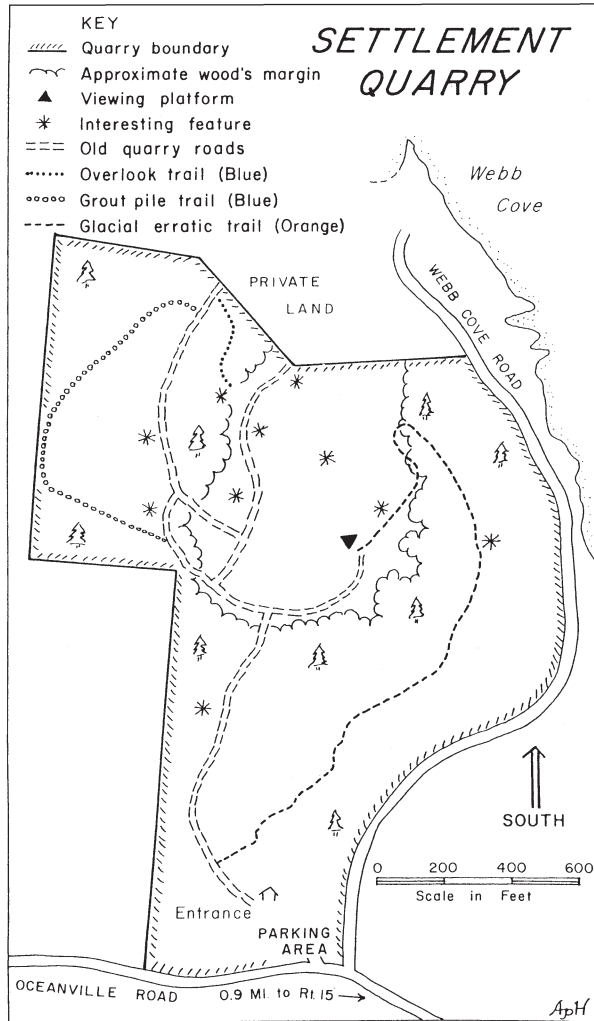


## Trails:

- The walk from the parking area up the old road to the top of the quarry is on a gentle slope of about 1/4 mile;
- Woods trails are marked with blazes (paint on tree trunks) – orange on the Glacial Erratic Trail, blue on the Grout Pile Trail;
- Trails on bare granite are indicated with blue and orange paint on the surface, directional signs, and cairns (small rock pile markers) where needed.



The Island Heritage Trust is a non-profit conservation land trust founded by local citizens in 1987 to help protect the environmental and scenic qualities of Deer Isle and Stonington. It purchased the Settlement Quarry property in 1996 for the benefit and enjoyment of the island community and its friends.

Island Heritage Trust is located in Heritage House, 420 Sunset Road, Sunset, next to the Deer Isle-Stonington Historical Society. We welcome visitors and encourage anyone wishing to help our work to become a member. It's easy! Just send us a check or contribute some of your time.

**ISLAND HERITAGE TRUST**



P.O. Box 42  
Deer Isle, ME 04627  
207-348-2455

e-mail: [iht@islandheritagetrust.org](mailto:iht@islandheritagetrust.org)  
Website: [www.islandheritagetrust.org](http://www.islandheritagetrust.org)

## Visitor Information

**The quarry can be dangerous if you or your children are careless**

- Granite surfaces include crevices and sharp drop-offs, and can be very slippery when wet, and even when dry;
- The huge waste rock piles (called "grout") are unstable and unsafe for climbing;
- It is impractical to put "Danger" signs at every possible danger spot. You must stay alert; please be careful, and supervise your children at all times.

