

NSW SCIENTIFIC COMMITTEE

Preliminary Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Preliminary Determination to support a proposal to list a population of the shrub *Prostanthera saxicola* R.Br. in the Sutherland and Liverpool local government areas as an ENDANGERED POPULATION in Part 2 of Schedule 1 of the Act. Listing of Endangered populations is provided for by Part 2 of the Act.

The Scientific Committee has found that:

1. *Prostanthera saxicola* R.Br. (family Lamiaceae) is not currently listed as an Endangered species in Part 1 of Schedule 1 or a Critically Endangered species in Part 1 of Schedule 1A and as a consequence populations of this species are eligible to be listed as Endangered populations.
2. *Prostanthera saxicola* is described as: "Prostrate to erect shrub, spreading to compact, 0.2–2 m high; branches glabrous to moderately covered with white appressed antrorse hairs and $\pm$ sessile glands. Leaves crowded to scattered; lamina linear to elliptic, 3–15 mm long, 1–6 mm wide; apex obtuse; base attenuate to cuneate, $\pm$ decurrent; margins entire, flat to $\pm$ terete; surfaces glabrous to sparsely covered with white appressed hairs and $\pm$ sessile glands; petiole 0–1 mm long. Flowers axillary; bracteoles persistent, 0.5–3 mm long. Calyx 4–6 mm long; tube 2–3.5 mm long; upper lobe 1.5–4 mm long, enlarged in fruit. Corolla 8–15 mm long, white to mauve. Anthers with appendage 0.5–1.5 mm long." (Royal Botanic Gardens and Domain Trust PlantNet, February 2013).
3. *Prostanthera saxicola* is widespread throughout the Central Coast, South Coast, Northern Tablelands, Central Tablelands, Southern Tablelands, North Western Slopes and Central Western Slopes botanical subdivisions of NSW. There are a number of varieties of *P. saxicola* currently recognised (Royal Botanic Gardens and Domain Trust PlantNet 2013). Due to complex morphological variations it is not possible to attribute individuals of the population of *P. saxicola* in the Sutherland and Liverpool local government areas to a particular variety at this time.
4. The population of the shrub *Prostanthera saxicola* occurs in the Sutherland and Liverpool local government areas. This population is currently known from a single area (Menai). The nearest confirmed locations of *P. saxicola* to this population are currently known to occur in the Central Tablelands (Kanangra Walls, Blackheath, Narrow Neck), Southern Tablelands (Morton National Park, Budawang National Park) and on the South Coast (Sassafras, Jervis Bay). There are reports of individuals of *P. saxicola* located 46–90 km from the population of *P. saxicola* in the Sutherland and Liverpool local government areas but these are unconfirmed. A range of vegetation surveys in remnant bushland in the Sutherland, Liverpool, Bankstown and Hurstville local government areas have found no other occurrences of *P. saxicola* (Miller *in litt.* 2011).
5. *Prostanthera saxicola* occurs in *Eucalyptus* forest and heath in association with *Hakea dactyloides*, *Brachyloma daphnoides*, *Banksia spinulosa*, *Baeckea brevifolia*, *Epacris pulchella*, *Acacia myrtifolia* and *A. ulicifolia*, and in closed heath in association with *Allocasuarina nana* and *Lepidosperma viscidum* (Benson and McDougall 1997). The population of *Prostanthera saxicola* in the Sutherland and Liverpool local government areas occurs in localised patches in heath and open woodland and is often a major component of the ground flora of the *Angophora hispida*/*Eucalyptus squamosa*/*Corymbia gummiifera*

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association in the area (Miller *in litt.* 2011). There is little information available on the ecology of this species including longevity and seed biology. This species is considered to be killed by fire (NPWS Fire Response Database 1.2 2002). The current number of individuals in the population is unknown.

6. The population of *Prostanthera saxicola* in the Sutherland and Liverpool local government areas has an estimated area of occupancy (AOO) of 8 km² based on 2 x 2 km grid cells, the scale recommended for assessing area of occupancy by IUCN (2011). The extent of occurrence (EOO) was also estimated to be 8 km². The geographic distribution is considered to be very highly restricted.
7. The population of *Prostanthera saxicola* in the Sutherland and Liverpool local government areas is threatened by habitat loss as a result of clearing for urban development. Much of the habitat in the Sutherland and Liverpool local government areas has already been cleared for urbanisation. 'Clearing of native vegetation' is listed as a Key Threatening Process under the NSW *Threatened Species Conservation Act* 1995. Part of the population occurs on a roadside reserve and is likely to be disturbed by road maintenance and road widening activities associated with urban development. Habitat loss and fragmentation is also expected as a result of rubbish dumping and use of trail bikes and off-road vehicles in the area. The population of *P. saxicola* in the Sutherland and Liverpool local government areas is threatened by environmental and demographic stochasticity due to its restricted distribution.
8. The population of *Prostanthera saxicola* R.Br. in the Sutherland and Liverpool local government areas is eligible to be listed as an Endangered population as, in the opinion of the Scientific Committee it is facing a very high risk of extinction in New South Wales in the near future as determined in accordance with the following criteria as prescribed by the *Threatened Species Conservation Regulation* 2010:

Clause 11 Criteria for listing determinations by Scientific Committee

The population is facing a very high risk of extinction in New South Wales in the near future as, in the opinion of the Scientific Committee, it satisfies any one or more of the following paragraphs and also meets the criteria specified in one or more of the following clauses:

- (a) it is disjunct or near the limit of its geographic range.

Clause 13 Highly restricted geographic distribution of population and other conditions

The geographic distribution of the population is estimated or inferred to be highly restricted and:

- (a) a projected or continuing decline is observed, estimated or inferred in either of the key indicators:
 - (a) an index of abundance appropriate to the taxon, or
 - (b) the geographic distribution, habitat quality or diversity, or genetic diversity.

Associate Professor Michelle Leishman
Chairperson
Scientific Committee

Proposed Gazettal date: 11/10/13
Exhibition period: 11/10/13 – 06/12/13

References:

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Benson D, McDougall L (1997) Ecology of Sydney plant species. Part 5. Dicotyledon families Flacourtiaceae to Myrsinaceae. *Cunninghamia* 5, 330-544.

IUCN Standards and Petitions Subcommittee (2011) Guidelines for Using the IUCN Red List Categories and Criteria. Version 9.0.

<http://www.iucnredlist.org/documents/RedListGuidelines.pdf>.

NPWS Fire Response Database ver. 1.2 (2002) NSW National Parks and Wildlife Service, Hurstville, Sydney.

Royal Botanic Gardens and Domain Trust (2013) PlantNET – The Plant Information Network System of The Royal Botanic Gardens and Domain Trust, Sydney, Australia (version 2.0).

[http://plantnet.rbgsyd.nsw.gov.au/cgi-](http://plantnet.rbgsyd.nsw.gov.au/cgi-bin/NSWfl.pl?page=nswfl&lvl=sp&name=Prostanthera~saxicola)

[bin/NSWfl.pl?page=nswfl&lvl=sp&name=Prostanthera~saxicola](http://plantnet.rbgsyd.nsw.gov.au/cgi-bin/NSWfl.pl?page=nswfl&lvl=sp&name=Prostanthera~saxicola) Accessed February 2013