

Leionema sympetalum

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Common name: Rylstone Bell

Formerly known as *Phebalium sympetalum*



The following information is provided to assist authors of Species Impact Statements, development and activity proponents, and determining and consent authorities, who are required to prepare or review assessments of likely impacts on threatened species pursuant to the provisions of the *Environmental Planning and Assessment Act 1979*. These guidelines should be read in conjunction with the NPWS *Information Circular No. 2: Threatened Species Assessment under the EP&A Act: The '8 Part Test' of Significance* (November 1996).

Survey

Survey for *Leionema sympetalum* should preferably be undertaken during the flowering period. Whilst the leaves are distinctive and should enable identification in the field at other times, flowers would assist in locating the species where it occurs in dense heath vegetation. A NPWS survey in 1999 failed to relocate the species at previously recorded locations.

Surveys should concentrate on exposed sandstone escarpments and pagodas, forest and woodland in sheltered situations and heath vegetation in more exposed areas.

Life cycle of the species

The distribution, biology and life cycle of *L. sympetalum* is poorly known. Critical factors are likely to be the longevity of individual plants, seed dormancy and dormancy release triggers and length of time from seed germination to reproductive maturity.

Threatening processes

“High frequency fire resulting in the disruption of life cycle processes in plants and animals and loss of vegetation structure and composition” is a key threatening process listed under the TSC Act. This process is relevant to this species.

Other generally recognised threatening processes include loss, fragmentation and degradation of habitat. Suspected threats that require investigation include introduced honeybees and inappropriate recreational uses.

Viable local population

There is insufficient information available on the species to make any prediction in relation to this question.

In the absence of more definite information small populations should be considered to be viable.

A significant area of habitat

Given the small number of known sites the habitat for any population of *L. sympetalum* should be considered to constitute a significant area of known habitat.

Isolation & fragmentation

The currently known populations of this species, whilst small in number are widely dispersed. This indicates that the species may have been previously more widespread, but has contracted in range. Development pressures are unlikely to contribute further to isolation of populations, but fragmentation of existing populations may occur with insensitive management.

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Regional distribution

The known distribution of *L. sympetalum* is within the Sydney Basin bioregion and within the Central Tablelands Botanical Division. The Pagoda Rock Complex vegetation map unit which forms the habitat for the species is found along the western rim of Wollemi National Park, in the Gardens of Stone National Park and the Wollangambe section of Blue Mountains National Park. It is also found on Crown land, private land and in Newnes and Ben Bullen State Forests. Whilst this vegetation type is widespread, *L. sympetalum* has only been found in four sites, all north of Glen Davis.

Limit of known distribution

The northern and western limit is at Currant Mountain Gap, east of Olinda, the eastern limit is at Cyrils Rocks and the southern limit is on

cliffs between Glen Davis & Glen Alice. Due to the widespread presence of suitable habitat and the remote & rugged nature of this habitat it is expected that further survey work would result in the discovery of additional locations for this species beyond its currently known distributional limits.

Adequacy of representation in conservation reserves

All known populations are within Wollemi National Park. The total population size of these populations is unknown, but is expected to be less than 1000 plants.

Critical habitat

Critical habitat cannot presently be declared for *L. sympetalum* as it is not currently listed on Schedule 1 of the TSC Act.

For further information contact

Threatened Species Unit, Central Directorate, NSW NPWS, PO Box 1967, Hurstville NSW 2220. Phone: 9585 6678 or visit our website at www.npws.nsw.gov.au

References

Briggs, J.D., and Leigh, J.H., (1996), *Rare or Threatened Australian Plants*, Centre for Plant Biodiversity Research, CSIRO Division of Plant Industry, Canberra.

Harden, G.J., ed., (1991), *Flora of New South Wales*, Volume 2, NSW Uni Press, Kensington. Vol 2, p 263.

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