



Monday, Feb 6, 2017

Pick up: Rock Pocket Mouse WS

Today you will:

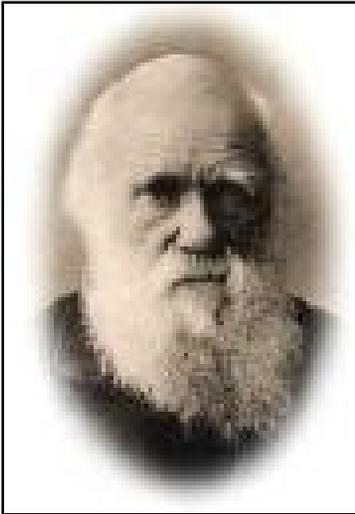
- Review Natural Selection notes
- Begin Rock Pocket Mouse Activity

Homework/Planner:

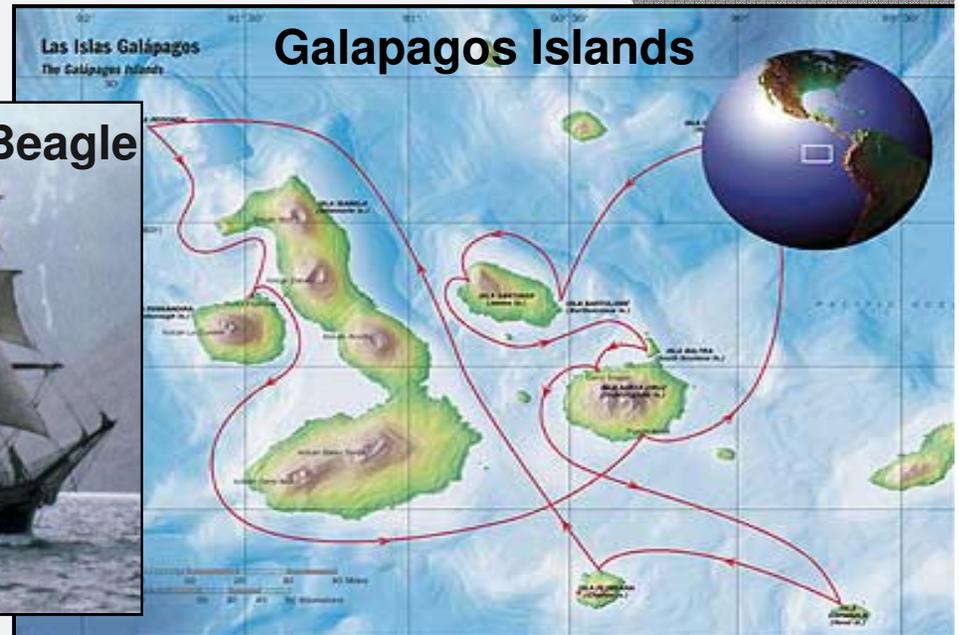
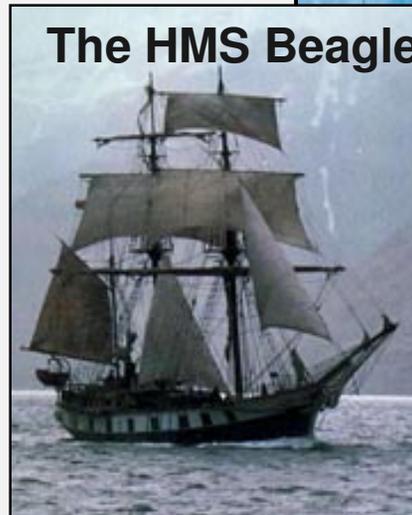
Study what we've done so far.

Quiz Friday!

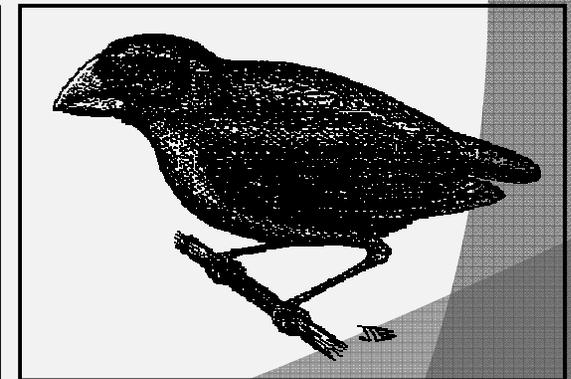
Charles Darwin



- He tried to explain natural selection and how living things gradually change, adapt, survive, & reproduce....



The Galapagos tortoise - largest living tortoise....weight over 500 pounds; measures 6 feet from head to tail; slow-moving animal - 0.16 mph - large shell made of bone.



