

CITES World

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Convention on international Trade
in Endangered Species of Wild Fauna and Flora (CITES)

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From the Editor

The title of the Convention is clear: CITES applies to both animals and plants, and in fact, there are many times more species of plants than animals in the Appendices. Yet despite having an equal status in the eye of the Convention and being dominant in numbers, plants seldom receive the attention and visibility they deserve. The trade in CITES-listed plants is no less complex than that in animal species, and the illegal trade in plants is an issue of concern for all Parties. This illegal trade can involve trade without documents and documents issued for different specimens and, very frequently, can involve fraudulent claims of artificial propagation that can be difficult for the non-specialist to detect. In this ninth issue of *CITES World* we present articles on the plant trade from the perspective of producing and

importing countries, and look at how botanical gardens can support national efforts to tackle illegal plant trade. We also provide tips on differentiating between wild-sourced and artificially propagated orchids, and consider advances in CITES implementing legislation for plants. With this issue of *CITES World* we remind ourselves that CITES is equally about regulating the trade in plants, and that illegal trade in CITES-listed plants is a continuing problem that requires the attention of all Parties.

In a few months the CITES community will meet in Santiago, Chile, from 3 to 15 November 2002, for the 12th meeting of the Conference of the Parties. To help with the preparations for this meeting, we are providing our readers with a detachable list of proposals to amend the Appendices. See you in Santiago!

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Illicit trade in live plants

Within the European Community, Germany is one of the major consumer countries of imported live plants. There are many highly specialized nurseries and collectors in Germany, dealing among others with the propagation of CITES-listed plants.

Unfortunately, the illegal import of protected live plants still occurs in Germany, sometimes in significant amounts. Persons involved in these unlawful activities can be categorized according to their differing motivations. These are tourists, ambitious private collectors and professional smugglers with major commercial interests.

The plant-smuggling tourist is mainly interested in bringing back home the lovely flowering plants that he/she sees while travelling, and this usually involves smuggling 1-10 plants without any of the documents required. Very often, these plants have been artificially propagated in nurseries.



The illegal collector is usually interested in a special group of plants, for example Asian lady slipper orchids (*Paphiopedilum* spp.) or Mexican cacti of the genus *Turbinicarpus*. The illegal collectors may smuggle in plants for their own collection, and may propagate them for exchange or sale to other collectors. They usually import a greater variety of plants than would have originated from nurseries, and in most occasions bring in plants that have been collected in the wild. Some highly specialized collectors have also a strong taxonomic or other scientific interest in their plants. They may be highly motivated to search for new and undescribed taxa, and engage in collecting expeditions to extremely remote areas in the world.



Photo: Hamme - Flickr

Echinocereus gentryi

Professional smugglers are mostly interested in the commercial value of plants. Their usual approach is to smuggle great numbers of single species, mostly those with a high commercial value.

According to German enforcement officials, there are currently two plant groups that predominate in unlawful activities. These are orchids from Southeast Asia, especially from China, Vietnam and adjacent countries, and cacti from Central America, and Mexico. The following examples illustrate recent investigations and help to explain the current battle concerning illegal trade in CITES-protected plants.

During a regular review of plant taxonomic journals, a German hobbyist was noted to have described several new orchid species of the Appendix-I listed genus *Paphiopedilum*. The holotype of one of the newly described species had been deposited in the herbarium of a *bona fide* botanical garden in Germany. A check of the files determined that no import permits had been issued for such orchids for research purposes. A subsequent investigation revealed that the hobbyist had received several plants from a contact in Japan, and in addition that these plants had been collected in the wild in Vietnam and China. This case was handed over to the public prosecutor.

In May 2001, the German Customs authority, after having been informed by the Management Authority, checked an import of several hundred orchids from Taiwan, Province of China. The importer declared that all documents were available. According to the CITES-equivalent documentation all plants had been artificially propagated. Because of a general suspicion that illegal activities might be involved, experts checked the shipment. They found the documents did not match the entire shipment, which contained among others 57 specimens of the genus *Paphiopedilum* and 141 specimens of a very rare Pacific islands species of the genus *Dendrobium*. All plants had been collected in the wild.

In October 2001, a German citizen, known to be a professional collector with close contacts to a well-known orchid specialist living in Thailand, informed Customs that he wished to collect the personal luggage of his father that was being forwarded to him by a friend in Vietnam. Customs asked to open the luggage; and inside were 78 wild-taken specimen of Appendix-I listed orchid species and 26 specimens of Appendix-II listed species.



Photo: Greg Allises, www.orchidworks.com

Paphiopedilum charlesworthii

In March 2000, the Dutch Customs at Amsterdam's Schiphol Airport checked the personal luggage of a German traveller arriving from Mexico. Hidden in the four suitcases beneath the personal belongings were 927 live specimens of 18 endemic Mexican cacti species (including *Ariocarpus*, *Astrophytum*, *Aztekium*, *Echinocereus*, *Obregonia*, *Pelecypora*, *Strombocactus* and *Turbinicarpus*), all of which had been taken from the wild. This information was immediately transmitted to the German Customs, which led to a search of the German traveller's premises, and it was found he had propagated around 3,000 cactus specimens in his greenhouses. During the

search a connection was discovered to another person who owned a small nursery specialized in rare cacti species. During the ongoing investigation reports and maps were found with precise information on all the places where the plants had been collected in the wild.

