



FLORA AND FAUNA GUARANTEE - SCIENTIFIC ADVISORY COMMITTEE
FINAL RECOMMENDATION ON A NOMINATION FOR LISTING

Collection of native orchids.
(Potentially Threatening Process)

Date of receipt of the nomination: 18 December 1992
Date of preliminary recommendation: 30 March 1993
Date of final recommendation: 21 September 1993

File No.: 93/0381

Validity:

The nomination is for a valid item and the prescribed information was provided.
In the opinion of the SAC the process is adequately defined and described.

The nominated process is the collection of native orchids, for cultivation, pressing and display, as well as for taxonomic or other research purposes. Although the impact of different methods of collection on the survival of species may vary, the overall threat to orchid populations is cumulative and can be significant. Orchids may be collected by growers, traders, researchers and pickers. Orchid enthusiasts/photographers can also trample and disturb orchids as well as their habitat. Native orchids may be collected and traded interstate and internationally.

The range of flora or fauna affected or potentially affected was adequately stated in the nomination.

Significance of the threat which the potentially threatening process poses or has the potential to pose was adequately stated in the nomination.

Eligibility for listing as a potentially threatening process under the Flora and Fauna Guarantee

The nominated item satisfies at least one criterion of the set of criteria prepared and maintained under Section 11 of the *Flora and Fauna Guarantee Act 1988*, and stated in Schedule 1 of the *Flora and Fauna Guarantee Regulations 1990*.

Evidence that criteria are satisfied:

Criterion 5.1 *The potentially threatening process, in the absence of appropriate management, poses or has the potential to pose a significant threat to the survival of a range of flora or fauna.*

Evidence:

The process has occurred and is continuing to occur throughout Victoria. There have been reports of at least 32 species of orchid being collected from the wild. These include threatened species, those listed under the *Flora and Fauna Guarantee Act 1988*, those valued for their attractive appearance, those in easily accessible areas, those occurring in areas well known to enthusiasts and those with localised genetically distinct populations. The acquisitiveness of some orchid enthusiasts may result in attempts to obtain rare and attractive orchids in the wild. Species which are not currently considered rare may become threatened in the future if collection pressure is intense.

Collection represents a threat to species survival by the direct loss of plants, through damaging their habitat by trampling and disturbance, or by the loss of isolated populations which can remove a significant fraction of a gene pool. Localised natural populations of orchid species may be genetically distinct, and extinctions of particular populations can compromise the future survival and adaptability of species (additional expert opinion).

The method of reproduction for particular species of orchid also influences the impact of collection on species survival. Species which reproduce vegetatively and form extensive colonies are more likely to be obtained from other cultivated plants. Those species which are difficult to cultivate are likely to be significantly affected by continuous collecting. In many cases the collection of flowers, rather than entire plants, may not represent a significant threat to a species survival since only a year's seed will be lost. However, the removal of entire plants (i.e. tuberoids) by collectors can destroy entire populations. Species which do not reproduce vegetatively (i.e. extra tuberoids) are most at risk.

The impact of collecting orchids from the wild on species survival will vary depending on a collector's experience and understanding of the issues involved in the conservation of orchids.

Sub-criterion 5.1.1 *The potentially threatening process, in the absence of appropriate management, poses or has the potential to pose a significant threat to the survival of two or more taxa.*

Evidence:

Species of orchids for which collection has been reported or is considered a potential threat (additional expert opinion) include:

- those listed under the *Flora and Fauna Guarantee Act 1988* and their VROT classification:

- Caladenia audasii* (Audas' Spider Orchid) - Endangered
- C. calcicola* (Limestone Caladenia) - Vulnerable
- C. rosella* (Rosella Spider Orchid) - Endangered
- C. thysanochila* (Fringed Spider Orchid) - Rare and Endangered
- Calochilus richiae* (Bald-tip Beard Orchid) - Endangered
- Dendrobium speciosum* (Rock Orchid) - Vulnerable
- Diuris cuneata* (Wedge Diuris) - Endangered
- D. punctata* (Purple Diuris) - Vulnerable
- Pterostylis baptistii* (King Greenhood) - Vulnerable
- P. cucullata* (Leafy Greenhood) - Vulnerable
- P. woolsii* (Long-tail Greenhood) - Endangered
- Sarcochilus falcatus* (Orange-blossom Orchid) - Endangered
- Thelymitra epipactoides* (Metallic Sun-orchid) - Endangered

- other threatened species and their VROT classification:

- Dipodium hamiltonianum* (Yellow Hyacinth Orchid) - Endangered
- Diuris fragrantissima* (Sunshine Diuris) - Endangered
- Thelymitra matthewsii* (Spiral Sun-orchid) - Vulnerable
- Pterostylis aestiva* (Long-tongue Greenhood) - Rare
- P. alveolata* (Gippsland Greenhood) - Rare
- P. coccinea* (Red-hood) - Vulnerable
- P. despectans* (Greenhood) - Endangered
- P. fischii* (Fisch's Greenhood) - Rare
- P. laxa* (Antelope Greenhood) - Rare
- P. grandiflora* (Cobra Greenhood) - Rare
- P. pediglossa* (Prawn Greenhood) - Vulnerable
- P. setifera* (Slender Greenhood) - Rare

Collection of orchids was cited as a threat in the final and preliminary recommendation reports for the Rosella Spider-orchid, the Rock Orchid, the Wedge Diuris, the Purple Diuris, the Orange Blossom Orchid, the Metallic Sun-orchid, the Spiral Sun-orchid and the Greenhood (*Pterostylis despectans*). Collection has led to the extinction of one of two populations of Wedge Diuris (Allen 1986) and was partly responsible for the loss of a population of Purple Diuris (additional expert opinion). Audas's Spider-orchid was recently known from only one location in Victoria. The three orchids which were recorded from this site in 1991 have now disappeared, 2 plants have deliberately been removed, the fate of the third unknown (D. Venn, pers. comm.).

Criterion 5.2 *The potentially threatening process, in the absence of appropriate management, poses or has the potential to pose a significant threat to the evolutionary development of a range of flora and fauna.*

Evidence:

Many species of orchids occur as a series of isolates which are genetically distinct. Thus the loss of natural populations through collection has the potential to remove a significant fraction of the gene pool. A loss of genetic variation could reduce the ability of species to adapt to environmental change.

Background Information

- 18 taxa of orchid have been listed under the *Flora and Fauna Guarantee Act 1988*, and a further 7 have received preliminary or final recommendations for listing.
- There are approximately 270 orchid taxa currently described in Victoria, of which about 100 are considered threatened (VROT's).

Advertisement for public comment

In accordance with the requirements of Section 14 of the *Flora and Fauna Guarantee Act 1988*, the preliminary recommendation was advertised for a period of at least 30 days.

The preliminary recommendation was advertised in:

"The Age" - on 4 August 1993

"The Weekly Times" - on 4 August 1993

Government Gazette - on 5 August 1993

Submissions closed on 6 September 1993.

Further evidence provided:

No public comments were received by the Scientific Advisory Committee.

No evidence was provided to warrant a review of the Scientific Advisory Committee's preliminary recommendation that the potentially threatening process is eligible for listing.

Documentation

The published information and research data provided to the SAC have been assessed. To the best of their knowledge, the SAC believes that the data presented are not the subject of scientific dispute and the inferences drawn are reasonable and well supported.

Final Recommendation of the Scientific Advisory Committee.

The Scientific Advisory Committee concludes that on the evidence available the nominated item is eligible for listing in accordance with Section 11 of the Act because primary criteria 5.1 and 5.2 are satisfied.

The SAC also concluded that sub-criterion 5.1.1 has been satisfied and that no evidence exists to suggest that primary criterion 5.1 cannot be satisfied as a consequence of sub-criterion 5.1.1 being satisfied.

The Scientific Advisory Committee recommends that the nominated item be supported for listing on Schedule 3 of the *Flora and Fauna Guarantee Act 1988*.

Selected references:

Allen, B (1986) *Diuris punctata* var. *longissima* at Goornong. Bendigo Field Naturalists Club. *Whirrakee* 7: 11.

Carr, G. (1988) New species of *Caladenia* R. Br. (Orchidaceae) from Victoria and New South Wales, Australia. *Muelleria* 6: 442.

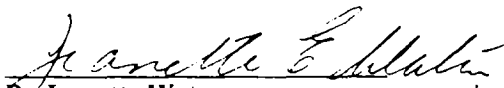
Gullan, P. K., Cheal, D. C. & Walsh, N. G. (1990) *Rare or threatened plants in Victoria*. Department of Conservation and Environment, Victoria.

Jones, D. (1988) *Native orchids of Australia*. Reed, New South Wales.

Endorsement by the Convenor of the Scientific Advisory Committee

Date

3 December 1993


Dr Jeanette Watson
Acting Convenor