

istics than is usually found in introductory biology textbooks, the presentation of heredity offers little that is unique.

Evolutionary relationships and disease relationships of organisms to man are adequately discussed. Most biologists will undoubtedly wish to see greater space devoted to affinities between plants and man and the invertebrates and man. The force and significance of biological science on our modern society is left for the instructor to develop, or it is assumed that the student will make these relationships for himself.

Where man is the focus of biological study, and where fundamental information is required in a course of biology, this book rates serious consideration.

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**Statistical Problems of the Kinsey Report on Sexual Behavior in the Human Male.** W. G. Cochran, F. Mosteller, and J. W. Tukey. American Statistical Assoc., Washington, 1954. x + 338 pp.

This volume contains a critique, by a committee of the American Statistical Association, of the methodological aspects of Kinsey's *Sexual Behavior in the Human Male*. A 42-page concise summary of the issues is followed by a series of appendixes in which are found detailed accounts.

Appendix A (110 pages) is a reproduction and evaluation of six leading reviews (in journals) of Kinsey's book. In general, these three mathematical statisticians agree with the previous critics, who had pointed out many serious shortcomings in Kinsey's methods. In Appendix B, prepared by W. O. Jenkins (a psychologist), one finds that by comparison with the eight other most important sex studies the work of Kinsey is superior, even though far from perfect.

The remaining five appendixes are concerned primarily with the problems of sampling and statistical treatment of results. Because of refusals, it becomes very difficult, even with true probability sampling, to arrive at precise percentages and averages for sexual behaviors. Refusals increase the width of confidence limits so much that if  $x$  dollars are required to get a nonrefuser, it may be worth more than  $10x$  dollars to persuade a refuser to respond.

This book should become required reading for sociologists, psychologists, and others who must depend on sampling surveys of human populations.

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**Health Careers Guidebook.** National Health Council, New York, 1955. 153 pp. Illus.

This 156 page book is the most attractive and interesting guidance aid that has appeared for the field of the health vocations and careers. It is intended for use primarily in high schools and junior colleges, by school principals and vocational guidance counselors. It will also certainly be consulted by many students themselves, since it contains concise, factual descriptions of some 156 occupations in health services. Although it does not claim to be comprehensive, it does cover a wide variety of careers, such as laboratory technologist, pharmacist, medical librarian, special therapists, nurse, physician, statistician, administrator, and veterinarian. Prominently displayed are numerous organizations and their addresses, from which additional information is available.

Also included is an all-too-brief section on basic sciences in the health field. This is an excellent introduction to what should be a book as large as the present one devoted entirely to the highly skilled professional and scientific careers in the life sciences, all of which are important in the health field.

Biologists have been slow to realize the need for "promoting" their science at secondary-school levels, despite the fact that today many of our most gifted young people are seeking career guidance while they are in junior- or senior-high schools. More informational material, as well written and as attractively designed as this guidebook on health careers, is needed.

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**Genetica Medica.** Primum Symposium Internationale Geneticae Medicae 6-7 Sept. 1953. Luigi Gedda, Ed. Edizioni dell'Istituto Gregorio Mendel, Rome, 1954. xxiii + 467 pp. Illus. + plates. L. 5.000.

There are two types of international scientific meetings: those that are "international" by virtue of their being sponsored and organized by an internationally recognized agency, and those that receive this qualification from the person who decides to invite to his laboratory a number of colleagues from various countries. The "Primum Symposium Internationale Geneticae Medicae" belongs to the second type; the book under review contains the proceedings of this meeting on medical genetics, held in Rome in 1953.

Of the 12 invited and the 18 contributed papers, presented in the original language, there are a few of considerable interest, such as that by R. Ceppellini on hereditary conditions responsible for urinary excretion of amino acids, and that by A. Franceschetti and D. Klein on the identification of heterozygotes.

In the opening address of Luigi Gedda, the organizer of the symposium, as well as in a short talk by a physiologist, C. Foà, there are polemic remarks claiming that the study of human genetics should be the domain of physicians. Of course, no geneticist would deny the right of medical doctors to devote themselves to human genetics, and, in fact, important contributions to the science of heredity have been made by professional physicians. They, however, should at least take the trouble to learn the proper use of terms, in order not to confuse, for example, inbreeding with backcrossing (p. 13) or chromosome markers with closely linked genes (p. 448).

