

Approved Conservation Advice
(s266B of the *Environment Protection and Biodiversity Conservation Act 1999*)

Approved Conservation Advice for
Spyridium coactilifolium

This Conservation Advice has been developed based on the best available information at the time this Conservation Advice was approved; this includes existing plans, records or management prescriptions for this species.

Description

Spyridium coactilifolium, Family Rhamnaceae, also known as Butterfly Spyridium, is a perennial shrub with rusty-tomentose branches. Its leaves are 6–15 mm long, obtuse and notched at the apex, densely stellate-pubescent, with thickened margins. Flowers occur in compact compound heads surrounded by 4–5 rounded white-velvety floral leaves. The flowers are funnel shaped, approximately 3 mm long, with ovate and ciliate brown bracts. The capsule is brown, ovoid and crustaceous, glabrous except at the base, and about 2.5 mm long (Jessop & Toelken, 1986).

Conservation Status

Spyridium coactilifolium is listed as **vulnerable**. This species is eligible for listing as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) as, prior to the commencement of the EPBC Act, it was listed as vulnerable under Schedule 1 of the *Endangered Species Protection Act 1992* (Cwlth).

Spyridium coactilifolium is also listed as vulnerable under the *National Parks and Wildlife Act 1972* (South Australia).

Distribution and Habitat

Spyridium coactilifolium is known from the Encounter Bay area of the Fleurieu Peninsula, South Australia. Approximately 18 populations occur between Point Elliot in the east, Parsons Beach Scrub and Back Valley in the west, and Mt Compass in the north (Davies, 1986; Davies, 1992; T. Jury, 2008, pers. comm.). The two largest populations occur in Waitpinga Scrub and Parsons Beach Scrub, and total about 100 000 individuals (Davies, 1986). Another large population of approximately 1000 individuals was recorded north-west of Ridgeway Hill (Davies, 1986). Fifteen smaller populations, consisting of approximately 1700 plants, occur in small blocks of native vegetation or along roadsides in or near Victor Harbor (T. Jury, 2008, pers. comm.). This species occurs within the Adelaide and Mount Lofty Ranges (South Australia) Natural Resource Management Region.

Spyridium coactilifolium is now mostly found atop rocky sea cliffs, but further inland populations occur on gentle or moderate ridges on south-east and south-west facing slopes (Davies, 1986). This species mainly occurs on sand that is pinkish-white, grey, reddish-grey or pinkish-grey when dry, with pH 6–7. One population occurs on sandy loam of pH 8.5 that is brown when dry (Davies, 1986).

In coastal areas this species is found associated with *Beyeria lechenauttii*, *Acrotriche cordata*, *Lomandra effusa* and *Lepidosperma* low shrubland; *Eucalyptus diversifolia* low shrubland; and *Melaleuca lanceolata* open heath. In inland areas this species is associated with *Eucalyptus fasciculosa* low woodland; *Eucalyptus baxteri* low open-forest; *Eucalyptus diversifolia* tall shrubland (Davies, 1986); and *Eucalyptus cosmophylla* low, closed heathy woodland (T. Jury, 2008, pers. comm.). Understorey species range from very sparse to mid-dense and include *Xanthorrhoea semiplana*, *Leptospermum* spp., *Calytrix tetragona*, *Hibbertia riparia*, *Lepidosperma viscidum*, *Hypolaena fastigiata*, *Astroloma conostephioides*,

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Brachyloma ericoides, *Adenanthos terminalis*, *Platylobium obtusangulum*, *Acacia* spp., *Banksia marginata*, *Melaleuca decussate*, and *Lepidosperma carphoides* (Davies, 1986; T. Jury, 2008, pers. comm.).

The distribution of this species overlaps with the “Swamps of the Fleurieu Peninsula” EPBC Act-listed threatened ecological community.

Threats

The main identified threats to *Spyridium coactilifolium* include weed invasion; urban development; roadwork; grazing; anthropogenic disturbances; and increasing fragmentation (ANRA, 2008; T. Jury, 2008, pers. comm.). Some populations are affected by Bridal Creeper (*Asparagus asparagoides*) and Boneseed (*Chrysanthemoides monilifera* ssp. *monilifera*) (Davies, 1986; T. Jury, 2008, pers. comm.).

