TAXA IDENTIFIED AS POSSIBLE CANDIDATES FOR INCLUSION IN THE REVIEW OF SIGNIFICANT TRADE IN SPECIMENS OF APPENDIX–II SPECIES

Prepared by TRAFFIC and the IUCN/SSC Wildlife Trade Programme

for the

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Contents

Introduction and Methodology

Resolution Conf. 12.8 directs the Animals and Plants Committees, in co-operation with the Secretariat and experts, and in consultation with range States, to review the biological, trade and other relevant information on Appendix-II species subject to significant levels of trade. An initial and critical step in this process is the selection of species to be subject to review. Resolution Conf. 12.8 calls for the selection process to be based on a review of CITES annual report data and additional information available to the Animals and Plants Committees.

TRAFFIC International and the Wildlife Trade Programme of the IUCN Species Survival Commission were contracted by the CITES Secretariat to undertake a rapid assessment of readily available information on the status and trade of Appendix II species in order to assist the Committees with the selection process. Research for this analysis combined a review of CITES trade data provided by UNEP-WCMC with collection and assessment of information provided by specialists from Specialist Groups of the IUCN Species Survival Commission, the TRAFFIC network, and where possible, published (including web) sources. The final text was written by the staff of the IUCN SSC Wildlife Trade Programme and TRAFFIC International based on information compiled.

The present analysis was undertaken within a very short timeframe, reducing the ability to seek input from specialists. In future, we recommend that such an analysis is initiated shortly after CITES export data summaries are produced by UNEP-WCMC (90 days following the conclusion of a meeting of the Conference of the Parties, in accordance with Resolution Conf. 12.8). This is especially important with regard to the trade in plant species, and specifically those traded as other than live specimens, owing to the need to supplement plant data. A recommendation for a species selection process linking data analysis by UNEP-WCMC with a wider consultation process is provided in document PC14 Inf. 5.

Analyses and accompanying recommendations are grouped within three categories. The first section contains information on taxa that appear to merit inclusion in the next Review of Significant Trade for plants. This is followed by a section on the trade in taxa for which concerns regarding the sustainability of exports may be linked to other issues. These include species for which there are apparent problems of enforcement of national level trade controls, for which the current annotations appear to exclude a major segment of the trade, and where there is confusion regarding taxonomy. The third section includes information on species for which trade data indicated that further review was merited, but for which further information indicated that trade did not appear to exceed sustainable levels.

I. Taxa identified as possible candidates for the review of significant trade

AMARYLLIDACEAE

***Galanthus* spp.**

COMMON NAME: Snowdrops (E)

DISTRIBUTION: Europe, West-Asia, USA (Int.)

CONSERVATION STATUS: No species are included in the IUCN Red List

Annotation #1

Galanthus spp. are popular in the horticulture trade, with Turkey, Georgia and the Russian Federation (1996 only) reported as the source of the majority of wild specimens in trade. The trade in *Galanthus* species has been subject to several CITES-related reviews, and significant investment has been made in the development of species management plans in Turkey. Following field visits to Georgia, the German Scientific Authority noted concerns regarding management of the trade in that country in a report to the Plants Committee (PC11 Doc. 9.1.b). Concerns included the scientific basis for establishing export quotas. The Plants Committee recommended continued co-operation between the German and Georgian CITES authorities and support from other CITES Parties with regard to sustainable management of *G. woronowii*. The Committee also recommended that *Galanthus* spp. produced on farm fields in Georgia be considered as harvested from the wild (they had previously been described as "ranched"). There is concern that rare *Galanthus* species may be dug either by accident or deliberately for replanting and trade. For example, *G. krasnovii*, known from only one locality in Georgia and from north-east Turkey, is believed to have entered international trade mixed with shipments of *G. woronowii* (Oldfield, 1999).

CITES data document the large-scale trade in wild specimens of *G. elwesii*, *G. nivalis*, and *G. woronowii*. UNEP-WCMC has explained that data for specimens declared as "ranched" were excluded when the data were run, which seems likely to explain the low volumes of *G. woronowii* exports from Georgia relative to export quotas in that country for certain years. Reported re-exports from Turkey of bulbs declared as originating from Georgia (but not declared as imported from that country) were included in the data, presumably explaining at least in part the reported export from Turkey of bulbs in excess of that country's export quotas. Small numbers of bulbs of a variety of species were reported as exported from Georgia in 2001 and 2002: *Galanthus alpinus (75), Galanthus kemulariae* (15)*, Galanthus ketzhovelii* (10)*, Galanthus krasnovii* (29)*, Galanthus lagodechianus* (29)*, Galanthus platyphyllus* (35) and *Galanthus rizehensis* (20).

Galanthus spp. are also reported to be traded in large numbers outside of CITES controls, with the Russian Federation identified by TRAFFIC Europe as a key destination, and Armenia, Azerbaijan and the Ukraine as important source countries. Russian Federation authorities confiscated 2000 specimens of *Galanthus woronowii* on the Russian-Georgian border in 2002 . In 2003, approximately 150 000 specimens of *Galanthus plicatus* were confiscated in Moscow according to TRAFFIC Europe sources (only 56 wild specimens of this species were reported in trade in CITES data, exported from Romania). Illegal exports of *Galanthus plicatus* and *G. nivalis* were reported from the Ukraine in 1997, where these species are listed in the 1996 Red Data for the Ukraine (Shaparenko, 1997).

Given the large CITES-reported trade volumes in several species and indications of widespread trade outside of CITES controls, consideration should be given to including this genus in the significant trade review.

Galanthus elwesii

COMMON NAME: Giant Snowdrop (E)

DISTRIBUTION: Bulgaria, Greece, Romania, Serbia and Montenegro, Turkey, Ukraine Netherlands (Introduced)

CONSERVATION STATUS: Not listed in the IUCN Red List

CITES-reported exports of live *Galanthus elwesii* (live) from Turkey

1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
10 571 417	11 662 100	14 780 738	4 074 299	3 930 668	5 537 200	5 500 000	5 500 000	5 500 000	5 361 900	5 976 530

Export quotas for *Galanthus elwesii* (bulbs) issued by Turkey

1999	2001	2002	2003
5 800 000	6 000 000	6 000 000	6 000 000

Galanthus nivalis

DISTRIBUTION: Albania, Austria, Bulgaria, Czech Republic, France, Germany, Greece, Hungary, Italy, Poland, Republic of Moldova, Romania, Slovakia, Spain, Switzerland, Turkey, Ukraine, Yugoslavia (former)

CONSERVATION STATUS: Not listed in the IUCN Red List

Reported trade in wild specimens of this widespread species virtually ceased in 1995, with the cessation of reported exports from Hungary.

