Ripples

Newsletter of the ***AUSTRALIAN PLATYPUS CONSERVANCY***

ISSUE 35 - May 2007

PLATYPUS CONSERVANCY ON THE MOVE

After a great deal of thought and discussion, the APC has recently relocated its research and conservation centre to eastern Victoria.

Since 1995, the APC has been based at Toorourrong Reservoir Park, thanks to the generous support of Parks Victoria. Toorourrong's location—near the top end of Plenty Road on Melbourne's northern fringes—has facilitated fieldwork undertaken throughout the urban area to map where platypus populations occur and study their behaviour and ecology in co-operation with Melbourne Water.

Live-trapping survey nets have been set at hundreds of sites distributed across the Yarra River catchment, Maribyrnong River and its tributaries, and streams of the Dandenong Valley and Westernport region, with many sites monitored on an annual basis for more than a decade. A diverse range of practical conservation projects to strengthen platypus numbers has also been implemented, including a successful program to re-introduce the species to Cardinia Creek (see article below).

Being close to Melbourne's north-west orbital freeway and other major highways, Toorourrong has also been a very good staging post for research projects along rivers in western and central Victoria (including the Wimmera, Mackenzie, Hopkins, Barwon, Moorabool and Werribee catchments to the west and the Goulburn, Broken, Loddon, and Coliban catchments to the north) as well as Kangaroo Island in South Australia.

In contrast, apart from educational activities and a few technical consultancies, the Conservancy has not to date initiated or carried out any platypus conservation programs in eastern Victoria.

This part of the state holds a number of waterways granted "Heritage River" status, including some relatively pristine systems (such as the upper Buchan and Genoa Rivers), and others that have been substantially affected in recent decades by altered flow regimes and related ecological changes (such as the Thomson and Snowy Rivers).

By the same token, eastern Victoria provides an ideal setting in which to examine how platypus respond to a whole suite of land management practices related to dairy farming, coal-fired power generation and forestry. The vast array of reliably flowing water bodies occurring in Gippsland also offers excellent opportunities for fine-tuning protocols for visual survey methods for the species.

To take best advantage of these opportunities, the Australian Platypus Conservancy has moved its main operational base to Wiseleigh—a small town located on the Tambo River near Bairnsdale, the regional capital of East Gippsland. Besides opening up many opportunities for new projects, the new base is close enough to Melbourne and the rest of Victoria to enable important existing programs to be continued.

OUR NEW CONTACT DETAILS:

P.O. Box 22
Wiseleigh VIC 3885
Tel: (03) 5157 5568
Email: platypus.apc@westnet.com.au
Website: www.platypus.asn.au

RE-INTRODUCTION UPDATE

Some very promising results have emerged from the latest round of survey work undertaken along Cardinia Creek, southeast of Melbourne, where a platypus re-introduction program conducted by Melbourne Water and the Conservancy has been in progress since 2004.

Six individuals were captured in March, including two of the three platypus released (as juveniles) in April 2004 and one of three juveniles (now grown into a sub-adult) captured 12 months ago (see *Ripples* no. 27, 30 and 33).

All three of these previously marked animals were in good condition (based on assessing their tail fat reserves on a five-point scale using a "squeeze" test), with the weight of the subadult female found to be about 25% greater than a year ago.

As well, APC researchers were extremely pleased to encounter three unmarked juveniles, presumed to have been hatched along the creek in the spring of 2006.

The new additions to the population (all girls) ranged in weight from 765 to 925 grams, with the largest nicknamed "Patty" in honour of Graeme Patterson—one of the APC's longest serving and most dedicated volunteers, who had assisted with setting nets on the day and was present at the time she was captured, measured and weighed.

Importantly, each young female was considered to be "above average" with respect to fat reserves, confirming that Cardinia Creek continues to provide the growing population with an ample food supply in the form of aquatic invertebrates such as worms and mayfly, caddis fly and damselfly nymphs.

