

The Edges of Life

A Series of 6 Lectures
Exploring Our World
and Ourselves
The University of Arizona
College of Science
Spring 2008



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College of Science
UASCIENCE



Topics of the public lectures

- Origins of life
- The limits of life/life on other planets
- The origin and extinction of species and human impact
- Animal and human cognition
- What is death
- Technology and human life

Other things you will learn:

- The tree of life
- A short history of life on earth
- What is science
- Critical evaluation of scientific topics
- Writing a summary
- What is a good presentation

The Edges of Life

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Course webpage:

<http://www.eebweb.arizona.edu/Faculty/Dornhaus/courses/ecol195g.html>

Colony organisation



- Collective decision-making in ants
- Communication and pheromones in bumble bees
- Benefits of recruitment in honey bees
- Division of labor in ants and bees

Syllabus etc.

- Check out the website
<http://www.eebweb.arizona.edu/faculty/dornhaus/courses/ecol195g.html>
- You are required to attend the 6 public lectures (Wed 7pm Centennial Hall) (30% of grade)
- And write a max. 300 word summary of each (30% of grade)
- Speak up in class! (30% of grade)
- No class on March 5th, but still go to lecture!

Writing style

- Make sure to start in a way that explains what the topic is.
- Make sure to end with a sentence that summarises the main point and the relevance of it all.
- Give details in the middle.
- Write 200-300 words (no more no less!!)



Writing style

- Ideally, each sentence should link with the sentence before.
- All sentences should be complete sentences.
- If someone only reads the first and last sentence of each paragraph, she should get the main message.

Writing style

- Read what you've written again at the end - does it make sense?
- Check for grammar and spelling
- Give it to someone else to read. Did they understand what the lecture was about?

Some admin stuff

Reading

- We will continue discussing these topics in class after the public lectures have finished.
- Please choose one book from the reading list! (let me know which)
- You will read a chapter of your book each week and present what you've learned to class from March 26.

A history of life on earth

A history of life on earth

- How old is the earth?
- How old is the oldest evidence of life?
- How long was it before complex, multicellular life appeared?

A history of life on earth

A history of life on earth

- How old is the earth?
- And how would you find out if you don't know?
- How long was it before complex, multicellular life appeared?

A history of life on earth

A history of life on earth

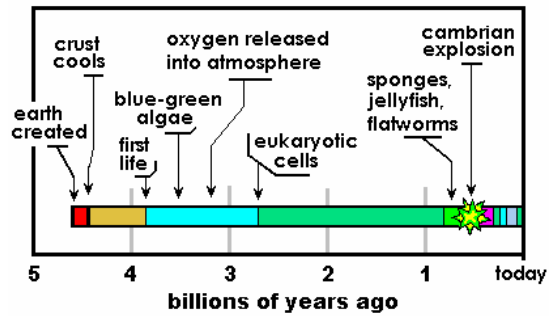
- How old is the earth?
http://en.wikipedia.org/wiki/Age_of_the_Earth
- How old is the oldest evidence of life?

http://en.wikipedia.org/wiki/Origin_of_life

- How long was it before complex, multicellular life appeared?

http://en.wikipedia.org/wiki/Timeline_of_life#Basic_timeline

A history of life on earth

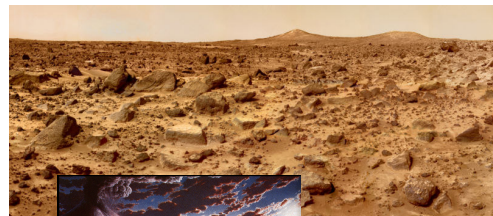


A history of life on earth



The Hadean era

A history of life on earth



The Archean era



A history of life on earth

Stromatolites

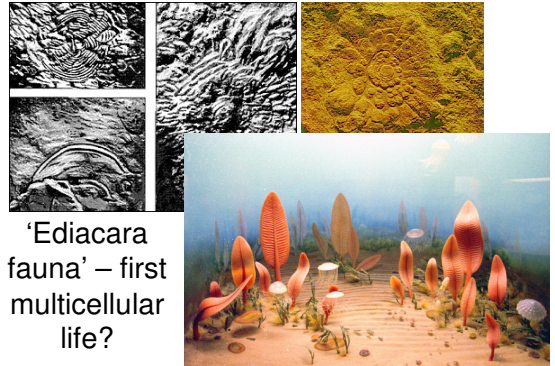
complex communities of (mostly) cyanobacteria - produced all the atmospheric oxygen



A history of life on earth



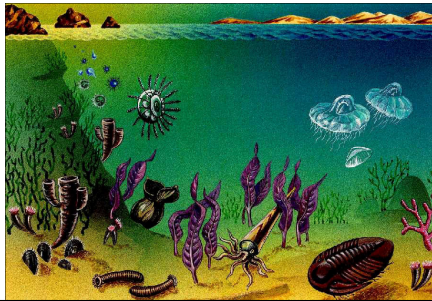
A history of life on earth



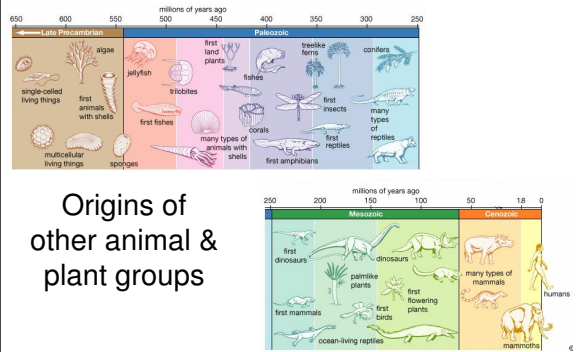
'Ediacara fauna' – first multicellular life?

A history of life on earth

The 'Cambrian explosion'

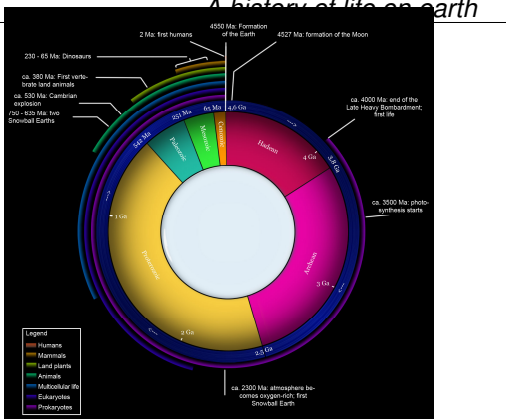


A history of life on earth



Origins of other animal & plant groups

A history of life on earth



A history of life on earth

