

Action statement

Flora & Fauna Guarantee Act 1988

Golden-rayed Blue Butterfly (*Candalides noelkeri*)

Taxon ID: 519887

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



Golden-rayed Blue Butterfly. Image by Kate Pearce.



Golden-rayed Blue Butterfly Victorian Biodiversity Atlas (VBA) records since 1970. See [NatureKit](#) for an interactive map.

Conservation Status

Endangered

Listing criteria: 4.1.2 (a),(b)(iii,v),(c)(i,v) of the Flora and Fauna Guarantee Regulations 2020.

This means that:

- its geographic distribution is highly restricted; and
- the distribution of the population or habitat of the Golden-rayed Blue Butterfly is severely fragmented; and
- it is restricted to a limited number of areas that are subject to the same threat or suite of threats that can impact all individuals present; and
- there is a continuing decline or reduction in:
 - the area, extent or quality of habitat; and/or
 - the number of mature individuals; and
- there are extreme fluctuations in the numbers of mature individuals.

Corresponding International Union for the Conservation of Nature (IUCN) criteria: B2ab(iii,v)c(i,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 [Golden-rayed Blue Butterfly Species Forecast Report](#).

Threats

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

| Threat | Description |
|---|--|
| Native species | |
| Native flora species outside of natural range | <ul style="list-style-type: none"> Habitat change from invasion of Salt Paperbark (<i>Melaleuca halmaturorum</i>) results in a dense shaded paperbark forest that reduces both the Golden-rayed Blue Butterfly's preferred open sunny microhabitat and extent of Creeping Myoporum (<i>Myoporum parvifolium</i>), the key food source for both larvae and adults. This threat is also evident at several known population sites, for example at Lake Wyn Wyn. |
| Introduced species | |
| Introduced plants | <ul style="list-style-type: none"> The species' habitat is vulnerable to invasion by a range of introduced plants that pose potential threat to the ecological integrity of the habitat. These include Horehound (<i>Marrubium vulgare</i> L.), Boneseed (<i>Chrysanthemoides monilifera</i>), Bridal Creeper (<i>Asparagus asparagoides</i>), Tall Wheat Grass (<i>Thinopyrum ponticum</i>) and a number of other introduced annual and perennial grasses. |
| Rabbits | <ul style="list-style-type: none"> Rabbit (<i>Oryctolagus cuniculus</i>) warrens within the main breeding area at Lake Wyn Wyn have partly destroyed clumps of the Golden-rayed Blue Butterfly larvae food plant Creeping Myoporum, as well as contributed to significant soil disturbance and soil loss. Grazing by rabbits is also placing pressure on the native plants and reducing the biomass of Creeping Myoporum. |

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 butterfly's range and/or extent, by enhancing the quality of existing habitat, creating additional habitat and providing opportunities for natural or facilitated movement.
- Increase knowledge of biology, ecology, distribution, demography, and conservation requirements.
- Promote community awareness of the Golden-rayed Blue Butterfly and its floodplain habitat and support opportunities for community participation in its conservation.

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 | <ul style="list-style-type: none"> Construct and maintain a public exhibit for the Golden-rayed Blue Butterfly to increase community awareness and promote its conservation. Profile the species as a flagship to enhance conservation of flood plain/salt-lake ecosystems. |
| Control rabbits* | <ul style="list-style-type: none"> Implement targeted rabbit control in appropriate areas to improve habitat for the Golden-rayed Blue Butterfly. |
| Control weeds* | <ul style="list-style-type: none"> Implement programs to control a range of invasive weeds (e.g. Boneseed, Bridal Creeper, Tall Wheat Grass) that are growing in areas with extant butterfly population. |
| Ex situ management | <ul style="list-style-type: none"> Investigate the value and feasibility of ex-situ breeding for the purposes of reintroduction into suitable habitat. |
| Manage over-abundant native species | <ul style="list-style-type: none"> Manage Salt Paperbark at sites where encroachment will result in significant loss of open sunny microhabitat and/or the species' larval food plant, Creeping Myoporum. |
| Monitoring and survey | <ul style="list-style-type: none"> Undertake systematic field surveys to better understand the species' distribution, population dynamics and threats. |
| Research | <ul style="list-style-type: none"> Undertake ecological studies to examine the effects of browsing and/or fire on the survival and recruitment of Salt Paperbark and its displacement of the Golden-rayed Blue Butterfly's larval food plant, Creeping Myoporum. Undertake trials to assess the effectiveness of revegetation, supplementation, and establishment of new populations of the butterfly's key food plant, Creeping Myoporum. Investigate opportunities for wild-to-wild translocation to secure existing or establish new populations. |

**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 |
|--|--|
| Acquisition or reservation | <ul style="list-style-type: none"> Land adjacent to Lake Wyn Wyn was purchased by Trust for Nature. |
| Community engagement | <ul style="list-style-type: none"> 'Totes for Wildlife' Campaign for the species was delivered through Zoos Victoria retail stores. |
| Conduct surveys to locate extant populations | <ul style="list-style-type: none"> Surveys were undertaken at known and potentially suitable locations of the Golden-rayed Blue Butterfly in 2021. The species was found at 12 sites (six known, six previously unknown) near salt lakes around Rainbow, Horsham and Douglas. |
| Conduct surveys to locate suitable habitat | <ul style="list-style-type: none"> Most other lake reserves in the Douglas-Hindmarsh chain were searched for the host plant Creeping Myoporum during the 2021 survey. |
| Control over-abundant native species | <ul style="list-style-type: none"> Trial removal of some patches of Salt Paperbark were undertaken at Lake Wyn Wyn. |
| Control weeds | <ul style="list-style-type: none"> Horehound and other weeds have been sprayed by Parks Victoria. |

| Past action | Description |
|---------------------------------|---|
| Introduced species management | <ul style="list-style-type: none">Rabbit warrens at Olivers Lake and Lake Wyn Wyn have been ripped, avoiding areas of Creeping Myoporum. |
| Restoration and/or revegetation | <ul style="list-style-type: none">Creeping Myoporum food plants have been propagated at a native nursery at Wail for planned revegetation/restoration trials. |

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

- [Golden-rayed Blue Butterfly Species Forecast Report](#)
- [Threatened Species Assessment report – Golden-rayed Blue Butterfly \(*Candalides noelkeri*\)](#)
- [Commonwealth Species Profile and Threats database](#)
- [Commonwealth Threat Abatement Plans](#)
- [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 / owner permissions, options and incentives for private land conservation, and engagement with Traditional Owners and public land managers here: [Action statements \(environment.vic.gov.au\)](http://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, 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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