

## TRIP B. CAYUGA INLET TROUGH

FRIDAY AFTERNOON, 8 MAY, 2:00 P.M.

Glacial and proglacial features of the southern part of Cayuga trough, between Ithaca and North Spencer, returning by way of Michigan Hollow and Danby. Includes hanging deltas, kame and kettle topography, marginal meltwater channels, end moraine, outwash plain, stream diversion and the upland surface.

Route. From Cornell Campus descend into Cayuga trough to downtown Ithaca built on compound delta of four creeks. Valley fill more than 400 ft. thick. Bottomlands subject to flooding. South via Routes 13 and 34, leaving Ithaca city limits at 0.0 miles  
Turn left into Buttermilk Falls State Park at 1.3 miles

Stop 1. Buttermilk Falls. Lower portion of Enfield and upper portion of Ithaca formation exposed. Representative of notched lower reaches of hanging valleys of Cayuga trough but contrasts with gorges initiated prior to last glaciation. Buttermilk Creek was diverted by glacial deposition in its interglacial gorge. Hanging deltas exposed in gravel pits 150 yards south.

Continue southwest on Route 13 to Inlet Valley School at 1.9 miles  
Turn sharply right (north) on Route 13A; proceed to Coy Glen at 2.7 miles  
Turn left (west) on Coy Glen Road and enter upper gravel pit at 3.1 miles

Stop 2. Coy Glen hanging deltas. Excavations by Rumsey Ithaca Corporation expose structure of massive deltas built into proglacial Lakes Warren and Dana during recession of the continental ice sheet in late Wisconsin time. Coy Creek in incising a meander initially developed across the main Dana delta has imposed on it second order meanders controlled by bedrock joints. Meet bus at lower pit.

Return south on Route 13A to Inlet Valley School at 4.4 miles  
Continue south on Route 13 over kame and kettle topography.  
Contrast steep southeast wall with gentler northwest wall of Cayuga trough.  
Pass Enfield Glen and entrance to Robert H. Treman State Park at 6.0 miles  
Continue south on Route 34 to Newfield Station (Nina) at 8.1 miles  
Turn right (west) following West Branch .8 mile toward Newfield to 8.9 miles  
Turn left and immediately bear right at fork, climbing due south up the southwest wall of Cayuga trough to intersect Shaffer Road at 9.5 miles

Stop 3. Shaffer Road overlook. Meltwater from a proglacial lake briefly impounded near Newfield flowed through ice-walled channels, cutting the bench followed southeastward by Shaffer Road and debouching across kame terrace to the southeast. View across stagnant ice deposits which fill the southern end of Cayuga trough.

- Continue south on Shaffer Road, turning left (east) on Piper St. at 10.7 miles
- Descend into Cayuga trough over kame complex, via Piper St. to Stratton 13.0 miles
- Turn right (south) on Route 34 at Stratton, riding across complex of stagnant ice deposits which mark minor glacial oscillations during downwasting of the Cayuga ice tongue in recession from the Valley Heads terminal moraine
- Route 34 climbs to 1130 feet, about 750 feet above Cayuga Lake at 18.9 miles
- Tributaries to Cayuga trough have entry angles pointing north, whereas tributaries to the through valley south of this point have entry angles pointing south, suggesting that the present depositional divide between St. Lawrence and Susquehanna watersheds corresponds approximately with an interglacial or preglacial bedrock divide.
- Highway passes onto outwash where moraine ridge curves southeast at 19.2 miles
- Pitting and large kettle lakes (e.g. Spencer Lake) indicate outwash deposition onto unmelted stagnant ice. Valley Heads terminal moraine about 2.5 miles south of this point is largely buried in outwash.
- Turn left (east) on Michigan Hollow Road in North Spencer 20.5 miles
- Cross swampy edge of large kettle lake. Toward east side of Cayuga trough road curves north to parallel low, narrow ridge which separates it from south-flowing Michigan Creek.
- Continue to Point O'Rocks 22.8 miles
- Stop 4. Point O'Rocks. Ice and ice marginal deposits near the Valley Heads maximum crowded Michigan Creek against the side of its valley, forcing it to cut a bedrock channel around this point. During ice wastage Michigan Creek deposited a fan into which it is now cutting. Kame exposed in borrow pit.
- Continue north from Point O'Rocks on Michigan Hollow Road. Moraine deposited by ice moving south down Michigan Hollow crosses valley at 24.7 miles
- Kames exposed in cuts and gravel pits to east near road. Valley bottom widens northward with swamp and ponds, the remnants of a small proglacial lake impounded behind the moraine until drained by Michigan Creek.
- Turn left (northwest) on Route 96 in outskirts of Danby at 28.4 miles
- Continue on Route 96 to moraine ridge trending northeast across Danby Valley. At this point turn right (northeast) on Muzzey Road 30.6 miles
- Turn left (north) on Patmore (Troy) Road at 31.7 miles
- Road as here at 1500 feet above sea level on the glacially modified upland erosion surface. View northeast across Hungerford, Snyder and Turkey hills at the edge of the deeply dissected Portage escarpment.
- Descending the upper slope of Sixmile trough, cross rock bench at 33.6 miles
- This bench at 1030 ft. is continuous northwest to the abrupt nose on South Hill which marks a former ice-walled spillway.

Here the waters of proglacial West Danby Lake in Inlet trough first escaped eastward into Slaterville Lake in Sixmile trough just before the two joined to form Lake Ithaca with outflow southeast past White Church and Willseyville.

Turn left, (northwest) on Coddington Road at

37.0 miles

Enter Ithaca city limits at

38.3 miles

Return through downtown Ithaca to Cornell Campus.