CITES-reported exports of live/bulbs of *Galanthus nivalis*

Exporter	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Hungary	200 000	120 000	150 000	0	0	0	0	0	0	0	0
Romania (kg)	0	0	0	0	0	0	0	0	41	0	0
Turkey	0	0	28 670	0	0	0	0	0	0	0	0
Netherlands	0	0	0	300	0	0	1 325	210	0	0	0

Galanthus schaoricus (10 specimens in 2002 from Georgia) and *Galanthus alpinus var. alpinus* (20 in 2001 and 52 in 2002 in Georgia) are synonyms of *Galanthus nivalis.*

Galanthus woronowii

DISTRIBUTION: Georgia, Russian Federation, Turkey

CONSERVATION STATUS: Not listed in the IUCN Red List. Additional distribution and status information can be found in PC 14 Doc 9.3.

A decline in reported trade from the Russian Federation coincided with a rapid increase in reported trade from Georgia. As noted above, there are also indications of large scale illegal trade.

CITES-reported exports of live/bulbs of *Galanthus woronowii*

Exporter	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Georgia	0	0	0	0	0	10 000 000	10 000 000	0	5 000 042	150	12 000 285
Russian Fed.	0	0	515 000	40 000	10 000 000	0	0	0	0	0	0
Turkey	2 277 775	1 894 500	1 990 000	292 400	615 600	999 908	2 000 000	11 749 915	15 000 000	3 005 950	2 000 000

NB: Data reported as *Galanthus ikariae* have been included with *Galanthus woronowii* as the former is now a recognised synonym of *Galanthus woronowii.*

Export quotas for *Galanthus woronowii*

Exporter	1999	2000	2001	2002	2003
Georgia	10 000 000	10 000 000	15 000 000	15 000 000	18 000 000
Turkey	2 000 000	2 000 000	2 000 000	2 000 000	2 000 000

CACTACEAE

Carnegiea gigantea

COMMON NAME: Saguaro

DISTRIBUTION: Mexico, USA

CONSERVATION STATUS: Not listed in the IUCN Red List; local status varies; additional distribution and status information provided in PC14 Doc 9.3

ANNOTATION: #4

Carnegia gigantea is one of the species most frequently used in the USA for landscaping in arid climates (Robbins, 2003), and therefore is in high demand as an ornamental species. CITES data indicate very low levels of legal trade in live specimens. The internal heavy, woody ribs of *C. gigantea* are used for firewood and building houses, fences and furniture (Pavek, 2003), which may account for the considerable volume of timber reported in international trade from Mexico. However, it is unclear if specimens are deliberately harvested from live plants, or if they are harvested as already dead specimens (such as collection from the ground as with 'rainsticks' from *Echinopsis* spp. and *Eulychnia* spp.) and if the latter, whether removal of dead specimens negatively affects the species' role in the ecosystem.

Cactus poaching is of concern around Saguaro National Monument (USA) and urban centers. Robbins (2003) provides evidence of illegal international trade, with 62 timber specimens seized upon import into the USA from Mexico in 1998. Given the large and apparently increasing export of timber from Mexico, this species merits consideration for inclusion in the review of significant trade.

CITES reported exports of *Carnegiea gigantea*

Exporter	Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
USA	Live	140	45	136	69	44	0	41	0	10	0	0
Mexico	Timber	0	0			0	115 405	60 080	52 300	30 000	120 000	135 500
Mexico	Timber m3	0	33	0	190	48	40	2	74	74	0	98
Mexico	Timber kg	0	0	0	0	0	0	3500	0	0	0	19 560
USA	Timber	9	12	0	0	0	50	14	0	0	0	0
Mexico	Timber pieces	0	0	64 000	101 651	0	170 040	30 000	0	0	0	0
Mexico	Timber pieces kg	0	0	0	0	0	0	16 500	0	0	0	0
USA	Timber pieces	0	0	0	0	0	0	0	13	10	0	0

CYATHEACEAE

Cyathea contaminans

COMMON NAME: Tree fern (E)

DISTRIBUTION: India, Indonesia, Malaysia, Myanmar, Papua New Guinea, Philippines, Thailand, Viet Nam

CONSERVATION STATUS: Not listed in the IUCN Red List

ANNOTATION: #1

Cyathea contaminans, a widely distributed tree fern species is used to produce fence posts. The species is reported to be fast growing. Indonesia is the major exporter with reported exports from 1996-2001 ranging from 61 300 to 52 250 units of timber. Indonesia established annual export quotas for 2002 and 2003 of 1 million kg. The basis on which quotas are set and non-detriment findings are made for this species are unclear, therefore suggesting its inclusion in the Review of Significant Trade.

CITES-reported exports of *Cyathea contaminans*

Exporter	Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Indonesia	Dried plants	0	0	0	0	38 897	0	89 264	0	0	0	0
Malaysia	Live	0	0	3	0	0	0	0	0	0	0	0
Indonesia	Timber	0	0	0	0	61 300	332 404	313 986	405 788	52 251	0	0
Indonesia	Timber kg	0	0	0	0	0	0	0	0	0	997 529	0
Indonesia	Timber shipments	0	0	0	0	0	0	170 220	147 638	0	0	0

DICKSONIACEAE

Cibotium barometz

DISTRIBUTION: China, Hong Kong, India, Indonesia, Japan, Malaysia, Myanmar, Papua New Guinea, Philippines, Taiwan, Province of China, Thailand, Viet Nam.

CONSERVATION STATUS: Not listed on IUCN Red List; local status varies; additional distribution and status information provided in PC14 Doc 9.3.

ANNOTATION: #1

This species was reviewed by Schippmann (2001).

The rhizomes of *Cibotium barometz* are traded internationally for medicinal use in China (including Hong Kong), Taiwan, Province of China, and the Republic of Korea. China and Viet Nam were the reported exporter of large quantities of rhizomes from 1992-2002; exports remained below China's export quota of 130 t during each of the years 2001-2003. TRAFFIC East Asia considers that international trade in this species is likely to be underreported.

Qin and Dong (2003) cite a 2000 population estimate of 76.8 million individuals, and note that wild populations have declined significantly over the last 25 years due to a combination of habitat destruction and harvesting for medicinal use (for both domestic and international markets). They add that data for recent rates of decline are lacking, but indicate that harvest for trade is accelerating the negative impacts of habitat loss. It has been considered a priority species for conservation action within China according to Qin and Dong (2003), and further information is required concerning resulting conservation action there. The species is reported to be easy to propagate (Qin and Dong, 2003), however no cultivation on a commercial scale has been reported according to TRAFFIC East Asia.

The large and persistent trade in the rhizomes of this species coupled with indications of ongoing decline in part as a result of harvest indicate that this species merits consideration for review.