The case of the cactus collector from Mexico is not an isolated one. In the past we have had important cases when people tried to smuggle several hundred (and up to 1,800) specimens of endemic Mexican cactus species. In several cases road atlases and maps were found that identified where plants were collected, often involving several trips.

These cases show clearly the persisting problems that all enforcement and in particular Customs officers face in their work:

- identification of the specimens to species level is only possible by highly specialized experts;
- the determination that plants declared as artificially propagated have in fact been collected from the wild can in many cases only be made by experts or officers with special training;
- people involved in illegal activities often know about the regulations and identification problems, and in many instances it has been easy for them to mix legal and illegal plants in one shipment and to use lawfully issued documents to cover their illegal activities;
- all too often court cases can become a dispute between specialists over whether the specimens were taken from the wild or artificially propagated, and if sufficient doubt exists, the judge may proceed on the basis that the defendant is right and he will be set free.

The CITES Management Authority of Germany

Is that orchid wild-collected or artificially propagated?

Orchids can be found on all continents and all climate zones but for the Arctic and Antarctica and form the largest family of plants, with over 20,000 species in 750 genera as a conservative estimate. In the temperate zones the orchids are mainly terrestrial. In the tropics and subtropics orchids are mainly epiphytic or lithophytic, meaning they grow



Photo: G. van Vliet

*Artificially propagated hybrids of *Phalaenopsis* spp. in a controlled environment.*

on trees or rocks, or in the loose leaf litter on the forest floor.

Artificially propagated orchids are traded in enormous quantities, forming probably more than 90% of the total volume of orchids traded internationally. There are nurseries that produce annually more than 35 million orchid plants, many to be sold on the national markets. Although the legal trade in wild-collected orchids only forms a small proportion of the total volume, there is unfortunately an important illegal trade associated with it. There are collectors who want to have specimens of wild origin, or particular species that are not available as artificially propagated ones, often from countries that prohibit the export of all plants of wild origin. Other collectors are interested in species that are included in Appendix I. In particular the Asian slipper orchids (*Paphiopedilum* spp.) are very popular, and illegally acquired wild specimens are regularly offered for sale.



Photo: G. van Vliet

A seizure of South American orchids illegally collected from the wild. Some of the lichens are still attached to the plants they were growing with.

The form in which orchids are usually traded, namely without flowers, makes it difficult to iden-

tify them to the species level (though some orchid genera are easy to recognize from their shape). A critical distinction in combating illegal trade is the ability to distinguish between wild-collected and artificially propagated plants. Enforcement efforts should first determine whether the orchids in a shipment are wild-collected or artificially propagated and, as this article explains, it is not that difficult to determine this.



Photo: Hortus Botanicus, Leiden

*A tell-tale clue: Wild-collected *Dendrobium* spp., with roots still attached to bark from the tree it was growing on.*

The definition of 'artificially propagated', found in Resolution Conf. 11.11, *Regulation of trade in plants*, makes specific reference to the need for such plants to have been produced under controlled conditions: an environment designed for the production of plants, heavily controlled by man. This control may involve potting and repotting, insect control, protection against sunburn, regular watering and feeding, and so on. A plant in nature cannot benefit from the care given under controlled conditions, and has to suffer from water shortage, insects, hungry mammals and other threats. These provide the clues to be sought first.

Look at the roots

Orchids collected from nature travel from the collector to the exporter, often via middlemen. During this period of handling roots may partly or wholly die off. Orchid roots are fleshy structures, covered by a skin (velamen) that is frequently silvery white of colour, and with a green or white tip. The roots largely serve to hold the plant on branches and stems of trees or on rocky surfaces. Frequently they are so strongly attached that the roots have to be torn or damaged when the plant is removed from its substrate, or part of the substrate may remain attached. Only the tip of the root serves to absorb water, either from moisture in the air or from water flowing along the substrate on which it is 'sitting'. When the root dies, the fleshy outside layer

quickly withers into a brown powdery substance, and only the tough woody cells that surround the central vascular bundle of the root are left. In addition, roots or root clumps may also reflect the shape of the branch or rock they were growing upon, and appear uneven in shape. For orchids growing on trees, the roots generally grow parallel to one another, following the path of the water runoff. Artificially propagated plants, on the other hand, have live and healthy roots, growing in different directions and frequently reflecting the shape of the pot that they were grown in.



Photo: Hortus Botanicus, Leiden

*The roots of these *Paphiopedilum* spp. are mostly dead, and some only have the central vascular bundle left. The leaves of the two plants on the left show evidence of attacks from insects. Some leaves have been bent during transport. Conclusion: These plants are collected from the wild.*

Look at the leaves

During packing and transport from the wild, the leaves of wild-collected plants are often crushed or torn. In addition many leaves show evidence of chewing by insects or small mammals, have light coloured spots caused by boring insects or holes caused by tunnelling larvae. Leaves with lichens, mosses, liverworts or algae colonies are also invariably of wild origin. Thirdly the prolonged travel from the wild to their final destination can cause damage through desiccation. As the plants lose water, their leaves lose their turgidity, and cracks appear in the cuticle on the leaf blade, especially along the midrib. Groups of cells in the epidermis may collapse, assuming the form of clustered depressions. However, these signs may also be found in artificially propagated plants that have not been properly taken care of. Artificially propagated plants generally have healthy, undamaged leaves.



