

Platypus News & Views



Newsletter of the Australian Platypus Conservancy (Issue 56 – May 2014)

REDUCING RISK FROM YABBY TRAPS

You may recall (from the previous issue of *Platypus News & Views*) that the APC has been recently involved in carrying out trials to test the platypus's ability to escape from opera house traps fitted with a circular escape hatch in the trap's roof. This research, funded by the Taronga Conservation Society, has now been completed by Conservancy biologists in Victoria (25 trials) and Dr Tom Grant in New South Wales (33 trials). Thirty-four adults and 24 juveniles were tested, with four trials scheduled during daylight hours and the rest at night.



Of four animals tested during the day, all escaped within one minute of being introduced to a trap, emerging in each case via the escape hatch (see photo at left). At night, 63% of tested animals managed to find their way out within one minute and 19% in 1-2 minutes. Again, all exited via the escape hatch in the roof. Given that a platypus can hold its breath for approximately two and a half minutes when active, these findings suggest that a large proportion of wild platypus are likely to escape from a modified trap before they drown.

However, other individuals failed to escape within the two-minute trial period despite doing their best to find a way out. After combining results for Victoria and New South Wales, a reasonable estimate of the overall risk that a platypus will drown after entering a modified opera house trap is in the order of 15%, though possibly higher at some localities. For example, eight of the 11 juveniles tested in New South Wales failed to escape from modified traps in the mandated trial period.

To ensure that yabbing practices are both ethical and environmentally sustainable, opera house traps should clearly not be set in water bodies where platypus regularly occur, even if the traps are fitted with escape hatches.

Sadly, given the very large numbers of opera house traps purchased annually across the platypus's range, it is inevitable that some will be deployed in rivers and streams supporting platypus, even in places where such use is banned and traps can lawfully be set only in private farm dams and the like. Although opera house traps fitted with an escape hatch are not completely platypus-safe, they certainly present less risk to animals than the standard design, which is fittingly described as a platypus death trap (see *Platypus News & Views* Issue 55 for more details). Accordingly, common sense suggests that sale of standard opera house traps should be universally phased out as soon as possible to reduce unnecessary platypus deaths, in favour of traps fitted with an escape hatch.

This change is also likely to assist conservation of freshwater turtles and native Australian water-rats (or rakali), both of which are far more likely to inhabit farm dams than are platypus. Studies assessing the ability of turtles to escape from opera house traps fitted with an escape hatch are currently being completed by Turtles Australia in partnership with the APC.

MORE ABOUT MODIFIED YABBY TRAPS

How well do opera house traps fitted with a circular roof hatch (to assist escape by air-breathing animals) perform when it comes to catching yabbies?

To answer this question, Conservancy biologists compared the number and size of yabbies captured in standard opera house traps and those fitted with an escape hatch. The carefully matched trials were carried out in 10 farm dams located in East Gippsland, Victoria. Preliminary trials indicated that the entry rate of yabbies into standard traps tends to level off after 2 to 4 hours. Traps were therefore set in dams for 3 hours before being lifted out so captured yabbies could be individually measured and weighed.

Somewhat unexpectedly, the relative performance of the two trap types was found to vary with yabby density. When yabby numbers were fairly low (resulting in average catch rates of 10 or fewer yabbies in standard traps), modified traps outperformed the standard design. In contrast, more yabbies were captured in standard than modified traps when yabbies were more abundant.



Regardless of yabby density, modified traps were more effective than standard traps at capturing large yabbies. Across all 10 dams, modified traps were responsible for capturing 56% of the total catch of yabbies weighing 60 grams or more (roughly equivalent to the size typically sold for use in restaurants). In contrast, modified traps captured just 39% of the total catch of yabbies belonging to the smallest size class considered in the study (weighing 16 grams or less).

To explain these findings, we hypothesise that yabbies of all sizes tend to enter modified traps at a faster rate than they enter standard traps, due to the fact that the modified design has three entrances rather than two.

In dams supporting relatively low numbers of yabbies, this will result in higher capture rates in modified than standard traps as long as captured animals tend to remain inside (which is likely to occur as long as some bait remains).

In the case of dams supporting higher numbers of yabbies, we also consider it likely that small individuals will increasingly try to escape from a trap as more and more yabbies accumulate inside. In part, this will reflect the species' highly aggressive nature, resulting in small individuals being progressively excluded from eating their share of bait as bigger animals arrive. Even worse, yabbies are known to be cannibalistic, so small individuals may rightfully worry about becoming dinner themselves as the trap fills up with large yabbies bearing big, scary claws.

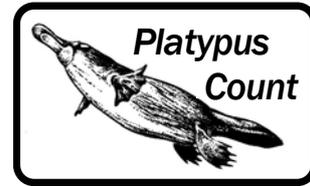
Presuming that the presence of an extra opening in modified traps makes it easier for small yabbies to escape, these processes will result in fewer small yabbies (but more large yabbies) accumulating inside modified traps, just as we observed.

Whatever the reason, the good news for persons aiming to dine on yabbies is that modified traps appear to be better at capturing large-bodied yabbies suitable for human consumption. Persons wanting to catch yabbies to use as fishing bait should also be pleased by the news that modified traps are likely to encourage yabbies of all sizes to accumulate at an initially faster rate, making it easier to obtain bait quickly.

