



Government
of South Australia

Declared Plant Policy

Arum Lily (*Zantedeschia aethiopica*)

Arum lily is a perennial from South Africa that has been a popular ornamental since colonial times. It is a garden escape that occupies wetlands and other sites in the higher rainfall regions of South Australia.

Management Plan for Arum Lily

Outcomes

- Protect the integrity of native riparian vegetation by preventing further spread and minimising the impacts of existing arum lily infestations.
- Maintain water flow and quality in watercourses.

Objectives

- Achieve control of existing arum lily infestations that threaten priority aquatic, riparian and significant native vegetation areas.
- Prevent the further spread and establishment of arum lily into priority areas.

Implementation

- Adelaide and Mount Lofty Ranges Natural Resources Management (NRM) Board to identify priority aquatic, riparian and significant native vegetation sites affected or threatened by arum lily.
- Organise control of priority infestations.
- To assist local control programs, any sale and movement to be prevented.
- Increase awareness about the impacts of arum lily.

Regional Implementation

Refer to regional management plans for further details.

| NRM Region | Actions |
|---------------------------------------|----------------|
| Adelaide and Mount Lofty Ranges | contain spread |
| Alinytjara Wilurara | limited action |
| Eyre Peninsula | limited action |
| Kangaroo Island | limited action |
| Northern and Yorke | limited action |
| South Australian Arid Lands | limited action |
| South Australian Murray-Darling Basin | limited action |
| South East | monitor |

Arum Lily policy

Declaration

To implement this policy, arum lily is declared under the *Natural Resources Management Act 2004* throughout the whole of the State of South Australia. The movement or transport of the plant on a public road, or its sale, is prohibited. In the Adelaide and Mount Lofty Ranges region, NRM authorities may require land owners to control arum lilies growing on their land. NRM authorities in this region are required to control plants on road reserves and may recover costs from the adjoining land owners.

Arum lily is declared in category 3 under the Act for the purpose of setting maximum penalties and for other purposes. Any permit to allow its movement or sale can only be issued by the regional NRM Board pursuant to section 188.

The following sections of the Act apply to arum lily throughout each of the NRM regions noted below:

| Sections of Act | Region | | | | | | | |
|--|--------|----|----|----|----|------|-------|----|
| | AMLR | AW | EP | KI | NY | SAAL | SAMDB | SE |
| 175(1) Prohibiting entry to area | | | | | | | | |
| 175(2) Prohibiting movement on public roads | X | X | X | X | X | X | X | X |
| 177(1) Prohibiting sale of the plant | X | X | X | X | X | X | X | X |
| 177(2) Prohibiting sale of contaminated goods | | | | | | | | |
| 180 Requiring notification of infestations | | | | | | | | |
| 182(1) Landowners to destroy the plant on their properties | | | | | | | | |
| 182(2) Landowners to control the plant on their properties | X | | | | | | | |
| 185 Recovery of control costs on adjoining road reserves | X | | | | | | | |

Sections 175(2) and 177(1) do not apply to detached inflorescences as used by florists.

Sections 182(2) and 185 do not apply to arum lilies planted and maintained for domestic or commercial purposes further than 100m from any wetland or watercourse.

Review

This policy is to be reviewed by 2020, or in the event of a change in one or more regional management plans for arum lily.

Weed Risk

Invasiveness

Spread of arum lily is almost entirely by humans, through deliberate planting and dumping of rhizomes in garden waste. The seed is moved short distances downstream by water.

Impacts

Infestations are generally confined to areas along rivers, creeks or swampy sites. Arum lily forms dense stands that may displace all species within the understorey layer. These infestations can block the flow of small streams.

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The plant is toxic to humans and livestock but cases of poisoning are very rare as it is unpalatable.

As a plant that is immediately recognisable as alien, it diminishes the aesthetic value of conservation areas.

Potential distribution

The potential distribution of arum lily is described as being in the southern agricultural areas of South Australia, south of the northern Yorke Peninsula

Arum lily grows in shade or moderately exposed conditions and tolerates flooding up to 300 mm deep. Although normally evergreen, it will survive occasional frost by regrowing from the rhizome in spring but does not establish in frost-prone areas.

Feasibility of Containment

Control costs

Arum lily is easily controlled by spraying or cutting and swabbing with commonly available herbicides under a current Australian Pesticides and Veterinary Medicines Authority (APVMA) permit.

Persistence

The seed of arum lily only survives one year in the soil, allowing the destruction of an infestation with a single well-timed herbicide treatment. On the other hand, the plant will persist indefinitely from the rhizomes.

Current distribution

Arum lily is found along streams and wet ground in the high rainfall parts of the State. Most infestations occur in the Adelaide and Mount Lofty Ranges region. It is also present on Kangaroo Island, the southern end of Eyre Peninsula, the lowest reaches of the Murray and the lower South East.

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 |
|--------------------|------------------|-------------------------------|--------------------------------|
| Aquatic (riparian) | low 23 | very high 3 | monitor |

Considerations

Risk assessment indicates a management action at State level of monitoring in native aquatic vegetation. However, the local weed risk of arum lily in high rainfall areas is higher, notably in the Mount Lofty Ranges NRM region where a strategy of containment by enforced control in some situations is justified. In the South East region, where there are potential habitats in wetlands, arum lily is monitored. In other regions, action is limited to enforcing the prohibition on sale and transport since dispersal of arum lily is mainly by human actions.

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Arum lily was grown at the Adelaide Botanic Gardens by 1858 and was first recorded as naturalised in South Australia in 1903, at Waterfall Gully.

The wild-type arum lily is so common that it is rarely sold commercially now. Some cultivars including 'Green Goddess' with green-stained spathes are still on the market. The coloured, winter-dormant zantedeschias derived from *Z. elliotiana* and *Z. rehmannii* are not weedy and do not produce viable hybrids with *Z. aethiopica*.

Synonymy

Zantedeschia aethiopica (L.) Spreng., Syst. Veg. (ed. 16) 3: 765 (1826).

Basionym:

Calla aethiopica L., Sp. Pl. 2: 968 (1753).

Nomenclatural synonyms:

Colocasia aethiopica (L.) Link, Diss Bot. Suerin 77 (1795).

Richardia aethiopica (L.) Spreng., Syst. Veg. (ed. 16) 3: 765. (1826).

Taxonomic synonyms:

Calla ambigua Salisb., Prodr. Stirp. Chap. Allerton 262 (1796).

Richardia africana Kunth, Mém. Mus. Par. 4: 433 (1818).

Other common names include calla lily, lily of the Nile, pig lily, richardia, St. Joseph's lily, trumpet lily and white arum lily.

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Minister for Sustainability, Environment and
Conservation

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