

chapter dealing with the extraction of alkaloids from the various crude drugs—seeds, leaves, roots—in which they occur, and the determination of the proportion present. This is followed by sections which treat of the individual drugs and the galenical preparations containing them. The alkaloids of gelsemium, hyoscyamus, stramonium, coca, colchicum, conium, hydrastis, ipecacuanha, physostigma, pilocarpus, tobacco, strophanthus, and veratrum are included, as well as the commoner alkaloids, and this part of the work should be a boon to chemists or students interested in the examination of these products.

The space allotted to the analysis of water and food-stuffs does not allow of the articles being discussed at any length. Milk, butter, oils and fats, starch, and sugar are dealt with, and the outlines of principles and processes given are trustworthy as far as they go.

For the sake of the numerous references which the author supplies, one can readily forgive him his occasional lapses into slipshod English. The book contains a wealth of information, and considered as a whole is an excellent production. C. S.

OUR BOOK SHELF.

Geologischer Führer durch Dalmatien. By Dr. R. Schubert. Pp. xxiv+176. (Berlin: Borntraeger, 1909.) Price 5.60 marks.

THERE are few portions of the map of Europe more attractive to the eye of the geographer and the geologist than the coast of the northern Adriatic. On the one hand we have the coast of deposition, starting from the Apennine foothills north of Pesaro, and more and more emphasised in the swampy flats of Ravenna and Venice, until we reach the jungle-like woods of Monfalcone. Beyond this we come against steeply descending limestone hills, with a "karst" character already manifest. The blue water at Trieste speaks of the coast of subsidence that stretches to the south-east, with chains of islands parallel with the tectonic features of the land.

Dr. Schubert sums up the geological features of Dalmatia in a work intended for the instructed traveller. Cretaceous limestones play a large part in the country, but are concealed over much of the north by fresh-water and marine Eocene strata. The marine limestones of Middle Eocene age are here overlapped by the brackish-water marls and fluviatile conglomerates of the Promina series, which were laid down in Upper Eocene, and possibly finally in Oligocene, times, after a general uplift of the area (p. xvii). The Eocene sea itself had represented a return to marine conditions after a terrestrial and lagoon stage which closed the local Cretaceous system. The folding from north-east to south-west, which has determined the salient features of modern Dalmatia, took place in Oligocene times (p. 173).

While the corresponding depression of the Adriatic may have begun, through the production of faults, soon after the Oligocene period, the sea did not invade the northern part of its present basin until what we may call human times. The Po and its tributaries, dependent on the growth of the Alpine chain, carried detritus across this area, and the sinking that has separated the alluvial Italian region from the rocky shore of Istria began in the Glacial and continued into the Roman epoch. The chains of islands off the Dalmatian coast have thus a very modern origin.

Dr. Schubert guides the traveller on a series of excursions, with useful notes as to the accommodation on the way. He wisely points out that a knowledge of either Italian or Croatian, preferably the latter, is essential for those who go beyond the tourist routes. The price of his compact volume, with its numerous references to other literature, will not seem high, when one considers how long it will be before any large number of visitors will venture far from the comfortable steamers on the coast. The desire for luxury during travel fortunately leaves many European districts, like Dalmatia, free for those who prefer to study and observe at their own leisure.

G. A. J. C.

Entwicklung und Untergang des Kopernikanischen Weltsystems bei den Alten. By O. T. Schulz. Pp. 143. (Stuttgart, Verlag: Neue Weltanschauung, 1909.)

THIS essay is the first of a series entitled "Weltanschauungs-Fragen." It deals with the ideas of the Greeks about the construction of the world, but, notwithstanding the title, the standpoint of the author is that of an historian of geography, and not that of an historian of astronomy. He is evidently quite at home when sketching the gradual rise of geographical knowledge and illustrating it by maps. But when he comes to the astronomical part of his subject he has apparently only Zeller's "Philosophie der Griechen" and Schiaparelli's memoir on the precursors of Copernicus to build on, while Schiaparelli's later paper on the very subject indicated by the title of the present essay, as well as the writings of Tannery, Hultsch, and others, are unknown to him.

The author makes no attempt to point out how Aristarchus may have been led to the idea of the earth's motion round the sun, and tells the reader nothing about the systems of movable excentrics or epicycles. He states that Aristarchus at first believed in the motion of the sun round the earth, and that he says so in his little book on the distances of the sun and moon. But there is not a word in this book as to whether the sun or the earth is in motion. As regards the failure of the heliocentric idea to secure acceptance, the only reason given by the author is that Hipparchus considered it not to be based on sufficiently lengthy observations. We cannot imagine where the author got this piece of information from, as there is no allusion to the system of Aristarchus in the preserved writings of Hipparchus and Ptolemy. What Hipparchus did say was that he did not himself possess sufficient observations to work out the theory of the orbital inequalities of the five planets. But these have nothing to do with the motion of the earth. The author adds that there is no original research in the *Almagest*!

When dealing with the views of Plato, the author repeats the statements current sixty years ago about Plato's doctrine respecting the rotation of the earth and about his change of opinion in his old age as to which body was in the centre of the world. One cannot help wondering whether it really is of any use to try to kill historical errors. They seem to be immortal. At least, popular writers on the history of science are generally not aware that they are dead and buried long ago. J. L. E. D.

Excursionsbuch zum Studium der Vögelstimmen. By Prof. Voigt. Pp. 326. (Leipzig: Quelle und Meyer, n.d.) Price 3 marks.

THIS is the fifth edition of an excellent manual of the songs and other notes of birds, suitable for carrying in the pocket during walks and excursions. As a matter of fact, it is better for the learner to find out for himself