Action statement

Flora & Fauna Guarantee Act 1988

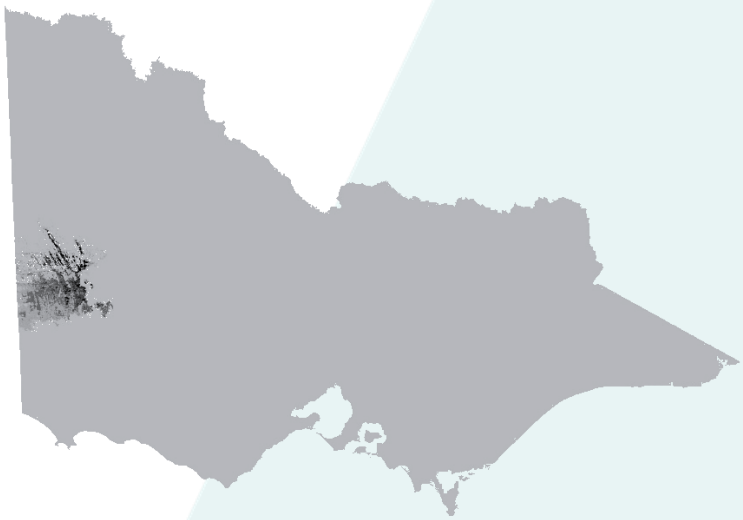
Forked Spyridium *(Spyridium furculentum)*

Taxon ID: 503232

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

Forked Spyridium. Image by Marcia Riederer.



This habitat distribution model displays the indicative range of the Forked Spyridium based on occurrence records and likely habitat. See NatureKit for an interactive map.

Conservation Status

Critically endangered
Listing criteria: 3.1.1; 3.1.2(a), (b)(i,ii,iii,iv,v); 3.1.3(a) of the Flora and Fauna Guarantee Regulations 2020.

This means that:

- the species has undergone, is suspected to have undergone, or is likely to undergo in the immediate future, avery severe reduction in population size; and
- its geographic distribution is extremely restricted; and
- the distribution of the population or habitat of the species is severely fragmented; and
- restricted to a limited number of areas that are subject to the same threat or suite of threats that can impact allindividuals present; and
- there is a continuing decline or reduction in:
  - its extent of occurrence; and
  - area of occupancy; and
  - the area, extent or quality of habitat; and
  - number of locations or subpopulations; and

  - the number of mature individuals; and
- the total number of mature individuals is very low, and the number is expected to continue to decline at a veryhigh rate.

Corresponding International Union for the Conservation of Nature (IUCN) criteria: A2c+3c+4c; B1ab(i,ii,iii,iv,v);C1.

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 Forked SpyridiumSpecies Forecast Report and VicFlora.

Threats

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

Threat	Description
Climate change	
Increased frequency and/or length of droughts	• Prolonged and intense drought stress leads to adult mortality and recruitment failure.
Fire	
Altered fire regimes	• Fire may exacerbate the impact of drought stress to increase the risk of adult mortality and recruitment failure, particularly if the interval between successive fires is less than the time taken to reach maximum seed production i.e., about 25 years. • Although the germination response of the species to fire is largely unknown, other Spyridium species germinate at temperatures expected during fire. The absence of fire may reduce or prevent germination and limit recruitment. Controlled or “cool” burning may also be a risk as fire temperatures are not high enough to stimulate seed germination, but still may kill existing plants.
Population dynamics	
Genetic decline	• Low population size and fragmented subpopulations may result in reduced geneticfitness and reduced ability of the species to adapt to changes in the environment.
Small population size	• Given the extremely limited distribution and very low numbers of plants, the risk of population decline or local extinction from stochastic events is very high.
Habitat loss, degradation or modification	
Land use change/intensification	• A third subpopulation occurs on private property with no conservation agreement. Although occurring in an intact patch of native vegetation and presently fenced, future clearing or grazing with livestock, especially goats, could destroy these plants.
Road and track maintenance	• Two of the three known subpopulations occur on roadsides, both of which have been subject to disturbance by activities such as grading, construction of drainage channels, slashing of vegetation, spraying of weeds, and creation of fire breaks andmineral earth breaks. These activities have modified the local hydrology
Introduced species	

Threat	Description
Rabbits	• There is evidence of large rabbit (*Oryctolagus cuniculus*) populations in the area occupied by Forked Spyridium.
Weeds	• The species is threatened by invasive weed species, including Perennial Veldt-grass (*Ehrharta calycina*) and Smooth Cat's-ear (*Hypochaeris glabra*).
Human disturbance	
Trampling by humans	• Apiarists collect honey from beehives amongst populations of Forked Spyridium, andin doing so, may trample seedlings. • Broombush (*Melaleuca uncinata*) is harvested from the roadside habitats and trampling may occur during this process.
Pathogens and disease	
Phytopthora	• Forked Spyridium is known to be susceptible to *Phytopthora cinnamomi,* which occurs in the vicinity of the population, and may be the reason for observed recent population decline.

