*AUSTRALIAN PLATYPUS CONSERVANCY*

# REVIEW: Draft Victorian Eel Management Plan (May 2017)

1.0 BACKGROUND INFORMATION

Since the current Victorian Eel Fishery Management Plan was published in July 2002, there have been several developments in relation to the issue of platypus bycatch in eel fishery nets.

(1.1). The conservation status of the platypus has been upgraded from “Least Concern” to “Near Threatened” (Woinarski *et al*. 2014; since ratified by the IUCN). In Victoria, platypus populations are believed to have become extinct in several river systems in recent decades, including the Bass River, Avoca River and Curdies River, with the Wimmera River population reduced to (probably) less than 20 animals in the Mackenzie River.

(1.2). Community expectations of animal welfare standards have risen in the last 15 years, resulting in 38 different Codes of Practice for Animal Welfare currently being mandated in Victoria. Similarly, national welfare standards for Australian researchers working with animals in the wild have recently been tightened by the Australian Code for the Care and Use of Animals for Scientific Purposes 8th Edition (2013). In line with these developments, DEDJTR’s Wildlife and Small Institutions Animal Ethics Committee (which is responsible for overseeing the work of a large proportion of environmental consultants who use fyke nets to survey fish in Victoria) has for some years mandated that fyke nets must be checked at a maximum interval of 12 hours so bycatch can be released and, more recently, has adopted the following protocols as standard best-practice requirements with respect to platypus bycatch in fyke nets:

*“…fyke nets that are set for fish at sites where there is a known high likelihood of capturing a platypus… must either be fitted with a rigid exclusion grid (aperture <50 mm square) at the front of the net or with an escape ring (>95 mm in internal diameter) at the cod end. If neither of these best practice solutions can be adopted, fyke nets set at such sites must be checked at least once midway through the night and again immediately after dawn so all captured platypus can be released…*

It should also be noted that these protocols have been framed not to make life difficult for persons setting nets, but to meet community expectations that mammals captured as bycatch are not subject to excessive stress or undue interference with critical life history processes, such as timely attendance of young.

(1.3). Research has confirmed that a platypus weighing up to 1 kg can pass through a 55-mm grid without particular difficulty (Grant *et al*. 2004). In Victoria, this equates to most adult females, many subadult and some adult males, and most juveniles in their first summer, with some first-year juveniles weighing as little as 300-400 grams (APC, unpub. data). It follows that a bycatch grid that is small enough to reliably exclude platypus from nets will also undoubtedly exclude a proportion of adult eels. Exclusion grids are therefore not an effective option for reducing platypus risk in commercial fyke nets, with the possible exception of nets set to capture small, immature eels.

(1.4). Available evidence supports the generalisation that inappropriate deployment of fyke nets in platypus waters has the potential to severely deplete platypus numbers and potentially jeopardise population survival, as exemplified by 17 platypus skulls retrieved by the APC from a single unlicensed fyke net recovered along a small stream in the Gellibrand River catchment, and 5 platypus carcasses discovered by a state wildlife officer in a pair of licensed fyke nets set about one kilometre upstream of the area legally allocated to eel fishing along the Tarra River (Serena and Williams 2010).

2.0 FEEDBACK ON DRAFT EEL MANAGEMENT PLAN

Based on the above, we feel that serious consideration should be given to addressing the following points in the draft Victorian Eel Fishery Management Plan (May 2017).

(2.1). *Section 5.4.1. Eels are harvested almost exclusively with fyke nets which are set and must be checked* **within 48 hours***. A shorter timeframe is specified as a permit/licence condition when there is a greater risk to wildlife.*

Response by APC: There is no logical justification for mandating different welfare-related net-setting requirements in platypus waters for persons setting fyke nets for the purpose of surveying fish and those setting fyke nets for the purpose of catching eels. The salient facts in both cases are that a platypus will be unable to either feed or sleep while confined in a fyke net, that food passes through a platypus’s digestive tract in about 5 hours (Booth and Connolly 2008), and that these animals are known to be subject to a high degree of stress (assessed objectively through plasma concentrations of adrenaline and noradrenaline) when confined in nets (McDonald *et al*. 1992). Holding a platypus in a net for an extended period (particularly if the platypus is a juvenile or lactating female, which typically make up a large percentage of animals captured in fyke nets in summer and autumn: Serena and Williams 2012) is surely contrary to the intent of the Prevention of Cruelty to Animals Act 1986, and would undoubtedly be considered completely unacceptable by most Victorians.

Recommendations:

* In waters where platypus are known to occur, persons setting fyke nets to catch eels should be required to conform to the same welfare-related standards and procedures mandated by DEDJTR’s Wildlife and Small Institutions AEC for persons using fyke nets to capture fish species in general.
* To address any community or overseas concerns about the welfare standards of commercial eel netting in Victoria, Fisheries Officers should be allocated resources to conduct randomly scheduled early morning checks of bycatch frequency and mortality in commercial eel nets, with at least two (though ideally more) such checks to be carried out annually per operator.

