CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA

Fourteenth meeting of the Plants Committee
Windhoek (Namibia), 16-20 February 2004

Species proposals for the 13th meeting of the Conference of the Parties

ANNOTATIONS FOR CERTAIN ARTIFICIALLY PROPAGATED ORCHID HYBRIDS

1. The draft proposal annexed to this document has been prepared by the Management Authority of Switzerland.

Background

2. At its ninth meeting (Darwin, June 1999), the Plants Committee agreed to review the listing in the Appendices of Orchidaceae. This review was initiated at its following meeting (Shepherdstown, December 2000) and continued at the 11th meeting (PC11, Langkawi, September 2001). At PC11, it was determined that a comprehensive review of the Orchidaceae would be lengthy and complex, and it was decided as an alternative that a working group should look at the possibility of excluding the artificially propagated hybrids of six selected orchid genera (*Cattleya, Cymbidium, Dendrobium, Oncidium, Phalaenopsis* and *Vanda*) from the provisions of the Convention. A working group was convened at PC11 to discuss the possibility of such a proposal. The United States of America and the American Orchid Society were asked to draft a proposal for consideration at the 12th meeting of the Plants Committee (Leiden, May 2002). At the 12th meeting of the Conference of the Parties (CoP12, Santiago, 2002), a proposal was submitted by the United States to annotate Orchidaceae in Appendix II with the aim of exempting certain artificially propagated orchid hybrids from the provisions of CITES under a number of conditions. The proposal adopted at CoP12 restricted the annotation to hybrids within the genus *Phalaenopsis*.

3. At the 13th meeting of the Plants Committee (Geneva, August 2003), Switzerland presented its preparatory work on the development of an annotation for all artificially propagated orchid hybrids subject to certain conditions. The Committee congratulated Switzerland on this initiative and urged it to continue developing the proposal.

4. After consideration of comments and suggestions, Switzerland has prepared a draft proposal presented in the Annex to this document, for consideration by the Plants Committee.

Comments from the Secretariat

5. The Secretariat has reviewed the draft proposal prepared by Switzerland and believes it should be supported. As noted in the proposal, artificially propagated hybrid orchids account for the greatest number of orchids in international trade. This trade presents no discernible direct threat to wild orchid populations. The commonly traded artificially propagated hybrid orchids are readily recognizable. The Secretariat is of the opinion that ICTES resources should as a matter of priority, be directed towards solving problems relating to the trade in wild-collected orchid species which may be of conservation concern.

Prop. 12.XX

CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

A. Proposal

To annotate Orchidaceae in Appendix II to exclude artificially propagated hybrids, exclusively under the condition that specimens are flowering, potted and labelled, professionally processed for commercial retail sale and that they allow for easy identification.

The annotation to specifically read as follows:

Artificially propagated specimens of hybrids are not subject to the provisions of the Convention when:

1) they are traded in flowering state;
2) they are professionally processed for commercial retail sale, e.g. labelled with printed labels and packaged in printed packages;
3) they can be readily recognized as artificially propagated specimens by exhibiting a high degree of cleanliness, undamaged inflorescences, intact root systems and a general absence of damage or injury that would be characteristic of plants originating in the wild;
4) do not exhibit characteristics of wild origin, such as damage by insects or other animals, fungi or algae adhering to leaves or mechanical damage to inflorescences, roots, leaves, or other parts resulting from collection; and
5) labels or packages indicate the trade name of the specimen, the country of artificial propagation or, in case of international trade during the production process, the country, where the specimen was labelled and packaged; and labels or packages show a photo of the flower, or demonstrate by other means the appropriate use of labels and packages in an easily verifiable way.

B. Proponent

Switzerland.