CITES-reported exports of *Cibotium barometz*

Exporter	Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
China	Derivatives	0	0	0	0	0	0	0	1 200	0	0	0
China	Derivatives flasks	0	0	0	0	0	0	240	0	10 000	423	0
China	Derivatives kg	0	0	31 000	4 000	0	0	0	19	505	6 675	1 457
China	Derivatives shipments	0	0	0	0	0	0	10 363	1 910	1 696	2 389	0
China	Live	0	0	0	0	0	0	720	0	0	0	50
Thailand	Live	0	0	0	0	0	0	0	0	27	0	0
China	Roots kg	0	4 000	16 100	328 000	17 470	0	0	0	0	14 200	39 400
Viet Nam	Roots kg	0	0	7 000	210 000	50 000	0	43 000	213 000	185 000	153 000	97 000

EUPHORBIACEAE

Euphorbia antisyphilitica

COMMON NAME: Candelilla

DISTRIBUTION: Mexico, USA

CONSERVATION STATUS: Not listed on IUCN Red List; Critically Imperilled New Mexico (USA) according to NatureServe

There has been a marked increase in the trade of the wax of this North American desert species, the common name of which translates to 'little candle'. The wax is used for a variety of purposes including cosmetics, polishes, medicines, and waterproofing, and based on web advertisements, appears to be in large scale use. Given the rapid increase in reported trade, this species would appear to merit inclusion in the significant trade review process.

CITES-reported exports of *Euphorbia antisyphilitica* (kg) from Mexico

Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Wax	0	0	0	0	0	0	0	0	0	0	208 000
Extract	0	0	0	0	0	0	0	0	0	98 000	0

ORCHIDACEAE

***Dendrobium* spp.**

COMMON NAME: Spray orchids

DISTRIBUTION: Bhutan, China, Cambodia, India, Indonesia, Lao P.D.R., Myanmar, Nepal, Philippines, Taiwan, Thailand, Viet Nam ADD MORE COUNTRIES

CONSERVATION STATUS: No taxa listed on IUCN Red List; local status varies per species and country

ANNOTATION: #8

This widespread genus occurs from India and Sri Lanka eastwards to Japan and the Republic of Korea and south to Australia, New Zealand and Fiji, with over 1400 taxa included in the CITES-listed species database maintained by UNEP-WCMC. Most *Dendrobium* spp. have an epiphytic growth habit, but some are also found growing on rocks and cliffs and terrestrial in grasslands (Steenbeeke *et al.*, 2004). Two hundred and twenty-one species were recorded in trade between 1992-2002, 55 of which were reported in trade at average levels of over 250 specimens per annum, and 16 of which were reported in trade at over 250 specimens per annum during the last five years for which data were available. Sixteen species were traded The majority of taxa were recorded as trade in live plants, which originated from the wild or where the source of the shipment was unspecified. Only *D. nobile* and *Dendrobium* spp. were reported as traded as derivatives and extract. Both *D. nobile* and *D. herbaceum* were traded as roots and the following seven species traded as dried plants: *D. brymerianum*, *D. herbaceum*, *D. mirbelianum*, *D. moniliforme*, *D. nobile*, *D. nothofagicola*, and *D. torricellianum*.

According to TRAFFIC sources, the reported international trade in some species (e.g. *D. moniliforme, D. nobile*) is high and additional trade is likely to be underreported and/ or misreported. Trade and enforcement communities have repeatedly reported that the genus is heavily traded across borders of Southeast Asian countries and China without proper documentation. Cultivation of *Dendrobium* species is known to exist in China but its production scale is unclear. According the Scientific Authority of China, surveys for *D. nobile* showed a marked decline in population size in the wild due to over-collection and decline of the quality of habitat (Jin, 2003).

According to TRAFFIC East Asia, 39 *Dendrobium* species are known to be traded internationally for medicinal purposes (Song, 2002). The listing for this species is not annotated to exclude chemical derivatives (unlike for many other medicinal plants), and, based on CITES trade data, it therefore appears that much of this trade is going unreported. Whilst a full review of the genus would require considerable resources, it appears that further investigation of the trade, including the potential impact of unreported medicinal trade, is merited. Reviews of the trade in orchids from China and Thailand have already been undertaken by the national scientific Authorities in conjunction with RBG Kew. The Significant Trade Review might therefore take into account recommendations resulting from these earlier studies, and focus research resources on the trade from other countries, e.g. Viet Nam, a country noted as being a significant exporter of orchids by UNEP-WCMC (see PC 14 Doc. 9.3).

CITES-reported exports of *Dendrobium nobile*

Exporter	Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
China	Derivatives	18 000	0	0	0	0	0	0	600	0	0	0
China	Derivatives kg	0	0	0	0	1 000	0	0	0	56	3050	6
China	Derivatives shipments	8 629	92	145	0	0	0	0	0	655	320	0
Viet Nam	Derivatives kg	0	0	0	0	5 000	0	0	0	0	0	0
Viet Nam	Dried plants kg	0	0	0	0	0	0	20 000	67 000	0	16 500	22 000
China	Extract flasks	0	0	0	0	0	0	0	0	0	1	0
China	Live	0	10	0	0	0	0	0	0	0	0	0
Thailand	Live	123	459	13 099	747	835	477	0	0	0	0	0
Viet Nam	Live	0	0	0	0	0	250	400	1776	130	0	0
China	Roots kg	0	1 000	0	0	0	0	0	0	0	0	0
Laos	Roots kg	0	0	0	0	0	0	0	0	0	400 000	0
Viet Nam	Roots kg	0	0	0	28 175	0	24 500	39 000	0	23 000	13 000	0

CITES-reported exports of *Dendrobium* spp. exceeding 250 specimens/year (1998-2002); excludes *D. nobile*

