Please post or circulate.

Long Island Geologists

Field Trip

Geology of Port Jefferson

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Stony Brook University

Saturday June 28, 2008
9 AM to 12 noon

Port Jefferson is at the eastern end of the Stony Brook Moraine and the western end of the Roanoke Point Moraine which were formed by lobes of the glacier that created the Harbor Hill Moraine some 20,000 years ago. The long ridge that forms Mount Misery is an interlobate moraine that formed between the Stony Brook Moraine and the Roanoke Point Moraine. As the Stony Brook lobe advanced on Long Island from the north it acted like bulldozer pushing the sediments it encountered into the arc-shaped Stony Brook Moraine. After the pushing action, a subglacial stream formed under the ice, filled with fast moving water. This water traveled uphill, carrying a large load of sediments that it removed from the area that is now Port Jefferson Harbor and Port Jefferson. The stream exited the glacier near the Port Jefferson railroad station forming a large alluvial fan to the south.

On this trip we will

- First review the geology of Port Jefferson at Stony Brook University.
- Travel by car to Port Jefferson
- Stop near the Port Jefferson Harbor to view the walls of the broad tunnel valley.
- Travel by car south on Main Street up a steep gradient which is essentially along the last path of the subglacial stream that created the Port Jefferson tunnel valley
- Stop to consider what the mouth of the tunnel valley may have looked liked as the water was pouring out of it.
- Visit a kettle hole that is 100 feet deep which may represent the location of a large chunk of ice torn from the front of the glacier and then buried by the sands and gravels deposited in the alluvial fan.
- At the end of the trip there will be an optional opportunity to walk to the top of Cedar Hill, with an elevation of 271 feet, the highest point in Port Jefferson.

Information about the geology of Port Jefferson can be found at http://www.geo.sunysb.edu/reports/dem_2/

We will meet at Stony Brook University in ESS 123 at 9 AM. We will then car pool to Port Jefferson.

Directions to SUNY Stony Brook and ESS Building

- From exit 62 of the Long Island Expressway (LIE, I-495) follow Nicolls Road (Route 97) north for nine miles. Pass the South and Main entrances to the University.
- Enter the North entrance which will be on your left.
- At the top of the small hill, turn right on Circle Road.
- Proceed about 1 mile.
- Turn left onto Campus Drive and then immediately turn left again onto John S. Toll Drive.
- Proceed about 50 yards then turn right into the large paved parking lot.
- The Earth and Space Sciences building is the large concrete building at the northeast end of the parking lot.
- Map of campus is on the web at: http://www.stonybrook.edu/sb/map/

Be prepared for inclement weather. We will go **rain or shine.**
Three contact hours toward in-service credit for teachers or professional geologists.

There is no fee

Please email gilbert.hanson@sunysb.edu if you plan to participate
and note if you wish to have an in-service credit letter.