

NSW SCIENTIFIC COMMITTEE

Preliminary Determination

The Scientific Committee, established by the *Threatened Species Conservation Act* 1995 (the Act), has made a Preliminary Determination to support a proposal to list the orchid *Diuris eborensis* D.L. Jones as an ENDANGERED SPECIES Part 1 of Schedule 1 of the Act. Listing of Endangered species is provided for by Part 2 of the Act.

The Scientific Committee has found that:

1. *Diuris eborensis* D.L. Jones has been described by Jones (2006a) as: "Glabrous, terrestrial herb, growing singly or in loose groups. Leaves 3-6, tufted, 70-300 mm x 3-6 mm straight. Flower stem 150-350 mm, 1-4-flowered. Flowers semi-erect to semi-nodding 18-23 mm across, pale yellowish with dark reddish purple streaks and striations on dorsal sepal and labellum. Dorsal sepal obliquely erect, 8-12 x 6-9 mm. Lateral sepals obliquely deflexed, 15-20 x 2.5-4 mm. Petals incurved or spreading; stalk 5-5.7 mm long, purplish, expanded into blade; blade 6-9 x 3-5.5 mm. Labellum 11-14 mm long; side lobes 3-5 x 2 mm, margins densely papillate; midlobe broadly ovate, 7-10 x 8-12 mm, basal margins papillate, distal margins scalloped. Callus with 2 broad papillate marginal ridges and a long central ridge, 5-8 mm long, incurved."
2. The distinguishing features of *Diuris eborensis* are noted by Jones (2006a) as follows: "Flowers pale yellow with dark purplish stripes on dorsal sepal and labellum; midlobe with scalloped margins; callus with 2 broad papillate marginal ridges and a long central ridge."
3. *Diuris eborensis* is endemic to NSW and known from five locations on the eastern side of the New England Tableland. There have been no systematic surveys for *D. eborensis* however the largest population is estimated to comprise 150 to 300 individuals (G. Steenbeeke pers. comm. May 2014; L. Copeland *in litt.* November 2012).
4. *Diuris eborensis* is described as favouring brown clay loams on moist grassy flats near creeks (Jones 2006b) and has been recorded at altitudes of between 900 and 1400 m. It flowers from late October to December (Jones 2006b). The fruit of *Diuris* is a non-fleshy, dehiscent capsule, containing between 30 and 500 minute seeds (Australia's Virtual Herbarium accessed June 2014). It is assumed that most seeds will fall close to the parent but that some will be dispersed further by wind. Above-ground parts of *Diuris* die off after flowering (Jones 1988). *Diuris eborensis* occurs in small clumps and *Diuris* species are known to spread vegetatively (Jones 1988).
5. The geographic distribution of *Diuris eborensis* is highly restricted. The extent of occurrence (EOO) is estimated to be 2340 km² based on a minimum convex polygon enclosing all known occurrences of the species, the method of assessment recommended by IUCN (2014). The area of occupancy (AOO) is estimated to be 24 km², based on six 2 x 2 km grid cells, the scale recommended for assessing AOO by IUCN (2014).
6. Ongoing threats to *Diuris eborensis* include grazing and trampling by cattle, competition from exotic plants, the unintended impacts of weed control, slashing, illegal collection, camping, roadworks and dumping of waste (G. Steenbeeke *in litt.* November 2012). Two of the five known locations are in conservation reserves. 'Loss and degradation of native

ESTABLISHED BY THE THREATENED SPECIES CONSERVATION ACT 1995

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plant and animal habitat by invasion of escaped garden plants, including aquatic plants' is listed as a Key Threatening Process under the NSW *Threatened Species Conservation Act* 1995

7. *Diuris eborensis* is not eligible to be listed as a Critically Endangered species.
8. *Diuris eborensis* is eligible to be listed as an Endangered species 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 7 Restricted geographic distribution and other conditions

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

- (b) highly restricted,
- and
- (d) a projected or continuing decline is observed, estimated or inferred in either of the key indicators:
 - (b) the geographic distribution, habitat quality or diversity, or genetic diversity.

Professor Michelle Leishman
Chairperson
NSW Scientific Committee

Exhibition period: 12/12/14 – 06/02/15

Proposed Gazettal date: 12/12/14

References:

Australia's Virtual Herbarium (retrieved June 2014) 'Genus description: *Diuris* Sm.'
<http://avh.ala.org.au/taxa/urn:lsid:biodiversity.org.au:apni.taxon:258221>

IUCN Standards and Petitions Subcommittee (2014) Guidelines for Using the IUCN Red List Categories and Criteria. Version 11. Prepared by the Standards and Petitions Subcommittee.
<http://www.iucnredlist.org/documents/RedListGuidelines.pdf>.

Jones DL (2006a) A Complete Guide to Native Orchids of Australia including the Island Territories (Reed New Holland: Sydney).

Jones DL (2006b) Miscellaneous new species of Australian Orchidaceae. *Australian Orchid Research* **5**, 45–111.

Jones DL (1988) 'Native Orchids of Australia'. (Reed, Sydney.)