

their external and internal anatomy and their behavior. The anatomical treatment is detailed and comprehensive but, except for a careful description of the male palpus, contains little that is new. Professor Comstock's study of the palpus forms a small treatise in itself and constitutes a valuable contribution to our knowledge of a peculiarly intricate mechanism. The spinning glands are also discussed in considerable detail as the author has been much interested in the construction of the web, a subject fully treated in his account of the "life of spiders," to the neglect or abridgment of many other equally interesting habits in these solitary organisms. No general account of the geographical distribution of the nearctic species is attempted, although such an account would have been very timely and of great interest to many zoologists who are not arachnologists. The systematic descriptions of the genera and species, and especially the tables for their identification, which occupy three fourths of the volume, are extremely valuable. The species are adequately illustrated from photographs or drawings of living or recently killed specimens, with their webs, nests, details of anatomical structure, color patterns, etc. Most of the figures have been well reproduced, but in some cases the fine photographs have suffered the customary deterioration in the hands of the engraver and printer. These are, of course, not the faults of the author, who deserves the hearty congratulations and thanks of all American zoologists for having given them such a helpful and beautiful volume.

W. M. WHEELER

Duc d'Orléans. Campagne Arctique de 1907.

Annélides Polychètes par PIERRE FAUVEL, iv, 45 pp., 4°, 2 pl.; Crustacés Malacostracés, par le DR. LOUIS STAPPERS, xxiv, 152 pp., 4°, 7 pl., 2 charts. Imp. Sci. Bruxelles, 1911.

The annelid fauna of the Arctic seas being practically circumpolar, and investigated in much detail by the Scandinavian and German naturalists, it was hardly to be expected

that the expedition of the Duke of Orleans on the *Belgica* in 1907 would add many novelties. As a matter of fact *Sphærodorum philippi* Fauvel was the only new species among the sixty-two collected on the coasts of Novaia Zemlaia, the Murman, Kara and Polar seas. Valuable notes as to the distribution, and data on the organization of several little-known forms, and a useful bibliography of work on Arctic annelids ensure a welcome for the memoir.

The sea north of Siberia has been but partially explored for Crustacea, and Dr. Stapper's collection, in spite of the adverse circumstances attending work in ice-encumbered waters, comprised no less than ninety-four species, of which two amphipods, one isopod and two sympods proved unknown to science.

Many of the species collected were obtained in considerable numbers, which permitted dissection of numerous individuals. The exact data as to distribution in depth and geographic range render the records of the collection especially valuable to science, and the twelve pages of bibliography will prove a boon to students. The execution of the plates as usual with this series of reports leaves nothing to be desired.

WM. H. DALL

Beyond War: A Chapter in the Natural History of Man. By VERNON L. KELLOGG. New York, Henry Holt and Company. 1912. Pp. ix + 172. \$1.00.

A biologist's contribution to the literature of the peace movement. The argument of the book runs somewhat as follows. "Man" is, like any organic species, a stage in evolution, an organism with a past and with a future. Human nature, like Nature herself, is not immutable, but inevitably mutable. Characteristics possessed at one time by the supra-modal few come to be possessed by the mode, and in passing are represented, for a time, only in the sub-modal group. War is such a trait—now vestigial, not rudimentary—an anomaly and an anachronism; it will disappear from human life when the mode of the species is well beyond war. When the

facts of man's whole history are brought into line, one can, sighting along it, see that his evolution is clearly to be away from war. Like an organic species, war is a species of conflict and it will give place to other forms of conflict, no less real but more humane.

To many scientific readers the most valuable part of this book will prove to be the convenient summary of man's physical and mental evolution during quaternary times, contained in Chapters II-V. Here are presented, in Professor Kellogg's well-known, striking style, and in a form well adapted for the general reader, the evidence for the existence of Tertiary man, and brief characterizations of early Quaternary man—"Homo Primi-genius: Man of the Great Ice"—who found in fighting his chief occupation and diversion. "Homo Priscus: Man after the Ice," partially freed by his wit from constant struggle with the rest of nature, devotes some of his newly acquired leisure toward fashioning his own environment.

Neolithic man, "Homo Sapiens: Man of History," gets something to call "culture." He begins to experience the results of his own modification of his environment, and finds that he has inherited not only instincts and reflexes, but also the capacity to modify these by the exercise of reason; and so he begins to take a hand in directing the evolution of his "human nature." Kellogg recognizes the proximity of this idea to the "inheritance of acquired characters," but proceeds. Man of to-day, as an individual, fights as a pastime chiefly, and international war has become primarily a struggle to destroy dollars. The real desire for war occasionally is said to be already a sub-modal species character.

As to Quaternary man, "Homo Superioris: Man of To-morrow," Kellogg ventures to prophesy, saying that his physical constitution seems fixed and unlikely to be much further changed, and he must perforce depend for his existence upon the evolution and use of his intelligence. As this develops man will recognize the truth about war and will, must, eliminate it from the species life.

It is obviously possible to arrange the leading facts of man's evolutionary history so as to indicate the future elimination of war, and, faith being the substance of things hoped for, let us have faith that this prediction may be speedily fulfilled. But that one may also arrange the facts of man's whole history, as well as of man's History, so as to point in any direction hoped for, is still true; and many of Kellogg's theses might serve as subjects for argumentation.

"Beyond War" is a clear indication of the now recognized necessity of enlarging history to include the whole history of man and his works, and of the important relation of biological facts to the work, not only of the historian, but of the politician, the economist, sociologist, philanthropist and peacemaker. While our biological substructure may not yet be able really to bear the load often thus placed upon it, we should and do welcome heartily every attempt of the trained biologist to make his science available for use and for human life.

WM. E. KELLOGG

BOTANICAL NOTES

THE BRUSSELS CODE

It may now be well in the middle of the lustrum between the Brussels Botanical Congress (of 1910) and the London Congress (to be held 1915) to make some pronouncements upon what progress has been made towards securing a useful and workable code and what remains yet to be done. Before the Vienna Congress (in 1905) there was great diversity of practise among botanists, and not a little heat and temper had been displayed by the champions of this or that particular view. When Otto Kuntze about twenty years ago stirred up the whole subject there were many who regarded his action as wholly unnecessary and uncalled for, and yet it is true that from this stirring up of things have come the two congresses, namely, at Vienna, and Brussels, and much that Kuntze contended for has now been enacted into botanical law. So too, the movement in America a little later,