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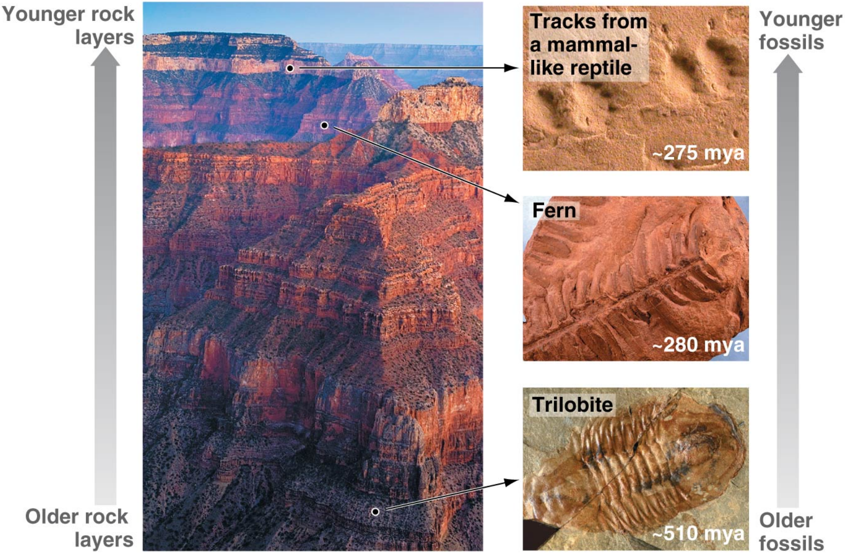
- Evolution
  - Change through time
  - Relationships between species
- Natural selection
- The nature of adaptation

Fossils


Younger rock layers
Older rock layers
Tracks from a mammal-like reptile
~275 mya
Fern
~280 mya
Trilobite
~510 mya
Younger fossils
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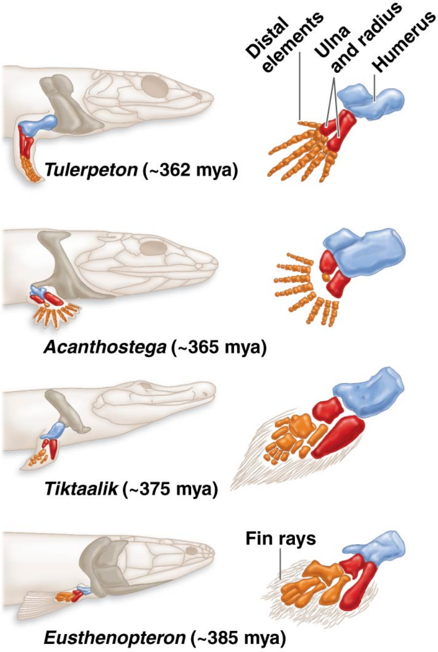

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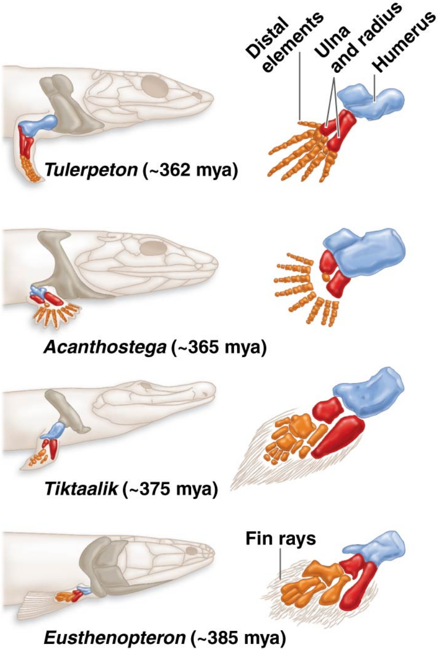

