

THIS WEEK IN BI 102

EXAM #1 IS MONDAY JAN. 26, 7:00 - 7:50 P.M.

TUESDAY LECTURE



Mechanisms of Change
Linking mutations and variation to fitness and selection.

THURSDAY LECTURE



Eons of Life on Earth
A whirlwind walk through 4.5 billion years of geologic time.

RECITATION



Evolutionary Case Studies
Using fossils, DNA, and geographic data to study evolution.

LABORATORY

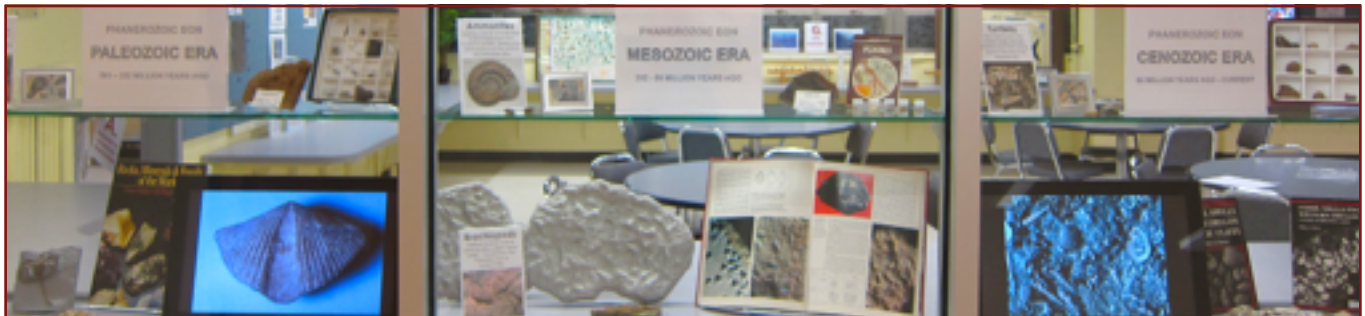


Eras and Periods of Time
Characteristic organisms of different eras.

ON-LINE READINGS



Darwin's Finches; Evolution Today
Revisiting Darwin; Reconstructing species.



Work Ahead for Tuesday's Lecture

Read "[Darwin's Finches](#)" and answer the following questions.

Where did Rosemary and Peter Grant study finches? _____

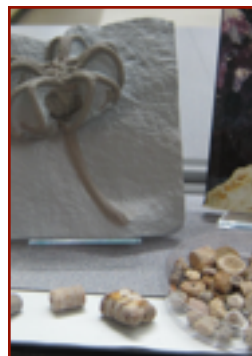
What severe environmental event impacted their study site in 1977?

Explain what happened to the finches.

Contrast this with what happened in 1984-1985.



View the general Geologic Timeline in this week's recitation room (127 Weniger) hall window.



Work Ahead for Thursday's Lecture and Recitation

Review "[Evolution Today](#)" and answer the following questions.

Describe what similar embryos across species suggested to Darwin and other early researchers.

What are **homologies**?

Provide examples of **vestigial organs** in animals.

Work Ahead for Recitation

In the **activity manual**, read over *Evolutionary Case Studies* to answer these questions.

Answer question #1, p. 69, comparing abbreviated amino acids (S, H, G, V, etc.) in a similar protein across different species.

From the readings you just completed (Evolution Today), what is a **phylogenetic tree**? See if you can use this information to answer question #2 on p. 69.

Even though Portfolio #2 isn't due until Monday, February 9, it is helpful to complete the recitation's portfolio assignment (Exam Analysis, p. 75) this week, while exam #1 is fresh in the mind.



Thought Question:
Why do we typically find fossilized bones and teeth from animals, but not soft organs?

Work Ahead for Laboratory

In the **activity manual**, read over *Eras and Periods of Time* to answer these questions.

Cyanobacteria are a group of bacteria that obtain energy through the process of _____ (question #3, p. 81). Remnants of prehistoric (before human recorded history) are found in _____ which date back more than 2.8 (or 3.5) _____ years ago (question #5, p. 81)

Put these three Eras of our current Phanerozoic Eon in the correct order to oldest to most recent: Mesozoic, Cenozoic, Paleozoic

We are currently living in the _____ Era. What type of plant that is a critical component of the human diet has become widespread in this era? _____ (Station G, p. 86)

If your exam #1 results are not as high as you would like... First do the "Exam Results Analysis" portfolio assignment (activity manual, p. 75). Next, seek assistance from the Teaching Team ([office hours](#) are posted at the course website).

Geologic Time



Precambrian:

Approximately 4.5 billion years ago (bya) to 542 million years ago (mya). Most Precambrian life was bacterial, but more complex organisms including the first animals arise late in the Supereon.



Paleozoic Era: 542 mya to 251 mya, land plants and the first vertebrate land animals arise.



Mesozoic Era: 251 mya to 65.5 mya, "the age of reptiles" and the first mammals.



Cenozoic Era: 65.5 mya to present, grasslands and "the age of mammals."