

angles to them all. If we can make out the pinacoids, we may be able to place a crystal in the conventional position by putting one of the first pair toward us, one of the second pair to the right and one of the third above.

If we take a corner where three edges meet, these three edges may be taken as the three axes. If extended beyond the corner and moved to the center without changing their direction they would be our typical axes.

The cube, with two other forms to be described and four more are classed as belonging to the Cubic or Isometric System of crystals. They are characterized by three axes at right angles and of equal length.

(To be continued.)

BOOK REVIEW

DIAMONDS; A STUDY OF THE FACTORS THAT GOVERN THEIR VALUE. FRANK B. WADE, of Shortridge High School, Indianapolis, Ind. G. P. Putnam's Sons, *New York*, 1916.

This little book of 150 pages is intended to furnish information to both dealer and purchaser of diamonds, as to the features of diamonds which are of influence on their market value. Chapter I is on color (spelt thruout colour), II on flaws, III on cutting or "make," IV on repairing and recutting, V on mounting, and VI on "Buying the engagement ring." The advice it contains is in every way excellent, and the presentation of the subject is so clear and so enlivened by specific cases illustrating the several points made that the book will make interesting reading to anyone even tho they do not plan to take up diamond-collecting as a hobby.

E. T. W.

NOTES AND NEWS

The collection of minerals at the Boston Society of Natural History has recently been rearranged and is now exhibited under modern conditions. The collection has been divided into two parts, one of which is entirely made up of New England minerals, the other a general collection from all over the world.

Eventually it is planned to keep only New England material with a small general synoptic collection, thus conforming to the policy adopted in other departments of the Museum.

The specimens are all exhibited on plate glass shelves without individual mounts. This method has been found to give the maximum light, and to prevent shadows; it has the additional advantage of being colorless and hence does not detract in any way from the color of the specimens.

Although the collection is very strong in New England minerals, especially those from the older localities, its curator desires to obtain specimens which will improve the present ones, and any from new or recent localities that are not as yet in the collection. For this purpose the Society is willing to exchange some of the specimens from outside of New England for particularly fine New England minerals.

EDWARD WIGGLESWORTH, *Curator*,
234 Berkeley St., Boston, Mass.

In October, 1914, the undersigned visited the locality on North Table Mountain, Colorado, described by Mr. Wilson in the March number of this magazine. Ascending to the quarry without confining myself strictly to the winding road, I found, about two thirds of the way up, a block of agatized wood about $2\frac{1}{2}$ feet in diameter, projecting from the talus. In the quarry analcite, chabazite, and other zeolites, but no mesolite, were obtained.

GEORGE E. ASHBY, *Vice-President*,
N. Y. Mineralogical Club.

My classes this fall in visiting the Winter Hill slate quarries at Somerville, Mass., found some unusually fine specimens of gypsum; the pyrite cubes $\frac{1}{2}$ inch on edge of those quarries are well known, and Professor Palache has described minerals from the calcite veins. When the pyrite decomposes the sulfuric acid generated seems to attack the calcite and we have on the seams, associated with limonite, a beautiful frosting of thin gypsum crystals, the individual crystals being at times nearly an inch long and over one fourth of an inch wide.

We also generally get orthite (allanite) in the pegmatites which intrude into the diorites at the Blueberry Mt. and Fessenden Road quarries of Arlington. This year I saw a lump nearly one inch across.

I have recently got from an old collection more native silver from Batopilas than I really need for my own work, and would be glad to exchange some of it.

ALFRED C. LANE,
Tufts College, Massachusetts.

SHAFTS IN GALENA-JOPLIN DISTRICT LURE COLLECTORS

The collector of minerals finds ardent dreams come true when he arrives in the Galena-Joplin district of southeastern Kansas and the adjacent parts of Missouri and Oklahoma.

In mines in the Joplin and Granby districts in Missouri and the Galena district in Kansas about forty-five different minerals have been discovered.

The mineralogically inclined visitor has little difficulty in gaining access to these mines and usually receives the best of attention from the superintendents, and is allowed to collect all the specimens he desires.

Many beautiful crystalline aggregates with two, three and even four different minerals in association can still be obtained from some of the older mines, and some of the newly opened mines near Baxter Springs, Kan., and Picher, Okla., furnish especially fine specimens of zinc ore, including parallel intergrowths of chalcopyrite and sphalerite, and galena incrustated with marcasite, etc.

The department of mineralogy at the University of Kansas has obtained many specimens of these minerals and is glad to exchange them with collectors and other universities, for minerals from other districts.—*The University Daily Kansan*, Monday, March 5, 1917.

