Notes: Evolution

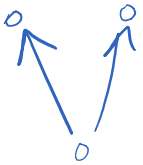
May 3, 2016 9:47 AM

Law of Faunal Succession – animal life forms change through time; the same life form is never exactly duplicated independently at two different times in history
- if exactly the same type of fossil is found in 2 rocks, then those rocks are the same age
  → correlation is possible

Why do animal life forms change through time?

Principles of Evolution

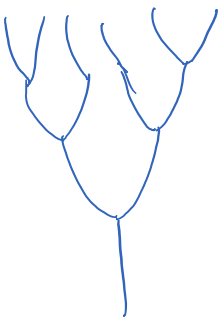
1. Divergence – the separation of single species into two or more groups exploring different habitats



2. Convergence – two or more groups of different species experience similar selective (survival) needs, thus become alike in some traits or features.

3. Adaptive Radiation – Adaptation is the adjustment that a population

adjustment that a population makes to its environment over a period of time.

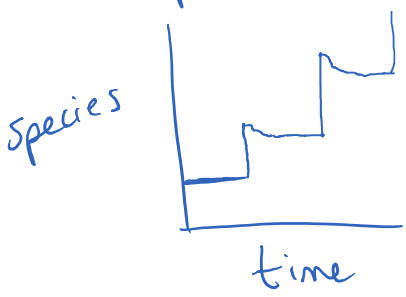


- when members of a single population undergo evolutionary divergence (successive generations become less and less alike) this is adaptive radiation

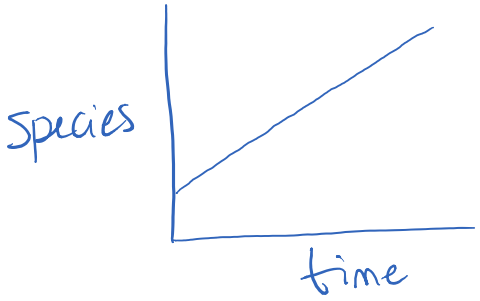
4. Natural Selection – survival of those organisms best suited to their environment

5. Extinction – species that can't adapt die out
   - the extinction of intermediate species helps explain the wide separation between the major groups of animals.

6. Punctuated Equilibrium – a model of the mechanism of evolutionary change that proposed that long periods of no change (status) are punctuated by periods of rapid formation of new species (speciation), followed by natural selection acting on the species.



7. Gradualism – approaching a desired end by gradual stages



* Difficult to decide between punc. eq. and grad. because many changes occur in the soft parts (muscles, tendons, etc) which don't fossilize easily.