

# Action statement

*Flora & Fauna Guarantee Act 1988*

## Maidenhair Spleenwort (*Asplenium hookerianum*)

Taxon ID: 500290

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



Maidenhair Spleenwort. Image by Andre Messina.



This habitat distribution model displays the indicative range of the Maidenhair Spleenwort based on occurrence records and likely habitat. See [NatureKit](#) for an interactive map. The Maidenhair Spleenwort also occurs outside of Victoria.

### Conservation Status

#### Critically endangered

**Listing criteria:** 3.1.2(a),(b)(i,ii,iii,iv,v) of the Flora and Fauna Guarantee Regulations 2020.

This means that:

- The Maidenhair Spleenwort’s geographic distribution is extremely restricted; and
- the distribution of the population or habitat of the taxon 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:
  - its extent of occurrence; and
  - its area of occupancy; and
  - the area, extent or quality of habitat; and
  - the number of locations or subpopulations; and
  - the number of mature individuals.

**Corresponding International Union for the Conservation of Nature (IUCN) criteria:** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v).

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 [Maidenhair Spleenwort Species Forecast Report](#) and [VicFlora](#).

## Threats

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

Threat	Description
<b>Population dynamics</b>	
Small population size	<ul style="list-style-type: none"> <li>Small populations have lower resilience to the risk of stochastic events, and increased risk of genetic decline.</li> </ul>
<b>Climate change</b>	
Altered rainfall and temperature regimes	<ul style="list-style-type: none"> <li>Climate change, increasing temperature and altered rainfall are likely to magnify existing threats and may reduce the stability, extent and condition of habitat, and impact recruitment and/or mortality rates.</li> <li>Maidenhair Spleenwort is generally confined to wet and shady cracks and crevices or under shelves on vertical rock faces. A drying and warming climate, including droughts, may reduce habitat suitability for the species.</li> </ul>
<b>Fire</b>	
Altered fire regimes	<ul style="list-style-type: none"> <li>Increased frequency and intensity of fire may cause mortality of plants, damage the habitat, and modify habitat processes.</li> <li>Post-fire changes in habitat structure, such as reduced canopy cover leading to desiccation, and increased sedimentation from erosion, are of potential concern to Maidenhair Spleenwort. It is unknown how Maidenhair Spleenwort responds to fire.</li> </ul>
<b>Human disturbance</b>	
Recreational activities	<ul style="list-style-type: none"> <li>Recreational activities such as rock climbing or abseiling may damage habitat, potentially impacting recruitment and mortality rates, and/or persistence at the site.</li> <li>Populations in Bryce Gorge that are confined to cracks and crevices in rock faces are particularly exposed to this threat.</li> </ul>
<b>Habitat loss, degradation or modification</b>	
Forestry operations	<ul style="list-style-type: none"> <li>Forestry operations have the potential to remove or degrade habitat, compact soils, contribute to erosion and sedimentation, exacerbate the spread of introduced species, pathogens and parasites, and cause mortality of individuals.</li> </ul>
<b>Introduced species</b>	
Deer	<ul style="list-style-type: none"> <li>Introduced deer species (Sambar deer (<i>Cervus unicolor</i>), Red deer (<i>Cervus elaphus</i>), and Fallow Deer (<i>Dama dama</i>)) degrade habitat through herbivory, trampling, pugging of wet soils, increasing nutrient loads, erosion of waterway edges, and increasing the accessibility of habitat to introduced plants.</li> </ul>

Threat	Description
Introduced plants	<ul style="list-style-type: none"><li>Introduced plants can directly compete for resources, modify habitat, and reduce species abundance and diversity.</li><li>Of potential concern to Maidenhair Spleenwort are invasive species including Blackberry (<i>Rubus fruticosus</i> spp. agg.).</li></ul>

## 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, improve genetic fitness and minimise future population decline.
- Increase knowledge of biology, ecology, distribution, demography, emerging threats, and conservation requirements.
- Support community participation and improve awareness of the Maidenhair Spleenwort 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
Avoid and/or mitigate impacts associated with fire management	<ul style="list-style-type: none"><li>Ensure that species distribution data and ecological information is available and considered in fire management activities.</li></ul>
Collect and store reproductive material	<ul style="list-style-type: none"><li>Ensure that adequate supply and genetic diversity is secured for future reintroduction, and that essential information (such as dormancy) is known.</li><li>Undertake appropriate spore collection for long-term storage.</li></ul>
Community engagement and awareness	<ul style="list-style-type: none"><li>Continue to identify, promote and support opportunities for community involvement in conservation efforts.</li></ul>
Develop, update and apply forestry protections	<ul style="list-style-type: none"><li>Consider amending the forest management zoning scheme to protect the known site in State Forest.</li><li>Where relevant, incorporate species-specific protection measures into plans and permits relating to timber harvesting operations in native forest on private land.</li></ul>
Ex-situ management	<ul style="list-style-type: none"><li>Establish and maintain ex-situ populations in suitable secure sites, to service the conservation objectives of the species.</li></ul>

Action	Description
Manage public access	<ul style="list-style-type: none"> <li>Manage public access to limit the risks of human disturbance. Access should be managed in Bryce Gorge to limit the risks associated with rock climbing and abseiling.</li> </ul>
Research	<ul style="list-style-type: none"> <li>Improve understanding of genetic diversity, reproductive requirements and factors influencing recruitment success.</li> <li>Investigate the impacts of known threats and potential management actions.</li> <li>Investigate the need for, and feasibility of, implementing a translocation program for Maidenhair Spleenwort.</li> </ul>
Survey and monitoring	<ul style="list-style-type: none"> <li>Monitor populations at known sites and other suitable locations to assess distribution, population trends and habitat condition.</li> <li>Monitor the impact of threats to inform management interventions.</li> <li>Undertake targeted field surveys to confirm the extent of all known populations and seek to discover previously undetected populations based on predicted habitat and ecological information.</li> </ul>

*\*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
Develop, update and apply forestry protections	<ul style="list-style-type: none"> <li>The risk of forestry operations was considered for this species in 2020 under the Victorian Government Threatened Species and Communities Risk Assessment. Additional permanent protections were not found to be required.</li> <li>In 2023, a new record of this species has occurred in State Forest. This record was not considered in the risk assessment, as the information was not available at the time, but has been considered above in the 'actions' section.</li> </ul>
Ex-situ management	<ul style="list-style-type: none"> <li>A small number of plants are held in the Living Collections of the Royal Botanic Gardens Victoria.</li> </ul>

## 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

- [Maidenhair Spleenwort Species Forecast Report](#)
- [Threatened Species Assessment report – Maidenhair Spleenwort \(\*Asplenium hookerianum\*\)](#)
- [Threatened Species and Communities Risk Assessment](#)
- [Commonwealth Species Profile and Threats database](#)
- [Victoria's changing climate – drivers and impacts of climate change in Victoria](#)

- [Commonwealth Threat Abatement Plans](#)
- [Genetic Risk Index](#)
- [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](mailto: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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