



Wednesday, Feb 15, 2017

Pick up: Self check-DO NOW

Today you will:

- Self Check-Mechanisms of evolution
- What is a Species? Notes on ISN pg 157
- [Speciation Video Clip](#)
- Work on Genetic Drift Lab Analysis-Due Friday

Homework/Planner:

Complete all pages up to ISN pg 157

Read Ch. 11.5 & 11.6

11.5

What is a species???

- ◎ ***A group of plants or animals that resemble one another and can interbreed ... and produce fertile offspring.***



**Love Bird & Black Cheeked Love Bird:
both are parrots, but will not interbreed.**



**Cabbage palm & Royal palm : both
are palms, but will not interbreed.**

Speciation

Rise of 2 or more new species over time

Due to Reproductive ISOLATION →
Gene Flow STOPS

Which can be caused by

Geographic Isolation

- Physical barriers:
Mountains, rivers,
valleys

Temporal Isolation

- Timing Issues:
• If there is lots of male competition, courtship behaviors may be displayed at different times; reproductive periods may change

Behavioral Isolation

- Courting Issues:
• Chemical scents, Songs may change, dances are a bit different, flashes of light may be longer or shorter

EXAMPLE of SPECIATION:

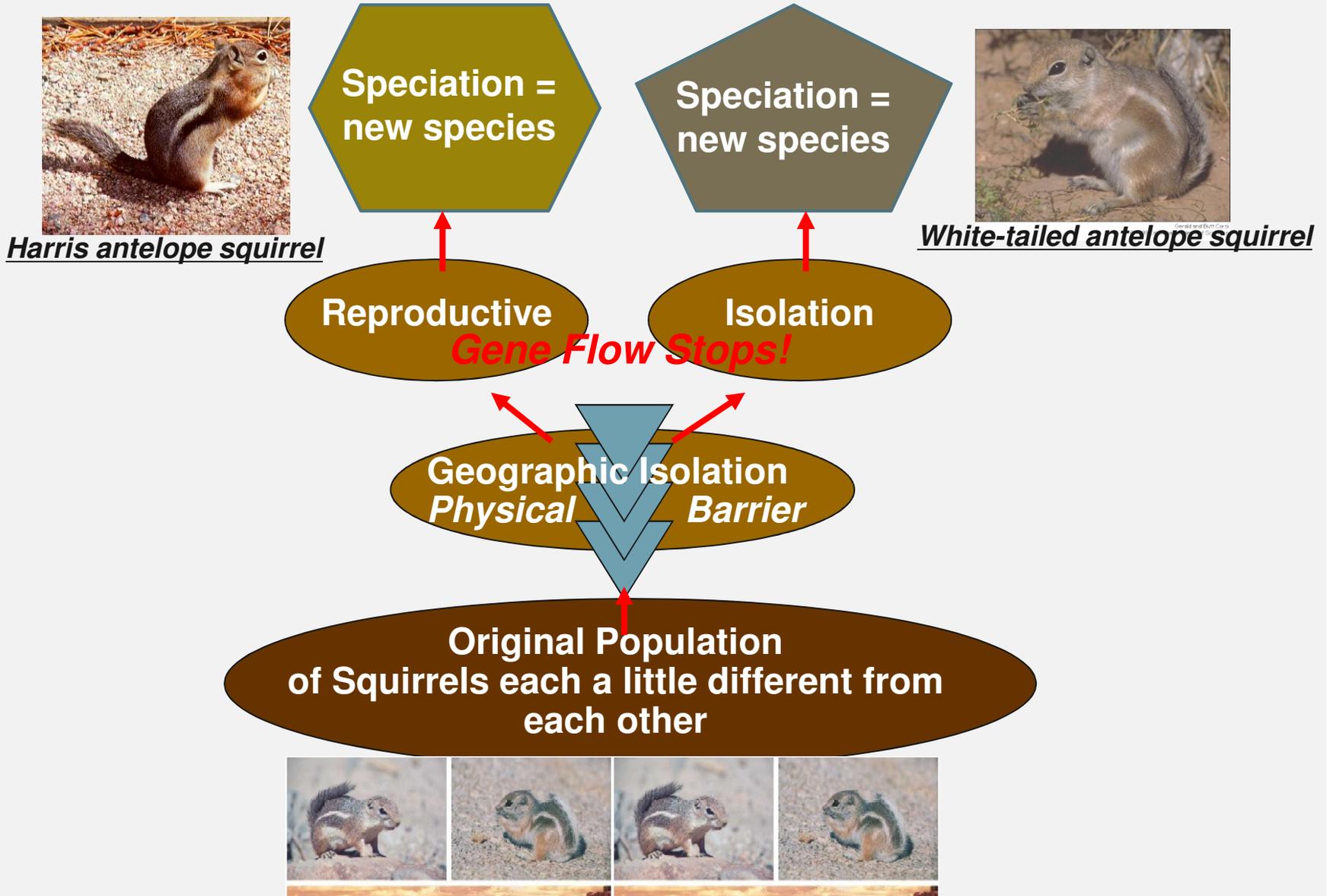
The formation of a new species

Speciation can be a 2-step process → If you have one population of squirrels or prairie dogs → how would speciation of a new group of squirrels or prairie dogs take place?



