are concerned, England is peculiarly fortunate in having such a number and variety of them on the southern coast, which presents great differences in outline, soil and climatic influences of various kinds. Dr. Ord remarks that "where a ridge comes down from high inland into the sea, its shelving sides are found to embrace great differences of climate within a small area. We may find one side of a bay exposed to east winds, with an air which is found to be tonic and bracing, while, on the other side, with a westerly or southwesterly aspect, the sun pours in on a beach lying at the foot of high cliffs with almost tropical warmth; and one side of a headland may be so warm as to be held to be relaxing, while the other is cool and invigorating."

In the section on the Climate of Devonshire attention is called to the fact that for years this region has been considered as specially favorable for those suffering from all forms of respiratory trouble, and the reporters, Dr. Symes Thompson and Dr. Lazarus-Barlow, say "from this cause it comes about that a large proportion of the permanent residents have become such from either some actual or hereditary tendency to diseases of the respiratory type." To this it might be added that so far as consumption is concerned, any locality to which large numbers of persons affected with pulminary tuberculosis have resorted for a number of years is specially liable to be infected with the specific bacillus from dried sputa, wherever this has been deposited in more or less dark places.

In speaking of one locality the significant remark is made that "typhoid fever has virtually disappeared from Sandown since the new water supply was established in 1863."

The really valuable thermal and mineral springs of Great Britain are comparatively few in number. There are no alkaline waters. Bath and Buxton are the only thermal waters of importance. Harrogate and Strathpeffer are the chief sulphurous spas, and the strongest saline waters are those of Droitwich and Nantwich. There are no chalybeate springs of great reputation, but there are several which have considerable value.

Considering the great number and variety of thermal and mineral waters in the United States, many of the springs containing considerable quantities of salts, having important therapeutic qualities, it is much to be desired that a scientific, impartial report upon them, similar to the one above referred to, should be prepared and published for the benefit not only of our own people, but of the world at large. No doubt at present it would be impossible to obtain the requisite data, for while we have a fair amount of reliable chemical analyses of the different waters, the statistics of disease and death are for the most part wanting and the meteorological data are still incomplete, although much has been done in this direction within the last ten years.

In the meantime, until we can have such a report of our own, those who are interested in health resorts, whether as physicians, patients, or friends of the sick, will find much in this volume to interest and instruct them.

J. S. BILLINGS.

Leitfaden für histiologische Untersuchungen. VON DR. BERNHARD RAWITZ, Privatdozenten an der Universität Berlin. Zweite umgearbeitete und vermehrte Auflage. Pp. 148, no figures. Verlag von Gustav Fischer, Jena, 1895.

The purpose of this work, as the title states, is to furnish a guide to histological investigation. It is divided into two main sections. The first is devoted to the methods of histology, fixing, hardening, sectioning, staining, etc., and the principles involved in these proceedings. The second part takes up all of the tissues and organs and shows how the methods are applied. Cross references are constantly given, so that only a minimum of repetition is necessary.

The author's preparation for the task has been excellent. Besides the training of the German laboratories, he has prepared an excellent manual of histology and has written several papers giving the results of his own histological investigations.

In going carefully over the methods one can see the discrimination that has been exercised by the author in selecting, from the great number of possible methods, those that his own experience and that of others have found most reliable and most capable of giving the best gen-

eral results. The book seems to be a thoroughly trustworthy guide to modern histology. The author emphasizes the need of keeping physiology constantly in mind in studying morphology; this is one of the crying needs of morphological study at the present time, and it may be safely predicted that future advances will most often be made by those who see in morphology the agent or material vehicle of physiology.

Unlike most guides to investigation in which a microscope is necessary, this one omits all consideration of the instrument of the investigator. The author believes that as the microscope is a physical instrument it should be studied in a course on physics. He stands nearly or quite alone in this respect. Most teachers have found that the special application of an instrument could best be taught in actually applying the instrument to the investigation, and the best instructor is the one who has had experience in the use of the special instrument, it being always understood, of course, that the teacher has an adequate knowledge of the theory of the instrument. The author also believes that in a work on histology the methods by which the results are obtained should find no place, but be in a separate volume. He is here also largely in a minority, as the best works on modern histology give the methods by which each preparation has been obtained. This is sometimes given with the preparation or at the end of the chapter. The advantage is that a student can follow exactly the method of the book he is studying and avoid the confusion of being compelled to make his own selection from several methods. The uncertainty as to the cause of any failure is thus largely eliminated.

From the standpoint of a teacher who has had much experience with students, the reviewer is compelled to say that it would require one of experience to make the best use of this guide, as in many, if not the majority of, cases the directions are so brief that a beginner would find it impossible to fill the gaps. For one with experience, however, the book would serve an excellent purpose, for its directions include many late methods, and the general discussions are very suggestive. A drawback for the teacher is the lack of references to the sources of the various methods given. Credit is given, as Ranvier's method, etc., but no reference to the place in which the full discussion can be found, and certainly in a book serving as a guide to investigation—and this professes to be such—the investigator should be given every aid. The Microtomists' Vade Mecum of Lee is far more satisfactory in this respect.

In a word, the book, with all its excellencies, is too brief for beginners without experienced teachers, and for the advanced worker the lack of references to original sources detracts greatly from its usefulness. S. H. G.

SCIENTIFIC JONRNALS.

PSYCHE, OCTOBER.

THE number is almost exclusively given to a revision of the species of the orthopteran genus Spharagemon by A. P. Morse. The author divides it into three series: bolli (with 4 species), æquale (3) and collare (2); but he further divides *S. collare* into no less than six races, to which he gives names; considerable change in the synonymy results. Excellent outline figures are given of the face of six of the commoner species with a few other characteristic parts. Three new species are briefly described. The genus is strictly North American and has not been found west of the Sierra Nevada. Mr. Morse expresses no definite opinion regarding the intimacy of its relationship to Dissosteira, under which Saussure placed it as a subgenus.

NEW BOOKS.

Report of the Chief of the Weather Bureau for 1893. Washington. Government Printing Office. 1894. Pp. 319.

The Forces of Nature. HERBERT B. HARROLD and LOUIS A. WALLIS. Columbus, Ohio, the authors. 1895. Pp. 159.

Psychology in Education. Ruric N. Roark. New York, American Book Company. 1895. Pp. 312. $1.00.

The Herschels and Modern Astronomy. AGNES M. CLERKE. New York, Macmillan & Co. 1895. Pp. vi+224. $1.25.

Justus von Liebig, His Life and Work (1803–1873). W. A. SHENSTONE. New York, Macmillan & Co. 1895. Pp. vi+215. $1.25.