Photo: G. van Vliet

A Paphiopedilum specimen showing the damaged roots and leaves, and uneven growth characteristics typical of wild-collected orchids



Photo: Hortus Botanicus, Leiden

A wild-collected Dendrobium specimen. This plant has old pseudobulbs still present, its leaves are damaged by insects, and its roots, though cut short, still display parallel growth characteristics.



Photo: G. van Vliet

Leaf of a wild-collected Paphiopedilum specimen. with cracks along the midrib and clusters of collapsed cells, indicating damage from desiccation.



Photo: Hortus Botanicus, Leiden

An artificially propagated orchid will have complete, live roots that reflect the shape of the pot it grew in, and healthy leaves free from insect and other damage.

A word of caution

In some parts of the world orchids are grown out of doors under non-controlled conditions (e.g. on trees in coffee plantations, large gardens or without any protection against the natural environment). These cannot be traded as 'artificially propagated, because the 'controlled conditions' do not apply. It may be difficult to distinguish these orchids from truly wild-collected ones. For reason of clarity, especially in court cases, it is better to distinguish between plants that comply with the definition of 'artificially propagated' and those that do not, rather than stating that specimens not artificially propagated are by definition 'wild-collected'.

CITES Secretariat

Botanic gardens and CITES

Botanic gardens vary dramatically in size and resources but every one can help their national authorities in the implementation of the Convention. All botanic gardens have knowledge of tending and growing plants, know the difference between wild and



propagated plants and have some knowledge of what plants are in trade. Botanic garden staff also have enthusiasm for the plants they grow – a vital asset in grabbing the attention of a world-weary Customs officer!

How can botanic gardens help enforcement agencies?

Training

Enforcement officers need to know the basic plant groups covered by the Convention and which plant groups are likely to be artificially propagated. A small training seminar targeting the main species in trade and also looking at what form the species are traded can dramatically raise the awareness of enforcement officers. It's also important for enforcement officers to be aware that many plants presently controlled by CITES are artificially propagated. The better trained enforcement officers are at targeting wild plants the stronger the case for removal of propagated plants from CITES controls.

In the majority of CITES Parties, staff responsible for enforcing CITES controls also have to enforce a host of other legislation. They do receive general training but Customs training facilities are often bleak and soulless – at least in the UK! Why not arrange to have some of the general Customs training to be held at the national botanic garden? The garden will provide an atmosphere much more conducive to learning and you can easily include some CITES plant training. In return botanic gardens will benefit from gaining an understanding of how enforcement agencies work and get first hand advice on how CITES controls apply to their garden. The building of a small CITES reference collection of living plants used in CITES training can also be used in the botanic gardens education programmes. Your national botanic garden may be running training programmes or seminars that have modules that enforcement staff can attend.

CITES works best where there is a strong relationship between exporting and importing countries and an understanding of the problems each side faces. Study and training visits are vital tools in capacity building. If both sides understand the structure of the trade they can work together to target illegal trade. Aid agencies are willing to fund such exchanges. Botanic gardens in major importing countries are ideally placed to host such visitors. They can use the botanic gardens as a base while getting to grips with the structure of the importing countries trade and CITES agencies. Training and enforcement tools can be developed directly relating to their needs.

Identification of possible detrimental trade

Enforcement authorities often target areas of high risk. Botanic gardens may often be able to point enforcement authorities towards the CITES plants that are vulnerable to illegal trade. Simple information even relating to the time of year that plants are in flower and 'attractive' to overseas collectors may suggest a good time to do spot checks at airports. They will also know of reports of newly described species or new sites, which may again attract collectors.



Photo: Botanic Gardens

Customs authorities examining a shipment of plants. Botanic gardens can help train Customs officers in basic plant identification and in distinguishing artificially propagated from wild-collected plants

Identification and holding of confiscated material

This is an area that is fraught with difficulties. It is vital that enforcement authorities have access to experts that can identify confiscated material. If botanic garden staff are used it is important that they are aware that they may have to back up that opinion by appearing as a witness in a court of law and be subject to cross-examination. Similarly seized plants are potential 'evidence' for enforcement officers but to botanic gardens they are living plants – often in very poor condition that have to be cared for and draw heavily on the resources of a small botanic garden.

Botanic gardens and CITES enforcement agencies can work together to detect and defeat illegal trade. The first step is to contact each other and identify some simple targets. A good starting point to identify possible partner gardens is the website of Botanic Gardens Conservation International at <http://www.bgci.org.uk>.

Noel McGough, Head of Conservation and Policy Section, Royal Botanic Garden, Kew



Proposals for amendment of Appendices I and II

Twelfth meeting of the Conference of the Parties

3 to 15 November 2002, Santiago (Chile)



