

A Report:

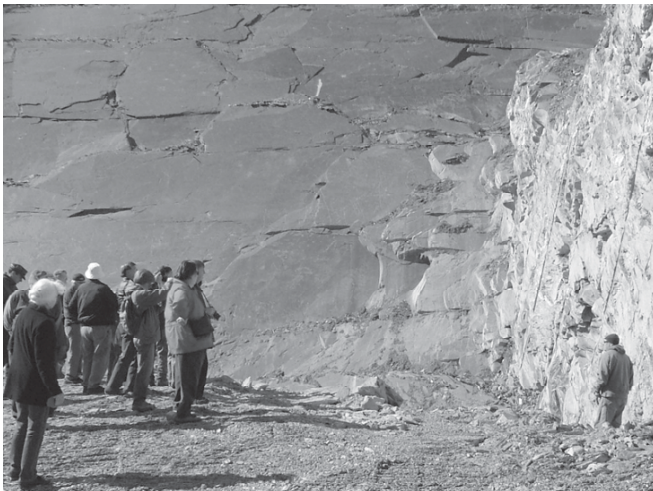
NNEC-SIA Fall 2008 Tour and Meeting

The NNEC fall tour and meeting was held on Saturday, October 17, 2008, at the Slate Valley Museum in Granville, N.Y., just over the Vermont border. The museum had expanded this year and opened a new visitor/interpretive center. An exhibit entitled "Heavy Lifting" had recently been installed and featured a 1951 Mack truck used in the slate industry. We watched a short movie on the history of the local slate industry which began in 1840 just one year after the discovery of slate in the area. The location of the slate is a valley running 24 miles long and six miles wide along the New York and Vermont border.

Many of the earliest workers in the slate industry came from Wales. These men were experienced miners and had the knowledge and expertise required for successful mining. In time, as more quarries opened, immigrants came from Italy, Ireland, and other Eastern European countries. At its peak, approximately a century ago, there were 350 quarries in the region owned by 100 different owners and corporations. In 2008, there were still 100 quarries open, producing slate for 35 business entities.

The museum exhibits contain many items of interest to the visitor. Mining equipment, tools, hardware, etc. are there to see. There is a large amount of information concerning the social life of the mining communities. Worker strikes and labor problems are covered along with detailing the strife between the various ethnic groups. Mary Lou Willits, executive director of the museum, talked briefly about the local slate industry and answered all questions we had. She mentioned that for insurance reasons, it's becoming more difficult for the museum to host quarry tours. So fellow SIA members, plan a visit someday soon.

Our tour of the Greenstone Slate Company quarry in Poultney, Vermont, was very informative. The company began operation between 1878-1886 and has been in business for over 120 years. There were two shutdowns during this time: during the



NNEC members view the Poultney, Vermont, Greenstone Slate Company quarry.

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depression for two years and for six years during WW2 due to a shortage of experienced workers. The current economic conditions would be expected to also cause production reductions.

The quarry we visited produces green, gray, and black slate but not red. Their red slate comes from a quarry in New York state, one of five the Greenstone company owns, together employing 80 workers in October 2008. On our tour, slate was being sawed and splitted into roofing shingles. The quarry was running 12 hours a day during the weekdays and on Saturday mornings until noon. At current mining rates this quarry will run out of slate in 20-25 years. The land has a fine view of Vermont and will eventually be sold and developed for luxury country homes. Even today, the land value exceeds the value of the slate under it.

This slate was formed 650 million years ago and was once above the granite in the Adirondacks and Green Mountains. As those mountain ranges uplifted, the slate eroded, exposing the granite underneath. Slate Valley was at a lower elevation between the mountains and the slate was never eroded away.

The process of mining, cutting, splitting, and trimming slate produces large volumes of waste material like most quarrying. In the past, only 10% of the mined slate ended up on roofs. Now the figure is closer to 20%. A considerable volume of the quarry slate cannot be used due to defects and fault lines. The useable sections are sawn into blocks one to two feet thick. The workers then slice off the roof slates in the traditional manner, using a chisel and a few blows from a mallet. The roof slates that are sliced off have a thickness of between three-eighths and three-quarters of an inch. The width of the roof slates varies greatly around the world. In Europe, cathedral roofs from the Middle Ages may have two-inch-thick slate that last 500 years. Thin, imported, one-quarter inch roof slates used in US housing developments may not even last 20 years. Greenstone slate roofs are guaranteed to last 100 years, with their thicker slates lasting 200 years or more. Normally the copper fasteners need to be replaced before the slate on the roofs with a 100+ year lifespan. In Europe during the Middle Ages,

sheep's teeth were used as the fasteners.

The final two steps in the manufacturing of slate roofing shingles are trimming and punching holes for the fasteners. The slate shingles are trimmed by hand using a couple of 120-year-old trimming machines. They are operated by experienced employees to produce shingles with a minimum of waste. An automatic trimming machine has been purchased but the faster speed results in more waste. Two holes are then punched through the slate for the fasteners. If slate thickness exceeds three-eighths of an inch, a two-headed drill press is utilized to drill the two holes. Punching holes is the preferred method since less slate is broken when punching the holes. The shingles are 12 inches long, and when installed, only 4 inches are exposed to the elements. Shingle width is generally 7-8 inches.

The Greenstone Slate Company sells the majority of their slate roofing for expensive residential housing and for University buildings. Any structure desiring such a roof needs to be engineered with additional structural strength to withstand the weight of roofing slates.

After the quarry tour, we returned to the Slate Museum for further viewing and the fall meeting. David Dunning, a recent and active member of both NE chapters, was nominated for second vice-president and accepted. A short explanation of how our chapter will slowly move towards email notification of dues and meetings/tours was the next topic. Those without email will still have the information mailed to them. Dennis Howe and Bill Burt, president of the Southern NE Chapter, discussed both chapters having a joint website similar to the joint newsletter. David Starbuck, longtime newsletter editor, informed us that more submissions are coming in for the newsletter and we may need one more issue per year or more pages per issue. It was decided to stay with two issues per year for now. Dennis Howe who arranged the Slate Valley tour informed us he is planning a mid-Hudson Valley Study Tour of the Rosendale Cement Industry and other sites from October 13-16, 2009.

David Coughlin
President, Northern New England Chapter