

last July. The general geology of the area was described with emphasis placed on the Triassic sediments and the typical igneous intrusions of that period. A model showing the peculiar conditions existing about the Bay of Fundy has been made and was explained in detail. The sixty foot tide cuts rapidly into the trap and sandstone frequently forming vertical cliffs, rising in some instances 400 feet from the water's edge. These cliffs are easily eroded and many zeolites are exposed, making collecting a far more simple matter than in most trap localities.

The route as described started at Yarmouth, continued along St. Mary's Bay, up the Annapolis valley to Wolfville, across Minas Basin to Parrsboro which became the base for all north shore localities. Exceptional stilbite and golden calcite were obtained at Partridge Island also fine quality chabazite at Wasson's Bluff. On Two Islands an interesting variety of white gmelinite was found which showed well developed prisms and upper and lower hexagonal pyramids, individual crystals occurring up to  $\frac{3}{4}$  of an inch in length. Pinnacle Island yielded water-clear analcite and natrolite. The gmelinite veins on Pinnacle Rock, in the Five Islands group, were visited and from which Mr. Biernbaum secured a very superior specimen. Recrossing Minas Basin, Blomidon, Scotts Bay and Margaretville were visited, also the gypsum mines at Winsor along with many other less noted localities. The talk was illustrated by a number of colored slides which included a group showing the effects of the unusual tides.

Mr. Cinkowski exhibited several beautiful specimens of calcite and galenite from Joplin, Mo., also a number of geodes from Keokuk, Iowa. Mr. Arndt showed a splendid collection of New England minerals, including datolite from Westfield and garnets from Russell, Massachusetts; also manganite and diaspore. Mr. Oldach, in describing a summer trip in Texas and New Mexico told of seeing an area of some 200,000 acres, located in the Tularosa Valley, southwest of Alamogordo, N. M., covered with gypsum sand and which in certain areas was blown into immense dunes of intense whiteness. In many places throughout this area, shallow excavations would yield large, clear gypsum crystals. He also spoke of finding small gypsum crystals on the dumps at French Creek Mines, Pennsylvania, doubtless resulting from the reaction on limestone, of waters containing sulphuric acid derived from the alteration of iron sulphides. Mr. Biernbaum reported secondary gypsum crystals about the edges of ponds near the old gypsum dumps at Winsor, N. S.

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## BOOK REVIEWS

ELEMENTS OF MINERALOGY. FRANK RUTLEY. REVISED BY H. H. READ. 22nd edition. XXII + 394 pages. Thos. Murby & Co., London; D. Van Nostrand Co., New York. 1929. Price \$2.50.

This well known popular text has recently appeared in its twenty-second edition. The changes that have been introduced are largely of a minor nature. In an attempt to bring the book up-to-date more space has been allotted to the portion dealing with the production and uses of minerals of economic importance.

The use of a number of antiquated cuts, such as the ones illustrating the Jolly balance and the polarizing microscope, detract somewhat from the modern appear-

ance of the book. One finds also that the early conception of hemihedrism is still emphasized, namely, the development of these forms through suppression and expansion of faces of holohedral forms. The definition of a mineral and a rock might likewise be questioned in some quarters as in the former a *definite* chemical composition is made an absolute prerequisite while rocks are defined as mechanical mixtures of minerals.

The portion devoted to the occurrence and uses is, in the main, quite satisfactory although several omissions were noted. Texas is not mentioned as a sulphur producing State and no economic uses are indicated for andalusite.

W. F. H.

DANA'S MANUAL OF MINERALOGY. WILLIAM E. FORD. 14th edition. X+476 pages, 360 figures. John Wiley & Sons, Inc., *New York*. 1929. Price \$4.00.

Compared with the previous edition which was issued sixteen years ago the fourteenth edition follows the same general presentation and arrangement of subject matter. The pagination shows an increase of sixteen pages and a few new cuts have been added. Portions throughout the text have been rewritten and some new material has been added to those sections dealing with crystal structure, paragenesis, uses and occurrence of the minerals. The mineral statistics have likewise been revised.

While modern in many respects, unfortunately, quite a number of slips (and omissions) have been carried over from previous editions. Arsenic and mercury have been omitted from the table recording iodide films (p. 95); potassium is not included in the flame tests (pp. 98 and 99); the rubbed streak of molybdenite is not mentioned, nor the Meigen's test for aragonite; anorthosite is listed under the syenite group; while the weight of a carat is erroneously recorded as 205 instead of 200 milligrams. This new value for the carat was adopted in 1913.

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