

Platypus

Many have been lucky enough to have seen a Platypus (*Ornithorhynchus anatinus*), or have at least thought that those ripples on the surface of the water may have been one.

They are truly remarkable animals, whose presence in a healthy breeding population is an indicator of good water quality and aquatic habitat. This Note provides an overview of Platypus ecology and identifies factors that pose a threat to their survival. Platypus are one of two species of monotreme (egg-laying mammals) found in Australia, the other being the Short-beaked Echidna.

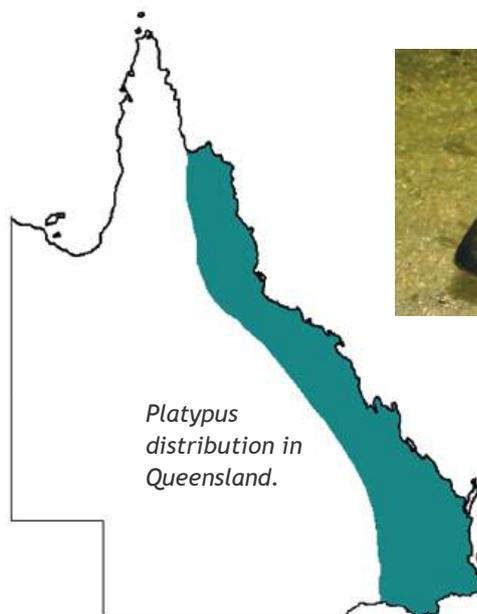
Where are Platypus found?

Platypus are widespread and found in permanent streams, rivers and lakes from North Queensland to Tasmania. They may also use temporary, or artificial water bodies (e.g. dams), particularly when these are linked to streams or rivers. Platypus are not often seen because of their quiet, retiring nature and largely nocturnal habits (you are most likely to see Platypus at dawn or dusk). Whilst Platypus are not listed as threatened, they are vulnerable to local extinctions if waterways are not managed properly. It is important to note that all native wildlife is protected under the *Nature Conservation Act 1992*.

Within Queensland, Platypus have been reported in many east-flowing rivers between Cooktown and the NSW border and the headwaters of three of the five river systems draining into the Murray-Darling Basin. They are still common in parts of the Atherton Tablelands but do not appear to occupy any of the waterways flowing into the Gulf of Carpentaria. Platypus are reasonably abundant in South East Queensland, even in more urbanised areas where habitat remains suitable.



High quality Platypus habitat.
Photo by Nick Clancy.



Platypus
distribution in
Queensland.



Platypus spend most of the day asleep in their burrows but come out to feed at dawn and dusk. Photo by Stefan Kraft, Wikimedia Commons.

Platypus Facts

Lifespan and breeding

Platypus have been recorded to live to the age of 16 years in the wild; however, most die at a younger age, possibly 4-5 years for males and 6-8 years for females. They breed from about July to September. Females lay 1-3 eggs that are incubated between her belly and curled up tail. Female Platypus lack nipples, instead their milk oozes out through ducts on their abdomen. The eggs are very small (15-18 mm) and after hatching, the juveniles are fed milk for about four months. Adult male Platypus measure an average 50 cm in length (bill to tail) and weigh 1.2-2.6 kg. Adult females are slightly smaller, measuring an average 44 cm in length and weighing 0.6-1.6 kg.

Diet

Platypus consume 15-30% of their body weight in food each day. Their diet includes a wide variety of freshwater invertebrates including shrimps, water insects, worms and mussels. They may also incidentally ingest tadpoles, small frogs, fish and their eggs. Platypus protect their eyes and ears by automatically closing them underwater. To detect prey, their bills are equipped with electroreceptors that sense the tiny electrical currents created when their prey moves. Platypus usually remain underwater for approximately a minute, returning to the surface to chew their food with the rough grinding pads they have instead of teeth.