The main potential threats to *S. coactilifolium* include forest operations and wildfire suppression (T. Jury, 2008, pers. comm.).

Research Priorities

Research priorities that would inform future regional and local priority actions include:

- Design and implement a monitoring program or, if appropriate, support and enhance existing programs.
- More precisely assess sub-population sizes, generation structure, distribution (extent of occurrence and area of occupancy), habitat requirements, fire ecology, and the relative impacts of threatening processes.
- Undertake seed germination and/or vegetative propagation trials to determine the requirements for successful establishment. Seed has been collected and appropriately stored by the Botanic Gardens of Adelaide (P. Ainsley, 2008, pers. comm.)
- Investigate disturbance and habitat factors that stimulate population recruitment.
- Undertake survey work in suitable habitat and potential habitat to locate any additional populations/occurrences/remnants.

Regional and Local Priority Actions

The following regional and local priority recovery and threat abatement actions can be done to support the recovery of *S. coactilifolium*.

Habitat Loss, Disturbance and Modification

- Monitor known populations to identify key threats.
- Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.
- Ensure populations of this species are not destroyed through vegetation clearance and/or during forestry operations.
- Negotiate the installation of obvious vegetation markers for roadside populations.
- Investigate formal conservation arrangements, management agreements and covenants on private land, and for crown and private land investigate inclusion in reserve tenure if possible.
- Ensure road works and associated development involving substrate or vegetation disturbance in areas where *S. coactilifolium* occurs do not adversely impact on known populations.
- Control access routes to suitably constrain public access to known sites.

Fire

- Develop and implement a suitable fire management strategy for this species.

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- Provide maps of known occurrences to local and state Rural Fire Services and seek inclusion of mitigative measures in bush fire risk management plans, risk register and/or operation maps.

Trampling, Browsing or Grazing

- Manage known sites to ensure appropriate grazing regimes occur to allow regeneration from seedlings.
- Where appropriate, manage total grazing pressure at known sites through exclusion fencing or other barriers.

Invasive Weeds

- Identify and remove weeds in the local area, which could become a threat to *S. coactilifolium*, using appropriate methods.
- Manage sites to prevent introduction of invasive weeds, which could become a threat to the species, using appropriate methods.
- Ensure chemicals or other methods used to eradicate weeds do not have a significant adverse impact on *S. coactilifolium*.

Enable Recovery of Additional Sites and/or Populations

- Investigate options for linking, enhancing or establishing additional populations.
- Implement national translocation protocols (Vallee et al., 2004) if establishing additional populations is considered necessary and feasible.

This list does not necessarily encompass all actions that may be of benefit to *Spyridium coactilifolium*, but highlights those that are considered to be of highest priority at the time of preparing the conservation advice.

Existing Plans/Management Prescriptions that are Relevant to the Species

- Adelaide and Mt. Lofty Ranges Regional Recovery Pilot (DEH, 2007),
- Boneseed (*Chrysanthemoides monilifera* ssp. *monilifera*) weed management guide (DEH, 2003a), and
- Bridal creeper (*Asparagus asparagoides*) weed management guide (DEH, 2003b).

These prescriptions were current at the time of publishing; please refer to the relevant agency's website for any updated versions.

Information Sources:

Ainsley, P (Seed Conservation Centre, Botanic Gardens of Adelaide) May 2008. Personal Communication.

Australian Natural Resources Atlas (ANRA) 2008, *Biodiversity Assessment – Gawler: Species at risk and their recovery process*, viewed 25 May 2008, <<http://www.anra.gov.au/topics/vegetation/assessment/sa/ibra-gaw-species-recovery.html>>.

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Jessop, JP & Toelken, HR 1986, *Flora of South Australia*, SA Government Printing Division, Adelaide.

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Vallee, L, Hogbin, T, Monks, L, Makinson, B, Matthes, M & Rossetto, M 2004, *Guidelines for the Translocation of Threatened Plants in Australia* (2nd ed.), Australian Network for Plant Conservation, Canberra.