Action statement

Flora & Fauna Guarantee Act 1988

Australasian Bittern *(Botaurus poiciloptilus)*

Taxon ID: 10197

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

Australasian Bittern. Image by Heather Alexander.

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

Conservation Status

Critically Endangered

Listing criteria: 3.1.3(b)(ii) of the Flora and Fauna Guarantee Regulations 2020.

This means that:

the total number of Australian Bittern mature individuals is very low, the number is likely to continue to decline and most of the individuals are in one subpopulation.

Corresponding International Union for the Conservation of Nature (IUCN) criteria: C2a(ii).

More information on IUCN listing criteria can be found here: IUCN Red List criteria.

Species Information

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

Threats

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

Threat	Description
Habitat loss, degradation or modification	
Land use change	• A change in agricultural land use from grazing to cropping can alter hydrology and degrade habitat.
Livestock	• Livestock can cause erosion and degradation of wetland habitats by trampling and pugging and increase nutrients through their waste.
Reduced wetland area	• Loss of large wetland complexes (mainly by draining for cropping) has greatly reduced foraging and breeding habitat. Remaining wetlands are drying as a result of groundwater extraction and declining rainfall.
Altered hydrology	
Altered wetland water regime	• Where wetlands provide habitat or potential habitat, management of water regimes insensitive to the species' needs may impact breeding success and ultimately site occupancy. • Prolonged wetting supports monocultures of tall reeds which reduces habitat extent and quality.
Climate change	
Altered rainfall regime	• Reduced rainfall, alteration in timing and intensity of rainfall and/or increased evaporation may reduce the stability, quality and availability of the wetland habitat for the species.
Sea-level rise	• Some freshwater coastal wetlands are expected to become more saline due to sea-level rise, causing a change in ecosystem type and loss of preferred habitat.
Water properties	
Degraded water quality	• Poor water quality from siltation, pollution, increased salinity, eutrophication, and blackwater events may impact foraging and breeding success.
Introduced species	
Introduced fish	• Introduced European Carp (*Cyprinus carpio*) are known to impact water quality and aquatic vegetation, and likely impact Australasian Bittern foraging habitat at some sites.
Introduced herbivores	• Grazing, and trampling by rabbits (*Oryctolagus cuniculus*), feral horses (*Equus caballus*), feral goats (*Capra hircus*) and deer (various species) alters vegetation structure, spreads introduced plant species, and increases accessibility of habitat to introduced predators.
Introduced plants	• Introduced plants change the structure and composition of wetland habitats, impacting breeding success, survival, and site occupancy.
Introduced predators	• Predation of Australasian Bittern occurs by foxes (*Vulpes vulpes*) and feral cats (*Felis catus*). As nests are close to the ground, nesting birds, eggs and young are particularly susceptible.

Threat	Description
Water properties	• Grazing, trampling and wallowing by feral pigs (*Sus scrofa*) damage and degrade habitat. Feral pigs are also known to prey on wetland birds and their nests.
Native species	
Problematic native plants	• Increasing abundance of some native plant species, e.g., the Common Reed (*Phragmites australis*), may impact the quality of foraging habitat.
Fire	
Altered fire regimes	• Frequent or intense burning of wetlands may reduce the dense vegetation that forms an important component of habitat.
Human disturbance	
Animal collision with built structures	• Individuals may collide with fences, powerlines and other built structures such as wind turbines when moving between habitat patches, causing mortality.
Construction, development and/or infrastructure	• Urban development adjacent to wetlands may cause off-site impacts to habitat including changes to water regime, increased risk of weed incursion, and disturbance or mortality through interactions with domestic pets.
Incidental impacts from hunting	• Disturbance from duck hunting can occur and is a particular problem during the breeding or chick rearing season.

Conservation Objectives

Conservation objectives are informed by the conservation status and criteria under 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 the Australasian Bittern and its habitat to increase resilience, improve genetic fitness and minimise future population decline.
- Increase the wild population size in Victoria to at least 300 mature individuals.
- Increase knowledge of biology, ecology, distribution, demography, emerging threats, and conservation requirements.
- Support community participation and improve awareness of the Australasian Bittern and conservation of its habitat.

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	• Continue to identify, promote and support opportunities for community involvement in conservation efforts. • Continue to raise awareness of Australasian Bittern and the importance of protecting its habitat with land managers and stakeholders.

