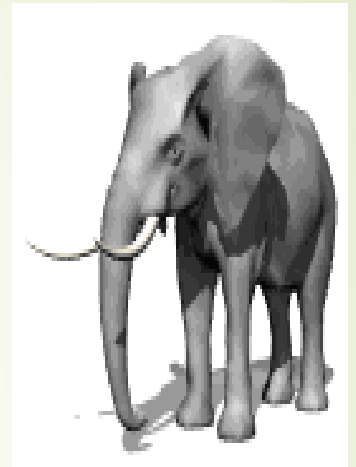




Mammals e-Honour

BUC Adventist Youth UK Ireland
14th June 2020 1600 BST

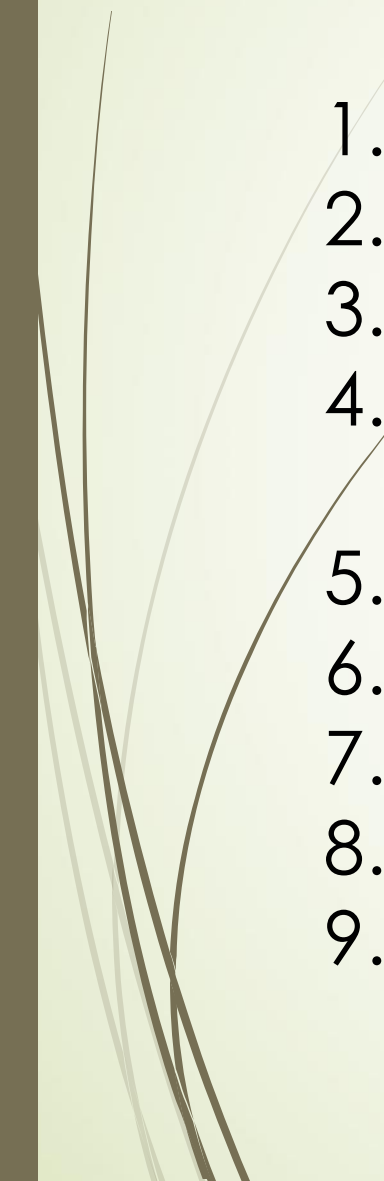


By Deyvid Batista





Objectives

1. Mammals and the Bible
 2. Characteristics of a Mammal
 3. Characteristics of Specific Species
 4. Beneficial Characteristics of Mammals
 5. Can a Mammal Harm You?
 6. Aquatic Mammals
 7. Big Guys!
 8. Observation Time
 9. Endangered Mammals
- 



Mammals and the Bible

1 Corinthians 15:39 – Everything that creeps on the ground

Genesis 9:3 – Every living creature that moves

Acts 10:12 - Cattle and birds

Isaiah 1:3 - Birds

Jude 1:10 - Animals

Job 12:7 - Birds

Proverbs 12:10 - Animals

2 Peter 2:12 - Animals

Genesis 1:24-31

²⁴And God said, "Let the land produce living creatures according to their kinds: livestock, creatures that move along the ground, and wild animals, each according to its kind." And it was so.

²⁵God made the wild animals according to their kinds, the livestock according to their kinds, and all the creatures that move along the ground according to their kinds. And God saw that it was good.

²⁶Then God said, "Let us make man in our image, in our likeness, and let them rule over the fish of the sea and the birds of the air, over the livestock, over all the earth, and over all the creatures that move along the ground."



²⁷So God created man in his own image, in the image of God he created him; male and female he created them.

²⁸God blessed them and said to them, "Be fruitful and increase in number; fill the earth and subdue it. Rule over the fish of the sea and the birds of the air and over every living creature that moves on the ground."


²⁹Then God said, "I give you every seed-bearing plant on the face of the whole earth and every tree that has fruit with seed in it. They will be yours for food.

³⁰And to all the beasts of the earth and all the birds of the air and all the creatures that move on the ground—everything that has the breath of life in it—I give every green plant for food." And it was so.

³¹God saw all that he had made, and it was very good. And there was evening, and there was morning—the sixth day.




Quiz time!



Polar bears have a very strong sense of smell, and can smell their prey up to...

- a. 500m away
- b. 1km away
- c. 5km away
- d. 10km away





Polar bears have a very strong sense of smell, and can smell their prey up to...


- a. 500m away
- b. 1km away**
- c. 5km away
- d. 10km away

This 'massive mammal' was photographed for WWF in the mountain forests of Bhutan, but what is it?