(2.2). *Section 5.4.1. In addition,* **waters which can be commercially fished for eels by holders of EFALs and their nominated operators include***: … 3.* **All Crown lakes, dams, swamps, marshes and morasses south of the Great Dividing Range***, except: a. Lake Wendouree, b. those water bodies forming part of any Wildlife Reserve unless specified in a permit issued by the Executive Director, Fisheries, c. any water allocated to another licence holder, d. any water subject to an Aquaculture Licence under the Fisheries Act, 1995 specifying eels.*

Also – *Appendix 1.* **The following list of waters***, including their branches or tributaries, whether or not on private property,* **are closed to commercial eel fishing** *for a minimum of the life of this management plan.* **This excludes lakes, dams, swamps, marshes and morasses that exist or form off tributaries and their connecting streams.**

Response by APC: Platypus show a significant preference for foraging in relatively still or slow-flowing water that is more than about 1 metre deep (Grant 2004; McLachlan-Troup *et al*. 2010). Habitats such as pools, lakes, dams, backwaters, billabongs and anabranches therefore constitute prime platypus breeding and feeding areas, and provide critical refuge habitats during drought. Particularly in the case of relatively degraded river systems, a large proportion of a catchment’s breeding females will occupy home ranges located in (or in the immediate vicinity of) large pools, on-stream dams, etc., and these habitats are predicted to generate a disproportionate number of juveniles even in average-to-wet years. The importance of sizable pools, lakes, etc. to platypus survival in dry years cannot be overstated: in periods of sustained drought, platypus activity necessarily becomes concentrated in whatever relatively deep water remains available to them. From the viewpoint of platypus conservation, it is therefore deeply concerning that the draft eel management plan as currently written can be interpreted to mean that commercial eel fishers may legally set nets without any departmental oversight in virtually any lentic portion of Victorian freshwater rivers and creeks south of the Great Dividing Range (apart from the exceptions listed as points a-d under point 3 in section 5.4.1), and without any apparent consideration for the fact that considerable portions of normally flowing waterways will predictably cease flowing in drought.

Recommendations:

* Criteria 1 for assessing commercial eel fishing permit applications in Appendix 2 (“The water must not be specifically closed under the Management Plan”) appears to be inconsistent with the text in Section 5.4.1 and Appendix 1 highlighted above. To bring Section 5.4.1 and Appendix 1 into line with Appendix 2, “waters specifically closed to commercial eel fishing” should be added as a fifth exception under sub-section 3 of Section 5.4.1, and the last sentence in the first paragraph of Appendix 1 should be deleted.
* To ensure acceptable accountability in the conduct of commercial eel netting activities in Victoria, we strongly recommend that the forthcoming eel management plan should require that eel netting can only proceed in “Crown lakes, dams, swamps, marshes and morasses south of the Great Dividing Range” (in cases where such water bodies are not allocated to a specific EFAL but constitute an implicitly or explicitly shared allocation) after a locality-specific permit has been issued by Fisheries Victoria (ideally on an annual basis) to authorise the activity.
* To ensure that the eel management plan achieves its stated aim that the eel fishing industry in Victoria should have “minimal ecological impact”, we strongly recommend that a requirement should be added to Appendix 2 that all commercial eel permits are to be reviewed prior to being issued (and thereafter on an annual basis if issued for more than one year) by DELWP Biodiversity section to ensure that the best and most up-to-date available information on distribution/status of sensitive or at-risk bycatch species, including the platypus, is routinely considered before an eel-netting permit is issued or renewed.
* Criteria 4 for the assessment of commercial eel fishing permit applications in Appendix 2 should be amended to acknowledge that this process may also in some cases consider the risk of deleterious interactions with *small* populations of TEP or other sensitive species, especially when these are considered to be critical to species survival in a given catchment.

(2.3). Section 5.3.1. *Waters specifically closed to commercial eel fishing are to include waterways known to have a high risk of TEP wildlife interactions.*

Response by APC: We’ve identified three creek or river systems that should logically be included as waters closed to commercial eel fishing based on the fact that they support widespread and substantial platypus populations and are not otherwise disqualified as a closed water under current criteria: (1) Bemm River, (2) Snowy River and tributaries (including Brodribb River and its tributaries), and (3) Stockyard Creek (South Gippsland drainage basin)

Recommendation:

* Add the Bemm River drainage, Snowy River drainage (including Brodribb River drainage) and Stockyard Creek to Appendix 1 of the draft eel management plan. If it is felt that this will result in an excessive percentage of coastal water bodies being included in Appendix 1, the APC will be happy to provide informed advice regarding which of the water bodies currently included in the appendix could be deleted with very little or nothing in the way of adverse consequences for platypus.

(2.4). Table 3. *Allocation of waters to Eel Fishery Access Licenses*.