Taxon	Term	Unit	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Total	1998-2002
Dendrobium aduncum	LIV		57	0	0	41	200	0	0	500	2 280	1 500	0	4 578	4 280
Dendrobium amabile	LIV		0	0	0	0	0	0	0	105	3 290	300	0	3 695	3 695
Dendrobium anosmum	LIV		977	303	427	522	592	1 982	108	1 014	230	100	20	6 275	1 472
Dendrobium bellatulum	LIV		3 222	4 193	4 237	4 953	9 422	1 547	600	675	50	200	550	29 649	2 075
Dendrobium brymerianum	LIV		2 868	402	577	286	2 980	588	600	0	0	0	230	830	8 531
Dendrobium brymerianum	DPL	KIL	0	0	0	0	0	0	0	0	0	0	1 000	1 000	1 000
Dendrobium capillipes	LIV		2 218	2 758	4 337	3 319	11 723	1 898	100	0	1 520	500	0	28 373	2 120
Dendrobium draconis	LIV		1 696	2 451	3 525	4 721	3 008	697	300	10	1 550	1 500	0	19 458	3 360
Dendrobium farmeri	LIV		13 912	8 360	13 498	10 466	8 150	2 762	601	1 020	50	0	0	58 819	1 671
Dendrobium formosum	LIV		3 654	2 345	4 503	5 116	7 178	2 744	0	210	2 085	1 500	0	29 335	3 795
Dendrobium harveyanum	LIV		1 282	1 838	2 246	1 122	3 339	1 039	0	0	1 300	0	200	12 366	1 500
Dendrobium herbaceum	DPL	KIL	0	0	0	0	0	0	23 000	0	0	0	11 000	34 000	34 000
Dendrobium herbaceum	ROO	KIL	0	0	0	0	0	0	0	0	35 000	0	0	35 000	35 000
Dendrobium lindleyi	LIV		24 875	19 199	20 513	23 140	22 327	21 290	400	0	1	600	250	132 595	1 251
Dendrobium moniliforme	DPL		0	0	0	0	0	0	3 700	0	0	0	0	3 700	3 700
Dendrobium moniliforme	DPL	KIL	0	0	0	0	0	0	5 000	0	0	0	0	5 000	5 000
Dendrobium secundum	LIV		5 931	6 005	3 657	3 622	8 709	3 242	0	1 500	1 210	1 500	0	35 376	4 210
Dendrobium spp.	DPL		0	0	0	0	0	30	10 000	0	0	39	1	10 070	10 040
Dendrobium spp.	LIV		496 037	80 905	63 044	68 174	822	1 408	12 352	104	206	250	650	723 952	13 562
Dendrobium spp.	DPL	KIL	0	0	0	0	0	0	28 000	25 000	0	10 000	0	63 000	63 000
Dendrobium spp.	ROO	KIL	0	500	0	0	0	0	0	0	0	10 000	150 000	160 500	160 000
Dendrobium thyrsiflorum	LIV		17 904	18 556	20 569	20 456	20 149	18 700	800	2 710	735	300	0	120 879	4 545

***Dendrobium* species identified as in international trade for medicinal purposes (Song, 1999)**

Dendrobium acinaciforme	*D. chryseum var.*	*D. exile*	*D. henryi*
D. aduncum	*D. chrysotoxum*	*D. falconeri*	*D. hercoglossum*
D. aphyllum	*D. crepidatum*	*D. fimbriatum*	*D. huoshanense*
D. bellatulum	*D. crystallinum*	*D. gratiotissimum*	*D. nobile*
D. capillipes	*D. densiflorum*	*D. hainanense*	*D. williamsonii*
D. chryseum	*D. devonianum*	*D. hancockii*	

Orchidaceae spp. exported from Viet Nam and Belize

Trade in Orchids from Viet Nam and Belize

UNEP-WCMC has recommended a country-level review of the trade in orchids from Viet Nam. The number of orchids exported from Viet Nam is considered of concern, particularly those exported without being identified to the genus or species level (i.e. as Orchidaceae spp.). Two of the species identified in CITES export data, *Ascocentrum christensonianum* and *Christensonia vietnamica,* were recently described and are certainly wild-collected. The nursery trade in Viet Nam is believed to be based on wild-collected plants (P. Cribb, IUCN SSC Orchid Specialist Group, pers. comm. to IUCN SSC Wildlife Trade Specialist Group).

CITES-reported exports of *Ascocentrum christensonianum* from Viet Nam

Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Live	0	0	0	0	0	50	3421	925	1010	1500	0

CITES-reported exports of *Christensonia vietnamica* from Viet Nam

Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Live	0	0	0	5	0	0	4531	780	1060	0	50

The export of orchids from Belize is similarly potentially cause for concern, and it is not certain if any nursery in Belize is raising plants from seed (P. Cribb, IUCN SSC Orchid Specialist Group, pers. comm. to IUCN SSC Wildlife Trade Specialist Group). Exports of *Encyclia bractescens*, *Myrmecophila tibicinis*, *Oncidium sphacelatum* and *Masdevallia spp.* increased in trade between 1999 and 2002, with mean annual export volumes exceeding 250 specimens. Average annual exports of *Psygmorchis pusilla, Epidendrum stamfordianum* and *Brassavola nodosa* from Belize were also over 250 specimens per year, although with a decreasing trend.

PRIMULACEAE

***Cyclamen* spp.**

COMMON NAME: Cyclamen

DISTRIBUTION: Europe, western Asia and north Africa

CONSERVATION STATUS: No *Cyclamen* species are included in the IUCN Red List

ANNOTATION: #1

Many of the 20 species in this genus are found in the horticulture trade, of which four are said to be widely grown and most readily cultivated (Sandison *et al*. 1999). Parts in trade include live plants and bulbs.

CITES data indicate that there is a widespread trade in wild specimens of three species (*Cyclamen cilicium*, *C. coum*, *C. hederifolium*, with Georgia and Turkey reported to the major countries of export. Smaller numbers (<200) of the following species were also reported in trade: C. *adzharicum, C. colchicum, C. intaminatum, C. mirabile, C. pseudibericum*.

TRAFFIC has also received also reports of widespread trade in *Cyclamen* spp. from countries such as Armenia, Azerbaijan and the Ukraine, with Russia being a key destination. This includes exports from the Ukraine to Russia of Kuznetov Cyclamen, a form of *C. coum* restricted to the Crimea, and now considered one of the rarest plants in Russia (Kreindlin, 2003). Cyclamen harvests for trade are also reported in the Russian Caucasus, and in the Krasnodar region (*C. coum*). The plants are destined for the Russian flower markets and large volumes are sold every spring in Moscow, St-Petersburg and several other large Russian cities. In 2003, approximately 75 000 specimens of *Cyclamen coum* were seized in Moscow according to information received by TRAFFIC Europe. *C. coum* and *C. colchicum* are reported as being especially affected by this trade.

A brief web search revealed that the majority of species in this genus are available for sale. Although it seems likely that many or most are from cultivated stock, it does not seem unlikely that international trade involves wild specimens of species other than those recorded in CITES data. Additional information is provided for the species reported in CITES trade data. Given the large CITES-reported trade volumes in several species and indications of widespread trade outside of CITES controls, consideration should be given to including this genus in the significant trade review.

Cyclamen cilicium

DISTRIBUTION: Turkey

CONSERVATION STATUS: Not listed in IUCN Red List

Turkey's annual export quota for this species from 1999-2002 was: 250 000 tubers.

CITES-reported *exports of C. cilicium* from Turkey

Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Live	330 000	318 855	100 000	53 745	69 850	99 920	250 000	250 000	250 000	250 000	239 500

Cyclamen colchicum

DISTRIBUTION: Georgia

CONSERVATION STATUS: Not listed on IUCN Red List; Included in the 1982 Red Data Book for Georgia (Anon., 2000)

Only 40 specimens of this species were reported in trade. It is reported to be found in an isolated area of the Caucasus mountains of Georgia (Anon., 2004d). In 2002 Russian authorities confiscated 4180 specimens of this species on the Russian-Georgian border (Kreindlin, 2003).

