

familiar to him as a biological phenomenon, the disease can be seen in good perspective. He synthesizes for the reader the concept of brucellosis as a "universal" from which the particular clinical variant can be understood and possibly predicted. The clinician will certainly find what he should know.

The book is taken up with the history, the organism, the reservoirs, the spread, and the epidemiology and then with the pathogenesis, natural course, complications, diagnosis, treatment, prevention, and outlook; 906 references are given, and the content of the articles is dealt with critically. He has supported the general clinical descriptions with the protocols of 244 cases.

One form of the infection may have been underemphasized—the one not characterized by abortion; it is prevalent in goats in the Mediterranean area. Since the Soviet reports on human immunization are only just now being made available, it is not surprising to find them unmentioned.

One hopes that the book will be as widely distributed as the disease.

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Chazy and Related Brachiopods. pt. 1, Text pt. 2, Plates. Smithsonian Miscellaneous Collections, vol. 127. G. Arthur Cooper. Smithsonian Institution, Washington, 1956. 1024 pp. + 241 pp. + 269 plates. \$20.

This monograph represents the culmination of study in the field and laboratory over a period of some 20 years. It is essentially a sequel to an earlier monograph by Ulrich and Cooper on brachiopods in the subjacent Canadian and Ozarkian rocks. The complex nature of the Chazy and related rocks is well recognized by Ordovician stratigraphers, and the appearance of this long anticipated monograph is of significance to a better understanding of middle Ordovician correlations.

The largest part of the material was collected by Cooper, although he did not visit all the regions from which Chazy and related rocks were taken. In addition, much of the material represents gifts or loans from other collectors whose accuracy for formational designations must be accepted. The list of formations, arranged alphabetically, covers most of the Chazy and related formations and is the most comprehensive to date. These formations cover the principal regions of Chazy rock exposures. Brachiopod faunal lists accompany each formation. Where

faunal lists of other workers are listed under certain formations, identifications considered questionable are so indicated. Details concerning lithology, contact relationships, age, correlation, thickness, type sections, and status of the formations are discussed.

Special consideration is given to Appalachian stratigraphy, where emphasis is placed on the interlocking type of facies development as opposed to barrier-type control. Some opposition to this is anticipated on the part of workers who accept and in cases have illustrated reasonable evidence for both types of phenomena. A restored section north-south across the structural belts in Tennessee is illustrated to show the middle Ordovician facies concept.

In Section II, annotated lists of genera and species summarize concisely the stratigraphic distribution, geographic distribution, and pertinent remarks concerning each described form. Page references for generic and specific descriptions are very helpful. A correlation chart shows the position of the formations and members from which brachiopods are mentioned, described, or illustrated in more than 60 areas throughout the country and into Canada. The units are tied in with the middle Ordovician standard proposed by Kay and into five newly proposed stages. These stages, in ascending order, the Whiterock, Marmor, Ashby, Porterfield, and Wilderness, comprise essentially a newly offered standard section which was believed necessary to define correctly the stratigraphy and the natural grouping of faunas, mostly brachiopods. It was recognized that correlations—as in the correlation chart—based on one group of animals seldom if ever give the true picture, for the forms might be retarded or advanced. However, the correlation chart represents a good basis for comparative faunal studies using additional groups of animals.

Some of the correlations differ noticeably from those of previous workers. The work has resulted in many new formational designations, largely in the southern Appalachians where most of the field work was done. There are several departures from the present standard section: (i) the Beekmantown, typically subjacent to the Chazy, is separated by a new stage (Whiterock); (ii) such stage terms as Chazy and Black River are no longer considered usable; (iii) the stage name Hatterian, typically subjacent to Hunterian, is considered equivalent when Cooper's correlations are compared with earlier correlations of the aforementioned names; (iv) the new stage Wilderness would include correlatives considered as both Black River and lower Trenton (Rockland) in earlier works. Thus, the new stage boundary does not

coincide with those in the existing standard section, and it would restrict the Trenton; (v) typical Chazy would be subdivided into the Marmor and Ashby stages.

The faunal descriptions cover more than 1070 species from more than 150 genera. Of these, nearly 80 represent new genera and nearly 600 new species, indicating the comprehensiveness of this study and at the same time pointing to the paucity of brachiopod studies in Chazy and related rocks heretofore. In addition to detailed descriptions on the morphology, type specimens, locality, and geologic horizon, a discussion of each species gives the salient characteristics by which it may be distinguished from others. Part 2 consists of 269 plates. They indicate the degree of mastery developed by the author in the preparation and illustration of brachiopod forms.