Response by APC: Consideration should be given to amending boundaries (or maintaining boundaries in line with the 2002 plan) of four waters allocated to EFALs in the draft eel management plan:

Gellibrand River (EFAL 18). The previous Victorian eel management plan (2002) defines the relevant licence area as consisting of the Gellibrand River downstream from the Great Ocean Road. This boundary for the licence area should be maintained in the current management plan, particularly as the Gellibrand River and its tributaries support a notably abundant and widespread platypus population.

Lower Barwon River between Queen’s Park and Grab Hole Drain (EFAL 5). Platypus are sighted with a reasonable degree of regularity in Queen’s Park in Geelong, presumably comprising animals originating in the Moorabool River (which joins the Barwon River in the immediate vicinity) and/or animals originating a short distance upstream in the Buckley Falls area (which supports a high platypus density as confirmed by live-trapping surveys carried out by the APC). More generally, we remain puzzled why this reach is considered to be an appropriate area for commercial eel netting given the occurrence of a highly built up landscape and rapidly developing urban growth areas across most or all of the designated area, which presumably should automatically qualify it to be a closed water as per the criteria listed in Section 5.3.1.

Latrobe River downstream from Yallourn Storage Dam to the Swing Bridge at Sale (EFAL 16). For some time we have been puzzled why platypus are often sighted in both the Latrobe River upstream from Yallourn Dam and in Yallourn Dam proper, but only very sparse sightings are reported in the river downstream of Yallourn Dam. Is it possible that commercial eel fishing has contributed to a significant contraction in the platypus’s range along the lower Latrobe River? At the very least, we believe there are sound wildlife management grounds for moving the boundary of this permitted water farther downstream to (say) the Princes Highway Bridge in Rosedale, with the aim of explicitly supporting the development of a more robust platypus metapopulation encompassing the river mainstem and its adjoining tributaries from the Morwell River to at least Flynns Creek. It’s also worth noting that the likely frequency of platypus bycatch in the Latrobe River upstream of Traralgon Creek is predicted to increase significantly as an outcome of the recent reinstatement of the natural confluence of the Morwell River with the Latrobe River, which in turn should result in many more dispersing juveniles entering the Latrobe River in autumn than was previously the case.

West Branch of Tarwin River downstream from Mardan Road (EFAL 1). The upstream limit for allocated eel fishing areas in rivers in South Gippsland runs within a few kilometres of the coast in the case of the Franklin River (downstream of South Gippsland Highway), Agnes River (downstream of South Gippsland Highway) and Albert River (west of Alberton). In contrast, the legal upstream limit for commercial eel fishing along the Tarwin River is located upstream of Leongatha, close to the point where the Tarwin River’s west branch starts splitting into smaller headwater streams. It is hard to see how this can conceivably be considered to be compatible with responsible management of the Tarwin River platypus population: at least two-thirds of the length of the Tarwin River’s west branch (including the channel downstream of the point where the east branch joins the west branch) is currently open to commercial eel fishing. As in the case of the Latrobe River, the available evidence suggests that eel fishing may have contributed to a significant contraction of the platypus’s range in this system: of 37 platypus sightings for the Tarwin River catchment reported to the APC since 2000, 19% were for Fish and Turtons Creeks, 19% were for the Tarwin River’s east branch, 62% were for the Tarwin River’s west branch and tributaries upstream of Mardan Road, and 0% were for the Tarwin River’s west branch downstream of Mardan Road.

Recommendations:

* Maintain the Great Ocean Road as the upstream limit for EFAL 18 along the Gellibrand River.
* Carry out a review (with input from DELWP and the Corangamite CMA) of the most appropriate upstream limit for EFAL 5 in the lower Barwon River, given current and projected limits of urban development near Geelong.
* Carry out a review (with input from DELWP and the West Gippsland CMA) of the most appropriate upstream limit for EFAL 16 in the lower Latrobe River, particularly in view of the comments presented here regarding the desirability of improved management to support platypus welfare and population viability.
* Carry out a review (with input from DELWP and the West Gippsland CMA) of the upstream limit for EFAL 1 along the Tarwin River, particularly in view of the comments presented here regarding the desirability of improved management to support platypus welfare and population viability.

(2.5). Formatting of Section 5.4.1.

Response by APC: Even Fisheries Officers have been heard to complain about the confusing way in which the allocation status of different Victorian water bodies in the 2002 eel management plan is presented, with the identity of shared allocations variously listed in the text, in Table 3 and as asterisked text under Table 3.

Recommendation:

* Provide two consolidated tables in the forthcoming eel management plan, one of which summarises the waters allocated to individual EFALs, and the other of which summarises the waters to be made available in different river basins as shared allocations. Similarly, if Figure 4 is included in the forthcoming management plan, it logically should be complemented by a new Figure 5 which indicates the geographic extent of basins where shared allocations are located.

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