

Geologic Site of the Month  
July, 2014

***The Perham Family Quarries, Greenwood, Maine***



44° 16' 59.79" N, 70° 38' 23.56" W

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### Introduction

Oxford County is world-famous for its pegmatites and the spectacular minerals they produce. Granite pegmatites are coarse-grained, igneous rocks that contain exceptionally large crystals of feldspar, mica, quartz, and sometimes a suite of rare earth elements and gem-quality minerals. Those large crystals owe their size and magnificence to the crystallization conditions in a magma body. The most spectacular crystals are found in “pockets”—open cavities in the rock that allow minerals to grow unimpeded. Minerals here tend to have few flaws.



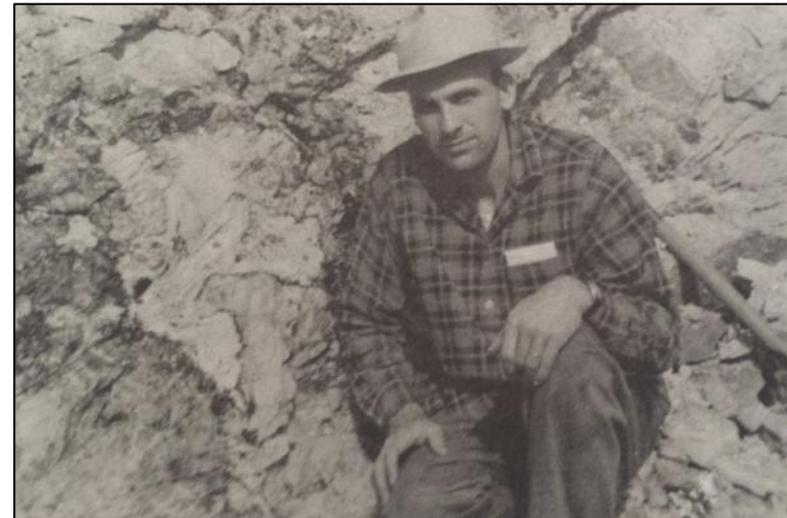
Photo from Coromoto Minerals

**Figure 1.** Slew of tourmaline crystals found in a single pocket at Mt. Mica in West Paris, Maine.



### The Perham Family

Three generations of the Perham family have mined the pegmatites of Oxford County from a number of different quarries. The Perham's story began when Alfred purchased a woodlot from prospector Elmer Aldrich that contained a quarry mined for feldspar in the early 1900's. Alfred had little initial interest in minerals. He was a local farmer and lumberman by trade. As the lumber business declined in 1921, Alfred realized the value in the feldspar that was on his land. With the help of his four sons, they began to explore the old Aldrich Quarry. It turned up nothing of value but Alfred's son Stanley found feldspar where cattle had removed the vegetation in a nearby pasture. Alfred decided to mine the feldspar his son had found. Stanley's son Frank continued to mine in the area until the 1960's.



**Figure 2.** Stanley Perham (left) behind the counter of his famous mineral shop in West Paris, and his son, Frank Perham (right) mining in the 1960s.

### The Perham Family Business

In the early 1920's, the nearest feldspar processing mill was in Auburn, Maine. It was not economical to transport the feldspar that far. Alfred Perham, with the help of some local investors, constructed the Oxford Mining and Milling Company plant in 1924 (Figure 3) to process the feldspar mined in the area by the Perhams and others. The mill operated into the late 1960's.

Stanley opened his store in West Paris in 1919. It saw visitors from every state in the nation and from countries all over the world. Stanley went on to train as a geologist at Bates College and he would happily discuss geology with anyone willing to listen. He passed on his love of minerals and business sense to his children, Frank and Jane.

Frank was lucky to come from a line of Maine miners but he relied on more than just his luck to make a name for himself in the mineral community. He trained as a geologist at Bates College like his father. Frank has spent a lifetime in the mines and has his own mineral museum, The Mineral Pocket. He has a vast amount of knowledge and the respect from geologists and enthusiasts alike to show for it. Frank's sister, Jane Perham, also participated in the family business. She ran her father's mineral store, Perham's of West Paris, until it closed in 2009. She

is a certified gemologist and the author of *Maine's Treasure Chest*—the authority on the history of pegmatite mining in Maine. Thanks to the family's generosity, their quarries are open to the public unless mining is taking place. No fee is charged, and visitors may keep whatever they happen to find.