CITES-reported exports of live *Cyclamen colchicum*

Exporter	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Georgia	0	0	0	0	0	0	0	0	0	40	0

Cyclamen coum

DISTRIBUTION: Armenia, Azerbaijan, Bulgaria, Georgia, Islamic Republic of Iran, Israel, Lebanon, Russian Federation, Syrian Arab Republic, Turkey; Ukraine.

CONSERVATION STATUS: Not listed on IUCN Red List. Considered 'Vulnerable' in Georgia according to Missouri Botanic Gardens (2004e). Additional information on status and distribution can be found in PC14 Doc 9.3

CITES-reported trade in wild specimens of this widespread species has increased in recent years from the two range countries reported as exporting this species, Georgia and Turkey. Trade from Georgia, where the species has been characterised as 'vulnerable' by Missouri Botanic Gardens (Anon., 2004e), was first reported in 2001, and doubled in 2002. Reported trade from Turkey exactly matched that country's export quotas in each of the years 1999-2002 (Turkey's 2003 quota was 300 000 tubers). Reported exports of *Cyclamen coum spp caucasicum* were 40 specimens in 2001.

CITES-reported exports of live *Cyclamen coum* and *Cyclamen coum* ssp. *Caucasicum*

Exporter	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Georgia	0	0	0	0	0	0	0	0	0	200 060	400 200
Netherlands	675	0	0	1050	0	0	0	0	0	0	0
Turkey	69 750	152 650	125 800	79 545	98 025	140 000	210 400	250 000	250 000	300 000	300 000

Cyclamen hederifolium

DISTRIBUTION: Albania, Bosnia & Croatia, Bulgaria, France, Greece, Italy, Serbia & Montenegro, Switzerland, Turkey, United Kingdom (introduced)

CONSERVATION STATUS: Not listed in IUCN Red List

This species is reported to be very readily cultivated. Turkey's is the only range State for which exports of wild specimens were reported. Turkey's export quotas for this species have increased from 250 000 plants in 1999 to 1.75 million plants (tubers) in 2002 and 2003.

CITES-reported exports of live *Cyclamen hederifolium* and *Cyclamen hederifolium* var. *hederifolium* fa. *hederifolium*

Exporter	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Netherlands	5 276	1 000	195	35 850	0	0	800	0	0	0	0
Turkey	1 184 375	1 651 000	1 499 228	474 890	1 094 300	1 315 000	1 452 532	1 441 850	1 250 000	1 300 000	1 275 000

VALERIANACEAE

Nardostachys grandiflora

COMMON NAME: Jatamansi (E)

DISTRIBUTION: Afghanistan, Bhutan, China, India, Myanmar, Nepal, Pakistan

CONSERVATION STATUS: Not listed in the IUCN Red List. India: Classified as Critically Endangered at a 1997 CAMP (Conservation Management Assessment Plan workshop)

ANNOTATION: #3

Nardistachys grandiflora was the subject of a CITES significant trade review by the Plants Committee in 1999. This study found that populations had declined in some parts of its Himalayan range due to over-harvesting of rhizomes for use in traditional medicine, perfumes and oils, as well as habitat destruction and loss. Nepal was identified as the primary country of export and India the primary country of import, with rhizomes being the main commodity in international trade (Mulliken, 2000). Trade volumes were estimated at 300 t per year when the species was listed in Appendix II in 1997, and there is no information to indicate a decline in demand since that time. There was no evidence of widespread cultivation in early 2000, with the expectation that the majority of the trade continues to involve wild specimens.

The annotation for this species designates that only whole or sliced roots and parts of roots are subject to CITES provisions, and the listing excludes manufactured parts or derivatives such as powders, pills, extracts, tonics, teas and confectionery. The main form in trade is the rhizome.

CITES-reported trade is limited to exports from China; the export of 12 500 kg of rhizomes was reported in 2001. The lack of further reported trade would seem likely to reflect continued low levels of CITES implementation for the trade in this and other medicinal species traded from Nepal to India as identified by Mulliken (2000). It seems unlikely that the lack of reporting represents confusion regarding and/or a strict interpretation of the annotation.

In view of continuing concerns regarding the status of this species and the likelihood that large scale international trade continues, consideration should be given to reviewing this species via the process set in Resolution Conf. 12.8. Consideration should also be given to recommending to the range States that they submit a proposal to modify the annotation such that rhizomes as well as roots are included.

CITES-reported exports of *Nardostachys grandiflora* from China

Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Roots kg	0	0	0	0	0	0	0	0	0	12 500	0

II. Taxa for which trade levels could be unsustainable, but for which the primary issues of concern appear to be other than Article IV implementation

ARALIACEAE

Panax ginseng

COMMON NAME: Ginseng; Red Ginseng (E)

DISTRIBUTION: China, Democratic People's Republic of Korea, Republic of Korea, Russian Federation

CONSERVATION STATUS: Not Included in the IUCN Red List; Endangered according to IUCN SSC Plants of the Chinese Region Action Plan (in prep.)

Panax ginseng is a herbaceous perennial. The rhizome is used for medicinal purposes. The species is very rare in China and South Korea (Maunder 2000; Pei, 2000) and stocks in the Russian Federation have been declining for over 30 years. The majority of *P. ginseng* in trade is from cultivated sources, however there is still demand for wild specimens.

Panax ginseng is listed in the Red Data Book of the Russian Federation and commercial harvest from the wild is strictly prohibited. Harvest of a few specimens can be allowed for scientific proposes; permits are issued by Ministry of Natural Resources. Based on information available to TRAFFIC, it appears that illegal trade continues and is a major threat to the species despite the CITES listing, with key destinations being China, the Republic of Korea, North Korea and Taiwan. Illegal harvests in the Russian Federation have been estimated at 1500-2000 kg. No legal trade has been recorded in CITES data. Further investigation of what appears to be a significant illegal trade is required.

BERBERIDACEAE

Podophyllum hexandrum

COMMON NAME: Himalayan may-apple (E), Podofilo del Himalaya (S)

DISTRIBUTION: Afghanistan, Bhutan, China, India, Nepal and Pakistan

CONSERVATION STATUS: Not listed in the IUCN Red List. Assessed as Critically Endangered in India (Molur and Walker, 1998). Rare in China (Fu and Jin, 1992). Considered locally rare and threatened elsewhere. Additional information on distribution and status can be found in PC14 Doc 9.3

ANNOTATION: #2

Podophyllum hexandrum was reviewed by Schippmann (2001).

