

Trip A-7

THE POWERS FARM UVITE LOCALITY: A DAY IN THE FIELD AT THIS CLASSIC MINERAL OCCURRENCE

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Once named pierrepontite (discredited name) the tourmalines from the Powers Farm occurrence in Pierrepont, New York can be found in private collections and museums world-wide. Amazingly this site can still be accessed by collectors looking for well crystallized uvites and other minerals.

INTRODUCTION

Introduced to the mineral collecting world of the 1800's as pierrepontite, the tourmaline crystals from the Bower Power's Farm, Pierrepont, St. Lawrence County, New York, USA, have achieved world-wide notoriety. Dana (1877) notes the occurrence of these unusual tourmaline specimens while Kunz (1892) describes the locality in his text Precious Stones of North America. To this day Pierrepont tourmalines are still noted and photographed in current editions (now in its 22nd edition) of the Manual of Mineral Science (Klein, 2002). Specimens of this aluminum-poor uvitic dravite (Dalton, 2003) and its accessory minerals can be found in many of the world's top museums and private collections. Though universally recognized as a classic tourmaline locale, the name of this mineral has been intensely debated. Based on recent chemical and x-ray analysis, the author believes the proper species name for this so called uvite may actually be in question. Henceforth, this tourmaline will be referred to as uvite, as it has been locally for many decades.

This field trip description will attempt to present an overview of what many have considered to be one of the world's classic tourmaline localities. Due to extensive coverage of the area's bedrock by Pleistocene glacial deposits, many aspects of the site's geology will remain speculative. Its minerals, however, are available for study and documentation, and the site remains open to collectors at the time of this writing.

DIRECTIONS

From Potsdam travel south on Rt. # 56 for approximately six miles to the intersection with the Brown's Bridge Road, also known as Country Road 24. Turn right onto County Road 24 and travel an additional 6 miles to the intersection with Post Road. Turn right onto this dirt lane and travel approximately one mile to where you will see a large garage/barn on your left. Continue straight into the woods along this jeep trail for one quarter of a mile until you reach Leonard Brook where the bridge is out. This is the parking area.

To reach the primary dig site, follow the foot path that travels north parallel to the stream for about one quarter mile. The site is in a wooded area on a small rise on the eastern side of the stream. Don't forget that this is private property and that the owner charges 5 dollars per person, per day to collect mineral specimens on his land. Arrangements to collect here should be made in advance or by contacting Bower Power, Jr. who lives in the first farm house on your left as you travel down Power's Road just north of Pierrepont.

GPS Readings are:

Power's House 044 deg. 33' 5.40" N. Lat. by 075 deg. 01' 28.53" W. Long.
DuFoe's Dig Site 044 deg. 33' 23.28" N. Lat. by 075 deg. 01' 20.56" W. Long; 624' elevation
Parking Area 044 deg. 33' 16.08" N. Lat. by 075 deg. 01' 12.96" W. Long; 612' elevation
Historic Dig Site 044 deg. 33' 23.03" N. Lat. by 075 deg. 01' 14.16" W. Long; 621' elevation
Hillside Dig Site 044 deg. 33' 16.70" N. Lat. by 075 deg. 01' 03.98" W. Long; 624' elevation

A BRIEF HISTORY

An early mineral enthusiast of the area, Reverend Roselle Theodore Cross, of Richville had this to say regarding the Powers site:

"My Father took me with him once to a religious meeting twenty-five miles from home, up on the hills of Pierrepont. At the farmer's house where we stopped I saw a shining black crystal of tourmaline. In reply to my enquiry as to where it came from they said it was found in abundance near an old saw mill about a half a mile distant. The next morning they took us to the place. I dug the black brilliants for a half hour or so and then a thunderstorm drove us away. I remembered the place for years and often wished that I could revisit. I gave some to a farmer in a distant part of the county. Mr. Nims saw them and followed up the clue until he found the locality, and from that place also he sold wagon loads of tourmaline crystals. It had been a famous locality, for no blacker, or more brilliant, or more sharply cut crystals of tourmaline are found in this world." (Cross, 1903)

In the mid 1970's this site saw an increase in collecting activity due to its notation in an unpublished, yet widely available mineral collecting book by Robinson and Alverson titled, Minerals of the St. Lawrence Valley. Power's Farm appears as the first site described in this manuscript.