No.	Proponent	Species covered by the proposal	Proposal
1	Switzerland		Amendment of Annotation °607 to exclude from the Convention: a) synthetically derived DNA that does not contain any part of the original; b) urine and faeces; c) synthetically produced medicines and other pharmaceutical products such as vaccines that do not contain any part of the original genetic material from which they are derived; and d) fossils
FAUNA			
2	Switzerland	Lovebirds <i>Agapornis</i> spp., <i>Rosellas</i> <i>Platycercus</i> spp., Ringneck parrots <i>Barnardius</i> spp., Yellow-crowned parakeet <i>Cyanorhamphus auriceps</i> , New Zealand parakeet <i>C. novaezelandiae</i> , Alexandrine parakeet <i>Psittacula eupatria</i> , Ring-necked parakeet <i>P. krameri</i> and Java sparrow <i>Padda oryzivora</i>	Annotation to exclude colour morphs produced by captive breeding
3	Georgia	Black Sea bottlenose dolphin <i>Tursiops truncatus ponticus</i>	Transfer from Appendix II to Appendix I
4	Japan	Minke whale <i>Balaenoptera acutorostrata</i>	Transfer from Appendix I to Appendix II of northern hemisphere populations (except the Yellow Sea, East China Sea and Sea of Japan populations), with annotation *
5	Japan	Bryde's whale <i>Balaenoptera edeni</i>	Transfer from Appendix I to Appendix II of the western North Pacific population, with annotation *
6	Botswana	African elephant <i>Loxodonta africana</i>	Amendment of annotation °604 *
7	Namibia	African elephant <i>Loxodonta africana</i>	Amendment of annotation °604 *
8	South Africa	African elephant <i>Loxodonta africana</i>	Amendment of annotation °604 *
9	Zambia	African elephant <i>Loxodonta africana</i>	Transfer of the Zambian population from Appendix I to Appendix II for the purpose of allowing: a) trade in raw ivory under a quota of 17,000 kg of whole tusks owned by

No.	Proponent	Species covered by the proposal	Proposal
			Zambia Wildlife Authority (ZAWA) obtained from management operations; and b) live sales under special circumstances.
10	Zimbabwe	African elephant <i>Loxodonta africana</i>	Amendment of annotation °604 *
11	India, Kenya	African elephant <i>Loxodonta africana</i>	Transfer to Appendix I of populations currently included in Appendix II
12	Argentina	Vicuna <i>Vicugna vicugna</i>	Transfer from Appendix I to Appendix II of the population of the province of Catamarca
13	Bolivia	Vicuna <i>Vicugna vicugna</i>	Transfer to Appendix II of the populations of Bolivia that are in Appendix I
14	Chile	Vicuna <i>Vicugna vicugna</i>	Transfer from Appendix I to Appendix II of the population of the <i>Primera Región</i> of Chile through a modification of annotations – 106 and + 211.
15	Chile	Lesser Rhea <i>Rhea pennata pennata</i>	Transfer from Appendix I to Appendix II of the Chilean population
16	Costa Rica	Yellow-naped parrot <i>Amazona auropalliata</i>	Transfer from Appendix II to Appendix I
17	Mexico	Yellow-headed parrot <i>Amazona oratrix</i>	Transfer from Appendix II to Appendix I
18	Germany	Blue-headed macaw <i>Ara couloni</i>	Transfer from Appendix II to Appendix I
19	South Africa	Cape parrot <i>Poicephalus robustus</i>	Transfer of the South African population from Appendix II to Appendix I
20	China, United States of America	Big-headed turtle <i>Platysternon megacephalum</i>	Inclusion in Appendix II
21	China, Germany,	Annam pond turtle <i>Annamemys annamensis</i>	Inclusion in Appendix II
22	China, Germany	Arakan forest turtle <i>Heosemys depressa</i> , Giant Asian pond turtle <i>H. grandis</i> , Philippine pond turtle <i>H. leytensis</i> , Spiny turtle <i>H. spinosa</i>	Inclusion in Appendix II (<i>Heosemys spp.</i>)
23	China, United States of America	Yellow-headed temple turtle <i>Hieremys annandalii</i>	Inclusion in Appendix II
24	India, United States of America	Three-striped roofed turtle <i>Kachuga dhongoka</i> , Red-crowned roofed turtle <i>Kachuga kachuga</i> , Brown roofed turtle <i>Kachuga smithii</i> , Assam roofed turtle <i>Kachuga sylhetensis</i> , Indian roofed turtle <i>Kachuga tentoria</i> , Burmese roofed turtle <i>Kachuga trivittata</i> , <i>Kachuga spp.</i> (except <i>K. tecta</i>)	Inclusion in Appendix II
25	China, Germany	Sulawesi forest turtle <i>Leucocephalon yuwonoi</i>	Inclusion in Appendix II
26	China, United States of America	Yellow pond turtle <i>Mauremys mutica</i>	Inclusion in Appendix II