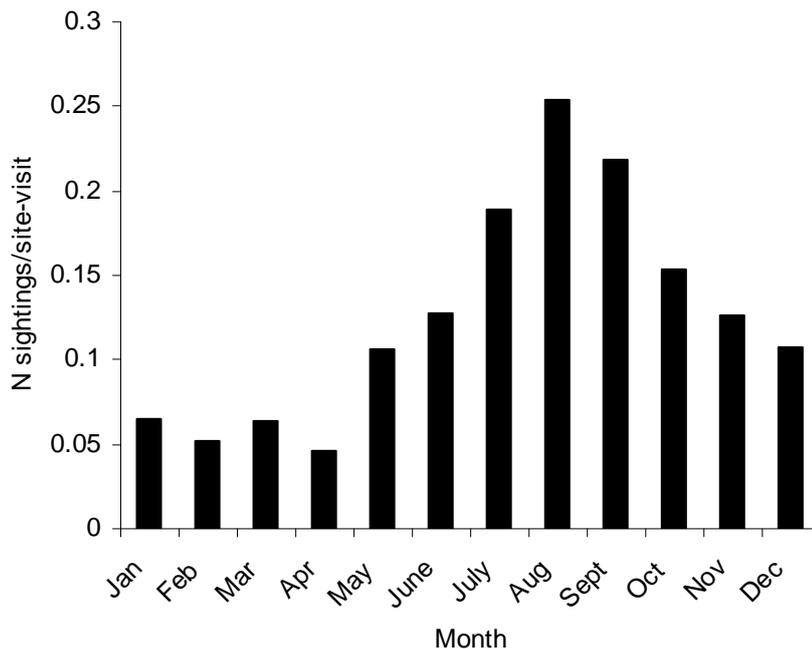
Last but not least, fisheries and wildlife managers should be happy that modified traps are predicted to encourage some small yabbies to escape as numbers rise inside, thereby helping to protect populations from wasteful and unsustainable over-harvesting.

PLATYPUS COUNT UPDATE: YARRA RIVER

The end of 2013 marked the sixth year that hard-working *Platypus Count* volunteers have monitored platypus activity along the Yarra River in Melbourne's eastern suburbs.



We therefore thought it might be of interest to see how the average frequency of platypus sightings has varied from one month to the next, based on sightings data collected from January 2008 through December 2013 in the area stretching from View Bank to as far upstream as Wonga Park. Combining data in this manner is expected to provide a more reliable picture of how sightings vary by month than would be true for data obtained over shorter time periods, by smoothing out random bumps or troughs in the number of monthly sightings recorded in any given year.



As shown above, August has really been the standout month for platypus sightings, followed by September. These two months are believed to coincide with the peak platypus breeding season in Victoria, suggesting that a large proportion of animals seen in late winter and early spring are likely to be adult males zooming around during the day in search of mates.

By comparison, the period from January through April – when lactation ends and juveniles appear in the population – has clearly been a much less favourable time of year to see a platypus. On average, the chance of spotting a platypus along the middle reaches of the Yarra in August (the best month for sightings) has been about five times greater than in April (the worst month for sightings).

It may seem somewhat puzzling that relatively low numbers of sightings have consistently been recorded in late summer and early autumn, given that platypus population size typically peaks each year in February and March after juveniles appear. At least part of the answer is that young platypus generally seem to be much less inclined to be diurnally active than mature animals. In turn, this behaviour has probably evolved so small and relatively inexperienced juveniles are less likely to be seen and killed by potential predators (such as the larger hawks and eagles).

From a purely practical perspective, persons wishing to set up a visual monitoring program for platypus clearly need to take natural monthly variation into account both when deciding how to allocate their sampling effort most effectively and when interpreting results.

MORE NEWS ON FACEBOOK

More news and articles about platypus and Australian water-rats can be found on the **Australian Platypus Conservancy (Official)** Facebook page. The page also features a "Sighting of the Week" selected from the many platypus and water-rat records sent to the APC by community members. This is typically used to highlight important ecological, conservation and research issues or other points of interest relating to these two species.

Facebook articles in the last three months have considered whether carp infestations are bad for platypus, reviewed prospects for platypus reintroduction projects, described an unusual incident of two platypus found dead at the bottom of a rocky sink-hole at the edge of a waterfall, outlined how to cope with "problem" water-rats, and provided guidelines for the emergency care of injured and displaced platypus.

PLATYPUS AND WATER-RAT PUBLIC TALKS

Forthcoming community talks by APC staff in country Victoria have been scheduled at the following locations:

- Friday 20 June (water-rats) – Paynesville
- Wednesday 23 July (platypus) – Echuca
- Thursday 24 July (platypus) – Strathallan
- Friday 25 July (platypus) – Axedale
- Saturday 26 July (unveiling of platypus sculpture) - Axedale
- Wednesday 6 August (platypus) - Wodonga
- Tuesday 12 August (water-rats) - Bruthen

For more details about starting times and venues, please contact the Conservancy (platypus.apc@westnet.com.au).

SPECIAL THANKS TO OUR SUPPORTERS!

The Australian Platypus Conservancy is a non-profit research and conservation organisation. The success of the APC's programs relies on the support of businesses, management agencies and individuals sharing our interest in one of the world's most amazing animals. We gratefully acknowledge recent help by the following supporters:

City of Banyule ■ City of Manningham ■ East Gippsland Shire ■ Friends of the Earth Melbourne ■ Gippsland Lakes Environment Fund ■ Goulburn Broken CMA ■ Betty Lynch OAM ■ Norske Skog ■ North Central CMA ■ Parks Victoria ■ Platypus Outdoors ■ Sonoco Australia ■ Taronga Conservation Society ■ Upper Murrumbidgee Waterwatch ■

Australian Platypus Conservancy



PO Box 22, Wiseleigh VIC 3885

(03) 5157 5568 platypus.apc@westnet.com.au

www.platypus.asn.au Facebook: Australian Platypus Conservancy (Official)