Action statement

Flora & Fauna Guarantee Act 1988

Platypus *(Ornithorhynchus anatinus)*

Taxon ID: 5136

Action statements are developed under the *Flora and Fauna Guarantee Act 1988* (FFG Act). Their preparation and implementation complement the FFG Act strategy *Protecting Victoria's Environment – Biodiversity 2037* and its vision that "Victoria's biodiversity is healthy, valued and actively cared for".

Species and Distribution

Platypus. Image by Doug Gimesy.

This habitat distribution model displays the indicative range of Platypus based on occurrence records and likely habitat. See NatureKit for an interactive map. The Platypus also occurs outside of Victoria.

Conservation Status

Vulnerable

Listing criteria: 5.1.1; 5.1.2 (a),(b) (i,ii,iii,iv) of the Flora and Fauna Guarantee Regulations 2020.

This means that:

- the Platypus is suspected to have undergone and is likely to undergo in the immediate future, a substantial reduction in population size; and
- its geographic distribution is restricted; and
- the population and habitat are severely fragmented; and
- there is a continuing decline in:
  - its extent of occurrence; and
  - area of occupancy; and
  - the area, extent and quality of habitat; and
  - the number of locations or subpopulations.

Corresponding International Union for the Conservation of Nature (IUCN) criteria: A2ace+3ce+4ce; B2ab(i,ii,iii,iv).

More information on IUCN listing criteria can be found here: IUCN Red List of Threatened Species

Species Information

Species information such as its description, distribution, ecology and references are provided in the Platypus Species Forecast Report.

Threats

Threats listed below have been identified through expert consultation and published literature.

Threat	Description
Habitat loss, degradation, or modification	
Altered flow regimes associated with water management	• Changes in frequency, magnitude and seasonality of flow associated with extraction of water, and changes in flow patterns affect Platypus populations. Reduction in surface flow, increased runoff and pollutants leads to poor water quality and reduced food resources, increasing stress on Platypus and rate of mortality.
Barriers to movement	• Waterway barriers and river regulation directly affect the hydrology of catchments, limit movement of individuals and reduce habitat connectivity.
Habitat degradation	• Loss or degradation of riparian habitat, and sediment input to waterways can reduce water quality and abundance and diversity of food resources for Platypus.
Human activities	• Activities such as firewood collection, recreation and vehicles can cause erosion and degradation of riparian vegetation and banks.
Livestock	• Livestock can cause erosion and degradation of riparian vegetation and banks, as well as reduced water quality from waste (increased nutrients).
Climate change	
Extreme weather	• Increased frequency and severity of storm events and landscape-scale flooding may lead to habitat degradation, displacement of individuals, drowning of juveniles and reduction in food resources.
Increased frequency and length of droughts	• Droughts degrade and reduce habitat, decrease water quality, impact availability of food resources and increase fragmentation of populations.
Fire	
Altered fire regimes	• Fire may affect Platypus through loss of aquatic and terrestrial habitat from post-fire debris-flow and siltation, reduced foraging opportunities and increased predation risk. Climate change is likely to lead to increased bushfire frequency and intensity.
Water properties	
Degraded water quality	• Poor water quality leads to reduced foraging efficiency and food resources.
Introduced species	
Deer	• Grazing, trampling and wallowing by deer damages and degrades riverbanks, impacts water quality and changes the physical form of rivers, impacting the Platypus habitat.
Foxes	• Predation by foxes (*Vulpes vulpes*) leads to a direct loss of individuals.

Threat	Description
Introduced fish	• Introduced fish including Carp (*Cyprinus carpio*), Brown Trout (*Salmo trutta*), Rainbow Trout (*Oncorhynchus mykiss*), and Redfin (*Perca fluviatilis*) occur throughout most of the Platypus' range and increase competition for food resources.
Introduced plants	• Introduced riparian and aquatic plants such as willows (*Salix* spp.) compete with native riparian vegetation, reduce quality of habitat for aquatic macroinvertebrates, modify bank structure and stability, and can exacerbate drying of small streams.
Human disturbance	
Fishing bycatch	• Fyke (eel) nets which are used to capture fish may lead to Platypus drownings and impacts from fishing tackle (lines and hooks) may also be harmful.
Litter	• Instream litter such as plastic, rubber, and metal objects may cause entanglement.
Population dynamics	
Small population size	• Small, fragmented and isolated populations are prone to loss of genetic diversity and increased extinction risk.

Conservation Objectives

Conservation objectives are informed by the conservation status and criteria in which the species was listed under the FFG Act. This provides a framework to understand how we can work towards recovery and improve the species' conservation status over time as per the objectives of the FFG Act.

