



## Extinction in the Modern World



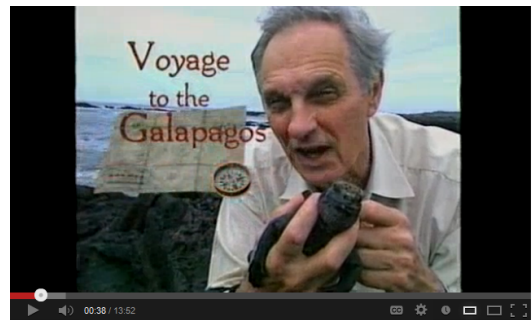
1.3

- 1600 - 1900 AD, one every four years
- 21<sup>st</sup> Century, one every thirty minutes
  - o in Canada, 80 species per year
  - o natural disasters were the biggest threat to organisms previous to the presence of humans
- over 500 million species have existed on Earth
  - o 90% have either become extinct or evolved into new species
- climate change and pressure of competition from other species force organisms to adapt or die.
- *Today human activity is the major cause of extinction*

# Charles Darwin

## Evolution in the Galapagos

13:51 Darwin's Finches

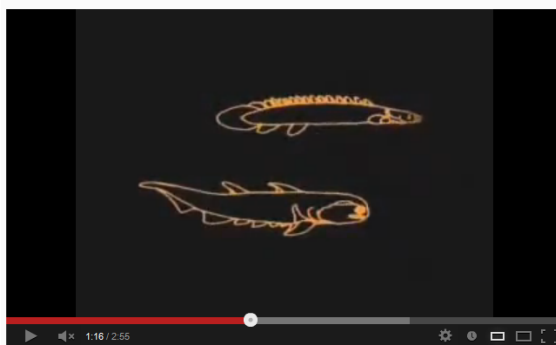


Evolution in the Galapagos

## Wonders of Galapagos



Doesn't work



Darwin's Revolution - Evolution Song

Song of evolution

**adaptation** - any genetically controlled characteristic (structural, physiological or behavioural) that enhances the chance for members of a population to survive and reproduce in their environment

**structural adaptations** - coloration, mimicry, protective cover, gripping mechanisms

**physiological adaptations** - ability to poison prey, give off chemical to repel predators, hibernate during cold weather

**behavioural adaptations** - migration, resource partitioning, species interactions (ie/parasitism)

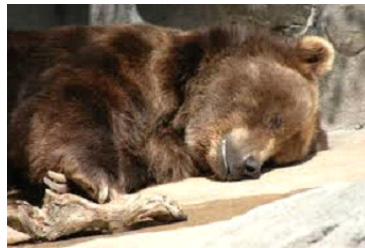


Structural adaptations

Chameleon- has the ability to change colour



Turtle- has hard shell to protect against predators.



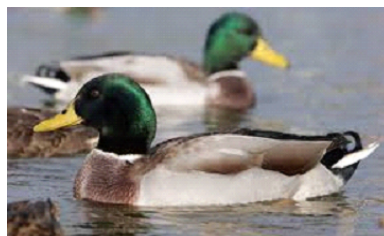
Physiological adaptations

Bear- can hibernate through winter



Skunk- can "spray" to get rid of predators

Behavioural Structures



Geese and ducks migrate during winter

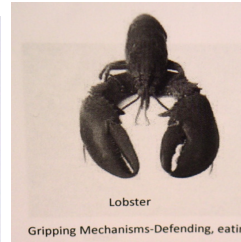
# Examples of Adaptions...

## Structural Adaptations:

Turtle - Protective Cover ✓



Bald eagle – Gripping Mechanisms



Lobster  
Gripping Mechanisms-Defending, eating



Rabbit  
Coloration-Changes color to blend with the right environment. ✓

## Psychological Adaptations:

Skunks – give off chemicals to repel predators ✓



Bears – hibernate during cold weather ✓



Snake  
Ability to Poison Prey-Has poisonous venom to use on prey. ✓



Bear  
Hibernation-Hibernates through the cold winters. ✓

## Behavioural Adaptations:

Monarch Butterfly – migration



Salmon lice – species interactions (ie/parasitism) ✓



Zebra  
Migration-Migrates to greener land. ✓



Geese  
Migration-Migrates to warmer weather in the cold. ✓



## Fossils

- Fossils are preserved remains of living things
- Most are formed when living things die and are buried quickly by sediment before it's eaten, decomposed or weathered.
- The sediment will slowly harden into rock and keep the shape of the organism.
- Paleontologist are scientist that study fossils