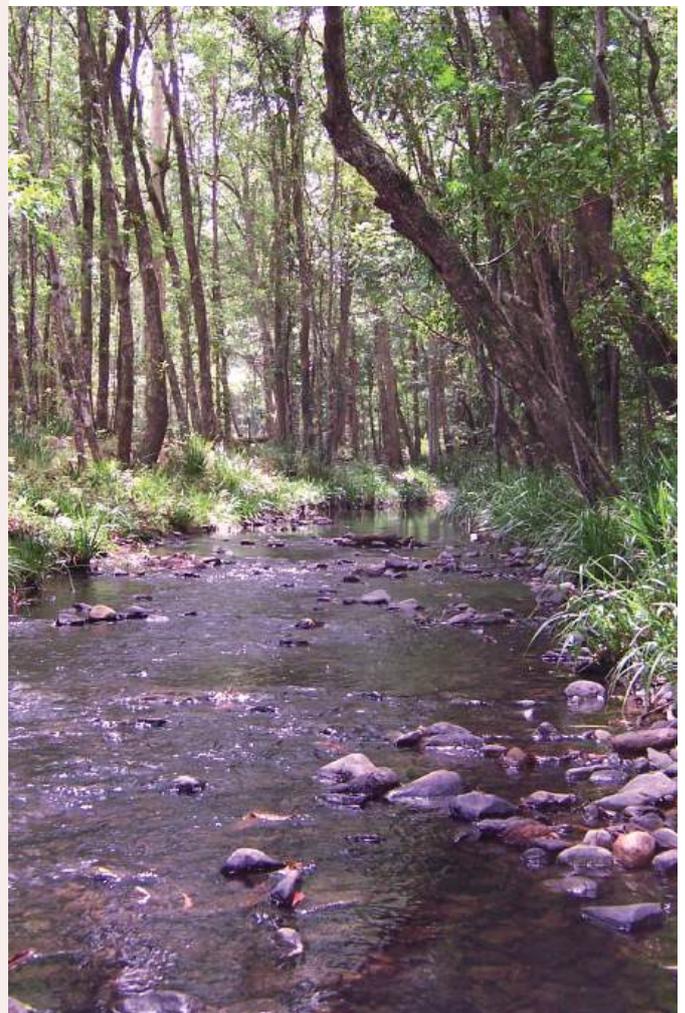
Riffles (shallow, pebbly sections of rivers and creeks) are important feeding sites for Platypus, as they eat invertebrates that hide in amongst the pebbles.

Spurs

Information on the sex and age of Platypus can be gained by examining the appearance of a spur located on the inner ankle of the hind foot. Juvenile males are equipped with a cone-shaped spur about one cm long. The spur is covered with a white chalky layer, which chips away by the age of about nine months to reveal the 'true' spur. Male Platypus start producing poison at two years of age. Young female Platypus have tiny (1-2 mm long) white or brown spurs, which are shed around the age of 8-10 months. People who are spurred when handling male Platypus typically experience severe pain and swelling, although the poison is not considered to be life-threatening.



Crustaceans such as yabbies are an important food source for Platypus.



*Riffles (shallow, pebbly sections of rivers and creeks) provide important foraging sites for Platypus.
Photo by Nick Clancy.*

Burrows

Platypus may spend up to 17 hours a day asleep in burrows. There are two types of burrows, nursery/ nesting burrows (providing shelter for a mother and her offspring) and camping/resting burrows. Nesting burrows are 3-15 metres long, with one or more entrances located above the waterline. Camping burrows are only 1-3 metres long with entrances usually located underwater. River and creek banks must be stable with overhanging streamside vegetation which provides secure burrows and protection for their entrances.



Riparian revegetation works can improve Platypus habitat by providing buffers to streams and filtering overland water flows. Photo by Nick Clancy.



Aquatic weeds such as Water Hyacinth can restrict the movement of native animals including Platypus.

Threats to Platypus

Platypus have natural predators such as goannas and Wedge-tailed Eagles. Introduced species such as foxes, domestic dogs and cats can also prey on Platypus. Other threats to Platypus resulting from human activity include:

- Decreased stream flow due to dam construction and drainage works.
- Pumping water from creeks.
- Entanglement in fencing wire and litter.
- Vegetation clearing.
- Home and agricultural chemical pollutants such as pesticides, fertilisers, detergents and urban stormwater.
- Disturbance to banks from activities such as heavy machinery or vehicle use, which can cause burrows to collapse.
- The spread of water weeds that can choke waterways and prevent Platypus from swimming, feeding and digging burrows.

