the results shown in column 1 of the following table while in column 2 is listed the analysis by Delesse and in column 3 the theoretical composition of heulandite according to Dana.

	1. Beaumontite, (Shannon)	2. Beaumontite, (Delesse)	3. Heulandite, (Theory)
SiO_2	56.73	64.20	59.20
Al_2O_3	16.96	14.10	16.80
Fe_2O_3	2.05	1.30	——
CaO	4.31	4.80	9.20
BaO	0.61	——	——
MgO	1.08	1.70	——
Na_2O	0.16	0.50	——
K_2O	3.28	——	——
$H_2O+110°C.$	12.13	13.40	14.80
$H_2O-110°C.$	3.60		
Total	100.91	100.00	100.00

The composition is essentially that of a heulandite in which potash enters to a notable extent.

From the foregoing optical, crystallographic, and chemical evidence, the conclusion of Dana and others that beaumontite is not a distinct mineral but merely a variety of heulandite is abundantly sustained.

FLUORITE FROM ROCHESTER, NEW YORK

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The Lockport dolomite (Niagara limestone), which underlies Rochester, New York, is at this locality some 170 feet in thickness, and its upper part, known as the Guelph limestone member, was originally composed of coral heads and fragments in a matrix of calcareous mud. The formation is now thoroughly solidified into a firm rock, and the larger coral heads, whose cellular structure has largely broken down, afford circular cavities, often several inches in diameter, in which crystallized minerals have developed. These minerals have already been quite thoroughly listed and described,[1] and it is the aim of the present writer merely to present a few

[1] Giles, Albert W.; Minerals in the Niagara Limestone of Western New York, *Proc. Rochester Acad. Sci.*, **6**, 57-72, (1920). Whitlock, H. P.; New York Mineral Localities, *New York State Museum Bulletin* **70**, 1903.

additional supplementary notes on fluorite from this locality, chiefly from the crystallographic viewpoint.

Specimens of crystallized selenite, calcite, and dolomite, obtained from the Lockport dolomite strata in the old Erie canal excavation at Lockport, New York, many years ago, are now found in many of our best mineral collections. Fluorite however appears to have been seldom found there, and only in simple purple cubes. Fluorite is a far more common mineral at Rochester, where small crystals may readily be observed in the Guelph strata, especially where the latter have been more recently excavated, as along the new barge canal.

The fluorite crystals of Rochester are usually small cubes, probably never exceeding four or five cm. in diameter, with a color ranging from a deep, rich purple through light purple and blue tints to colorless; also, an extremely rare type with a bright green color and octahedral habit of crystallization has been found. A yellowish color is seen in some specimens, often caused by the presence of petroleum residues. A single crystal of fluorite usually represents all of the mineral in a cavity. It is notable that the majority of the purple cubes occur in association with rhombs of white dolomite and yellow scalenohedrons of calcite, the whole often encased in a fine quality cleavable selenite, which fills the balance of the cavity. The colorless, transparent cubes, on the other hand, have been most often found in cavities whose walls are lined with tiny drusy quartz crystals alone.

Detailed examination with the unaided eye and the hand lens at once demonstrates that the solid angles of the fresh, unweathered fluorite cubes are in very many cases modified, and often highly so. The modifying faces are small and bright, and sometimes occur in combinations of several forms on a single crystal. Study of a great many selected crystals has given the list of forms enumerated below, from which all doubtful and vicinal forms have been eliminated. The forms so far identified are as follows: *c* (001) common; *a* (013) uncommon, the usual tetrahexahedron, where one is present; **E* (023) rare; *e* (012) uncommon; *d* (011) rare, most often produced by etching; *m* (113) common, present on many crystals, alone and in combinations; *p* (111) uncommon; Γ (3.14.20) uncommon; Ξ (137) common, often relatively prominent and bright; *T* (2.6.15) uncommon; also a persistent vicinal tetrahexahedron at about 1° from *c* (001).

* New form.

The following measurements serve to identify the new form:

	Measured		Calculated	
(230)	33° 30′	90° 22′	33° 41′	90° 00′

Cleavage is perfect octahedral; twinning, on (111), is rare. Numerous examples among these fluorite crystals contain slender, blade-like negative crystal cavities, evidently an orthorhombic combination of pinacoids terminated by the base or a dome. These may have been celestite crystals. In one case a small amount of liquid or dried petroleum residue, with curved meniscus, can be seen within the negative crystal cavity. One group of small crystals show *a* (013) and *c* (001) in equal development. Microscopic examination shows that these crystals are filled with tiny cavities containing hydrocarbons, perhaps liquid; this may account for the large development of the tetrahexahedron.

Gypsum is readily removed by weathering from any exposed cavities, as cleavages of the selenite become beautifully etched when exposed to the weather during ordinary wet periods for two or three weeks. The fluorite crystals also are slowly dissolved, and those which have been exposed for a period of five years or more are found to be covered with etch figures in the form of tiny octahedral pits whose axes are parallel to the principal elements of the crystal; and additional rough faces, usually those of the dodecahedron, are formed by this etching.

PROCEEDINGS OF SOCIETIES

NEW YORK MINERALOGICAL CLUB

Regular Monthly Meeting of October 8, 1924

A regular monthly meeting of the New York Mineralogical Club was held in the East Assembly Room of the American Museum of Natural History on the evening of October 8th, at 8:15 P.M. In the temporary absence of the president and vice-president, the corresponding secretary, Mr. Roy M. Allen, occupied the chair. There was an attendance of 21 members.

The following names were submitted to the committee on membership: Mr. G. Arthur Cooper, Flushing, N. Y., and Mr. R. Norris Shreve, 50 East 41st Street, New York. The committee on the Scott Memorial resolution reported progress. The recording secretary, speaking for the committee on the Gratacap Memorial Tablet, reported the matter in the hands of the president. The treasurer, reporting on the finances of the Gratacap Tablet, stated that there was on hand a sum of $202.00 toward the cost of the tablet, and that $70.00 further was promised. He suggested that a Memorial Meeting of the Club be arranged at the time of the