

modulators of autonomous rhythms, variations in responsiveness of end organs and differences in the substrate on which the hormones act. New and interesting viewpoints are proposed, and if there is not always agreement there is always interesting and stimulating discussion. At the end, in the chairman's closing remarks, Zuckerman ably and skillfully brings together the scattered facts and theories and adds his penetrating comments on the problems of reproduction and endocrinology.

The book is one of the best to appear in this field for many a day and probably the best recent one on comparative endocrinology.

DOROTHY PRICE

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Guide Pratique de Mycologie Médicale.

A l'usage des médecins, des laboratoires et des botanistes précédé d'un tableau d'orientation diagnostique et thérapeutique. Jean Coudert. Masson, Paris, 1955. 364 pp. + plates. Cloth, F. 6000; paper, F. 5200.

If anyone should question the fundamental biological importance of taxonomy in this day of ATP and DNA, he has only to look to the fungi that are pathogenic to man to see a frightening example of the consequences of confused taxonomy and improper nomenclature. Since most of the human pathogens reproduce only asexually, and since all of them are presumably haploid, it is possible for many morphological mutations to become evident, so that to some workers there are almost as many species as there are isolates. This situation, which is perhaps analogous to that in such taxonomically "difficult" genera as *Rubus* or *Crataegus* in the higher plants, has tempted workers to describe a bewildering number of species. Nomenclatorial confusion has been added to this taxonomic difficulty, so that it requires an intrepid and dedicated individual to attempt to bring some sort of order to this chaos. Yet, to do so is of great practical importance to insure accurate diagnosis and appropriate treatment of fungous diseases.

The *Guide Pratique de Mycologie Médicale* is intended to be a simplified guide to medical mycology for the use of clinicians and biologists. The book is divided into three parts. The first part deals with the techniques of medical mycology—methods of taking samples from lesions, methods for direct microscopic examination, media for the cultivation of pathogenic fungi, directions for the macro- and microscopic observation of cultures, verification of pathogenicity by

animal inoculation, and immunological procedures.

The second part of the book is devoted to dichotomous keys for the identification of fungi that have been reported to be pathogenic. One major key provides for the identification of genera that cause mycoses of the epidermis and its extensions; another is for the separation of genera that cause deep-seated mycoses; and more refined keys lead to the identification of species.

The third section of the book contains descriptions of the genera and species treated. The genera are arranged according to a phylogenetic sequence, and within each genus the species are arranged alphabetically. For each species there is a concise statement of the type of disease(s) caused, method of securing samples, appearance under direct examination, macro- and microscopic appearance of cultures, immunology, epidemiology, and, in some cases, the relationships of the pathogen.

One feature of this book which serves to set it apart from many of the recent works on medical mycology is the organization of the major part in accordance with the phylogeny of the pathogens rather than on a basis of the diseases that they cause. This type of organization has the advantage of indicating the position of a given pathogen in the scheme of living things, but the dermatologist might question whether this arrangement is practical for clinical use, and some mycologists may be dissatisfied with the particular phylogenetic scheme that was followed. Moreover, the assignment of some forms that lack sexual reproduction to natural groups may not meet with universal approval. It is surprising, for example, to find *Coccidioides*, the causal agent of coccidioidomycosis or valley fever, assigned, even tentatively, to the Chytridiales when it possesses almost none of the characteristics of this Phycmycete order.

The provision of dichotomous keys for the identification of pathogenic fungi is another unusual and laudable feature of this book; however, the usefulness of the keys could have been extended greatly by the inclusion of adequate illustrations. To be sure, there are eight plates of sketches of assorted structures, but these cannot substitute for clear illustrations of the diagnostic features of each species. In the dermatophytes, at least, it would be difficult for the clinician to supplement the descriptions by consulting illustrations in the most recent books on medical mycology, because the names employed for the genera and species differ from those recognized by workers in this country.

Although the *Guide Pratique de Mycologie Médicale* is to be praised for its approach to a difficult subject, derma-

tologists may find it to be of limited usefulness, because of its brief consideration of clinical symptoms and treatment. Some mycologists may question the validity of many of the large number of species recognized, and all will regret that, through improper citation of species, the book contributes to the confusion of nomenclature which has done so much to hinder the progress of medical mycology.

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Cancer of the Lung. Pathology, diagnosis, and treatment. Milton B. Rosenblatt and James R. Lisa. Oxford Univ. Press, New York, 1956. 330 pp. Illus. \$15.

The different chapters of this book are written by specialists in the fields, and I cannot have the specialists' knowledge in all of them. Since it is the same with the reader, my impressions may still be worth while.