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 populations and habitat to increase resilience and minimise future population decline
- Increase the wild population size to at least 250 mature individuals.
- Establish at least three new viable populations within its historic range.
- Increase knowledge of biology, ecology, distribution, demography, emerging threats, and conservation requirements.
- Support community participation and improve awareness of the Forked Spyridium.

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
Acquisition or reservation	• Explore opportunities to acquire freehold land supporting any populations of the species, for incorporation into the nearby or adjacent Little Desert National Park.
Collect and store reproductive material	• Maintain seed storage in appropriate institutions and determine the viability of stored seed

Action	Description
Community engagement and awareness	• Ensure local road agencies and landholders are aware of the presence of the species and the need to protect it. • Encourage local community members and groups to establish the species on private land. • Engage with landholders to raise their awareness of the impacts of grazing on thespecies, and grazing regimes that support its conservation.
Control rabbits	• Implement effective control of rabbits.
Control weeds *	• Implement effective management and control of Perennial Veldt-grass and any other weeds that could threaten the species. Ensure that the overspray associatedwith any chemical control is minimised.
Covenants and/or agreements	• Protect the known habitat of the species with formal conservation agreements including covenants.
Establish and maintain exclusion fencing	• Fence roadside populations to prevent habitat disturbance from road maintenance, earthworks, or other activities leading to habitat loss or disruption. • Maintain fencing of the known population on private land to minimise the impacts of grazing.
Ex-situ management	• Maintain ex-situ living collections in cultivation that include mature plants, representative of each known population.
Manage livestock	• Work with local road agencies and landholders to ensure that livestock are activelyexcluded from roadside sites. •
Research	• Conduct in-field trials to improve ecological understanding of the reproductive/ regenerative status of the Forked Spyridium. • Determine seed germination requirements to identify key stimuli, such as soil disturbance regimes. • Conduct vegetative propagation trials to determine the requirements for successfulestablishment. • Undertake research into the genetic diversity of the wild populations. • Investigate susceptibility of the species to *Phytophthora* in the field.
Surveys and monitoring	• Undertake targeted surveys throughout the range of the species to better define itsdistribution and abundance. • Monitor populations to determine trends in population size and distribution, mortality and timing of life history stages and to monitor the progress of recovery,including the effectiveness of management actions. • Assess population size, structure and reproductive status at different post-fire intervals to improve understanding of the fire response of the species. • Monitor the size, structure and reproductive status of the translocated population at Nurcoung.
Translocation	• Establish three additional subpopulations in suitable secure habitat, preferably at asufficient distance from the existing subpopulations that they are unlikely to be impacted by the same threat or suite of threats.

Action	Description
Undertake ecological burning	• Implement a suitable fire regime that meets the ecological requirements of Forked Spyridium and promotes its recovery. • Ensure that fires do not occur within populations before an accumulation of a seedbank large enough to replace the number of fire-killed standing plants.

**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
Collect and store reproductive material	• Seed was collected in 2013, 2016, 2017 and 2018 and stored at the Victorian Conservation Seedbank, Royal Botanic Gardens Victoria.
Surveys and monitoring	• Targeted surveys were undertaken on private land in 2013, 2015, 2016 and 2017. • Monitoring of a translocation site at Nurcoung was undertaken between 2017 and 2019.
Translocation	• In 2017, seedlings were planted in a translocation site on a property at Nurcoung.

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

- Forked Spyridium Species Forecast Report
- Threatened Species Assessment report – Forked Spyridium (*Spyridium furculentum*)
- Commonwealth Species Profile and Threats database
- Threatened Species and Communities Risk Assessment
- Commonwealth Threat Abatement Plans
- Victoria's changing climate – understanding the impacts of climate change in Victoria
  - 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.

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.

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