

# NSW Threatened Species Scientific Committee

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## Notice of and reasons for the Final Determination

The NSW Threatened Species Scientific Committee, established under the *Biodiversity Conservation Act 2016* (the Act), has made a Final Determination to REJECT a proposal to list a population of the shrub *Acacia pubescens* (Vent.) R.Br. in the Wingecarribee local government area as an endangered population as populations of threatened species are ineligible to be listed under the Act.

The NSW Threatened Species Scientific Committee has found that:

1. *Acacia pubescens* (family Fabaceae) is described by PlantNET 2016 as a “Spreading to slightly weeping shrub 1–5 m high; bark smooth, brownish grey; branchlets angled at apex becoming ± terete with ridges, hairy with long fine hairs. Leaves ± sessile on pulvinus, rachis 1.5–6.5 cm long, hairy, glands absent or small, often inconspicuous, jugary or rarely interjugary glands irregularly present; pinnae 3–12 pairs, 0.5–2.5 cm long; pinnules 5–20 pairs, mostly oblong to narrowly oblong, 1.5–5 mm long, 0.4–1 mm wide, glabrous. Inflorescences 6–49 in an axillary or terminal raceme with axis 2.5–11 cm long (axis often zigzagged) or sometimes in a terminal panicle; peduncles 2–6 mm long, glabrous or sparsely hairy; heads globose, 8–16-flowered, 3–6 mm diam., bright yellow. Pods ± straight, ± flat, ± straight-sided to variably constricted between seeds, 1.5–8 cm long, 4–6.5 mm wide, firmly papery to thinly leathery, glabrous, ± pruinose; seeds longitudinal; funicle filiform. Flowering is from August to October.”
2. *Acacia pubescens* is endemic to New South Wales (NSW), mainly occurring around Sydney from Bilpin in the north of the lower Blue Mountains, to the Georges River in the south and in the Oakdale area west of Camden. There are two southern outlier populations at Aylmerton, just north of Mittagong in the southern highlands, and near Nowra on the NSW south coast (PlantNET 2016). The population at Aylmerton is the subject of this determination and is referred to as ‘the population of *Acacia pubescens* in the Wingecarribee local government area’. The population is near the southern limit of the species’ range and is disjunct, with the nearest record of *A. pubescens* being from Oakdale, approximately 40 km north, and Nowra, approximately 55 km south.
3. The population of *Acacia pubescens* in the Wingecarribee local government area is currently only known from a single site at Aylmerton, where it is located on a road verge fronting two private properties, and covers less than 1 ha (OEH *in litt.* 2016). The road verge is managed by the Wingecarribee Shire Council. Native vegetation in the area has been extensively cleared. Vegetation remnants occurring in the vicinity of the population primarily occur on clay-loam soils derived from Wianamatta Shale and include trees such as *Eucalyptus paniculata*, *E. punctata*, *E. globoidea* and *Exocarpos cupressiformis* with an understorey dominated primarily by herbaceous species including *Billardiera scandens*, *Pratia purpurascens*, *Lomandra longifolia*, *Clematis aristata*, *Dichondra repens*, *Hardenbergia violacea*, *Austrostipa aristoglumis*, *Euchiton* sp., *Rytidosperma* sp., *Microlaena stipoides*, *Entolasia stricta* and *Themeda triandra* (OEH *in litt.* 2016).

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4. The number of *Acacia pubescens* plants in the Wingecarribee local government area population is very low with an estimate of fewer than 100 mature individuals in a recent survey (OEH *in litt.* 2016). *Acacia pubescens* reproduces clonally and it is difficult to define a separate individual plant due to the presence of many suckering stems (NSW NPWS 2003). Hence it is likely that there may be fewer than 100 plants. Seed production is generally low for this species and for the little seed that is produced, seed predation is high (NSW NPWS 2003).
5. The distribution of the population of *Acacia pubescens* in the Wingecarribee local government area is very highly restricted. The extent of occurrence and area of occupancy (AOO) were both estimated to be 4 km<sup>2</sup>. The AOO is based on 2 x 2 km grid cells, the scale recommended for assessing AOO by IUCN (2016).
6. A number of threats to the *Acacia pubescens* population in the Wingecarribee local government area have been identified, including habitat loss and degradation. The only known site of the population is located on a road reserve in a highly modified rural-residential area and is surrounded by cleared private land. Many sections of the road verge are cleared and mown and/or planted with exotic vegetation including environmental weeds (S. Douglas *in litt.* 2016). Road maintenance activities and mechanical damage are threats to the population. Browsing by livestock has been observed (OEH *in litt.* 2016) and is also a threat. Potential hybridisation with *Acacia baileyana*, a species that is not native to the area but has naturalised extensively nearby, is a recognised threat to *A. pubescens* (NSW NPWS 2003, OEH 2016). By having a very highly restricted geographic distribution and occurring at only one location, the population of *A. pubescens* in the Wingecarribee local government area is prone to the future effects of human activities or stochastic events within a very short time period.
7. The NSW Scientific Committee, established under the *Threatened Species Conservation Act 1995*, made a Preliminary Determination to support a proposal to list a population of *Acacia pubescens* population in the Wingecarribee local government area as an endangered population as, in the opinion of the NSW Scientific Committee, the population is facing a very high risk of extinction in NSW in the near future as determined in accordance with Clauses 11, 13, 14 and 15 of the *Threatened Species Conservation Regulation 2010*:
8. The Preliminary Determination was placed on public exhibition for comment from 28th April, 2017 to 23rd June, 2017.
9. On 25th August, 2017 the *Threatened Species Conservation Act 1995* was repealed and replaced by the *Biodiversity Conservation Act 2016*.
10. Under Clause 4.1(5) of the *Biodiversity Conservation Regulation 2017* a population of a species is not eligible to be listed as threatened if the species is separately listed as a threatened species under the *Biodiversity Conservation Act 2016*.
11. *Acacia pubescens* (Vent.) R.Br. (family Fabaceae) is currently listed as a Vulnerable species in Part 3 of Schedule 1 of the *Biodiversity Conservation Act 2016*.

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12. As *Acacia pubescens* is listed as a Threatened species under the *Biodiversity Conservation Act 2016*, the *Acacia pubescens* population in the Wingecarribee local government area is ineligible to be listed under the Act.

Dr Marco Duretto  
Chairperson  
NSW Threatened Species Scientific Committee

Exhibition period: 08/12/17 – 02/02/18

Proposed Listing date: 08/12/17

## References:

IUCN Standards and Petitions Subcommittee (2016) Guidelines for Using the IUCN Red List Categories and Criteria. Version 12. Prepared by the Standards and Petitions Subcommittee.

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

NSW National Parks and Wildlife Service (2003) Downy Wattle (*Acacia pubescens*) Recovery Plan. NSW NPWS, Hurstville, NSW.

Office of Environment and Heritage (2016) Environmental Assessment Guidelines for *Acacia pubescens*.

<http://www.environment.nsw.gov.au/resources/nature/ApubescensEia0103.pdf>

(accessed 21 November 2016)

PlantNET (The NSW Plant Information Network System) (2016) Royal Botanic Gardens and Domain Trust, Sydney.

<http://plantnet.rbgsyd.nsw.gov.au/cgi-bin/NSWfl.pl?page=nswfl&lvl=sp&name=Acacia~pubescens>

(accessed 21 November 2016)