

VERTEBRATES

Birds

Domain	Eukaryota
Kingdom	Animalia
Phylum	Chordata
Class	Aves

95 MYA – PRESENT

Birds are the only extant dinosaurs. Modern birds have feathers, wings, walk on two legs, are warm-blooded, and lay eggs.

They range in size from the tiny, 5 cm long bee hummingbird to the 2.5 m tall ostrich.

Fossil Record

The earliest fossilised bird is *Archaeopteryx*, from the late Jurassic Germany, about 150 million years ago. Soon after this birds evolved into two main groups, one of which, the enantiornithines became extinct at the end of the Cretaceous, 66 million years ago. The other group, the euornithes, continued to evolve and diversify into modern day birds.

Habitat and Lifestyle

Birds live all around the planet from the Arctic to the Antarctic and while most can fly, some have lost that ability such as the emu, ostrich, and kiwi. Some, such as penguins and cormorants, swim incredibly well. Many birds are predators and eat other birds, insects, reptiles, fish, and other small vertebrates. Others are scavengers, herbivores, frugivores, or nectarivores, which eat seeds, fruit, and nectar. Nectarivores also play an important role in angiosperm pollination.

A few species such as flamingos are filter feeders, filtering small plants and animals from water.

Fossilisation

Fossilised remains of birds are rare as their bones are hollow and consequently very delicate. Remains are often small, fragmented and easily overlooked.



The beautiful rainbow lorikeet, *Trichoglossus moluccanus*. Image from Magnascan, pixabay.



Plaster cast of an *Archaeopteryx* fossil found in Solnhofen, Germany. Image from Patrick De Deckker, Australian National University Research School of Earth Sciences palaeontological collection.

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DID YOU KNOW



Some early birds, such as *Archaeopteryx* had more in common with small theropod dinosaurs than with modern birds. *Archaeopteryx* had jaws with sharp teeth, three fingers with claws on its wings, a long bony tail, and a large killing claw on one of its toes. It has been found that chickens have retained the gene that develop teeth.