

in time, through the action of superstition and myth, with a religious garb, and thus the marriage system would come under their influence. The theory seems to me very nearly, if not quite, to solve the mystery of totemism. There is also some good criticism of recent views, such as the origin of totemism from the "external soul," or from magical cooperative societies for the control of food.

The value of the book is increased by a clear exposition and sane criticism of the chief theories and suggestions which have been put forward in the study of totemism, exogamy, and primitive marriage.

ERNEST CRAWLEY.

OUR BOOK SHELF.

*Immune Sera. Haemolysins, Cytotoxins, and Precipitins.* By Prof. A. Wassermann, M.D. Translated by Charles Bolduan, M.D. Pp. ix+77. (New York: John Wiley and Sons; London: Chapman and Hall, Ltd., 1904.)

THE subject of immune sera has not in this country received as much attention from the medical profession as its importance and interest deserve. This is not so much due to the inherent difficulties of the subject as to the complicated way in which it has usually been expounded, and to the fact that the nomenclature introduced by different authors and experimenters has been found bewildering. The difficulties have been increased by the introduction by various experimenters of different terms for the same entities, and often ones which suggest the function or properties of the substance, according to the inventor's particular views.

This neglect is the more to be regretted, as investigations upon hæmolysins, cytotoxins, and precipitins which at first seemed to possess merely scientific interest, have become of the greatest importance, owing to the close analogy which has been found to obtain between these phenomena and those of natural and acquired immunity. These studies have indeed occupied an important and striking position in the development of our knowledge of the mechanisms whereby an animal protects itself, or is protected, against the invasion of the micro-organisms of infectious diseases.

This little book of seventy-five pages is an English translation of one of the "Clinical Lecture" series, edited by von Bergman. The treatment of the subject is intended for medical men generally, and is not addressed to specialists. That Prof. Wassermann is the author is sufficient guarantee that the matter has been judiciously selected, and the manner in which it is presented could hardly be improved upon, so that it forms a clear and interesting account of the subject. The main facts and principal conclusions, including a brief but adequate *résumé* of Ehrlich's development of his side-chain theory to apply to anti-bodies in general, are given, but all unnecessary controversial matter is omitted. At the end is a very select bibliography, to which the reader is from time to time referred for fuller information.

The translation is excellent, and we confidently recommend this little book to the attention of all medical men, or others, desirous of acquainting themselves with the essential and most significant facts on the subject of immune sera.

CHARLES J. MARTIN.

*The Flora of the Parish of Halifax.* By W. B. Crump and C. Crossland. Pp. lxxiv+316. (Halifax Scientific Society, 1904.) Price 10s. 6d. net.

THE question arises, Why should the records of a parish be amplified into a book containing 300 odd pages? in reply to which the authors explain at the

outset that the parish of Halifax covers 129 square miles, and corresponds to a natural geographical division, through which flows the River Calder. But although the area is circumscribed and the vertical range is not great—the altitude varies between 500 and 1500 feet—the number of plants found within the district forms a good list, which has been worked up into an attractive historical and ecological account, and in addition, owing to the cooperation of other workers, it has been possible to include lists of all the cryptogamic plants. Looking at the plant associations, the mixed deciduous woods are the habitat of the globe-flower, the bird's nest orchid, the helleborine and the daffodil, while among the rare species of the heather moors are reckoned the bog-bell, the winter greens, and the bear berry. The bryologist, too, will find a good hunting ground, for, in addition to a fairly rich flora, the parish has yielded a new variety of *Philonotis*, the first record in Yorkshire for *Amblystegium Juratzkae*, and one of the few stations in the British Isles for *Jubula Hutchinsiae*. With the botany of Halifax is inseparably bound up the name of John Bolton, painter and naturalist, who in 1785 published "*Filices Britannicæ*," with thirty-one copper plates all drawn by himself, and in 1791 completed "*An History of Fungusses*," also provided with plates, and the extent of his collections can be gauged from the numerous records which are given in the book.

While this "Flora" must naturally prove most useful to those who can traverse the parish, the ecological account and the records will serve for guidance and reference to a larger number of naturalists.

*Chemisches Praktikum.* By Dr. A. Wolfrum. II. Teil. Präparative und Fabrikatorische Übungen. Pp. xii+580. Price 15s. net. Atlas, Part ii. Atlas, price 1l. net; together, price 1l. 8s. net. (Leipzig: Engelmann, 1903.)

WE gather from the preface to the first part that the author's intention in compiling this work was to present the student whose aims lie in the direction of chemical technology with a course of practical exercises especially fitted for his future career. The first volume dealt with analytical work, and here the student is introduced to preparative chemistry.

The first chapter is devoted to a discussion of general matters, such as the treatment of materials for preparative and technical purposes, the general conditions of chemical reaction, and the separation, purification, and testing of reaction products. In the second chapter of 150 pages, the methods of preparation of a large number of inorganic and organic substances are described. Fifteen pages form the third chapter, which deals with the dynamics of chemical reactions, and the last two chapters are devoted to matters of a specially technical nature—descriptions of furnaces, autoclaves, filter-presses, air-pumps, condensers, centrifuges, &c., the fitting up of factories, book-keeping, patent laws, and, finally, exercises in connection with large scale technical processes are given.

Such is the programme arranged by the author for the future works chemist. It must be admitted that in many cases the practical courses provided at the universities and higher technical institutions for such chemical students might be with advantage considerably modified; in most cases the chief difficulty confronting such change is to be found in the greatly increased cost of laboratory equipment and upkeep. Without such equipment it is questionable whether the "*Chemisches Praktikum*" can be advantageously used by the technical student. The preparations are well chosen, but the working details would have been far more intelligible to the average student if