



Acacia pubescens

(Vent.) R. Br.

Common name: Downy Wattle

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

Surveys for *A. pubescens* can be conducted at any time of year. It can be distinguished from other bipinnate wattles in the region by its conspicuously hairy branchlets. As it is a clonal species, counting the number of individuals at a site can be difficult. Alternative survey methods include counting the number of stems or clumps of stems, or estimating the extent of the population.

Life cycle of the species

The life cycle of the species is not well understood. One factor that is known to influence the life cycle is fire. If a proposal is likely to result in frequent fires, then this may lead to declines in the population, since an adequate seedbank will not be able to develop between fire events.

Threatening processes

Key threatening processes that have been listed under the *Threatened Species Conservation Act 1995* that are relevant to this species include "Clearing of native vegetation" and "High frequency fire resulting in the disruption of life cycle processes in plants and animals and

loss of vegetation structure and composition".

Threatening processes that have been identified as being relevant to this species should also be considered. These include habitat loss, hybridisation with other bipinnate Acacias and habitat degradation through weed invasion, mechanical damage, rubbish dumping, illegal track creation and arson (NSW NPWS 2003).

Viable local population of the species

The NPWS has assumed that any *A. pubescens* individuals within 300 m of each other are part of the same population (NSW NPWS 2003). The thresholds for viability of local populations of *A. pubescens* have not been determined. It should be noted that *A. pubescens* is known to be tolerant of quite high levels of some disturbances, such as mechanical damage. Small population sizes may not be a relevant factor in viability assessments, as most recruitment is from vegetative reproduction. Therefore, populations should be considered viable unless there is evidence to the contrary.

A significant area of habitat

Genetic studies have shown that numerous plants over a large area (eg one hectare) may all be one individual (NPWS 2003). Therefore, the significance of sites cannot be based on numbers of plants or stems without genetic testing. Other factors that can be used to determine the significance of a site include whether the population is setting seed, the size and connectivity of the habitat, the security of the site, the quality of the habitat (e.g. level of weed infestation) in comparison to other sites in the locality, the number of other sites

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in the locality and whether the site is at the edge of the range of the species.

Isolation/fragmentation

The threat of inbreeding depression (resulting from isolation of sites) may not be an issue for *A. pubescens*, as recruitment usually occurs vegetatively and seed production is known to be low.

Fragmentation may be a significant issue for the species, as the current distribution of the species is highly fragmented. Management of *A. pubescens* habitat and any proposals should aim to maintain the continuity of habitat between individuals within sub-populations, and avoid artificially creating new sub-populations.

Regional distribution

The species is confined to the Sydney Basin Bioregion. Within this region, *A. pubescens* occurs at a number of scattered sites.

Limit of known distribution

The distribution is concentrated around the Bankstown-Fairfield-Rookwood area

For Further Information contact

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References

NSW NPWS (2003). Recovery Plan for *Acacia pubescens*. NSW NPWS, Hurstville.

and the Pitt Town area, with outliers occurring at Barden Ridge, Oakdale and Mountain Lagoon (see map in recovery plan, NPWS 2003). Further surveys may identify additional sites outside these areas.

Adequacy of representation in conservation reserves or other similar protected areas

Only five sites occur within conservation reserves, at Scheyville National Park and Windsor Downs Nature Reserve. The species is therefore not considered to be adequately represented in conservation reserves. However, a large percentage of sites (66%) occur on lands owned by public authorities, which in some cases provides a certain level of protection (NSW NPWS 2003).

Critical habitat

Critical habitat cannot be declared for *A. pubescens* as it is not listed on Schedule 1 of the TSC Act. Therefore, this issue does not need to be considered.

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