The key objectives of this action statement are:

- Mitigate threats to populations and habitat to increase resilience and minimise future population decline.
- Increase the Platypus' range and/or extent, by providing opportunities for natural movement.
- Increase knowledge of Platypus biology, ecology, distribution, demography, emerging threats, and conservation requirements.
- Support community participation and improve awareness of the Platypus and conservation of riparian environments.

Conservation Actions

The actions below have been identified through expert consultation, published literature and spatial analysis. Actions are listed in alphabetical order to allow all interested parties to prioritise based on their context, capacity and capability. Landscape scale actions may mitigate threats for other species. For more information on where to undertake actions that benefit multiple species and identify the most beneficial locations to undertake actions for this species, please refer to NatureKit.

Action	Description
Community engagement and awareness	• Deliver incentives and investment programs to protect, enhance, and restore riparian and in-stream zones. • Develop and support citizen science programs to assist research and monitoring. • Ensure educational material is accessible to commercial fisheries, researchers, and recreational fishers about the risk of Platypus entanglement from fishing equipment, and the appropriate response to entanglement.

Action	Description
	• Support education programs to reduce litter, clean up waterways and to encourage responsible pet ownership.
Control deer*	• Implement effective management and control of deer, targeting riparian zones and nearby catchment adjacent to Platypus habitat.
Control foxes*	• Implement effective management and control of foxes, targeting riparian areas during periods of drought to reduce predation.
Control introduced fish*	• Implement effective management and control of European Carp, targeting important locations such as drought refugia.
Control weeds*	• Implement effective management and control of weeds, with a focus on species that readily invade riparian zones.
Increase connectivity	• Improve habitat condition and facilitate movement by fencing and revegetating riparian areas. • Identify and modify weirs and other physical barriers where feasible to improve the frequency and safety of Platypus movements. • Identify the benefits of removing barriers such as decommissioned weirs and other structures to facilitate connectivity between populations. • Develop a translocation plan to support the re-establishment of populations following local extinctions, and to support movement and gene flow between populations.
Manage and/or regulate fisheries	• Monitor impacts on Platypus from commercial eel fisheries. • Continue to enforce compliance of permit and licence conditions for Fyke (eel) nets. • Continue to enforce compliance with the most recent netting protocols to prevent bycatch.
Manage impacts from natural disaster events	• Facilitate research into the impact and consequences of natural disaster events, such as fire and floods, on habitat and populations. • Design and implement appropriate emergency response protocols including planning, response, and recovery phases to protect Platypus habitat and populations.
Reduce litter	• Reduce and where possible eliminate litter that may cause entanglement.
Research	• Analyse results from the broad scale eDNA monitoring program and identify knowledge gaps. • Identify relationships between habitat quality and suitability, invertebrate abundance and population processes, carrying capacity, and population health to inform management. • Improve understanding of emergency response to drought, fire and disease; and impact of the stocking of non-native recreational aquatic species such as trout.
Restore habitat	• Identify and protect refuge areas to support Platypus in periods of drought and low/no flow, including both natural and manmade habitats (e.g., weir pools). • Monitor and evaluate effectiveness of existing regulations for firewood collection, recreation and driving of vehicles in waterways and riparian areas.

Action	Description
	• Exclude livestock from riparian areas.
Survey and monitoring	• Continue the long-term survey and monitoring program for Platypus.

**Indicates landscape-scale actions that may deliver benefits to multiple species*

Past Actions

The key conservation management actions listed below have been delivered in the past 10 years.

Past action	Description
Citizen science	• The Victorian Government and partners have provided support and funding for the state-wide collection of water and eDNA samples by citizen scientists to better understand the distribution of Platypus across Victoria.
Community engagement and awareness	• An education and information campaign has been undertaken to promote the ban on opera house, yabby nets and other closed freshwater crayfish traps and replace nets. • Online livestream camera 'Platycam' installed at Grange Burn near Hamilton.
Control foxes	• Several programs have targeted fox control on public land as follows: – Weeds and Pests on Public Land Program funds landscape-scale pest projects including Ark projects. – Biodiversity Response Planning is investing in predator control projects across Victoria. – The Good Neighbour Program is working to control invasive species on the interface of public and private land. • Foxes are also controlled through ground shooting, aerial shooting, and baiting programs across fire-affected areas.
Develop, update, and apply forestry protections	• The risk of forestry operations was assessed for this species in 2021 under the Victorian Government Threatened Species and Communities Risk Assessment. Additional permanent protections were not found to be required.
Habitat restoration and revegetation	• Revegetation of the Upper Murray (Cudgewa and Nariel creeks) and installation of log jams has been undertaken. • Restoration of instream and streamside habitats in fire-affected areas on the Tambo River has been undertaken. • Revegetation of the Grange Burn near Hamilton has been undertaken together with installation of logs and root balls instream. • Victoria has a substantial and mature Waterway Program, which supports the delivery of waterway programs, including for waterway and riparian restoration and protection.
Managing impacts from commercial and recreational fisheries	• In 2019, the Victorian Government implemented a ban on use of opera house yabby nets and other closed freshwater crayfish traps to prevent accidental Platypus drownings.
Survey and monitoring	• An assessment of Platypus eDNA was undertaken state-wide (see 'Citizen Science' above).