No.	Proponent	Species covered by the proposal	Proposal
27	China, Germany	Malaysian giant turtle <i>Orlitia borneensis</i>	Inclusion in Appendix II
28	China, United States of America	Keeled box turtle <i>Pyxidea mouhotii</i>	Inclusion in Appendix II
29	China, United States of America	Black marsh turtle <i>Siebenrockiella crassicollis</i>	Inclusion in Appendix II
30	Cuba	Hawksbill turtle <i>Eretmochelys imbricata</i>	Transfer of the population in Cuban waters from Appendix I to Appendix II for the exclusive purpose of exporting its stockpile of shell plates (7,800 kg), with annotation *
31	China, United States of America	Southeast Asian narrow-headed softshell turtle <i>Chitra chitra</i> , Indian narrow-headed softshell turtle <i>C. indica</i> , all other <i>Chitra</i> spp.	Inclusion in Appendix II
32	China, United States of America	New Guinea giant softshell turtle <i>Pelochelys bibroni</i> , Asian giant softshell turtle <i>P. cantorii</i>	Inclusion in Appendix II (<i>Pelochelys</i> spp.)
33	New Zealand	<i>Hoplodactylus</i> spp. and <i>Naultinus</i> spp.	Inclusion in Appendix II
34	United States of America	Orange-throated whiptail lizard <i>Cnemidophorus hyperythrus</i>	Deletion from Appendix II
35	India, the Philippines	Whale shark <i>Rhincodon typus</i>	Inclusion in Appendix II
36	United Kingdom of Great Britain and Northern Ireland	Basking shark <i>Cetorhinus maximus</i>	Inclusion in Appendix II
37	United States of America	Seahorses <i>Hippocampus</i> spp.	Inclusion in Appendix II
38	United States of America	Humphead wrasse <i>Cheilinus undulatus</i>	Inclusion in Appendix II
39	Australia	Patagonian toothfish <i>Dissostichus eleginoides</i> , Antarctic toothfish <i>D. mawsonii</i>	Inclusion in Appendix II, with annotation *
40	Germany	Sri Lankan rose <i>Atrophaneura jophon</i> , and <i>A. pandiyana</i>	Inclusion in Appendix II
41	Germany	<i>Papilio aristophontes</i> , <i>P. nireus</i> and <i>P. sosia</i>	Inclusion in Appendix II
FLORA			
42	Argentina	Monkey puzzle tree <i>Araucaria araucana</i>	Inclusion in Appendix I (all populations)
43	Switzerland	All CACTACEAE taxa listed in Appendix II	Amendment of the text of the annotation °608 that refers to artificially propagated specimens (cultivars) of <i>Gymnocalycium mihanovichii</i> forms lacking chlorophyll *



No.	Proponent	Species covered by the proposal	Proposal
44	Switzerland	<i>Opuntioideae spp.</i>	Deletion from Appendix II
45	Switzerland	<i>Pereskioideae spp., Pereskopsis spp. and Quiabentia spp.</i>	Deletion from Appendix II
46	United States of America	<i>Sclerocactus nyensis</i>	Transfer from Appendix II to Appendix I
47	United States of America	<i>Blaine's pincushion Sclerocactus spinosior ssp. blainei</i>	Transfer from Appendix II to Appendix I
48	United States of America	<i>Santa Barbara Island dudleya Dudleya traskiae</i>	Transfer from Appendix I to Appendix II
49	South Africa	<i>Aloe thorncroftii</i>	Transfer from Appendix I to Appendix II
50	Nicaragua	<i>Bigleaf mahogany Swietenia macrophylla</i>	Inclusion in Appendix II of the neotropical populations, including logs, sawn wood and veneer sheets
51	United States of America	Appendix-II ORCHIDACEAE spp.	Annotation of Orchidaceae in Appendix II, to exclude artificially propagated specimens of hybrids within the genera <i>Cattleya</i> , <i>Cymbidium</i> , <i>Dendrobium</i> (<i>phalaenopsis</i> and <i>nobile</i> types only), <i>Oncidium</i> , <i>Phalaenopsis</i> and <i>Vanda</i> , including their intergeneric hybrids, under certain conditions *
52	China	<i>Cistanche deserticola</i>	Deletion of the annotation to <i>Cistanche deserticola</i> in Appendix II
53	United States of America	<i>Maguire's bitter-root Lewisia maguirei</i>	Deletion from Appendix II
54	Germany	<i>Lignum vitae Guaiacum spp.</i>	Inclusion in Appendix II of all parts and derivatives, including wood, bark and extract.

* For details of the relevant annotations, please consult our website www.cites.org



The devil's claw and CITES

The devil's claw (*Harpagophytum spp.*) is indigenous to the arid savannah areas of Botswana, Namibia and the Republic of South Africa. It has significant medicinal properties and a substantial trade in dried plant tubers currently takes place from Botswana, Namibia and South Africa. The indigenous San and Khoi peoples of southern Africa have used devil's claw tubers for medical purposes for centuries. Europeans discovered the tuber's medicinal properties from local people in 1907, and since 1962 this plant has been exported to Europe and used in the production of herbal medicines to treat mainly arthritis and rheumatism.

Commercial harvesting of the devil's claw has been occurring in Namibia and Botswana since the 1960's and has recently begun in South Africa. Poor marginalized communities harvest the devil's claw in very remote areas of the Kalahari Desert. The arid system of the Kalahari provides restricted livelihood opportunities for rural people. An estimate of 20,000 families depend on the devil's claw for their main source of income. Earnings from harvesting are very low with harvesters receiving between USD 0.80 and USD 2.10 per dry kilogram of tubers. This equates to on average of less than one per cent of the income generated by pharmaceutical industries from sales of Devil's Claw products.

A marked increase in export levels of the devil's claw to Europe over the past five years and a number of reports of populations being severely reduced by unsustainable harvesting practices led Germany to submit a proposal to include the genus *Harpagophytum spp.* in CITES Appendix II, but the proposal did not sufficiently address the social and economic impacts that such a listing would have. The range States of Botswana, Namibia and South Africa opposed the listing, and the Conference of the Parties instead adopted Decisions 11.63 and 11.111. These Decisions called on range and importing States to submit all available information concerning the trade, management and biological status of *Harpagophytum* species and regulatory measures applying to them, and directed the Plants Committee to review the information, summarize the biological and trade status of the species subject to international trade, and prepare a report for consideration at the 12th meeting of the Conference of the Parties.