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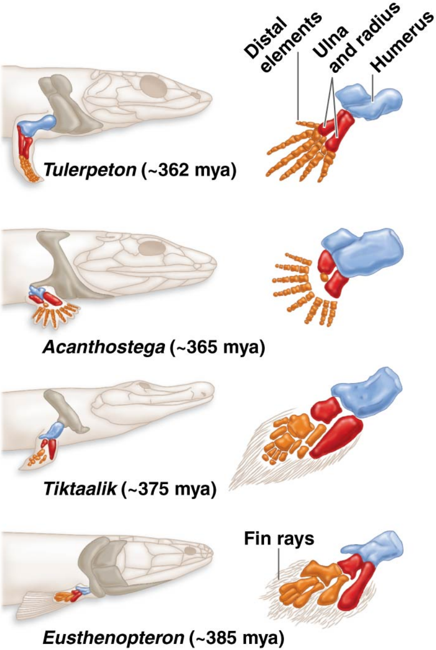

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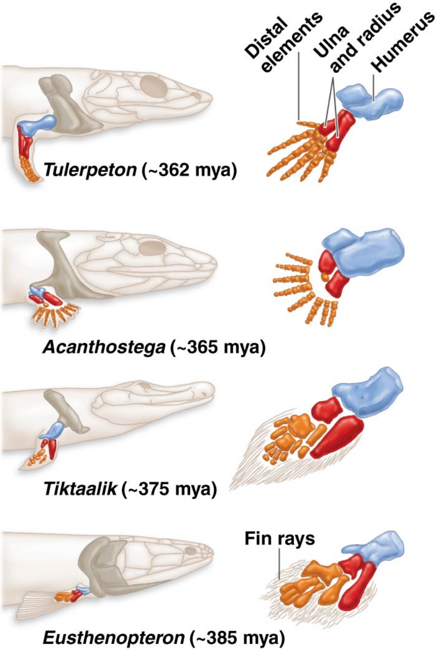

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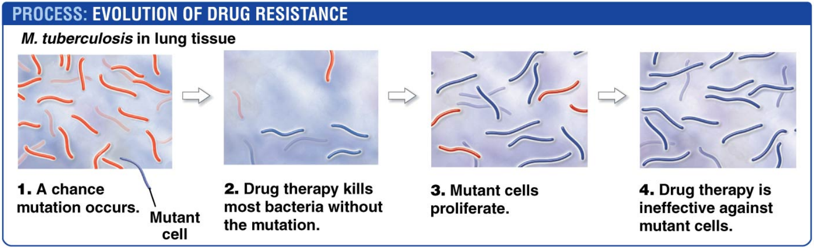

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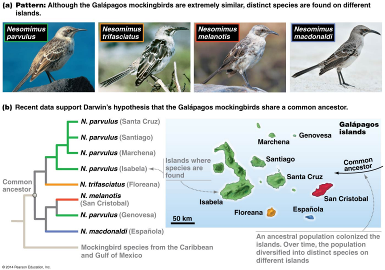

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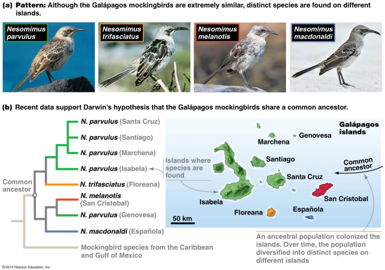

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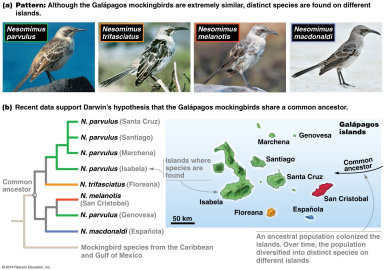

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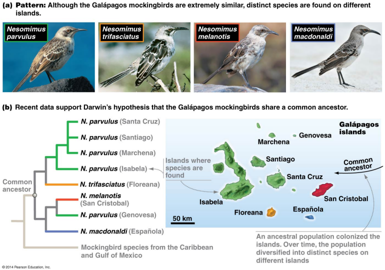

