study of a most ancient ceremonial and a belief that survived 10,000 years. Clyde E. Keeler. Exposition Press, New York, 1961. 72 pp. Illus. + plates. \$3.50.

The subtitle of this book, "The study of a most ancient ceremonial and a belief that survived 10,000 years," immediately arouses in any anthropologist the suspicion that here is another amateur, speculative endeavor addressed to large issues in cultural history. Reading the volume confirms the suspicion.

Clyde Keeler is a geneticist, with more than creditable recognition in his own field, who has adopted the San Blas Cuna Indians of eastern Panama as a hobby-like subject of study; over the years, he has developed a familiarity with some of the people and an undisciplined knowledge of the formal ethnographic literature concerning them. The present book purports to trace certain Cuna rites and usages concerned with the fruits of the *Genipa americana* tree (employed on certain occasions as a body "paint" or dye) to the Tree of Life motif in the mythologies of the Near East and elsewhere. In the course of the book, the reader is confronted with figures and text references pertaining to Egypt, India, Sumeria, the Upper Paleolithic of Western Europe, Mexico, Arizona, British Columbia, and points between.

An appeal is made to the long-since discredited Heliolithic theory of cultural history of Sir Grafton Elliot Smith, to the possibility that Phoenician trading colonies were the origin of both the Mandan and Hopi Indian tribes of North America, and to the "expert"

knowledge of a Potawatomi Indian to whom Keeler sent some of his findings for evaluation. His general conclusion is that present Cuna practices are a stage in the Tree of Life myths and ceremonies, and their depiction, held by diverse other peoples of between 6000 and 10,000 years ago.

The author states in his final paragraph "that to conjecture this is anthropological heresy today. . ."; with this I agree, stipulating, however, that the word "heresy" be replaced by "fantasy."

The merits of this book aside, it is one more reason for raising the question: "Why does an expert in one field think that his hobby, however satisfying to him, is sufficiently disciplined to merit publication and serious consideration by other scholars?" Surely, Keeler would not employ the low standards in the collection and assessment of evidence and in the selection of what fits the case and the rejection of what does not in his genetic research that he has applied in writing *Apples of Immortality*. . . .

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New Books

Mathematics, Physical Sciences, and Engineering

Artificial Satellites. Michael W. Oven-den. Penguin Books, Baltimore, Md., 1961. 128 pp. Illus. \$1.25.

College Physics. Ray W. Kenworthy. Davis, Philadelphia, Pa., 1961. 671 pp. Illus. \$8.50.

Concepts from Tensor Analysis and Differential Geometry. Tracy Y. Thomas. Academic Press, New York, 1961. 126 pp. Illus. \$5.

Descriptive Palaeoclimatology. A. E. M. Nairn, Ed. Interscience, New York, 1961. 391 pp. Illus. \$11.

The Earth Today. A collection of papers dedicated to Sir Harold Jeffreys. A. H. Cook and T. F. Gaskell, Eds. Royal Astronomical Soc., London, 1961 (order from Oliver and Boyd, London). 414 pp. Illus. 80s.

Electrical Engineering. S. B. Hammond. McGraw-Hill, New York, 1961. 576 pp. Illus. \$8.75.

Electrical Estimating. Ray Ashley. McGraw-Hill, New York, ed. 3, 1961. 446 pp. Illus. \$12.50.

Engineering Data for Product Design. Douglas C. Greenwood, Ed. McGraw-Hill, New York, 1961. 438 pp. Illus. \$10.

Full-Scale Fatigue Testing of Aircraft Structures. F. J. Plantema and J. Schijve, Eds. Pergamon, New York, 1961. 436 pp. Illus. \$15. Proceedings of a symposium held in Amsterdam, Netherlands, June 1959.

Fundamental Mathematics. Thomas L.

Wade and Howard E. Taylor. McGraw-Hill, New York, ed. 2, 1961. 442 pp. Illus.

Gas Chromatography. Ernst Bayer. Elsevier, Amsterdam, 1961 (order from Van Nostrand, Princeton, N. J.). 252 pp. Illus. \$5.

Gas Sampling and Chemical Analysis in Combustion Processes. G. Tine'. Pergamon, New York, 1961. 109 pp. Illus. \$6.

An Introduction to Relativistic Quantum Field Theory. Silvan S. Schweber. Row, Peterson, Evanston, Ill., 1961. 917 pp. Illus.

Introductory Systems Analysis. Signals and systems in electrical engineering. William A. Lynch and John G. Truxal. McGraw-Hill, New York, 1961. 473 pp. \$7.50.

Iterative Arrays of Logical Circuits. Frederick C. Hennie, III. Massachusetts Inst. of Technology Press and Wiley, New York, 1961. 252 pp. Illus. \$4.95.

Lectures in Theoretical Physics. Wesley E. Brittin, B. W. Downs, and Joanne Downs, Eds. Interscience, New York, 1961. 539 pp. Illus. \$11.

Physical Chemistry. E. A. Moelwyn-Hughes. Pergamon, New York, ed. 2, 1961. 1340 pp. Illus. \$17.50.

Physical Chemistry of Process Metallurgy. pts. 1 and 2. George R. St. Pierre, Ed. Interscience, New York, 1961. 658 pp.; 1402 pp. Illus. pt. 1, \$22.50; pt. 2, \$25. Proceedings of an international symposium sponsored by the Metallurgical Society.

Quantum Mechanics. Eugen Merzbacher. Wiley, New York, 1961. 556 pp. Illus.

Radiation Chemistry of Gases. Samuel C. Lind. Reinhold, New York; Chapman and Hall, London, 1961. 323 pp. Illus. \$12.50.

Reference Electrodes. Theory and practice. David J. G. Ives and George J. Janz, Eds. Academic Press, New York, 1961. 662 pp. Illus. \$20.

Special Ceramics. P. Popper, Ed. Academic Press, New York, 1960. 381 pp. Illus. \$10.50. Proceedings of a symposium held by the British Ceramic Research Association, July 1959.

Soviet Research in Catalysis, 1956. pt. 1. *Theoretical and Sundry Associated Effects*, 46 pp., \$15; pts. 2a and 2b, General, pp. 47-569, \$60; pt. 3. *Reduction, Oxidation, Fischer-Tropsch*, pp. 571-647, \$15; pt. 4, *Hydrogenation; Cracking*, pp. 649-805, \$15. Consultants Bureau, New York, 1959. Selected reports reprinted from 1956 issues of journals translated by the publisher.

Tables of Airy Functions and Special Confluent Hypergeometric Functions. For asymptotic solutions of differential equations of the second order. A. D. Smirnov. Translated from the Russian by D. G. Fry. Pergamon, New York, 1960. 267 pp. Illus. \$15.

Tables of Elementary Functions. Mieczyslaw Warmus. Pergamon, New York; Państwowe Wydawnictwo Naukowe, Warsaw, Poland, 1960. 574 pp. \$15.

Theory of Hydrodynamic Lubrication. Oscar Pinkus and Beno Sternlicht. McGraw-Hill, New York, 1961. 479 pp. Illus. \$15.