### Other considerations:

- Please respect private property surrounding the quarry and do not venture beyond posted boundaries;
- There is NO public access to the water;
- Please KEEP your dog on a leash;
- Please carry out all trash;
- There is no drinking water and no toilet;
- Please comply with the following restrictions:



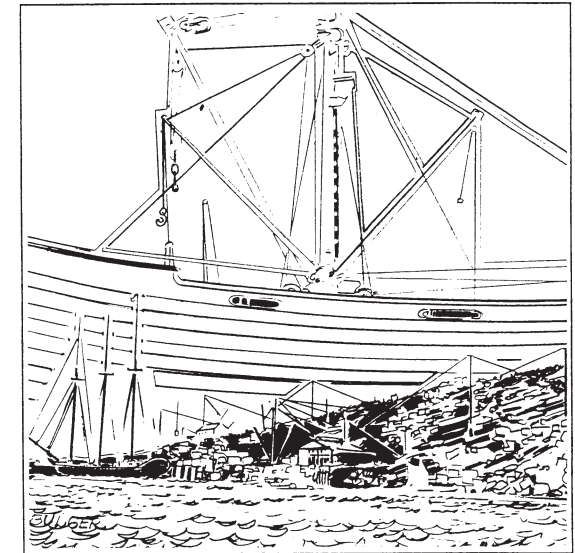
***Thank You— Enjoy your visit!***

Brochure prepared by: Kathleen Emerson, Stonington, ME

**ISLAND HERITAGE TRUST**



The Conservation Land Trust  
of Deer Isle and Stonington, Maine



**SETTLEMENT QUARRY**  
STONINGTON, MAINE

- View a splendid panorama of nearby Webb Cove, offshore islands including Isle au Haut, and the Camden Hills, 20 miles to the west;
- Learn something about the geologic history of Deer Isle, and quarrying;
- Enjoy pleasant, easy walks on the Glacial Erratic and Grout Pile Trails.

# Local Geology

## The Stonington Granite

The Stonington Granite is a large granite body, several miles across, which forms the solid bedrock under the southern part of Deer Isle, several smaller islands south and east of Stonington, and the intervening sea floor. The granite is generally covered by a thin layer of glacial deposits, modern marine deposits, soil, or ocean, but it is found in outcrops at the ground surface in many parts of the region. The Settlement Quarry, Crotch Island quarries, and many smaller quarries have been excavated from the Stonington Granite. While the granite bedrock is geologically similar in this whole region of Deer Isle, there are subtle differences in color, mineral texture, fractures, and other practical considerations that have allowed certain quarries to be more productive than others.

The main mass of granite consists of microcline (a pink feldspar), plagioclase (a white feldspar), and quartz. These three minerals, in roughly equal proportions, constitute 95% of the rock. Shiny flakes of biotite (black mica) comprise the rest. The rock's texture is remarkably similar throughout the Settlement Quarry. Granite is an intrusive igneous rock that forms by slow cooling and crystallization of molten rock (magma) beneath the earth's surface. As the magma cools, the minerals with the highest melting points crystallize first, while some of the magma is still molten. Thin sheets of other rock are found cutting through the main mass of granite. Most of these sheets are made of fine-grained pink rock called aplite. The sheets of rock solidified from younger phases of magma that were injected along fractures into the granite after the main mass had already solidified.

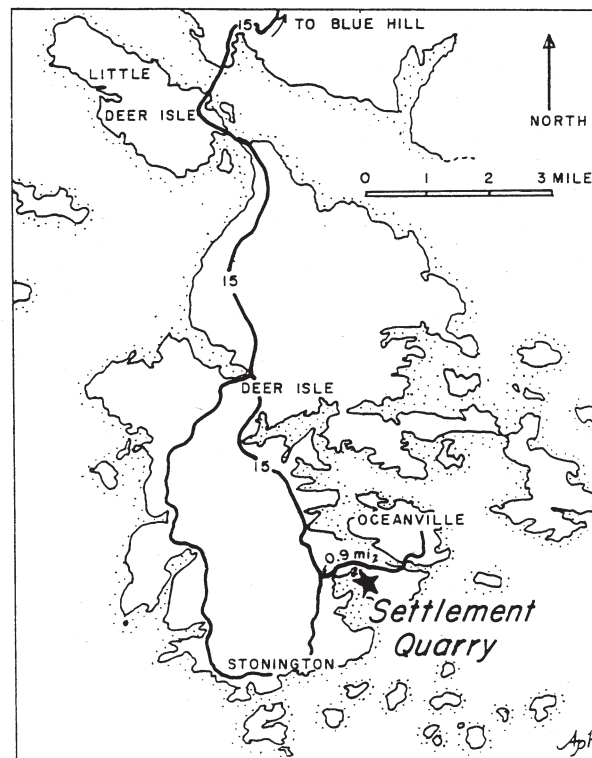
The Stonington Granite was formed at least 360 million years ago, when what is now coastal Maine was geologically active. Some of the magma rose through the crust and became trapped before reaching the surface, cooling slowly over hundreds of thousands of years. In the great expanse of geologic time, the thousands of feet of overlying rock has been gradually eroded inch by inch so that the Stonington Granite is now exposed at the earth's surface.