**Figure 3.** Feldspar processing mill in West Paris, Maine.



The Waisanen Quarry

Photo Courtesy Jane C. Perham

**Figure 4.** Miners exploring the ledge of the Waisanen in the 1960s.

Frank discovered remarkable smoky quartz crystals, herderite crystals, and bertrandite crystals. Substantial deposits of spodumene were also found. Gem quality tourmaline was found in a mass of soft cookeite. Two thousand carats of tourmaline were removed from the only pocket in the pegmatite to harbor colored tourmaline.

Exploration of the Waisanen Quarry began in 1931 when Matti Waisanen noticed a ledge of what appeared to be feldspar on his farm. Initial testing revealed that the ledge was worth being explored further and mining began shortly thereafter. Mining continued uninterrupted for the next four years until the winter of 1935. The miners returned in the spring to find the pit filled with water and mining operations ceased.

The Waisanen went unnoticed for many years until it was eventually purchased by Stanley Perham. His son Frank began to mine it in 1963 after two years of preparation.



## The Waisanen Quarry



The Waisanen, like many quarries in Maine, has been picked apart by collectors. Even so, the enthusiast can still find wonderful books of mica, gorgeous garnet crystals, schorl crystals, and of course, plenty of feldspar. Lepidolite is no longer as abundant as it once was but can still be found sporadically.

The Waisanen is directly northeast of the Tamminen Quarry and both localities can be explored in a single trip.

**Figure 5.** The ledge of the Waisanen as it is seen today.

Photo by Arthur P. West



The Waisanen Quarry Crystals



Photo Courtesy Jane C. Perham

**Figure 6.** Beautiful specimen of herderite crystals found at the Waisanen Quarry.

The Waisanen Quarry Crystals



Photo Courtesy Jane C. Perham

**Figure 7.** Incredible smoky quartz crystals found at the Waisanen by Frank Perham in 1963.

### The Tamminen Quarry

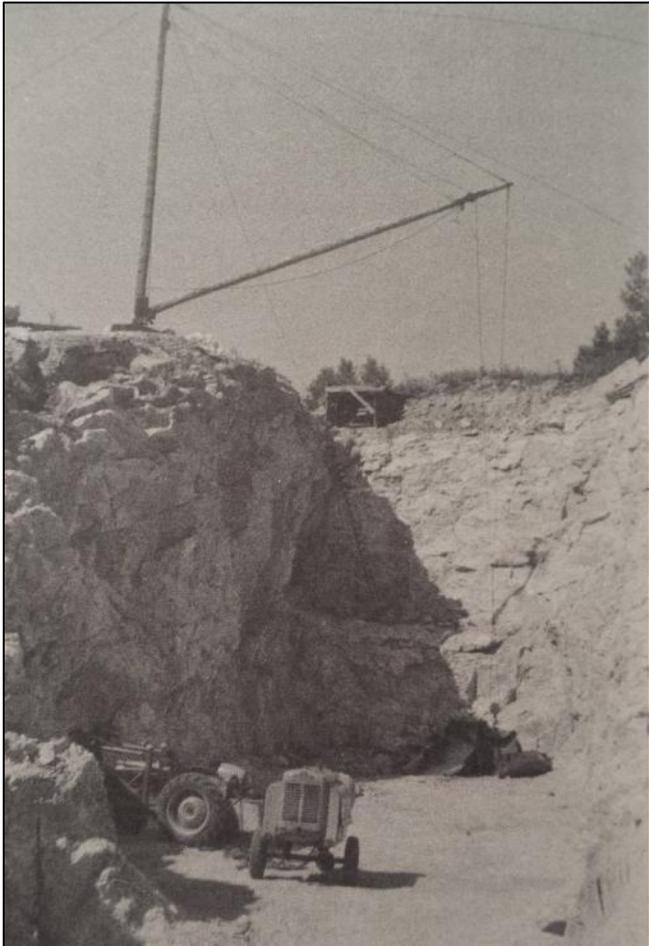


Photo courtesy Jane C. Perham

**Figure 8.** Tamminen Quarry at the height of mining in the 1950s.

The quarry was first explored in the 1920's as a result of the increase in demand for feldspar. William Donahue, of New York, approached the owners, Mr. and Mrs. Tamminen, and asked to examine their property in the hopes of finding feldspar. Donahue was successful in the pasture area but the fields proved to be less fruitful.

As a result of his exploration, the Tamminens leased the pasture area to Donahue for a period of five years, beginning on September 18<sup>th</sup>, 1930. Donahue mined the area himself for a brief period before sub-leasing the site to the Oxford Mining and Milling Company of West Paris.

