

# Ripples

Newsletter of the *AUSTRALIAN PLATYPUS CONSERVANCY*

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## WHERE HAVE ALL THE YOUNG GIRLS (FEMALE PLATYPUS) GONE?

The Hopkins River basin drains nearly one million hectares of land in southwestern Victoria. More than 95% of this area has been cleared for cropping or grazing, with less than 4% of the catchment covered by indigenous vegetation. In consequence, the major water quality issue identified through most of the Hopkins basin is high salinity. As well, large stretches of waterways have been seriously degraded through bank and channel erosion.

In 1912, the naturalist J.A. Kershaw published a very detailed description of the platypus nesting (or nursery) burrows he found along the Hopkins River near the town of Mortlake<sup>1</sup>.

*...The nest-chamber is rounded in form, the bottom always being much lower than the floor of the burrow, which enters about its centre...The nest itself is composed of fine grass and gum-leaves, and completely fills the cavity. The bottom of the chamber is first covered with a thin layer of grass, followed by a thick layer of gum-leaves about four inches deep, which is continued up the sides, and - at least in one case - completely encircles the cavity, forming a compact circular nest, with the entrance in the side opposite the tunnel. It was noticeable that many of the leaves were green, and appeared to be quite fresh. The bottom of the chamber in every instance was wet, owing to surface soakage, and it is apparently with the object of avoiding this that the bottom of the chamber is excavated below the level of the burrow and so thickly lined with leaves...*

To find out how the species is faring along the Hopkins today, the APC set platypus survey nets along 40 kilometres of the river's middle reaches in March of this year.

The study was conceived and undertaken in co-operation with the Central Hopkins Land Protection Association, with students from Mortlake Secondary College helping to set survey nets, and many local residents and a WIN-TV news crew meeting APC staff at dawn to see platypus being released back to the wild.

The good news is that platypus were captured across essentially the entire survey area, at 6 of the 8 trapping sites. As well, the animals all appeared to be healthy and reasonably well-fed based on the amount of fat apparent in their tails.

On a less positive note, the seven individuals encountered were all adult males - no females or juveniles were recorded.

Platypus sex ratios showing an excess of adult males have previously been reported in a number of waterways. While the factors serving to favour the presence of males have not yet been identified with certainty, one possibility is that males are more likely to be found in relatively degraded habitats than are females - because adult females demand high quality

stretches of habitat to raise and wean their offspring. (Male platypus have no direct involvement in rearing juveniles.)

If true, this suggests that the development of a more balanced and productive platypus sex ratio will be both a desirable outcome and a natural indicator of improving riverine health along the Hopkins over the longer term.

*1 Kershaw, J.A. (1912). Notes on the breeding habits and young of the platypus, Ornithorhynchus anatinus Shaw. Victorian Naturalist 29: 102-106.*

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

***According to Aboriginal legend, the first platypus was born after a young duck mated with a lonely and persuasive water-rat.***

***The duck's offspring inherited her broad bill and webbed feet along with the water-rat's four legs and handsome brown fur.***

### **PLATYPUS BREEDING SUCCESS IN 1999**

The birth of two platypus in captivity earlier this year captured much media attention. Happily, 1999 has also been an excellent year for platypus reproductive success along many natural waterways.

Along the Wimmera River in western Victoria, seven juveniles were recorded in the upper catchment between Elmhurst and Crowlands (near the Pyrenees Range) in April and May. By comparison, only three juveniles were captured over the same area in April and May of the previous year.

As well, the first juvenile to be encountered in the middle reaches of the Wimmera system (about 15 kilometres upstream of Glenorchy near the mouth of Seven Mile Creek) was recorded in 1999.

In the Yarra River and Dandenong Creek catchments near Melbourne, juveniles were encountered along six of the seven streams where the APC set nets in April and May to monitor platypus populations as part of the Melbourne Water Urban Platypus Program.

Breeding success was especially high along Mullum Mullum Creek in the city's eastern suburbs, where six young animals (three males and three females) were marked and released this year. By comparison, no more than two juveniles were encountered along this waterway in each of the four previous breeding seasons.

While much remains to be learned about the factors limiting platypus reproduction in the wild, the presence of large (or increasing) numbers of young platypus along a stream or river is clearly a positive sign as far as the environmental health of that waterway is concerned.

From the viewpoint of conservation, the presence of home-grown juveniles along streams and rivers is also of practical significance in helping to ensure that there are young platypus available to colonise new areas of habitat in the catchment - created as native trees and bushes

are encouraged to grow along a waterway's banks, erosion is controlled, litter and other pollutants are eliminated, or adequate flows are restored along the channel.

### **LIVING WITH PLATYPUS BOOKLET**

Since its foundation in 1994, the Australian Platypus Conservancy has been working hard to unlock some of the key scientific mysteries surrounding the species. With assistance from the Parks Victoria Community Grants Program, the Conservancy has recently produced Living with Platypus to make research findings more accessible to the general community.

Living with Platypus is an attractive 40 page booklet, designed with the assistance of fourth year students from The Works, the design consultancy at the Royal Melbourne Institute of Technology.

This publication summarises much of what is currently known about platypus biology and ecology and provides straightforward guidelines to assist platypus conservation. It is designed to be of interest and practical value to persons involved in waterway management at every level, including landowners, community volunteers, professional officers, consultants, and elected representatives - as well as concerned citizens and students of all ages.

Copies of Living with Platypus can be obtained from the APC – see website for current cost. Members of Friends of the Platypus will automatically receive a copy of the booklet when they join the organisation or renew their existing subscription.

Much of the information contained in Living with Platypus has also been included on the Australian Platypus Conservancy website to ensure that it is available to as wide an audience as possible.