



Government
of South Australia

Declared Plant Policy

This policy relates to natural resources management under section 9(1)(d) of the Landscape South Australia Act 2019 (the Act), enabling co-ordinated implementation and promotion of sound management programs and practices for the use, development or protection of natural resources of the State. Specifically, this policy provides guidance on the use and management of natural resources relating to the prevention or control of impacts caused by pest species of plants that may have an adverse effect on the environment, primary production or the community, as per object s7(1)(f) of the Act.

polygala (*Polygala myrtifolia*)

Polygala myrtifolia is a South African garden escape, a shrub growing up to 3 metres tall. It has become established in some coastal areas on Eyre Peninsula, Yorke Peninsula, Kangaroo Island, and more generally in the Hills and Fleurieu and Limestone Coast regions.

Management Plan for Polygala

Outcomes

- Native vegetation protected from further invasion by polygala.

Objectives

- Prevent the spread of polygala to uninfested areas due to planting.
- Control high priority infestations according to regional management plans.
- Locate small, isolated infestations threatening high priority sites for control action.
- Contain larger and low-priority infestations of polygala.

Best Policy Implementation

- Regional landscape boards and Green Adelaide to inspect retail outlets for *Polygala myrtifolia* on sale.
- Regional landscape boards and Green Adelaide to increase community awareness of polygala through extension and publicity.
- Regional landscape boards and Green Adelaide to map the extent of infestations and prioritise them for action.
- High priority infestations to be controlled as detailed in regional management plans.

Regional Implementation

Refer to regional management plans for further details.

polygala policy

| Region | Objectives |
|-----------------------------|----------------------|
| Alinytjara Wilurara | Destroy infestations |
| Eyre Peninsula | Protect sites |
| Green Adelaide | Protect sites |
| Hills and Fleurieu | Protect sites |
| Kangaroo Island | Contain spread |
| Limestone Coast | Protect sites |
| Murraylands and Riverland | Manage weed |
| Northern and Yorke | Destroy infestations |
| South Australian Arid Lands | Limited action |

Declaration

To implement this policy, polygala is declared under the *Landscape South Australia Act 2019* throughout the whole of the State of South Australia. Its entry to the State, movement or transport on a public road by itself or as a contaminant, or sale by itself or as a contaminant are prohibited. Regional landscape boards and Green Adelaide may require land owners to control polygala plants growing on their land. These authorities are required to control plants on road reserves in their regions, and may recover control costs from the adjoining land owners.

Polygala is declared in category 2 under the Act for the purpose of setting maximum penalties and for other purposes. Any permit to allow its entry, road transport or sale can only be issued by the Chief Executive of the Department for Environment and Water or their delegate pursuant to section 197.

Under the *Landscape South Australia (General) Regulations 2020*, Regulation 27 specifies the conditions under which a person is exempt from the operation of section 186 and may transport wool, grain or other produce or goods carrying polygala on public roads, or bring them into the State. Regulation 28 specifies conditions under which a person is exempt from the operation of section 188(2) and may sell wool, grain or other produce or goods carrying polygala. Note that certain produce or goods may be excluded from these general movement and sale exemptions by Gazettal Notice of the Chief Executive, DEW.

The following sections of the Act apply to polygala throughout each of the regions noted below:

| Sections of Act | Region | | | | | | | | |
|---|--------|----|----|----|----|----|----|----|------|
| | AW | EP | GA | HF | KI | LC | MR | NY | SAAL |
| 186(1) Prohibiting entry to area | X | X | X | X | X | X | X | X | X |
| 186(2) Prohibiting movement on public roads | X | X | X | X | X | X | X | X | X |
| 188(1) Prohibiting sale of the plant | X | X | X | X | X | X | X | X | X |
| 188(2) Prohibiting sale of contaminated goods | X | X | X | X | X | X | X | X | X |
| 190 Requiring notification of presence | | | | | | | | | |
| 192(1) Land owners to destroy the plant on their properties | | | | | | | | | |
| 192(2) Land owners to control the plant on their properties | X | X | X | X | X | X | X | X | X |
| 194 Recovery of control costs on adjoining road reserves | X | X | X | X | X | X | X | X | X |

Review

This policy is to be reviewed by 2025, or in the event of a change in one or more regional management plans for polygala. Success will be measured by the number of new infestations recorded.

