places. On the whole, however, the surgery has been skillfully done, and the body that remains is not notably disfigured.

There is no reason why a medical or dental student, with this textbook, a good atlas, and the usual laboratory facilities, could not have a superior course. The textbook, however, will meet with different degrees of enthusiasm from teachers of anatomy. These will assess students' needs differently, and there will be questions about the advisability of this abridgment or that.

Textbook of Human Anatomy, despite the multiple authorship, is simply written; short declarative sentences predominate. Most of the illustrations are colored halftones, and these, on the whole, are diagrammatic, clear, and effective. The paper is heavy and glossy, and the format is attractive. The index seems adequate.

One may reasonably question whether an abridged account of the tracts and finer organization of the central nervous system (even one as effectively handled as Clark's chapter is) should occupy space in a gross anatomy textbook when whole books and special courses are devoted to neuroanatomy. A treatment of meninges, blood supply, external relations, and the ventricular system should suffice.

It is unfortunate, for the American user, that the authors did not delay publication of the edition long enough to permit them to incorporate the Paris revision (1955) of the Basel nomina anatomica terminology instead of the Birmingham revision, which has never been used here.

Several of the illustrations, especially those of the muscles of the back and arm, were reduced too much in size for clarity. The use of a red, or pink, halftone overlay to represent areas of muscle attachment on halftone figures of bones is often not clear. In the section on autonomic nerves, fine yellow lines in the diagrams, indicating nerves, do not show up well, especially under artificial light. The deep blue color added as an overlay to certain figures often obscures more than it clarifies. There are occasional lapses—mislabeling of figures or failures to correlate text and figures—but these are not too bothersome. The geniohyoid muscle was grouped with the scalene muscles! Sometimes, for the smaller muscles, the nerve supply was not mentioned.

No references whatever are listed. Because of the heavy, glossy paper, the book is nearly as big and as heavy as the older textbooks that have 50 percent more pages. The binding does not appear sturdy enough for the weight of the book and for student handling.

The greater part of the information in *Textbook of Human Anatomy* is of the conventional sort. Many provocative references in the British *Journal of Anatomy* and in the American and European literature of the last 25 years or more have been ignored, which could have added a notable flavor of freshness to this book.

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Lehrbuch der Tropenkrankheiten. Ernst G. Nauck. Thieme, Stuttgart, 1956 (order from Intercontinental Medical Book Corp., New York 16). 432 pp. Illus. $15.25.

Until the appearance of this volume, no German-language textbook on tropical diseases had been published since 1942. The present book has a twofold purpose—it is intended for use by students in the Institut für Schiffs- und Tropenkrankheiten, in Hamburg, and for German-speaking practitioners in tropical climates. Ernst Nauck, director of the institute, has, as associates in this undertaking, a large group of distinguished German specialists, yet the chapters have been so closely knit together that they constitute a well-integrated presentation.

The sequence of subjects is somewhat unusual, beginning with arthropods as agents and vectors of disease, followed by parasitic worms, protozoans, spirochetes, bacteria, rickettsias, tropical viruses and fungi, nutritional deficiencies, diseases of various other etiologies, and finally poisonous animals. The last 19 pages provide a comprehensive subject index.

In the beginning of the first section it is stated that tropical medicine, unlike other areas of medical science and practice, requires a fundamental understanding of biology, because of the preponderance of parasitic diseases in warm climates; such knowledge is essential for appreciating the clinical and epidemiologic implications of most tropical diseases. This emphasis is maintained throughout the volume, without sacrificing the practical goal. The material presented under each causative agent includes etiology, geographic distribution, epidemiology, pathogenesis, symptomatology, diagnosis, and clinical management and control. Although the techniques and therapeutic procedures recommended are principally those developed by German workers, important contributions by American and other investigators have not been excluded. Owing, no doubt, to space limitation, sources for most of the information presented have not been cited.