## Fractures

Several sets of fractures in the granite formed at various times after the granite had solidified and cooled. In the millions of years since cooling, the crust of Maine has been subjected to tectonic stresses that have produced fractures in all rocks of the state. The most recent fractures in the quarry, called sheeting joints, are nearly horizontal. The sheeting joints can be seen best in the vertical quarry faces. When the overlying weight of rock was removed by erosion, the upper part of the rock expanded slightly and broke away from the underlying bedrock. While the quarrying operation was responsible for making the broad, flat benches that make up the walking surfaces in the quarry, these surfaces exploited the natural sheeting joints.

## Glaciation

The last significant erosional event was the glaciation that shaped the hills and modern landscape of Maine. Scrapes and grooves in natural bedrock surfaces just north of the open quarry (east of the main trail to the top) were caused when stones frozen in the base of the glacier were dragged across the bedrock. The fact that striations and glacial deposits are found near the top of the hill indicates that the continental ice sheet



Location: 0.9 mi. from Rt. 15 on Oceanville Road

overrode the entire hill, and extended well into what is now the Gulf of Maine. Glacial geologists estimate that 20,000 years ago the ice was 1 to 2 miles thick at the present Maine coast. The asymmetric shape of the hill, with a more gently sloping north side and steeper south side, is characteristic of a glaciated landscape. As the ice moved southward, the north side of the hill was worn down by abrasion while rock of the south side of the hill was frozen into the glacier and carried off piece by piece to leave a steeper, ragged slope. The steep south side gave the quarry a natural deep-water access to shipping.

\*Excerpted from a report by Henry N. Berry IV, Maine Geological Survey, Augusta, 1997. Full report is on file at the IHT office.

## Quarry Operations

In the early part of this century, the Settlement Quarry was a major industrial site, employing hundreds of men. It was a forest of stacks, masts, booms, and derricks, such as depicted in Stonington's Granite Museum. It included coal-fired boilers to generate the steam to run the engines that operated compressors, dynamos, winches, and cranes. There was a railroad for moving granite and machinery within the site.

In 1902 the first major granite shipment went to construct abutments of the Williamsburg Bridge in New York City. Subsequent shipments were used for the Manhattan Bridge, New York County Courthouse, Boston Museum of Fine Arts, and many other important buildings. Its last major shipment in the late 1960's was sent to Washington D.C. for the John F. Kennedy Memorial in Arlington National Cemetery. The quarry was most active in the 1920's. It opened briefly in the 1960's, and closed permanently after a final effort about 1980.

Technology changed the quarrying industry. Steel and reinforced concrete replaced granite. Special burning torches replaced black powder. Huge loaders and trucks replaced derricks and schooners. Over the years the old buildings were removed and the equipment salvaged or sold as scrap.

Today, the Maine granite industry primarily supplies veneers for building facades and kitchen countertops. Because of bedrock fractures, the Settlement Quarry can't supply suitable stone. Crotch Island granite is still barged to the Webb Cove wharf where it is loaded onto trucks and hauled elsewhere for cutting to supply today's market.