Wild populations of *Podophyllum hexandrum*, a Himalayan medicinal plant species, have declined owing to harvest of the rhizomes for production of herbal and pharmaceutical products, and there is continued concern for its status. Demand for the species is believed to have increased in recent years following the expiration of a patent on the pharmaceutical applications of etoposide, produced from a resin found in the rhizomes of this species, and used to treat cancer and other diseases (Moraes *et al*., 2000). International trade seems likely primarily to involve extracts, rather than rhizomes, although further research is required to confirm this. There is no evidence that demand is being met via cultivated specimens.

CITES-reported trade in this species is limited to exports from China from 1998-2000. Based on indications of strong demand, the lack of additional trade data seems likely to reflect the fact that the annotation for this species excludes chemical derivatives and finished pharmaceutical products, rather than a lack of trade.

It would appear that the trade in this species is taking place at unsustainable levels, but that the majority of this trade is not covered by CITES trade controls under the current annotation. The Plants Committee might consider whether, therefore, this species qualifies for review under the significant trade process,

and further, whether range States should be encouraged to submit a proposal to modify the annotation such that trade is covered in future.

CITES-reported exports of *Podophyllum hexandrum* from China

Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Derivatives (kg)	0	0	0	0	0	0	10 000	0	0	0	0
Roots (kg)	0	0	0	0	0	0	0	570	16 000	0	0
Seeds	0	0	0	0	0	0	0	30	0	0	0

LEGUMINOSAE

Pterocarpus santalinus

COMMON NAME: Red sandalwood; saunderswood (E), Santal rouge (F), Sándalo rojo (S)

DISTRIBUTION: India (small populations possibly introduced elsewhere)

CONSERVATION STATUS: Listed in the IUCN Red List as Endangered (EN B1 + 2de); Additional information on distribution and status can be found in PC14 Doc 9.3

ANNOTATION: #7

This species was reviewed by Schippmann (2001).

The wood of *Pterocarpus santalinus* is highly valued for the manufacture of furniture, musical instruments, cosmetics, dye and for medicinal purposes. Japan has been identified as the main market for the wood of this species outside of India. *P. santalinus* is endemic to India and considered globally endangered, with illegal harvest being a key threat. The scale of such harvests are indicated by government seizures: approximately 1800 t of *P. santalinus* were reported to have been seized in the past decade in India (Anon., 2002), and more recently, 15 t were seized in a single raid in January 2004 (Anon., 2004b). Seized material may be sold by the Government (Anon., 2002), however, under India's Import and Export Policy, this material may only be exported as a value added product (possibly only if processed into a "formulation"). The Andhra Pradesh Forest Department is reported to have 2381 t of confiscated *P. santilinus* available for internal sale (Anon., 2004c). Export of cultivated material is also allowed.

Cultivation is reported, however the success of plantations is unknown. Large quantities of extract (excluded by annotation from CITES provisions), reportedly from artificially propagated sources, have been exported. CITES data do not show evidence of trade in wild-sourced wood, however illegal exports are suspected based on evidence of seizures.

Given India's harvest and export controls, it appears that the primary threat to this species is illegal harvest and trade rather than problems of implementation of Article IV. The Plants Committee might wish to consider seeking confirmation from the Government of India regarding these controls, and calling for support from other CITES Parties in enforcing them.

CITES-reported exports of *Pterocarpus santalinus*

Exporter	Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
India	Extract kg	0	0	0	0	0	0	0	2 497	0	0	0

NB: The distribution of *Pterocarpus santalinus* is restricted to India. Reported exports from Cambodia (30 m^3 of timber in 1999), Madagascar (20 m^3 timber in 2000) and Mexico (one unit of carvings and one unit of wood chips in 1998) therefore seem likely to be mis-reporting or re-exports rather than exports.

OROBANCHACEAE

Cistanche deserticola

DISTRIBUTION: China and Mongolia (possibly other countries in Central Asia)

CONSERVATION STATUS: Not listed in the IUCN Red List; Considered Endangered in China according to Fu and Jin (1992)

ANNOTATION: None

The distribution of this medicinal species is highly restricted; its survival relies on two parasitic plants, *Haloxylon ammodendron* and *H. persicum*, which are threatened as well due to over-collection for firewood and timber (Qin and Rui 2003). The species is heavily exploited in the wild for medicinal use in China and elsewhere, with indications of cross border trade. Information available to TRAFFIC East Asia indicates that cultivation is in very early stages and not capable of meeting demand.

China banned exports of wild specimens of this species in 2000; however, exports of derivatives and stems were reported in 2001 and 2002. There is concern there is also illegal trade in this species, indicating that trade volumes are higher. China submitted a successful proposal to remove the annotation (#3) for this species with the intention of requiring that the trade in any products be conducted according to CITES trade controls (the annotation had referred to roots, when in fact it is stems that are in trade, and had excluded chemical derivatives and finished products). However, it has since been clarified that, in the case of plant species for which there are no annotations, only whole plants are covered by the Convention, i.e., parts, products and derivatives are not covered by the current listing.

The Plants Committee might consider seeking clarification from China regarding current export controls, and, should exports be allowed, the basis for non-detriment findings. The Plants Committee might also consider encouraging the Government of China to submit a proposal to annotate the listing such that all products in trade are covered.

CITES-reported exports of *Cistanche deserticola*

Exporter	Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
China	Derivatives	0	0	0	0	0	0	0	0	0	0	1
China	Derivatives kg	0	0	0	0	0	0	0	0	4 200	0	1 233
China	Derivatives shipments	0	0	0	0	0	0	0	0	0	0	1
China	stems kg	0	0	0	0	0	0	0	0	0	3 750	2 589

SCROPHULARIACEAE

Picrorhiza kurrooa

COMMON NAME: Kutki (E)

DISTRIBUTION: Bhutan, China, India, Nepal, Pakistan

CONSERVATION STATUS: Not listed on IUCN Red List. China: Included in the China Plant Red Data list as a category IIII species. India: Classified as Endangered at a 1997 CAMP (Conservation Management Assessment Plan workshop)

ANNOTATION: #3

Picrorhiza kurrooa, a Himalayan medicinal plant, was the subject of a CITES significant trade review by the Plants Committee in 1999. This study found that there was confusion regarding the species' taxonomy: some authorities believe that the main species in trade is a separate species, *P. scrophulariiflora*, which occurs in Nepal, the country from which the majority of exports were found to take place, and China (Mulliken, 2000). A recommendation to the Nomenclature Committee to review the taxonomy of this genus was included in PC 10 13.2 (Shepherdstown, December 2000), as was a recommendation to treat *Picrohiza scrophulariiflora* as a synonym of *P. kurrooa* until the review was completed. The recommendation to treat *P. kurrooa* as a synonym was rejected by the Plants Committee.

The annotation for this species designates that only whole or sliced roots and parts of roots are subject to CITES provisions, and the listing excludes manufactured parts or derivatives such as powders, pills, extracts, tonics, teas and confectionery. However, strictly speaking, the main form in trade is rhizomes rather than roots.

