

PLEISTOCENE GEOLOGY OF CROTON POINT

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Trips 4-B and 4E.

Route Description and Comments

Mileage

- 0 Shustin's Locust Manor (headquarters) - right (S) on Locust Ave.
- .2 right (S) on US-6
- .4 left on approach to Bear Mt. Parkway (heading W)
- 3.3 bear left on US-9 at intersection with US-6-202
- 3.9 pass under US-202 (Main St.) - continue S on US-9
- 5.9 Buchanan
- 11.9 NY-129 enters US-9 from left
If one had chanced to come along route NY-129, one would have observed the gravel and silt deposits of the former Croton River delta on the left (S) just before reaching US-9.
- 12.5 Continuing along US-9 we rise up onto this former delta surface and find a traffic light ahead. Let us turn right (S) here on Croton Pt. Ave. and proceed to the Harmon railroad station (Fig. 1) Here we notice the wide cut made for the railroad and its shops. We continue west beyond the station on the viaduct over the tracks and skirt the south-side of a remnant of the old delta. If one took time to walk along the seaward (N) side, it would be possible to see where waves have exposed varved clay and slit at the base of these deltaic sands and gravels.
- We do not stop now, but continue, observing a former tidal swamp, now filled with rubbish, on our left. Soon the delta remnant is behind us and we travel on a tombolo (bathing beach on our right and former swamp on our left) to the outer portion of Croton Point. We proceed to the large parking field at its southern end.
- 15.2 Ahead of us we see a sand pit which furnishes the material used to cover the rubbish in the former swamp. Let us examine this exposure. Here we find another remnant of the old Croton delta with sand and fine gravel resting on varved silty clay. Occasional concretions may be seen in the latter. Some of the silty clay layers are disturbed with horizontal layers above them. Are they the result of slumping or disturbance by floating ice?
- Let us now walk S along the shore. We see numerous bricks, castoffs from the days when bricks were manufactured here. Behind some swimming rafts parked above the reach of the tide we see a cattail (freshwater) swamp which marks the source of clay used in brick manufacture.
- As we proceed beyond the swamp we see delta sands, and 100 yards or so further we observe these varved clays resting on glacial till containing boulders of various sizes in a reddish matrix. Now we realize the source of the boulders among which we have been threading our way along the beach. The surface of this moraine is uneven and appears to be dropping below sealevel for a distance

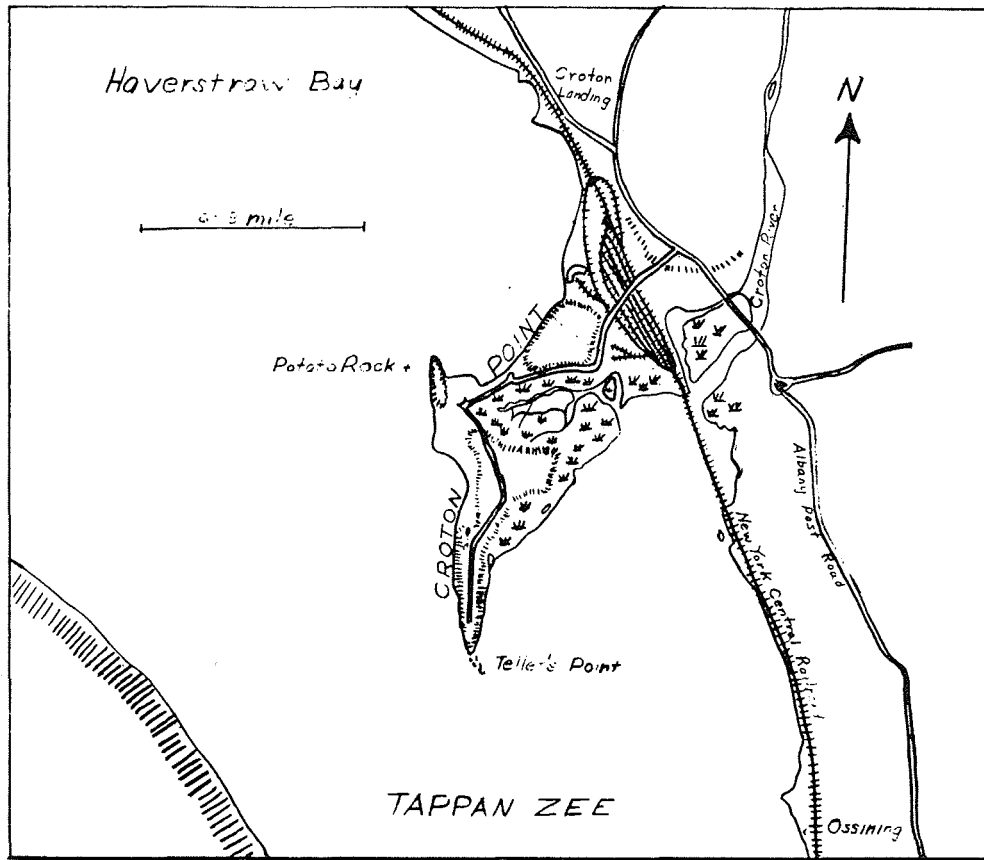


Fig. 1 Map of Croton Point, N.Y

before rising to 40 or 50 feet above sealevel at Teller's Point (Fig. 1). A boulder bar extending south of Teller's Point marks its further continuation.

As we return to our cars we realize the preservation of the outer remnant of the Croton delta from wave erosion must be credited to this moraine.

We can now drive to the north end of the parking area and examine the north tip of the outer part of Croton Point. The weather and the state of the tide will determine whether we walk along the outer side of the point (more boulders) or the inner side (shorter). Woodchuck holes indicate that the top of the southern end of this point is deltaic sand. At the north end are glacial till and Indian shell beds.

Erosion appears to be rapid at all points along the shore. Waves have certainly cut down the size of the Indian campsite (at the point) considerably since the oyster beds were laid there. Was sealevel lower a short time ago? Does the (now buried) tidal swamp south of the tombolo indicate that sealevel was lower when that portion of the old delta was eroded?

Return to cars and drive back to headquarters following the same route as taken at the start of the trip. Compare route description of Trip 2-B between mileages 20.9. to 25.8 and 30.6 to 36.4.

35.5 Arrive at headquarters.

Reference

Kindle, Cecil H. (1949) The Croton Point moraine, *Rocks and Minerals*, Nov.-Dec., p 563-568.