Dr. Lea McIlvaine Luquer, tutor and associate professor of mineralogy at Columbia University from 1887 to 1925, died on January 30, at the age of sixty-four years.

The next meeting of the Geological and Mineralogical Societies will be held in Toronto, Ontario, December 29–31, 1930.

PROCEEDINGS OF SOCIETIES

PHILADELPHIA MINERALOGICAL SOCIETY

Academy of Natural Sciences, Philadelphia, Jan. 9, 1930.

A stated meeting of the Philadelphia Mineralogical Society was held on the above date, President Toothaker in the chair. Upon favorable recommendation of the Council, the following were elected as senior members: Messrs. H. E. McNelly, A. E. Mason and Norman Booker.

Dr. William F. Foshag, of the United States National Museum, addressed the Society on "*The Mineralogy of Some Ancient and Modern Saline Lakes.*" Introductory to his remarks on the various mineral localities in the Mojave Desert, Dr. Foshag described the various aspects of arid regions in general with particular emphasis on "playas," moist and dry, together with the minerals formed with varying conditions. Particular attention was called to Rhoads Marsh, Teels Marsh, Columbus Marsh and Fish Lake, Nevada, in which were found an abundance of thenardite, glauberite and "cotton-ball" ulexite; also reference was made to Searles Lake, California, which produces hanksite, blödite, gay-lussite, sulphohalite and quantities of octahedral halite. Among the Tertiary playas, were described the extensive borax deposits in San Bernardino County, California, especially those located at the junction of Furnace Creek and Death Valley, and the very extensive individual deposits of ulexite at Mount Blanco. Kramer, the type locality for proberite and kernite, the recently described borate minerals, was treated at some length.

Dr. Foshag related his various experiences collecting in these interesting localities and exhibited numerous attractive specimens which he obtained. His talk which was illustrated with many excellent lantern slides was very enthusiastically received.

Several members showed additional finds of attractive quartz crystals found by them at Bridgeport. The meeting adjourned with an attendance of 55.

LESTER W. STROCK, *Secretary*

MINERALOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND

MINERALOGICAL SOCIETY, January 14. Dr. G. T. Prior in the chair.

The following papers were read by DR. L. J. SPENCER: SIR DOUGLAS MAWSON: *On the occurrence of potassium nitrate near Goyder's Pass, McDonnell Ranges, Central Australia.* The nitre occurs as encrustations on the walls and impregnations in the wall-rock in small caves in dolomitic limestone. The roof of the caves consists of a case-hardened crust formed by superficial silicification and ferruginization of the limestone; and it is this impervious crust that has enabled the nitrates, probably of animal origin, to be preserved. Mention is made of some other occurrences of mineral nitrates in Australia. DR. LOUIS T. NEL: *A new occurrence of zunyite near*

Postmasburg, South Africa. The mineral zunyite, previously known only from Colorado, has been found in some abundance in altered, highly aluminous shales and flagstones in the vicinity of the deposits of manganese ore of the Postmasburg District in Cape Province. Minute perfectly developed tetrahedra are aggregated in clusters or are disseminated through the rock, which contains also diaspore kaolin, and leverrierite. Most of the tetrahedra are simple, but a few are interpenetration twins with a triad axis as twin-axis. Analyses agree with the formula $Al_8(OH,F,Cl)_{12}(SiO_4)_3$.

MR. F. N. ASHCROFT exhibited minerals from Broken Hill, Rhodesia and from other localities, and MR. W. CAMPBELL SMITH exhibited specimens and photomicrographs of volcanic rocks from Kenya Colony.

W. CAMPBELL SMITH, *General Secretary.*

BOOK REVIEWS

ELEMENTS OF MINERALOGY. PART III. DETERMINATIVE TABLES. With colored chart and two diagrams in pocket on cover. Entirely rewritten and enlarged. ALEXANDER N. WINCHELL. Second edition. XII+204 pages. John Wiley & Sons, Inc., *New York.* 1929. Price $4.50.

This is the third part, or volume, of a series pertaining to *Elements of Mineralogy.* Part I deals with principles and methods; Part II contains descriptions of minerals with special reference to their optic and microscopic characters; and Part III summarizes the data recorded in Part II with minor additions so as to include new data that have appeared since Part II was published.

Five determinative tables comprise Part III. Table 1 deals with the common minerals that are opaque in thin sections. Minerals which are subtranslucent to opaque are inserted in more than one table. Table II is based on birefringence primarily, with refringence as a contributing factor in determining 56 smaller groups of minerals. These groups are limited by the following values of N: $N<1.48$; $N>1.48<1.54$; $N>1.53<1.59$; $N>1.59<1.66$; $N>1.66<1.74$; $N>1.74<2.00$; $N>2.00$. If a mineral has a lower index than balsam its relief may be characterized as negative, if higher, positive.

Color and pleochroism form the basis of the classification of the minerals into 26 subdivisions in Table III. While the first three tables are intended for identification of minerals in thin sections, the fourth and fifth tables are designed essentially for use with powders and immersion liquids.

Tables 4 and 5 are based upon refringence and dispersion, respectively. The dispersion indicated is the difference between the index in light of 4861 Å wave length (=F, the Frauenhofer line or the β line of hydrogen), and the index in light of 6563 Å wave length (=C, the Frauenhofer line or the α line of hydrogen). In the tables this difference is expressed as F-C. Three useful charts accompany the tables, and four different styles of type are used to distinguish between the very common, common, less common and rare minerals.

The author is to be congratulated in completing this series of three books on the Elements of Optical Mineralogy. As the minerals listed and described are not confined to the rock-forming types but include practically all non-opaque minerals whose optical properties are known, the tables should prove extremely useful to all who employ the polarizing microscope and optical methods for purposes of mineral identification.

W. F. H.