

Stratigraphy and Sedimentation 303

Fall 2005

Objective #1: Given an outcrop, 1D/2D section, correlation diagram or another representation of a stratigraphic section, interpret the depositional history of the sequence and develop an internally consistent hypothesis about the relative importance of sediment supply, subsidence and/or base level in creating the sequence.

Objective #2: Become familiar with regional Paleozoic stratigraphy. Many of you will likely work professionally in this region at least for part of your careers, and will be helpful to know the strat. column.

Objective #3: Given a tectonic setting, predict what types of sedimentary processes and depositional environments would result and what their stratigraphic/sedimentologic signature would be.

1 Project #1
virtual field trip to the Cretaceous
Book Cliffs, UT

Project Duration: 23 Aug- 19 Sept
Project Due Date: 19 Sept, Monday 5 p.m.

Content: observation and interpretation of basic clastic lithologies, bedding geometry, and sedimentary textures (mainly grain size, rounding); sedimentary facies; basic sedimentary petrography

1 Project #2 **2**
depositional environments of
Silurian Rockwood Fm

Project Duration: 20 Sept - 31 Oct
Project Due Date: 31 Oct, Monday 5 p.m.

Content: Observation and interpretation of primary and secondary sedimentary structures; measuring a section; trace fossils; correlation; Walther's Law and introduction to stratigraphy

2 Project #3 **1**
regional stratigraphy
and facies interpretation

Project Duration: 1 Nov - 21 Nov
Project Due Date: 21 Nov, Monday 5 p.m.

Content: observation and interpretation of the regional Paleozoic strata, basic lithologic determination, bedding geometry and sedimentary structures (grain size, rounding); fossil content; sedimentary facies interpretation; basic sedimentary petrography; regional tectonic setting

3 Project #4
sedimentation and tectonics jigsaw

Project Duration: 22 Nov - 1 Dec
Project Due Date: 1 Dec, Monday 5 p.m.

Content: provenance analysis; paleocurrent analysis; sedimentary facies and plate tectonics

Portfolio Due Date: 5 Dec

All original write-ups and presentations turned in on a pin-drive or CD. One project can be revised and included as an appendix to portfolio file.

Final Exam 8 Dec, 11-1 p.m. Thursday

practical exam