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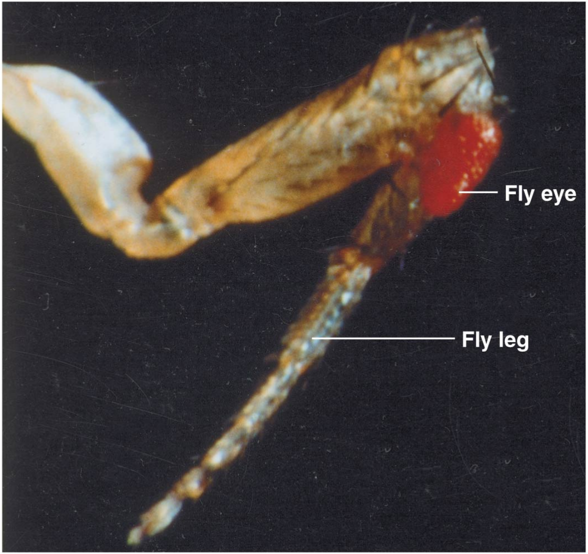

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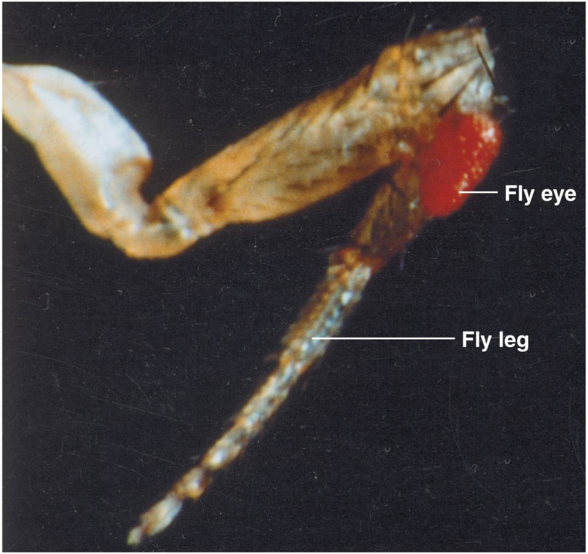

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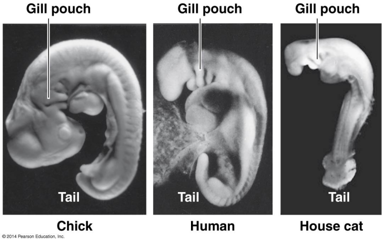

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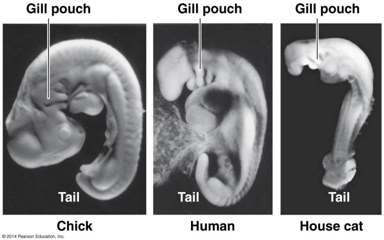

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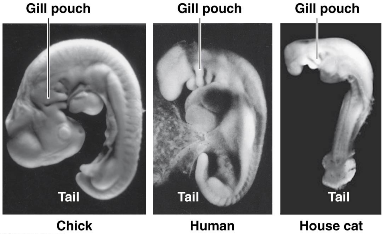

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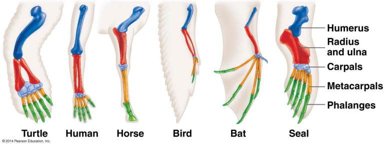

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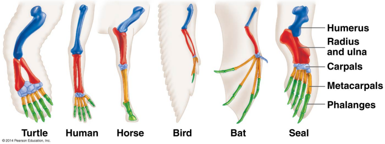

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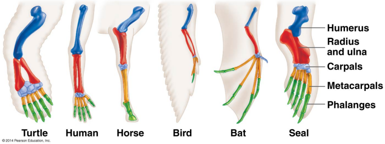

