

'Outlines of Proximate Organic Analysis,' and deals mainly with certain common organic compounds of importance in commerce or pharmacy. Many topics which are touched upon in the smaller book—such, for example, as the properties of the alcohols and alcoholic derivatives, and of the carbohydrates—are here passed by, excepting, perhaps, mere incidental mention; but such substances as are discussed at all, are in general treated fully and exactly, with liberal citation and reference to authorities. The alkaloids naturally hold an important place; and schemes for plant-analysis, the examination of coloring-materials, and the separation and identification of fats and oils, are prominent. The title of the book is suggestive of a view broader than that actually presented, but it should be said in this connection that information upon the more important topics omitted is easily accessible elsewhere. This book is a decidedly valuable contribution to the literature of analysis.

Elementary Chemistry. By M. M. PATTISON MUIR and CHARLES SLATER. Cambridge, Eng., University Pr. 12°. \$1.25.

Practical Chemistry. By M. M. PATTISON MUIR and DOUGLAS CARNEGIE. Cambridge, Eng., University Pr. 12°. 80 cents.

THESE two books are complementary, and together outline a progressive course in elementary chemistry.

The 'Practical Chemistry' leads experimentally from the demonstration of the distinction between simple physical and chemical changes up to such topics as the investigation of atomic weights, the phenomena of dissociation, the relative affinities of acids, the constitution of compounds, rates of etherification, and specific volumes; the acquisition of the elements of qualitative and quantitative analysis being assumed as an intermediate and outside incident of the course of work. The 'Elementary Chemistry' presents the essential facts and theories of chemistry, carefully distinguished and correlated in a clear and logical manner, the properties of bodies being discussed in the light of the 'periodic law.' The plan of instruction is in many respects unique and admirable, and reflects very strongly the growing tendency toward the early introduction of methods approximately quantitative.

Down the Islands. By WILLIAM AGNEW PATON. New York, Scribner. 8°. \$4.

THE author, who made a brief voyage to the Caribbees and British Guiana, tells the experiences and observations of his voyage. In an introductory note he confesses that on starting he had no knowledge whatever of the country he was going to visit. If this be true, he has made good use of his brief trip, for the book contains much valuable information; not the less valuable, as told in a very attractive form. In reading the description, it would seem as though the writer gives nothing but the impressions of an observant traveller who is unexpectedly taken to a world entirely new to him; and this makes his tale very charming. His remarks show that he is quick to catch the characteristic features of the country he visits; and his descriptions of the character of the several islands, of the English and French Creole, of the negroes, the 'black and yellow Caribs,' and of the Hindu coolie, are worth reading. Besides, a considerable amount of reliable statistical and historical information is embodied in this book, which gave us greater pleasure and satisfaction than many a pretentious book of travel.

Under the Southern Cross. By M. M. BALLOU. Boston, Ticknor. 12°. \$1.50.

THE author, who has spent much of his time in travelling all over the world, tells in the present volume the story of a journey to the Pacific Ocean. Starting from Boston, he crossed the continent, and began his sea-voyage in San Francisco. A few days were spent on the Hawaiian Islands, a few hours' stay was made at Samoa, and then he proceeded to New Zealand and Australia. The time has passed when scientific results of great import may be gleaned from such a journey; but the author tells in an attractive form his observations and experiences, and gives us a glance of the life of the colonists and natives of the Pacific Ocean so far as he has seen it.

Special attention is devoted to the political relations of the South Sea colonies to America and Europe. The author dwells upon the question of the proposed federation of the Australian colonies and the probability of their becoming an independent republic, upon

American influence in Hawaii and the development of American trade on the islands in consequence of the reciprocity treaty, and upon the late events in the Samoan Islands. Australian stock-raising and mining, and British immigration to these countries, are discussed, as well as the influence of the Chinese and of coolie labor, but the main and best part of the book are the interesting sketches of cities. Several descriptions of scenery are vivid and attractive, but those passages in which the author attempts to touch upon questions of geography or ethnology show that he has only paid a flying visit to the Pacific Ocean, and that he has not lived long enough in those regions to gain a thorough insight of their nature and of their natives.

NOTES AND NEWS.

THE *Railway Review* says that the Russians are pushing forward the Transcaspian Railroad as rapidly as possible. Seven thousand men are now grading the road through Bokhara. It is now ready for the rails for four-fifths of the way between the Oxus and Samarcand, nearly three hundred miles; but the track cannot be laid until the bridge over the Oxus is completed. This bridge, now more than half finished, will be three miles long. It will connect the road now completed to the Oxus with the extension to Samarcand, and next spring the line will probably be in operation.

—It is but a short time since we called attention to Edwards's 'Butterflies of North America,' and now a new part lies before us. Indeed, within a twelvemonth four parts of the new series have appeared, the intervals between them being briefer than has been the case with any preceding numbers in the twenty years it has been running. More species of the prolific genera *Colias* and *Argynnis* are figured, but the specially attractive plate of the number—and there is always one—is that devoted to *Cænonympha californica*, or *galactinus* as Mr. Edwards would prefer to have us call it. The transformations of this genus are now for the first time illustrated by the early stages of one of our American forms; and the number of exquisite figures 'given to these early stages would be deemed almost luxurious if we were not accustomed to this kind of generosity on Mr. Edwards's part. The species is abundant on the Pacific coast, but was first raised in West Virginia from eggs sent the author from California, and we now know its history better than any species of the genus is known in Europe. Two forms, distinguishable by slight differences in the intensity of the markings, have long been regarded as one and the same species; but it was reserved to Mr. Edwards to prove by his precise experiments that the two were seasonally dimorphic forms of one and the same species, the darker giving birth the same summer to the lighter. We wish that this work, so great a credit to American science and American art, were better supported, and not published at so heavy an expense to its indefatigable author. It is in fact superior, both in matter and in execution, to any thing which is done abroad, and ought to receive ample support at home. Yet we chance to know that nearly forty per cent of the regular subscribers to the work come from outside of the United States. This shows, indeed, its appreciation in other countries; but it is a kind of work which should be found in every considerable library of the country, as a stimulus and an aid to workers young and old, and to show what one man, remote from associates, libraries, and even from much of his own field of work, may accomplish therein.

—Gardiner G. Hubbard, C. E. Dutton, O. H. Tittman, J. H. Gore, C. H. Merriam, J. R. Bartlett, R. Birnie, jun., J. W. Powell, Henry Gannett, A. H. Thompson, A. W. Greeley, Henry Mitchell, George Kennan, Marcus Baker, and Gilbert Thompson, all of Washington, have incorporated the National Geographical Society for a term of one hundred years. Its principal objects are to increase and diffuse geographical knowledge, to publish the transactions of the society, to publish a periodical magazine and other works relating to the science of geography, to dispose of such publications by sale or otherwise, and to acquire a library under the restrictions and regulations to be established by its by-laws. The officers elected for the current year are as follows: president, Gardiner G. Hubbard; vice-presidents, H. G. Ogden (United States Coast and Geodetic Survey), Com. J. R. Bartlett (Hydrographic