Extensive collecting has occurred at Power's Farm over the past 50 years. Tailings left by previous collectors can reach depths of ten feet or more. Thankfully, the occurrences of minerals on this property are widespread. Though it is unlikely in the present day to find "wagon loads" of crystals, there are good specimens to be had. Recent history has shown that every ten to fifteen years someone makes a major find at the site. This is usually the result of more than a single days work, however.

GEOLOGY

The geology at this location goes beyond complex to downright stupefying. To further confuse matters, much of the area bedrock is covered by overlying glacial till which sometimes reaches depths of 20 feet or more.

The area is obviously a complex metamorphic puzzle. Overly simplified, it appears to be a contact between regional Grenville aged marbles and Precambrian schists of mixed mineralogical nature. These schists vary in their mineral content, with most having large amounts of tourmaline, quartz and biotite.

MINERALS

Allanite: $(Ca,Ce)_3(Fe^{2+},Fe^{3+})Al_2O(SiO_4)(Si_2O_7)(OH)$ (EDS verified, 2003) is found as acicular inclusions and tuft-like bundles of crystals in association with quartz and calcite crystals from the adjoining DuFoe property (across stream from Power's property). It is currently unidentified as occurring on the east side of Leonard Stream on Mr. Power's land.

Apatite/Fluor-?: $Ca_5(PO_4)_3(F,Cl,OH)$ occurs in well formed translucent to opaque crystals up to 5 cm in length. They are usually green in color and typify the form seen in most New York State and Ontario, Canada apatite crystals. Crystals are usually small (less than a cm) and uncommon.

Calcite: $CaCO_3$, crystals from this location have only been recorded as coming from the adjoining property owned by the DuFoe family and the stream-side site on the Powers property. This site is on the western side of Leonard Stream and was once directly beside the trail leading into the main dig site up until the mid 1980's.

Chlorite: $(Mg,Fe)_6(AlSi_3)O_{10}(OH)_8$, occurs as coatings and inclusions within and on quartz and other minerals.

Goethite: $FeO(OH)$ appears as an alteration product of pyrite in small crystals to .5 cm and as coatings on other minerals.

Graphite: C, occurs as plates and aggregates of plates to 5 cm.

Magnetite: Fe_3O_4 , occurs as small, metallic, platy crystals up to several millimeters. (Personally observed in DuFoe specimens but none from Power's property).

Micas: at least 2 varieties as per S. Chamberlain, (personal communication). Phlogopite and biotite occur in large, well formed hexagonal books to 15 cm in diameter.

Pyrite: FeS_2 , occurs in massive form as a vein filling and rarely as poorly formed cubic crystals to 5 cm.

Quartz: SiO_2 , occurs in at least two generations with distinctly different appearances and crystal forms. The first generation quartz crystals form barrel shaped crystals with tapered terminations. These crystals are common and attain sizes to over 30 cm in length. They are almost always poorly formed, looking as if they have been partially melted, white to smoky in color and most commonly found in association with uvite or as floater clusters and individuals within calcite seams. They are commonly broken, sometimes showing minor rehealing of fracture surfaces. Some surfaces on these crystals will occasionally show a curvature to their prism faces. Seldom will this generation of quartz make for presentable specimens.

Second generation quartz crystals are very rare but spectacular in their form, clarity and luster. Many phenomenal specimens came from the stream-side site in the mid 1970's. This cut also produced some uvite quartz combination pieces that are rivaled by none. These quartz crystals exhibit more traditional and symmetrical development and are sometimes double terminated. They are exceptionally transparent, usually have a slightly smoky tint and can reach lengths up to 15 cm.