C. Supporting statement

1. Taxonomy

1.1	Class:	Monocotyledonae
1.2	Order:	Orchidales
1.3	Family:	Orchidaceae
1.4	Genus:	The most important hybrids in trade are:
1.4.1		*Phalaenopsis* Blume (over 22,000 man-made hybrids)
1.4.2		*Dendrobium nobile* Lindl. and *Dendrobium bigibbum* Lindl. [=*D. Phalaenopsis* Fitzg.] (thousands of man-made hybrids known in trade as "*nobile*-type" and "*phalaenopsis*-type" dendrobiums)
1.4.3		*Cymbidium* Sw. (approximately 11,000 man-made interspecific and intergeneric hybrids; Annex 1)
1.4.4		*Vanda* Jones (approximately 6,000 man-made hybrids)
1.4.5		*Oncidium* Sw. (approximately 4,000 man-made hybrids)

1.5 Scientific synonyms: See Annex 1 of Prop. 12.51 for names of intergeneric hybrids within taxa listed under paragraph 1.4 above.

1.6 Common names**: English: Orchid hybrids
French: Hybrides d'orchidées
Spanish: Híbridos de orquídeas

** Orchid hybrids are often traded under their scientific generic names, see under 1.4; there are a few common names like 'moth orchid' (*Phalaenopsis*) or 'dancing lady orchid' (*Oncidium*).

1.7 Code numbers: Not applicable.

2. Biological parameters

These parameters are not relevant to this proposal, since it does not refer to wild-collected specimens, or even to naturally occurring entities in most cases (i.e., natural hybrids, which may also be artificially produced in cultivation). The majority of these artificially propagated hybrids are complex interspecific or intergeneric hybrids, often several generations away from the original species used to create them, with their origins pre-dating the Convention.

This proposal is made in accordance with the provisions of paragraph f) under the second RESOLVES in Resolution Conf. 9.24 (Rev. CoP12):

> *species of which all specimens in trade have been bred in captivity or artificially propagated should not be included in the Appendices if there is no probability of trade taking place in specimens of wild origin:*

as well as in accordance with the provisions of paragraph a) under DETERMINES in the section of Resolution Conf. 11.11 Regarding hybrids:

> *hybrids shall be subject to the provisions of the Convention even though not specifically included in the Appendices if one or both of their parents are of taxa included in the Appendices, unless the hybrids are excluded from CITES controls by a specific annotation in Appendix II or III* [the annotation to Orchidaceae spp. in Appendix II].

3. Utilization and trade

3.1 National utilization

A country-by-country account of national utilization of these hybrids would not be meaningful because they are not natural entities and they are traded worldwide.

3.2 Legal international trade

Data from the UNEP-World Conservation Monitoring Centre for the years 1980 to 1998 (the period given in proposal Prop. 12.51) show that an increasing number of artificially propagated specimens, including an increasing percentage, make up the total recorded legal trade. Of the tens of millions of orchids traded annually, approximately 95% or more are artificially propagated (see Annex 2 of proposal Prop. 12.51). At the same time, the total number of wild-collected plants in trade appears to be declining (see Annex 3 of proposal Prop. 12.51), although it is difficult to make such a statement with certainty owing to the possibility for recent years' data to be incomplete.

3.3 Illegal trade

Artificially propagated hybrid specimens of these genera are illegally traded, although deliberate efforts to smuggle orchids generally involve wild-collected specimens of newly discovered or described species. Illegal trade of hybrids often consists of small numbers of specimens by tourists who are unaware of documentation requirements. Commercial growers are usually aware of the requirements for permits or certificates and obtain them as needed, although

occasional irregularities occur, first of all in international retail sale, in mixed shipments containing also ornamental plants other than orchids.

3.4 Actual or potential trade impacts

Concern over the impact of trade is not related to these entities, but to the naturally occurring species within these genera. Exempting artificially propagated hybrids may be harmful to wild populations if wild-collected specimens of these genera are traded as artificially propagated hybrids. However, this risk is the same as the risk of wild-collected specimens being traded with permits or certificates issued for artificially propagated specimens. The restrictions in the proposed annotation are intended to preclude abuse of the exemption by traders in wild-collected species, which generally a) are traded in non-flowering state and with naked roots; b) are not uniform in appearance; and c) exhibit characteristics of wild origin.

