

Manual of Bacterial Plant Pathogens. By Charlotte Elliott. Pp. ix + 349. (London: Baillière, Tindall and Cox, 1930.) 22s. 6d. net.

THIS volume is the outgrowth of a card-index on bacterial parasites of plants accumulated by the author and is presented in the form of short summaries of the characters of the organisms and of the disease produced, together with remarkably complete bibliographies of each pathogen.

The book is divided into three parts; the first part, which forms three-quarters of the whole volume, consists of a list of all known bacterial pathogens arranged in alphabetical order, the classification adopted being E. F. Smith's modification of Migula's system. The second part comprises a list of organisms described as commonly found in association with pathogens, but not themselves parasitic, while the third part consists of a chart of the chief characters of the organisms arranged in chronological order of discovery. This last would have been of much more use if the arrangement had been alphabetical, as in the body of the text.

As a source of reference, particularly to the literature, the book will prove of great value to all plant pathologists.

R. H. S.

Pflanzenmikrochemie: ein Hilfsbuch beim mikrochemischen Studium pflanzlicher Objekte. Von Dr. A. Tunmann. Zweite vermehrte und verbesserte Auflage bearbeitet von Prof. Dr. L. Rosenthaler. Pp. xxiii + 1047. (Berlin: Gebrüder Borntraeger, 1931.) 75 gold marks.

THE new edition of this well-known book on plant micro-chemistry has been considerably enlarged under the editorship of Prof. Rosenthaler of Bern.

To the general section of the work has been added a section upon micro-manipulation in which, as also in the description of methods of counting and measuring under the microscope, Dr. Ehlers of Jena has collaborated. Sections are also added upon urea, compounds of uronic acid, vital staining, membrane pigments in the mosses, pigments of fungi and bacteria, etc. The citations of literature in the footnotes continue to be very extensive, and the account in small type, which accompanies the different substances discussed and analyses their distribution in the plant kingdom, also remains a very satisfactory feature of this comprehensive and valuable laboratory reference book.

Physiology.

- (1) *Ultra-violet Radiotherapy.* By Dr. W. Kerr Russell. (Modern Treatment Series.) Pp. 130. (London: Jonathan Cape, Ltd., 1930.) 5s. net.
- (2) *Therapeutic Uses of Infra-red Rays.* By W. Annandale Troup. Pp. viii + 58 + 16 plates. (London: The Actinic Press, Ltd., 1930.) 5s. 6d. net.

THE electromagnetic waves which have found a place in therapeutics extend over a considerable portion of the spectrum, from the γ -rays of

radium and the X-rays of short wave-length, through the ultra-violet to the infra-red rays, of long wave-length. In 'light' treatment, the ultra-violet rays play an important part, although their sources used in practice usually emit heat waves also; in 'heat' treatment, the action is due to the long infra-red waves, although the source used may emit visible light rays at the same time.

Light and heat treatment have been employed in a great variety of diseases with benefit in many cases, but as with other kinds of treatment, experience is necessary, and overdosage has unpleasant after-effects. The value of the treatment can only be determined by observation of the results obtained, which depend on the technique adopted as well as on the variable responses of different patients. Hence precise descriptions of technique and the results observed in different diseases are of value in enabling physicians to select those cases which are likely to be benefited by the treatment.

In both the little books before us, the authors describe their technique and their results. Dr. Kerr Russell considers that ultra-violet radiotherapy is almost a specific in certain diseases, and a useful adjuvant to other methods of treatment in many others. Dr. Annandale Troup's book is the first published in Great Britain devoted specifically to the therapeutic uses of infra-red rays; he prefers a low temperature generator, which he describes in detail. The rays are of value in chronic rheumatic conditions, and in sprains and other injuries they can be used in conjunction with ultra-violet radiotherapy.

These books should be of value to those employing this treatment and to others who wish to have some knowledge as to the type of case which it may be expected to benefit.

Bread: a Collection of Popular Papers on Wheat, Flour and Bread. By Harry Snyder. With Biographical Sketch by Andrew L. Winton. Pp. x + 293 + 20 plates. (New York: The Macmillan Co., 1930.) 10s. 6d. net.

HARRY SNYDER, who died at Minneapolis four years ago, had many friends and admirers in Great Britain. In the United States he was known as the champion of pure white flour and the outstanding man of science in the milling industry. This book contains a biographical appreciation of him by Andrew L. Winton and a series of papers on bread and cognate subjects which are considered of such value as to be of wide interest.

Snyder's theme was the rightful place of bread in the human diet: his conclusions are as valid to-day as when they were first written. The papers form a most valuable source of information on all that concerns bread and flour and wheat, and they are worth a place on the shelves of everyone interested in preserving this source of our food in a pure state. It is a matter which will always require watchful care; Snyder himself did not a little in attacking fallacies concerning food values which were being exploited by the aid of generous advertising.

E. F. A.