

ences and a large number of well-selected illustrations of uniformly high quality, which will do much to help the student's understanding of the subject. The omission of magnifications from some illustrations is a minor deduction from their value.

A thoroughly good book, eminently suitable as an introduction to past vegetation.

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## Comets and Minor Planets

**La Poussière Cosmique.** Les milieux interplanétaire, interstellaire, et intergalactique (*Évolution des Sciences*, No. 19). A. Dauvillier. Masson, Paris, 1961. 212 pp. Illus.

This French book on "cosmic dust" is essentially an account of the author's theories about the intergalactic, interstellar, and especially interplanetary media. After a 19-page introduction, and out of 177 pages of text proper, no less than 144 pages are devoted to the minor bodies of the solar system, with well over half on comets; much of the rest is devoted to meteors, meteorites, and asteroids. Few of the modern data on the gas are discussed. Nevertheless, this section includes the more interesting part of the book, in that it exposes the fallacies in some of the currently fashionable theories and describes at length the arguments for the author's own thesis, namely, that cosmic dust, micrometeorites, meteorites, cometary nuclei, microsatellites (of Mars, Jupiter, Saturn), and asteroids are all vestiges and products of the breakup of the terrestrial planet postulated by Olbers to account for the minor planets—and possibly of a lost satellite of Neptune. The references are curiously loaded with obscure popular or semi-popular papers of old authors (mainly 19th-century French), while modern references are sketchy. For instance, other theories of the origin of comets are either ignored (Oort's is not even mentioned), or given short shrift (Littleton's is dismissed in one paragraph); Whipple fares better: two paragraphs, one of which gives priority for the icy conglomerate model to G. A. Hirn in a book published in Paris in 1889! A more serious defect is the evidence of excessive haste and care-

lessness in putting together the author's reading notes into a book. For example, the statement on page 78, which is used to describe the polarimetric observations of the nucleus of a comet, "the polarisation . . . decreased with phase angle," is obscure because the range of phase angle is not stated. Furthermore, there are occasional plain errors of fact: the motion of Phobos, the inner satellite of Mars, is shown and described, on pages 47 and 48, as retrograde; the motion is direct.

The two brief chapters on interstellar gas and dust are extremely poor and sketchy; the last chapter (nine pages on intergalactic matter) is even worse and shows that the author is here way out of his field. The author (or the editors of the series) should have had the good sense to recognize it and to limit the discussion to the solar system.

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## South Sea Island Immigrants

**Peasants in the Pacific.** A study of Fiji Indian rural society. Adrian C. Mayer. University of California Press, Berkeley, 1961. 201 pp. Illus. \$6.

The British Crown Colony of Fiji has been called "The Little India of the Pacific," because agricultural labor brought there, as to other British Colonies during this and the last century, and their descendants, now 170,000 strong, outnumber native Fijians and all other peoples residing in these South Sea Islands. No longer bound by indenture and despite government regulations which virtually exclude them from acquiring freehold farm lands of their own, most Fiji Indians have preferred to stay in these islands rather than return to India. In so remaining, they have become a peasantry dominated by the economics of sugar production and also the largest overseas Indian community to be found anywhere.

During 1950 and 1951 Mayer studied three settlements, which represented about one percent of the population, located in each of the rural areas where Fiji Indians are concentrated. In his presentation of this research, he gives a concise review of the historical and cultural factors that have influenced some of the settlement and so-

cial patterns and a brief and excellent analysis of the major activities upon which this rural economy rests, as well as of the relations of these to certain aspects of the social structure. Variations and changes in caste, kinship, and the ritual life are described and related to the different localities of origin in India and to the effects of emigration and adaptation to a new social and economic order. Most interesting here is the effect that reliance on a single productive economy—growing sugar cane—has had upon that bulwark of Indian social and economic organization, caste, for in India caste is as much a system of economic interdependence between occupationally specialized groups as it is a matter of social rank and religious life. Greatest emphasis, however, is placed on the local political scene and its various organizational contexts, and on factionalism, leadership, and some aspects of social control. The manner in which these cut across the diversities of caste, linguistic affiliation, and religion brought from India is of utmost importance, for in these political activities are to be found the interests and values around which this new and emergent version of Indian society has become integrated in a multiethnic setting that includes Fijians, Europeans, and Chinese. The scope of this analysis is purposely restricted to rural settlements, but in an attempt to relate these to Fijian society at large, the author has, in a concluding chapter, summarized some of the attitudes and stereotypes Fiji Indians have toward each other, toward Fijians and Europeans, and toward their Indian homeland. As the subtitle indicates, the urban residents of the Fiji Indian community, whose importance and power derive from their participation in trade, finance, and Colony politics, are hardly discussed, yet their relation to the rural population is made abundantly clear.