Current trade data show that the total trade in the devil's claw for all southern African countries is

approximately 700 tonnes per annum, of which five per cent of exports originate from Botswana, ninety-two per cent from Namibia and three per cent from South Africa.

The overall population status of *Harpagophytum procumbens*, the main species in trade, is unknown. Nevertheless, the available information suggests that it would not be classified as threatened using IUCN criteria for overall population size, extent of occurrence (range), or area of occupancy. The only threat to devil's claw would be decline in populations as a result of harvesting. In all three range States, harvesting is not being monitored closely enough to determine the actual impact on the populations. However, many stakeholders argue that decline is unlikely to have had a substantial effect on total population size of the devil's claw as populations occur in protected areas and on commercial farms where harvesting does not occur.



Photo: Medicinal Ingredients

Harvesting the devil's claw tubers for the medicinal trade. An estimated 20,000 southern African households depend on these harvests for their main source of income.

Botswana has existing policies to promote sustainable use of the devil's claw and its Government is actively managing the trade in collaboration with NGOs. The devil's claw is protected in Namibia but policies for sustainable use have only been enforced in the last few years. Recent increases



in trade have resulted in revision of policies. The vast range of the devil's claw in Namibia makes it very difficult to manage the resource and enforce policy throughout its range. Unsustainable harvesting practices are widespread, but NGO activity in the Omaheke region is promoting sustainable use. In South Africa, the devil's claw is protected by provincial legislation. Provincial nature conservation authorities are managing the trade in spite of a lack of national legislation or policy.

The majority of stakeholders in Namibia and Botswana oppose a CITES Appendix-II listing based on an anticipated drop in demand for devil's claw products, which would reduce the income of thousands of poor rural harvesters. The pronounced drop in exports in the year 2000, attributed to the amendment proposal, supports this sentiment.

The case of the devil's claw is unusual for CITES as the species in trade (*Harpagophytum procumbens*) has a life history that makes it predisposed to sustainable harvesting from the wild (the fast growing secondary tubers are harvested and these are not required for plant recovery). It provides a form of land use in the arid Kalahari that is non-destructive, and is the only means of survival for thousands of rural poor. Often the listing of plants on the CITES Appendices drives the trade to reliance on cultivated material. Should this hap-



Photo: National Botanical Institute

The sustainability of the devil's claw has socio-economic implications. An Appendix III-listing may help with monitoring.

pen with the devil's claw, it would endanger the livelihoods of these rural poor.

The CITES Plants Committee recognizes that the devil's claw trade raises important issues reports that international agreements such as CITES can have on the conservation and trade of such resources. The Committee believes that monitoring the trade in the devil's claw could be accomplished by an Appendix-III listing, but notes that the usefulness of such a listing is not widely appreciated among stakeholders involved in the devil's claw trade. Range and importing States are encouraged to negotiate with the Devil's Claw industry to obtain support for management programmes that promote sustainable use and the development of the communities that manage the resource. Range States should also explore how other international treaties can be used to provide support for sustainable resource use and fair trade.

Domitilla Raimondo, National Botanical Institute

What Parties can do to reduce illegal plant trade

The Secretariat is concerned over recent cases involving permits and certificates used fraudulently to engage in illegal trade in plants. These indicate that much closer attention requires to be paid to the issuance and use of permits and, in particular, phytosanitary certificates.

Several major plant trading Parties make use of phytosanitary certificates as certificates of artificial propagation in accordance with Article VII, paragraph 5, of the Convention. Such use has been agreed by the Conference of the Parties and the provisions relating to the use of phytosanitary certificates are to be found in section VI of Resolution Conf. 10.2 (Rev.) (*Permits and certificates*). Other Parties use CITES export permits and re-export certificates.

Whether Parties use phytosanitary certificates or CITES permits or certificates, it is not uncommon for documents to be provided to traders in advance and for them to be entitled to complete the majority of the document, especially the details relating to the number of specimens and species, before having the document endorsed and

validated by Customs or other inspection services immediately or shortly before export or re-export. It is important for authorities to ensure that such documents are completed correctly and accurately.

The Secretariat offers the following recommendations regarding illicit trade in plants:

- authorities responsible for the issuance of phytosanitary certificates should be alerted to the potential for abuse of the system;

- spot checks on applications for phytosanitary certificates should be increased to detect and deter abuse, and documents should be checked for accuracy;

- controls at time of export should be increased to detect and deter smuggling;

- where domestic legislation allows, there should be increased inspections of traders' nurseries;

- issuing authorities should be aware of the risk of nurseries making fraudulent applications on behalf of persons engaged in illegal collection of plants from the wild;

- organizers of exhibitions should be encouraged to include in their literature to exhibitors and visitors information relating to CITES, and spot checks should be conducted at exhibitions to detect fraudulent documents and the presence of illegally-obtained specimens;

- bearing in mind that Appendix-I orchid species, such as *Paphiopedilum* spp., but also many Appendix-II species require 5-10 years in artificial propagation to reach a flowering stage suitable for retail sale, the offering for sale of species that have only recently been discovered in the wild (which are of special interest to collectors) may indicate that the specimens are actually wild-collected and being traded illicitly; and

- authorities who detect illicit trade involving foreign nationals should immediately provide details to the CITES Management Authority of their country of residence and to the CITES Secretariat.

