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| Domain | Eukaryota |
| Kingdom | Animalia |
| Phylum | Chordata |
| Class | Mammalia |

VERTEBRATES

Mammals

125 MYA – PRESENT

Mammals are a group of air-breathing vertebrates that have hair, three middle-ear bones, and suckle their young. There are three major groups of mammals: monotremes (platypuses and echidnas),

marsupials (kangaroos, possums) and placental mammals (cats, whales, horses, bats, humans, and many more). Mammals range in size from the 4 cm long bumblebee bat to the 35 m long blue whale.

Fossil Record

Mammals first appear in the fossil record in rocks from the late Triassic, approximately 220 million years ago. The earliest mammals belong to several extinct groups, one of which were the multituberculates. These went extinct in the early Oligocene. The oldest monotreme fossil is from Victoria, from the early Cretaceous. The oldest fossil marsupial comes from rocks of the early Cretaceous in China and the oldest fossil placental comes from the Paleocene. After the mass extinction at the end of the Cretaceous, 66 million years ago, mammals took over many of the niches previously occupied by reptiles.

Habitat and Lifestyle

Mammals live on all continents from high mountains down to the ocean. They live in marine environments (seals, dolphins, dugongs, and whales) and in fresh water (platypuses, otters, and rakalis). Most are diurnal meaning they are active during the day, but many are nocturnal, meaning they are active at night.

Some glide and some fly. They live on the ground, in trees, in burrows, in colonies or alone. They eat other vertebrates, insects, plankton, fungi, plants, seeds, fruit, and nectar. Mammals have mammary glands and give birth to live young. Monotremes do not give birth to live young, instead they lay eggs with a leathery protective shell. Marsupials raise their young in pouches on their bodies.



A pod of bottlenose dolphins, *Tursiops truncatus*. Image from makabera, pixabay.



Common wombat, *Vombatus ursinus*. Maria Island National Park, Tasmania. Image from Dominic Iffland, Geoscience Australia.

DID YOU KNOW



The blue whale is the largest animal ever to have lived! It is larger than any of the large herbivorous sauropod dinosaurs that lived during the Jurassic and Cretaceous. These dinosaurs may have been as long as a blue whale but were only about half the weight. An adult blue whale may be up to 35 m long and weigh as much as 180 tonnes. Blue whales feed on one of the smallest animals in the ocean, krill, and require about 3.5 tonnes of food a day – up to 40 million krill. A blue whale's lung capacity is about 5000 L, roughly 1000 times that of a human.

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