

Annotation of Orchidaceae spp. in Appendix II. Proponent: United States of America.

The annotation to specifically read as follows:

Artificially propagated specimens of hybrids within the genera *Cattleya*, *Cymbidium*, *Dendrobium*, (*Phalaenopsis* and *nobile* types only), *Oncidium*, *Phalaenopsis* and *Vanda*, including their intergeneric hybrids, are not subject to the Convention when:

- a) specimens are traded in shipments consisting of individual containers (i.e. cartons, boxes, or crates) containing 100 or more plants each;
- b) all plants within a container are of the same hybrid, with no mixing of different hybrids within a container;
- c) plants within a container can be readily recognized as artificially propagated specimens by exhibiting a high degree of uniformity in size and stage of growth, cleanliness, intact root systems, and general absence of damage or injury that could be attributed to plants originating in the wild;
- d) plants 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 roots, leaves, or other parts resulting from collection; and
- e) shipments are accompanied by documentation, such as an invoice, which clearly states the number of plants and which of the six exempt genera are included in the shipment, and is signed by the shipper. Plants not clearly qualifying for the exemption must be accompanied by appropriate CITES documents.

Summary: The Orchid family, or Orchidaceae (including the subfamilies Apostasioideae and Cypridodioideae, sometimes considered to be separate families) is the largest plant family with ca 20 000 species in around 800 genera. Orchids occur in the wild on all continents except Antarctica and are most diverse in tropical regions. In cultivation, they are extremely popular as cut flowers, ornamental garden and house-plants and as collectors' or hobbyists' plants. International trade in orchids has grown extremely rapidly in the past 20 years, and now involves tens of millions of plants each year. The vast majority of this trade is in artificially-propagated plants, mostly hybrids of which some 110 000 have been officially registered, but significant numbers of wild plants are still traded. In some cases, collection of wild plants for international trade poses, or has in the past posed, a significant threat to the survival of those species.

The entire family was included in the CITES Appendices in 1975. Currently two genera (*Paphiopedilum* with 82 species and *Phragmipedium* with 19 species) and seven additional species are included in Appendix I with the remainder of the family in Appendix II under annotation * = 463, which indicates that all parts and derivatives are covered by the Convention except: a) seeds and pollen (including pollinia); b) seedling or tissue cultures obtained *in vitro*, in solid or liquid media, transported in sterile containers; c) cut flowers of artificially propagated plants; and d) fruits and parts and derivatives thereof of artificially propagated plants of the genus *Vanilla*. The Appendix I listing is under annotation °610, which exempts seedling or tissue cultures obtained *in vitro*, in solid or liquid media, transported in sterile containers from the provisions of the Convention.

The proposed annotation aims to exclude from the provisions of the Convention artificially-propagated hybrids that have some contribution from one or more of six genera (in the case of *Dendrobium* of only two species within the genus) and that are shipped under a series of conditions. The annotation is intended to create an incentive for trade in artificially-propagated specimens by eliminating the need for CITES permits as a preferred alternative to trade in wild-collected specimens for which trade impacts are not precisely known. It is believed that removing artificially-propagated specimens from CITES controls should significantly reduce the workload of permit-issuing authorities, although the supporting statement also acknowledges that the annotation will place a burden of responsibility on inspection officials to ensure that specimens qualify for the exemption.

Analysis Under the proposed annotation the specimens to be excluded from the provisions of the Convention are all artificially-propagated hybrids. Their removal from the Appendices can have no direct impact on wild populations of orchid species. However, it is unclear how the proposed annotation can be applied in practice, for a variety of reasons, and it appears therefore that adopting it may affect the control of trade in other taxa listed in the Appendices – that is all other members of the family Orchidaceae (with the existing exemptions noted above) and in particular species and naturally occurring hybrids within the

genera *Cattleya*, *Cymbidium*, *Dendrobium*, *Oncidium*, *Phalaenopsis* and *Vanda*.

From the point of view of implementation of the proposed annotation, the following points should be considered:

Most trade in artificially-propagated plants in the proposed taxa is reportedly in the form of small non-flowering plants. It is very often not possible to identify such plants to generic level with certainty, and in the case of intergeneric hybrids, to determine which genera have contributed to the plant.

No clear definition of "nobile-type" and "phalaenopsis-type" *Dendrobium* hybrids is contained within the annotation. Both *D. nobile* and *D. phalaenopsis* have been extensively used in the production of a wide range of hybrids. The annotation could be interpreted to mean that any hybrid with parentage from either species is exempt from the provisions of the Convention, or only those that closely resemble the parent species. When not in flower, plants of either type may closely resemble other *Dendrobium* species or hybrids.

The proposed annotation includes ca 80 000 hybrid gregi (i.e. those with genetic contribution from at least one of the genera) but excludes a further ca 30 000 (i.e. those that do not have genetic contribution from one of the genera). As an example, under the annotation, an *Ada* x *Miltonia* x *Odontoglossum* x *Oncidium* cross will be exempt from the provisions of the Convention (under the specific conditions set out), but an *Ada* x *Miltonia* x *Odontoglossum* cross will not. Distinguishing between these and many other similar cases when plants are not in flower will not be possible, even for experts, and in most cases is unlikely to be possible when plants are in flower. The number of registered hybrid gregi increases by around 1 000 each year. Distinguishing intergeneric hybrid gregi that qualify for exemption from those that do not will not be possible on the basis of their names alone as the names of more recent intergeneric hybrids are not based on the names of the parent genera.

The annotation specifically refers to interspecific hybrids and therefore excludes species and their varieties and improved forms, which will continue to be subject to the provisions of the Convention. Several of the latter in the specified genera feature extensively in trade and cannot easily be distinguished from hybrids either when in flower or not.