Water pollution

Rubbish dumped in watercourses may cause severe injury or death to Platypus such as fishing line, barbed wire fencing or PVC pipe. Chemical pollutants (e.g. oils, paints, pesticides) that enter freshwater systems through runoff can harm Platypus by fouling the water, thereby poisoning or killing the animals on which they feed. Unmanaged livestock access to creeks and rivers can also damage nesting burrows through erosion and compaction. Limiting livestock access to watercourses and banks will conserve your water source for Platypus and will maintain water quality and protect vegetation cover. Healthy streamside vegetation will help prevent bank erosion and subsequent siltation which can have significant effects on the animals that Platypus feed on.

Weeds

Exotic pasture grasses like Para Grass (*Brachiaria mutica*) and water weeds such as Water Hyacinth (*Eichornia crassipes*) can choke water flow and impede the movement of native animals. Avoid unnecessary disturbance to the roots and soil when controlling weed trees (e.g. willows and Camphor Laurel) and shrubs. The 'cut stump' or 'stem injection' methods, which leave the roots in place but kill the tree, are preferable (see *Land for Wildlife Note EW2 - Weed Control Methods*).

Feral animals and domestic pets

Domestic pets and foxes are considered major predators of Platypus. It is therefore important to prevent pets from wandering along waterways, especially at night. Walking paths or vehicle tracks along the edge of water courses can facilitate access by predators such as foxes and dogs and contribute toward erosion and damage to Platypus burrows.

Platypus care

PlatypusCare was established by the Australian Platypus Conservancy in 2002. In 2004, the Wildlife Preservation Society of Queensland (WPSQ) became a collaborator when they started Queensland *PlatypusCare*. The main objectives are to raise public awareness about the Platypus, its habitat and to collect reliable data on their distribution and abundance in Queensland.

This data is then provided to local and state planning authorities with the aim of improving land and catchment management practices for Platypus. If you would like more information on the program, or have a Platypus record to submit, you can visit the webpage for the Australian Platypus Conservancy at www.platypus.asn.au or WPSQ: www.wildlife.org.au and click on the Platypus icon, or email: platypus@wildlife.org.au, or phone WPSQ on 3221 0194.

Other relevant notes

Land for Wildlife Note W1 - Riparian Management and Restoration.

Land for Wildlife Note G4 - Wildlife Friendly Fencing and Netting.

Land for Wildlife Note G5 - Responsible Pet Ownership.

Land for Wildlife Note EW2 - Weed Control Methods.



What you can do

- ✓ Maintain, restore or improve the quality of native riparian vegetation.
- ✓ Restrict livestock access to watercourses and banks and install off-stream watering points.
- ✓ Control weeds and prevent the introduction and spread of new weeds.
- ✓ Retain or install logs, stumps and snags (large woody debris) in and along watercourses.
- ✓ Avoid placing walking paths or vehicle tracks along the edge of watercourses.
- ✓ Carefully dispose of fishing line and sharp or jagged objects such as fish hooks and barbed wire.
- ✓ Avoid placing barbed wire fences across creek-lines.
- ✓ Restrain or confine domestic pets at night time.
- ✓ Prepare a property management plan which includes wildlife conservation.
- ✓ Cover pumps with a grille or mesh cover to prevent Platypus being sucked into intake pipes.
- ✓ Avoid using 'Opera House' style yabby traps as these can trap and kill Platypus.

Remember a healthy creek for Platypus will be a healthy creek for aquatic invertebrates and therefore, all other creatures in the freshwater food chain.

Platypus are indicators of good environmental health of waterways as they depend on healthy streambanks for making their burrows and a range of freshwater invertebrates for food.

Land for Wildlife is a voluntary program that encourages and assists landholders to provide habitat for wildlife on their properties. For more information about Land for Wildlife South East Queensland, or to download *Land for Wildlife Notes* free of charge, visit www.lfwseq.com.au

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