

DISCLAIMER

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Landowners only granted permission to visit these sites to the organizers of the original trips for the designated dates of the conference. It is your responsibility to obtain permission for your visit. Be aware that this permission may not be granted.

Especially when using older guidebooks in this collection, note that locations may have changed drastically. Likewise, geological interpretations may differ from current understandings.

Please respect any trip stops designated as “no hammers”, “no collecting” or the like.

Consider possible hazards and use appropriate caution and safety equipment.

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10th FIELD TRIP NEW ENGLAND FIELD GEOLOGISTS

RHODE ISLAND AREA

October 18 and 19, 1947

Secretary's note-Plans laid for 1948 field trip went wrong. Secretary hustled around to find some one to run trip for this. It is a pleasure to announce that Dr. ALONZO QUINN, of the Department of Geology of Brown University consented at a late date to organize a trip.

IMPORTANT

Because of traffic conditions in Providence it is best that all trips assemble outside the area of heavy traffic.

SATURDAY, October 18, 1947- 9.30 a.m.

RED ROCK TRIP-Cars assemble 10 miles northwest of Providence at the junction of Route 146 (Louisquisset Pike) and Route 116 (George Washington Highway) cars head east on 116 east of junction.

TO BE SEEN:-1) pre-Cambrian(?) Blackstone series of schists; 2) older plutonic rocks including chiefly quartz diorite and granite; 3) Quincy granite and granite porphyry; and, 4) Wamsutta sandstone and conglomerate of Pennsylvanian age.

LEADER-Dr. ALONZO QUINN.

LUNCH-at Diamond Hill park; bring your lunch with you.

MAPS-Pawtucket, R. I. Quadrangle, chiefly; also Franklin quadrangle.

GLACIAL AND SHORELINE FEATURES- Cars assemble, 9:30 a.m. at intersection of Route 3 (Nooseneck Hill road) and Route 102 (Pine Hill Rd.) about 24 miles southwest of Providence with cars parked facing east on route 102 east of the intersection.

TO BE SEEN:-"Rottenstone" exposures in Exeter, shore features along Narragansett Bay, and the Wakefield-Watch Hill Moraine.

LEADER-J. P. SCHAFER. Mr. Schafer has only recently joined the staff at Brown University. Although he has not yet had time to do detailed work in Rhode Island he has consented to run the trip.

MAPS-Wickford, Narragansett Pier, Kingston, Carolina, and Quonochontaug are the most important. Slocum and Hope Valley quadrangle areas will also be visited.

LUNCH-BRING IT WITH YOU.

SATURDAY EVENING-OCTOBER 18, 1947-EVENING DISCUSSION-BUSINESS MEETING in Geology rooms, Rhode Island Hall, near southwest corner of campus Time-8:00 p.m.

SUNDAY, OCTOBER 19, 1947

Morning trips to Westerly-Bradford granite area or to the Purgatory-Newport area if sufficient interest in these areas is indicated at the Saturday evening meeting or during the course of the field trips.

HOTEL RESERVATIONS-MAKE THEM IMMEDIATELY and DIRECTLY WITH HOTEL

	Single		Double	
	bath	without bath	bath	without bath
Downtown				
Narragansett Hotel.....	\$4.00	\$2.75	\$6.50	\$5.00
			7.00 (tw. beds)	
Sheraton-Biltmore.....	4.75		7.75	
			8.75 (tw. beds)	
Near Campus				
Minden Hotel.....	3.50		5.00 and up	
123 Waterman street (Note-5% tax added to above prices)				

YOU ARE WELCOME TO DROP IN AT THE DEPARTMENT ROOMS ON FRIDAY NIGHT.

Secretary:-Lloyd W. Fisher, Bates College (or 508 Main) Lewiston, Maine.

NEW ENGLAND GEOLOGISTS - 40th FIELD TRIP, 1947

Rhode Island - Bedrock Trip, Oct. 18.

9:30 A.M. - Assemble at intersection of Route 146 (Louisquisset Pike) and Route 116 (George Washington Highway); cars head east on 116 just east of intersection.

DRIVE EAST ON 116 0.87 mile; TURN RIGHT 0.25 mi.

Sta. 1 Thin-bedded quartzite of Mussey Brook schist intruded by Hunting Hill greenstone.

