the variations of the elements shown in the different colored stones.

Black crystals of tourmaline are not found well developed at the localities where the gem stones are found, but occur elsewhere in Madagascar, in crystals of much beauty and of very considerable size.

Thanking you for the privilege of presenting this paper on a subject, which properly illustrated with specimens, would prove to be, I think, one of the most stimulating of mineralogic themes, I can only, through the courtesy of the Museum, show some of the very fine specimens we possess.

REVIEWS AND ABSTRACTS

EDGAR T. WHERRY

A NEW edition of Clarke's Data of Geochemistry has appeared as U. S. Geological Survey Bulletin 616. This book contains a most valuable critical summary of our knowledge of the chemistry and the genesis of minerals and rocks.

ÜBER KRYSTALLSTRUKTUR (CRYSTAL STRUCTURE). A. SCHOENFLIES, Frankfurt a. M. *Z. Kryst. Min.* **55,** 4, 321–352, 1916.

A technical, mathematical discussion.

ÜBER DAS TONMINERAL MONTMORILLONIT UND DAS TONERDEPHOSPHAT PLANERIT (THE CLAY MINERAL, MONTMORILLONITE, AND THE ALUMINIUM PHOSPHATE, PLANERITE). HANS LEITMEIER, of Doelter's Mineralogical Institute, University of Vienna. *Z. Kryst. Min.* **55,** 4, 353–371, 1916.

A clay is described which was amorphous and colloidal when found but on standing in the laboratory three years became crystalline. It is believed to be a definite chemical compound of the formula $Al_2Si_4O_{11}+6H_2O$. [The name cimolite has priority over montmorillonite. EDITOR.]

A white to blue aluminium phosphate is described in detail and regarded as the gel (colloid) form of planerite. As found it contains twice as much water as does this mineral, but half of the water is driven off below 100°, and is not included in the formula, which is given as $H_{36}Al_6P_4O_{37}$. The blue color of some

specimens is due to a copper compound, and in order to determine in what form this is present L. placed some of the white mineral on a filter and poured copper-ammonia sulfate solution over it until the filtrate became blue. Analysis then showed that 5.8% CuO had been taken up by the phosphate. He accordingly concludes that the copper in this and other similar minerals is not chemically combined, in any definite compound, but is held by adsorption [the phenomenon shown by colloidal substances of uniting with other substances by surface attraction instead of chemical affinity]. Planerite is regarded as identical with ceruleolactite. [This identity may be questioned, as ceruleolactite from Gen. Trimble's iron mine, Chester County, Pa., is distinct from planerite in its optical and many other properties. Further it must be pointed out that water which escapes from a mineral, and especially from a colloid one, below 100°, is not necessarily different from that held to a higher temperature; much depends on the state of division of the material, the dryness of the air when the analysis is made, etc. If all the water is included, L.'s mineral is identical with vashegyite, which was described by Zimanyi in 1909 and has recently been reported from an American locality (Abstr. in *Am. Min.* **1,** 1, 18, 1916). EDITOR.]

ÜBER DAS VORKOMMEN DER BASISFLÄCHE AM QUARZ (THE OCCURRENCE OF THE BASAL PLANE ON QUARTZ). H. STEINMETZ, of Munich. *Z. Kryst. Min.* **55,** 4, 376–377, 1916.

The three previously reported occurrences of this face are noted, and a new one from the Simplon Tunnel described. The face is very poor, and its identity could be determined only by study on the reflecting goniometer.

THE LOZENGE-SHAPED CAVITIES IN THE FIRST WATCHUNG MOUNTAIN ZEOLITE DEPOSITS. EDGAR T. WHERRY, of the U. S. National Museum. *J. Wash. Acad. Sci.* **6,** 7, 181–184, 1916.

It is shown that the crystallographic, geologic and genetic evidences all agree in indicating the original mineral of these familiar objects to have been glauberite, $Na_2Ca(SO_4)_2$.