

PROCEEDINGS OF SOCIETIES

PHILADELPHIA MINERALOGICAL SOCIETY

Academy of Natural Sciences of Philadelphia, May 7, 1931

A stated meeting of the Philadelphia Mineralogical Society was held on the above date, Mr. Biernbaum presiding. There were 53 persons in attendance including 40 members. Mr. Cienkowski outlined the chief features of the Junior mineralogical exhibit to be held at the Northeast High School on the evening of May 20.

Mr. Frank Hartman addressed the Society on *Radium and Radium Products*. Introductory to an unusual exhibition of radioactive material, Mr. Hartman paid high tribute to the Fluorescence Exhibit placed in the mineral hall of the Academy by Mr. Gordon. "No other such exhibit compares with this one anywhere in the world." Various paintings which had been painted with activated zinc sulfide and other fluorescent materials were exposed for a few seconds to a lamp, then displayed in the darkened room, which produced a striking example of fluorescence.

The ordinary manifestations of radioactivity were demonstrated with an electrometer and spinthariscopes. The differences between alpha, beta, and gamma rays were pointed out. Many practical points concerning the handling of radium and the various uses of radium products were described.

Mr. Cienkowski reported on a trip taken with four junior members to the following localities: Easton, Pa.; Little Falls, Diamond Hill, and Bedford, N. Y.; and Paterson, N. J. Mr. Vanartsdalen reported epidote in quartz and silicified wood in a quarry at Holland Station. Mr. Peterson reported a large beryl crystal from Blue Hill, Pa.

After a vote of thanks to Mr. Hartman for his talk and numerous demonstrations, the meeting adjourned.

LESTER W. STROCK, *Secretary*

MINERALOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND

MINERALOGICAL SOCIETY, *March 17*.—SIR JOHN S. FLETT, President, in the chair. — MR. A. J. P. MARTIN: *On a new method of detecting pyro-electricity*. On changing the temperature of certain crystals electric poles of opposite sign are developed at the two ends. In these experiments the temperature change is produced by cooling in liquid air and the electric charge is detected in the following way. The crystal is suspended by a long thin glass fibre near to the copper plate which may be moved near to or away from the crystal, both of them being immersed in the liquid air. The charge on the crystal induces an equal and opposite charge on the plate and the attraction between the two causes the crystal to move nearer the plate. This method is specially suited to very small crystals or to those which are decomposed on heating.

DR. D. R. GRANTHAM and MR. FRANK OATES: *On the Mbozi meteoric iron, Tanganyika Territory*. A wedge-shaped mass of meteoric iron measuring $10 \times 4 \times 3$ feet and estimated to weigh 12 to 15 tons was found late in 1930 near Mbozi between Lakes Tanganyika and Nyasa. It is a medium octahedral containing 8.69 per cent of nickel.

MR. S. R. NOCKOLDS: *On the Dhoon (Isle of Man) granite: a study of contamination.* The Dhoon granite forms a small boss-like mass intruded into the Lonan Flags. Two main types are present, one of which is slightly earlier in date than the other. The difference between the two types is mainly textural. The main type may be termed biotite-granodiorite-porphry whilst the other is a biotite-granodiorite. Both types are abnormal in that the biotite occurs in clots and in association with zoisite, ilmenite (usually with a border of granular sphene), sphene itself and, more rarely, epidote, clinozoisite and garnet. These clots represent the last remnants of a regionally metamorphosed basic igneous rock which has been absorbed by the original granitic magma. The theoretical aspects of this contamination are discussed and it is finally concluded that the original magma was of alkali-granite type and similar to the quartz porphyry dikes which are associated with the mass. All the evidence points to an extensive interchange of oxides between the original magma and the basic igneous rock. Further it is shown that the peculiar albitization of the feldspars in the "granite" of both types, is indirectly dependent on the contamination.

MR. A. G. MACGREGOR: *On clouded feldspars as a result of thermal metamorphism.* A special type of cloudiness in plagioclase due to the development of minute inclusions is shown to be the result of contact thermal metamorphism acting after consolidation of the igneous rock. The effects have been observed in various contact metamorphosed lavas in Scotland. Similar cloudiness is observed in the Scourie Dyke, the 'hyperites' of Sweden, malchite of Melibocus, and many other rocks. The possibility of similar clouding being produced as a deuteric effect at a late stage in consolidation is considered.

MR. C. N. FENNER: *On the residual liquids of crystallizing magmas.* Discussion of the character of the residues left by the crystallization of magmas, and consideration of articles by F. Walker, Daly and Barth, Bowen, Schairer and Willems in which some criticism has been offered of the present author's paper on 'The Crystallization of Basalts.' In conclusion a short summary is given of outstanding points of evidence that should be taken into consideration in forming an opinion on the broad problems of differentiation.