Th. Dobzhansky [*Science* 118, 561 (1953)] has already commented on the introductory section of the volume, an allocution of His Holiness Pope Pius XII to the participants in this symposium. It is interesting to note that Gedda has found it necessary to reply to Dobzhansky's criticisms in a footnote to the allocution where it is stated: "In this allocution, the concept of species is taken in the philosophico-biological sense, signifying that one may speak of a new species, when not only the quantitative and qualitative elements, but also at least one ontological element, are different." One would expect from Gedda, the head of the Men of Catholic Action of Italy, a greater respect for the words of His Holiness than is apparent from the sometimes incorrect translations into English, German, and Italian of the allocution, which was originally delivered in French.

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**Nuclear Physics.** Alex E. S. Green. International Series in Pure and Applied Physics. Leonard I. Schiff, Consulting Ed. McGraw-Hill, New York-London, 1955. xv + 535 pp. Illus. \$9.

This book was written primarily as a textbook for a course in nuclear physics for senior or first-year graduate students. Although a knowledge of atomic physics and quantum mechanics has not been assumed, a reader with a background that includes these subjects will probably derive more from the book.

The first two chapters are concerned with relativistic dynamics, a review of

atomic physics, and a description of the static properties of nuclei. In Chapter 3 are the major types of particle accelerators. The characteristics of a typical machine of each variety are tabulated. Chapters 4 and 5 are devoted to experimental instruments and methods. This is a very complete summary. One minor objection to this section is the inclusion of rather complex diagrams of apparatus from the literature without sufficient accompanying explanations. The next two chapters are an introduction to radioactivity and nuclear reactions. Chapter 8 is a discussion of systematics and the general characteristics of nuclear forces. A chapter then is devoted to the liquid-drop model and fission.

Before the development of nuclear theory, there is an introduction to quantum mechanics that should prove helpful to the student at this point. Some of the topics in nuclear theory that are then included are the major models, nuclear moments, radiative transitions, alpha and beta decay. The last two chapters are devoted to the theory of nuclear reactions and nuclear forces.

Perhaps the most outstanding feature of the book is its completeness. The arrangement of material is, for the most part, very good. There is a set of problems at the end of each chapter that are designated according to their complexity. The book in general is well referenced, and a list of these references is included at the end of each chapter.

In summary, *Nuclear Physics* should be welcomed by those teaching a course in the subject, since there are few textbooks written at this level that are so comprehensive and lucid. Others involved in nuclear physics should be equally pleased to have this as a reference book, since it brings together a vast amount of up-to-date information on the subject.

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## Books Reviewed in

### The Scientific Monthly

#### August

**Exploring Mars**, Robert S. Richardson (McGraw-Hill). Reviewed by Thomas S. Gardner.

**Soil**, G. V. Jacks (Philosophical Library). Reviewed by C. E. Millar.

**The Origins of Psychoanalysis**, Marie Bonaparte, Anna Freud, and Ernst Kris, Eds. (Basic Books). Revised by Robert R. Holt.

**Public Education under Criticism**, C. Winfield Scott and Clyde M. Hill, Eds. (Prentice-Hall). Reviewed by John R. Mayor.

**Suicide and Homicide**, Andrew F. Henry and James F. Short, Jr. (Free Press). Reviewed by Dorothy S. Thomas.

**Cryptogamic Botany**, Gilbert M. Smith (McGraw-Hill). Reviewed by H. L. Blomquist.

**Forest Entomology in Hawaii**, Otto H. Swezey (Bernice P. Bishop Museum). Reviewed by F. R. Fosberg.

**Poliomyelitis**, World Health Organization (WHO). Reviewed by Robert Ward.

**The Nihilism of John Dewey**, Paul K. Crosser (Philosophical Library). Reviewed by James P. Warbasse.

**50 Jahre Arzneimittel Forschung**, C. L. Lautenschläger (Thieme). Reviewed by Glenn L. Jenkins.

**A Field Guide to Animal Tracks**, Olaus J. Murie (Houghton Mifflin). Reviewed by Frank A. Pitelka.

**How to Know the Minerals and Rocks**, Richard M. Pearl (McGraw-Hill). Reviewed by Victor T. Allen.

**A Guide to the Planets**, Patrick Moore (Norton). Reviewed by Harlow Shapley.

**Aspects of Deep Sea Biology**, N. B. Marshall (Philosophical Library). Reviewed by Joel W. Hedgpeth.

**The Micmac Indians of Eastern Canada**, Wilson D. Wallis and Ruth Sawtell Wallis (Univ. of Minnesota Press). Reviewed by Matthew W. Stirling.

**Laboratory Instrumentation in Psychology**, William W. Grings (National Press). Reviewed by Lester N. Recktenwald.

## New Books

**Man's Mastery of Malaria**, Paul F. Russell. Oxford Univ. Press, New York-London, 1955. 308 pp. \$6.

**F. Schuyler Mathews' Field Book of American Wild Flowers**. Rev. and enlarged by Norman Taylor. Putnam, New York, ed. 4, 1955. 601 pp. Illus. \$5.