Galapagos Finch

Today you will also read about **ADAPTATIONS**

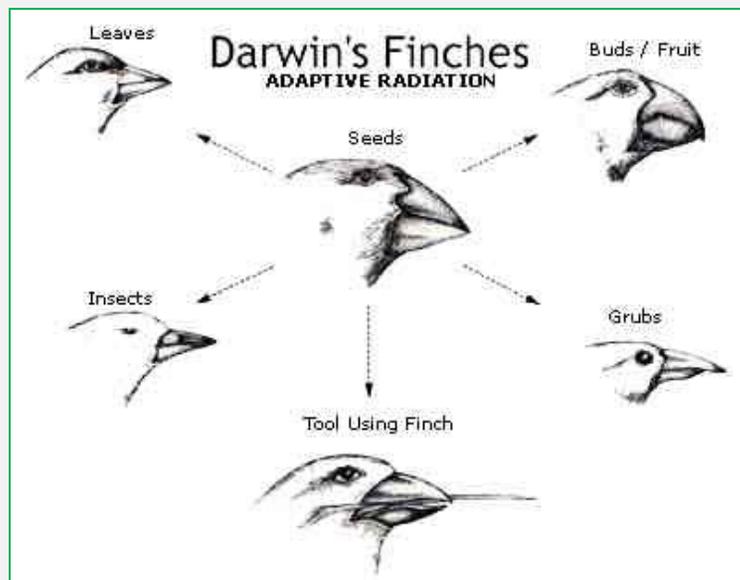
*The everyday meaning of ‘adaptation’
differs from its scientific meaning:*

1. For example, a new student may **adapt** to an unfamiliar school by joining clubs or sports → in this sense, ADAPT is something one does KNOWINGLY.

2. In NATURE, ADAPTATIONS are traits or behaviors that are GENETICALLY DETERMINED → no bird can choose to grow its beak longer!

Darwin did NOT
believe...

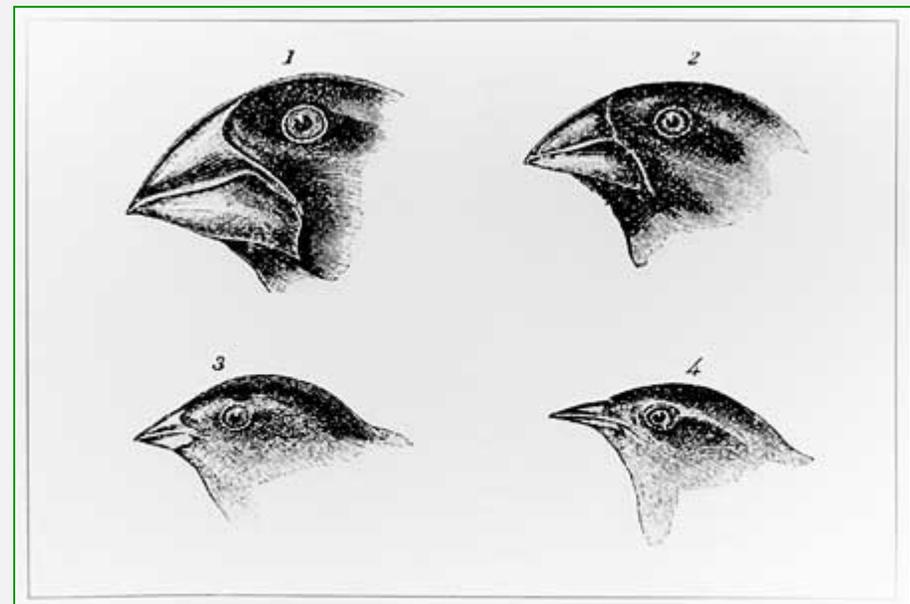
... that the environment
produced the
variation in the
finches!



Darwin DID
believe...

... that the variation
ALREADY EXISTED!

& that NATURE SELECTED
FOR the MOST SUITABLE
TRAIT & AGAINST the less
useful ones!!!



