

BIOL 1110- 20.1



Island 1: rainforest habitat, lots of trees / plants, with fruit & seeds growing on them.



Large ground finch (seeds)

Island 2: desert habitat, few trees / plants apart from cactus plants, lots of insects hidden in cracks in the rocks.



Cactus finch (cactus fruits and flowers)



Vegetarian finch (buds)



Woodpecker finch (insects)

[CH.20]

Climate changes the ground finches' by the wet seasons made small seeds and small beaks, and larger seeds and larger beaks in the dry seasons

ATK / 1700 DEF / 1500

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BIOL 1110- 20.2



Peppered Moth "Evolution"

- Study took place in industrial England (1800's)
- Start with mostly light-colored moths, a few dark
 - Light moths hidden on light trees, dark eaten
- Industrial pollution turns trees dark
 - New dark moths hidden, light eaten
- Population shifted from mostly white to mostly dark
- Start with moths, end with moths!
- If trees had turned blue from polluting dye, would blue moths have developed?
- Natural selection here, but no evolution!

Browning - 2008

NBBioSciences.org

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[CH.20]

ATK / 1600 DEF / 1800

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Two kinds of selection

1. Natural - "survival of the fittest"
2. Artificial - breeding plants or animals for specific traits (human intervention)



Artificial selection



Natural selection

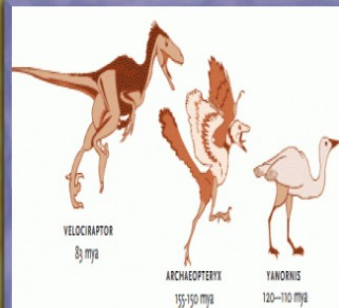
[CH.20]

ATK / 1400 DEF / 1650

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VELOCIPTOR

83 mya

ARCHAEOPTERYX

155-150 mya

YANORNIS

120-110 mya

[CH.20]

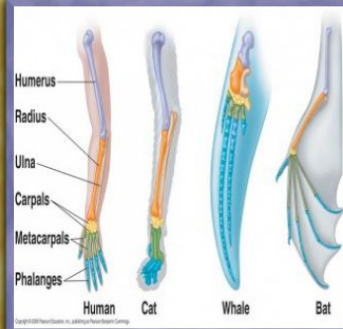
Transitional fossils help us understand how creatures like a dinosaur transitions to another modern animal

ATK / 1300 DEF / 1400

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[CH.20]

Homologous structures

ATK / 1200 DEF / 1800

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Vestigial Structures

- features present in modern animals that are no longer in use
- give hints as to the evolution of organisms

Ex: human tailbone, whale pelvis, appendix



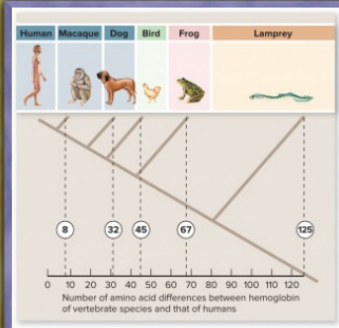
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ATK / 1700 DEF / 1600

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[CH.20]

Genetic evidence can show evolution

ATK / 1600 DEF / 2000

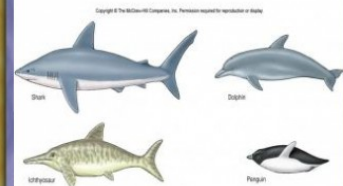
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Convergent Evolution: Streamlining



[CH.20]

ATK / 1800 DEF / 2100

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