

Where did we come from?

How do we explain the natural world we see around us?

- Naturalism/Materialism

- Only natural processes
- Neo-Darwinism
- Common Dissent

Creationism

Designed by a Creator

What is Science?

- It is the method by which we obtain knowledge about the physical world
- Science can be broken into two spheres
 - Theoretical
 - Empirical
 - based on, concerned with, or verifiable by observation or experience rather than theory or pure logic
- Theories vs Laws

We must realize that Science is a man made tool

- Science is prone to error because we are prone to error
- At one time we thought
 - The world was flat
 - That the Sun revolved around the earth
 - That blood letting and leeches would cure someone
 - That bathing was bad for you
 - That smoking was good for you
 - In 50 years what will we think is ridiculous? - One of my favorite Star Trek moments
- Many times we not only don't know the answer, we don't know the right question

What do we mean by evolution?

- What is evolution? – Change
- There are four things that we must distinguish between when we use the word “evolution”
 - Natural Selection
 - Microevolution
 - Macroevolution/Speciation
 - Common Descent

Natural Selection

The process in nature by which individuals of a species by nature of certain biological traits obtains an advantage over other individuals in obtaining vital resources or avoids death and thus gains a reproductive advantage.

Microevolution

Change at the species level

Change in the traits of a species due to natural selection

I can show microevolution in the lab using bacteria.

Start killing off a large population of bacteria with antibiotics and if there are a few individuals with resistance then the new bacteria take over.

See any problems here?

A bacteria is a bacteria is still a bacteria

Macroevolution

What is usually meant when we say evolution.

- The change of one species to another species by genetic change and natural selection.
What is a species?

I look at the term species as one arbitrarily given for the sake of convenience to a set of individuals closely resembling each other it does not essentially differ from the term variety, which is given to less distinct and more fluctuating forms. The term variety, again in comparison with mere individual difference, is also applied arbitrarily, and for mere convenience sake.

Charles Darwin 1988 (1859) *On the Origin of Species* in *The Works of Charles Darwin* edited by Paul H. Barrett and R. B. Freeman. Cambridge: Cambridge University Press vol. 15 page 39

What is a species?