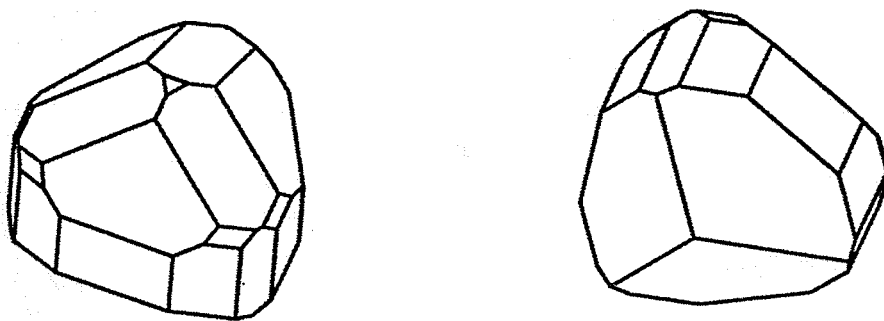
Scapolite: $3\text{NaAlSi}_3\text{O}_8 \cdot \text{NaCl}$ to $3\text{CaAl}_2\text{Si}_2\text{O}_8 \cdot \text{CaCO}_3$, occurs as blocky, low luster crystals to 15 cm in length.

Talc: $\text{Mg}_3\text{Si}_4\text{O}_{10}(\text{OH})_2$, occurs as a pseudomorph of uralite after diopside and as surface coatings on numerous other minerals. Rarely as pseudomorphs of scapolite or diopside in crystals to 6 cm.

Tremolite, $\text{Ca}_2(\text{Mg,Fe})_5\text{Si}_8\text{O}_{22}(\text{OH})_2$ occurs in well formed green crystals up to 8 cm in length. Clusters and plates of crystals are commonly associated with other area minerals.

Uralite occurs as a pseudomorph of a clinopyroxene, probably diopside, in green crystals up to 10 cm in length. Clusters and plates of crystals are commonly associated with other area minerals.

Uvite, $(\text{Na, Ca})(\text{Li, Mg, Al})_3(\text{Al, Fe, Mn})_6(\text{BO}_3)_3(\text{Si}_6\text{O}_{18})(\text{OH})_4$ occurs in spectacular groupings and as individual crystals up to 20 cm in diameter (though any crystal over 4 cm is uncommon) and as vein filling in the area bedrock. Plates of uvite and associated minerals have been recovered up to 60 cm in maximum dimensions. Crystals appear black and opaque, although they can actually be



Idealized drawings of the typical uvite crystal form.

seen to be brown and translucent under intense light. The luster can range from flat to glassy. Occasionally, crystals are found which have broken in situ and partially rehealed. A great

degree of internal fracturing is present in most specimens. Calcite often acts as a cementing agent for such crystals leading to their destruction, in most cases, when they are etched from this calcite with acid. Specimens naturally weathered from calcite are more stable, yet less common.

Pockets to several feet in diameter containing uvite crystals are rarely encountered. More common are seams lined with uvite which have been subsequently filled by massive calcite through meteoric or hydrothermal deposition.

ACCESSIBILITY

This classic site is still available to collectors unlike so many others in the northeastern United States that have been closed. Mineral enthusiasts are encouraged to take advantage of the opportunity which exists to actually find their own specimens at this historic locality. Responsibility is also encouraged. The author has known this family for 35 years. They have no personal interest in mineral collecting, yet they do allow others to do so on their property for the small fee of five dollars per day per person. In the past the site has sometimes closed to collecting due to the irresponsibility of collectors who demand their money back or litter the property:
“Dear Sir,

This is just a note to inform you of the closing of another famous mineral locality: the uvite locality at Pierrepoint, New York. Apparently last winter the owner, Mr. Bower Powers (Senior) died and his son (Mr. Bower Powers Junior) heir to the property wants nothing to do with mineral collectors. Knowing him personally, I would say the prospects don't look too good for the future. Each year many mineral collectors visit the locality. Perhaps the Record can convey this message to those collectors who would otherwise be making the trip in vane.

George Robinson
Kingston, Ontario” (Robinson, 1978)

ACKNOWLEDGEMENTS

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