- a. Bison
- b. Buffalo
- c. Takin
- d. Gaur




- a. Bison
- b. Buffalo
- c. Takin
- d. Gaur



What is the world's largest land mammal?

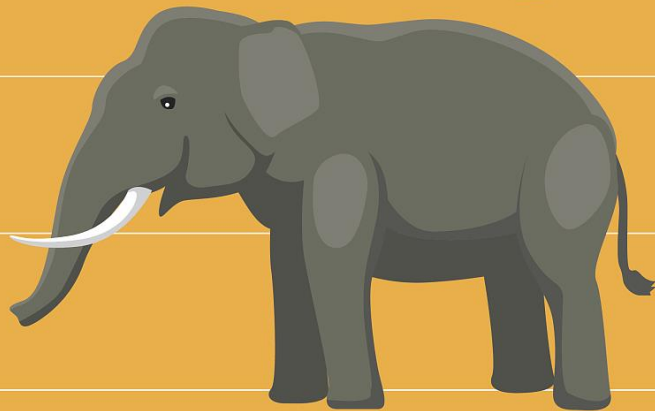
- a. African elephant
- b. Grizzly bear
- c. Hippo
- d. Doormouse



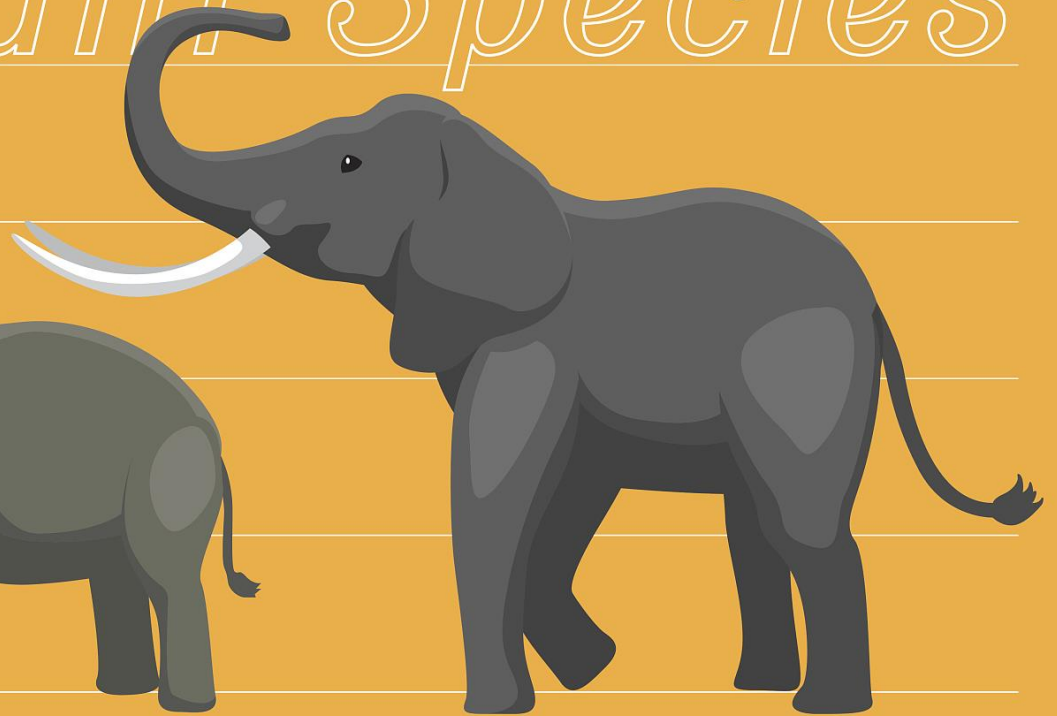
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- d. Doormouse

Elephant Species




ASIAN ELEPHANT




AFRICAN ELEPHANT





Elephants can recognise how many individuals from their calls alone?

- a. Fewer than 20
- b. Over 100
- c. Over 1,000
- d. Over 2,000




Elephants can recognise how many individuals from their calls alone?