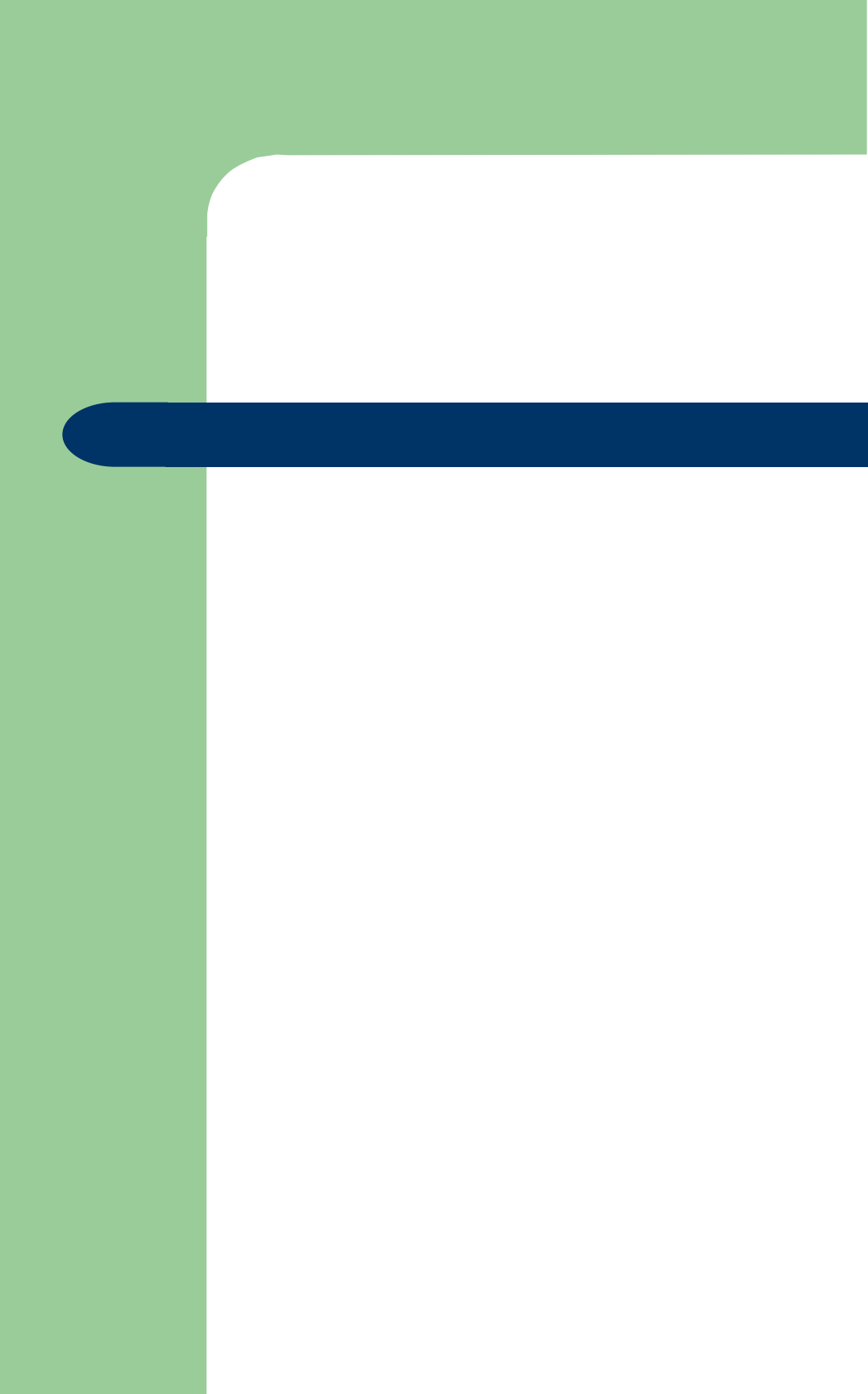
- Anything that a taxonomist says is a species.
- A group of organisms that are very similar that can breed and produce individuals capable of continuing to breed.
- Evolution - The genetic change in a species over time to the point that a member of the original population cannot reproduce with the new species.

Mutation

- A change in the genetic code induced by radiation, chemicals or viruses
- They are overwhelmingly deleterious
 - All morphological mutations are deleterious
- They are rarely beneficial
 - All beneficial mutations are on the micro level
- Organisms have mechanisms in place to combat mutation

Common Descent

- The idea that all life has descended from a common ancestor.
- The Story of Evolution – Neo-Darwinism
 - Life began as a single celled organism.
 - Over Millions of years more complex life arose by a series of mutations that were magnified by natural selection
- Predictions
 - The fossil record should mirror the tree of life
 - We should see a slow transition from one form to another



