

# Ripples

Newsletter of the **AUSTRALIAN PLATYPUS CONSERVANCY**

## ISSUE 29 - February 2005

### PLATYPUS WEIGHT WATCHERS

The APC recently reached a major milestone when staff carried out the 400th night of platypus live-trapping surveys since such work began in 1994.

A review of the data collected over eleven field seasons indicates that nets have been set on one or more occasions at nearly 750 sites, distributed across thirteen major drainage divisions on the Australian mainland and two rivers on Kangaroo Island. To date, nearly 1400 data sheets describing the size and other physical attributes of individual platypus have been completed, with one or more animals encountered at nearly 38% of all netting sites.

While live-trapping surveys have focused on providing baseline data to assist improved conservation management, the fact that APC researchers always use standard protocols to capture and measure platypus means that information from different areas can also be combined to reveal basic biological patterns.

For example, based on the characteristic size and shape of pointed spurs found on the hind legs of males and young females, 18% of the platypus captured to date have been classified as juveniles (less than one year old), with the remainder comprising adults or subadults.

The overall juvenile sex ratio is very nearly 1:1, with males comprising 49.6% of animals less than one year old.

By comparison, males make up slightly more than half (54.7%) of the adults and subadults examined, suggesting that a lower proportion of females survive to adulthood and/or that females are somewhat less likely to enter nets—for example, as a by-product of their generally more sedentary lifestyle.

The smallest platypus ever recorded in our work has been a juvenile female captured in February 2004 along the Yarra River, which weighed just 311 grams and measured 31 centimetres in total body length—about as long as a standard ruler.

By comparison, the smallest confirmed adult female (also captured in the Yarra system) weighed 769 grams, while the largest adult female (captured along the Mackenzie River in western Victoria) tipped the scales at 1635 grams.

Reflecting the fact that male platypus typically are 15-20% longer and weigh 60-90% more than females at any given locality, the smallest adult male encountered to date (along the Rocky River on Kangaroo Island) weighed 1060 grams, while the biggest male (captured and released along Deep Creek in the Maribyrnong River catchment) weighed in at a robust 2640 grams.

Besides being of general scientific interest, reliable estimates of demographic attributes such as age structure and sex ratio are of practical value when trying to assess how platypus populations will be affected by chronic or catastrophic disturbance.

With respect to conservation, the relatively small size of platypus (particularly juveniles) highlights the potential vulnerability of these animals to a range of terrestrial predators, including cats. Especially in the case of streams or rivers that are characterised by extensive stretches of very low (or no) flow in summer, the best action that can be taken to protect local

platypus populations is to ensure that plenty of protective cover is present along the banks in the form of shrubs and other plants overhanging the water.

## **PLATYPUS AND PLANNING**

Protecting environmental conditions for platypus should be a feature of good planning throughout the species' range in eastern Australia. Unfortunately, it currently tends to be the exception rather than the rule for the animals' needs to be taken into account when applications for rezoning or new developments are considered.

Because the platypus is officially classified as "Common", Environmental Impact Reviews (EIR's) for proposed developments frequently fail to consider the species. Consequently, planning authorities and regulatory agencies often do not appreciate that platypus populations may be threatened locally and need to be managed with care if they are to survive.

The inclusion of platypus in the EIR process for relevant planning schemes and development application procedures also makes good sense for a number of practical reasons.

Firstly, conditions that are right for the platypus - a top predator in freshwater ecosystems - will by definition favour many other indigenous species. This generalisation is especially important given the increasing importance placed on protecting biodiversity values in planning (for example, see Victoria Planning Provisions Biodiversity Note, 2002).

Secondly, failure to ensure at an early stage in the planning process that platypus will be protected can lead to highly acrimonious community conflict. This has been recently exemplified by two ongoing disputes, respectively involving a new creekside supermarket in a town north of Brisbane and plans to decommission a small urban weir in central Victoria.

Thirdly, with very little extra effort and cost, many developments can be modified at the planning stage to make them more "platypus-friendly" - for example, by redesigning bank stabilisation works, siting roads and walking trails more sensitively, and creating wetlands that can be used by the species. Even if platypus do not currently occupy a stream or river, allowance should be made for the fact that animal populations are dynamic: improved management may make it possible for platypus to reside there in the future. Such an approach can result in a "win/win" outcome for both the environment and developers. (See **Case Study: Monbulk Creek Wetland** on this page.)