Some trade in wild-collected plants in all six genera has been recorded in annual reports to CITES during the period 1991-2001 (in the case of *Dendrobium* in *D. nobile* itself, as well as in a range of other species). In a small number of cases this trade has been in a relatively large number of plants, although in all cases the volume of recorded trade is extremely small compared with that in artificially propagated plants. Some, though not all, of this trade may have been reported in error in CITES Annual Reports. Among species reportedly traded in some quantity as wild-collected plants are a number of species of *Cymbidium*. Because of their growth-form, plants in this genus may lose the characteristics of wild-collected plants if grown on for one or two seasons before export. They would then be extremely difficult to distinguish from hybrid *Cymbidiums* when not in flower, that is from forms regarded under the proposed annotation as exempt under the given conditions from the provisions of the Convention. Similarly, in the case of deciduous forms of *Dendrobium* (which include *D. nobile*) it may not be possible to distinguish wild-collected specimens of species from artificially propagated specimens of species and hybrids.

In view of the above, it is not possible to see how compliance with the proposed annotation can be monitored or enforced in the majority of cases. Inspection of shipments may detect some cases of non-compliance, for example in a mixed batch of clearly wild-collected plants, or when an individual container includes fewer than 100 plants, or clearly includes more than one form (i.e. when plants are in flower or when the different forms have easily distinguishable vegetative growth, such as a mixed container of *Cattleya* and *Cymbidium*). Similarly, compliance may be verified with some confidence by inspection when shipments are of identical plants in flower (although even here it may not be possible to determine if the plants are hybrids or true species). In all other cases, which are likely to constitute the great majority, it will not be possible to determine by inspection whether a given consignment should be exempt from the provisions of the Convention or not. In these cases, the annotation indicates that appropriate CITES certificates should accompany shipments.

Supporting Statement (SS)	Additional information
As of December 2001 there were 80 138 registered hybrids involving the six natural genera of <i>Cattleya</i> , <i>Cymbidium</i> , <i>Dendrobium</i> , <i>Oncidium</i> , <i>Phalaenopsis</i> and <i>Vanda</i> .	<i>The CITES Orchid Checklist (Vols. 1-3) accepts 50 names for Cattleya with 169 synonyms, 67 names for Cymbidium with 230 synonyms, 692 names for Dendrobium with 1225 synonyms (part of the genus only), 81 names for Phalaenopsis with 194 synonyms,</i>

Supporting Statement (SS)	Additional information
<p>Artificially propagated hybrids of <i>Cattleya</i>, <i>Cymbidium</i>, <i>Dendrobium</i>, <i>Oncidium</i>, <i>Phalaenopsis</i>, and <i>Vanda</i> can be distinguished from wild specimens by the following characteristics:</p> <ul style="list-style-type: none"> – the plants are traded in large volumes by traders who specialise in mass-marketed pot plants; – specimens of the same taxon are highly uniform in size and form, especially within a shipment, because the plants are the same age and in the same stage of growth; – specimens are generally free of pests, disease, and damage; – specimens are typically grown in pots and often will have roots conforming to the shape of the pot in which they were grown; – prices of these plants are typically low and consistent within taxa; – artificially propagated hybrids will often be exported in large volumes from countries that do not include the natural range of the parent species, although this is not exclusively the case. 	<p>and 59 names for <i>Vanda</i> with 98 synonyms (Roberts et al., 1995; Roberts et al., 1997; Roberts et al., 2001). <i>Oncidium</i> has yet to be covered in the checklist.</p> <p>Three wild species in the genera under consideration are currently included in Appendix I: <i>Cattleya trianaei</i>, <i>Dendrobium cruentum</i>, and <i>Vanda coerulea</i>.</p> <p>Most trade in mass-produced hybrids is in small, non-flowering plants. It may not be possible to identify these even to generic level, or in the case of intergeneric hybrids, to determine which genera have contributed to them.</p> <p>Four taxa of <i>Cymbidium</i> have been recorded in CITES Annual Reports as wild-collected plants in significant quantities (over 5 000 plants) during the period 1991-2001 (<i>Cymbidium aloifolium</i>, <i>C. ensifolium</i> spp. <i>haematodes</i>, <i>C. sinense</i> and <i>C. tracyanum</i>). When grown on in nurseries for one or more seasons, these may lose the characteristics of wild-collected plants (TRAFFIC East Asia, 2002).</p> <p>A wide range of <i>Dendrobium</i> spp. (ca. 220, plus a number traded as “<i>Dendrobium</i> spp.”) has been recorded in CITES Annual Reports as wild-collected plants during the period 1991-2001, some (including <i>D. nobile</i>) in significant numbers. It may be difficult to distinguish wild-collected from artificially propagated plants of deciduous forms of <i>Dendrobium</i> such as <i>D. nobile</i> when the canes are dormant.</p>

Reviewers: TRAFFIC East Asia.

References:

- Roberts, J.A., Beale, C.R., Benseler, J.C., McGough, H.N., and Zappi, D.C., 1995. *CITES Orchid Checklist*. Volume 1. The Royal Botanic Gardens, Kew, UK.
- Roberts, J.A., Allman, L.R., Beale, C.R., Butter, R.W., Crook, K.R., and McGough, H.N., 1997. *CITES Orchid Checklist*. Volume 2. The Royal Botanic Gardens, Kew, UK.
- Roberts, J.A., Anuku, S., Burdon, J., Mathew, P., McGough, H.N., and Newman, A.D., 2001. *CITES Orchid Checklist*. Volume 3. The Royal Botanic Gardens, Kew, UK.
- TRAFFIC East Asia, 2002. *in litt.* to TRAFFIC International, Cambridge, UK.