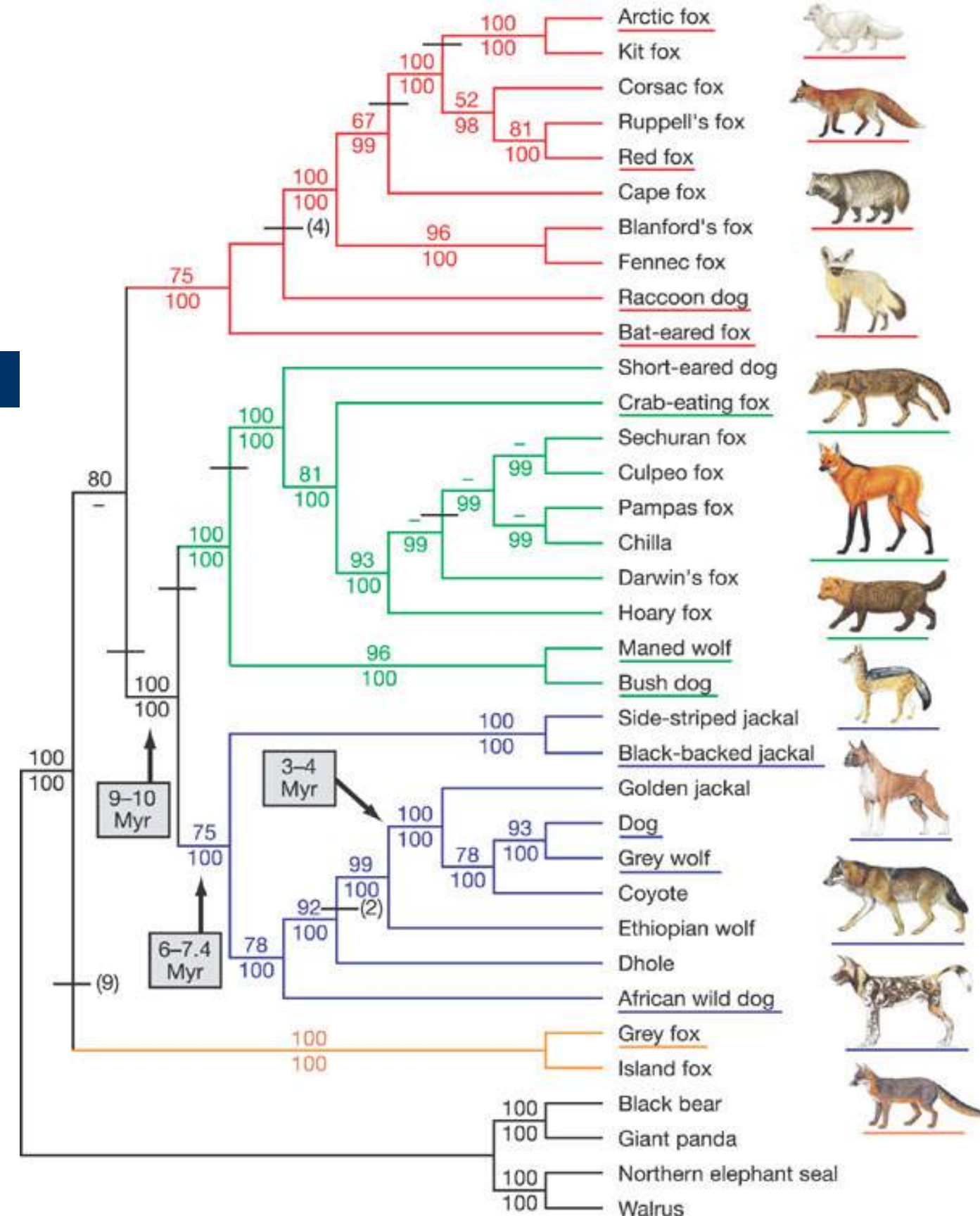
Do you believe in evolution?

- What Kind?
- I do not believe in common descent

Is there a Biblical Evolution?

- Gen 7:1-3
- 1 Then the LORD said to Noah, "Come into the ark, you and all your household, because I have seen that you are righteous before Me in this generation.
- 2 "You shall take with you seven each of every clean animal, a male and his female; two each of animals that are unclean, a male and his female;
- 3 "also seven each of birds of the air, male and female, to keep the species alive on the face of all the earth.
- (NKJ)

3 also of the birds of the sky, by sevens, male and female, to keep offspring alive on the face of all the earth. NAS



Biblical Evolution?

- Noah took 7 and 2 of every kind of animal
- How many kinds of animals are there now?
- Est. between 2 and 100 million species
- What is the mechanism for this type of evolution? – I don't know. Probably not Darwinian
- What we have is a collision of definitions
- Can you take a fly and stress it in such a way and make a frog out of it?
- The most difficult thing to combat is a half truth.
- Documented limits of Genetic Stress
 - Sugar Beats
 - Bristles on Fruit Fly Thorax