Adaptation ISN pg 188

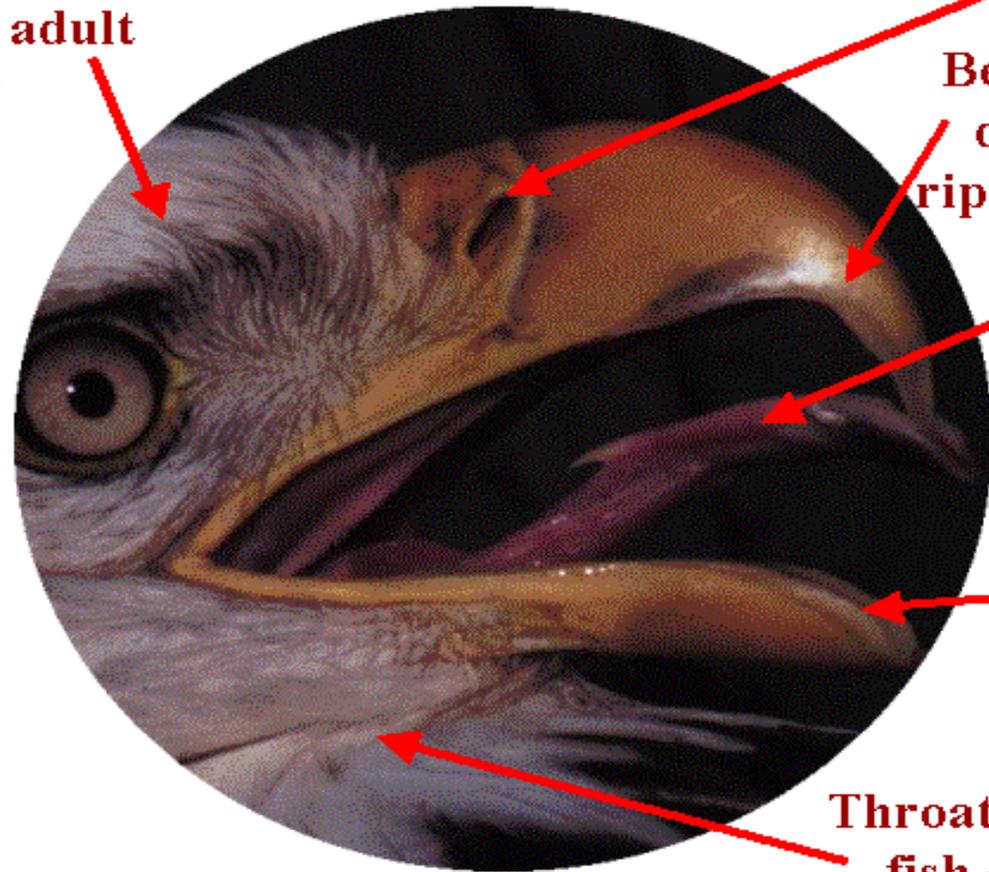
- ◎ Anything that enables a living thing to survive & reproduce → Variation is ALREADY present!!!



- The creosote bush is a desert-dwelling plant that produces toxins that prevent other plants from growing nearby...
- thus reducing competition for nutrients and water.

Adaptation

White head feathers show other eagles that this one is a mature adult



Nostrils for breathing

Beak's tip strong and sharp, designed for piercing and ripping apart the toughest fish

Tongue thick and strong for pushing big chunks of fish down the throat

Lower beak blunt and short to brace against upper beak

Throat stretchy so big chunks of fish can go down the hatch!

Structural Adaptations

PHYSICAL – changes in structure of body parts

Examples...



Plants have adaptations, too!



