

sicists or engineers because it lacks applications. There are many exercises, most of them quite straightforward, with answers compiled at the end. This feature doubtless will increase the appeal of the book to readers using it for self-study. The summaries at the ends of the chapters are another good feature. In my opinion, some additional suggestions for outside reading and mathematical report writing would enhance the usefulness of the book as a text.

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**Karl Patterson Schmidt Anniversary Volume in Honor of His Sixty-fifth Birthday.** Fieldiana: Zoology, vol. 37. Chicago Natural History Museum, Chicago, 1955. viii + 728 pp. Illus. + plates. \$10.

Appreciative accounts of Karl Patterson Schmidt by his administrative associates are followed in this book by 26 scientific articles, by 27 zoologists, on living and fossil animals from all five continents and several islands. Taxonomy, nomenclature, anatomy, geographic distribution, speciation, food habits, paleontology, and other aspects of vertebrates and invertebrates are dealt with.

In the past 30 years the advancing front of knowledge in taxonomy, phylogeny, and geographic distribution of animals—especially living animals—has lagged behind that in genetics, biochemistry, and microbiology. To consolidate and apply much of the information recently acquired in the last-mentioned fields, and to permit further advances in some of them, more precise knowledge of the taxonomy and natural history of most animal groups is now required. Consequently, the information in the Karl Patterson Schmidt volume is timely as well as basic in nature. From it we learn much about the natural relationships among the 80 species of snakes of the genus *Calamaria*, the northward limits of geographic range in Mexico of many neotropical bats, the 42 kinds (23 are new!) of obligate parasitic amblyopine beetles that live on rodents and marsupials; we also learn which of the nominal species of Columbian gallinaceous birds are valid and which are not, what foods are eaten by scores of kinds of fishes, and much about the species of fishes of the genus *Holocentrus* that are arranged according to the heretofore imperfectly known anatomical and functional relationships between the auditory bulla and swim bladder. In addition, we learn that the premaxillary fossa on the lower jaw of the living spectacled bear accommodates a pouch of the mouth cavity and is

not a place of attachment for a separate portion of the chewing musculature as the literature and our professors wrongly taught us about the closely related, extinct *Tremarctotherium*. Prevailing westerly winds acting on migrants account for the American origin of the bird fauna of Tristan de Cunha. Students of paleozoology will find in the volume well-illustrated and competently described missing links that make speculations unnecessary concerning the phylogeny of some lines of sea turtles, symmetrodont mammals, early crabs, and Devonian fishlike Heterostrachi that are useful in correlating discontinuous geologic deposits.

The basic nature of the original information in the Karl Patterson Schmidt volume guarantees long-time recognition of the deserved honor that it does him.

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## New Books

*Experimental Pharmacodynamics.* T. Koppányi and A. G. Karczmar. Burgess, Minneapolis 15, 1955. 256 pp. \$5.

*Metallurgical Progress.* vol. 2. Philosophical Library, New York; Cassier, London, 1955. 71 pp. \$6.

*Plastics and Building.* E. F. Mactaggart and H. H. Chambers. Philosophical Library, New York, 1955. 181 pp. \$12.

*Present-Day Psychology.* An original survey of departments, branches, methods, and phases, including clinical and dynamic psychology. A. A. Roback, Ed. Philosophical Library, New York, 1955. 993 pp. \$12.

*Particle Size Determination.* R. D. Cadle. Interscience, New York, 1955. 303 pp. \$5.50.

*Mutual Aid. A factor of evolution.* Petr Kropotkin; foreword by Ashley Montagu; "The struggle for existence" by Thomas H. Huxley, Extending Horizons Books, Boston 8, Mass., 1955. 362 pp. Cloth, \$3; paper, \$2.

*Biochemistry of the Developing Nervous System.* Proceedings of the First International Neurochemical Symposium, held at Magdalen College, Oxford, 13-17 July 1954. Heinrich Waelsch, Ed. Academic Press, New York, 1955. 537 pp. \$11.50.

*Histamine: Its Role in Anaphylaxis and Allergy.* M. Rocha e Silva. Thomas, Springfield, Ill.; Blackwell, Oxford, England, 1955. 248 pp. \$7.50.

