

## HOW TO ETCH METEORITES

## THE EDITORS

THE surface to be investigated is first ground flat and smooth; the larger the surface the greater will be the opportunity afforded to study the details of its structure. The Foote Mineral Company's method of etching is as follows:<sup>1</sup>

1. Wash the specimen with benzine.
2. Lacquer the unpolished back and edges with a lacquer known as "steel gloss" diluting to about one-half with benzine. When this side is dry, carefully remove with benzine any lacquer which may have run over the edges onto the polished surface. An electric fan hastens the drying of the lacquer.
3. Lacquer any nodules. They should be completely covered, as they are readily attacked by the acid, and will stain the etched surface.
4. Place the iron so that the polished surface is horizontal. Wash with 5 to 15 per cent solution of C. P. nitric acid for from 15 seconds to 4 or 5 minutes, until the etching is brilliant. If etched much longer, the iron will darken. When the surface begins to get rough, the maximum brilliancy has been reached. The acid should be kept as thick and as even as possible by rubbing the plate with a large brush. As the acid becomes discolored, it should be brushed off and clean acid added.
5. To clean and facilitate rapid drying, quickly put the section into clean warm water (120° to 130° F.) for several minutes, rubbing with a brush.
6. Dry in a few seconds with blotting paper.
7. Thickly lacquer the etched surface at once. To avoid oxidizing, the operations from 4 to 7 should be accomplished as quickly as is practicable, by having all the materials at hand.

## PROCEEDINGS OF SOCIETIES

## NEW YORK MINERALOGICAL CLUB

The regular meeting of the Club, held at the American Museum of Natural History of New York on January 10th, 1917, President J. G. Manchester presiding, was devoted to exhibits of specimens of zeolites and associated minerals of special interest, chiefly from the private collections of, and with explanatory descriptions by, the exhibitors, as follows:

<sup>1</sup> From "Meteorites, Their Structure, Composition, and Terrestrial Relations," Oliver C. Farrington; Chicago, 1915.

Messrs. G. S. Stanton, William H. Broadwell (Secretary of the Newark Mineralogical Society), G. L. Van Dusen, Charles W. Hoadley, Ex-President George E. Ashby, President James G. Manchester, and the Secretary. Each presented selections of specimens from numerous celebrated localities, but chiefly from those of New Jersey.

Dr. L. P. Gratacap (the Curator of the Museum and the Club collection), represented by Mr. G. S. Stanton, exhibited a selection of Iceland and Faroe Island zeolites from the Bement and Spang Collections of the Museum of Natural History, accompanied by an account of their mode of occurrence and of the geology of the Faroe Islands [abstracted from Dr. J. Curries' paper in the *Trans. Edinburgh Geol. Soc.* 9, 1].

Dr. Gratacap also had exhibited a specimen showing numerous large and very perfect feldspar crystals on a flat granite matrix, which had intruded into cloudy quartz, that came away with its molds of the crystals, leaving them intact. The crystals are 2-5 inches in dimensions, and the group about 15 by 12 inches across. The specimen, which came from a quarry at Mystic, Conn., was presented to the museum by Mr. George S. Scott.

Mr. R. Broadbent, a visitor from Australia, was then introduced, and gave a very interesting account of the present condition of the Broken Hill mines, New South Wales.

In conclusion the Secretary presented a series of lantern slides, photographs, and photomicrographs, made by himself from specimens of zeolites too fragile to transport, or showing features of special interest.

WALLACE GOULD LEVISON, *Secretary.*

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#### THE PHILADELPHIA MINERALOGICAL SOCIETY

Wagner Free Institute of Science, January 11, 1917

PRESIDENT Trudell in the chair. Those present were Messrs. Allen, Bengé, Biernbaum, Bradford, Egee, Flack, Gordon, Hagey, Jones, Knabe, Leffmann, Trudell, Vanartsdalen and Warford.

The subject of the evening was an exhibition of minerals from the Phoenixville, Perkiomen and Falls of French Creek Mines, many fine specimens being exhibited by Messrs. Bengé, Biernbaum, Gordon, Egee and Trudell, with brief oral communications. Mr. Biernbaum also exhibited hematite from Lake Superior.

Dr. Leffmann proposed that the ruling requiring proposed members to have attended two meetings before election be abrogated.

Mr. Gushing was proposed by Mr. Bengé for membership and elected.

Messrs. Bengé and Trudell told of a recent reunion of two of the founders of the society, Mr. Henry G. Ives and Mr. James Richardson, at Mr. Bengé's house.

The council proposed a series of 18 excursions for 1917; these will be duly announced in this column.

SUNDAY, MARCH 25; meet at Market St. Ferry, 7.45 A. M., for trip to Mullica Hill, N. J.

SAMUEL G. GORDON, *Secretary.*