DRIVE SOUTH 0.15 mi; TURN RIGHT (WEST) ABOUT A HALF-MILE TO LIME QUARRIES (HARRIS QUARRIES)

Sta. 2 (arrive 10:30) Marble of Mussey Brook schist in contact with quartz diorite.

TURN CARS AROUND AND RETURN TO GEORGE WASHINGTON HIGHWAY WHERE WE LEFT IT (IN TURNING, FOLLOW CAR DIRECTLY AHEAD SO AS TO AVOID TRAFFIC CONFUSION).

AT GEORGE WASHINGTON HIGHWAY TURN RIGHT (EAST) ABOUT 1.1 mi. TO JUNCTION WITH ROUTE 122.

Notice valley of Blackstone River eroded in Westboro quartzite. Massive quartzite is exposed under both ends of the bridge and at several places upstream along the banks.

TURN RIGHT (SOUTH) ON 122 ABOUT 0.6 mi.

Sta. 3 (arrive 11:15) Westboro quartzite, with the regional northwest-southeast strike and northeast dip.

CONTINUE SOUTHEAST ON 122 ABOUT 1.2 mi.; TURN LEFT (EAST) 0.58 mi.; TURN LEFT (NORTH) ON 114 (DIAMOND HILL ROAD) ABOUT 1.65 mi. TO ANGELL ROAD.

Diamond Hill Road runs near the edge of the Narragansett Basin, and the contact a quarter of a mile beyond the Cistercian Monastery is probably a fault (Quartzite of the Blackstone series exposed on the west side of the road and carbonaceous shales encountered in wells on the east side).

TURN LEFT ON ANGELL ROAD (road cuts of quartz diorite) 0.45 mi.; TURN RIGHT (NORTH) 0.15 mi.; TAKE LEFT FORK FOR 0.77 mi.; TURN RIGHT (EAST) TO TOP OF HILL BY FOUNDATION RUINS OF COUNTRY CLUB.

Sta. 4 (arrive 11:45) Pyroclastic facies of Hunting Hill greenstone.

Bedrock trip page 2.

DRIVE NORTHEAST A LITTLE MORE THAN A HALF-MILE; TURN LEFT (WEST) ON SCOTT ROAD 0.2 mi.; TURN RIGHT IN LANE ABOUT 400 feet; TURN LEFT 250 feet; TURN RIGHT AND LEAVE CARS IN MIDDLE OF LANE, AS THIS IS USED ONLY OCCASIONALLY (about once every 20 years).

Sta. 5 (arrive 12:45) Walk (on your empty stomach) north in woods; Grant Mills granodiorite intruded into quartzite and schist of Blackstone series. Different orientation of inclusions indicate magmatic intrusion of granodiorite.

FOLLOW LINE AROUND TO SCOTT ROAD AGAIN; TURN LEFT TO LITTLE POND ROAD AGAIN; TURN LEFT AND PROCEED NORTH A LITTLE OVER A MILE; TURN RIGHT (EAST) 0.35 mi. TO DIAMOND HILL ROAD; TURN LEFT AND DRIVE NORTH THROUGH VILLAGE OF DIAMOND HILL TO PROMINENT FACE OF VEIN QUARTZ.

Sta. 6 Lunch You may eat here while you collect quartz, or if not interested in collecting, you may drive north about a half-mile to Diamond Hill Park (Franklin quadrangle).

Vein quartz at Diamond Hill, 1000 feet wide and 1 mile long. This lies at the contact between the Pennsylvanian rocks of the Narragansett Basin and the older crystalline rocks; probably a fault contact.

AFTERNOON TRIP: ALL ASSEMBLE AT DIAMOND HILL PARK AT 2:00 P.M. DRIVE NORTH 0.3 mi.; TURN LEFT (WEST) ABOUT 1.5 mi.; TURN LEFT (SOUTH) 0.6 mi.; TURN RIGHT (WEST) 0.1 mi. TO QUARRY AT IRON MINE HILL.

Sta. 7 (arrive 2:15) Cumberlandite quarry. This unusual rock consists chiefly and primarily of olivine, labradorite, and an intimate mixture of magnetite and ilmenite. Most of the silicates have been replaced by serpentine and actinolite.

RETURN TO WEST WRENTHAM ROAD AND DRIVE ALMOST SOUTH ABOUT 2 mi. TO CUMBERLAND HILL; TURN LEFT ON 122 ABOUT 0.2 mi.; TURN LEFT (EAST) ON SNEECH POND ROAD ABOUT 0.9 mi.; WALK SEVERAL HUNDRED FEET NORTH IN WOODS.

