

taken by the California Museum of Vertebrate Zoology, its object being to learn the species and the local distribution of each, to map out the general life areas, to learn the food relations and breeding habits of the species, and, finally, to present all in a form accessible to the public, both lay and scientific. The section studied is divided into six zones, the characters of which are enumerated, the species found in each being shown pictorially; as the Sierra crest is 10,000 to 13,000 feet in altitude and the two sides of the divide differ greatly in aridity, there is clearly plenty of scope. Censuses of birds observed are recorded, numbers of each species seen in stated times and distances in each zone. The balance of Nature from insect to bird, bird to tree, and tree to insect is claimed to be mutually beneficial. Then follows a typical natural history account of each of the 246 species of mammals, birds, reptiles, and amphibians that were found, the book closing with an excellent bibliography and more than sixty well-chosen plates illustrative of the fauna. We should certainly have this book with us if we were visiting the Yosemite region, for, as a first complete work on the locality, it adequately fulfils its object. It will be a useful basal foundation for subsequent periodical surveys to ascertain the changes taking place in the Park due to the closer settling of neighbouring regions.

*The Marine Plankton, with special reference to Investigations made at Port Erin, Isle of Man, during 1907-1914: a Handbook for Students and Amateur Workers.* By Dr. James Johnstone, Andrew Scott, and Herbert C. Chadwick. Pp. xvi + 194 (20 plates). (Liverpool: University Press of Liverpool, Ltd.; London: Hodder and Stoughton, Ltd., 1924.) 12s. 6d. net.

THIS is an account of the researches of the authors on the distribution and succession of the plankton in a particular area of the sea. Apart from the important data recorded here, the book gives an admirable account of how a research of this kind is and should be conducted. It can therefore be used as a preliminary guide by any one who wishes to pursue a similar research in other parts of the sea.

After an opening chapter on "The Plankton in General," a large series of illustrations is given of various plankton types. These enable the student to identify the main classes to which the organisms of a particular plankton sample belong. A chapter on the distribution in space of plankton and the succession of forms throughout the year then follows: this is based on the authors' researches. The last chapter gives an account of nutrition in the plankton and of organic production by plant and animal organisms.

There is a valuable appendix on methods to be employed, and a short bibliography from which further references can be obtained. The illustrations are very good. The reference to the quantum theory on p. 156 is perhaps rather out of place in a book of this scope; the account is necessarily too short to be clear, and does not really seem to be of importance to the argument.

This kind of book is unfortunately not common enough. One cannot help wishing that there were books of a similar scope and price to help the student of, for example, fresh-water biology.

*The Principles and Practice of Fly and Bait Casting.* By Reginald D. Hughes. Pp. xi + 80 + 8 plates. (London: A. and C. Black, Ltd., 1924.) 5s. net.

MR. HUGHES is both a caster and an angler, that is, he is an expert in the art of casting for its own sake, without regard to its application to the sport of fishing, and also an enthusiastic angler, who has brought to the pursuit of his sport all the knowledge acquired in the practice of his art. His book, therefore, will be of the greatest service to anglers. It covers both branches of angling, dry-fly fishing, and fishing with bait, and in each case the general principles involved are discussed, and precise and careful directions given for both single-handed and double-handed rods. The veriest tyro can follow the author's instructions with ease, and should, by careful attention to detail and assiduous practice, acquire that precision in casting which will add to the pleasure of his sport and to the weight of his basket. Clear illustrations and drawings help the text very materially, and anglers will be grateful for the sound advice so clearly and concisely given. Casting is not fishing, as the author is aware, but that correct casting is the first requisite in the making of a successful angler, no one, least of all anglers themselves, will deny.

*A Dictionary of Electrical Terms: for Electrical Engineers and Students.* By S. R. Roget. Pp. vii + 296. (London: Sir Isaac Pitman and Sons, Ltd., 1924.) 7s. 6d. net.

AS many new branches of applied electricity are continually developing, new terms come into use, and it is difficult even for the professional electrician to remember what they all mean. This book of Mr. Roget's therefore fulfils a useful function. For example, it is no use to look up in an ordinary dictionary to find out what a traction engineer means by an "ear" or a "frog," or an illuminating engineer means by a "lux" or a "lumen." We are glad that the author includes American terms. Every electrician must now read a certain amount of American technical literature, and he might easily be puzzled by such terms as "resistor," "inductor," "quarter-phase," etc. We can congratulate the author on having got such a comprehensive list into such a small volume. It will prove useful to many.

*The Racing Eight: Notes on its Design and Propulsion.* By W. B. Coventry. Pp. iv + 39. (Cambridge: W. Heffer and Sons, Ltd.; London: Simpkin, Marshall and Co., Ltd., 1922.) 3s. 6d. net.

MR. COVENTRY'S aim is to discuss how to obtain the maximum speed out of a racing eight. It is clear that the design of the boat is an important factor determining the success or failure of the crew, and the author claims that in several cases the result of the Universities Boat Race was due to the superior design of the boat used by the victors. His chief contention is that a racing eight should be as short as possible. He bases his view on theoretical grounds, as well as on the successes achieved by the short boats constructed by Mat Taylor of Newcastle for Oxford in 1857 and for the Chester Rowing Club in 1856. In his theoretical investigation he assumes that the resistance is mainly due to surface friction on the wetted surface, being proportional to the wetted area and to the 1.852 power of the speed. S. B.