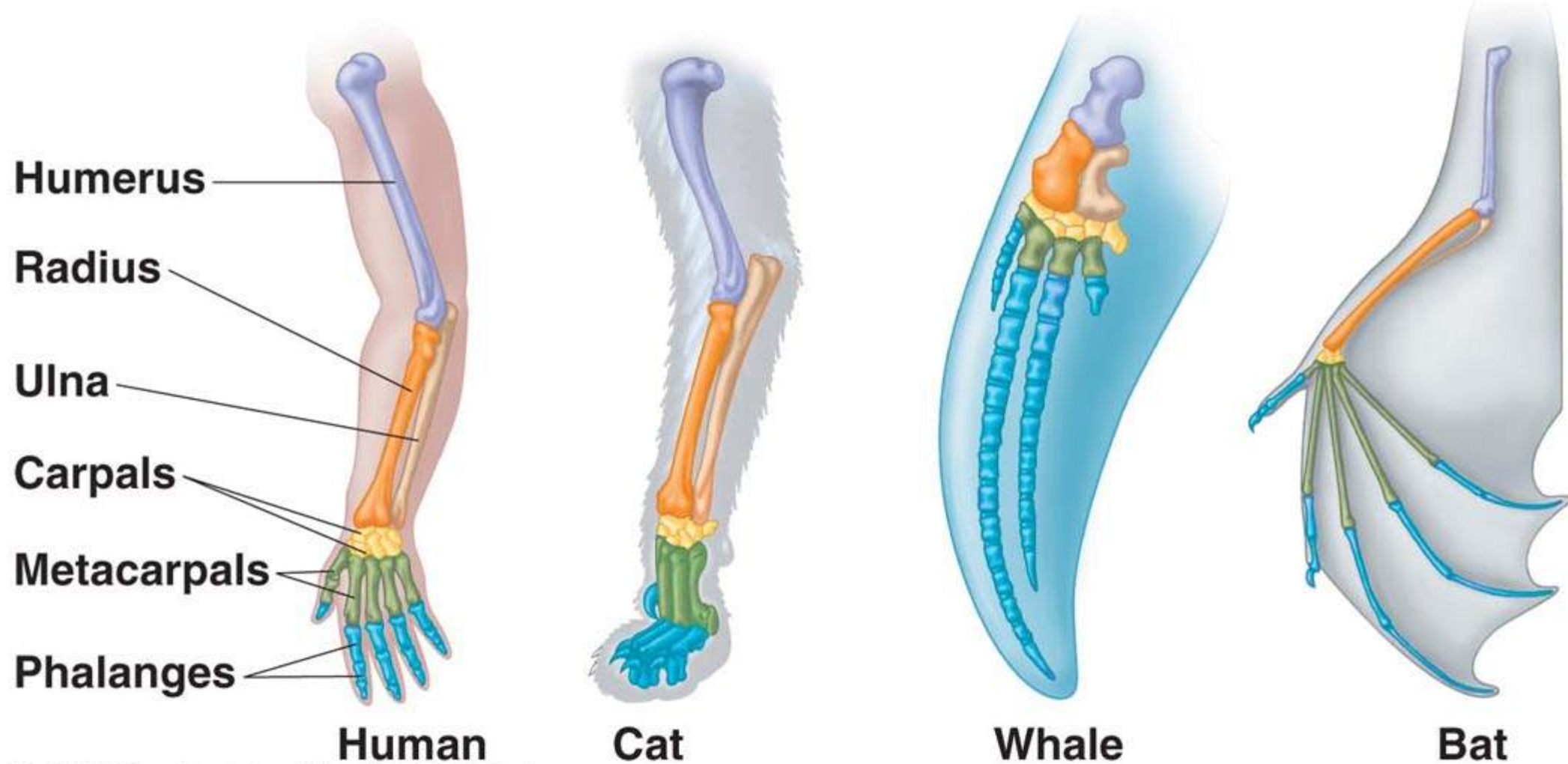
Neo-Darwinism

Common descent occurred when single celled organism by a process of random mutation and natural selection became more diverse and complex.

The Evidence for Common Descent

- Genetic similarities
- Comparative Anatomy - Homology
- Fossil Record
 - Geological column
- Embryology

Genetic Similarities and Homology





Homology – the argument against evolution

- The Great Nation of Herbie









The Fossil Record



- The geological column consists of layers of sedimentary rock from the deepest being the oldest layer progressing upwards through successively younger layers.
- Fossils at the lowest levels are observed to be very simple and become progressively more complex as the strata become younger.