*The Guilty Mind.* Psychiatry and the law of homicide. John Biggs, Jr. Harcourt, Brace, New York, 1955. 236 pp. \$4.50.

*Kinships of Animals and Man.* A textbook of animal biology. Ann H. Morgan. McGraw-Hill, New York, 1955. 839 pp. \$6.75.

*Bibliographia Araneorum.* vol. II, pt. 1. Pierre Bonnet. The Author, Université de Toulouse, 1955. 918 pp. \$23.

*Structure of the Ego.* An anatomic and physiologic interpretation of the psyche based on the psychology of Otto Rank. Lovell Langstroth. Stanford Univ. Press, Stanford, Calif.; Oxford Univ. Press, London, 1955. 149 pp. \$4.

*Smithsonian Institution, Annual Report of the Board of Regents.* Publ. 4190. U.S. Govt. Printing Office, Washington, 1955. 455 pp.

*Fishes of Japan.* Illustrations and descriptions of the fishes of Japan. Yaichiro Okada. Maruzen, Tokyo, 1955. 463 pp. \$10.

## Miscellaneous Publications

(Inquiry concerning these publications should be addressed, not to Science, but to the publisher or agency sponsoring the publication.)

*Indian Agricultural Research Institute, Souvenir, Golden Jubilee, 1905-1955.* The Institute, New Delhi, 1955. 90 pp.

*South Pacific Commission, Report for the Year 1953.* The Commission, Noumea, 1954. 33 pp.

*Life Insurance Medical Research Fund, Annual Report, 1 July 1954 to 30 June 1955.* The Fund, New York 17, 1955. 92 pp.

*Mineralogy of Some Japanese Mangane Ores.* Stanford Univ. Publ., Geological Sciences, vol. 5. Donald Edward Lee. Stanford Univ. Press, Stanford, Calif.; Oxford Univ. Press, London, 1955. 64 pp. \$1.50.

*Proceedings on the Conference on Interfacial Phenomena and Nucleation.* vols. 1-3. Geophysical Research Papers No. 37. H. Reiss, Ed. Geophysics Research Directorate, Air Force Cambridge Research Center, Cambridge, Mass., 1955. vol. 1, 225 pp.; vol. 2, 190 pp.; vol. 3, 123 pp. (Order from U.S. Dept. of Commerce, Office of Technical Services, Washington 25).

*Symposium on Genetic Recombination.* Given at Research Conference for Biology and Medicine of the Atomic Energy Commission, 19-21 April 1954. Oak Ridge National Laboratory, Oak Ridge, Tenn., 1955. 321 pp.

*Tularemia in Sheep and in Sheep Industry Workers in Western United States.* Public Health Monogr. No. 28. William L. Jellison and Glen M. Kohls. U.S. Public Health Service, Washington 25, 1955. 17 pp. Single copy, free.

*Educational Aids for Schools and Colleges 1955-56.* National Assoc. of Manufacturers, New York 17, 1955. 24 pp.

*Yale Conservation Studies.* vol. 4. Yale Conservation Club, Yale Univ., New Haven, Conn., 1955. 31 pp.

*Marine Sciences Programs in the South.* Regional Committee on Marine Sciences. Southern Regional Education Bd., Atlanta, Ga., ed. 2, 1955. 125 pp.

*Measurement of Vibration.* Ervin E. Gross, Jr. General Radio Co., Cambridge 39, Mass., 1955. 60 pp.

*Results of 1954 Fungicide Tests.* American Phytopathological Soc., 1955 (Order from D. A. Roberts, College of Agriculture, Ithaca, N.Y.). 16 pp. \$1.

*Algunos Problemas Relativos al Equilibrio Químico de Una Fase Gaseosa.* Publicaciones del Instituto de Matematica y Estadística, vol. II, No. 8. Juan J. Schäffer. 28 pp. *Figura Mínima que Cubre Puntos de Una Red.* II. vol. II, No. 9. Juan J. Schäffer. 26 pp. Facultad de Ingeniería y Agrimensura, Montevideo, Uruguay, 1955.