3.5 Captive breeding or artificial propagation for commercial purposes (outside country of origin)

Artificially propagated specimens of the genera *Cattleya*, *Cymbidium*, *Dendrobium*, *Oncidium*, *Phalaenopsis* and *Vanda* for example, are represented by over 80,000 hybrid gregi (plural of grex, the term used for the progeny resulting from a cross of two particular parental plants; number as of December 2001). They constitute by far the largest component of international commercial orchid trade. Breeding in these six genera has occurred since hybridization began in the orchid family in the middle of the 19th century. A *Cattleya* hybrid was the first interspecific hybrid recorded, ca. 1850, though it was not the first to flower. Since 1922, when Lewis Knudson introduced asymbiotic seed culture for orchids, their hybridization has exploded, with over 110,000 hybrid gregi registered by the end of 2000. Seed culture, while still a vital part of large-scale commercial orchid production–particularly in *Phalaenopsis*, by far the leader in numbers of plants-produced tissue culture or cloning ('meristemming') of popular cultivars has enabled the global market to grow at an exponential rate.

The phenomenal growth rate of the global orchid trade, as evidenced by trade figures, has been fueled by several factors. These include: an increase in popularity and the realization by consumers that orchids are affordable and amenable to home culture; technological improvements in orchid culture, which enable plants to be grown in greater quantities, faster, and therefore at a lower cost; improved transport from lower-cost production areas to distant markets where production is less cost-effective; and improved communication between producer and consumer countries, where higher prices can be obtained by superior marketing techniques.

Major producing nations include Brazil, China, Costa Rica, Indonesia, Malaysia, the Netherlands, the Philippines, Thailand and the United States of America. Increasing demand in developed nations provides the opportunity for the development of export markets by other developing nations in Southeast Asia and Latin America.

Thailand is the world's largest exporter of tropical orchids, mostly of *Dendrobium*. The industry was founded on the Pompadour orchid, which was extremely successful when introduced on a wide scale in the mid 1970s. In the early 1980s, Thailand developed new export varieties to meet consumer preferences and diversify its product line, which was suffering from overproduction and low prices. *Dendrobium* orchids have become synonymous with Thailand on the world market thanks to the country's capability to perform advanced research, including tissue propagation; good climate, which permits year-round production; inexpensive labour; and efficient post-harvest handling and transport. Thailand exports orchids to more than 50 countries, Japan being the major market.

4. Conservation and management

4.1 Legal status

Artificially propagated hybrids may be subject to legal controls at the national level to effect the protection of species. These hybrids currently require CITES export documents to ensure that their export is both legal and not detrimental to their parent species.

4.2 Species management

Not relevant for this proposal.

4.3 Control measures

Artificially propagated, flowering, labelled and packaged orchid hybrids can be distinguished from wild orchid specimens by the following characteristics:

- wild orchid specimens are normally traded in non-flowering state and cultivated to flower in the country of final destination;

- wild orchid specimens are normally traded with naked roots; they are potted or mounted, and labelled in the country of final destination;

- artificially propagated hybrids are generally free of pests, disease and damage;

- artificially propagated hybrids are typically grown in pots and will often have roots conforming to the shape of the pot in which they were grown;

- prices of artificially propagated hybrids are typically low and consistent within taxa;

- artificially propagated flowering hybrids are often exported by individual tourists, in small quantities and openly carried in hand luggage; or they are exported for commercial retail sale in rather small quantities together with other ornamental (non-CITES) plants;

- commercial trade in flowering orchid hybrids is often outside the specialized orchid market and involves retail sale such as flower shops and garden centres.

5. Information on similar species

This proposal only relates to artificially propagated, flowering and labelled orchid hybrids, which are relatively easy to identify to genus or type. They may be confused in trade with flowering, artificially propagated specimens of their parent species (congeners), which still need permits, owing to their similar appearance. But this could only happen if the latter specimens are incorrectly labelled as hybrids. However, the combination of flowers, labels and packages allows differentiation between hybrids and artificially propagated botanical species.

