Dec3

Bio 3

Final on Dec 11 at 2pm

Evolution

* Mechanisms of evolution
* Evidences of evolution
* Modern definition: 3. 1. In a given population 2. Over time 3. Change in allele frequencies for characteristics 4. This is often referred to ass microevolutions. We cant find a population that has not evolved
* The results of these changes. 1. Characteristics of the population change over time: 1. Physical, 2 behavioral, 3. Chemical. 2. Enough changes over enough time will result in? New species
* What is a species? Lots of different definitions. Biological species concept: a populations or group of populations whose members have the potential to interbreed in nature and produce viable.
* But: for speciation to occur – reproductive isolation, can be time separation, can be physical separation, this is macroevolution. Changing over time
* Evolutionary thought. Before Darwin, early Greek philosophers’: Anaximander ect. Simpler life forms preceded more complex ones. Aristotle: species are fixed and do not evolve; had a great impact on western thinking. Archbishop James Usher: earth is 6000 yrs old & Aristotle is correct. Judeo-Christian biblical view: all species were individually designed by divine creator
* Advances in information. In the century pror to Darwin, science was advancing: carolus Linnaeus: binomial nomenclature, & classification hierarchy K.indom P.alace C.lass O.rder F.amily G.enus Species., Hutton: Geology – Gradualism, Baron Cuvier \_ Catastrophism
* Scientists begin to understand and look for explanations. Buffon: the study of fossils suggested that earth is older than 6,000 years, and fossil forms might be early versions of modern forms.
* Lamarck: Fossils are related to modern forms because life evolves; acquired characteristics are inherited. Charles lyell:”principles of Geology” Uniformitarianism.