Peasant communities, which form but a part of a large, heterogeneous, and complex society, are anything but easy to describe analytically, for they lack the unity and clearly defined social structures which relatively autonomous primitive societies possess and which social anthropologists have become skilled in handling. In this case the difficulties are amplified by the fact that Fiji Indians themselves come from diverse regional and social backgrounds, and many of these differences are perpetuated in the new setting.

Only an investigator who combined great sophistication in the intricacies of the cultures and societies in India with a talent for dealing with complex societies could have produced this clear, concise, and salient analysis. Furthermore, Mayer does not assume his readers are specialists in these matters.

In the decade since this field study was made, controversies over the always important political and economic statuses of Fiji Indians in the Colony have become so intensified that they have reached a critical state. However timely the appearance of this book is in this respect, Mayer has deliberately steered clear of these inflamed issues, and by objectively concentrating on a remarkably cogent analysis of the rural peasantry, with very little reference to policies of the Fiji Government, he has helped illuminate the current political crisis without taking a partisan stance.

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## New Books

### Biological Sciences and Medicine

**British Flies.** vol. 6, *Empididae*. J. E. Collin. Cambridge Univ. Press, New York, 1962. 790 pp. Illus. \$17.50.

**The Chromatography of Steroids.** I. E. Bush. Pergamon, New York, 1961. 458 pp. Illus. \$12.50.

**Contemporary Botanical Thought.** A. M. Macleod and L. S. Copley, Eds. Quadrangle Books, Chicago, Ill., 1962. 197 pp. Illus. \$6.50.

**Enzymes in Clinical Chemistry.** Section on Biology, International Union of Pure and Applied Chemistry. Butterworth, Washington, D.C., 1962. 511 pp. Illus. \$9. Proceedings of the Second International Symposium on Enzymes in Clinical Chemistry, held in Ghent, Belgium (April 1961), sponsored by IUPAC in conjunction with the Belgian Society of Clinical Chemistry. The papers are reprinted from *Pure and Applied Chemistry*, vol. 3. Nos. 3-4.

**Experimental Neurology.** Paul Glees. Oxford Univ. Press, New York, 1961. 543 pp. Illus. \$17.50.

**Flowering Trees of the World.** For tropics and warm climates. Edwin A. Menninger. Hearthsides Press, New York, 1962. 351 pp. Illus. \$18.95.

**The Giant Golden Book of Biology.** Gerald Ames and Rose Wyler. Golden Press, New York, 1962. 99 pp. Illus. \$3.99 (juvenile book).

**The Harvey Lectures, 1960-61.** Seymour Benzer *et al.* Academic Press, New York, 1961. 278 pp. Illus. \$8.

**The Human Species.** A biology of man. Anthony Barnett. Penguin Books, New York, ed. 2, 1962. 366 pp. Illus. \$1.85.

**Liver Biopsy.** An atlas of histologic appearances. R. G. Shorter. Pergamon, New York, 1961. 122 pp. Illus. \$9.50.

**The Mammalian Egg.** C. R. Austin. Thomas, Springfield, Ill., 1961. 189 pp. Illus. \$9.

**Mechanism of Action of Steroid Hormones.** Claude A. Villee and Lewis L. Engel, Eds. Pergamon, New York, 1961. 274 pp. Illus. \$10. Proceedings of the conference held at Endicott House.

**Natural History of Plants and Animals.** A. C. Olson, R. W. Crawford, and E. W. Huffman. National Press, Palo Alto, Calif., 1961. 183 pp. \$4.75.

**New and Nonofficial Drugs, 1962.** Council on Drugs, American Medical Association. Lippincott, Philadelphia, Pa., 1962. 900 pp. Illus. \$4.

**Organophosphorus Poisons.** Anticholinesterases and related compounds. D. F. Heath. Pergamon, New York, 1961. 410 pp. Illus. \$12.50.

**Pain, Its Modes and Functions.** F. J. J. Buytendijk. Univ. of Chicago Press, Chicago, Ill., 1962. 189 pp. \$3.95.

**Plant Life of Palestine: Israel and Jordan.** Michael Zohary. Ronald, New York, 1962. 268 pp. Illus.

**Survey of Biological Progress.** vol. 4. Bentley Glass, Ed. Academic Press, New York, 1962. 478 pp. Illus. \$10.

**A Synthesis of Evolutionary Theory.** Herbert H. Ross. Prentice-Hall, Englewood Cliffs, N.J., 1962. 400 pp. Illus. Trade ed., \$10; text ed., \$7.50.

**Systema Helminthum.** vol. 3, pts. 1 and 2. Satyu Yamaguti. Interscience, New York, 1961. 1261 pp. Illus. \$90 per set.

**Taxonomy of Setaria (Gramineae) in North America.** James M. Rominger. Univ. of Illinois Press, Urbana, 1962. 132 pp. Illus.

**Transplantation of Tissues and Cells.** R. E. Villingham and Willys K. Silvers, Eds. Wistar Inst. Press, Philadelphia, Pa., 1961. 155 pp. Illus. \$7.50.

