

C4. BEDROCK GEOLOGY OF ISLESBORO, PENOBSCOT BAY, MAINE

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Description. Islesboro, at the head of Penobscot Bay, hosts an unusually rich geologic record, disproportionate to its size and beautifully exposed in shoreline outcrops. Recent 1:24,000 scale mapping confirms three major stratigraphic sequences, several igneous suites, and four episodes of deformation/metamorphism. New geochronologic data constrain the Seven Hundred Acre Island Formation (marble, quartzite, garnet-kyanite schist) to between 1700 Ma (detrital zircon) and 655 Ma (cross-cutting pegmatite). The Islesboro Formation (late Neoproterozoic quartzite, carbonate, slate) and unconformably overlying Turtle Head Cove formation (Cambrian conglomerate, shale, sandstone) display a penetrative west-vergent deformation. All units are juxtaposed along a network of late strike-slip faults. In the larger picture, Islesboro bedrock has significant potential to enlighten relationships both across Penobscot Bay (Camden Hills [St. Croix]-Ellsworth terranes) and the Atlantic (provenance in Gondwana and/or Baltica). This trip will provide a rare opportunity to access this unique geology, much of which is on private property requiring special permission.

Meeting Time and Place. 8:00 a.m. [Lincolnville ferry terminal](#), 16 McKay Rd., Lincolnville, UTM 0499405, 4902994 (NAD83). Parking availability at the ferry terminal parking lot is unpredictable and may be very limited. We are in the process of making a special one-time arrangement with the Lincolnville Historical Society to park in their lot for the day; if parking near the terminal is unavailable, the tentative plan will be for participants to park there and walk 0.3 miles to the terminal. Registered participants will be kept informed of parking details.

Other logistics. Participants will all board the 9 a.m. ferry to Islesboro. You will be responsible for purchasing a parking permit (\$12/vehicle) and a round trip passenger ferry ticket (\$14 per person) before boarding. Walk-on passengers typically board about 8:45, before vehicles are loaded. The ferry service recommends arriving a half hour before departure.

On arrival at the Islesboro terminal, we have made arrangements with the local bus driver to meet us with a standard yellow school bus to take us around the island for the day. At the end of the trip we will catch the 4:30 p.m. ferry back to the mainland, to arrive in Lincolnville at 4:50. Please bring lunch and water. Islesboro is primarily residential. Public facilities are very limited. Dress for the weather, for walking along the coast, and for tick prevention.

Participant Limit. 40 participants, maximum bus capacity.

Cost: There is an additional cost of \$10 per person to register for this trip, to cover the bus rental. This will be added to the NEIGC registration fee for trip C4 participants. Paying for parking and ferry tickets will be the responsibility of individual participants to handle at the ferry office on the day of the trip.