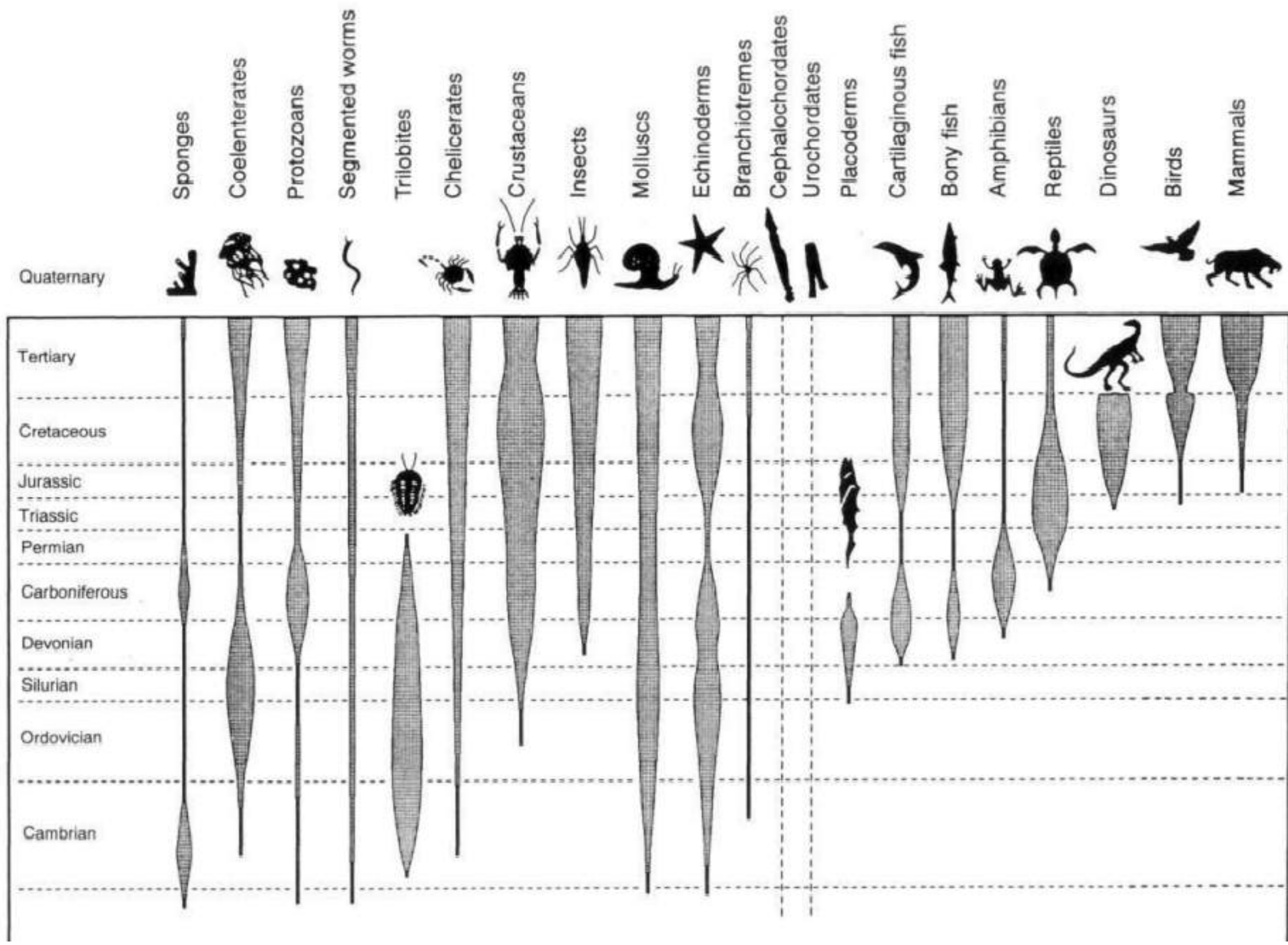


Fig. 1. An impressionistic representation of the fossil record, showing the frequency of occurrence of most animal groups.