

*Natural Sciences 360*

*Legacy of Life*

*Lecture 1*

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# *“Legacy of Life”*

## Introduction and Course Overview

# Themes of the Course:

Life over time:

- Origin
- Diversity
- Evolution

What can groups tell us about evolutionary processes?

# Themes of the Course:

Deep Time – How old is life?

**HOW** did it get to be how it is?

# How old is life?

...About Three Billion years old. (The earth is about 4-4.5 billion years old.)

So, if life is about three billion years old...

- That's about 300 million years a week (in a quarter term).
- That's about 100 million years a class period.
- That's about 1,400,000 years a minute.

To look into deep time, we must turn to fossils.

TYPES OF FOSSILS...



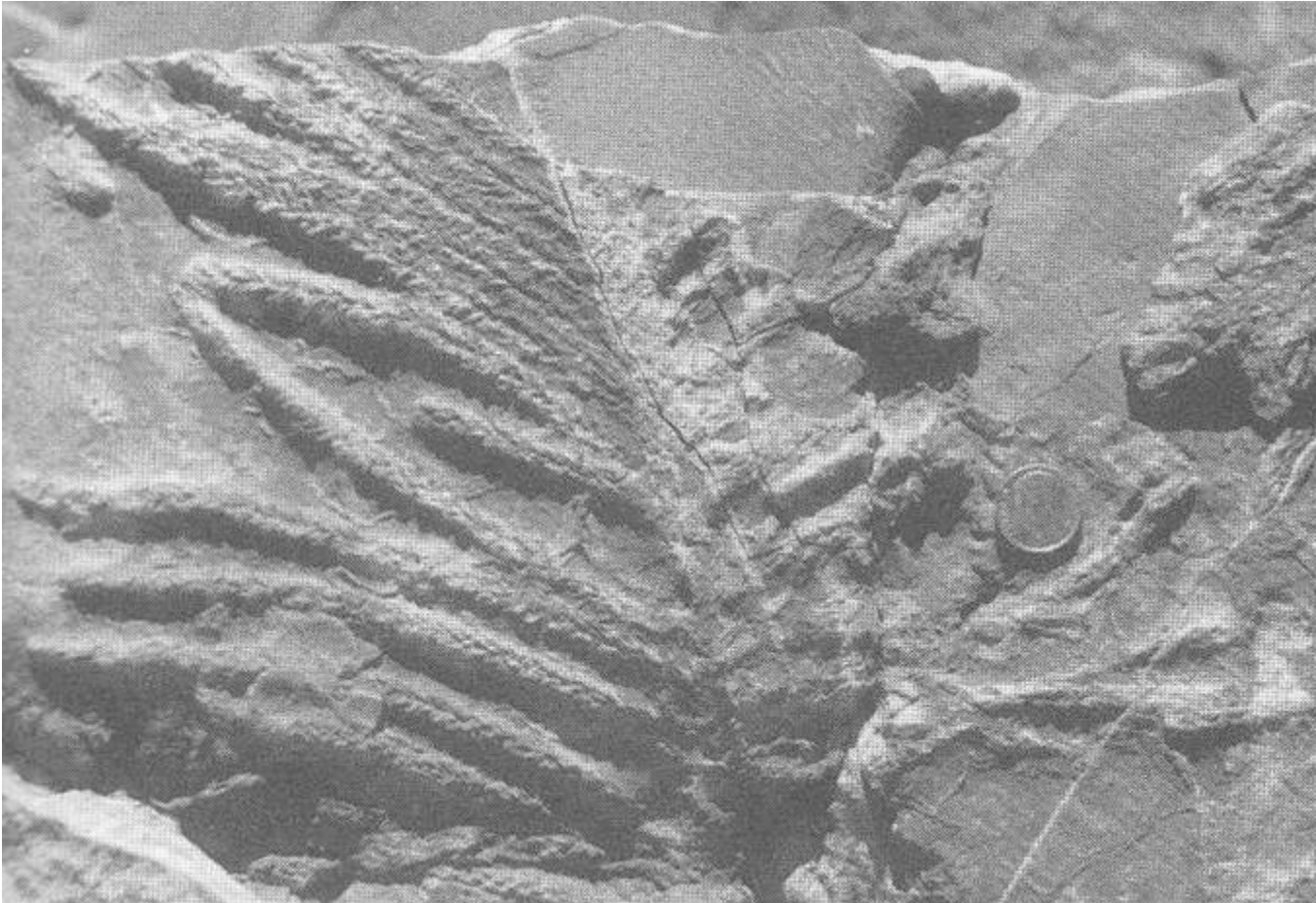






Permineralized amphibian skeletons

280 million year old specimens from Germany called  
*Seymouria*



Plant Impression  
*Walchia*, a fossil fern-like plant



280 million year old footprints from Germany

Deep Time

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Regardless – good to look at the big picture.

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Science: part of knowledge? Actually product of all three.

# Goals of the next lecture:

Show how biology was influenced by geology.

Show how geological knowledge (and thus biological knowledge) are product of scientific investigation AND the prevailing culture of the time.\*

\*Is today any different?