which he works has in fact been suggested by the faculty member under whose direction he is carrying on the work. The formulation of a set of propositions provides him with an opportunity for expressing his originality; a proposition may give the result of a small original investigation that the student has carried out, or may be a proposal that an investigation be carried out. The system of propositions in doctor's examinations may have its greatest value in encouraging originality in young scientists and in serving as a test of their originality.

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Isolation of *Salmonella schwarzengrund* from Turkey Poults

IN MARCH 1952, nine-day-old turkey poults from a farm in southern Indiana were submitted to the Diagnostic Laboratory. The poults showed a severe diarrhea and protruding vents. Internally there were no observable lesions except a mild enteritis. The mortality in the group of 13,000 turkeys by weeks was as follows: 217, 327, 117, 93, 28, 14, 14, 14, 12, 14 up to and including the tenth week. These poults had been purchased from a hatchery in Michigan, which had obtained the turkey hatching eggs from breeders in California and Oregon.

A gram-negative organism isolated from the livers of the affected turkeys was identified by R. P. Edwards, of the Enteric Bacteriological Laboratories, of Chamblee, Ga., as *Salmonella schwarzengrund* I, IV, XII: d: 1, 7. Unlike the original of this organism identified by Kauffmann (*1*), the organism isolated in this case did not have XXVII antigenic factor in the O formula. This is believed to be the first isolation on this continent and the second recorded isolation of *Salmonella schwarzengrund.*

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Reference

1. KAUFFMANN, F. *Acta Path. Microbiol. Scand.* Suppl. 44, 34 (1944).

Book Reviews

Chemical Physiology of Endoparasitic Animals. Theodor von Brand. New York: Academic Press, 1952. 339 pp. $7.50.

The publication of this book will come as a welcome addition to the libraries of parasitologists and others who are interested in the more dynamic aspects of the biology of endoparasites. Professor von Brand has undertaken the problems of synthesis and integration of the accumulated information concerning parasite physiology with the authority of one who has seen the growth of this information, from the beginning of the modern period of accurate observation, and has contributed importantly to this growth. Those familiar with his work will recognize the excellent organization and the readable style of writing that have characterized his earlier efforts.

The book is divided into three main sections. The first of these is devoted to discussions of the chemical composition of endoparasites, wherein the author tells of the various organic and inorganic molecules, the vitamins, enzymes, and other structural and functional entities that are to be found within the protoplasmic make-up of many different parasites. The second section is an impressive presentation of the information that has accumulated in the subjects of intermediary metabolism, respiration, and nutrition of many diverse forms of parasitic life. In this section especially, the author has assumed that the reader will have a genuine interest in the context and will not be content to accept without question a superficial account of parasite metabolism. He wisely presents the material in such a way that the student can make a critical analysis of the situation existing in regard to any one of the many aspects of parasite metabolism that have been investigated. Frequent reference is made to the original literature. The final section is devoted to a most interesting account of the physiological aspects of host-parasite relationships in which nutritional, metabolic, and hormonal factors are explored and the subject of chemotherapy is discussed. This section is well done and is noteworthy in that it creates within the reader a true insight into the intricate manner by which parasites and their hosts are physiologically interrelated. Included in this section are the results of some of the recent investigations involving the endocrine glands.

The author has recognized that controversy exists in many areas and has presented his material in such a manner that the reader is encouraged to consult the original literature. To this end he has compiled and included the most complete bibliography that has appeared in the field of experimental parasitology. This extensive citation of literature will be of particular value to the parasitologist who is not too well acquainted with the rapidly expanding work in parasite physiology and also to the student who is endeavoring to build up a bibliography in this field. The author has made frequent use of tables and charts. These are very clear and concise and where possible include the source of the material given. A feature of the book that may be especially helpful to those