

Ripples is the quarterly newsletter of the Australian Platypus Conservancy. It provides updates on research in progress and other APC news. Members of *Friends of the Platypus* automatically receive each edition of *Ripples*.

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Newsletter of the **AUSTRALIAN PLATYPUS CONSERVANCY**

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CONSERVING THE PLATYPUS IN RURAL WATERWAYS

Describing a species' habitat requirements is one of the most challenging tasks faced by modern conservation biologists.

Unfortunately, we cannot expect animals to provide us with a list of desirable features in their environment, nor can we read their minds.

Alternatively, we *can* map the distribution of a species in a particular area and then find out whether habitat attributes vary consistently in relation to the animals' population density.

To assist platypus conservation in agricultural areas, APC staff recently completed a study of the species' habitat relationships along the Wimmera River in western Victoria. Following extensive live-trapping surveys, bank and channel characteristics were measured in an area known to support reasonable numbers of platypus (between Crowlands and Elmhurst) as well as a neighbouring area supporting few or no platypus (downstream of Crowlands).

Interestingly, several habitat features showed a very strong positive association with platypus, including the number of medium-to-large trees (mainly river red gums *Eucalyptus camaldulensis*) growing near the channel, the amount of leafy vegetation overhanging the bank, and the amount of dead wood (logs and large branches) lying in the water.

As well, some habitat features were negatively associated with platypus, including the presence of sandy or gravelly beaches along the edge of the channel - an indicator of high rates of erosion farther upstream in the catchment.

In general, the habitat attributes that appear to be good for platypus along the Wimmera are also known to be good for aquatic insects and other freshwater invertebrates such as yabbies. For example, large trees provide shade which helps to keep the water cool in summer, thereby maintaining reasonably high levels of dissolved oxygen. Organic materials such as dead leaves and branches provide places for invertebrates to feed and shelter from sources of disturbance, including strong flows. By controlling erosion along the banks, trees and smaller plants also limit inputs of mobile sediments which create poor living conditions for most aquatic organisms.

These relationships make sense given that the platypus is a top predator which mainly feeds on bottom-dwelling insects, worms, snails, yabbies and freshwater shrimp.

Because platypus can only thrive as part of a productive aquatic community, it is not surprising that the animals are a valuable indicator of the biological integrity of freshwater systems.

The fact that so many of the habitat factors that are positively linked to platypus along the Wimmera relate to trees and other plants growing on the banks also highlights the key role played by good land management in stream and river health.

In short, even though we can't read their minds, the message provided by platypus couldn't be clearer. By working together in the Wimmera (and other country catchments) to ensure that stream and river margins are managed sustainably, farmers will contribute enormously both to waterway conservation and platypus survival.

HOW TO HELP A LOST PLATYPUS

Platypus breed only in late winter and spring, incubating a clutch of 1-3 eggs in an underground nest for a period of 10-11 days.

The young first emerge from their natal burrow 3-4 months later, in the period from January to April. At this age they are well-furred and able to swim, but weigh only about half as much as adults. Like human infants, they also appear to be both curious and naive about the world. As a result, it is by no means uncommon for small juvenile platypus to end up in all sorts of inappropriate places - suburban gardens, ploughed grain fields, chlorinated public swimming pools, and the middle of paved city streets. As well, grown platypus are sometimes found wandering long distances from waterways when they are forced to leave an area because of population pressure or catastrophic changes to their habitat (for example, when a river dries up during a drought).

Confronted by a platypus in one's own backyard, perhaps a kilometre or more from the nearest stream, what's the best thing to do?

Firstly, although the platypus is not a naturally aggressive animal, caution is warranted whenever picking up an individual of unknown age and sex. This reflects the presence of sharp poisonous spurs on the heels of adult males. The spurs are about 1.5 centimetres long and curved like a dog's canine tooth, and while the poison is not considered to be life-threatening to humans, it can cause excruciating pain and spectacular swelling for the best part of a week. Hence, until it is established that a given platypus is definitely not equipped with such spurs, it is highly inadvisable to hold or carry the animal by supporting it from below. As a safe alternative, lift the platypus by gripping it firmly around the middle or end of its tail (but not the base of the tail, which a male can reach with his spurs).

Secondly, when selecting a container to temporarily hold a platypus, be aware that these animals are gifted escape artists. Though it may not look particularly agile, the average platypus is both very strong for its size and exceptionally good at squeezing through holes, gaps or cracks. As a temporary measure, the animals may be successfully confined for a short time in a sturdy cardboard box with a reasonably strong cover or lid.

If circumstances require that a platypus is held overnight before being released back to the wild or taken to a veterinarian, consider confining the animal within an old cotton pillow case, knotting a piece of twine tightly around the opening. Make sure that the animal has enough room inside to stretch out and move around a bit, and place the pillow case and its occupant in a box in a relatively cool (less than 30° C), quiet location where it won't be disturbed by curious

pets or children. Because a platypus enters the water mainly to feed, it is generally wrong to force an animal to spend the night in a half-filled bath tub, unless a lot of food is provided in the form of live aquatic insects to replace the energy used while swimming! Even then, the animal will also need to be given a dry place to groom itself and rest.

Thirdly, if there is no reason to believe that a platypus found in an unusual place is injured, the animal should be returned to a suitable nearby section of waterway as soon as possible. Because platypus are wild animals with specialised living requirements, it is inappropriate (and illegal) to try to keep one as a pet for even a short period of time - the animal is highly unlikely to survive the experience.

Especially in drought years, a platypus may be forced to leave its territory as environmental conditions deteriorate. If the stream or river closest to where a platypus is found appears to be nearly dry, it would probably be best to release the animal along a different, reliably flowing waterway within the same river system - so the animal can potentially find its way home when conditions improve.

Did You Know That....

Based on research undertaken by Dr Tom Grant, the oldest platypus recorded to date in the wild lived to the age of 16 years. More studies are needed to determine how long individuals typically survive, though estimates of about 4-5 years for males and 6-8 years for females are not unreasonable.