

and deals with morphology, biology, and taxonomy of the *Cæstridæ* and *Calliphorinæ*, which are included by the author in the family *Tachinidæ*. The *Conopidæ* are parasitic, as larvæ, on bees and wasps, and in a few cases upon *Orthoptera*. Very little is known of the details of the parasitism and research is greatly needed. The *Cæstridæ* are all parasites of vertebrates, while the *Calliphorinæ* are of more varied habits. Their larvæ are either saprophagous or carnivorous, and are more rarely occasional or regular parasites. The biology of the groups of flies dealt with, therefore, affords unusually interesting examples of various phases of development, while many of the species concerned are of definite economic significance. We can commend the memoir as a sound and trustworthy contribution by a recognised authority on the subject. It is adequately illustrated and is accompanied by a full bibliography.

*Flora of West Tropical Africa: the British West African Colonies, British Cameroons, the French and Portuguese Colonies south of the Tropic of Cancer to Lake Chad, and Fernando Po.* By J. Hutchinson and Dr. J. M. Dalziel. Prepared at the Herbarium, Royal Botanic Gardens, Kew, under the Supervision of the Director. Published under the Authority of the Secretary of State for the Colonies. Vol. 1, Part 2. Pp. iii + 247-523. (London: The Crown Agents for the Colonies, 1928.) 8s. 6d.

PART 2 of this work comprises 44 families from *Sterculiaceæ* to *Umbelliferæ* in the phylogenetic order devised by Mr. J. Hutchinson, one of its authors. Several families of great importance from the botanical as well as the economic point of view are included, such as the *Malvaceæ*, *Euphorbiaceæ*, *Leguminosæ* (here divided into three families), *Meliaceæ*, *Anacardiaceæ*, and *Umbelliferæ*. The one represented by the most abundant species is of course the *Papilionaceæ*, which occupies just one-fifth of the whole part (the '*Leguminosæ*' take up three-eighths). Next in order come the *Euphorbiaceæ* with one-seventh. There are sixty-nine excellent full-page and text illustrations, drawn by W. E. Trevithick, which materially assist in the determination of the plants represented and in the understanding of the chief characteristics of the families to which they belong. C. FISCHER.

*Evaporating, Condensing and Cooling Apparatus: Explanation, Formulae and Tables for Use in Practice.* By E. Hausbrand. Translated from the second revised German edition by A. C. Wright. Fourth English edition revised and enlarged by Basil Heastie. Pp. 468. (London: Ernest Benn, Ltd., 1929.) 25s. net.

HAUSBRAND'S work, the first English edition of which appeared in 1903, has long been recognised as an authority on the subject. It sets before the engineer, in a readily applicable form, the results of experiments in physics and of large-scale plant processes, and contains a number of valuable tables. In the present edition, the work carried out in the National Physical Laboratory in 1916, which con-

firmed the earlier investigations of Osborne Reynolds on fluid flow, is taken into account. It supersedes the empirical results which were previously the only ones available, and large changes have been made in the sections and tables dealing with this part of the subject. The experiments on heat losses by radiation and convection, also made in the National Physical Laboratory in 1923, have been dealt with by the reviser, and a chapter has been added on modern evaporating plants. These and other alterations have considerably improved the work, and the English translation is therefore much in advance of the German edition. When the great amount of valuable information in the book is considered, the price must be regarded as moderate.

*From a Bird-Lover's Diary.* By Arthur Astley. Pp. ix + 306 + 8 plates. (London: The Sheldon Press; New York and Toronto: The Macmillan Co., 1928.) 7s. 6d. net.

THIS little volume gives us the results of the author's observations on birds in a northern district of England. He divides his chapters into those containing the birds of lakeland, those of woodland, and those of the mountains, after which he devotes a chapter dealing with bird life month by month as he finds it to be within these areas, selecting certain birds as emblematical of each individual month. The author calls his book a diary, and, perhaps, it has lost some of its charm by his keeping too carefully to the form which its title indicates. We confess we should have liked less diary—entailing a good deal of overlapping—and more information and anecdote about the birds and their habits. In spite of this, though we are told nothing that is new, there is much that is of interest, whilst the book is easy to read and holds one's attention throughout. The photographs with which the book is illustrated are very charming, and have been well selected with the view of giving as varied suggestions as possible of the haunts of the birds discussed.

*Power Resources of the World (Potential and Developed).* Compiled by Hugh Quigley for International Executive Council, World Power Conference. Pp. xii + 170. (London: World Power Conference, 1929.) 21s.

THE assessment of the power resources of the world presents formidable difficulties, if only on account of gaps in precise figures from many countries. The lack of a standard method of investigation and a common basis of evaluation are other drawbacks to reaching satisfactory conclusions. In this volume, however, an attempt has been made, and apparently with considerable success, to assess the world's power resources in coal, oil, and water. Inexhaustible sources of power, such as wind, tide, and solar energy, and also timber, do not come under review. Their use depends partly on inventions and, in the case of timber, on man's will to increase the supplies. The book concludes with a chapter on world power production on a common basis, and a lengthy bibliography covering works published since 1924 on power resources.