

The background of the slide features a detailed illustration of fossilized biological remains embedded in a reddish-brown rock matrix. The fossils include several fish skeletons, some showing distinct scales and fins, and a central plant fossil with a complex, branching structure. The overall scene is set against a gradient background that transitions from a warm orange-red at the top to a pale yellow-green at the bottom. A large, semi-transparent white shape with rounded corners is positioned in the lower right, serving as a backdrop for the text.

Biological Evolution

Chapter 10

evolution

a gradual change that causes something to improve or become more complex

biological evolution

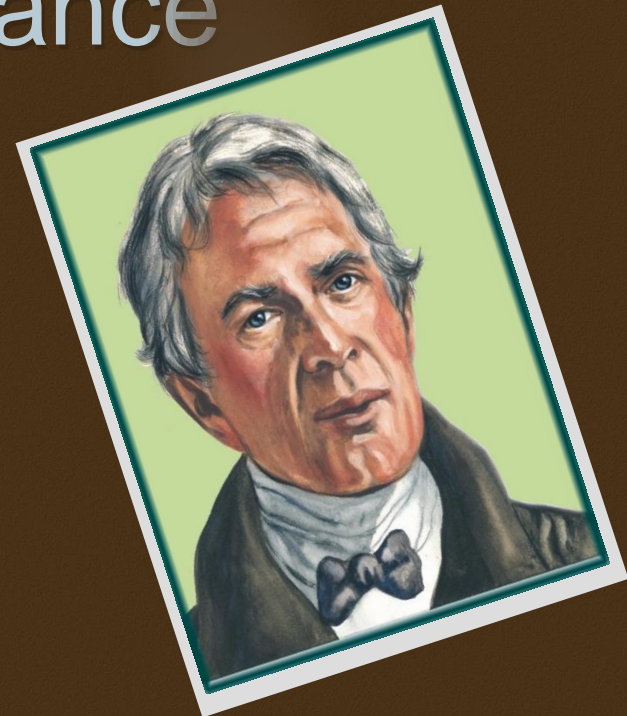
the change of one kind of organism into another kind of organism

Theory of Evolution

- Offspring must inherit new traits that make them different from their parents.
- These new traits must improve the offspring's ability to survive.

Lamarck's Theory

- Theory of Inheritance of Acquired Characteristics
- Use and Disuse Theory



Darwin's Theory

Natural Selection

- In every species there are more young produced than can remain alive; therefore, some will die.

Darwin's Theory

Natural Selection

- The individuals in a species will compete with one another for the things necessary for survival such as food, shelter, and mates.

Darwin's Theory

Natural Selection

- In every species, there are some individuals that are able to compete for things more effectively.

Darwin's Theory

Natural Selection

- Those individuals that have traits that allow them to win the competition are the individuals that will live and reproduce.

Darwin's Theory

Natural Selection

- Those individuals that reproduce pass on their traits.

Darwin's Theory

Natural Selection

- Only the organisms with the traits best suited to survive will be able to reproduce and pass on their traits.



Darwin's Theory

Natural Selection

Natural selection will
cause new kinds of
organisms to evolve.

Hugo De Vries

Evolution by Mutation

- Mutations provide the genetic changes necessary for evolution.



THREE SCREWS WERE
DROPPED INTO THREE CLOCKS



THIS ONE HAS
STOPPED ALTOGETHER



THE SCREW MUST HAVE LODGED
IN AN UNIMPORTANT PLACE...
THIS CLOCK RUNS FINE.