Past action	Description
Threat mapping	• Analysis of threats to Platypus is underway to identify priority areas for management. • An assessment to identify barriers to Platypus and recommend actions to facilitate dispersal was delivered.
Weed control	• Catchment Management Authorities (CMAs) have removed willows along many Victorian waterways and revegetated riparian zones with indigenous species.

Decision Support Tools

Decision making for conservation actions is supported through the following Victorian Government tools which may be of assistance in choosing the most appropriate or beneficial actions for biodiversity:

- Choosing actions for nature: NatureKit
- Biodiversity Knowledge Framework

Further Information

- Platypus Species Forecast Report
- Final Recommendation Report – Platypus (*Ornithorhynchus anatinus*)
- Threatened Species and Communities Risk Assessment
- Final Recommendation Report – Platypus
- Margooya Lagoon – Cultural Flows Management Plan, Tadi Tadi 2021
- Victorian Deer Control Strategy
- Commonwealth Threat Abatement Plans
- Victoria's changing climate – understanding the impacts of climate change in Victoria
- Victorian Government Waterway Program
- Flora and Fauna Guarantee Regulations 2020
- IUCN Red List criteria descriptions

Get Involved and Take Action

If you are interested in supporting this species' recovery, there are some important things you need to consider.

The Department of Energy, Environment and Climate Action (DEECA) is committed to engaging and partnering with Traditional Owners on how they wish to be involved in the planning and implementation of actions for this species. Steps must be taken to avoid harm and where appropriate ensure actions can deliver cultural benefits.

You can find advice about required approvals, land manager and / or owner permissions, options and incentives for private land conservation, and engagement with Traditional Owners and public land managers here: Action statements (environment.vic.gov.au)

To identify the relevant Traditional Owners, use the Aboriginal Cultural Heritage Register and Information System (ACHRIS) Welcome to Country and Acknowledgements Map.

Interested parties are encouraged to work together across community, government, private and public land managers and Traditional Owners to undertake these actions and secure funding for their implementation.

You can also register your interest in taking action so we can connect you to other people or organisations working to help us secure the future for this species at threatened.species@deeca.vic.gov.au

Reporting Actions

Activity data is critical to monitoring the implementation and progress of actions and evaluating action statements. These data are also used to:

- Determine progress towards achieving the contributing targets for Protecting Victoria's Environment – Biodiversity 2037.
- Inform the five-yearly State of the Environment Report.

For guidance on reporting actions undertaken on this species, refer to Activity Data.

Submitting Monitoring Data

The Victorian Biodiversity Atlas (VBA) provides a foundational dataset showing where biodiversity occurs across the Victorian landscape and how it may have changed over time. As a core input for decision support tools that inform conservation actions, public land management, research activities and reporting, we encourage all participants in the delivery of on-ground actions to submit species records, including for weeds and introduced animals and observations as they carry out their projects.

For further information see: Victorian Biodiversity Atlas (environment.vic.gov.au)

Sign up and begin submitting your data today at: https://vba.biodiversity.vic.gov.au/

Acknowledgment

We acknowledge and respect Victorian Traditional Owners as the original custodians of Victoria's land and waters, their unique ability to care for Country and deep spiritual connection to it. We honour Elders past and present whose knowledge and wisdom has ensured the continuation of culture and traditional practices.

We are committed to genuinely partner, and meaningfully engage, with Victoria's Traditional Owners and Aboriginal communities to support the protection of Country, the maintenance of spiritual and cultural practices and their broader aspirations in the 21st century and beyond.

ISSN 1448-9902 **(online)**

Accessibility

If you would like to receive this publication in an alternative format, please telephone the DEECA Customer Service Centre on 136186, email customer.service@delwp.vic.gov.au or via the National Relay Service on 133 677 www.relayservice.com.au. This document is also available on the internet at www.environment.vic.gov.au