To provide initial assistance to planners and those undertaking approved works along waterways, the APC website: ([www.platypus.asn.au](http://www.platypus.asn.au)) features a series of conservation guidelines. For those persons who prefer the convenience of storing reference materials in a printed and bound format, the guidelines are also included in the booklet *Living with Platypus*, which can be purchased from the APC for \$6.50 per copy (including GST and postage).

The guidelines have been developed based mainly on findings from research projects undertaken by the APC in the past decade to monitor the effects of activities such as removing willows, stabilising banks, building a golf course, and creating new wetlands.

Recommendations regarding how to go about helping platypus populations in rural and urban environments are included, including advice on issues such as catchment planning, retaining vegetation buffers, designing stream improvement works, and the best time to implement work along waterways.

However, it's important to note that these guidelines have never been intended to serve as a substitute for a proper EIR: commissioning an adequate assessment of the local conservation status of platypus and their specific requirements to persist and thrive should be a key requirement of the planning review process.

### **CASE STUDY: MONBULK CREEK WETLAND**

When a new housing estate was proposed for a site near Monbulk Creek in Melbourne's southeastern suburbs, two key planning authorities (the City of Knox and Melbourne Water)

suggested that the developer (Wilbow Corporation) consult the Australian Platypus Conservancy at an early stage of the planning process to ensure that there was no adverse impact on the local platypus population.

As part of this technical review, the design of the wetland associated with this development was changed, making the new water body more accessible to platypus from the creek in order to boost the number of platypus that can live in the area.

The re-design of the wetland also reduced the cost of the project very significantly by reducing the need for major earthworks.

### **PLATYPUS EMERGENCY CARE**

The late summer/autumn period is the time of the year when “lost” platypus are most likely to be encountered.

Such animals are most typically inexperienced or dispersing juveniles that end up in inappropriate localities such as puddles in the middle of farm paddocks, suburban swimming pools or (according to a report recently received by the APC) the brackish margin of a sandy foreshore at a resort crowded with holidaymakers. However, adult platypus are also sometimes found in unexpected places, especially if forced to migrate from their normal haunts by natural catastrophes such as drought or bushfires.

The Conservancy’s leaflet *Platypus Emergency Care* provides a series of recommendations on how best to deal with displaced or injured animals until they can be released safely. Copies of this publication can be obtained free of charge by contacting the APC.

### **SPONSOR A PLATYPUS**

Featured on the cover of the *Platypus Emergency Care* leaflet is Double Trouble, who was rescued as a young juvenile from the jaws of a dog in a public park. Unfortunately, the rescuer then made a common error by placing the tiny animal in a tub of water for the night. When finally picked up by the APC, the young platypus was so cold and exhausted that she could barely move. However, with some expert care, she recovered completely and was eventually released back to the wild.

Double Trouble is one of four animals that can be sponsored to assist the APC’s research and conservation programs. For each sponsored platypus you will receive:

- A certificate bearing your name (or the name of a person you designate), a scanned picture and description of the platypus, and information about the area in which he or she lives.
- A blank platypus greetings card.

The cost of sponsorship (in Aus. \$) is as follows:

1 platypus only: \$10.00;      2 platypus: \$18.00;  
3 platypus: \$25.00;      All four: \$30.00.

Sponsorship application forms can be obtained from the APC website or by contacting the Conservancy directly.

### ***Did You Know That....***

***An orphaned platypus will drink milk by sucking the liquid up noisily from a human hand while sweeping its stubby bill back and forth against the palm. In the wild, such pressure probably stimulates the flow of milk, which oozes from pores on the mother’s belly.***

### **DRAWING A FINE LINE**

The line-drawings of platypus and water rats used in *Ripples* and on the APC's official website ([www.platypus.asn.au](http://www.platypus.asn.au)) are the work of Canberra-based wildlife artist, Peter Marsack.

Peter has won numerous wildlife art awards and has been the main illustrator contributing to the most recent volume of Birds Australia's prestigious *Handbook of Australian and New Zealand Birds* (HANZAB).

In 1994, Peter also produced the image for the APC's logo, showing a platypus floating in its freshwater world to symbolise how platypus conservation is integrally linked to preserving river, creek and lake habitats.

Further information on Peter and his art can be found by visiting [www.marsack.com.au](http://www.marsack.com.au).