

# INVERTEBRATE PALEONTOLOGY

## SPRING, 2000 LECTURE/LAB SCHEDULE

Semester Schedule Based on Last Time Course Was Taught

---

Because this course continues to evolve, the schedule below is tentative and subject to change. Any significant changes will be announced in class.

---

### LAB TESTS

Note that lab tests are not taken during the regularly scheduled lab time. Rather a several day period will be scheduled for the lab test, and a tray of test specimens placed in one of the cabinets. You may take the test any time during the several day period, at a time convenient to yourself. That is, each of you will likely take the test alone. The Honor Code of JMU applied to the taking of these tests. I expect that each of you will abide by the rules of honor and honesty.

---

### WEEK 1

### LAB: STROMATOLITES

JANUARY

10 M ..... Introduction  
 12 W ..... Gould's Eternal Metaphors  
 14 F ..... Evolution of Evolutionary Theory

### WEEK 2

### LAB: CALCAREOUS ALGAE

17 M ..... Major Developments in The History of Life And Earth  
 19 W ..... Fractal Geometry And The Patterns of Life  
 ..... The Problem of Problems  
 ..... Non-equilibrium Thermodynamics - Getting Around The 2nd Law  
 21 F ..... Determinism  
 ..... Chaos Theory - The Period Doubling Route to Chaos  
 ..... Strange Attractors

### WEEK 3

### LAB: ARTIFICIAL LIFE EXERCISES

24 M ..... Artificial Life Systems  
 ..... Computer Simulations on Life3000  
 26 W ..... Positive and Negative Feedback and Evolution  
 ..... Evolution of Evolutionary Theory  
 28 F ..... Evolution of Evolutionary Theory

### WEEK 4

### LAB: PROTISTS

31 M ..... Lovelock's Gaia Hypothesis  
 FEBRUARY  
 2 W ..... The Origin of Life  
 4 F ..... Archaean Ecosystems

**WEEK 5****LAB: SPONGES**

- 7 M ..... Archean Daisyworld; Proterozoic Ecosystems
- 9 W ..... Proterozoic Ecosystems
- 11 F ..... Seminar: Archean and Proterozoic Daisyworlds

**WEEK 6****LAB: CNIDARIA**

(END LAB TEST ONE)

- 14 M ..... Benthic Moneran and Protoctist Fossil Record
- 16 W ..... Benthic Moneran and Protoctist Fossil Record
- 18 F ..... Pelagic Protists: Fossil Record and Paleoenvironmental Interpretations

**WEEK 7****LAB: GASTROPODA**

- 21 M ..... Pelagic Protists: Fossil Record and Paleoenvironmental Interpretations
- 23 W ..... Pelagic Protists: Fossil Record and Paleoenvironmental Interpretations
- 25 F ..... The Phanerozoic Record of Life (Principles, Riphean, Vendian, Tommotian)

**WEEK 8****LAB: BIVALVIA**

- 28 M ..... The Phanerozoic Record of Life (Lower Paleozoic and Reefs)

MARCH

- 1 W ..... The Phanerozoic Record of Life (Paleozoic)
- 3 F ..... The Phanerozoic Record of Life (Paleozoic)

---



---

 6 M - 11 S Recess
 

---



---

**WEEK 9****LAB: CEPHALOPODA**

- 13 M ..... The Phanerozoic Record of Life (Paleozoic)
- 15 W ..... The Phanerozoic Record of Life (Mesozoic)
- 17 F ..... The Phanerozoic Record of Life (Mesozoic)

**WEEK 10****LAB: TRILOBITA**

(END LAB TEST TWO)

- 20 M ..... The Phanerozoic Record of Life (Mesozoic)
- 22 W ..... The Phanerozoic Record of Life (Cenozoic)
- 24 F ..... The Phanerozoic Record of Life (Cenozoic)

**WEEK 11****LAB REVIEW**

- 27 M ..... Origin of Multicellularity (Biological Principles)
- 29 W ..... Origin of Multicellularity (Biological Principles)
- 31 F ..... Origin of Multicellularity (Biological Principles)

**WEEK 12**

**LAB: BRACHIOPODA**

APRIL

- 3 M ..... Origin of Multicellularity (Geologic Record)
- 5 W ..... Origin of Multicellularity (Geologic Record)
- 7 F ..... Seminar on the Problem of the Origins of Multicellularity

**WEEK 13**

**LAB: BRYOZOA AND GRAPTOLITA**

- 10 M ..... The Coelomate Grade of Evolution
- ..... Functional Organizations and Adaptations of Coeloms
- 12 W ..... Organization and Evolutionary Relationships of True Coelomates
- 14 F ..... Coelomate Evolutionary Record and Adaptive Strategies
- ..... Is There Progress in Coelomate Evolution?

**WEEK 14**

**LAB: ECHINODERMATA**

- 17 M ..... Extinction: Coming to Grips with the Fact Most Species Are Extinct
- 19 W ..... Extinction: Coming to Grips with the Fact Most Species Are Extinct
- 21 F ..... Extinction: Coming to Grips with the Fact Most Species Are Extinct

**WEEK 15**

**LAB: REVIEW**

(END LAB TEST THREE: COMPREHENSIVE)

- 24 M ..... Paleocology: A Silurian Example
- 26 W ..... Paleocology: A Silurian Example
- 28 F ..... Reading Day/Snow Make-up Day

**Finals Week**

MAY

- 1 M .....
- 3 W ..... Wednesday, May 3 from 10:30 12:30 <sup>1</sup>
- 5 F .....

---

<sup>1</sup> Since all lecture tests are take home, the final exam is also a take home. Which means that the final exam will not be due at the final exam time. Instead we will schedule the final lab test for the regularly scheduled exam time. The lecture portion will be due some time later in the week, at a mutually convenient time to the class members and myself.