

# Fauna of Australia



# Mammals

Australia has a rich mammalian fossil history, as well as a variety of extant mammalian species, dominated by the marsupials, currently however there is limited taxonomic research into Australia's mammals.



Two of the five living species of monotreme occur in Australia: the platypus and the short-beaked echidna. The monotremes differ from other mammals in their methods of reproduction; in particular, they lay eggs instead of giving birth to live young. The platypus—a venomous, egg-laying, duck-billed amphibious mammal—is considered to be one of the strangest creatures in the animal kingdom.

The koala or, inaccurately, koala bear (*Phascolarctos cinereus*) is an arboreal herbivorous marsupial native to Australia. It is the only extant representative of the family Phascolarctidae and its closest living relatives are the wombats, which comprise the family Vombatidae.

The koala is found in coastal areas of the mainland's eastern and southern regions, inhabiting Queensland, New South Wales, Victoria, and South Australia.

The red fox (*Vulpes vulpes*) is the largest of the true foxes and one of the most widely distributed members of the order Carnivora, being present across the entire Northern Hemisphere including most of North America, Europe and Asia plus parts of Northern Africa. It is listed as least concern by the IUCN.

Due to its presence in Australia, it is included on the list of the "world's 100 worst invasive species".





The kangaroo is a marsupial from the family **Macropodidae** (macropods, meaning "large foot"). In common use the term is used to describe the largest species from this family, the red kangaroo, as well as the antilopine kangaroo, eastern grey kangaroo, and western grey kangaroo. Kangaroos are indigenous to Australia. The Australian government estimates that 34.3 million kangaroos lived within the commercial harvest areas of Australia in 2011, up from 25.1 million one year earlier.

As with the terms "wallaroo" and "wallaby", "kangaroo" refers to a paraphyletic grouping of species. All three refer to members of the same taxonomic family, **Macropodidae**, and are distinguished according to size. The largest species in the family are called "kangaroos" and the smallest are generally called "wallabies". The term "wallaroos" refers to species of an intermediate size. There is also the tree-kangaroo, another genus of macropod, which inhabits the tropical rainforests of New Guinea, far northeastern Queensland and some of the islands in the region.

# Birds

- ▶ Australia and its territories are home to around 800 species of bird.
- ▶ 45% of these are endemic to Australia.



The emu (*Dromaius novaehollandiae*) is the second-largest living bird by height, after its ratite relative, the ostrich. It is endemic to Australia where it is the largest native bird and the only extant member of the genus *Dromaius*. The emu's range covers most of mainland Australia, but the Tasmanian, Kangaroo Island and King Island subspecies became extinct after the European settlement of Australia in 1788.

Emus are soft-feathered, brown, flightless birds with long necks and legs, and can reach up to 1.9 metres (6.2 ft) in height. Emus can travel great distances, and when necessary can sprint at 50 km/h (31 mph).

They forage for a variety of plants and insects, but have been known to go for weeks without eating. They drink infrequently, but take in copious amounts of water when the opportunity arises.





- ▶ **Australian parrots comprise a sixth of the world's parrots, including many cockatoos and galahs. The kookaburra is the largest species of the kingfisher family, known for its call, which sounds uncannily like loud, echoing human laughter.**
- ▶ **Parrots are found on all tropical and subtropical continents and regions including Australia.**
- ▶ **By far the greatest number of parrot species come from Australasia.**
- ▶ **One-third of all parrot species are threatened by extinction, with higher aggregate extinction risk than any other comparable bird group.**

- ▶ About 200 species of seabird live on the Australian coast, including many species of migratory seabird. Australia is at the southern end of the East Asian-Australasian Flyway for migratory water birds, which extends from Far-East Russia and Alaska through Southeast Asia to Australia and New Zealand. About two million birds travel this route to and from Australia each year. One very common large seabird is the Australian pelican, which can be found in most waterways in Australia. The little penguin is the only species of penguin that breeds on mainland Australia.



