

# Platypus News & Views



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*Newsletter of the Australian Platypus Conservancy (Issue 78 – November 2019)*

## PLATYPUS AND DROUGHT

Exceptionally dry conditions have prevailed across much of eastern and south-eastern Australia since 2017. For Australia as a whole, the first 10 months of 2019 were the second driest such period on record (exceeded only by January-October 1902). Apart from contributing to widespread bushfires, the deficit in rainfall has reduced surface flow in many normally reliable water courses to a trickle or worse, especially in parts of New South Wales and Queensland. In turn, this raises an important question for platypus conservation: How do these animals cope in times of severe drought?

A platypus is adapted to feed exclusively in the water, and will starve to death if its habitat dries up completely. Although a platypus is capable of remaining inactive in a burrow to avoid inhospitable conditions (dropping its body temperature considerably to save energy), this is apparently only an option for periods of less than a week in the colder months of the year.

Drought also increases the risk that predators (such as foxes or large raptors) will kill a platypus as it forages in very shallow water or - even worse – trudges across dry land to move from one isolated pool to another.

The Conservancy has recently been contacted by a number of landowners in drought-affected regions who are worried about the welfare of a platypus that is apparently trapped in a rapidly shrinking pool. Sadly, there's no easy answer to the question: What's the best way to assist the animal's survival in such circumstances?

The difficulty with providing supplementary food is that a platypus normally only eats live aquatic invertebrates, and so may take some time to recognise alternative foods as being edible. These animals also need a lot of food to thrive, typically consuming the equivalent of at least 15% of their body weight each day.

If a platypus is found a long way from water or in a remnant puddle without access to any other substantial water within a few hundred metres, the only way to assist its survival will be to transport the animal to the nearest remaining large stretch of suitable aquatic habitat and release it there. The release site should if at all possible be located in the same river system where the platypus was found, so it can find its way home again when rain arrives and flow resumes. Of course, if the animal appears to be injured or unwell it should first be taken to a suitably experienced vet for assessment and treatment.

In either case, it's important to be extremely careful whenever picking up a platypus, as adult males have a sharp poisonous spur (about the size of a dog's canine tooth) on each hind ankle. The safest way to grasp or carry a platypus is by firmly gripping the end half of the tail, as this is beyond the reach of the spurs. It can then be safely confined in a pillowcase-sized cloth bag (after tying the top tightly shut) or in a sturdy box with a lid that's been fastened so the animal can't push its way out (taking care that the box is well ventilated as well as secure).

Because a platypus's body temperature is normally a few degrees below that of a human, the skin of its feet and bill should feel cool at all times. It's also really important that a platypus should not be allowed to overheat while being transported – for example, by keeping its holding container out of direct sunshine on warm days.

## **PLATYPUS IN THE APPLE ISLE**

Tasmania has long been associated with widespread and abundant platypus populations. As early as 1839, the newly created Tasmanian Society of Natural History selected the platypus as its emblem, placing a Latin motto on their journal's title page that translated as "It's a paradox whichever way you look at it".

A less happy association emerged in the 1980s, when Tasmanian platypus were first diagnosed with a fungal disease known as mucormycosis, which has never been known to affect platypus on the mainland. The disease typically results in the development of skin ulcers or large raised nodules of hairless skin but can also affect internal organs such as the lungs.

In late October, APC biologists Geoff Williams and Melody Serena travelled to Hobart at the invitation of the Tasmanian Wildlife Rehabilitation Council – Tasmania's leading community-based organisation working to ensure the best possible welfare outcomes for orphaned or injured native wildlife. As part of TWRC's commitment to a knowledgeable and professional approach to animal rehabilitation, Geoff and Melody participated in a workshop about platypus and rakali/water-rats by providing information about the animals' ecology and behaviour and how best to handle them and initially assess their condition.

Following the workshop, Geoff and Melody headed north to visit schools and give talks at a number of platypus hot spots as part of the national roll-out of APMN (Australian Platypus Monitoring Network).

Particularly high numbers of platypus were evident in the Meander River at Deloraine (shown below at left), where at least nine (possibly 10) animals were seen by APC staff in just 30 minutes along a stretch of river extending less than a kilometre through the town centre. In addition, at least 5 (possibly 6) individuals were observed feeding one morning in a man-made lake at the Tasmanian Arboretum near Eugenana, and the human residents of Mole Creek reported that up to four platypus at a time can occasionally be spotted in tiny Limestone Creek (shown below at right), which again runs through the centre of the village.



Volunteers have now registered to monitor platypus at these and other Tasmanian locations. However, more APMN participants are both needed and welcome, in Tassie and elsewhere. For more information, visit [www.platypusnetwork.org.au](http://www.platypusnetwork.org.au) or contact the APC directly.

The other good news from Tasmania is that the effects of mucormycosis appear to be waning, presumably because the causal agent is becoming progressively less virulent and/or platypus populations are developing resistance to the disease. For example, a study that sampled 75 Tasmanian waterways in 2008-2009 found that mucormycosis was four times less prevalent than had been recorded a decade earlier. Furthermore, according to the members of TWRC who attended the October workshop, no platypus known to be suffering from the disease has come to the attention of their organisation since about 2012.

