

1 **Approved Conservation Advice for**
2 ***Prasophyllum* sp. Wybong (C. Phelps ORG 5269) (a leek orchid)**

3 (s266B of the *Environment Protection and Biodiversity Conservation Act 1999*)

4 This Conservation Advice has been developed based on the best available information at the
5 time this Conservation Advice was approved; this includes existing plans, records or
6 management prescriptions for this species.

7 **Description**

8 *Prasophyllum* sp. Wybong (C. Phelps ORG 5269), Family Orchidaceae, is a terrestrial orchid
9 that grows to approximately 30 cm high. It has a single, tubular, fleshy, dull-green leaf and a
10 single flower spike with numerous fragrant flowers (Holzinger, pers. comm., 2006).

11 **Conservation Status**

12 *Prasophyllum* sp. Wybong (C. Phelps ORG 5269) is listed as **critically endangered**. This
13 species is eligible for listing as critically endangered under the *Environment Protection and*
14 *Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) as it has a very restricted geographic
15 distribution with an estimated area of occupancy of 1.5 km². The species' geographic
16 distribution is precarious for its survival due to fragmentation and ongoing threats (TSSC,
17 2009).

18 **Distribution and Habitat**

19 *Prasophyllum* sp. Wybong (C. Phelps ORG 5269) is known from seven populations in open
20 eucalypt woodland and grassland in New South Wales. The species' area of occupancy is
21 estimated to be 1.5 km² with an estimated population size based on surveys in 2006 of 460
22 mature individuals (Holzinger, pers. comm., 2006, 2009; Copeland, pers. comm., 2009).

23 This species occurs within the Sydney Basin, New England Tablelands, Brigalow Belt South
24 and NSW South Western Slopes IBRA Bioregions and the Border Rivers–Gwydir, Namoi,
25 Hunter–Central Rivers and Central West Natural Resource Management Regions.

26 The distribution of this species overlaps with the White Box–Yellow Box–Blakely's Red Gum
27 Grassy Woodland and Derived Native Grassland EPBC Act-listed threatened ecological
28 community.

29 **Threats**

30 The main identified threats to *Prasophyllum* sp. Wybong (C. Phelps ORG 5269) are habitat
31 clearance, weed invasion, vehicle traffic and inappropriate disturbance regimes.

32 The main potential threats to *Prasophyllum* sp. Wybong (C. Phelps ORG 5269) include
33 chemical drift from agricultural properties, illegal collection, trampling by people and climate
34 change.

35 **Research Priorities**

36 Research priorities that would inform future regional and local priority actions include:

- 37 • Design and implement a monitoring program or, if appropriate, support and enhance
38 existing programs.
39 • More precisely assess population size, distribution, ecological requirements and the
40 relative impacts of threatening processes.

- 41 • Develop a better understanding of life history, disturbance ecology and identification of
42 pollinators.
- 43 • Undertake survey work in suitable habitat and potential habitat to locate any additional
44 populations/occurrences/remnants. Due to the cryptic dormant period of the species during
45 summer and autumn, surveys should be undertaken during the September–November
46 flowering period.
- 47 • Undertake seed germination trials to determine the requirements for successful
48 establishment, including mycorrhizal association trials.

49 **Priority Actions**

50 The following priority recovery and threat abatement actions can be done to support the
51 recovery of *Prasophyllum* sp. Wybong (C. Phelps ORG 5269).

52 **Habitat Loss, Disturbance and Modification**

- Ensure mining, road widening and maintenance activities (or other infrastructure or development activities) involving substrate or vegetation disturbance in areas where *Prasophyllum* sp. Wybong (C. Phelps ORG 5269) occurs does not adversely impact on known populations.
- 53 • Manage any other known, potential or emerging threats including inappropriate
54 disturbance, loss of pollinators and effects of climate change.
- 55 • Monitor known populations to identify key threats.
- 56 • Monitor the progress of recovery, including the effectiveness of management actions and
57 the need to adapt them if necessary.
- 58 • Protect populations of the listed species through the development of conservation
59 agreements and/or covenants.

60 **Invasive Weeds**

- Implement the ‘Weed Management Guide - Coolatai grass (*Hyparrhenia hirta*)’ for the control of Coolatai Grass in the region.
- Develop and implement a management plan for the control of other invasive weed species in the region, particularly Rhodes Grass.
- Ensure chemicals or other mechanisms used to eradicate weeds do not have a significant adverse impact on *Prasophyllum* sp. Wybong (C. Phelps ORG 5269).

67 **Conservation Information**

- Raise awareness of *Prasophyllum* sp. Wybong (C. Phelps ORG 5269) within the local community.
- Frequently engage with private landholders and land managers responsible for the land on which populations occur and encourage these key stakeholders to contribute to the implementation of conservation management actions.

73 **Enable Recovery of Additional Sites and/or Populations**

- Undertake appropriate seed and mycorrhizal fungi collection and storage.
- Investigate options for establishing additional populations in-situ, or ex-situ.
- Implement national translocation protocols (Vallee et al., 2004) if translocating existing populations or establishing additional populations is considered necessary and feasible.

78 This list does not necessarily encompass all actions that may be of benefit to *Prasophyllum*
79 sp. Wybong (C. Phelps ORG 5269), but highlights those that are considered to be of highest
80 priority at the time of preparing the Conservation Advice.

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82 **Existing Plans/Management Prescriptions that are Relevant to the Species**

83 Weed Management Guide - Coolatai grass (*Hyparrhenia hirta*) (CRC for Australian Weed
84 Management, 2007).

85 These prescriptions were current at the time of publishing; please refer to the relevant
86 agency's website for any updated versions.

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88 **Information Sources:**

89 CRC for Australian Weed Management (2007). Weed Management Guide - Coolatai grass
90 (*Hyparrhenia hirta*).

91 Available on the internet at:

92 www.weedsrc.org.au/documents/wmg_coolatai.pdf

93 Copeland L (2009). Personal communication, January 2009, Department of Botany,
94 University of New England.

95 Holzinger B (2006). Independent expert. Personal communication, July and October 2006.

96 Holzinger B (2009). Independent expert. Personal communication, January 2009.

97 Threatened Species Scientific Committee (TSSC) (2009). Listing advice for *Prasophyllum* sp.
98 Wybong (C. Phelps ORG 5269).

99 Vallee, L, Hogbin, T, Monks, L, Makinson, B, Matthes, M & Rossetto, M 2004, Guidelines
100 for the Translocation of Threatened Plants in Australia - Second Edition, Australian
101 Network for Plant Conservation, Canberra.