Sta. 8 (arrive 3:00) Pillow structure of Hunting Hill greenstone.

CONTINUE EAST ABOUT 0.4 mi.; WALK NORTH THROUGH FIELD AND BRUSH.

Sta. 9 (arrive 3:45) Granite porphyry related to Quincy granite.

CONTINUE EAST ON SNEECH POND ROAD MORE THAN A MILE; CROSS DIAMOND HILL ROAD; CONTINUE EAST 0.23 mi.; TURN RIGHT (SOUTH) ABOUT $3\frac{1}{2}$ mi. (outwash here covers what is undoubtedly

Bedrock trip page 3.

interesting bedrock of Pennsylvanian formations); PARK CARS
ALONG ROAD AND WALK A QUARTER OF A MILE BACK INTO RHODE ISLAND.

Sta. 10 (Last station arrive 4:30) Red conglomerate and
sandstone of Pennsylvanian Wamsutta formation.

CONTINUE SOUTH AND EAST ON THIS ROAD, HERE KNOWN AS MENDON
ROAD, ABOUT $1\frac{1}{2}$ mi. to US 1; TURN RIGHT FOR PROVIDENCE; TURN
LEFT FOR BOSTON.

Evening discussion and business meeting - Rhode Island Hall
8:00

SIMPLIFIED STRATIGRAPHIC COLUMN FOR NORTHEAST RHODE ISLAND

Pennsylvanian or younger	{	Trap dikes
		Vein quartz at Diamond Hill
		Rhode Island formation
Pennsylvanian	{	Wamsutta formation
		Pondville conglomerate
Mississippian (?)	{	Quincy granite and granite porphyry
Early Paleozoic (?)	{	granite, granodiorite, quartz diorite, diorite, gabbro, cumberlandite (?)
		Hunting Hill greenstone *
		Sneech Pond schist *
Pre-Cambrian (?)	{	Blackstone series
		Westboro quartzite
		Mussey Brook schist *
		Marble beds *

*Formerly included in
Marlboro formation

NEW ENGLAND GEOLOGISTS-40th FIELD TRIP

RHODE ISLAND-GLACIAL AND SHORELINE FEATURES TRIP, OCTOBER 18, 1947

MEETING PLACE: 9:30 A.M. at intersection of Route 3 (Nooseneck Hill Road) and Route 102 (Pine Hill Road), about 24 miles southwest of Providence, Rhode Island.

DRIVE 0.6 MILE EAST ON ROUTE 102.

STOP 1. Outcrop of Sterling granite gneiss showing weathering to a depth of a number of feet. Between this point and the intersection with Ten Rod Road, 1.6 miles to the southeast, are several other outcrops of this material, at two of which stops will be made. DRIVE ABOUT 8 MILES EAST ON ROUTE 102 TO INTERSECTION WITH ROUTE 1A. In the first five miles this road crosses several small valleys containing kames, kame terraces, and similar features. In the last three miles the road crosses several flat-topped masses of outwash, and passes kettleholes and other features. No stops will be made. TURN RIGHT ON ROUTE 1A. DRIVE 1.1 MILES SOUTH AND PARK.

STOP 2. A few hundred feet from the road a gravel pit in an esker displays crossbedded sands and gravel.

DRIVE 0.5 MILE SOUTH ON ROUTE 1A TO INTERSECTION WITH HAMILTON-ALLEN TON ROAD. TURN LEFT AND DRIVE 1.5 MILES EAST TO INTERSECTION WITH ROUTE 1. TURN RIGHT AND DRIVE 1.8 MILES SOUTH AND TURN LEFT ONTO ROAD LEADING TO JAMESTOWN BRIDGE. PARK ON SIDE ROAD TO LEFT JUST WEST OF BRIDGE APPROACH.

STOP 3. Plum Beach Point, which is crossed by the bridge approach, is a cusped foreland.

RETURN TO ROUTE 1 BY A SIDE STREET, TURN LEFT, AND DRIVE 1.1 MILES SOUTH ON ROUTE 1. STOP IN PARKING SPACE ON LEFT SIDE OF ROAD.

STOP 4. View of Onsey Point, another cusped foreland.

GLACIAL AND SHORELINE FEATURES TRIP, PAGE 2.