The miners encountered a unique combination of petalite and pollucite in the pegmatite, and this was the first time this combination was found in the United States. Pseudo-cubic quartz crystals have also been found here.

The quarry was leased to the United Feldspar and Minerals Co. of West Paris and the majority of mining was completed by the company in the 1950s. Today, the Tamminen is still mined sporadically for mineral specimens.



The Tamminen Quarry

Photo by Arthur P. West

**Figure 9.** View of the Tamminen Pit dump pile.

The tailings piles have been mostly picked over by collectors but almandine garnets and schorl crystals can still be found. Montmorillonite can also be found but it's not abundant.

The best schorl crystals can be found atop the pit and the best garnets can be found in the dump piles.

Access the top of the pit by following a woods road that starts near the quarry entrance and goes up around the left (south) side of the quarry area.

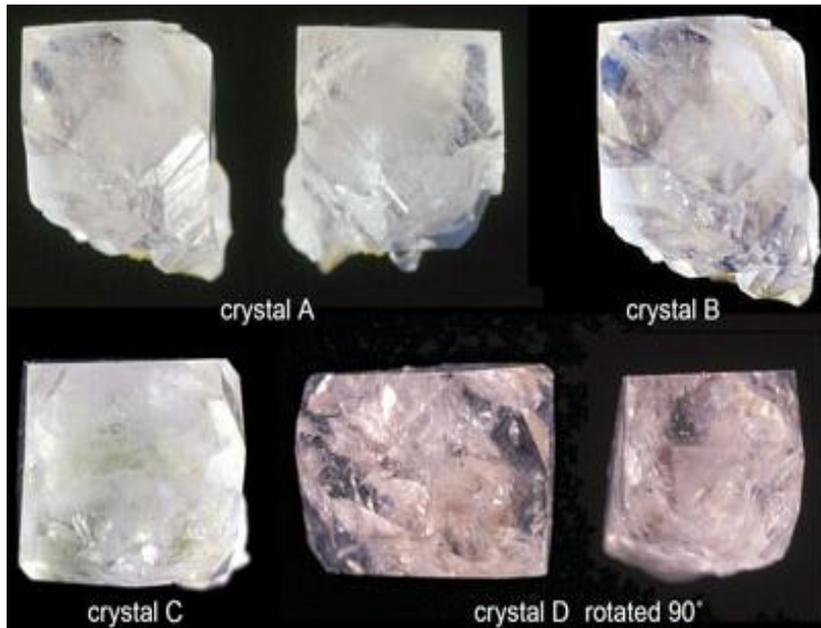
The Tamminen Quarry

Photo from <http://www.pegworkshop.com/extras/frank/cubic.html>



Photo by Arthur P. West

**Figure 10.** Pseudo-cubic quartz crystals like those found in the Tamminen Quarry (left). The Tamminen Quarry and the adjacent dump pile in the foreground can be seen (right). Nice schorl crystals can be found here along with specimens of garnet, montmorillonite, feldspar, and quartz.

## “The Mineral Pocket” Museum



Photo by Arthur P. West

**Figure 11.** The “Kids Table” at Frank’s museum includes samples of quartz, beryl, feldspar, montmorillonite, muscovite mica, and more for his visitors to touch.

Frank Perham displays the minerals and rocks he has collected throughout his life in a museum he maintains in his basement.

Rocks and minerals from every quarry he has mined and visited are on display. Every visitor gets a personalized tour of his museum complete with mining stories and lessons in geology.

The museum is adjacent to Frank’s auto repair shop, *Route 219 Garage*, and can be visited if Frank is not busy at the time.

It is a recommended stop for the enthusiast on a mineral collecting trip in West Paris. Frank is always happy to discuss the rocks and minerals he loves so much.

### Driving Directions



**Figure 12.** The old *Perham's of West Paris* store in West Paris, Maine.

Quarry profiles, driving directions, and a map are all available through from the Maine Geological Survey through the online edition of [A Collector's Guide to Maine Mineral Localities](#). Quarry locales are provided in Chapter 6, but the entire publication is helpful for mineral collecting in Maine.

Old flyers given out by the Perham family at their store are available online through the Boston Mineral Club <http://www.bostonmineralclub.org>. The [first flyer](#) shows a map of the area and includes safety instructions. The [second flyer](#) gives profiles of the Greenwood quarries.

## References and Additional Information

- King, V. T., 2000, Selected history of Maine mining and minerals, in King, V. T., ed., Mineralogy of Maine, Volume 2: Mining history, gems, and geology: Augusta, Maine Geological Survey, p. 17-254.
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