

TRIP G: PALEONTOLOGY OF THE CORTLAND AREA

Jonathan W. Harrington

All of the exposures visited on this trip are in the Ithaca formation. The participant is referred to the discussion on benthic communities of the Genesee Group (Trip A).

Selected Exposures

1. Roadcut on Rte 81, 3 miles south of Cortland

This exposure represents the Grammysia biotope in the Smethport depositional phase. Lithology is highly variable with shales, and ripple-marked and cross-laminated siltstones and fine sandstones. Coquinite lenses, especially with Cupularostrum, are frequent and usually show distinct size-sorting and differential accumulation of valves. Areas of high currents are dominated by the infaunal filter-feeder, Grammysia, and the byssally attached bivalve, Goniophora. Occasional vertical burrows may be seen.

Sheltered areas support an abundant epifauna of crinoids (Decadocrinus and Acanthocrinus) and occasional brachiopods. This environment is characterized by the accumulation of plant fragments and orthoconic cephalopods, and by the high incidence of carnivores and scavengers - the gastropods, Pleurotomaria and Loxonema, several asteroids (Urasterella, Lepidasterella) and ophiuroids.

The orientation of many of the smaller crinoid calices (inverted with free arms outspread) indicates very slight water agitation. However the preservation of fragile specimens such as asteroids and the scyphomedusa, Plectodiscus cortlandensis, requires periodic rapid sedimentation. Fecal material is occasionally found at this outcrop. It has tentatively been identified as Tomaculum problematicum, a form not previously reported in North America.

2. Outcrop in Homer Gulf on Rte 41A, 4 miles north of Cortland.

Ponticeras perlatum has been identified from exposures in Homer Gulf. This places the section in the lower portion of the Ithaca formation, probably correlative with the Renwick shale member in the Cayuga Lake meridian.

Lithology is extremely variable; consisting mainly of gray and reddish shales and siltstones. The fauna contains elements of both the Warrenella and Ithaca biotopes. Particularly common are: Conularia, Plumulatia, Mucrospirifer, "Pugnoides", Cupularostrum eximia, Taxocrinus and linguloid brachiopods.

3. Small outcrop on the west side of Cosmos Hill, 1 1/2 miles northwest of Cortland.

At this outcrop shales and fine siltstones of the Smethport phase are

exposed. The fauna is that of the Leptodesma biotope, with abundant epifaunal filter-feeding faunas.

4. Roadcut on Rte 81 at Homer, Cortland Co.

The sequence here consists of alternating dark shales and fine siltstones, occasionally ripple-marked. The sparse fauna, representing the Leptodesma or Grammysia biotope, consists of rare brachiopods and occasional crinoids (Acanthocrinus). At several horizons are colonies of the hexactinellid sponge, Actinodictya placenta. These fragile forms were almost certainly preserved in situ.

Small hillside quarries immediately north of this exposure have yielded Ponticeras perlatum. Thus, indicating a correlation with the lower portion of the Ithaca (Renwick or Six Mile Creek Members) in the Ithaca meridian.