- a. Fewer than 20
- b. Over 100**
- c. Over 1,000
- d. Over 2,000

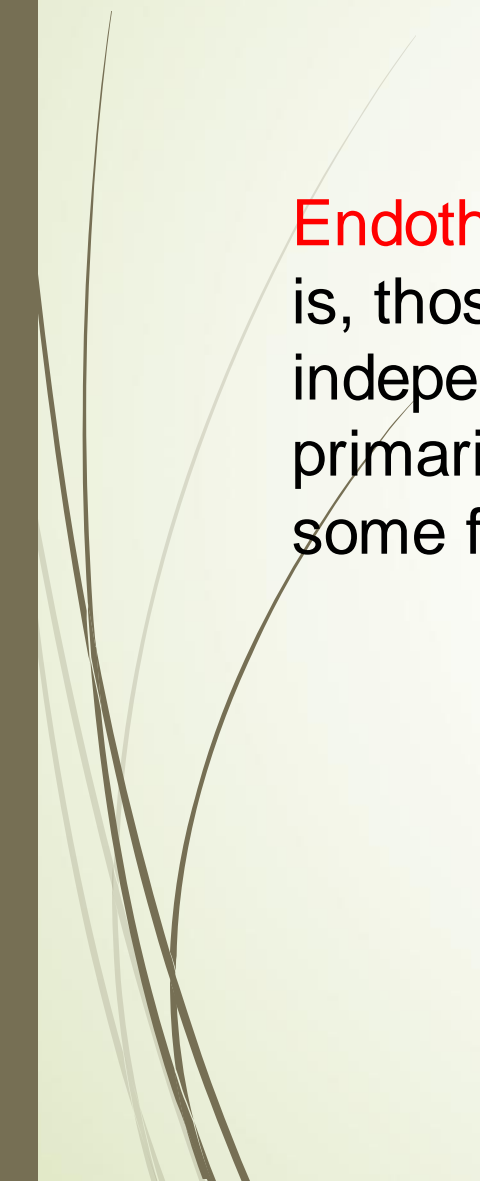


Characteristics of a Mammal

1. Endothermic (Warm-blooded)
2. Hair or Fur
3. Mammary (milk producing) glands
4. Sebaceous (fat-secreting) glands
5. Heterodont Dentition (Different shapes of teeth in their mouths)



Endotherm, so-called warm-blooded animals; that is, those that maintain a constant body temperature independent of the environment. The endotherms primarily include the **birds** and **mammals**; however, some fish are also endothermic.






All mammals have fur or hair.

Even **mammals** that swim under the water (like dolphins and whales) **have hair**. Though you would **need** a magnifying glass to see the fine **hair** on the lips of a young whale. **Mammals** are the only **animals** with true **hair**.