This monograph represents a singularly significant contribution to middle Ordovician stratigraphy and at the same time offers a challenge to other workers who may base their work on other groups of animals, and to those who may find evidence based on physical and structural criteria or who may have differing basic concepts of facies development.

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Observations on Krebiozen in the Management of Cancer. A. C. Ivy, John F. Pick, and W. F. P. Phillips. Regnery, Chicago, 1956. 88 pp. + tables and plates. \$2.50.

The book *Observations on Krebiozen in the Management of Cancer* by A. C. Ivy, J. F. Pick, and W. F. P. Phillips purports to advance evidence in support of the senior author's claims made some years ago concerning a material alleged to be useful in treating cancer. The conclusions, which are based on reports of treated patients, are that the substance used, which has never been clearly defined, has brought about some improvement in a substantial proportion of the patients treated. The authors state that the improvement effected has occurred independently of other forms of treatment and too frequently to be considered examples of the well-known tendency of cancer to improve temporarily without any treatment. These claims are made for 4 percent of 189 patients.

The alleged material to which the term *Krebiozen* is applied is described as being made from the blood serum of horses that have been treated with a particular strain of microorganism. The method of preparation is not given in sufficient detail to permit it to be repeated

by others. This extent of detail is normally required of those who advance claims for the therapeutic usefulness of a new drug.

The book refers to experiments on spontaneous tumors in dogs and cats. The number and reproducibility of these experiments on such notably unreliable investigative materials are not impressive.

There is much reference, of a general nature, to defense mechanisms against cancer, spontaneous regressions of the disease, and the role in cancer of the reticuloendothelial system. These references are of a conventional type, from statements of others hallowed by long usage but without documentation.

The clinical reports presented do not lend themselves to analysis or permit any conclusion about the validity of the authors' claims. Similar claims have been examined, repeatedly, by responsible agencies and found to be invalid. One would hope, therefore, that the ones published in this document would be carefully reviewed by impartial and informed individuals, and endorsed, before they are accepted.

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The Menninger Story. Walker Winslow. Doubleday, Garden City, N.Y., 1956. 350 pp.+ plates. \$5.

Mayos at Rochester, Minnesota, then Menningers at Topeka, Kansas; Mayos for surgery, Menningers for mental health. Judged from the stories of these clinics, surgical therapy antedated emphasis on health of spirit, mind, and body as exemplified at Topeka.

The Menninger Story is biography. Its central figure is Dr. Charles Frederick. But of almost equal concern are sons, Karl and William, with their mother, Flo, and brother, Edwin, also in the picture. It might be considered the success story of a lad, born into a German family but recently come from Switzerland, who before his death could be credited with an almost complete reversal in national attitude toward mental ill health. But Dr. C. F., however, would not have favored this as the emphasis in a biography of himself. For him *The Menninger Story* would be a history of a change of emphasis of health service from therapy for an organic pathology to that for a person *in toto*. He wished the patient, not the specialty, to be of first concern.

Professionally Dr. C. F. faced opposition throughout most of the 60-odd years of his medical career. In the last decade, however, his sons carried the fight against public inertia and professional apathy. An unexpected factor in

the story is that education functioned markedly in the changes achieved. In that participation, education gave a triple service. First, it transformed a narrowly trained homeopathic medic into a family practitioner acceptable to both his community and fellow-physicians of other schools of medicine. Second, education became an integral part of the therapy, especially with those patients with mental illness. Then there was the extension of the educational out-reach that ultimately brought an improved administration and treatment for patients in state hospitals.

The word *story* in the title is significant. The author has shown skill both in recording history and in doing it in a manner that is attention-holding to the end. And not least significant, the reader is likely to experience a marked change in his estimate of mental illness and its therapy as he reads.

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Books Reviewed in

The Scientific Monthly, February

The Search beneath the Sea, J. L. B. Smith (Holt). Reviewed by A. S. Romer.

Greek Science in Antiquity, M. Clagett (Abelard-Schuman). Reviewed by R. P. Multhauf.

Opinions and Personality, M. B. Smith, J. S. Bruner, and R. W. White (Wiley; Chapman & Hall). Reviewed by M. J. Rosenberg.

