

Chapter 14 – Marine Mammals



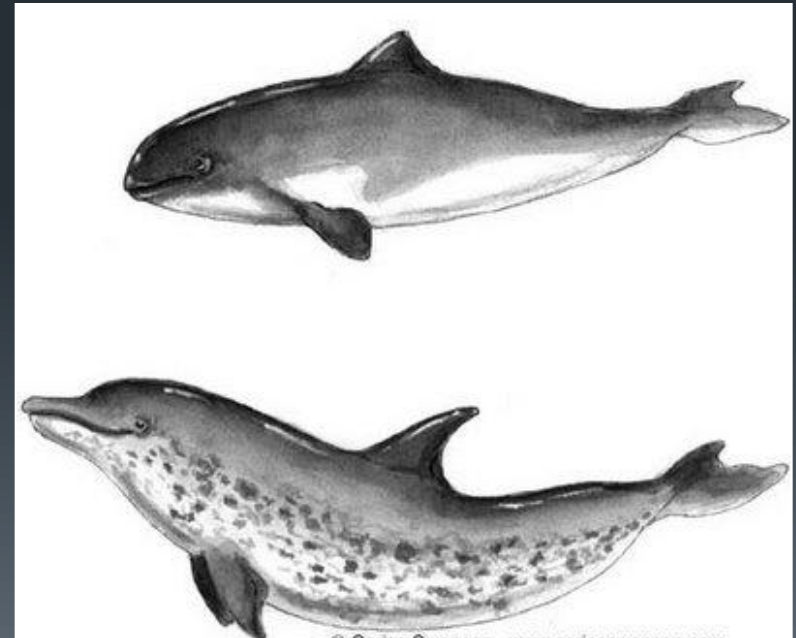
Marine Mammals

- Phylum: Chordata (nerve cord)
- Subphylum: Vertebrata (vertebrate)
- Class: Mammalia
- All mammals have:
 - 4 chambered heart
 - Fur
 - Live birth
 - Mammary glands (milk)



Cetaceans: whales & dolphins

- Order Cetacea includes whales, dolphins, and porpoises.
- Dolphins have an elongated snout, porpoises have a short snout.
- Dolphins and porpoises are small whales.
- 2 main groups of whales:
baleen & toothed



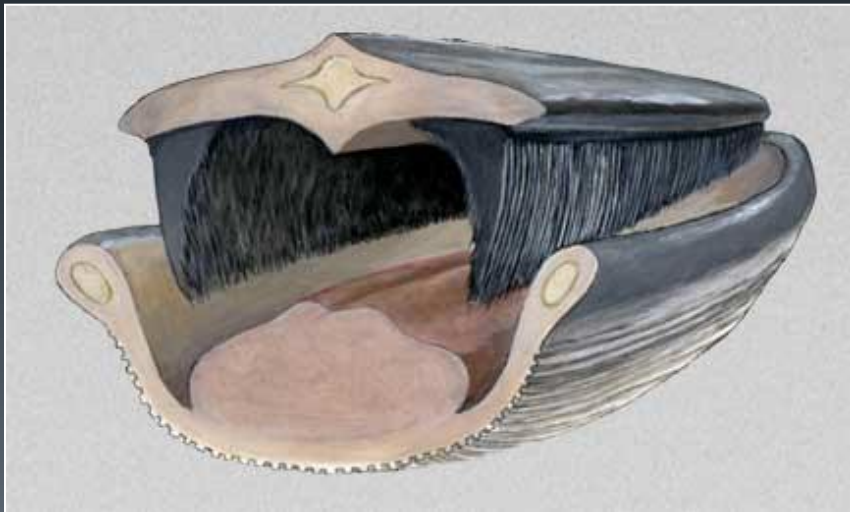
Sub-order Mysticeti: Baleen whales

- No teeth: baleen used to filter feed
- Eat plankton and small fish.
- Blue, Finback, Humpback, Right and Gray whales.
- Blue whale is biggest mammal ever to live on Earth.



Sub-order Mysticeti: Baleen whales

- Baleen whales open mouths while swimming to catch zooplankton.
- Water is forced back out through the baleen, which filters the zooplankton.
- Plates of baleen look like a giant comb.



Sub-order Odontoceti: Toothed whales

- Suborder includes all other species: orca, beluga, sperm whale and all dolphins and porpoises.
- Sperm whale is largest: 15 meters
- Narwhal is smallest: 5 meters.
- Different tooth shapes are adapted for different purposes.



Cetacean Reproduction

- Cetaceans are entirely aquatic.
- Fertilization is internal – they have live births.
- Whales are born tail first; mother pushes them to surface for breath.
- Very strong mother-calf bond.
- Mothers nurse calves 6-10mos.



Pinnipeds: seals, sea lions and walruses



- Pinniped = wing-foot
- Marine mammals that mate and breed on land.
- Streamlined bodies for efficient swimming.
- Seals and sea lions are found many places; walruses are found in the polar regions.
- Pinnipeds are well adapted to dive deep for food.