# Amphibians and reptiles

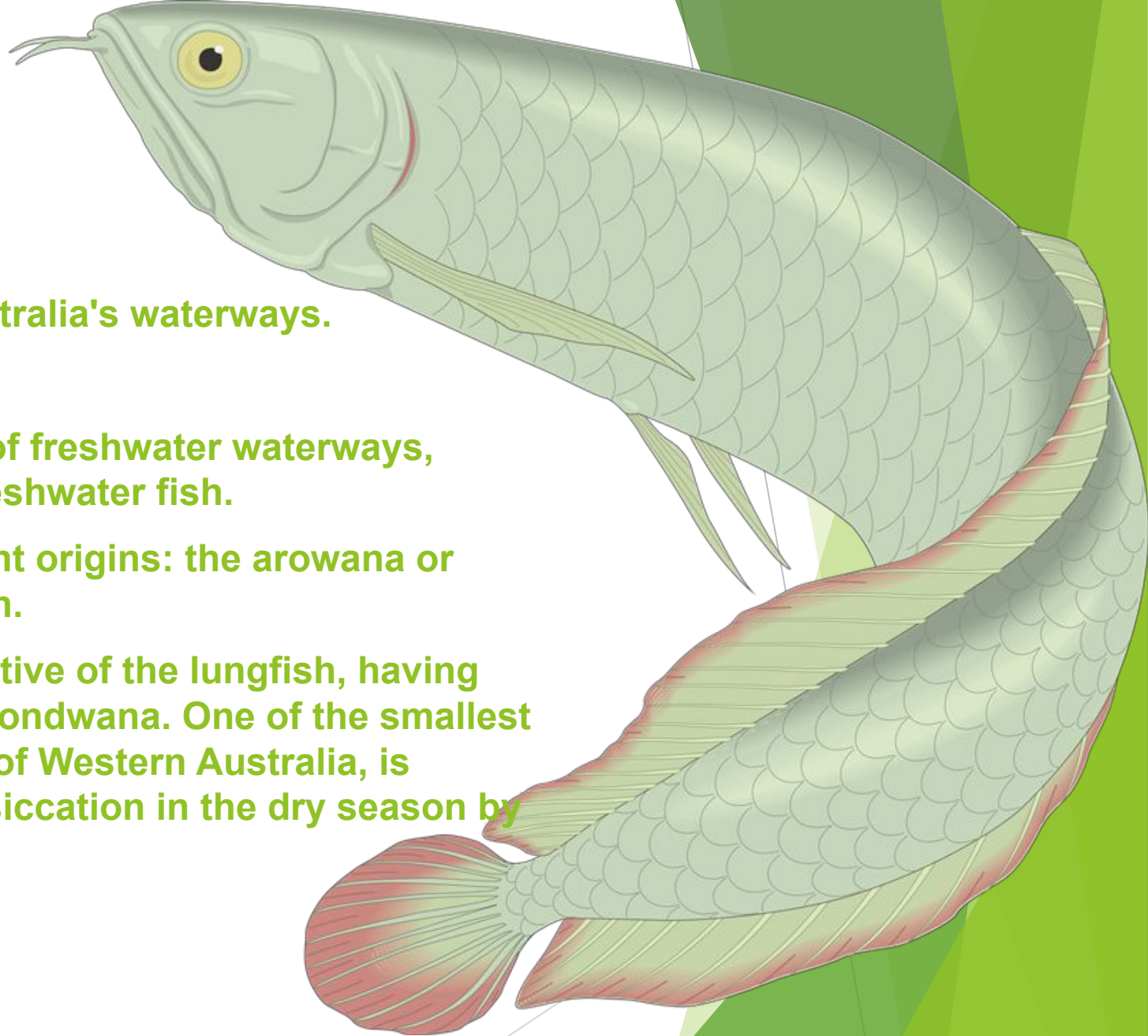
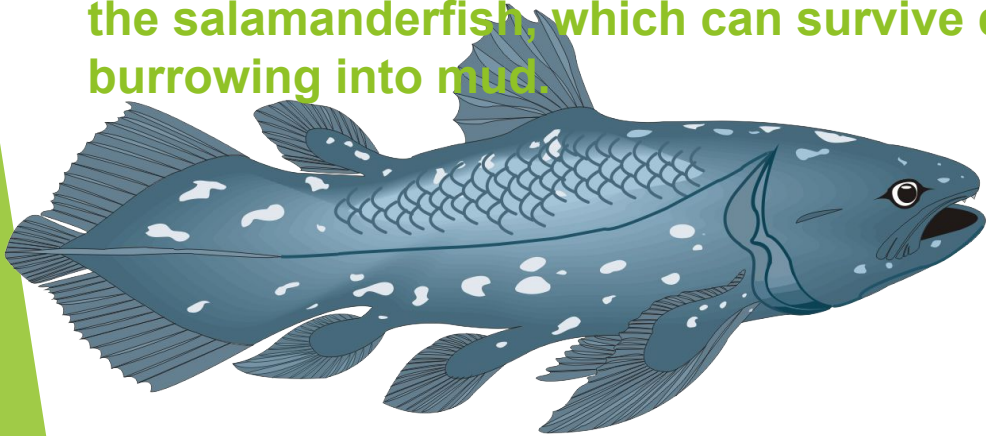
Amphibians of Australia are limited to members of the order Anura, commonly known as frogs. All Australian frogs are in the suborder Neobatrachia, also known as the modern frogs, which make up the largest proportion of extant frog species. About 230 of the 5,280 species of frog are native to Australia with 93% of them endemic. Compared with other continents, species diversity is low, and may be related to the climate of most of the Australian continent. There are two known invasive amphibians, the cane toad and the smooth newt.