The authors, as is stated in the foreword, expect all practitioners of medicine to profit from the book. This is true for the clinical chapters, but it is doubtful how much a nonspecialist can profit from the detailed descriptions of surgical technique and the accompanying small sketches. Some of the x-ray pictures are difficult to interpret, even for a specialist. The general practitioner will not recognize a "thin-walled cavity" in Fig. 8, page 126, or the pneumothorax on Fig. 6B, page 250, and he may be entirely at a loss how to interpret the rectangular shadow on Fig. 6, page 148.

Pathology does not fare much better. In many of the photomicrographs the details as listed in the legends cannot be studied because magnifications are too low or contrast is lacking. The diagrams in the chapter on surgical pathology are instructive, while those concerning radical Roentgen therapy call for a specialist's eye. The chapter on exfoliative cytology also contains pictures that only the specialist can appreciate, but the text makes profitable reading for every physician.

The term *hilar* is used—on pages 50 and 72, for example—in a wider sense than is customary in anatomy and pathology. The fact is justly stressed that more cures cannot be expected from progress in surgical techniques but only from diagnosis in the preinvasive stage. (I would like to add: and from prevention.) At present, cure or long-time survival can be expected in less than 5 percent of the total cases diagnosed. Routine Roentgen examinations in doctors' offices, clinics, and hospitals are considered to

be more efficient and less expensive than general screening. The number of cases detected in this way is too small to affect the total result. Squamous cell tumors seem to have a better prognosis, but the localization is more important.

The chapter on radiation therapy, palliative and otherwise, is long and detailed, while that on psychotherapy is very short. The chapter on the controversial subjects of statistics, geographic distribution and causative factors makes interesting reading. The book is well arranged and well printed; the subtitles at the top of every page are very helpful. I object to introducing the term *bronchiogenic* instead of *bronchiolar*. *Bronchogenic*, which is widely used instead of *bronchial*, is bad enough.

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La Genese des Sols en tant que Phénomène Géologique. Esquisse d'une théorie géologique et géochimique biostase et rhexistase. H. Erhart. Masson, Paris, 1956. 83 pp. F. 560.

The 80 pages of text in this book are divided into five chapters: the first setting up and defining the theory of "bi-rhexistase." Here the author proposes the new term *rhexistase*, which may be defined as a sudden break in the biological balance but not the catastrophic type proposed by Cuvier in the last century. Erhart also uses the term *biostase* for a continuing biological balance but not quite in the same way as Lyell's rules of uniformity would be applied. His contention is that since the days of Lyell and Cuvier many additional facts of geology and geochemistry have been discovered and that these therefore modify Lyell's conclusions.

In Chapter 2 are considered the genesis of soils and sediments showing the importance of vegetable cover in both cases and the several problems connected with them. The question of chronology and its geologic implications are handled in Chapter 3. *Rhexistase* is again discussed as due to climate evolution in connection with forest cover. Chapter 4 discusses the relation of continental sediments as the red sandstones, the bauxites, the iron-bearing beds (Laterites), and the clays. The land-derived marine sediments are fitted in here.

The last chapter, 5, is entitled "Evolution of the mineral material and biological transformation." In other words, the development of sediments is interdependent on the evolution of life, especially plants. It is a sort of attempt to cross the ideas of Cuvier and Lamarck. To quote, "Evolution of minerals and biologic evolution are both the result of Time, but an essential difference is char-

acteristic of their metamorphism." New forms and new aptitudes develop.

This is an interesting brochure and should bring comment from many areas of earth science. The importance of soil cover on the development of soils and of sediments derived from such areas deserves more attention than it has had. After all, sediments may be simply transported fossil soils. The author makes a fairly good case for his ideas. It seems to me that more examples and more detailed explanation would make a clearer presentation.

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New Books

Biographical Memoirs. vol. XXIX. National Academy of Sciences of the United States of America. Columbia University Press, New York, 1956. 359 pp. \$4.

Immunity, 203 pp., \$5; *The Nature of Viruses and the Origin of Life*, 454 pp., \$7. Hideo Moriyama. Shonan Hygiene Institute, Kamakura, Japan, 1955 (order from Igaku-Shoin, 20 Hongo-6, Bunkyo-Ku, Tokyo).

La Régulation des processus métaboliques dans l'organisme. Théophile Cahn. Presses Universitaires de France, Paris, 1956. 681 pp.

Machine Design. Joseph Edward Shigley. McGraw-Hill, New York, 1956. 523 pp. \$7.75.

Mental Health and Infant Development. Proceedings of the International Seminar held by the World Federation for Mental Health at Chichester, England. vol. 1, *Papers*, 308 pp.; vol. 2, *Case Histories*, 289 pp. Kenneth Soddy, Ed. Basic Books, New York, 1956. \$4.50 per volume.