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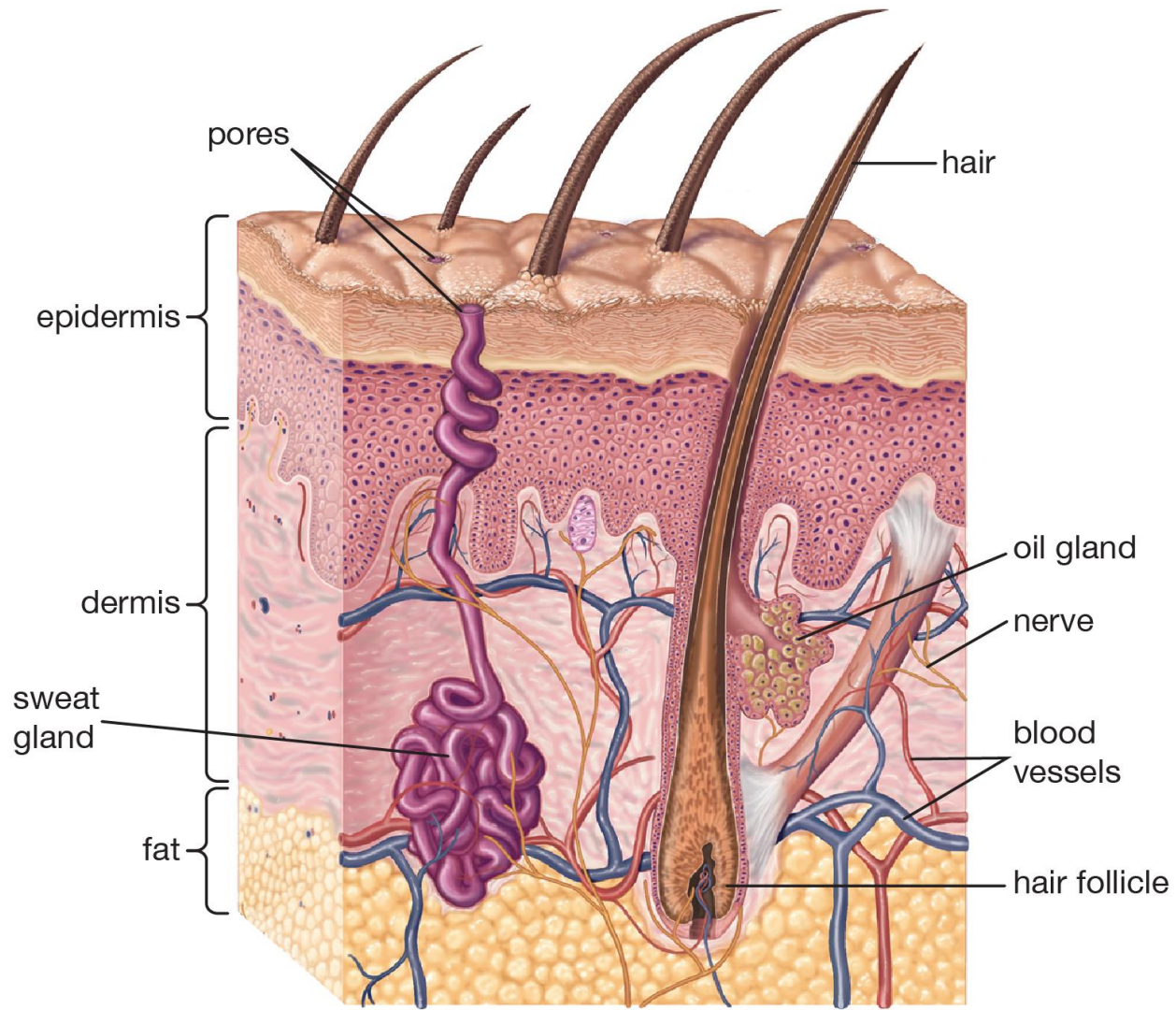



Mammary gland, milk-producing gland is a characteristic of all female mammals and present in a rudimentary and generally non-functional form in males. Mammary glands are regulated by the endocrine system and become functional in response to the hormonal changes associated with parturition.





Mammals have an array of different **skin glands**. These include the wax producing, sweat, sebaceous and mammary glands. Wax producing glands are found in the ears. Sebaceous glands secrete an oily secretion into the hair follicle.

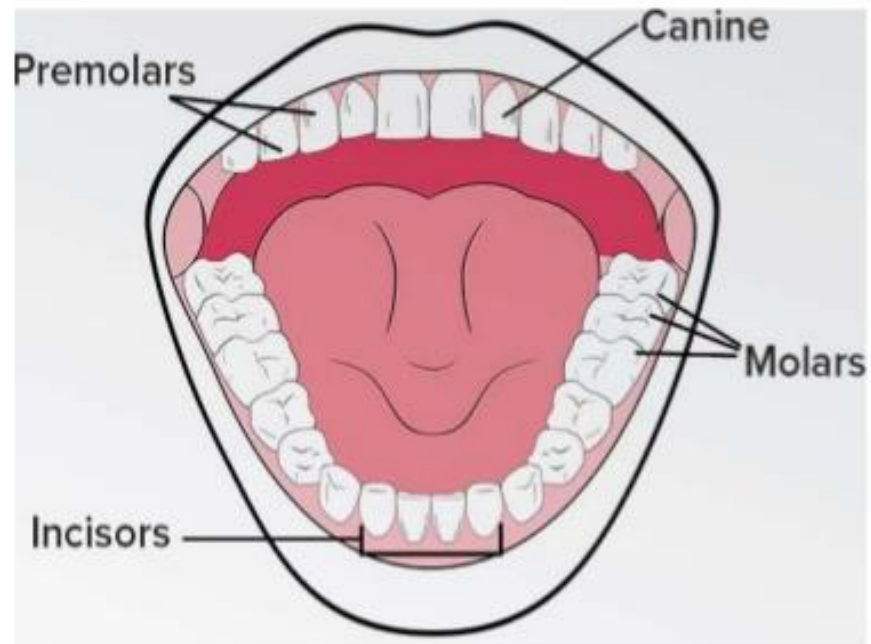




Mammals have a heterodont **dentition** with four classes of teeth: incisors, canines, premolars and molars. Each tooth is formed by 1-5 cusps. Maxillary cusps are called cones whereas mandibular ones are called conids.