Weed Risk

Invasiveness

Polygala has high seed production. The seed is dispersed by ants over short distances as it has an oil body attached, as is typical for *Polygala* species around the world. Wind and water may also carry seeds short distances. It lacks any adaptations for long-range dispersal, which appears to be dependant on human activity through planting and movement of infested soil.

Seedlings germinate in autumn and quickly establish before the next dry season. Its high rate of spread is inferred from observations at Discovery Bay, Victoria, where an infestation of *Polygala myrtifolia* doubled its area from 500 ha to 1000 ha over 10 years. The infestations on unallotted Crown land near Port Lincoln and in the Bernoulli Conservation Park appear to have spread as rapidly into vegetation with no visible disturbance.

Polygala has the potential to spread more widely into some native vegetation types with consequent reduction in some native species. As the main pathway of long-range dispersal is planting in gardens, a prohibition on its sale will minimise further spread.

Impacts

Polygala myrtifolia establishes under the canopy of native vegetation where it reaches high densities. It is most significant as an invader of coastal dune scrublands, where it can form a monoculture replacing *Leucopogon parviflorus* and *Acacia longifolia* subsp. *sophorae*.

It displaces native species due to its dense growth and the heavy layer of leaf litter formed under it. The dense thickets that result restrict access.

Potential distribution

Most infestations occur on sandy, well-drained soils. Polygala does not appear to tolerate heavy frosts, which may also confine it to near-coastal areas.

Feasibility of Containment

Control costs

No herbicides are registered for use on polygala, but it is covered by permits for the use of glyphosate and metsulfuron-methyl on woody weeds in general. Small plants can be hand-pulled, and larger plants can be cut off at the base. These control methods are labour-intensive.

The possibility of biological control of polygala is being investigated by the Victorian government.

Persistence

The seed is long-lived, forming a seed bank in the soil under infestations. The seed bank enables dense seedling regeneration after a cool burn or clearing.

Current distribution

Polygala is still scattered in its distribution around the coast, and further dispersal is likely to depend on its deliberate planting.

State Level Risk Assessment

Assessment using the Biosecurity SA Weed Risk Management System gave the following comparative weed risk and feasibility of containment scores by land use:

| Land use | Weed Risk | Feasibility of control | Response at State Level |
|-------------------------|------------------|-------------------------------|--------------------------------|
| Grazing only - southern | low 17 | very high 6 | monitor |
| Native vegetation | medium 54 | medium 35 | manage sites |

Considerations

Polygala was introduced as a garden shrub in the 19th century and was first recorded naturalised in 1926. Most polygala infestations occur in native coastal vegetation on public land.

Risk assessment indicates the action of site management in native vegetation, and monitoring in southern permanent pastures. While sale and movement are prohibited uniformly across the State, regional actions vary according to amount of vulnerable native vegetation in each region. The Eyre Peninsula, Green Adelaide, Hills and Fleurieu and Limestone Coast regions will manage polygala by site protection; the Limestone Coast also aims to prevent spread to key sites and assets of high economic, environmental and/or social value. The Alinytjara Wilurara and Northern and Yorke region will destroy any infestations of polygala as the weed is absent from that region, and Kangaroo Island aims to contain spread. Polygala will be managed in the Murraylands and Riverland region. Only limited action, by prevention of any sale of polygala, is undertaken in the South Australian Arid Lands.

The impacts on native vegetation of polygala control by herbicides or mechanical clearance must be considered. Restoration or revegetation of treated sites is necessary to prevent erosion or invasion by other weed species.

A garden hybrid, *Polygala X dalmaisiana*, includes several cultivars. They are all smaller shrubs that have not been found naturalised in South Australia although they may produce viable seed. This hybrid is not included in the declaration.

Synonymy

Polygala myrtifolia L., Sp. Pl. 2: 703 (1753)

Taxonomic synonyms:

Polygala amoena Thunb., Prodr. Fl. Cap. 2: 120 (1800).

Polygala myrtifolia var. *amoena* (Thunb.) Harv., Fl. Cap. 1: 83 (1860).

Polygala myrtifolia var. *grandiflora* Hook., Bot. Mag. 64: t.3616 (1837).

The name *Polygala grandiflora* has also been misapplied to *P. myrtifolia*.

Common names include Bellarine pea, boukappie and septemberbossie.

Reference

Adair, R.J., Shackleton, A., Stajsic, V. & Gajaweera, R. (2012) The Biology of Australian Weeds 61. *Polygala myrtifolia* L. *Plant Protection Quarterly* 27(4): 119-130.

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