# Fish

- ▶ More than 5000 species of fish inhabit Australia's waterways.
- ▶ 24% are endemic.
- ▶ However, because of the relative scarcity of freshwater waterways, Australia has only about 300 species of freshwater fish.
- ▶ Two families of freshwater fish have ancient origins: the arowana or bonytongues, and the Queensland lungfish.
- ▶ The Queensland lungfish is the most primitive of the lungfish, having evolved before Australia separated from Gondwana. One of the smallest freshwater fish, peculiar to the southwest of Western Australia, is the salamanderfish, which can survive desiccation in the dry season by burrowing into mud.



# Invertebrates

Of the estimated 200,000 animal species in Australia, about 96% are invertebrates. While the full extent of invertebrate diversity is uncertain, 90% of insects and molluscs are considered endemic. Invertebrates occupy many ecological niches and are important in all ecosystems as decomposers, pollinators, and food sources. The largest group of invertebrates is the insects, comprising 75% of Australia's known species of animals. The most diverse insect orders are the Coleoptera, with 28,200 species of beetles and weevils, the Lepidoptera with 20,816 species [citation needed] including butterflies and moths, and around 14,800 species of Hymenoptera,



# Invasive species

- ▶ Introduction of exotic fauna in Australia by design, accident and natural processes has led to a considerable number of invasive, feral and pest species which have flourished and now impact the environment adversely. Introduced organisms affect the environment in a number of ways.
- ▶ Rabbits render land economically useless by eating everything.
- ▶ Red foxes affect local endemic fauna by predation while the cane toad poisons the predators by being eaten.
- ▶ The invasive species include birds (Indian mynah) and fish (common carp), insects (red imported fire ant) and molluscs (Asian mussel). The problem is compounded by invasive exotic flora as well as introduced diseases, fungi and parasites.
- ▶ Costly, laborious and time-consuming efforts at control of these species has met with little success and this continues to be a major problem area in the conservation of Australia's biodiversity.
- ▶ Many of the introduced species are not regulated through wildlife services and can be regularly hunted year-round.



# Human impact and conservation

- ▶ For at least 40,000 years, Australia's fauna played an integral role in the traditional lifestyles of Indigenous Australians, who relied upon many species as a source of food and skins.
- ▶ Vertebrates commonly harvested included macropods, possums, seals, fish and the short-tailed shearwater, most commonly known as the muttonbird. Invertebrates used as food included insects such as the Bogong moth and larvae collectively called witchetty grubs and molluscs.
- ▶ The use of fire-stick farming, in which large swathes of bushland were burnt to facilitate hunting, modified both flora and fauna – and are thought to have contributed to the extinction of large herbivores with a specialised diet, such as the flightless birds from the genus *Genyornis*.
- ▶ The role of hunting and landscape modification by aboriginal people in the extinction of the Australian megafauna is debated, but increasingly favours the idea humans were responsible for megafaunal extinction.
- ▶ Australia is a member of the International Whaling Commission and is strongly opposed to commercial whaling—all cetacean species are protected in Australian waters.
- ▶ Australia is also a signatory to the CITES agreement and prohibits the export of endangered species. Protected areas have been created in every state and territory to protect and preserve the country's unique ecosystems. These protected areas include national parks and other reserves, as well as 64 wetlands registered under the Ramsar Convention and 16 World Heritage Sites.
- ▶ As of 2002, 10.8% (774,619.51 km<sup>2</sup>) of the total land area of Australia is within protected areas. Protected marine zones have been created in many areas to preserve marine biodiversity; as of 2002, these areas cover about 7% (646,000 km<sup>2</sup>) of Australia's marine jurisdiction.
- ▶ The Great Barrier Reef is managed by the Great Barrier Reef Marine Park Authority under specific federal and state legislation. Some of Australia's fisheries are already overexploited, and quotas have been set for the sustainable harvest of many marine