Adult mammals have four kind of teeth.


- Incisors
- Canines
- Premolars
- Molars







asasatria-photography



Characteristics of Specific Species



Marsupialia

Marsupials have a pouch that protects the young as they are developing. The infant is born at very early stage of development and crawls out of the womb and across the mothers belly to the pouch where the baby finds a nipple that it attaches to as it continues to grow.





Insectivora

Insectivora means literally insect eater and that is the main connecting feature of the animals in this order. Many of the animals that were once a part of this order have been moved to other orders based on DNA analysis. The order Insectivora has been replaced by the orders Erinaceomorpha and Soricomorpha.





Chiroptera

The order of flying mammals commonly called "bats". Bats are mammals. Though sometimes called "flying rodents", "flying mice," or even mistaken for invertebrate bugs and birds, bats are neither rodents nor arthropods. There are two suborders of bats:

- Megabat Megachiroptera (megabats)
- Microbat Microchiroptera (microbats/echolocating bats)





Carnivora

Carnivora are meat eaters, and have canine teeth that are especially adapted for this behaviour. They tend to have good eye sight, a good sense of smell and a well developed brain, all working together to improve their hunting ability.

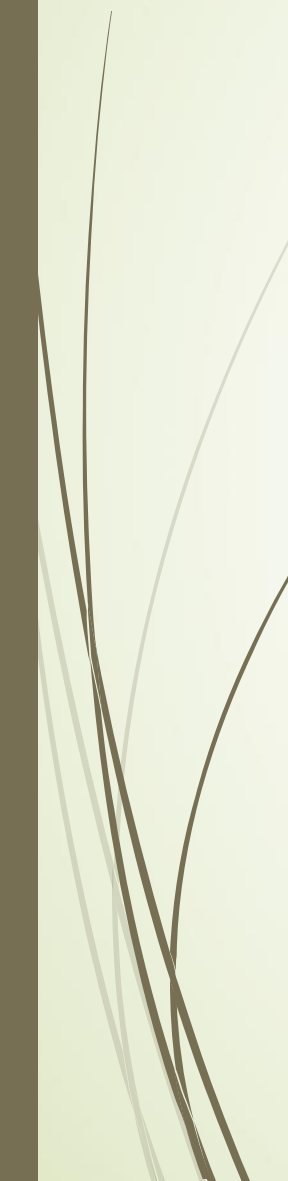
It should also be said that there are a number of species included in the order carnivora that are not carnivores. *Ailuruss* (Pandas) are a good example as they primarily eat bamboo, using their canines to rip the hard bamboo apart.



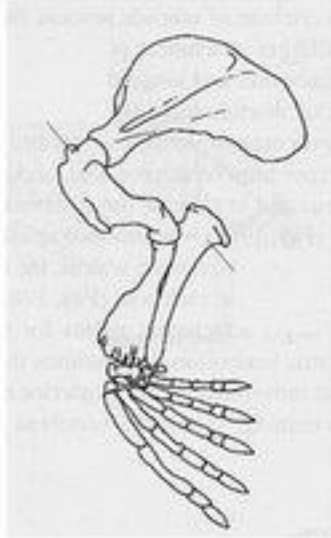


Pinnipedia

An order of carnivorous aquatic mammals that comprises the seals, sea lions, and walrus. They are distinguished by their flipper-like limbs.



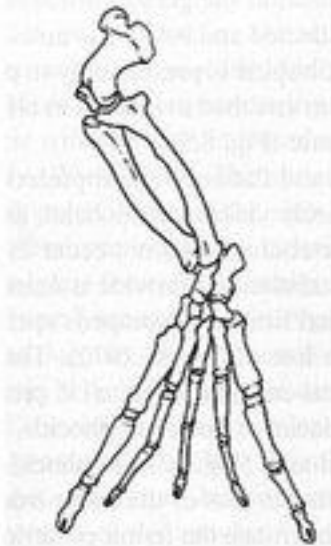
Seal fore
flipper



Human hand





Seal hind
flipper



Human foot







Quiz time!



A group of rhinos is called

- a. A band
- b. A crash
- c. A gang
- d. A squad



A group of rhinos is called

- a. A band
- b. A crash**
- c. A gang
- d. A squad

This mammal from the Amazon Basin has quite an impressive 'stache. What's it called?



