

by the buzzing of flies, or by the direct droning flight of the great scarabs?

Much is said about coloration. Mr. Beebe's "infallible test" whether a bird is protectively coloured or not is whether it "freezes," counting upon being overlooked, or whether it goes off. Lists of such and other birds are given, and many of the real, or apparent, exceptions are scrutinised. Some explanation is always available where personal bias is not hampered by actual knowledge in this "optical tower of Babel of the tropical forest."

One chapter is devoted to the life of the hoatzin, with excellent photographs of the scenery, nests, and the climbing and swimming of the unfledged babies. All this is glorified into a miracle, with conclusions about the origin of birds rather startling and a little overdone. The staff took no end of trouble about the nesting, eggs, and young of various other birds, especially toucans, about which nothing was known.

Mr. Hartley has contributed chapters on the development of external features. There is a lively chapter on the perai or cannibal fish, the *piranha* of the Brazilians. Mr. Howes treats of the life-histories of bees and wasps, with coloured plates. Mr. Rodway, of the Georgetown Museum, writes on Indian charms, and the Rev. W. G. White contributes notes of the Hinterland of Guiana.

Altogether this is a very valuable first instalment of a most promising enterprise.

#### DRUGS AND THEIR PREPARATIONS.

*The Dispensatory of the United States of America.* Twentieth edition, thoroughly revised and largely re-written by Prof. J. P. Remington and others. Pp. cxxii + 2010. (Philadelphia and London: J. B. Lippincott Co., 1918.) Price 2l. 10s. net.

IT is now three-quarters of a century since the first edition of the United States Dispensatory was published. During that period it has grown from a volume of 1073 pages to one of nearly double that size, and simultaneously enhanced its reputation as a standard work of reference for matters pharmaceutical.

The revision of the work for the present edition was accomplished by the late Prof. Remington, whose loss all pharmacists deplore, and Dr. Horatio Wood, assisted by Prof. Sadtler (Chemistry), Prof. LaWall (Pharmacy), Prof. Kraemer (Pharmacognosy), and Dr. Anderson. It has long been recognised that in the preparation of so compendious a volume, embracing various branches of knowledge, the co-operation of experts in those branches must be enlisted, and this plan has here been followed with most admirable results.

The issue of new editions of the United States and British Pharmacopœias and of the National Formulary, the appearance of many new non-official remedies, and the rapid increase in our knowledge of official remedies, have necessitated a vast amount of work by the compilers. It may at once be said that the compilation has been excel-

lently accomplished, with the result that the United States Dispensatory is now a mine of information on all matters relating to pharmacy. It includes practically all the drugs and preparations of the United States and British Pharmacopœias and of the National Formulary, and also such of the German and French pharmacopœias as are in common use in the United States.

The preliminary pages (122) are devoted to the (American) Food and Drugs Act, to Food Inspection decisions, to the Harrison Anti-narcotic Law, a glossary, an index of diseases, and so on. The body of the work is divided into three parts. Part i. deals with all the remedies in the United States and British Pharmacopœias, part ii. with the National Formulary and non-official remedies, and part iii. with tests, test solutions, weights and measures, the art of prescribing, and cognate matters such as alcohol tables, etc.

As part i. comprises more than 1200 pages of closely printed text, it is obvious that the various remedies are comprehensively dealt with. As an example, the account of Acacia (gum arabic) may be utilised to show the extent of the information given and the method adopted for its arrangement. After an enumeration of the various species of Acacia that yield commercial gums, and a brief note on the products other than gum obtained from the tree, the nature and cause of the exudation and the method of harvesting the gum are described. Then follows an elaborate description of official and non-official varieties of gum. The general properties, chemical composition, and tests occupy three columns, the article concluding with incompatibles, adulterations, uses, and official preparations. It will be seen, therefore, that the treatment is very comprehensive and that it is possible in a few minutes and in a single volume to inform oneself very thoroughly about gum arabic. The other preparations and drugs are similarly treated, more or less extensively according to their importance. Here and there one misses the latest researches; thus in the excellent, historically arranged account of the chemical examination of rhubarb the investigations of Tutin and Clewer appear to have been overlooked, as also under "Scammoniæ Radix" those of Power and Rogerson. Such omission is, however, quite exceptional, and reference to the United States Dispensatory may be relied upon for rapid, concise, and comprehensive information on almost any drug or preparation that is or has been used in pharmacy.

#### OUR BOOKSHELF.

*School Entomology: An Elementary Text-book of Entomology for Secondary Schools and Agricultural Short Courses.* By E. Dwight Sanderson and L. M. Peairs. Pp. vii + 356. (New York: J. Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1917.) Price 7s. net.

THIS little book is one of "Wiley's Technical Series," for the use of "various" schools in the United States of America, where such educational