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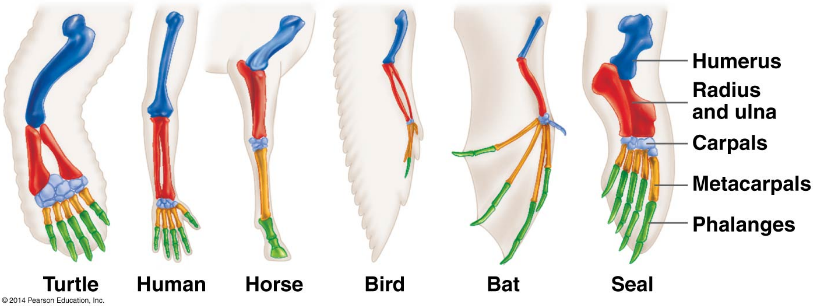

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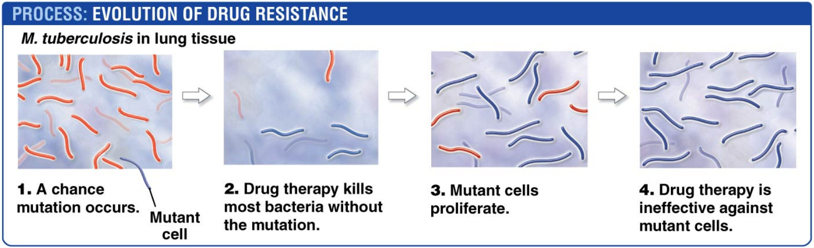
Tuberculosis



Example: Tuberculosis

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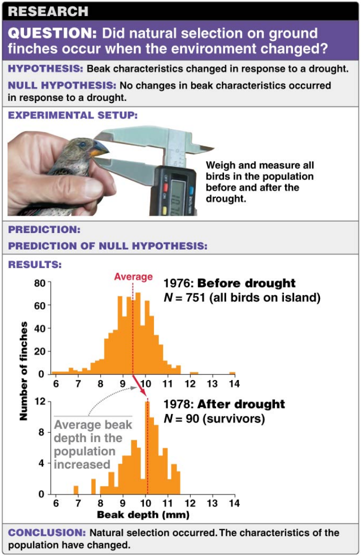
Finch beaks


RESEARCH
QUESTION: Did natural selection on ground finches occur when the environment changed?
HYPOTHESIS: Beak characteristics changed in response to a drought.
NULL HYPOTHESIS: No changes in beak characteristics occurred in response to a drought.
EXPERIMENTAL SETUP:
Weigh and measure all birds in the population before and after the drought.
PREDICTION:
PREDICTION OF NULL HYPOTHESIS:
RESULTS:
Average
1976: Before drought
N = 751 (all birds on island)
1978: After drought
N = 90 (survivors)
Average beak depth in the population increased
Number of finches
80
60
40
20
0
12
8
4
0
6 7 8 9 10 11 12 13 14
Beak depth (mm)
CONCLUSION: Natural selection occurred. The characteristics of the population have changed.

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  - * **Replicate**. Repeat the experiment with different offspring (using different mothers and fathers).

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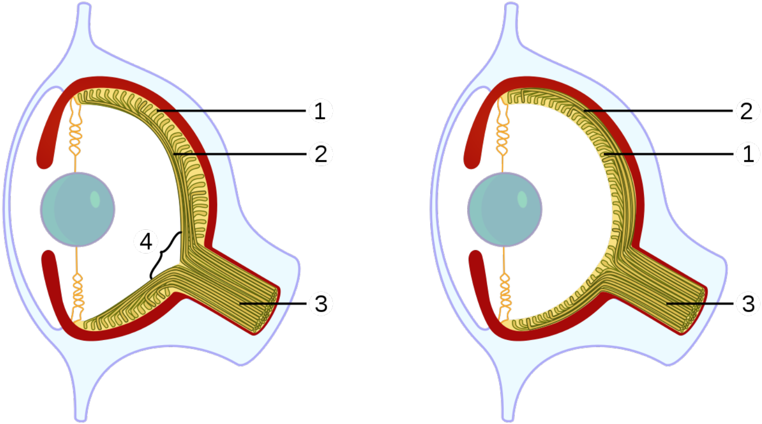
ADD References to wikipedia here



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