Fluid Models in Geophysics. Proceedings of the first symposium on the use of models in geophysical fluid dynamics. Held at John Hopkins University, 1-4 September 1953. Robert R. Long, Ed. Sponsored by Office of Naval Research, Geophysics Research Directorate, and U.S. Weather Bureau. Supt. of Documents, GPO, Washington 25, 1956. 162 pp.

Principles of Human Physiology. Charles Lovatt Evans and H. Hartridge. Lea & Febiger, Philadelphia, ed. 12, 1956. 1233 pp. \$12.50.

The Theory of Games and Linear Programming. S. Vajda. Methuen, London; Wiley, New York, 1956. 106 pp. \$1.75.

Psychical Research. R. C. Johnson. Philosophical Library, New York, 1956. 176 pp. \$2.75.

Chemical Market Research in Practice. Richard E. Chaddock, Ed. Reinhold, New York; Chapman & Hall, London, 1956. 196 pp. \$3.

General Biology. Gordon Alexander. Crowell, New York, 1956. 881 pp. \$6.75.

The Growth and Structure of Motives. Psychological studies in the theory of action. James Olds. Free Press, Glencoe, Ill., 1956. 277 pp. \$5.

The Biology of Senescence. Alex Comfort. Rinehart, New York, 1956. 257 pp. \$4.

Miscellaneous Publications

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

The Cultural Heritage of 20th Century Man. Philomathean Lecture Ser., 1955. Pennsylvania Literary Review and Philomathean Society, Philadelphia, 1956 (order from Pennsylvania Literary Review, 3443 Woodland Ave., Philadelphia). 96 pp. \$0.50.

What Are Business and Industry Looking for in College Graduates? Summary of the report of the Detroit Board of Commerce and Wayne University. Harold A. Basilius, Walter A. Crow, Orville F. Linck. Wayne University, Detroit, Mich., 1956. 15 pp.

Teachers Handbook, a Guide to the Interpretation and Follow-up of Achievement Scores. Louis P. Thorpe, D. Welty Lefever, Robert A. Naslund. 1955. 47 pp. \$0.35. *Guide to Good Leadership*. Kenneth A. Wells. 1956. 48 pp. \$0.50. *Combating the Dropout Problem*. Charles M. Allen. 1956. 46 pp. \$1. *Helping Children Discover Books*. Doris Gates. 1956. 48 pp. \$0.50. *Modern Man*. The story of his past development and future possibilities. Ashley Montagu. 1956. 48 pp. \$0.60. *How to Work with Parents*. Maria Piers. 1955. 42 pp. \$1. *Make Your Study Hours Count*. C. d'A. Gerken and Alice Kemp. 1956. 40 pp. \$0.50. Science Research Associates, Chicago.

Second Annual Computer Applications Symposium, Proceedings. 24-25 October 1955. Armour Research Foundation, Chicago, 1956. 108 pp. \$3.

The Production and Properties of Graphite for Reactors. A paper presented at the United Nations International Conference on the Peaceful Uses of Atomic Energy, Geneva, Switzerland, 8-20 August 1955. L. M. Curries, V. C. Hamister, H. G. MacPherson. National Carbon Co., New York, 1956. 61 pp. Free.

Catalogue of Southern Double Stars. vol. XI, Publ. of the Observatory of the University of Michigan. Richard A. Rosser. University of Michigan, Ann Arbor, 1955. 283 pp.

What Are the Facts about Mental Illness in the United States? National Mental Health Committee, Washington 5, 1956. 36 pp.

Cancer Cytology and Cytochemistry. Annals, vol. 63, art. 6. Ray W. Miner, Ed. New York Academy of Sciences, New York, 1956. 430 pp. \$4.50.

Fibrocystic Disease of the Pancreas. Report of the Eighteenth Ross Pediatric Research Conference. Ross Laboratories, Columbus 16, Ohio, 1956. 92 pp.

The Flavonoids in Biology and Medicine. A critical review. Maurice E. Shils and Robert S. Goodhart. National Vitamin Foundation, New York 22, 1956. 101 pp. \$2.

Solar Radiation, Absorption Rates and Photochemical Primary Processes in Urban Air. Rept. No. 14. Philip A. Leighton and William A. Perkins. Air Pollution Foundation, Los Angeles 14, 1956. 129 pp. \$5.

Industrial Directory of Washington Metropolitan Area. Economic Development Committee, Washington Board of Trade. Washington Board of Trade, Washington, D.C., ed. 2, 1956. 24 pp.