Very few errors or omissions have been noted. On page 48 (first paragraph), "Scott" instead of "Stoll" has been credited with estimation of the amount of global schistosomiasis. In discussing the intestinal amebas (pages 110, 115, 126) the German concept and terminology are followed with respect to *Entamoeba histolytica* as the tissue invader and the morphologically indistinguishable *E. hartmanni* as the lumen parasite. Figure 42 (page 115) suggests that the latter form is a "small race." Chemotherapy for eradication of these two forms is separately but satisfactorily presented. In the color illustrations for thin-film preparations of the human malaria parasites (Figs. 53 to 56) there is an inconsistency in the legends (an apparent oversight) between the designation for male and female mother sex cells—*Mikrogametozyt* and *Makrogamet.* In Table 20 (page 405) the term *solenoglyphae* is not provided for viperine snakes, as distinguished from the categories *aglyphae, opisthoglyphae,* and *proteroglyphae*; instead, the family name *Viperidae* is employed.

The text is unusually lucid; the illustrations are excellent, well chosen, and beautifully reproduced; the format is pleasing; and the binding is attractive. This book should not only serve its intended purpose for German students and practitioners of tropical medicine but, because of its concise, authoritative, up-to-date information, is recommended to readers who commonly consult English reference books.

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Pica. A survey of the historical literature as well as reports from the fields of veterinary medicine and anthropology, the present study of pica in young children, and a discussion of its pediatric and psychological implications. Marcia Cooper. Thomas, Springfield, 1957. 114 pp. $3.75.

This is an interesting and well-organized account of pica (a Latin word, meaning "magpie," that refers, in this connection, to the eating of clay, plaster, ashes, and charcoal), which has been observed in many peoples in all parts of the world, from ancient times. The hisorical summary is particularly well done, as is a survey of the current incidence of pica. This may be greater than suspected. It occurs in groups suffering from dietary deficiencies and in people on whom heavy nutritional demands are made, such as young children and childbearing women.

Laboratory studies on domestic and experimental animals show that animals seek, from dirt or other materials, that which may compensate for dietary defi-

ciencies, especially for lack of iron or phosphate. The book gives a careful review of self-regulating dietary functions as studied in laboratory animals and young children.

The current study deals with 784 children in the Baltimore area, of whom 172, or 22 percent, had a record of pica. The incidence of pica was 27 percent in Negro children and about 17 percent in white children. This was correlated with the incidence of nutritional problems and the percentage of illness and physical defect.

The hypothesis that poor nutrition may be the underlying factor in pica is well documented historically, especially in connection with the Negro slaves in the South, and by experimental and clinical studies. The volume is well arranged, and there is a good index.

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History and Philosophy of Science

Edward Palmer, Plant Explorer of the American West. Rogers McVaugh. University of Oklahoma Press, Norman, 1956. 430 pp. Illus. + plates. $6.

Edward Palmer was one of the great pioneer collectors of a century ago, principally in the Southwest and in Mexico. As an outstanding collector, he was proficient in many fields, "gathering for the museums of the world more than 100,000 specimens of plants and uncounted thousands of archaeological, ethnological, and zoological specimens," corals, amphibians, marine animals, birds, insects, land shells, reptiles, sponges, mammals. A self-trained man, he was given to writing vivid field notes but leaving to his scientifically trained colleagues the responsibility of seeing that the notes got incorporated with the specimens. Human nature being what it is, this seldom happened, and the museums and herbaria of the world contain tens of thousands of Palmer specimens accompanied by only the most fragmentary information.

Nearly 20 years ago, Rogers McVaugh stumbled on an almost complete set of Palmer's field notes, together with many other manuscripts related to his life and travels. The present volume is the result of a devoted winnowing of these materials and of many others, painstakingly assembled from various institutions and individuals. It is essentially a gazetteer of Palmer's travels and collections, written very largely with the needs of present-day taxonomists in mind. Some 229 pages are devoted to a meticulous account, in alphabetical order, of all the localities in which Palmer is known, or supposed, to have done his collecting. As one turns the pages and reads an item here and there, one does not know whether to be more astounded at Palmer's persistence in getting around the world on slender means, at a time when traveling conditions were very primitive, or at McVaugh's persistence in running down and assembling exact information —from ancient and modern maps, from letters, from his own travels, from records in the government files, and from specimens in the herbaria of the world. Take this entry, for instance (and remember there are more than 200 pages of such concentrated, codified, corrected information about the doings of 50 to 100 years ago):

