

Various errors in construction seem also to have escaped the author's notice and deserve mention for correction in a second edition:

The order is so different from that given by Yung that, although done on different animals, the interpretation of the real influence of light is probably open to question (p. 264).

He found that when the tadpoles of *Rana temporaria* . . . were fed on a mixed vegetable and meat diet that 95 per cent. of them were females and 5 per cent. were males (p. 381).

The potentialities of producing both sexes is present in all eggs and in all sperm (p. 422).

The development of Cowper's gland seems to be correlated with the development of the prostate and after castration remains undeveloped (p. 436).

With pimprennelle, which also gives an abundant nourishment, but not so well as the preceding, the caterpillars that showed the female type of marking were in excess (p. 437).

Typographical errors are most frequent in scientific names. We find, for example, the following: "polychloros" for polychloros (p. 16), "fasceata" for fasciata (p. 24), "machacon" for machaon (p. 29), "ingra" for nigra (p. 34), "rectvoctris" for rectirostris (p. 40), "hortenses" for hortensis (in the explanation of Fig. 15), "*Lymnæa*" for *Limnæa* (p. 263), "nemorales" for nemoralis (p. 273), "*Hormaphs hamamelistes*" for *Hormaphis hamamelidis* (p. 328), "*Hydratina*" for *Hydatina* (p. 348), "*Rhoditis*" for *Rhabditis*, throughout the table on p. 371, and *Rosii* for *Rossi* (p. 374).

Some other typographical errors are: "subjects of 'Formative Reiz'" (p. vi, preface), "25,000 grams" for 2,500 grams as the weight of the adult rabbit, "birth-rate" for birth-weight (pp. 255, 256), "extensive" for extensively (p. 317), "temperate" for temperature (p. 338), "dandyllion" for dandelion (p. 380), "capulatory" for copulatory (p. 408), "primoidia" for primordia (p. 421). On p. 374 the specific name "*Rossi*" (spelled *Rosii*) is capitalized, while on p. 438 we find "*frassci*."

The book will undoubtedly prove of value especially to the younger students of experimental zoology and to the more general reader

who desires to know something of the work that has been done along these lines.

C. M. CHILD

Chemical Pathology. By H. GIDEON WELLS. Philadelphia, W. B. Saunders Co.

While only a comparatively short time has elapsed since the appearance of Virchow's "Cellular Pathology," yet it is significant of the steady progress of pathology that meanwhile new and infinitely finer means for its advancement have been developed and many new fields within its territory have been opened to investigation.

The cell is essentially chemical in its functions. Normal and pathological processes as well as bacterial influences in their relation to higher forms present so many problems that can be solved only by chemical agencies and explained only in chemical terms, that any book dealing adequately with chemical phases of pathology offers an important addition to the means at hand for acquiring a mastery of the subject.

In his "Chemical Pathology," Professor Wells addresses himself to three classes of readers: the student of medicine, the physician and the investigator, but it seems evident, as one reads his book, that it is the medical student whose interest he has sought chiefly to attract. For reference reading on the chemical side of pathology in the same way that the student would use his Orth for morphology, the book is well designed. The exposition of fundamental chemico-pathological changes, such as inflammation, cell necrosis, etc., is clear and concise, and is well designed to enable the student to grasp a larger concept of pathology than he could well obtain without such an aid. Of the chapters dealing with the problem of immunity one may not speak so unreservedly. The elucidation of the theories and the experimental evidences pertaining to that extensive subject are not so well put as in some other works of this kind. It is also to be regretted that in dealing with the problems of bacteriology the author did not go into the physical chemistry of the subject in more detail—a field that has become particularly fruitful, in recent years, in its yield

of data pertaining to all phases of chemical biology.

The clinician will find in Professor Wells's book not only much that is very instructive, but also, if he be so minded, much that will stimulate him along lines of individual investigation. The chapters devoted to the diseases of metabolism, such as diabetes, while less exhaustive than they might be, are excellent in the compact, condensed style in which they are written. Preceding the study of each disease is given a short description of the chemistry of related normal metabolic changes and the various pertinent theories of importance. It is a question whether future editions of Professor Wells's book might not be improved if more space should be devoted to such diseases as gout than they receive in this edition. While it is true that there are exhaustive works on such subjects, Minkowski's, for example, they are not much read by practising physicians nor by students, perhaps because they are too full of details, while a book like Professor Wells's is almost sure to be in large demand.

One is often led to wish that the author were less reticent in stating his own ideas relative to many questions. The writer of a book like this steps out of proximity to any one problem and, by virtue of his apartness, he is apt to have a correct perspective of the results of its investigation and of the relations that such results bear to each other and related data. From such a vantage point, the criticisms of a man who has himself been a laboratory worker are valuable to student and investigator alike. As Professor Wells says, what the investigator in scientific fields most requires is effective guidance, and ready access, to original publications. The excellent bibliography in the book under discussion affords that.

When one considers the extent of the field that must be covered by a book dealing with chemical pathology, it is surprising to note the large amount of matter that Professor Wells has compressed into a relatively small volume. It is our opinion that the demand for Professor Wells's book will be a cumulative one and that his successful authorship will

induce him to include, in future editions, discussions of various additional pathological matters of importance that could not be encompassed in the original volume.

NELLIS B. FOSTER

COLUMBIA UNIVERSITY,
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Physiography. By ROLLIN D. SALISBURY. American Science Series—Advanced Course. New York, Henry Holt and Company. 1907. Pp. 770, plates, figures, maps.

Object.—As Professor Salisbury states in the preface of his "Physiography," the book is intended for students of early college or normal school grade who have received elementary instruction in the subject, but who do not expect to pursue the study further. There are a number of text-books on this subject which have been published from time to time within recent years but none of them has been devoted especially to this class of students. Professor Salisbury's book, therefore, meets a real want and the character of its compilation, based as it is, on many years of experience in teaching, gives the book a completeness far beyond any other physiography published up to this time.

Plan.—The book is a companion volume to "Geologic Processes" which appeared in 1905, and much the same plan of treatment is adopted in both. In the "processes" the emphasis is thrown on the discussion of the agencies which have brought about changes in the earth's crust. In the "Physiography" topographic forms are brought into greater relative importance and less discussion given to the processes which have produced them. Part I. is devoted to the Lithosphere, part II. to the Earth Relations, part III. to the Atmosphere, part IV. to the Oceans. Each one of these major divisions is subdivided into appropriate chapters.

Illustrations.—The "Physiography" is as fine an example of text-book making as has yet appeared on the subject, and it is difficult to see where it could be improved. The figures which are both halftones and line engravings, are well selected, numerous, and beautifully reproduced. The maps are in great measure