

been observed at points two miles apart on the veins. Beyond question these deposits constitute a valuable source of radium. Native silver in wire, leaf and dendritic forms occurs in quartz gangue and in calcite fillings in the sheared greenstone bands.

The Wilberforce radium occurrence, Ontario,³ is described by H. S. Spence and R. K. Carnochan. The rocks in the area consist of crystalline limestone, sedimentary gneiss, amphibolite, gabbro, diorite, gneissic granite, and nepheline syenite and associated alkali-syenite. Uraninite is found in miarolitic cavities in coarse-grained feldspar pegmatite enclosed in gneiss.

Silver.—C. E. Cairnes describes the geology of Lightning Peak camp, Monaskee mountains, at the headwaters of the Granby river, Osoyoos district, British Columbia,¹ as consisting of crystalline limestone and altered volcanics intruded by granite batholiths and soaked with granite material from the batholith. Deposits of galena, sphalerite, pyrite, chalcocopyrite, ruby silver, argentite, and native silver in a quartz calcite gangue are developed along shear zones, in the limestone and volcanics, striking east and west. Numerous quartz veins striking north and south and following along narrow dykes of quartz-porphyrity carry pyrite, galena, sphalerite, chalcocopyrite, grey copper and other high grade silver minerals, and low values in gold.

A comprehensive report is made by T. L. Tanton upon the Fort William-Port Arthur and Thunder Bay area, Thunder Bay district, Ontario.¹ Precambrian schists, sediments, granite, granite gneiss and diabase occupy the area. Silver is the chief economic feature. The known deposits of this metal are exhausted but many veins of silver-bearing type have not been thoroughly explored and it is possible silver concentrations occur in them. Numerous deposits of lead and zinc and some deposits of barite, molybdenum, iron and copper occur in the area.

Geological structure disclosed in the Keeley mine, Ontario,⁵ is the subject of a paper by C. H. Boydell. The geological setting of the property consists of Keewatin basaltic and possibly andesitic flows showing pillow structure in places, intruded by lamprophyre dykes and a diabase sill. These rocks are intersected by faults which became the *loci* of silver-bearing copper-nickel veins with their attendant suite of essentially arsenide minerals and native silver. The author suggests further exploratory work in search of ore at the upper and lower contacts of the diabase. (See radium).

Sodium Sulphate.—A description of the sodium sulphate deposits of Saskatchewan is afforded by J. P. deWet.⁴ Deposits of the salt are quite common throughout the province. A demand for a large tonnage of this mineral comes from the International Nickel Co., Sudbury, Ontario. Here nitre cake is used as a flux in separating copper and nickel.

Tin-Silver.—A tin-silver vein at the Snowflake mine, British Columbia, is described by H. C. Gunning.⁷ Contorted, sheared and altered Precambrian quartzitic argillites and impure calcareous beds are cut by granite and granite gneiss of Mesozoic age. Following the bedding of carbonaceous argillites are a number of quartz veins. In one of these veins, irregularly distributed shoots, bunches, lenses or disseminations of pyrite, sphalerite, galena, stannite, chalcocopyrite, tetrahedrite, ruby silver, scheelite and wolframite are found.