Action	Description
	• Increase landholder awareness of the Australasian Bittern, its habitat, and the impacts of grazing to the species and habitat. Provide guidance on changes to grazing that may be required to support the recovery of the species, such as excluding grazing, or using grazing to control excess biomass and/or introduced plants.
Conservation and management planning	• Develop guidelines for habitat restoration and management approaches that benefit Australasian Bittern, considering both breeding and foraging habitat requirements.
Control introduced herbivores *	• Implement and maintain effective control of introduced herbivores including rabbits, deer, feral pigs, feral goats and feral horses.
Control introduced plants *	• Implement and maintain effective control of introduced plants and undertake revegetation with appropriate native species.
Control introduced predators *	• Implement and maintain effective control of feral cats and foxes.
Manage built infrastructure	• Consider Australasian Bittern requirements in the placement and design of built infrastructure near wetlands. Include planning for appropriate buffers around wetlands and movement corridors to limit disturbance and mortality, and stormwater management to limit the off-site impacts of development. • Wind farm proponents identify site-specific mitigation actions for operating wind energy facilities in Bat and Avifauna Management Plan (BAM) Plans.
Manage hunting disturbance	• Consider wetland closures informed by the susceptibility of Australasian Bittern to disturbance by duck hunting and associated trigger levels developed from population estimates of the species. See ‘Further information’ section below.
Manage over-abundant native species	• Develop and apply management techniques to maintain appropriate diversity and density of reeds and rushes in wetland habitats, including the management of over-abundant native plants such as the Common Reed.
Manage to provide an appropriate water regime	• Manage wetland water regimes and water quality to support retention, restoration and/or creation of habitat through a combination of physical on-ground works and environmental watering.
Permanent protection *	• Investigate incentives, voluntary agreements, covenants and other permanent protection measures to protect and restore habitat.
Research	• Improve understanding of sex ratios and average harem size to confirm how best to extrapolate population size from the number of calling males detected. • Continue to trial and apply tracking technologies to improve understanding of the species’ movements and habitat requirements.
Restoration and/or revegetation *	• Undertake restoration and/or revegetation of wetland vegetation to increase habitat suitability and/or create new habitat areas.
Survey and monitoring	• Monitor populations and habitat at known sites and other suitable locations to assess population trends and habitat condition. • Continue to refine survey techniques to increase detection probability and employ these approaches to monitor the population.

**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
Community engagement and awareness	• Community engagement activities through survey and monitoring programs have raised local community and land manager knowledge about the species and its management requirements. • BirdLife Australia provides a pathway for raising community awareness and involvement through a dedicated Australasian Bittern project and webpage.
Conservation management planning	• Declaration of the Glenelg Estuary and Discovery Bay Ramsar Site, including Long Swamp, has provided improved planning and protection for Australasian Bittern habitat.
Environmental water	• Partnerships projects are bringing environmental watering to several wetlands under permanent protection.
Permanent protection	• Permanent protection though covenants and land purchase over a range of wetlands. Examples include covenants in place over most of Tootgarook Swamp (300 ha), and purchase of Long Swamp (138 ha) west of Castlemaine. • Management plans prepared and implemented to improve habitat condition. • Victorian landholders' management advice is in preparation which aims to support voluntary management agreements in the future.
Research	• Descriptions developed for Australasian Bittern habitat requirements. • An area of occupancy model is being piloted in the Glenelg Hopkins Catchment. • Victorian birds have been included in a New South Wales radio-tracking project adding to understanding of the species' movements.
Restoration and/or revegetation	• Restoration and/or revegetation of wetland vegetation has occurred to increase habitat suitability and/or create new habitat areas.
Survey and monitoring	• Population monitoring has been undertaken by a range of delivery organisations at priority sites/regions. Examples include Barmah National Park, the Eastern Treatment Plant at Carrum, Edithvale-Seaford Wetlands, Gippsland Lakes, Hird's Swamp, Johnson's Swamp, Princetown Estuary, Reedy Lake (Geelong), and Tootgarook Swamp. • Targeted surveys in southwest Victoria in the period (2018/19-2022/23) demonstrated that the region supports a significant proportion of the Australasian Bittern population and identified new breeding locations.

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

- Australasian Bittern Species Forecast Report
- Threatened Species Assessment report - Australasian Bittern (*Botaurus poiciloptilus*)
- Commonwealth Species Profile and Threats database
- Assessing waterbird susceptibility to disturbance by duck hunters in Victoria
- Victoria's changing climate – understanding the impacts of climate change on Victoria
- Genetic Risk Index
- Commonwealth Threat Abatement Plans
- Flora and Fauna Guarantee Regulations 2020
- IUCN criteria summary

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.

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 action, public land management, research activities and reporting, we encourage all participants in the delivery of on-ground actions to submit species records and observations, including for introduced plants and animals, 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.

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Accessibility

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