DRIVE 2.6 MILES SOUTH ON ROUTE 1. TURN LEFT ONTO ROAD TO BONNET SHORES, AND DRIVE ABOUT 1 MILE SOUTHEAST TO WESQUAGE BEACH. LUNCH WILL BE EATEN HERE, WEATHER PERMITTING.

STOP 5. Wesquage Beach is a baymouth (or mid-bay) bar.

RETURN TO ROUTE 1, TURN LEFT ON IT, AND DRIVE 1.7 MILES SOUTH TO INTERSECTION WITH MIDDLE BRIDGE ROAD. TURN RIGHT, AND DRIVE 2.1 MILES WEST AND NORTH TO INTERSECTION WITH ROUTE 1A.

The prominent north-south escarpment on the west side of the Pettaquamscutt River, here crossed, marks the eastern limit of the area of outcrop of the Sterling granite gneiss. The low-lying area to the east is occupied by the Carboniferous sedimentary rocks of the Narragansett Basin.

TURN LEFT ONTO ROUTE 1A, DRIVE 0.1 MILE SOUTH, AND TURN RIGHT ONTO SAUGATUCKETT ROAD. DRIVE 3.6 MILES WEST TO INTERSECTION WITH SOUTH ROAD. TURN LEFT AND DRIVE 1.6 MILES SOUTH TO INTERSECTION WITH ROUTE 1. TURN RIGHT AND DRIVE 3.9 MILES SOUTH AND WEST TO INTERSECTION WITH MINISTERIAL ROAD.

Route 1 here rounds the east end of the Wakefield-Watch Hill moraine, which appears to die out rather than to cross Narragansett Bay to the east.

TURN RIGHT AND DRIVE 1.3 MILES NORTH.

STOP 6. The road has crossed the moraine and given a view of the pronounced knob-and-kettle topography. This road cut at the north edge of the moraine displays light, sandy "new" till.

DRIVE 0.7 MILE NORTH TO INTERSECTION WITH TUCKERTOWN ROAD AND TURN AROUND.

GLACIAL AND SHORELINE FEATURES TRIP, PAGE 3.

Here may be seen the north slope of the moraine rising sharply from the adjacent lowland.

RETURN TO ROUTE 1, TURN RIGHT ONTO IT, AND DRIVE 4.4 MILES SOUTHWEST. PARK ON RIGHT SIDE OF HIGHWAY.

The highway here and in the next stretch driven follows close to the southern margin of the moraine. The broad level area descending to the south is probably underlain principally by outwash from the moraine. The moraine decreases in height and in width toward the southwest. Along the shore to the south may be seen barrier beaches capped by dune ridges.

STOP 7. Outwash sands and gravels in a pit on the south side of the highway.

DRIVE 2.9 MILES SOUTHWEST ON ROUTE 1.

STOP 8. Morainal material in a pit on the north side of the highway.

DRIVE 2.2 MILES SOUTHWEST TO INTERSECTION WITH ROSS HILL ROAD. TURN RIGHT, AND DRIVE 0.3 MILE NORTHWEST.

STOP 9. Morainal material in a pit a short distance east of the road. DRIVE 0.6 MILE NORTH ALONG ROSS HILL ROAD.

STOP 10. Till overlain by sand in a pit on the west side of the road. This locality is actually north of the moraine, on the south end of a till-bedrock hill.

THE TRIP ENDS HERE.

The most direct way to Providence is north and northwest through Bradford and Ashaway to Route 3.

One good way to New London, New Haven, etc. is north and northwest through Bradford and Ashaway to Route 3; thence north to Route 8 $\frac{1}{4}$ (New London Turnpike).

NEW ENGLAND GEOLOGISTS FIELD TRIP - Sunday Morning

October 19, 1947

North Scituate trip - "Rottenstone" pits, with clastic
class - Leader Phillip Schafer.

Cars assemble at 9:30 on Route 6, just west of
intersection with Route 5 (about 4 miles west of
Providence).

Purgatory trip - Stretched conglomerate; also Cliff Walk
if desired - Leader Alonzo Quinn.

Cars assemble at 9:30 on far (south) end of
Mount Hope Bridge, Route 114 (about 18 miles
southeast of Providence).
(Mount Hope Bridge is a toll bridge; 60¢ one way,
1.00 round trip. It may be avoided by driving
around through Fall River.)