

relation of the sulci to the cortical areas; VIII. Endocranial casts and brain fissuration; IX. Some sulcal relations in the anthropoid and in the human brain; X. The fissural impressions on the endocranial casts of prehistoric man; XI. On homologies and the origin of sulci.

One is disappointed that the text does not deal with the mesial temporal and mesial frontal surfaces of the brain, where the history of the primate brain is the richest and wherein the secrets of phylogenetic development are most effectually concealed. The reason given for this omission is that "... it was not desirable to separate the hemispheres in this series" (p. 253). Insofar as the study goes, however, it is a thorough and dependable one, reflecting Dr. Connolly's wide experience in the field. The effort he expended on detail was immense and was wisely channeled into one phase of the over-all subject, namely, the geography of the fissures; his illustrations of the fissures are true and effective, for he has used the Schwarz stereograph in portraying them. Indeed, all of the 337 illustrations are excellent. The bigger problem of the relationship of thalamic development to the configuration of the gyri (of which the fissures are mere boundaries) is not dealt with. His description of endocranial casts of anthropoids and of prehistoric man constitutes an interesting chapter, but interpretation is scanty. The fissural pattern in fetal and adult human brains is treated at some length, as are also the differences in fissuration in Negroes and whites. It is curious that no reference could be found to the duplication of the central sulcus, described in 1882 by Giacomini, in 1907 by Tricomi Allegra, and in 1929 by Gerlach and Weber.

The documentation of the work is admirable. Only here and there can one find instances in which the works of the past could have been put to greater use—for instance, Kuhlbeck's interesting interpretation of the significance of the lateral occipital gyri (p. 249).

Dr. Connolly's writing is terse and always to the point. His facility of expression makes the text read like a narrative. It is altogether a splendid piece of work.

WEBB HAYMAKER

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Illustrated Study Aid for Medical Bacteriology. Walter J. Nungester and Phebe G. Williams. Ann Arbor, Mich.: Edwards Brothers, 1949. 71 pp. \$2.00.

This is a picture book. At first glance one might think it had little place among medical texts, but even slight perusal shows that it will take its place as an outstanding supplementary textbook in bacteriology.

Although the preface states that this is "strictly an experiment" it is the reviewer's opinion that the work in its present form has evident value for students studying medical bacteriology and immunology, postgraduate groups reviewing this subject matter, and teachers wishing to use the pictorial material for the preparation of lantern slides or directly on opaque projectors.

The technique of summarizing facts in charts and diagrams is here followed to its logical conclusion. It appears that few, if any, aspects of bacteriology cannot so be treated, as evidenced by the major divisions of the

book: Types of Pathogens, Classification, Distribution and Spread of Pathogens, Disinfectants, Infection and Resistance, Immunology, Laboratory Diagnostic Procedures, Chemotherapy, Review of Diseases, Techniques and Methods.

Under each major heading is found a group of related charts and diagrams. Most are self-explanatory; a few assume some knowledge on the part of the reader, and all provide the nucleus of more or less extended discussion, depending on the group interest. The section previewing diseases has the most charts—40 out of a total of 131. The chart of each disease summarizes the pathology, nature of the pathogen, clinical and laboratory diagnosis, treatment, spread and prevention.

The potentialities of this work well warrant the extended version that the authors contemplate.

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Clinical Pathology: Application and Interpretation. Benjamin B. Wells. Philadelphia-London: W. B. Saunders, 1950. 397 pp. \$6.00.

The first laboratory employing the microscope for the diagnosis of infectious diseases was established by Pasteur at Alais in 1865, in connection with his investigations on pebrine of silkworms. The malady was controlled by destroying the ova of moths found infected by microscopic examination. In order to put this procedure to practical use, girls were taught how to make the necessary examinations. In this way the training of laboratory technicians was included as a function of the diagnostic laboratory at a very early date. Seventeen years later, Koch, in his monumental work on tuberculosis, called attention to the necessity of microscopic examinations of sputum for the tubercle bacillus, to confirm diagnosis of pulmonary tuberculosis. The teachings of these two gave to the diagnostic laboratory its true place in medicine.

Clinical pathology was not generally accepted as a specialty in the United States until the second decade of the present century. The wider application of serological methods, a multiplicity of biochemical tests, the assay of hormones and vitamins, and the determination of susceptibility and resistance of microorganisms to the sulfanilamides and antibiotics necessitated the bringing together of individuals skilled in the various branches of serology, biochemistry, endocrinology, and bacteriology to carry out the multitude of highly specialized techniques. The connecting link between these laboratorians and the practicing physician is the clinical pathologist; trained in medicine and skilled in the interpretation of the results obtained by the experts, he brings to the clinician a clearer understanding of the value and limitations of laboratory findings as they affect the patient.

It is essential for the physician to know what laboratory procedures are available and what they may contribute to the problem confronting him. The book by Wells will provide this information. There are nine chapters, the first seven of which deal with: laboratory procedures generally applicable to the study of infectious diseases, diseases of the gastrointestinal system, diseases of the re-