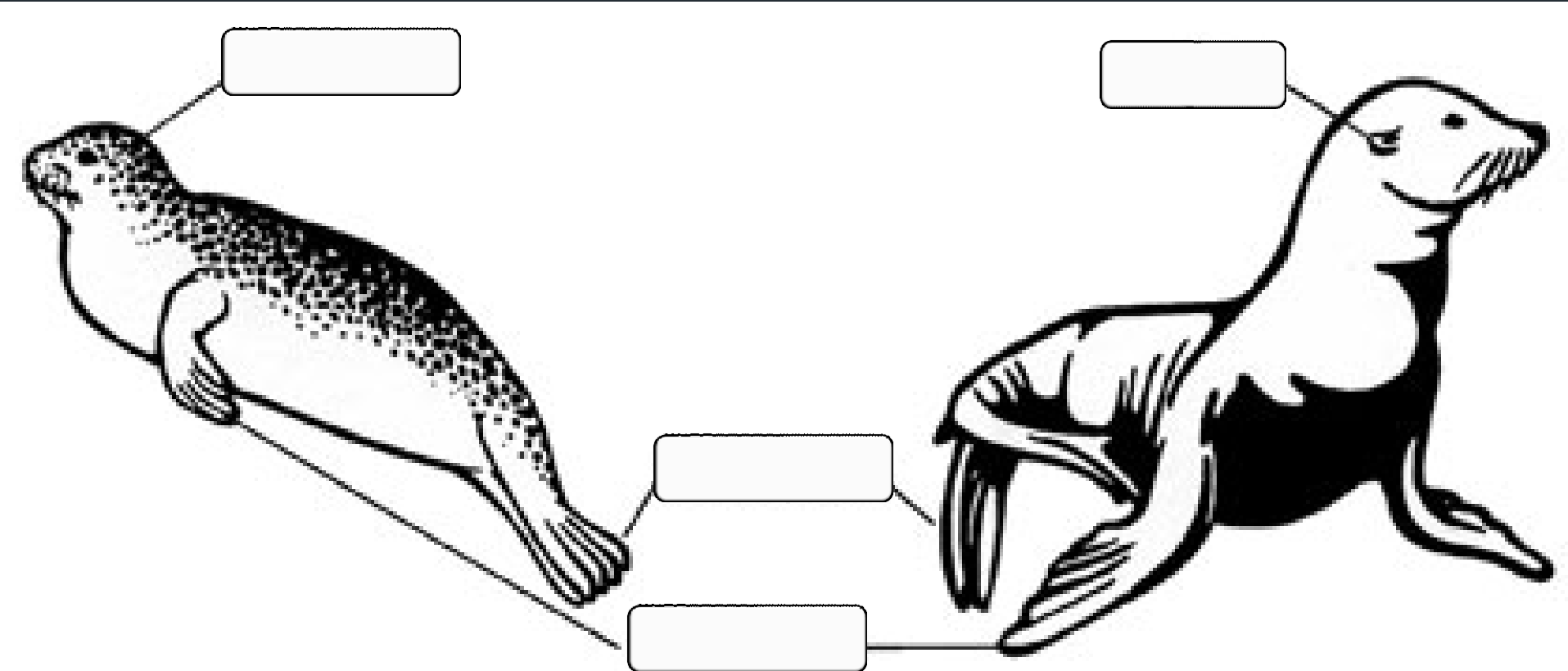


Pinnipeds: seals vs. sea lions



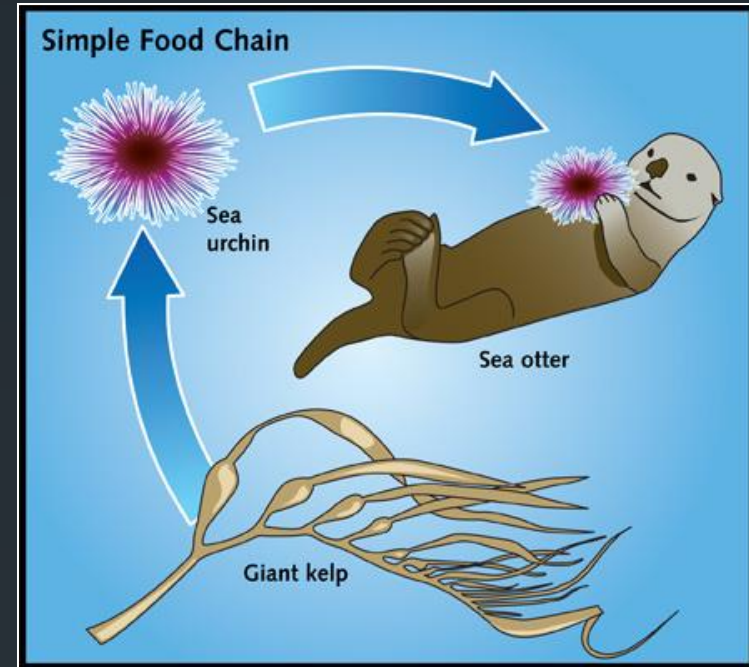
<http://oceanservice.noaa.gov/facts/seal-sealion.html>

<http://www.marinemammalcenter.org/education/marine-mammal-information/pinnipeds/>



Sea Otters

- Smallest marine mammal (1 meter long)
- Closely related to land animals.
- Spends most of its time in the water (feeds, mates, gives birth)
- Very adept at using tools to feed.
- Found in the Pacific ocean.
- No blubber; thick fur and oils are used to keep warm.



Manatees & Dugongs

- Manatee is a slow-moving herbivore.
 - Found in warm, shallow waters in Florida, Caribbean.
 - Uses round, paddle-like tail to swim.
 - Surfaces every 15 minutes.
- Dugong's tail is triangular.
- Both species use upper lip to grab food (like elephant trunk)



Polar Bears



- Most terrestrial marine mammal.
- Lives on ice floes in polar regions.
- Seal is main prey (hunt them from the ice).
- Solitary animal (except mother-pup).