**Applied Thermodynamics**. Formerly *Heat Power*. Earle B. Norris, Eric Therkelsen, and Clarence E. Trent. McGraw-Hill, New York-London, ed. 3, 1955. 490 pp. \$7.50.

**The Structural Relations of Natural Products**. Being the First Weizmann Memorial Lectures, December, 1953. Robert Robinson. Oxford Univ. Press, New York-London, 1955. 150 pp. \$4.

**Advanced Calculus**. An introduction to classical analysis. Louis Brand. Wiley, New York; Chapman & Hall, London, 1955. 574 pp. \$8.50.

**Danger My Ally**, F. A. Mitchell-Hedges. Little, Brown, Boston, 1955. 278 pp. \$3.75.

**Blutgerinnungsfaktoren**. Band I. Erwin Deutsch. Deuticke, Wien, 1955. 298 pp. DM. 42.

**Radiocarbon Dating**. Willard F. Libby. Univ. of Chicago Press, Chicago, ed. 2, 1955. 175 pp. \$4.50.

**European Firearms**. J. F. Hayward. Philosophical Library, New York, 1955. 53 pp. \$7.50.

**Merchant Ships: World Built**. 1955 volume. De Graff, New York, 1955. 264 pp. \$5.

## Miscellaneous Publications

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

**Annual Report, 1954, of the Twentieth Century Fund**. The Fund, New York, 1955. 62 pp.

**Mite Pests of Ornamentals and Their Control**. Bull. 591. John C. Schread. Connecticut Agr. Expt. Sta., New Haven, 1955. 19 pp.

**Malaria: A World Problem**. E. J. Panapana and P. F. Russell. World Health Organization, Geneva, 1955. 72 pp. \$0.70.

**Proceedings**, vol. LVIII, No. 1. Ser. A, *Mathematical Sciences*, 131 pp.; ser. B, *Physical Sciences*, 89 pp.; ser. C, *Biological and Medical Sciences*, 136 pp. **Proceedings**, vol. LVIII, No. 2. Ser. A, *Mathematical Sciences*, 128 pp.; ser. B, *Physical Sciences*, 56 pp.; ser. C, *Biological and Medical Sciences*, 136 pp. Koninklijke Nederlandse Akademie van Wetenschappen, North-Holland, Amsterdam, 1955.

**Rice Varieties and Their Yields in Arkansas, 1948-1954**. Rpt. ser. 49. T. H. Johnston and E. M. Cralley. Agr. Expt. Sta., Univ. of Arkansas, Fayetteville, 1955. 20 pp.

**Subcommittee Report on Research Activities in the Department of Defense and Defense Related Agencies**. Dept. of Defense, 1955 (Order from Supt. of Documents, GPO, Washington, D.C.). 91 pp. \$0.30.

**Report on Inspection Commercial Feeding Stuffs 1954**. Bull. 592. H. J. Fisher. Connecticut Agr. Expt. Sta., New Haven, 1955. 116 pp.

**Visual Sensations (Phosphenes) Produced by AC Sine Wave Stimulation**. Johs. Clausen. Munksgaard, Copenhagen, 1955. 101 pp.

**Calibration of the Weights in Balances with Automatic Weight Loading**. Natl. Standards Lab. Tech. Paper No. 6. G. A. Bell. Commonwealth Scientific and Industrial Research Organization, Melbourne, Australia, 1955. 8 pp.

**List of the Plants of N. W. Europe**, vol. 1, *Vascular Plants*. Nils Hylander. Lund Botanical Soc., Lund, Sweden, 1955. Kr. 4.50.

**Report of the Committee on the Measurement of Geologic Time 1953-1954**. Div. of Earth Sciences, Publ. 333. 193 pp. \$1.75. **Vehicle Climbing Lanes**. Highway Research Bd., Bull. 104. 34 pp. \$0.60. Natl. Acad. of Sciences-Natl. Research Council, Washington, D.C., 1955.

**The Megachilina Bees of California (Hymenoptera: Megachilidae)**. Bull. of California Insect Survey, vol. 3. Paul D. Hurd, Jr., and Charles D. Michener. Univ. of California Press, Berkeley and Los Angeles, 1955. 247 pp. \$3.50.

**Rusts and Wood-Rotting Fungi on Some of the Important Indian Conifers**. Indian Forest Bull. No. 179. Y. N. Puri-Manager of Publications, Delhi, 1955. 10 pp. 1s.

**Developed and Potential Waterpower of the United States and Other Countries of the World, December 1954**. Circ. 367. Loyd L. Young. Geological Survey, Washington 25, 1955. 14 pp.