

Ripples is the quarterly newsletter of the Australian Platypus Conservancy. It provides updates on research in progress and other APC news. Members of *Friends of the Platypus* automatically receive each edition of *Ripples*.

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Newsletter of the AUSTRALIAN PLATYPUS CONSERVANCY

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PLATYPUS AND THE DROUGHT

Exceptionally dry conditions have prevailed across much of eastern and southeastern Australia this summer, raising the question: How do platypus cope in times of drought?

A platypus will starve to death if its habitat dries up completely. Stagnant conditions caused by low water flow can be nearly as big a problem for the animals, reducing their food supply in the form of small freshwater creatures such as insects, shrimps and worms. While a platypus can let its body temperature drop and remain inactive in a burrow to avoid inhospitable conditions, this sort of behaviour has only been recorded in the colder months of the year, and only for fairly short periods (less than a week).

Drought also increases the risk that land-based predators such as foxes will be able to kill platypus when the latter are forced to spend more time feeding in shallow water (or, worse yet, have to trek across dry land to travel between pools).

The most extreme effects of drought are generally experienced in middle to late summer, at the same time that juvenile platypus first emerge from nesting (or nursery) burrows. The increased population size will necessarily result in greater competition for food—with young animals most likely to lose out due to their inexperience and lack of skill in foraging. Having recently weaned up to three offspring, breeding age females are often very thin in late summer, and so may also be particularly likely to die in drought-affected years.

Intuitively, one would expect that platypus are most likely to disappear during drought from habitats which were relatively unproductive even before the onset of dry weather.

For instance, a survey undertaken by the APC along the upper Maribyrnong River in February 2003 failed to find any platypus for the first time since surveys commenced along this waterway in 1996. However, the animals have always been fairly sparse in this section of waterway, with no adult females recorded to date—consistent with the hypothesis that the upper Maribyrnong comprises suboptimal platypus habitat even in years of reasonably high rainfall.

Faced with deteriorating habitat conditions, at least some platypus are predicted to become refugees and migrate to a different part of the catchment—particularly if the areas remain linked by water.

As one apparent example, the results of APC surveys along the Barwon River in early 2003 indicated that platypus had increased (as compared to the previous two years) in the middle reaches of the waterway, where large pools continued to provide feeding opportunities for the species. In contrast, platypus numbers had dropped farther upstream, where flows had declined more dramatically in response to drought.

In catchments where platypus populations have declined greatly or become severely fragmented, the species' ability to survive drought cycles may well be tested to the limit—particularly if water flows are markedly compromised by irrigation or other forms of water extraction. Establishing environmental flow standards which both improve river health in years of good rainfall and ensure that adequate refuge areas remain for wildlife in times of drought is accordingly a key issue for conserving the platypus over the longer term.

PLATYPUS AND THE DROUGHT: HOW TO ASSIST A STRANDED ANIMAL

The APC has received a huge number of calls this summer from landowners in drought-affected regions concerned about the welfare of platypus apparently trapped in shrinking pools.

Sadly, there's no straightforward, easy answer to the question: "What's the best way to assist the animals' survival?"

Platypus can walk, and so in theory can leave an isolated pool and head off in search of a better place to live. However, their chance of success will necessarily depend on the distance to the nearest permanent water body—platypus can only feed in the water, and when walking across land are vulnerable to heat exhaustion as well as predators. While the animals have occasionally been found wandering several kilometres from the nearest waterway and lived to tell the tale, many platypus will undoubtedly end up dying if forced to travel a substantial distance on foot (say, more than a few hundred metres along a dry creek or river bed).

Persons who are worried that a platypus living in a small pool may be running out of food can try supplementing the animal's diet until normal flows resume.

While any amount of extra food may potentially be useful, platypus do need to eat a lot relative to their body size - based on studies undertaken in captivity, each animal needs to consume the equivalent of at least 15% of its body weight each day to thrive, with animals typically weighing in the order of 800-1400 grams (females) or 1200-2400 grams (males).

Accordingly, if people really intend to get serious about helping a platypus in this manner, they should plan to provide at least a couple of large handfuls of food a day. Platypus are carnivores, specifically adapted to finding live invertebrate prey in the water. In practice, given that it's not appropriate to damage natural habitats in search of platypus tucker, the best source of food is likely to be worms collected from large compost piles or a productive worm farm. Ideally, the worms could be tossed into the water near the animal when it becomes active (or at dusk). Even if it takes awhile for the platypus to grasp the concept that food is falling from the sky, the animal should find the worms if it's foraging in the immediate vicinity.

If a platypus is found a long way from water or in a remnant puddle, the best strategy is generally to take the animal immediately to the nearest stretch of suitable habitat so it can start to feed. The only exception will involve animals that are injured or otherwise clearly appear unwell, which ideally should first be taken to a veterinarian for professional assessment and treatment.

In either event, it's important to take great care when picking a platypus up, given that adult males are equipped with a sharp, poisonous spur on the ankle of each hind leg. The safest way to grab and hold a platypus is by firmly grasping the end half of the tail, which is beyond the reach of the spurs.

Once a platypus is in hand, it should be confined immediately in an appropriate container, such as a hessian sack or other reasonably roomy cloth bag (knotting the top firmly with twine or the equivalent to make sure the animal stays inside). A sturdy box with a lid may also be suitable, as long as the box is adequately ventilated as well as secure.

Because the body temperature of a platypus is normally a few degrees below that of a human, its feet and bill should feel cool at all times. It is also essential that a platypus not be allowed to overheat while being transported—for instance, by ensuring its holding container remains shaded, especially on warm days.

Did You Know That....

A female platypus incubates her clutch of one to three leathery-shelled eggs by clasping them between her belly and curled-up tail. The newly hatched juveniles measure less than two centimetres in length. Their emergence from the egg is assisted by the presence of a special bump (or caruncle) at the tip of the snout, an inward-curving egg tooth, and forelimbs armed with tiny claws.

PLATYPUS CARE EXTENDS ITS SEARCH

Since the Platypus Care program was launched in November 2002, the Australian Platypus Conservancy has been receiving a steady stream of platypus sightings reports from members of the general community. While most sightings relate to Victorian waterways, information has also been received from persons living in or visiting New South Wales, the ACT, Tasmania and Queensland.

Working primarily in partnership with the Victorian Catchment Management Authorities and Melbourne Water, Platypus Care will focus over the next few months on obtaining sightings (both recent and historical) through Landcare networks and community-based environmental programs such as Waterwatch.

Assistance will also be provided to a variety of initiatives that have arisen in Victoria in response to the Platypus Care program.

For example, a number of schools have decided to collect sightings reports from local landowners as a special environmental education exercise.

Similarly, some city councils have asked to help publicise the program both to assess the health of local waterways and improve community awareness of freshwater conservation issues.

*Persons wishing to contribute information to Platypus Care can fill in the form below or pick up a standard reporting brochure from Victorian public libraries, CMA offices, or DSE Information Centres. Platypus sightings can also be registered on-line (or a copy of the reporting form can be downloaded and then filled in by hand) by visiting the Platypus Care website: **www.platypus.asn.au***