Rhyssonotus, *Cicada*, *Pielus*, and *Trictena*, all of which live underground at the roots of plants.

For an account of the general structure and development of the entomogenous fungi we cannot do better than turn to the writings of Dr. Cooke. This writer* says, "there are four groups under which the fungi parasitic upon insects would primarily arrange themselves, and these, in the order of their importance, would be: first, the ascigerous or *Cordyceps* group, which have mostly a fleshy stroma, a club-like shape, and sporidia contained in asci, including also those imperfect forms or conidial states which belong or are allied to *Isaria*. . . . The first group consists of . . . entomogenous species, to which at first the generic name of *Clavaria* was applied, until their structure and fructification were ascertained, but which were afterwards transferred to the large genus *Sphæria*, on account of their possessing the cells called perithecia, in which the sporidia were developed, enclosed in long delicate sacs or asci. When a division of *Sphæria* took place subsequently a new genus, termed *Cordyceps*, was characterized, to which the entomogenous species, with some few others, were assigned, on account of their fleshy vertical stroma and perithecia, with long filiform sporidia.

"The general and typical form in *Cordyceps* is a somewhat club-shaped erect body, sometimes only a few millimetres and sometimes several inches in height, with a naked, sterile, solid stem, attached by threads of mycelium, and a thicker head, globose, oval, or elongated, which is covered on all sides with nearly globose perithecia, immersed in the substance, and only visible externally by their dot-like mouths or orifices. In a few instances the perithecia are only partially immersed or nearly free, but such instances are rare. At first the perithecia contain only a minute drop of grumous gelatin, but finally this is differentiated into very long cylindrical asci, with a thin membrane, each containing eight long thread-like sporidia, which are commonly nucleate, then septate, breaking up finally into separate joints, each of which is a reproductive unit.

"The vegetative portion, or mycelium, at the base pervades the body of the host-insect, commencing in many instances during life, and at length absorbing the whole interior, converting it into a fungoid mass. The external stroma, constituting the fungus proper, notwithstanding all that has been written to the contrary, is not developed until the whole interior is absorbed, and consequently the insect is dead."

* Hist. Ent. Fungi, p. 1.

This quotation will serve to answer the question often asked in this country as to the truth of the statement that these large parasitic species of *Cordyceps* are found on living caterpillars. It may safely be asserted that they are not; after the germination of the spores, which, I believe, usually occurs in the stomach and intestines, the host-insect quickly dies, and life is certainly extinct long before the stem and other external parts of the fungus are developed.

[This is followed by a synopsis of the species, with descriptions of several new ones, accompanied with four Plates, to which we must refer the reader.—W. F.]

BIBLIOGRAPHICAL NOTICE.

Catalogue of the Marine Mollusks of Japan. By Henry A. Pilsbry. 8vo. Frederick Stearns, Detroit; Kegan Paul, Trench, Trübner, & Co., London, 1895.

Probably more attention has been bestowed upon the marine Molluscan fauna of Japan than upon that of any country, with the exception of Europe, N. America, and some of the British colonies. Within the last thirty-four years two more or less complete catalogues of the known forms were issued by the late Dr. W. Dunker, three very valuable and beautifully illustrated quarto volumes were published by the late Dr. C. E. Lischke, and an enormous number of genera and species were described by Mr. A. Adams from material which he himself collected. In addition, very numerous and important papers have appeared in various journals, and very many species have been described in monographic works and in the reports of the 'Samarang,' 'Challenger,' and other voyages.

The volume before us is the latest contribution to our knowledge of this fauna. It resulted "from the research incidental to the identification of the Mollusca procured by Mr. Frederick Stearns (the publisher) during two visits to Japan."

It consists of a few prefatory remarks by the author, a short introduction by Mr. Stearns, a list of the principal works quoted, and 196 pages of text, containing the list of species, with references and descriptions of about thirty new ones, illustrated by eleven excellent plates.

The whole of the text is not, however, devoted to the marine mollusks, as might be inferred from the title of the work. Only 154 pages have reference to that part of the Japanese fauna, the remainder containing two appendices, respectively on the "Land