- a. Gelada
- b. Emperor tamarin
- c. Red-shanked douc
- d. Silvery lutung

This mammal from the Amazon Basin has quite an impressive 'stache. What's it called?



- a. Gelada
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Rodentia

Rodents have two incisors in the upper as well as in the lower jaw which grow continuously and must be kept worn down by gnawing; this is the origin of the name. These teeth are used for cutting wood, biting through the skin of fruit, or for defense.



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Lagomorpha

Lagomorphs differ from rodents in that:
they have four incisors in the upper jaw (not two as in rodents);
they will only eat vegetation (unlike rodents, who will eat meat and vegetation)
they will re-digest first-time droppings to obtain the most from their plant diet.
They resemble rodents, however, in that their teeth grow throughout their life, thus necessitating constant chewing to keep them from growing too long.




Artiodactyla

The Artiodactyla are mammals with hooves and which bear most of their weight on an even number of toes. They are sometimes called the *even-toed ungulates* (ungulates are hooved animals).



Sirenia

These slow moving herbivores are named after the Sirens of the Homeric legend of Odysseus.







Cetacea

This group includes whales, porpoises and dolphins. The word cetus means large sea animal, and is the name of a constellation also known as the whale. These mammals are truly aquatic, and many are quite massive, incapable of walking on land.

Cetaceans



blue whale
(*Balaenoptera musculus*)
length 29.5 m (97 ft)



minke whale
(*Balaenoptera acutorostrata*)
length up to 10 m (33 ft)



gray whale
(*Eschrichtius robustus*)
length up to 15 m (49 ft)



fin whale
(*Balaenoptera physalus*)
length 23 m (75 ft)



**Baird's beaked, or
giant bottlenose, whale**
(*Berardius bairdii*)
length 13 m (43 ft)



sperm whale
(*Physeter catodon*)
length up to 19 m (62 ft)



sei whale
(*Balaenoptera borealis*)
length 14 m (46 ft)



narwhal
(*Monodon monoceros*)
length 4 m (13 ft)



northern right whale
(*Eubalaena glacialis*)
length up to 18 m (59 ft)

**bowhead, or
Greenland right whale**
(*Balaena mysticetus*)
length up to 20 m (66 ft)



beluga
(*Delphinapterus leucas*)
length 4 m (13 ft)



dolphins

killer whale, or orca
(*Orcinus orca*)
length 8 m (26 ft)

porpoise



Beneficial Characteristics of Mammals

- Bats eat flying insects.
- Dogs provide assistance to the blind and comfort to the sick.
- Meerkats eat scorpions and snakes.
- Cats keep down the rodent population.
- Hyena is a scavenger and also helps keep the environment clean and free of disease.
- Bears carry the nutrients of the salmon they eat into the forest.



Dangerous Mammals

Skunks can make a neighbourhood smell quite bad. Tigers, lions, bears, wolves and many other carnivorous mammals have killed and sometimes eaten people. They also prey on livestock. Groundhogs, prairie dogs, gophers, moles and many other burrowing animals can create tripping hazards for humans, horses and other mammals.

Name this threatening animal...

- a. Bison
- b. Jaguar
- c. Common hippopotamus
- d. German shepherd



Name this threatening animal...

- a. Bison
- b. Jaguar
- c. Common hippopotamus
- d. German shepherd





Aquatic Mammals

Salt Water Mammals

1. Whales

a. *Balaenoptera musculus*

b. *Delphinapterus leucas* (Beluga Whale)

c. *Balaena mysticetu* (Bowhead Whale) lives solely in the Arctic near the surface of the ocean. d. *Megaptera novaeangliae* (Humpback Whale) lives in all the oceans in the world except the polar seas. They live mostly in shallow water.



2. Dolphins

a. *Tursiops truncatus*

b. *Orcinus orca* (Orcas or Killer Whales)

c. *Stenella longirostris* (Spinner

Dolphin): 1. Eastern d. *Lagenorhynchus*

obliquidens (Pacific White Sided Dolphin)

lives in the Pacific Ocean



3. Porpoise

a. *Neophocaena phocaenoides* (Finless Porpoise) b. *Phocoena*

phocaena (Harbour Porpoise

c. *Phocoena sinus* (Vaquita)

d. *Phocoenoides dalli* (Dall's Porpoise)

ranges across the north Pacific Ocean from southern California to southern Japan (including the Sea of Japan in the south up to the Bering Sea in the north).