PROCEEDINGS OF SOCIETIES

THE NEW YORK MINERALOGICAL CLUB

The regular monthly meeting of the Club for March, 1917, was held on Wednesday, the 14th inst., at the American Museum of Natural History, N. Y., at 8 P. M., with President James G. Manchester in the chair and an attendance of thirty members and nine visitors.

Mr. Otto F. Pfordte exhibited a fine series of specimens of minerals from Cobalt and Sudbury, Canada which had been intended to illustrate his paper presented at the preceding meeting but had failed to arrive in time.

The remainder of the evening was devoted to the announced address by Dr. Edgar T. Wherry of the National Museum, Washington, D. C., on "Crystal Structure."

Dr. Wherry's paper consisted of a historical sketch and detailed review of the revelations resulting originally from the suggestion by Dr. Laue of Zurich, of employing a crystal as a "space diffraction grating" for X-rays, the success-

ful realization of the idea by Messrs. Friedrich and Knipping in 1912, and its subsequent more elaborate and effective development by Messrs. W. H. and W. L. Bragg, whereby great progress has been attained on the one hand in our knowledge of the nature of X-rays, and on the other of the architecture of crystals, or the disposition within them of the various elementary atoms of which they are constructed.

Dr. Wherry's review was illustrated with blackboard formulas, adjustable models of the atomic structure of crystals, and a series of lantern slides showing the X-Ray Spectrometer and the evidence it has afforded of crystal structure by both the photographic and ionization methods, taken largely from the recent treatise on the subject by W. H. and W. L. Bragg.

At the close of the discussion which followed, Dr. Wherry gave an account of the present status and aims of the American Mineralogist which elicited the enthusiastic approval of many of those present.

WALLACE GOULD LEVISON, *Secretary*.

THE PHILADELPHIA MINERALOGICAL SOCIETY

Wagner Free Institute of Science, March 8, 1917.

A joint meeting of the Philadelphia Mineralogical Society and the Wagner Institute Society of Chemistry and Physics was held on the above date with President Trudell in the chair, 16 members and 30 visitors being present.

Dr. Edgar T. Wherry presented a lecture on "Crystal Structure." The earlier views of the structure of substances were presented introductory to the present theories as developed by the study of crystals with the X-ray spectrometer. The lecture was illustrated with lantern slides, space models and motion pictures.

Dr. Herman Burgin, Philadelphia, and Mr. Morton L. Jandorf of York, Pa. were nominated for active membership.

FIELD TRIPS

SATURDAY, MAY 19. Trip to Frankford localities. Meet at Frankford Ave. and Church Street at 1.45 P. M.

WEDNESDAY (MEMORIAL DAY) MAY 30. Unionville, Beryl Hill, and the Poor House Quarry. Meet at 69th St. Terminal at 7.15 A. M.

SATURDAY, JUNE 9. West Philadelphia localities. Meet at Broad St. Station, Subway entrance, at 1.45 P. M.

SAMUEL G. GORDON, *Secretary*.

THE MINERALOGICAL SOCIETY OF GREAT BRITAIN

London, January 16, 1917. Mr. W. BARLOW, president, in the chair.

A. HOLMES AND DR. H. F. HARWOOD: *The basalts of Iceland, Faroe Islands, and Jan Mayen*. PROF. H. HILTON: *The use of orthographic projection in crystallography*. J. V. SAMOJLOFF: *Paleophysiology, the organic origin of some minerals occurring in sedimentary rocks*. E. S. SIMPSON: *Tapiolite in the Pilbara Goldfield, Western Australia*. The mineral, which was discovered at Tabba-Tabba Creek and Green's Well, lying in a large area of granite intersected by pegmatite veins and greenstone dikes and bosses, occurs in fairly well defined crystals, which analysis proved to contain little niobium (columbium). At the first locality the crystals displayed the forms 100, 001, 111, 101, 320, and were twinned as usual on 101, and often distorted; while at the second they displayed the forms 100, 111, 101, 320, and showed twinning about 106 and 301, as well as 101. A curve was prepared showing the specific gravity obtaining in the tetragonal isomorphous series of metatantalates and metacolumbates of iron, manganese and calcium.—*Nature*, 98, 423, 1917.

NEW MINERALS

Magnesioludwigite

B. S. BUTLER AND W. T. SCHALLER, of the U. S. Geological Survey: *Magnesioludwigite, a new mineral*. *J. Wash. Acad. Sci.*, 7, (2), 29-31, 1917.

Ludwigite occurs in the Big and Little Cottonwood districts, Utah, as a replacement of limestone at or near the contact with intrusive rocks, associated with magnetite, forsterite, garnet, diopside, muscovite, and sulfides of