of plants, has adopted the admirable plan of giving under each species a brief note of its range, a most valuable addition in a paper of which the importance is chiefly distributional. The plates consist of photo-etchings well executed in the Survey of India Office, and represent fishes, reptiles and crustaceans, the rock structure of a biotite granite, and a view of an *Ovis poli* skin on a wall of rough stones amongst small orchards. The last is so good a plate, that it is impossible to help regretting that a more congenial background has not been selected.

W. T. B.

SOCIOLOGICAL SCIENCE.

Outlines of Sociology. By Lester F. Ward. Pp. xii + 301. (New York: The Macmillan Company, 1898.)

MR. WARD'S little volume, with its clear thought and trenchant writing on more than one topic of current interest, will be welcomed by all students of sociology. It is a reprint of twelve chapters formerly contributed by the author to the *American Journal of Sociology* during the years 1895 to 1897. In the first six lectures, which bear the general title "Social Philosophy," Mr. Ward discusses the old question of the proper position of sociology in a systematic classification of the sciences. The general philosophical position adopted is that of Comte, but the author very properly restores anthropology and psychology to their lawful position in the scheme of the sciences between biology and sociology, and insists with great force upon the very special dependence of sociological on psychological science. The most interesting feature of this part of the book is Mr. Ward's able criticism of Mr. Herbert Spencer's favourite comparison of society to a huge biological organism. Following the lead of Prof. Huxley, he shows, by irresistible arguments, that it is not the whole biological organism, but only the nervous system which really corresponds to a society, and further, that society in its present state is at best a "very low form of organism."

"The most extreme socialist would shrink from the contemplation of any such absolutism as that exercised by the central ganglion of even the lowest of the recognised Metazoa. In order to find a stage comparable to that occupied by society with respect to the central control of the functions of life, it is necessary to go down among the Protozoa and study those peculiar groups of creatures that live in colonies so adapted, that, while the individuals are free to act as they please within certain limits, they are still imperfectly bound together by protoplasmic threads to such an extent that they are in a measure subordinate to the mass thus combined, and really act as a unit or body."

When conscious co-operation of society, as a whole, for its own welfare supersedes sporadic individual effort, and not before will there be a real parallelism between social institutions and the nervous structure of the higher animals.

In the second part of the book, which is entitled "Social Science," Mr. Ward describes the gradual evolution of such a higher form of social structure. Social institutions at first grow up unconsciously under the pressure of the mere "struggle for existence." As intelligence progresses this stage of mere "genesis" passes into the higher stage, called by Mr. Ward "telesis"; unconscious growth gives place to the deliberate manufacture of institutions by conscious purposive action. Hitherto such conscious creation of social institutions has been the work of a few exceptional individuals, but in a higher stage of evolution we may expect it to take the form of "collective telesis," *i.e.* the deliberate co-operation of the community as an organised whole in the work of social amelioration.

Perhaps the most valuable part of Mr. Ward's book is that in which he discusses the differences between mere unconscious growth and deliberate constructive activity. It has been too much the fashion of sociologists in recent years to argue directly from biological analogies, forgetting that society is at least as much a machine as an organism, and that the presence in all but the lowest stages of social evolution of deliberate human purpose profoundly modifies the whole character of the evolutionary process. As Mr. Ward pithily phrases it, "the environment transforms the animal, but man transforms his environment," a remark which has an obvious bearing upon the application of evolutionary principles to the problems of ethics. Altogether the student who is not content with being told that society "evolves," but wishes to know how specifically social differs from merely biological evolution, will find Mr. Ward's last six chapters singularly luminous and suggestive. The get-up and typography of the book are generally worthy of commendation, but there are some ugly misprints of classical names.

A. E. TAYLOR.

OUR BOOK SHELF.

A Text-book of Botany. By Dr. E. Strasburger, Dr. Fritz Noll, Dr. H. Schenck, Dr. A. F. W. Schimper; translated from the German by H. C. Porter, Ph.D. With 594 illustrations, in part coloured. (London: Macmillan and Co., Ltd., 1898.)

THE "Text-book of Botany" issued from the famous institute at Bonn has met with such favour on the part of teachers and students, that it is a matter of surprise that the translation of it into English should have been so long deferred. However it is certain to be extensively used, as the subject is handled from a comprehensive standpoint, and the authors have succeeded in hitting the happy mean between a too elementary and a too advanced treatment.

It is the more to be regretted that, as it was passing through the press, the emendations and corrections which have some time ago appeared in the third German edition were not incorporated in the present volume, which seems based on the first edition in the original language. It is, for example, surprising, and to a student confusing, to find elaborate figures and descriptions of centrospheres in dicotyledonous cells on p. 61, when it is known that the author of this part of the book (Strasburger) has long ago abandoned his belief in their existence, and in the current German text expressly denies their presence in these plants. It may also be doubted whether the book gains at all in value by the somewhat poor coloured illustrations of certain examples of flowering plants, although in this the publishers are but following the original. If, however, they could see their way to reduce the rather high price of the book at the expense of these really useless luxuries, both its own circulation and the temper of the purchaser would improve. For it is not a little remarkable to find a work which in Germany can be bought for 7 marks, costing in its English dress 18*s.* The book is intrinsically so good that it is to be hoped