This is when fish abandoned their preferred habitat of water and started moving in to land. This is when they started developing 4 limbs which separated the fish form the frogs lizards and monkeys. The amniotic clad then corresponds to the lizard and monkey which then follows the hair clade singularly to the monkey.

Sources of phylogenetic information:

-Comparative morphology- shapes and sizes of organismal structures including developmental origins [Example skulls bones, limb bones] —> **Living and fossil records**
-Comparative biochemistry- gene and protein sequencing [Example rDNA [slow], mtDNA [fast]] —> **Living and some fossil material**

rDNA changes very slowly and thus evolves very slowly.

-Comparative cytology- numbers, shapes and sizes of chromosomes and associated material. —> **Living material only**

Animal Architecture

—> **Five grades of organization within animal and animal-like groups.**

a) Unicellular eukaryotes- unicellular animal-like organisms —> protozoa.
b-e) Metazoa- multicellular animals —> animal.

Unicellular eukaryotic "cell" - complete organism that conducts all basic functions of life and therefore lives independently.
Metazoan cell - a single unit that is part of the whole organism and thus cannot live independently.

"Clear distinction between unicellular and a single celled organism"

A) Protoplasmic level of organization- all life functions within the cell and organelles perform specialized functions.

B) Cellular level of organization- includes multicellular micro flagellates. Aggregation of undifferentiated cells. Division of labour between cells and