The Secretariat

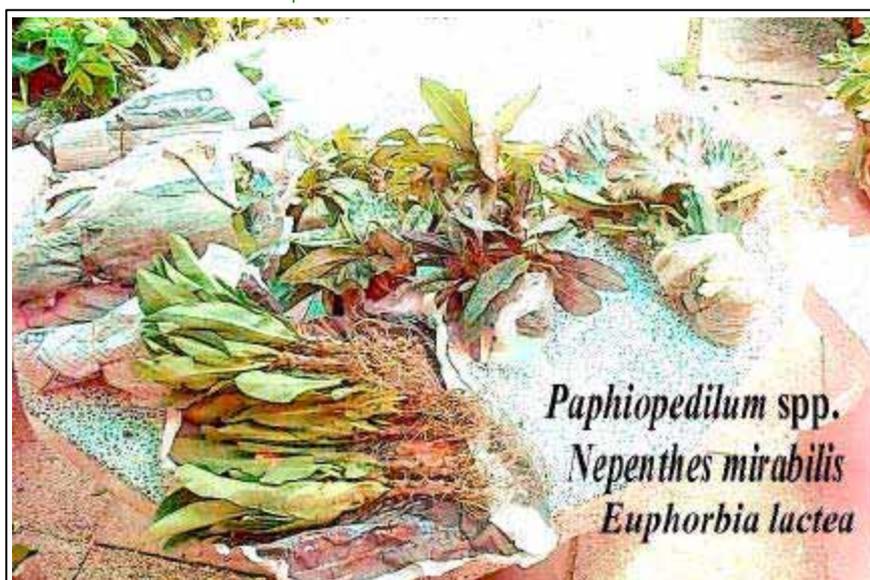
CITES implementation for plants by Thailand

Thailand is, by tradition, a country with a large volume trade in orchids, both plants and cut flowers. It has a good legislation to regulate the plant trade under which it is rarely permitted to export wild-collected plants. To ensure that the legislation is adequately implemented, the Management Authority for Plants regularly provides training to its border inspectors. It has also published an illustrated guide on the identification of wild-collected and artificially propagated specimens of *Paphiopedilum* spp. (Appendix I), and two illustrated booklets on the identification of other Thai orchid species.

The success of these efforts to improve the implementation of CITES can be demonstrated by several recent cases, which clearly demonstrate the effectiveness of regular training of border inspectors.

- Two small shipments of plants intended for export were seized on 21 March and 31 March 2002, as these lacked proper documents. The shipments contained 22 wild-collected orchids mixed with artificially propagated euphorbias, wild-collected Asian pitcher plants *Nepenthes* spp. (Appendix II), and tree ferns *Cyathea* spp. (Appendix II)

- On 7 April 2002, inspectors at Bangkok International Airport seized a large orchid shipment.



Paphiopedilum spp.
Nepenthes mirabilis
Euphorbia lactea

Photo: CITES Management Authority of Thailand



Photo: CITES Management Authority of Thailand

The shipment consisted of 320 orchid specimens (involving *Dendrobium tenellum*, *Phalaenopsis schilleriana* and *Phaius flavus*) for which a valid export permit was issued by the Philippines. However, the shipment also contained 112 wild-collected specimens of *Paphiopedilum philippinense* and 30 specimens of *P. adductum* (both Appendix I), 48 specimens of *Epigeneium treacherianum* (Appendix II) and two plants of *Grammatophyllum scriptum* (Appendix II). This method of smuggling plants by mixing legal plants with illegal ones is frequently encountered. The whole shipment was confiscated.

- On 24 April 2002, someone tried to import, without permit, 16 wild-collected orchids from Myanmar (involving *Aerides multiflora*, *Rhynchostylis retusa*, *Dendrobium delacaurii*, *Dendrobium chrysotoxum*, *Vanda dennisoniana* and *Vanda brunnea*). All the plants were confiscated.

- On 6 June 2002, inspectors seized a shipment of plants at the Bangkok airport cargo terminal that was intended for export to Bangladesh, as it was without the required permits. On inspection the shipment was found to contain 446 artificially propagated orchids amongst which were hidden 6 wild-collected *Paphiopedilum* spp. orchids (Appendix I), of two species, and ten Asian pitcher plants *Nepenthes mirabilis* (Appendix II). The whole shipment was confiscated.

Wichar Thitiprasert, CITES Management Authority of Thailand for Plants

Inspectors at Bangkok International Airport checking the shipment seized on 6 June 2002

Plants in legislation

CITES-implementing legislation must apply to all animal and plant species listed in all three CITES appendices. Legislation in many Parties make a distinction between 'wildlife' and 'wild plants' and under national law each of these may have its own specific provisions, procedures and authorities.

For plants, there may be several laws applicable to particular aspects of international trade in live plants and the parts and derivatives thereof. There may be domestic controls on indigenous protected species, plants in protected areas, specially protected plants, rare plants, botanical collecting, forestry laws, laws establishing controls for phytosanitary purposes and rules controlling the introduction of alien species.



There may also be a distinction between timber and non-timber species. The Parties make this distinction in Resolution Conf. 10.13, *Implementation of the Convention for timber species* and Resolution Conf. 11.1, *Regulation of trade in plants*. Many Parties have designated Management Authorities exclusively devoted to flora species, and the major timber producers such as Brazil, Malaysia and Venezuela have designated separated management authorities for timber species.

