

utilized for several hundred illustrations which generally are of both popular and scientific interest. Of the 70 views of birds, seals and sea-elephants scarcely one could be spared. The bird-lover finds penguins and petrels of all ages and conditions; the sea-rover will delight in the scenes of seal and sea-elephant life; the meteorologist notes graphic records of winds and blizzards; the biologist sees prophetic shadows of the riches of later scientific publications; and the geologist finds pictured nunataks, columns of dolorite and cliffs of granite. The volumes will be welcome additions to scientific as to other libraries. The index is neither good nor full. Unfortunate was Sir Douglas in the "literary style" due to his associate, as shown in the foreword and by interjected poetry, which mar the dignity of the story of a great and historic expedition.

It is pleasing to find Sir Douglas Mawson in that restricted class that has a due sense of obligation to predecessors. After praising the skill and daring of Wilkes in the hazardous voyage of his squadron for 42 days along the borders of the antarctic circle, he adds:

It is wonderful how much was achieved. We may amply testify that Wilkes did more than open the field for future expeditions.

Americans thus owe a debt to Mawson, whose faith, courage and ability have given definite form to the 1,500 miles of the continent of Antarctica, which was reported by Wilkes only to be contemned and suppressed in narratives and on charts, and to be absolutely neglected by explorers for seventy years.

A. W. GREELY

The Lower Amazon. By ALGOT LANGE. New York, G. P. Putnam's Sons, 1914. 8°, ill., 460 pages.

Mr. Lange's new book shows a great advance over his earlier work entitled "In the Amazon Jungle" published in 1912. He has evidently learned the Portuguese language, a thing so many other travelers seem to regard as quite unnecessary, and he has apparently reached the wise conclusion that one does not need to go deep into the forests of the upper Amazon

in order to see and to learn interesting things. The experiences described by the author were confined mostly to a trip up the Tocantins, but without reaching the region of falls, another up the Mojú a short distance above the lower falls, and another to the Ilha do Pacoval in Lake Arary—all of them near Pará.

Personal experiences are related and illustrated by good photographs taken by the author, while the maps add greatly to the interest of the book. The author has a facile and attractive style, and no one has ever described more truly or more pathetically the poverty, sickness and despair that hang over the villages and rubber camps of the Amazon region.

In spite of the fact that he does not take kindly to the food of the country, the author is no longer a tenderfoot.

From a scientific point of view there is nothing new in the book. The ancient pottery from Marajó, on which he justly lays stress, has been known to the scientific world since 1870, when it was visited by Dr. Barnard, of Cornell University, and a paper on it was published by Hartt in the *American Naturalist* for July, 1871, while a much fuller account of it is given in the *Archivos do Museu Nacional* of Rio de Janeiro, Vol. VI., Rio, 1885.

Those who want to know how the conditions of life and of business in the Amazon Valley appear to one who is personally and freshly familiar with them will find much of interest in the final chapters regarding the conditions, prospects, food, health, and what the government is doing for the people. Those who believe in the boundless agricultural possibilities of the lowlands of the Amazon should read what is said at pages 27 and 387-8 of the great, enormously expensive, and tragic experiment of a North American firm on the Mojú, and the footnote about its final abandonment.

It is a relief to find a book necessarily containing many Portuguese words with so few typographic errors. On the other hand, it is not clear why the author always uses the Spanish word "machete" for forest-knife, or why he speaks of his men as "bucks." The long accent so often used by him on Portuguese words is not Portuguese at all: in the

cases observed it should be replaced by the acute accent. A few words are habitually misspelled, probably because they are not given in the smaller dictionaries: such as *cachassa* for *cachaça*, *meruhim* for *marui*, *tracachā* for *tracajá* (111), *chibēh* for *chibé* (115).

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BOTANICAL NOTES

ANOTHER APPLIED BOTANY BOOK

WE have become so accustomed to looking for a new book, or a new revision of one of his earlier books by Professor Doctor Henry Kraemer, that it will not be a surprise to receive the announcement of another big volume of over eight hundred pages. In this book, which he calls "Applied and Economic Botany"¹ he has in mind the needs of students in technical schools, and agricultural, pharmaceutical and medical colleges. At the same time the work will prove itself to be a valuable reference book for chemists and food analysts, while students in morphological and physiological botany will find much that is helpful in its pages.

In carrying out his plan for making the book useful for these various classes of persons the author wisely first makes a rapid survey of the plant kingdom from Schizophytes, Algae, Diatoms, Fungi and Lichens to Bryophytes, Pteridophytes, Gymnosperms and Angiosperms. With this preparation the student is next given a good course in elementary cytology and histology, bringing the text up to page 298, where one finds a chapter on the outer and inner morphology of higher plants. A short chapter on botanical nomenclature must be especially useful to the particular students for whom the book is designed, as it gives a few of the general laws of nomenclature, and follows these with twenty-nine pages in which over eight hundred botanical names are enumerated and their derivations briefly given.

The three remaining chapters are given to

the classification of angiosperms yielding economic products, the cultivation of medicinal plants, and microscopic technique, including reagents and their use. They all have a strong pharmaceutical bias, and yet the student in an agricultural college will find in them very much that will be helpful to him, more, probably, than in many of the books that have a more distinctly agricultural label.

It should be said that while there are many paragraphs and illustrations in this book that are identical with the author's fourth edition of his "Text-book of Botany and Pharmacognosy,"² published four years ago, this book is distinct from that, and appeals to a much wider circle of botanical students.

CYBELE COLUMBIANA

UNDER this title Dr. Edward L. Greene issues a 56-page pamphlet as No. 1, Vol. I., of a new botanical periodical which bears the date of December, 1914. Although it is known that the editor's address is Washington, D. C. (Smithsonian Institution), the publishers are given as Preston & Rounds, Providence; William Wesley & Son, London, and Oswald Weigel, Leipzig. Nor is there a statement of a subscription price, but it is stated on the title page that the price for this part is seventy-five cents, from which one may infer that the cost of the volume may be about three dollars. The same title page also informs us that this is to be "a series of studies in botany, chiefly North American," by the editor, "with occasional articles by others."

This first number opens with six pages of inimitable "explanatory," with reference to the title in which it is intimated that this is likely to be a violet periodical. This suggestion is borne out by the second paper on the "Violets of the District of Columbia, I." (pp. 7-33). Other papers are "Manipulus Malvacearum" (pp. 33-36) by the editor, and "Twelve Elementary Species of *Onagra*" (pp. 37-56, with 5 plates) by H. H. Bartlett.

Of course every systematic botanist will welcome *Cybele Columbiana*.

¹ Published by the author, 145 North Tenth St., Philadelphia, 1914. \$5.

² Lippincott, Philadelphia, 1910.