"*Otinapa, Durango,* 24°11′N, 105°W. *1906. July 25–August 5.* on August 7 Palmer wrote from the city of Durango: 'I have today returned to this city from the Hascienda [*sic*] of Otonapa 35 miles n.w. of Durango City . . . at which place spent 12 days.' Nos. 332–465, 546–55, 559, and 560 were collected. The distance from Durango is not far from 35 km. (not 35 miles as stated by Palmer, nor 65 miles as given in the set of the field notes at the Gray Herbarium). The Hacienda of Otinapa is now (1951) nearly abandoned, but it is accessible by a poor road from Otinapa station on the railroad. The site of the old hacienda, about 20 km. north of the railroad, is in a broad cultivated stream bottom, with grasslands and pine forests on the hills above it and some rough broken land in the canyons along the creek."

Preceding this section there is a chronological account of Palmer's life, with particular reference to what he collected, where he collected it, and under what conditions. Following it are five appendixes: a chronology of his plant collections and locations of known sets of field notes; a list of herbaria known to have significant numbers of his plant specimens; his botanical field notes from the Colorado trip of 1861 and the Indian Territory collecting of 1868; and his last will and testament. There is a meticulous list of original source materials and a short and very incomplete index.

But for two things it would be all this and nothing more—a useful technical compendium of the goings and comings of Edward Palmer and the herbarium specimens which resulted therefrom. The first of these things is McVaugh's skill, not only as a finicky and indefatigable cataloger, but as a writer of good, plain, easy-to-read English prose. The other is the man Palmer, himself. The fullness of his own record, now that McVaugh has pointed the way to it, makes it a gold mine of social history. And, in this book, we see the character of the man—able, so taciturn about many things that we have only a sketchy notion of his life in spite of his voluminous record, cross-grained in some relationships yet singularly sweet at times (so that an old Mormon lady now sits down and writes a charmingly detailed account of how he set all the pioneer children in one home to collecting insects).

Of all plant labels, Palmer's are certainly the ones most worth saving. He may not have known how to spell or to punctuate, but he had a remarkable eye for essentials and a gift for pithy phrases. They are more than just scientifically accurate; they are the raw material of poetry. Here are some examples, with the original spelling and punctuation:

"309 edges of woods and parias yellow as soon as the sun is hot the petals curl under June 26 boiling spring Chickasaw nation."

"198 Pigg weed old road sides old fields and wood openings all over the country May 28."

"430 white mottled purple sage cented a decotion is made of this plant and used in feavers it is also used to wash the skin to cool it June 26 moist spots in wood and by raveins boiling spring to Rileys Mill."

"477. fox grape on gravelly wooded hills and raveins often but very short wood pendant to ground and unsupported by trees of a very agreeable foxy taste pulp thick rather tough makes fine preserves . . ."

Palmer's personality obviously fascinated McVaugh, who goes out of his way to describe Palmer's unsuccessful attempts to bottle *pulque* and *aguamiel* commercially, and to comment grimly on his calmly collecting ethnological material in an Apache village immediately after it had been wiped out in a punitive expedition. He was, says McVaugh, "a man who could neither express himself clearly nor spell his words consistently, but who corresponded regularly on an equal basis with the leading scientists of his day. He performed prodigious feats in accumulating, packing, and safeguarding collections of all kinds of fragile materials and he prepared copious data sheets to accompany the specimens, yet he rarely succeeded in keeping his records free from errors and hardly ever managed to distribute his specimens with the data he provided. He was small and frail and passed hardly a year without some incapacitating accident or illness, but when he was seventy-five years old he was still able to take in stride a week's trip on horse back in the rough mountains of western Durango. . . . The impulse that took him back to the field again and again must have been not a liking for collecting itself but little more than a liking for travel and for strange places, a feeling that by his work he was contributing to science, and a willingness to accept commissions to collect certain classes of materials in return for the opportunity to go out again."