There are no indications that demand for *Picrorhiza* spp. has declined within India, the main destination country, nor of widespread cultivation, leading to the expectation that large scale trade from Nepal continues. CITES-reported exports of *P. kurrooa* are limited exports from China, although the CITES Management Authority reported in 2000 its belief that the species in China was actually *P. scrophulariiflora* (Y. Zhou, *in litt*. to the CITES Secretariat, 29 February 2000). The lack of trade reporting for exports from Nepal could reflect questions or taxonomy, or the low levels of CITES implementation for this and other medicinal species traded from Nepal to India as identified by Mulliken (2000). It seems unlikely that the lack of reporting represents confusion regarding and/or a strict interpretation of the annotation.

The Plants Committee might consider a further taxonomic review of this species, potentially followed by a recommendation to the range States to develop a proposal for inclusion of the entire genus *Picrorhiza* in Appendix II. Any annotation to such a proposal should also ensure that the trade in rhizomes as well as roots is covered by the Convention.

CITES-reported exports of *Picrorhiza kurrooa* from China

Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Derivatives (kg)	0	0	0	0	0	0	0	0	0	100	0
Extract (kg)	0	0	0	0	0	0	0	0	0	0	300
Roots (kg)	0	0	0	0	0	0	0	0	0	100	300

TAXACEAE

Taxus wallichiana

COMMON NAME: Himalayan Yew (E), If de l'Himalaya (F), Tejo del Himalaya (S)

DISTRIBUTION: Afghanistan, Bhutan, China, India, Malaysia, Myanmar, Nepal, Pakistan, Viet Nam

CONSERVATION STATUS: IUCN Red List - Data Deficient

ANNOTATION: #2

This species was reviewed by Schippman (2001).

Information regarding the (confused) taxonomy of *Taxus* spp. was discussed in PC 10 Doc. 13.3 (Shepherdstown, 2003), and recommendations made at that time that the taxonomy and status of the species be reviewed and reported to PC 11; at PC 11 (Langkawi, September 2001), it was agreed that a document would be prepared by China, France, India and the USA, and noted that the trade was of great concern. These countries were recommended to continue to work on the issue by PC 12 (Leiden, May 2002).

Taxus wallichiana is a small evergreen tree or shrub. The leaves, shoots and bark are used for medicinal purposes, including the extraction of taxanes, which are used in the treatments of various cancers; the anti-cancer drug Taxol has been produced from a taxane found in *T. wallichiana* (Schippmann, 2001). Although globally assessed as Data Deficient, regional threat assessments indicate local threats to the taxon. The species is reportedly heavily over-exploited especially in China (Wang *et al.*, 1999) and is assessed as Critically Endangered according to the IUCN SSC Plants of the Chinese Region Action Plan (Wang and Yang, in prep.). In addition, the State Governments of Arunachal Pradesh and Himachal Pradesh have apparently banned its extraction from the forests according to information presented at a recent regional CAMP workshop (D.K. Ved, FRHLT, *in litt.* to IUCN SSC). Under India's Export and Import Policy, exports of the species in the form of wild plants, plant portions and their derivatives and extracts is prohibited. However, an exception is made for the export of wild "formulations", products that may contain portions/extracts of such plants but only in unrecognisable and physically inseparable forms.

Four tonnes of derivatives were reported as exported from China in 1999 and smaller amounts of extract exported in 2000-2002. Schippmann (2001) noted that *Taxus wallichiana* was likely to be in international trade, but not sufficiently reported. Web sites viewed in 2004 advertised leaves of *Taxus baccata* "Himalyan Yew" for sale for international trade from India (Hillgreen) and from Nepal (Natural Resources Industries). However the distribution of *Taxus baccata* the European Yew stretches from Europe to northern Iran, possibly this trade is in cultivated *Taxus baccata*, or possibly the taxon has been mis-identified.

Clarification of the taxonomy of this species and species and parts involved in international is required. More specifically, further research to assess whether *T. wallichiana* continues to be traded in significant volumes, the form in which the species is traded, and whether this trade is having a negative impact on the species.

CITES-reported exports of *Taxus wallichiana* from China

Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Derivatives (kg)	0	0	0	0	0	0	0	4 000	0	0	0
Extract (kg)	0	0	0	0	0	0	0	0	56	38	3

III. Taxa traded in significant volumes for which available Information indicates that a review by the Plants Committee is not necessary at this time

ARALIACEAE

Panax quinquefolius

COMMON NAME: American Ginseng (E), Ginseng Americano (S), Ginseng d'Amérique (F)

DISTRIBUTION: Canada, China and the USA

CONSERVATION STATUS: not listed in the IUCN Red List

The large scale trade in wild specimens is limited to the USA. A combination of state and federal harvest management requirements appear sufficient to maintain the trade within sustainable levels, although poaching remains a concern. Export of wild specimens from Canada is prohibited.

CITES-reported exports of *Panax quinquefolius*

Exporter	Terms	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
United States	Live	0	0	0	0	0	0	0	14	0	0	0
United States	Roots (kg)	444	0	0	0	0	0	0	80	20	0	0
United States	Roots (kg)	65 899	58 503	65 344	54 278	54 173	51 101	32 016	30 918	37 714	26 062	35 553
Australia	Roots (kg)	0	0	0	0	0	0.2	0	0	0	0	0
Canada	Roots (kg)	0	0	0	0	9	0	0	0	0	24 062	7
Hong Kong	Roots (kg)	0	0	0	933	0	0	0	0	0	0	22
Russian Fed.	Roots (kg)	0	0	7	0	0	0	0	0	0	0	0

CYATHEACEAE

Initially a number of tree fern species with high export volumes (see below) were also identified as potentially subject to significant trade. However, according to communications from the Pteridophyte Specialist Group, the following species: *Cyathea cunninghamii, Cyathea dealbata, Cyathea medullaris* and *Cyathea smithii* are collected from commercial timber plantations in New Zealand (Pers. comm. D. Given and B. Parris). During the time between planting and harvesting of Monterey Pine *Pinus radiata* and Douglas Fir *Pseudotsuga menziesii* (28 to 50 years), tree ferns self seed and flourish amongst the pines. Before the plantation owners harvest a block, tree fern exporters are notified and all the tree ferns are removed before they are destroyed. One plantation in central North Island totals 281 000 hectares (694 000 acres), and after establishment in 1902 is harvested on a rotational basis as a large production forest.

The Slender Tree Fern *Cyathea cunninghamii* is restricted in distribution to Australai, New Zealand and the Tuamotu Islands of French Polynesia. Only 20 live speciemens were reported as exported from Australia in 2001. Exports from Australia are subject top a management plan. New Zealand is the major exporter, with a live export trade reported from 1997-2002, reaching a peak of 3241 individuals in 2002. Timber exports in 2001 from New Zealand were reported as 67 456, presumably representing pieces.