Few Parties have incorporated all the CITES-listed species into a single and harmonized piece of legislation, as has been done by Argentina, and the member States of the European Union. The most common approach to regulate international trade in CITES-listed plants is to rely on forestry laws and general wild plant legislation. Trade in timber species is regulated under forestry laws whilst trade in non-timber species (such as orchids, cacti, and medicinal plants) is mainly regulated by other plant legislation.

The use of existing legislation to apply CITES provisions can give rise to a variety of problems. Existing sector-based legislation is rarely suited to the specific requirements of the Convention regarding the trade in artificially propagated plants, and usually does not contain those provisions of the Convention which States are required or recommended to introduce into their domestic legislation. Most forestry and wild plant laws are limited in scope and only cover certain categories of species, products or operations.

Some parts and derivatives of CITES-listed plant species are exempt from CITES requirements. For instance, a number of artificially propagated hybrids of some "supermarket" cacti have been granted this general exemption. Certain specimens (e.g. seeds, flaked seedlings) are exempted but plants grown from these are subject to the provisions of CITES.

One of the most challenging CITES issues to regulate in legislation is the special provisions for artificially propagated plants provided in Article VII, paragraphs 4 and 5, and Resolution Conf. 11.11. Since some plant materials can be traded without any CITES documents, Parties need to ensure that national legislation regulates in a proper way these special provisions. However, few Parties have adopted provisions as Australia has done, incorporating a comprehensive regulation of trade in artificially propagated CITES-listed species.

It is important to take into account in the legislation that plant hybrids are subject to CITES controls if one or both parents are in the appendices. If the hybrid includes two or more CITES species in

its lineage, contrary to animals, it is not listed in the more restrictive appendix of either parent: they are all regarded as is being included in Appendix II. Grafted plants can also be considered artificially propagated according to criteria foreseen in Resolution Conf. 11.11.

Some Parties consider that their practices governing the issue of phytosanitary certificates for export of Appendix II specimens provide adequate assurance that the specimens are artificially propagated (as defined in Resolution Conf. 11.11). For instance, Singapore uses phytosanitary documents as certificates of artificial propagation in accordance with Article VII, paragraph 5, of the Convention. It is important to note that any Party using its phytosanitary certificates for this purpose should inform the Secretariat and provide copies of the certificates, stamps and seals that are used.

Why does law matter?

The lack of adequate national legislation for the implementation of the Convention is one of the most serious problems that a majority of Parties face today. A key step in establishing an effective and harmonized regulatory framework is to ensure that adequate legislation is in place.

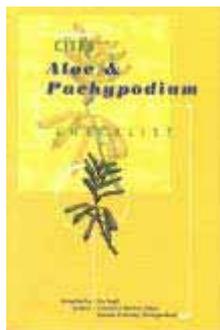
There is a common belief that through discretionary actions, existing legislation can be adapted to CITES requirements without having a solid legal basis. While this might produce simple, cheap and flexible administrative results, such actions may also be unpredictable, arbitrary and inconsistent with the legality of government action. Moreover, if the actions lack legitimacy and popular acceptance, they may not be as effective as expected, and such actions are more likely to be annulled by the courts than those with a sound basis in the law.

Another common perception is that the problem is not with the legislation but with its implementation. Some think that the contrast between what forestry and wild plant laws prescribe and what actually happens on the ground is so obvious that careful attention to the details of drafting legislative texts is academic and somewhat beside the point. This perception reflects only a narrow view about the law. A solid legal basis is essential for an effective enforcement of the Convention. It is the law that determines which policy governs the use and trade in wild flora and timber specimens, and what behaviour is legal or illegal.

The Secretariat



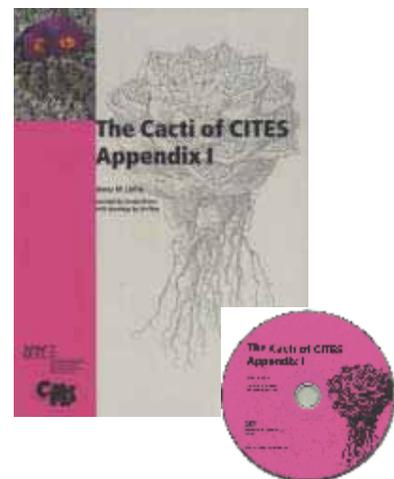
Recent publications on plants and CITES



Parties have received three additional volumes of the checklist on plants, namely Aloe and Pachypodium, Carnivorous Plants, and Orchids (Volume 3). These checklists are partly funded by the Secretariat, and are published by the Royal Botanic Gardens, Kew. Together with earlier published checklists (Cactaceae, 2nd edition, and Orchids Volumes 1 & 2), these are a easy to use reference.

Because there are so many plant names with which only few people are familiar, these checklists allow CITES authorities to determine whether a species name is the correct one, and to verify the distribution of species in the wild. These checklists can help authorities to spot errors on documents and detect attempted fraudulent trade by using old, invalid names.

The Management Authority of Switzerland has published a useful guide to the cacti of CITES Appendix I. This guide has beautiful drawings of the species concerned, and is designed to allow various ways of searching for information, such as by species name, by country of origin or by growth forms. The guide is also provided on CD-ROM. This guide will soon be distributed to the Parties and is currently available only in English. The guide will be translated into French and Spanish.



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