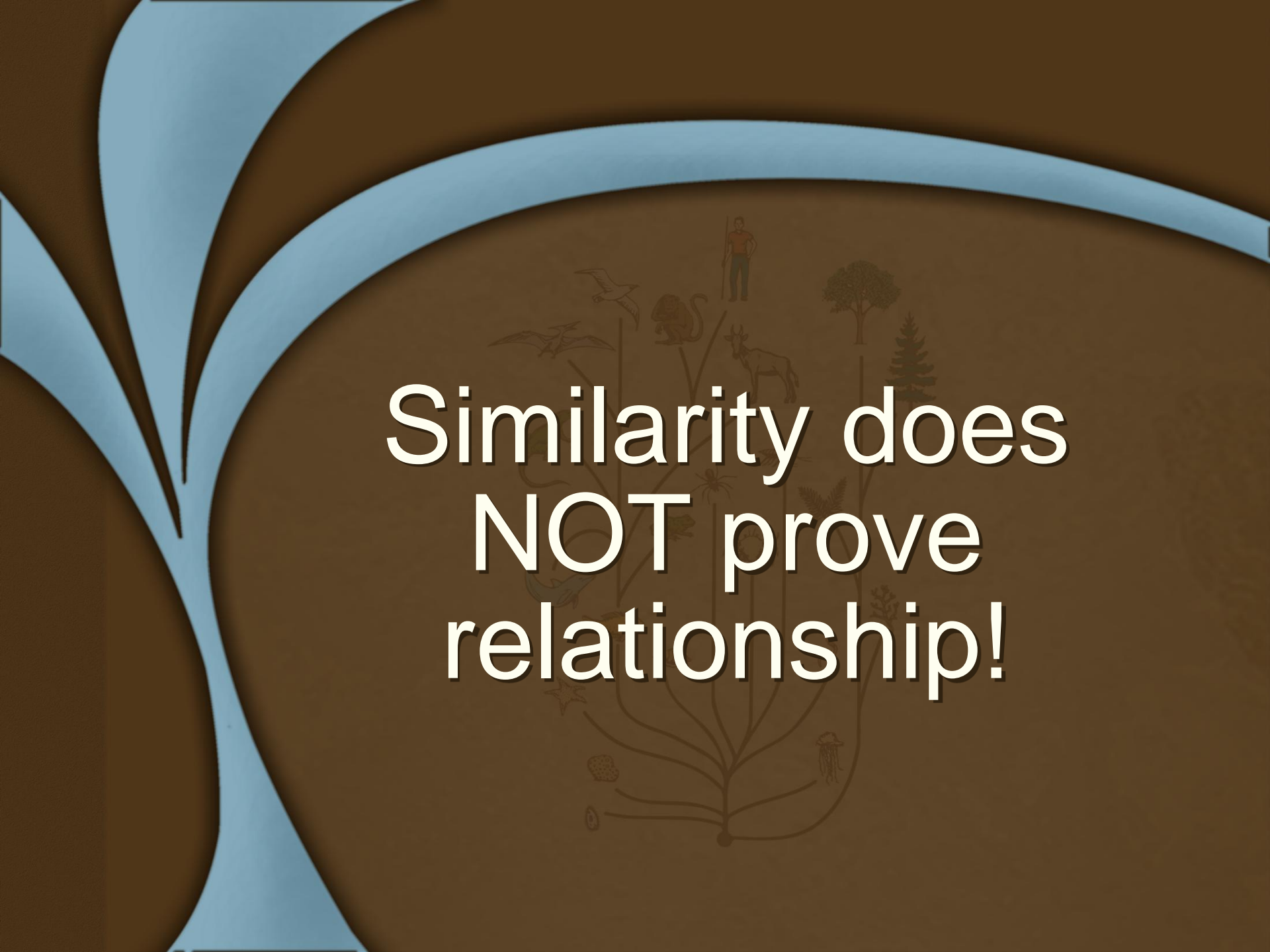
Mutation-Selection Theory

Neo-Darwinism

- Mutations supply new traits.
- Organisms produce more offspring than can survive.
- Selection allows only those with the best traits to survive.

phylogenetic tree

a diagram demonstrating the supposed stages of biological evolution



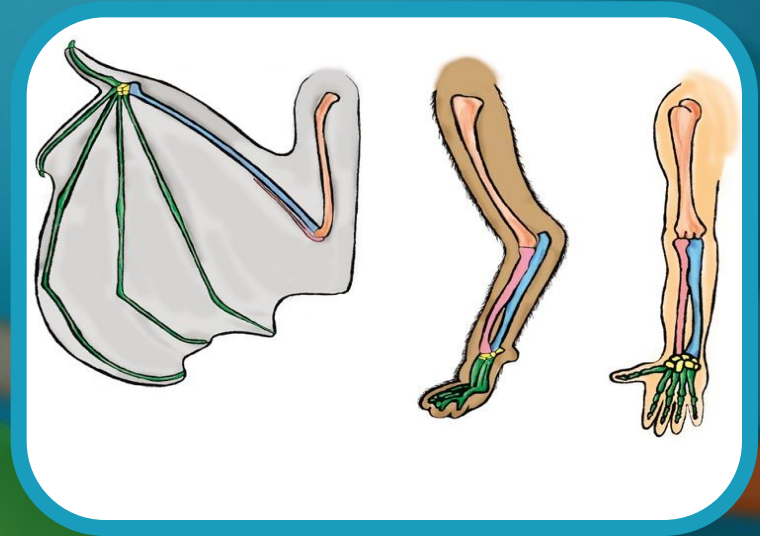
Similarity does
NOT prove
relationship!

missing link

one of the “in-between” organisms that must have lived if one type of organism evolved into another

homologous structures

similar structures in two organisms that are believed to be related



analogous structures

or

homoplastic features

similar structures in two organisms that are not believed to be related

Fossil Record

- according to evolutionists, a record in stone
- organisms that were at the base of the evolutionary tree in the deepest fossil layers
- reveal missing links

Creation

- by acts of a creator

Evolution

- by natural processes

Creation

- creation of basic plant and animal types with complete characteristics

Evolution

- all living things originated from a single living source which arose from inanimate matter

Creation

- variation and speciation are limited within each kind

Evolution

- unlimited variation; all forms are genetically related

Creation

- sudden appearance of a great variety of highly complex forms

Evolution

- gradual change of simple forms into more complex forms