

Eurypterids: Central-Eastern New York Fieldtrip
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ROADLOG

START

- 0.0 Intersection of US20 and NY10, Sharon Springs
Head west on US20.
- 1.1 Leesville
- 5.2 Parking Area
- 5.8 Outcrops on both sides of road. Important sections revealing a number of Early Devonian stratigraphic units including the Kalkberg and included metabentonites.
- 6.4 EXIT NY 166.
- 6.5 TURN RIGHT onto NY166.
- 7.0 **STOP 1 Outcrops of Thacher Formation and overlying units.**
This section exhibits a wonderful stratigraphic sequence of limestones of various characteristics, but is little different from the type Olney Limestone at Split Rock near Syracuse, New York. These units are within the Early Devonian *Erieopterus* Biozone. *Howellella* (occurring in enormous numbers), and *Megambonia* are characteristic here as they are in the type Olney Limestone at Syracuse. In this region (Cherry Valley), *Erieopterus* occurs in beds with these typical marine forms and in ostracodal limestone interbeds. Progressively westward, typical marine forms disappear, especially in the dolomitic units (Chrysler Formation of the Syracuse area, Honeoye Falls Dolostone south of Rochester, and the Clansbrassil Formation of Ontario, Canada.
- Turn around and head back to US20
- 7.5 TURN LEFT onto US20 and head west.
- 11.8 East Springfield
- 15.1 JCT. NY80
- 16.2 Petrified Creatures "Museum of Natural History"
- 17.7 Warren
- 20.5 Richfield Springs
- 21.2 JCT. NY167
- 23.7 Brighton Corners
- 28.8 East Winfield
- 29.7 JCT. NY51, TURN RIGHT.
- 32.8 Cedarville
- 33.0 TURN LEFT.
- 33.2 Intersection NY51 North
Continue west (straight) on Cedarville Road.
- 36.0 Intersection with Jerusalem Hill Road

STOP 2 Litchfield Town Hall Site

While a relatively shallow roadcut, opposite the Litchfield Town Hall, the small exposure of the Phelps Waterlime at the top of the Fiddlers Green Formation here has yielded hundreds of eurypterid specimens. This is not a classic locality as Tollerton (1997) implied. Within Litchfield Township and nearby areas, Clarke & Ruedemann (1912) described that in the 1800s, eurypterids were collected from rock fences and barn foundations. No specimens were obtained from bedrock and the stratigraphy of the eurypterid-bearing beds was poorly known at the time. In the 1960s, the Litchfield Town Hall Site was a glacially polished and striated mass of waterlime that was difficult to examine. A eurypterid carapace appeared on the polished surface and I and some associates began to slowly excavate the upper portions of the Fiddlers Green here. Over the following several years, we extracted hundreds of specimens indicating a fauna identical to that found at the well-known Passage Gulf roadcut. One scorpion has been

recovered from this site as well as cephalopods, ostracods, a phyllocarid and several species of eurypterids—all part of the *Eurypterus remipes* Biozone.

At this stop we will examine the transition from the underlying Victor Member to the overlying Phelps Member of the Fiddlers Green Formation. Various sedimentary structures, including stromatolites and mudcracks, are present and, of course, we will look for eurypterid remains.