SPECIATION:

The process of forming a new species



Practice Quiz...

1. Which of the following closely matches Charles Darwin's Theory of Natural Selection?

- A. Populations ACQUIRE adaptations that help them survive throughout their life**
- B. Organisms WORK HARDER to become more fit to survive**
- C. Organisms in a POPULATION have a mixture of traits that may or may not help them survive**
- D. Organisms in a POPULATION KNOWINGLY produce new traits**

- 2. According to the theory of natural selection, which statement best explains why some organisms are more likely to survive and reproduce than others?**
- A. They are better able to compete for limited resources.**
 - B. They share common descent with successful organisms.**
 - C. They have acquired useful characteristics at some point in their lifetime.**
 - D. Their population grows more slowly than the populations of other organisms.**

- 3. What happens to organisms with the least favorable variations?**
- 4. So then what is each new successful generation of offspring made up of?**

5. The process by which isolated populations of the same species develop into new species is called

- A. Geographic isolation**
- B. Speciation**
- C. Reproductive isolation**
- D. Natural selection**



6. The Woodpecker Finch and the Warbler Finch are two different species. Which of the following can you infer about these two birds?

A. They lack homologous structures

B. They lack a common ancestor

C. They have very different embryos

D. They cannot interbreed & produce fertile offspring

7. Complete the following analogy.

struggle for survival : competition ::

A. time : environment

B. trait : time

C. survival of the fittest : best traits

D. environment : traits



8. Natural selection is the process by which

- A. the age of selected fossils is calculated.**
- B. organisms with traits well suited to their environment survive and reproduce at a greater rate than less well-adapted organisms in the same environment.**
- C. acquired traits are passed on from one generation to the next.**
- D. All of the above**

- 9. Which of the following is a true statement about evolution?**
- A. Individuals evolve more slowly than populations.**
 - B. Individuals evolve; populations don't**
 - C. Individuals evolve by changing the gene pool.**
 - D. Populations evolve; individuals don't.**



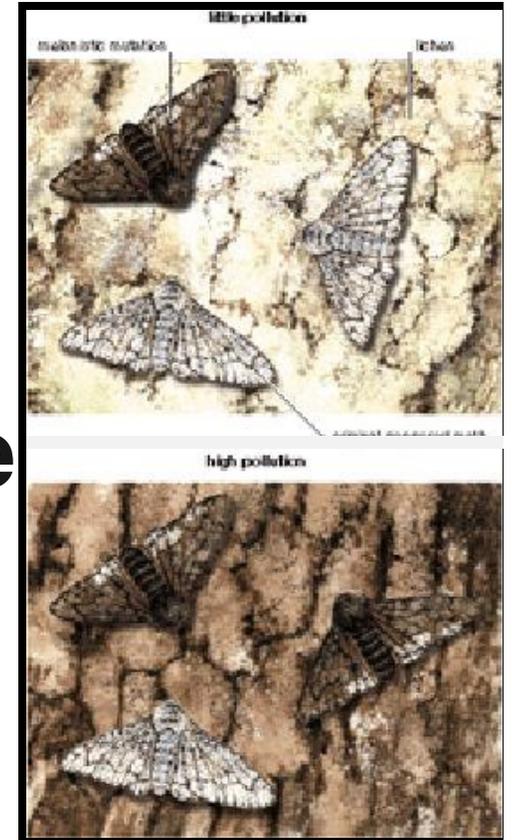
10. What term describes any trait that helps an organism better survive its environment?

- A. Equilibrium**
- B. Adaptation**
- C. Natural Selection**
- D. Gradualism**



11. The study of the peppered moths showed that

- A.** Moths changed their color to suit their environment.
- B.** The moths adapted to the changing surroundings.
- C.** The environment naturally selected the moths with the best traits.
- D.** The environment changed and so the moths changed, so they would be selected to survive and reproduce.



**12. Can living things just
'change' or 'adapt' to
their environment OR are
they born with these
adaptations?**