**Workbook and Laboratory Manual in General Biology.** William C. Beaver. Mosby, St. Louis, Mo., ed. 6, 1962. 299 pp. Paper, \$3.75.

### Mathematics, Physical Sciences, and Engineering Science

**Argon, Helium, and the Rare Gases.** vol. 2. Gerhard A. Cook, Ed. Interscience, New York, 1961. 818 pp. Illus. \$17.50.

**Atmospheric Diffusion.** F. Pasquill. Van Nostrand, Princeton, N.J., 1962. 297 pp. Illus. \$10.75.

**Bibliography of Agricultural Meteorology.** Jen Yu Wang and Gerald L. Barger, Eds. Univ. of Wisconsin Press, Madison, 1962. 684 pp. \$6.75.

**Chemical Dictionary.** J. Fouchier and F. Billet. Netherlands Univ. Press, Amsterdam, ed. 2, 1961. 453 pp. \$25.

**Classical Electrodynamics.** John David Jackson. Wiley, New York, 1962. 658 pp. Illus. \$13.

**Collected Works of John von Neumann.** vol. 1, *Logic, Theory of Sets, and Quantum Mechanics*. 664 pp. vol. 2, *Operators, Ergodic Theory, and Almost Periodic Functions in a Group*. 578 pp. A. H. Taub, Ed. Pergamon, New York, 1961. \$15 each.

**A Combined Control System for the Process Industries.** E. Pavlik and B. Machai. Van Nostrand, Princeton, N.J., 1962. 195 pp. Illus. \$6.

**Design Data for Aeronautics and Astronautics.** Richard B. Morrison, Ed. Wiley, New York, 1962. 518 pp. Illus. \$18.

**Elements of Infrared Technology.** Generation, transmission, and detection. Paul W. Kruse, Laurence D. McGlauchlin, and Richmond B. McQuistan. Wiley, New York, 1962. 469 pp. Illus. \$10.75.

**Elements of Thermodynamics and Heat Transfer.** Edward F. Obert and Robert L. Young. McGraw-Hill, New York, ed. 2, 1962. 557 pp. Illus. \$8.95.

**Explanatory Supplement to the Astronomical Ephemeris and the American Ephemeris and Nautical Almanac.** Her Majesty's Stationery Office, London, 1961. 505 pp. Illus. \$7.85.

**The Givaudan Index.** Specifications of synthetics and isolates for perfumery. Givaudan-Delawanna, New York, 1961. 431 pp. \$7.50.

**A History of Chemistry.** vol. 2. J. R. Partington. St. Martin's Press, New York, 1962. 795 pp. Illus. \$20.

**The Inspiration of Science.** Sir George Thomson. Oxford Univ. Press, New York, 1961. 160 pp. Illus. \$4.

**Introduction to Structural Stability Theory.** George Gerard. McGraw-Hill, New York, 1962. 185 pp. Illus. \$7.95.

**Mathematical Statistics.** John E. Freund. Prentice-Hall, Englewood Cliffs, N.J., 1962. 260 pp. Illus. \$7.50.

**Muddy Sediments.** Some geotechnical studies for geologists, engineers and soil scientists. P. G. H. Boswell. Heffer, Cambridge, England, 1962. 150 pp. 14s.

**Organic Chemistry Today.** F. W. Gibbs. Penguin Books, Baltimore, Md., 1962. 304 pp. Illus. Paper, \$1.45.

**Précis de Physique.** vol. 2. Maurice Curie. Presses Universitaires, Paris, 1962. 648 pp. Illus. NF. 24.

**Qualitative Elemental Analysis.** E. H. Swift and W. P. Schaefer. Freeman, San Francisco, Calif., 1962. 483 pp. Illus. \$6.75 (*Teachers Manual*, 78 pp.).

**Solid Surfaces and the Gas-Solid Interface.** Lewellyn E. Copeland *et al.*, Eds. American Chemical Soc., Washington, D.C., 1961. 388 pp. Illus. \$9.

**Stochastic Service Systems.** John Rioridan. Wiley, New York, 1962. 139 pp. Illus. \$6.75.

**Structure Reports for 1954.** vol. 18. A. J. C. Wilson, Ed. Published for the International Union of Crystallography by Oosthoek, Utrecht, Netherlands, 1961. 853 pp. Illus.

**Theoretical Geomorphology.** Adrian E. Scheidegger. Prentice-Hall, Englewood Cliffs, N.J., 1962. 332 pp. Illus. \$18.

**Thermoelectricity.** An introduction to the principles. D. K. C. MacDonald. Wiley, New York, 1962. 133 pp. Illus. \$6.50.

**Treatise on Analytical Chemistry.** pt. 2, *Analytical Chemistry of the Elements*. I. M. Kolthoff and Philip J. Elving, Eds. Interscience, New York, 1961. 567 pp. Illus. \$16.

**Vistas in Astronomy.** vol. 4. Arthur Beer, Ed. Pergamon, New York, 1961. 194 pp. Illus. \$12.