- TURN AROUND and head back to Cedarville.
- 38.7 STOP SIGN – TURN LEFT onto NY51 (winding road).
- 40.5 **STOP 3 Syracuse Formation (Salina Group) on right.**
Small section exhibiting typical Syracuse Formation. The *Waeringopterus* Biozone is found within the lower portions of the Syracuse Formation in this part of the state.
- 41.0 **STOP 4 Red shale of the Vernon Formation (Salina Group) on left and right.**
Approaching the base of the Salina Group, we see here exposures of the bright red Vernon Formation. In this part of the state, the *Hughmilleria* Biozone occurs within basal beds of the formation. Pterygotids are also well-known, especially those of the Downing Brook Member.
- 45.7 Village of Illion
- 47.1 Intersection E. Clark Street TURN RIGHT, head to Mohawk (street changes to E. Main Street).
- 48.0 Village of Mohawk
- 48.8 JCT. NY28, continue forward.
- 49.4 JCT. NY55, continue to I90, NYS Thruway on right.
- 49.7 TOLL BOOTH, head west to Canastota exit for next stop.
- 92.6 Canastota Exit 34, leave Thruway, TURN LEFT on NY13 South.
- 95.0 Intersection NY5/Oxbow Road, CONTINUE SOUTH.
- 97.0 Clockville
- 98.0 REST AREA ON RIGHT, drive in and park.
- STOP 5 Roadcut on east side of the highway.**
This roadcut reveals one of the most important (eurypterid-bearing) sections in this part of the state. The top of the Fiddlers Green is exposed in a drainage ditch, and upsection, several other Siluro-devonian units are exposed. Eurypterid horizons begin with the top of the Fiddlers Green Formation (Bertie Group)—the Phelps Waterlime, exposed in the ditch, has yielded fragmentary eurypterid remains and salt hoppers. The Cobleskill Formation is also well-exposed on the east side of the road. The formation consists of 3 members: a lower dolostone, middle limestone member, and an upper dolostone. The dolostones are massive, and the upper dolostone is important for the *Eurypterus* fauna it contains. The Silurian-Devonian boundary is placed above this unit. Early Devonian sedimentation is revealed by the waterlime beds (Chrysler Formation) in the sequence above the Cobleskill Formation. *Erieopterus microphthalmus* is characteristic of these waterlimes and also the lower beds of the overlying Thacher Limestone.
- TURN AROUND and head back to NY5 (north).
- 99.0 Clockville
- 100.0 NY5 TURN LEFT (west).
- 106.1 Chittenango Falls
- 106.6 TURN LEFT and follow NY13 (south).
- 106.8 TURN LEFT towards Cazanovia. Follow NY13 south towards Chittenango Falls State Park.
- 111.4 REST AREA ON RIGHT, drive in and park.

STOP 6 Roadcut on east side of the highway, Chittenango Falls Roadcut.

This cut begins with the Akron-Cobleskill. While an occasional stromatoporoid has been found in the Akron-Cobleskill here, note the lack of the fossiliferous limestone, observed at Clockville, in the section exposed here. Overlying Chrysler dolostones are known for the fine celestite and calcite specimens obtained here over the years. Large pieces of eurypterid integument have been

observed on some massive chunks of fallen Akron-Cobleskill at this site and at Clockville. Above is a thick sequence of limestones, including the *Erieopterus*-bearing Thacher Limestone.

Turn around and head north on NY13.

- 115.9 NY5, TURN LEFT (west) Intersection of NY173.
- 116.0 TURN WEST onto NY173 (west), head towards Manlius and Syracuse.
- 121.4 Entering Manlius
- 122.4 JCT. NY92, continue on NY173.
- 127.4 JCT. NY91 (Jamesville), proceed west on NY173.
- 130.7 TURN LEFT, follow NY173.
- 131.5 JCT. US11, continue on NY173 and up the hill.
- 133.4 JCT. NY175, continue on NY173.
- 136.7 Onondaga Blvd. (signal light at intersection), TURN LEFT and go to the end of the road (base of Split Rock Quarry).
- 137.4 Split Rock Quarry – we will walk up the hill to enter this large quarry complex.

Stop 7 Split Rock Quarry

This old abandoned quarry, which we can only hope will be preserved, contains a wonderful section of the Olney Limestone. The Early Devonian *Erieopterus microphthalmus* occurs abundantly in strata just beneath the Olney Limestone, in the lower beds of the Olney, and in several feet of strata near the top. The occurrence is analogous to the famous Bertie Group eurypterid horizons in that the eurypterid remains occur in windrows (current induced accumulations of animal and plant remains). While pterygotid remains are relatively rare here, they been found within the *Erieopterus*-bearing horizons in this quarry.

Turn around and head back to the stoplight. TURN LEFT and head up to NY 5. TURN RIGHT at the light and go to I690 (and the New York State Thruway) and head in the direction you need to go to return home.