Silver Tree Fern *Cyathea dealbata* is restricted in distribution to New Zealand. CITES-reported exports of this species are recorded from 1995-2002, the trade reaching a high of 4256 live specimens in 2002.

Black Tree Fern *Cyathea medullaris* occurs in Australia, Fiji, French Polynesia, New Zealand, the Pitacirn Islands and Samoa. The majority of reported exports were from New Zealand, and comprised a mixture of dried plants, timber and live plants. The live plant trade has beeen the most substantial, with a high of 4391 recorded in 2002.

The Soft Tree Fern *Cyathea smithii* is restricted in occurrence to New Zealand, trade in live plants, dried plants and timber has been recordedfrom1993- 2002. The majority of trade has been in live plants, with a high of 4115 reported in 2002.

DICKSONIACEAE

Dicksonia sellowiana

COMMON NAME: -

DISTRIBUTION: Argentina , Bolivia, Brazil, Colombia, Costa Rica, Ecuador , El Salvador, Guatemala, Honduras, Mexico , Nicaragua, Panama, Paraguay, Peru, Uruguay, Venezuela

CONSERVATION STATUS: Not listed in the IUCN Red List

There are no official reports on the export of *Dicksonia sellowiana* from Brazil since 1999, but the species is still harvested for orchid growing and fibre, harvests considered a cause for concern (Pers. comm. C. Jermy, Pterophytes Specialist Group).

INTERNATIONAL TRADE

CITES-reported exports of *Dicksonia sellowiana* from Brazil

Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Carvings	6 500	8 500	0	0	0	0	0	0	0	0	0
Dried plants	37 526	20 250	1 204	0	0	14 421	18 127	4 200	0	0	0
Dried plants (m^3)	0	53	20	0	0	0	5 241	0	0	0	0
Dried plants (L)	0	0	10	0	0	0	0	0	0	0	0
Extract (m^3)	9	0	0	0	0	0	0	0	0	0	0
Flowers	0	3 300	0	0	0	0	0	0	0	0	0
Live	400	3 870	50	50	0	0	0	0	0	0	0
Timber	5 446	3 782	1 710	0	0	0	0	0	0	0	0
Timber	0	0	35	0	0	0	0	0	0	0	0

NEPENTHACEAE

Nepenthes mirabilis

COMMON NAME: Pitcher Plant

DISTRIBUTION: Australia, Brunei Darussalam, Cambodia, China , Hong Kong, Indonesia, Lao P.D.R., Malaysia, Palau, Papua New Guinea, Philippines, Solomon Islands, Thailand and Viet Nam export reported from Thailand

CONSERVATION STATUS: Not listed on IUCN Red List

The international trade in this carnivorous species has increased over the past few years, however: the genus is widespread. Most of the trade is in artificially propagated specimens and the export quantities reported as wild by Thailand would not suggest a problem.

CITES-reported exports of *Nepenthes mirabilis*

Exporter	Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Thailand	Live	0	100	11	12	60	634	0	0	0	420	6 375
Brunei Dar.	Dried plants	0	0	0	0	0	0	2	0	0	0	0
Indonesia	Live	0	0	3	0	0	0	0	0	0	0	0

ORCHIDACEAE

Bletilla striata

COMMON NAME: Purple ground orchid (E)

DISTRIBUTION: China, Hong Kong, Japan, Republic of Korea

CONSERVATION STATUS: Not listed on IUCN Red List; local status rare in parts of Japan. Additional distribution and status information provided in PC14 Doc 9.3

ANNOTATION: #7

The species was reviewed by Schippmann (2001).

Bletilla striata, a widely distributed orchid species, is used for both ornamental and medicinal purposes. Much of the ornamental trade is apparently supplied by artificially propagated specimens. Trade in medicinal products involves roots, or more specifically, rhizomes, and products made therefrom. The species is reported to be easily cultivated, CITES trade data showing exports of artificially propagated roots of this species from China and Japan, and live specimens from a number of countries. Concern has not been expressed that international trade in this species is at unsustainable levels.

CITES-reported exports of *Bletilla striata*

Exporter	Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
China	Derivatives kg	0	0	0	0	7600	0	0	5	2	0	0
	Derivatives cartons								300			
China	Derivatives shipments	0	0	0	0	0	0	0	130	0	0	0
China	dried plants kg	0	0	0	0	0	0	0	198	300	0	0
China	Live (cartons)	0	0	0	0	5	0	0	0	0	0	3000
Viet Nam	Live	0	0	0	0	0	0	17	0	0	0	0

RANUNCULACEAE

Hydrastis canadensis

COMMON NAME: Goldenseal

DISTRIBUTION: Canada and the USA

CONSERVATION STATUS: Not listed on IUCN Red List

Export volumes have declined significantly in recent years, and there is no indication at present that harvest for international trade is having a detrimental effect on wild populations.

CITES-reported exports of *Hydrastis canadensis* from the USA

Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Dried plants kg	0	0	0	0	0	0	4 534	0	0	0	60
Live kg	0	0	0	0	0	0	25	0	0	0	0
Roots kg	0	0	0	0	0	0	803	130	1541	256	60

ANNEX 1

Annotations for Flora in the CITES Appendices

In accordance with Article I, paragraph (b), sub-paragraph (iii), of the Convention, the symbol (#) followed by a number placed against the name of a species or higher taxon included in Appendix II or III designates parts or derivatives which are specified in relation thereto for the purposes of the Convention as follows:

#1 Designates all parts and derivatives, except:

a) seeds, spores and pollen (including pollinia);

b) seedling or tissue cultures obtained *in vitro*, in solid or liquid media, transported in sterile containers; and

c) cut flowers of artificially propagated plants.

#2 Designates all parts and derivatives, except:

a) seeds and pollen;

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) chemical derivatives and finished pharmaceutical products.

#3 Designates whole and sliced roots and parts of roots, excluding manufactured parts or derivatives such as powders, pills, extracts, tonics, teas and confectionery.

#4 Designates all parts and derivatives, except:

a) seeds, except those from Mexican cacti originating in Mexico, and pollen;

b) seedling or tissue cultures obtained *in vitro*, in solid or liquid media, transported in sterile containers;

c) cut flowers of artificially propagated plants;

d) fruits and parts and derivatives thereof of naturalized or artificially propagated plants; and

e) separate stem joints (pads) and parts and derivatives thereof of naturalized or artificially propagated plants of the genus *Opuntia* subgenus *Opuntia*.

#5 Designates logs, sawn wood and veneer sheets.

#6 Designates logs, sawn wood, veneer sheets and plywood.

#7 Designates logs, wood-chips and unprocessed broken material.

#8 Designates all parts and derivatives, 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*

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