Most importantly, confusion with wild-collected orchids is not probable as differences are numerous and very obvious.

6. Other comments

This proposal is closely linked with proposal Prop. 12.51, which was developed as a consequence of a review of the listing of the Orchidaceae. This review was begun at the 10th meeting of the Plants Committee (Shepherdstown, December 2000) by a working group, with the assistance of the Secretariat. At the 11th meeting of the Plants Committee (Langkawi, September 2001), it was determined that a thorough review of all Orchidaceae was not practicable, given the limited resources and the enormity of the task. However, to make the listing of Orchidaceae more effective, it was agreed that another working group would investigate the feasibility of annotating selected genera to exempt their artificially propagated hybrids from CITES controls. A draft proposal submitted by the United States was discussed and endorsed by the Plants Committee at its 12th meeting (Leiden, May 2002, see document PC12 Doc. 10.1). The observer from Switzerland expressed the opinion in Leiden that flowering and labelled orchid hybrids should generally be exempted, as it is the case for *in vitro* orchids. This idea was however not considered when the draft proposal was subsequently re-worded and submitted for consideration at the 12th meeting of the Conference of the Parties. When proposal Prop. 12.51 was finally submitted to the Parties, there was no opportunity to modify it accordingly, as this would have widened its scope. The idea to exempt flowering and labelled orchid hybrids had to be postponed. Proposal 12.51 was revised at CoP12 and restricted to *Phalaenopsis* before being adopted. Consequently, a draft proposal was submitted by Switzerland at the 13th meeting of the Plants Committee (Geneva, August 2003, see

document PC13 Doc. 11.1). The Plants Committee urged Switzerland to continue working on this project. There was support from a number of observing Parties, but also concern. Various Parties stated that the impact of the exemption of *Phalaenopsis* hybrids should first be assessed. The observer from the United States announced that he would try to do a survey on *Phalaenopsis* hybrids by the 14th meeting of the Plants Committee.

7. Additional remarks

Modern orchid trade has changed in a dramatic way in recent years, as outlined in proposal Prop. 12.51. It has moved away from wild-collected orchids to hybrids that are mass-produced and internationally traded on an industrial scale. On the other hand, newly discovered and described species are still exploited in an unsustainable way for illegal international trade, such as *Paphiopedilum vietnamense* Perner & Gruss, described in 1999 from Vietnam, or *Phragmipedium kovachii* Atwood, Dalström & Fernandez, described in 2002 from Peru, both listed in Appendix I. This situation is a big challenge for species conservation. CITES must adapt in order to cope with modern orchid trade in an effective way. Enforcement authorities should be allowed to concentrate their efforts and focus their resources on wild-collected orchids. This was surely the intention, when *in vitro* specimens in sterile containers of all orchids were exempted from CITES. A further step was the exemption of *Phalaenopsis* hybrids under certain circumstances. Trade in artificially propagated orchid hybrids should be facilitated as much as possible, as long as such this does not also facilitate illegal trade in wild-collected orchids. Permits for mass-produced hybrids are not necessary, as long as such specimens can be correctly identified. It is assumed that flowering and labelled orchid hybrids constitute a correctly identifiable finished product the trade thereof without permits should not further the illegal trade in wild-collected orchids.

8. References

US Fish and Wildlife Service (2002): Prop. 12.51

Griesbach, R.J. 2002. Development of Phalaenopsis Orchids for the Mass-Market. p. 458–465. In: J. Janick and A. Whipkey (eds.), Trends in new crops and new uses. ASHS Press, Alexandria, VA.

Griesbach, R.J. 2000. ASHS-2000 Symposium: Potted Orchid Production in the New Millennium. Potted Phalaenopsis Orchid Production: History, Present Status, and Challenges for the Future. Floral and Nursery Plant Research, U.S. National Arboretum, Beltsville, MD 20705.