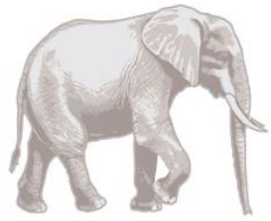
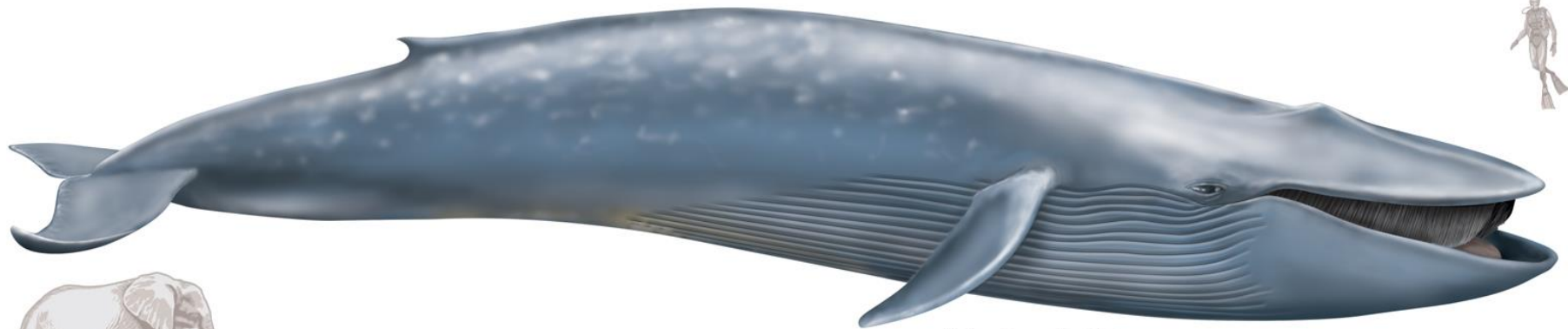
Fresh Water Mammals

1. *Inia geoffrensis* (Amazon or Pink Dolphin) lives in the Amazon River and Orinoco River systems.
2. *Platanista gangetica* (Ganges and Indus River Dolphin or Indian River Dolphin) lives in the Ganges River in India and in the Indus River in Pakistan.



Big guy!

- ❖ The *Balaenoptera musculus* (Blue Whale) is the largest animal on the planet. Specimens have been recorded over 30 meters in length and are estimated to weigh more than 90 tonnes.
- ❖ These whales have been seen in every ocean of the world and feed by filtering the water through the giant baleen plates in their mouth.
- ❖ Adult whales can eat up to 4 tones krill (euphausiids) and copepods each day and the calves can drink up to 400 litres/day.
- ❖ These amazing creatures were hunted by man to the brink of extinction. Over 378,000 were killed to provide oil and whale meat. The population of *B. musculus* (Blue Whales) is now only about 1% of the total 100 years ago.



3 metres
9 feet

blue whale
(Balaenoptera musculus)
length 29.5 m (97 ft)

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Tips for Observing Wildlife

1. Get Up Early. The best times for **observing** most **animals** are early in the morning and in the evening....
2. Be Quiet. Make as little noise as possible and listen!...
3. Stay Downwind. If you can, face into the wind when looking for **wildlife**. ...
4. Be Patient. ...
5. Pick a Good Spot. ...
6. Be Prepared. ...
7. Respect **Wildlife**.



Endangered Mammals



For some species, time on planet Earth is running out. Human beings are the greatest threat to the survival of endangered species with poaching, habitat destruction and the effects of climate change causing a lot of the problems.

Kakapo

Kakapos are nocturnal ground-dwelling parrots from New Zealand, and yet another example of an animal brought to the edge of extinction by humans. They are critically endangered with only around 140 individuals remaining, each one with an individual name.



Amur Leopard

Unfortunately, Amur leopards are one of the world's most endangered big cats. They are as Critically Endangered and between 2014 and 2015, there were only around 92 Amur leopards left within their natural range. That number is now estimated to be less than 70.



Vaquita

70

The vaquita is both the smallest and the most endangered marine mammal in the world. It has been classified as Critically Endangered by the IUCN since 1996, and in 2018, there were only around 6 to 22 vaquitas left. The latest estimate, from July 2019, suggests there are currently only 9





Questions?