Each juvenile was encountered at a different trapping site, located respectively at distances of roughly 4, 6.5 and 10 kilometres downstream of Cardinia Reservoir. Accordingly, it is considered likely that each youngster had a different mother (with the population comprising three mature females in the 2006 breeding season).

To help boost genetic diversity and maintain a balanced sex ratio, one additional juvenile male was translocated from the Tarago River to Cardinia Creek in early April.

The population now includes 16 marked animals: 10 individuals translocated over a period of four years (four males and six females), plus a grand total of 6 home-grown juveniles recorded in 2006 and 2007 (two males and four females).

Though the Cardinia Creek population is still small, the fact that it is now generating several healthy offspring annually suggests that it is well on its way to becoming a self-sustaining entity.

Did You Know That....

Studies undertaken in Tasmania have shown that a platypus may dive up to 1600 times in a single foraging period, with nearly all dives lasting less than one minute. Animals were mostly recorded feeding at depths of less than three metres, though one animal reached a depth of nearly nine metres on one occasion.

MAKING A MARK

Since beginning field studies in 1995, APC researchers have marked nearly a thousand platypus with tiny implanted Trovan transponders (the same microchip-based technology used by veterinarians to permanently identify dogs and cats). Being coated with biologically inert plastic, the tags continue to function after an animal dies and so can be used to identify the body.

However, platypus are fairly small, secretive and solitary animals. They also prefer to spend most of their time either diving for food at night in the water or resting in an underground burrow during the day. Not too surprisingly, it is a reasonably rare occurrence for a dead platypus to be found by a human. In practice, in the 12 years since APC field studies have commenced, only two deceased platypus marked with transponders have been brought to the attention of Conservancy staff.

The first was a young female, originally captured as a juvenile in early 2003 along Monbulk Creek, at the edge of the Dandenong Range in Melbourne's southeastern suburbs. Sadly, her body was recovered on the creek banks just eight months later, apparently after being mauled by a fox or fox-sized dog (see *Ripples* no. 26).

More recently, a conservation-minded member of the public found a dead platypus floating in the Plenty River (near the point where the Plenty River joins the much larger Yarra River in the Melbourne municipality of Banyule) on the last day of December in 2006.

Concerned about the possible cause of death, he took the body to Melbourne Zoo, where veterinarian Michael Lynch discovered that the animal (an adult male) was marked with a microchip tag, ID code 0627-F2CB. Dr Lynch contacted the APC, who were able to confirm that the tag had been used to mark a male platypus captured on just one occasion nearly four years previously, on 12 March 2003.

Male 0627-F2CB was first encountered as a young juvenile along Diamond Creek in Eltham township—about 2.5 kilometres upstream of the Yarra and 10 kilometres (as the platypus swims) from the place where his body was later to be recovered.

At that time he weighed 1145 grams and was considered to be in average physical condition based on the amount of fat stored in his tail. His body length, measured from bill tip to tail tip, was 41.5 centimetres. He carried a grand total of 16 small ticks (each 1-3 millimetres long) on his hind ankles, and hadn't yet acquired any scars on either his bill or the relatively thinly haired skin under his tail. He did have an elastic band caught around his neck, which didn't seem to be causing any particular problem but was removed as a standard precautionary measure.

According to Dr Lynch, male 0627-F2CB had probably died about 12 to 18 hours before being found. The animal weighed exactly 2000 grams and appeared to be in good condition, suggesting his death was not due to malnutrition.

Interestingly, in 2006 he again had an item of litter caught around his neck—a wrist bangle. However, there was no external evidence that this had contributed to his death, as the bangle was quite loose and had not rubbed the skin raw.

The only internal abnormality revealed by a post mortem examination was congested lungs, with tissue pathology indicating that the animal's liver may have been damaged by a wide range of factors including hypoxia (low oxygen levels).

So, it remains possible that an innocent-looking piece of lost or discarded jewelry may indeed have killed 0627-F2CB—by becoming temporarily snagged on an underwater branch or other obstruction, causing him to drown. However, the actual truth behind 0627-F2CB's death (like so many other aspects of platypus life) remains unknown.