## **CAPITAL RESULT FOR RAKALI**

The Australian Platypus Conservancy has recently completed a community-based survey of the water-rat or rakali (*Hydromys chrysogaster*) in the Greater ACT region. Only 50 rakali records pertaining to the period since 2009 were previously listed on public databases covering the Australian Capital Territory and south-eastern New South Wales (Canberra Nature Map and its associated Budawang and Coastal Wilderness Atlases and the Atlas of Living Australia). The APC survey has now contributed 263 new records for the most recent 10 years – an increase of 526% over what was previously available.



The results confirm that water-rats are quite widely distributed across the ACT. The species appears to be particularly abundant in the Molonglo River and Ginninderra Creek catchments, with 48 records submitted for Lake Ginninderra and 20 for its associated creek. A total of 152 new records were made available for the Molonglo system, with more than half of these (55%) originating in Lake Burleigh Griffin. In addition, substantial numbers of sightings were reported for both the Queanbeyan River (24 records) and Jerrabomberra Creek and its wetlands (20 records).

However, rakali population density also appears to vary considerably across the region, with only two records available for Lake Tuggeranong and none for its associated creek. One of the reports for Lake Tuggeranong described a water-rat found dead in an opera house trap, suggesting that illegal netting may be acting to reduce numbers there. Similarly, only two rakali sightings were reported for the section of the Murrumbidgee River contained within the ACT.

Outside of the ACT, relatively high numbers of sightings were reported for Lake Jindabyne (7 records) and the Thredbo River (7 records) in the Snowy River catchment, the Yass River (8 records) and the Tumut River (7 records) in the Murrumbidgee catchment downstream of the ACT, the Murrumbidgee River upstream of the ACT (9 records), and the Wollondilly catchment (10 records) and Shoalhaven catchment (7 records) along the Budawang Coast.

In contrast, no records of sightings since 2009 were obtained for the Numeralla and Bredbo Rivers (in the Murrumbidgee catchment upstream of the ACT), the Bombala River and its tributaries (in the Snowy catchment) and Lake Burrinjuck (in the Murrumbidgee catchment downstream of the ACT). All of these systems support nearby resident human populations and attract regular usage by visiting anglers and campers. The absence of any rakali reports therefore suggests that the species may be genuinely uncommon in these areas.

The study shows that water-rats can make use of a wide range of aquatic habitats and are especially likely to be seen using lakes, including man-made impoundments.

As noted above, it also confirms that water-rats continue to die in yabby traps and fish nets set in the ACT and nearby parts of New South Wales, with enclosed yabby traps accounting for more than half of all mortality records. This is higher than the percentages reported in similar studies recently conducted in Western Australia (43%) and Victoria (42.5%). It is therefore very welcome news that the ACT Government has recently announced that use of enclosed yabby traps will soon be totally banned throughout its jurisdiction.

The ACT rakali survey was generously supported by the Wettenhall Environment Trust (which previously helped to fund the APC's rakali survey in Victoria, as described in *PN&V 70*). Local project partners also included the Field Naturalists Association of Canberra, National Parks Association ACT and ACT Waterwatch. (*Photo above courtesy of Lissa Ryan*).

## **PLATYPUS CONSERVANCY ON THE MOVE**

The Australian Platypus Conservancy has recently relocated its base to Campbells Creek township, near Castlemaine in central Victoria (see new contact details below). After 12 very productive years based in East Gippsland, the move has been mainly triggered by the need for more travel in the next few years to promote the Australian Platypus Monitoring Network (APMN). The Castlemaine area is both conveniently placed in relation to most other Victorian regional centres and located quite near to Melbourne airport.

The move has also provided a great opportunity to replicate fieldwork that was carried out by the Conservancy along Campbells Creek (a tributary of the Loddon River) in 2001. In mid-November, the APC again conducted a platypus live-trapping survey there, working in partnership with the Friends of Campbells Creek (FoCC). As compared to the four platypus captured in 2001, seven animals were recorded in 2019 (one of which is shown at right just after being released back to the wild). The apparent increase in platypus abundance plausibly reflects the hard work by FoCC members over many years to improve riparian habitat quality and keep the creek litter-free.



## **TACKLING THE LITTER THREAT**

In *PN&V 76* we highlighted the tragic death of a juvenile platypus caused by its entanglement in three elastic hair-ties at Bright in north-eastern Victoria. Alpine Shire Council has responded by supporting the development of a Platypus Awareness and Conservation Strategy that will aim to increase public understanding of the platypus's needs and the threats it faces. Actions will include installing educational signage at popular swimming and fishing spots, producing information leaflets and related publicity materials, and supporting a special education program for local schools to encourage students to become 'platypus-aware'.

The Australian Platypus Conservancy will be one of the partners in this initiative (and will deliver the school program), along with the North East Catchment Management Authority and the Upper Ovens Valley Landcare Group. Other community groups are also expected to contribute to the initiative, including the 1<sup>st</sup> Bright Cubs who have already done a great job in organising local litter clean ups.

## **HELPING US TO HELP THE PLATYPUS**

If you would like to support the APC's work, please remember that donations and bequests to the Australian Platypus Conservancy are tax-deductible.

Australian Platypus Conservancy



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