The Wheat Industry in Australia, A. R. Callaghan and A. J. Millington (Angus and Robertson). Reviewed by J. Hancock.

Between the Planets, F. G. Watson (Harvard Univ. Press). Reviewed by R. Fleischer.

Proceedings of the Third Berkeley Symposium on Mathematical Statistics and Probability, vol. IV, J. Neyman, Ed. (Univ. of California Press). Reviewed by G. E. Bates.

Toward a Unified Theory of Human Behavior, R. R. Grinker and H. M. Hughes, Eds. (Basic Books). Reviewed by R. H. Knapp.

Handbook of Biological Data, W. S. Spector, Ed. (Saunders). Reviewed by T. C. Byerly.

Introduction to Microfossils, D. J. Jones (Harper). Reviewed by E. W. Berry.

Fun with Figures, J. A. H. Hunter (Oxford Univ. Press).

Corn and Its Early Fathers, H. A. Wallace and W. L. Brown (Michigan State Univ. Press). Reviewed by W. R. Singleton.

Aquatic Insects of California, with Keys to North American Genera and California Species, R. L. Usinger, Ed. (Univ. of California Press). Reviewed by J. H. Young.

In Search of Adam, H. Wendt (Houghton Mifflin). Reviewed by L. J. and M. Milne.

New Books

Franklin and His French Contemporaries. Alfred O. Aldridge. New York University Press, New York, 1957. 260 pp. \$4.75.

Progress in the Chemistry of Organic Natural Products, vol. 13. L. Zechmeister, Ed. Springer, Vienna, 1956. 624 pp. \$25.60.

Modern Methods of Microscopy. A series of papers reprinted from *Research*. A. E. J. Vickers. Butterworths, London, 1956. 114 pp. \$3.50.

Must Men Starve? The Malthusian controversy. Jacob Oser. Abelard-Schuman, New York, 1957. 331 pp. \$4.50.

Fishes, a Guide to Fresh- and Salt-Water Species. Herbert S. Zim and Hurst H. Shoemaker. Simon and Schuster, New York, 1956. 160 pp. \$1, paper.

Remarks on the Foundations of Mathematics. Ludwig Wittgenstein. Translated by G. E. M. Anscombe. G. H. von Wright, R. Rhees, and G. E. M. Anscombe, Eds. Macmillan, New York, 1956. 204 pp. \$5.75.

The Milky Way. Bart J. Bok and Priscilla F. Bok. Harvard University Press, Cambridge, Mass., ed. 3, 1957. 269 pp. \$5.50.

Elements of Partial Differential Equations. Ian N. Sneddon. McGraw-Hill, New York, 1957. 327 pp. \$7.50.

Engineering Structural Failure. The causes and results of failure in modern structures of various types. Rolt Hammond. Philosophical Library, New York, 1957. 224 pp. \$12.

Vastness of the Sea. Adventure in the mysterious depths. Bernard Gorsky. Translated from the French by Alec Brown. Little, Brown, Boston, 1957. 305 pp. \$5.

Physics. John S. Marshall and Elton R. Pounder. Macmillan, New York, 1957. 906 pp. \$8.50.

pH Measurements. Their theory and practice. Methuen, London; Wiley, New York, 1956. 125 pp. \$2.25.

Lectures in Immunochemistry. Michael Heidelberger. Academic Press, New York, 1956. 150 pp. \$4.

Chain Reactions, an Introduction. F. S. Dainton. Methuen, London; Wiley, New York, 1956. 183 pp. \$2.90.

A Million Years of Human Progress. Ira D. Cardiff. Pageant Press, New York, rev. ed., 1955. 146 pp. \$2.50.

Elements of Engineering Materials. Charles P. Bacha, Joseph L. Schwalje, and Anthony J. Del Mastro. Harper, New York, 1957. 494 pp. \$6.50.

Organic Analysis, vol. III. John Mitchell, Jr., I. M. Kolthoff, E. S. Proskauer, and A. Weissberger, Editorial Board. Interscience, New York, 1956. 546 pp. \$11.50.

Solid State Physics. Advances in research and application. vol. III. Frederick Seitz and David Turnbull, Eds. Academic Press, New York, 1956. 588 pp. \$12.

Physical Techniques in Biological Research, vol. II. *Physical Chemical Techniques*. Gerald Oster and Arthur W. Pollister. Academic Press, New York, 1956. 502 pp. \$12.80.