

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list the orchid *Caladenia attenuata* (Brinsley) D.L.Jones as a CRITICALLY ENDANGERED SPECIES in Part 1 of Schedule 1A of the Act. Listing of Critically Endangered species is provided for by Part 2 of the Act.

The Scientific Committee has found that:

1. *Caladenia attenuata* (Brinsley) D.L.Jones (family Orchidaceae) is a terrestrial herb with “Flowers usually <10 mm across, white, the dorsal sepal lax (hooding the column), labellum midlobe entire wrinkled (flowers Oct.–Nov.); inflorescence unusually tall, to 24 cm high.” (The Royal Botanic Gardens and Domain Trust PlantNET accessed August 2013).
2. *Caladenia attenuata* is endemic to NSW and was first described in 1968 (Brinsley 1968) as a variety of *Caladenia carnea*, but has since been elevated to species status (The Royal Botanic Gardens and Domain Trust PlantNET accessed August 2013). It is synonymous with *Petalochilus attenuatus*. Brinsley (1968) reported that the species was known only from the type locality near Bathurst. Since then, there has been only one other confirmed collection of the species from a site near Ilford in 1972 (The Council of Heads of Australasian Herbaria 2013, Australia’s Virtual Herbarium, accessed as *Petalochilus attenuatus*).
3. The geographic distribution of *Caladenia attenuata* is very highly restricted. There are two known sites for the species. The area of occupancy for *C. attenuata* was estimated to be approximately 8 km². This estimate is based on 2 x 2 km grid cells, the scale recommended for assessing area of occupancy by IUCN (2011). The extent of occurrence was estimated to be 52 km².
4. The number of mature individuals of terrestrial orchids will fluctuate depending on seasonal conditions and disturbance history. In 1964, at the type locality, Brinsley (1968) reported ‘considerable numbers of flowering specimens were seen over a fairly restricted area’. Recent searches of both the type locality and the Ilford area site along with other surrounding potentially suitable habitat have failed to confirm the species, even though searches were conducted within the known flowering season, conditions were favourable for detecting terrestrial orchids and other *Caladenia* spp. were readily located (Auld and Fleming *in litt.* 2013). During this survey, one individual *Caladenia* specimen from near Ilford may be attributable to *C. attenuata*, but more material is needed to resolve this. Hence, the total population size for *C. attenuata* is inferred to be extremely low.
5. Both recorded localities for *Caladenia attenuata* are subject to grazing by stock and rabbits and competition from herbaceous weeds such as *Melilotus* sp., *Hypochaeris radicata* and *Sonchus oleraceus* (Auld and Fleming *in litt.* 2013). ‘Competition and grazing by the feral European Rabbit, *Oryctolagus cuniculus* (L.)’ is listed as a Key Threatening Process under the NSW *Threatened Species Conservation Act 1995*.
6. *Caladenia attenuata* (Brinsley) D.L.Jones is eligible to be listed as a Critically Endangered species as, in the opinion of the Scientific Committee, it is facing an extremely high risk of extinction in New South Wales in the immediate future as determined in accordance with the following criteria as prescribed by the *Threatened Species Conservation Regulation 2010*:

NSW SCIENTIFIC COMMITTEE

Clause 7 Restricted geographic distribution and other conditions

The geographic distribution of the species is estimated or inferred to be:

- (a) very highly restricted,
- and:
- (d) 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.

Clause 8 Low numbers of mature individuals of species and other conditions

The estimated total number of mature individuals of the species is:

- (a) very low,
- and:
- (d) 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.

Clause 9 Low number of mature individuals of species

The total number of mature individuals of the species is observed, estimated or inferred to be:

- (a) extremely low.

Professor Michelle Leishman
Chairperson
Scientific Committee

Exhibition period: 30/05/04 – 25/07/14

Proposed Gazettal date: 30/05/14

References:

Brinsley W (1968) A new variety of *Caladenia carnea* R. Br. *The Orchadian* **3**, 16.

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

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-bin/NSWfl.pl?page=nswfl&lvl=sp&name=Caladenia~attenuata>
(accessed on August 2013)

The Council of Heads of Australasian Herbaria (2013) Australia's Virtual Herbarium.
<http://avh.chah.org.au>. Accessed September 2013 as *Petalochilus attenuatus*.