

**A Census of Devonian Life in Central New York State:
Fossil Collecting for Teachers and Students**

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Richly fossiliferous rocks of Middle Devonian age (375 million years old) are exposed near Hamilton, NY, and represent some of the most complete fossil-bearing sequences that formed during this time period anywhere in the world. The shale we will examine was deposited at a time when the Acadian Mountains (precursor of the younger Appalachian Mountains) were forming in eastern New York state (present day Catskills Mountains area) as a result of collision between a microcontinent and eastern North America. Uplift and mountain building resulted in extensive erosion and transport of sediment towards Hamilton where these materials accumulated. As the fossils below indicate, the shallow epi-continental (epeiric) sea that once covered central New York State had abundant, teeming life.



Arthropod (trilobite)



Brachiopod (lamp shell)



Bryozoa (moss animal)



Cnidaria (coral)



Echinoderm (sea lily)



Mollusk (nautilus)



Mollusk (clam)



Mollusk (snail)



Trace fossil (worm burrow)

Photographs by C.M. Soja of Middle Devonian fossils from central New York State in the R.M. Linsley Collections, Department of Geology, Colgate University, Hamilton, NY

Our goal during the field exercise is to accumulate as much information as possible to complete a detailed "census" and paleoecological analysis of the fossils. Upon arrival at the field site, participants will draw specialist roles from a hat and work in small groups collecting fossils. Time will be allotted for specialists to work together compiling data before our group discussion. We will brainstorm questions that paleontologists can ask and answer about the fossils preserved at the field site. Participants will depart the field site appreciating the diversity of life that existed in central New York State during the Devonian and the environmental conditions that were conducive to exquisite fossil preservation.

Field Trip Schedule

12:00 noon—group departs Hamilton College for fossil site near Lebanon Reservoir
(32 miles + one quick restroom stop = 1 hour)

1:00 pm—bus arrives at fossil locality

1:00-1:15 pm—welcome and orientation

1:15-2:15 pm—group collects fossils in specialist teams

2:15-3:00 pm—each team compiles fossil data

3:00-3:45 pm—group discusses data and makes interpretations

3:45-4:00 pm—Q&A, participants pack up samples

4:00 pm—group departs Geer Road (+ one quick restroom stop)

5:00 pm—group arrives at Hamilton College

A fossil guide (Some Common Invertebrate Macrofossils of the Hamilton Group of Central New York modified by C. M. Soja) will be provided to each participant.