Thorns



Wide leaves

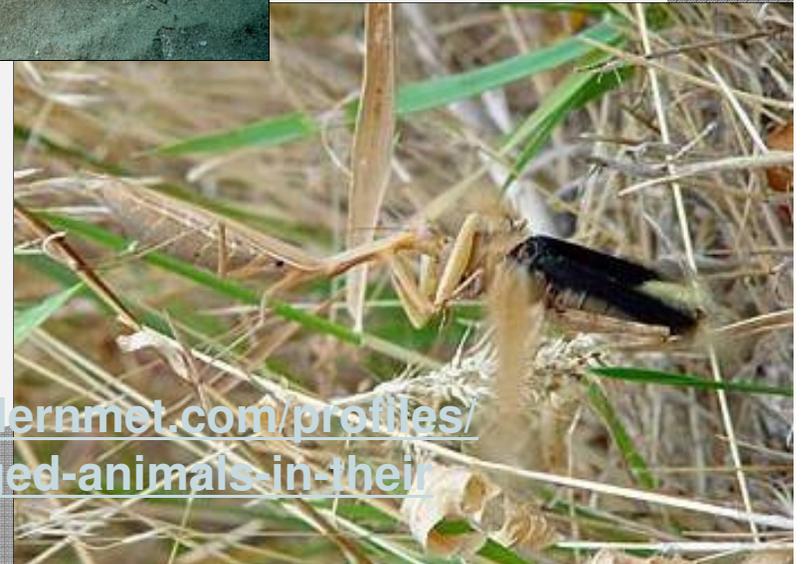
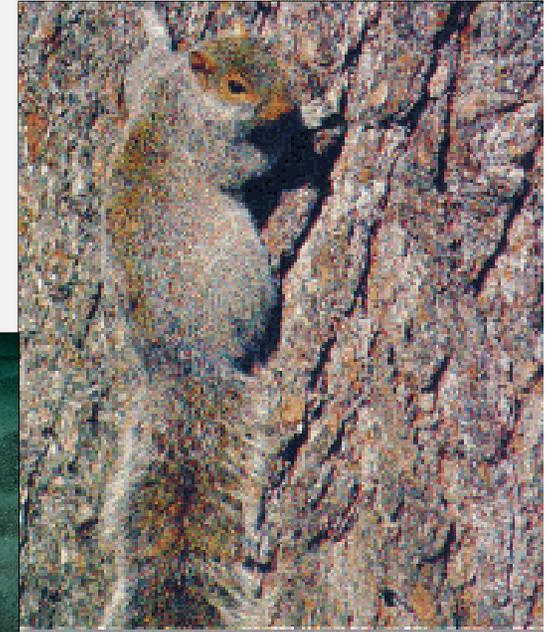
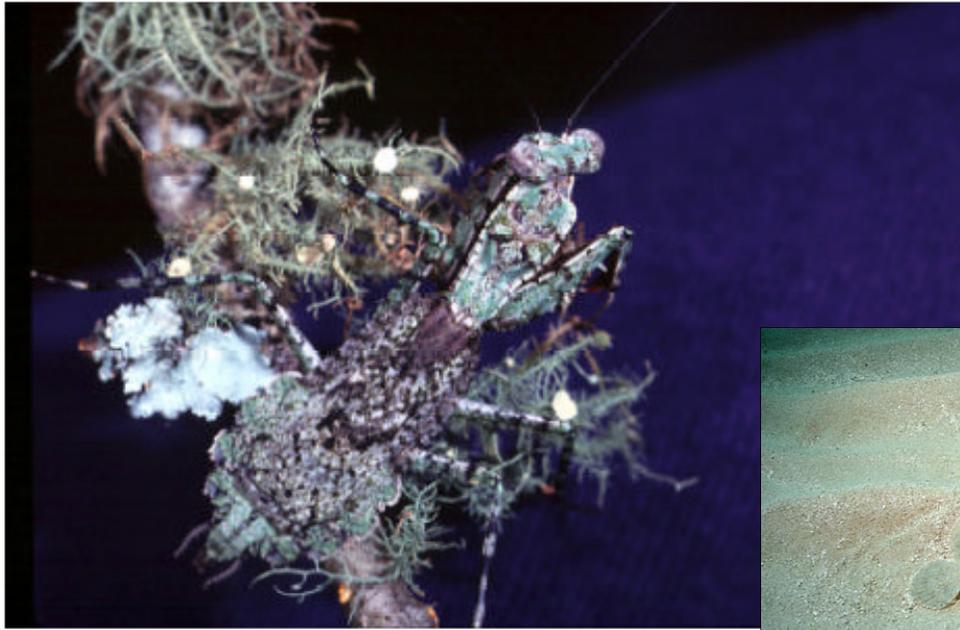


Prop roots



Thick, waxy cuticle

More *examples* of Structural Adaptations: Camouflage



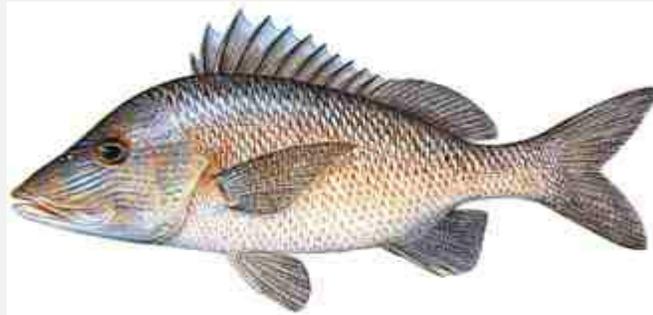
<http://www.mymodernmet.com/profiles/blogs/camouflaged-animals-in-their>

Physiological Adaptations

Changes in organisms metabolism - Substance...
produced internally



•Use of silk to line burrows or catch prey or to protect delicate baby eggs.



The lateral line contains nerve endings that detects changes in water around fish.



*The Jacobson's organ and the snake's fork shaped tongue allow snake to smell its environment.

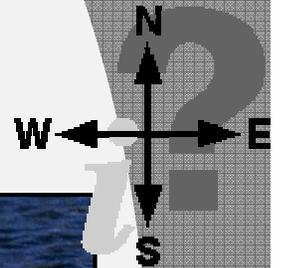


COURTESY: NEUROBIOLOGICAL TECHNOLOGIES, INC.

Snake venom

Behavioral Adaptations

Changes in what they do – how they act



More behavioral adaptations...

1. California red squirrels heat up their tails to let rattlesnakes know they are there & ready to defend their babies



2. Other squirrels eat snake skin, rub it on their tails so the rattlesnake thinks it is another snake



How Does Evolution Really Work?

- ◎ <http://www.hhmi.org/biointeractive/making-fittest-natural-selection-and-adaptation>