

**EPISODE 1: COASTS**



# PREHISTORIC PLANET

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# Introduction

- Presents the most up-to-date paleontological knowledge on dinosaurs
  - Computer generated
- Takes you through the lives of prehistoric creatures
- Follows many different species
  - T-Rex
  - Pterosaur
  - Scaphitids
  - Mosasaur
  - Tuarangisaurus





# Hoffman's Mosasaur

- Ocean's deadliest predator
  - 50 feet long
  - 10 tons
- Marine lizard - not a dinosaur
  - Dense bones
  - Breathe air
- Diet
  - Giant Sea Turtles
  - Smaller Mosasaurs
  - Baby T-Rexes
- Symbiotic relationship with pycnodont fish
  - Mosasaur is cleaned by the fish
  - Fish get to eat dead skin



# Tuarangisaurus

- Marine reptile
  - 30 feet long
  - 1 offspring every 2 years
- Travel in groups
  - Travel hundreds of miles
- Gastroliths
  - Swallow round pebbles
  - Helps to digest food



# Connection to Class

- Dispersal & Immigration

- Dispersion
- Migration
- Mechanisms of Dispersal

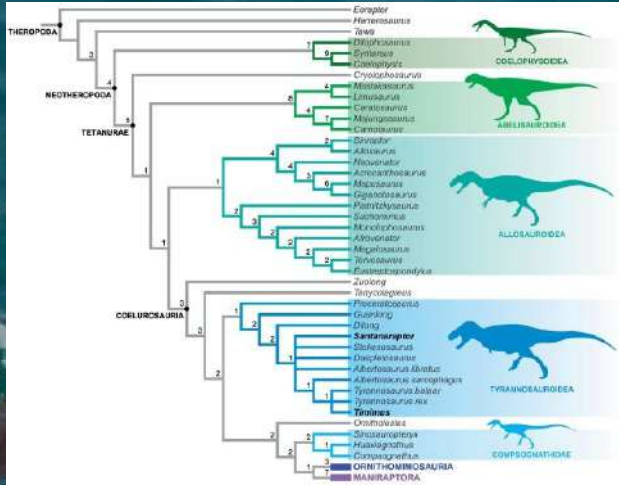


- Island Biogeography

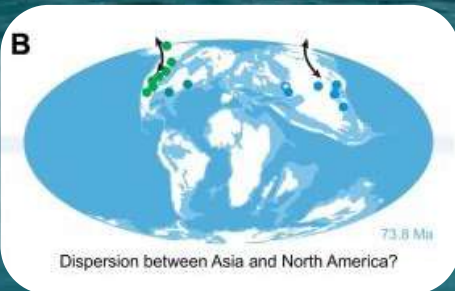
- Niches
- Equilibrium
- Differential Dispersal



# Tyrannosauroids from the Southern Hemisphere: Implications for biogeography, evolution, and taxonomy



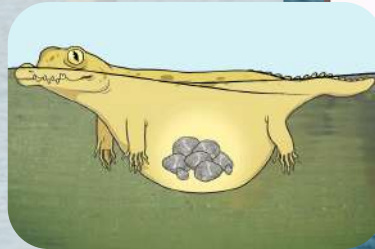
- Little known about biogeographical origin of T-Rex
- 3 phylogenetic datasets used
  - All major clades
  - Non-Maniraptoriformes Tetanurae
  - Tyrannosauroidae



- T-Rex may have been more widespread than we had thought

# Gastroliths Associated with Plesiosaur Remains in the Sharon Springs Member of the Pierre Shale

- 47 gastroliths found in plesiosaur fossil
  - Larger than most findings
- Common occurrence
  - Seen in animals today as well
- Various reasons
  - Digestion assistance
  - Ballasts
  - For minerals
  - Accidentally





# Conclusion

- Prehistoric life utilized many similar aspects of biogeography as modern day organisms
- Biogeographic evidence for dinosaurs is rare.
- We know so much more about prehistoric life on this planet, however, there's still a lot more to learn.





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