

## TRIP A. ENFIELD GLEN (ROBERT H. TREMAN STATE PARK)

FRIDAY AFTERNOON, 8 MAY, 2:00 P.M.  
(See diagram opposite page)

Leave McGraw Hall. Down the eastern wall of the Cayuga trough, and west across the delta-plain to Albany street, turning south. Soon after crossing Six-mile creek the road (Rte. 13) turns toward the southwest. Excellent views west from this stretch of road of the surface of the delta-plain and the sequence of hanging deltas through which the Coy Glen stream has cut its gorge.

Railroad underpass. Just south of this underpass the end of the interglacial Buttermilk gorge may be seen on the east to be followed slightly to the south by the hanging valley waterfalls made by the post-glacial Buttermilk stream as it descends the oversteepened eastern wall of the Cayuga trough. The large gravel pit to the south of the Buttermilk Falls was excavated in the hanging delta sequence made by Buttermilk creek.

The bed-rock exposed in Buttermilk Falls is the Ithaca formation. The upper member of the Ithaca shale begins at about the top of the first cascade.

Junction of Routes 13 and 13A. The road crosses the delta-plain to the west side of the valley and continues southward on glacial deposits to

State Route 327. From the floor of the Cayuga trough the road climbs the west wall. Small hanging deltas may be observed in several of which gravel pits have been opened.

Upper or western entrance to Tremen State Park. The parking area is in a post-glacial, excavated part of an interglacial gorge (see diagram for details). (The buses will leave the parties and later meet them at the lower or eastern entrance.) From the parking area, walk to the entrance of the post-glacial sector of the gorge. This post-glacial gorge is nearly at right angles to the drift-filled interglacial gorge which swings around the rock island which forms the north wall of the post-glacial gorge. The outstanding feature of the post-glacial gorge itself is the perfection of joint-plane control of the stream course.

Lucifer Falls at the eastern end of the upper gorge is slightly upstream from the main southern wall of the interglacial gorge which has been excavated by the post-glacial stream. The upper gorge is cut in the Enfield shale. The base of the Enfield formation is about at the top of Lucifer Falls. The lower sector of Enfield Glen is in the Ithaca formation.

Several sedimentary features are well developed in the rocks in the vicinity of Lucifer Falls, including current ripple marks that demonstrate that the general current direction was from northeast to southwest. Moreover, there is a submarine erosion channel which shows well in the south wall of the gorge above Lucifer Falls.

View eastward before descending into the interglacial part of the Enfield Glen the eastern, oversteepened slope of the Caguya trough.

Eastward from Lucifer Falls. The trail follows down the drift-filled interglacial valley and thence along the excavated part of interglacial valley. Sulphur falls and the Lower falls represent spurs of the interglacial valley upon which the post-glacial stream was superimposed.

Return to Ithaca via Rte. 13.