



# WILDLIFE TRADE MONITORING UNIT

# Traffic Bulletin

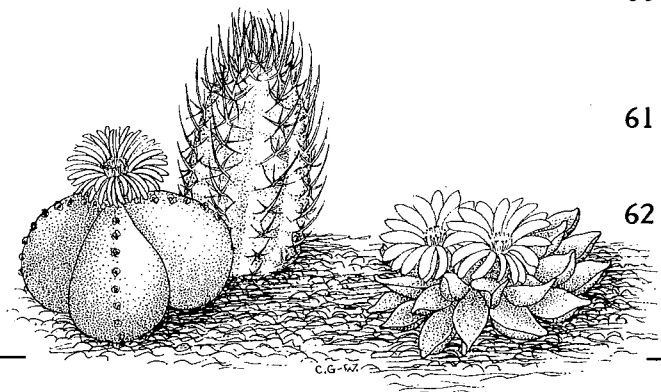
Publication is funded by **TRAFFIC (USA)** and  
**THE PEOPLE'S TRUST FOR ENDANGERED SPECIES**

ISSN 0267-4297

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Printing and distribution of the Traffic Bulletin is funded by the People's Trust for Endangered Species and TRAFFIC (USA). The World Wildlife Fund and the United Nations Environment Programme provide financial assistance for the work of the IUCN/CMC Wildlife Trade Monitoring Unit. Any opinions expressed in this Bulletin are those of the writers and do not necessarily reflect those of IUCN or any organisation connected with WTMU.

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Published by the Wildlife Trade Monitoring Unit, IUCN Conservation Monitoring Centre, 219c Huntingdon Road, Cambridge, CB3 0DL, UK. Tel: (0)223-277427. Tlx: 817036. Compiled by Kim Lochen. Printed by Foister & Jagg Ltd., Abbey Walk, Cambridge.

## Suriname and Switzerland Enter Reservations

Suriname and Switzerland have both entered reservations against the listing of the Scarlet Macaw (*Ara macao*) in CITES Appendix I. Switzerland has also entered a reservation against the inclusion in CITES Appendix II of the Indian Bullfrog (*Rana tigerina*) and the Six-fingered Frog (*Rana hexadactyla*). All these listings were agreed at the fifth meeting of the Conference of the Parties, in May.

A Resolution (Conf. 4.25) adopted at the fourth meeting recommends that Parties with reservations on Appendix I species, treat them for all purposes, including documentation and control, as if they were in Appendix II. The Resolution also called on Parties having entered reservations to include data on trade in the species concerned, in their annual reports.

## Spain Implements CITES for Chimps

Although it has not yet presented its instrument of accession to the CITES depositary government, Spain has started implementing CITES. On 29 July 1985, the Spanish authorities, assisted by the Spanish representatives of the International Primate Protection League, confiscated nine Chimpanzees (*Pan troglodytes*) held by photographers on beaches in southern Spain. It is thought that the animals originated from several countries, including Equatorial Guinea and Sierra Leone, and it is hoped that they will be returned to Africa in the near future.

*Sources: CITES Secretariat*

*International Primate Protection League, UK*

## Ports of Entry Restricted in UK . . .

New regulations under the UK Government's endangered species legislation restrict the entry into the UK of live animals, including most mammals, reptiles, amphibians and birds, to certain designated seaports and airports.

The new rules came into force during the second half of August.

According to the Environment Minister, Mr William Waldegrave, "These regulations will fulfil a promise made by the Government during the passage of the Wildlife and Countryside Act in 1981. The regulations will help to implement the rules governing trade in endangered species more effectively, and have been made following extensive consultations with traders and conservation bodies.

"I am also making further Regulations today about penalties for offences under the European Community legislation covering trade in endangered species."

*Source: UK Department of the Environment Press Notice, 25.7.85*

## . . . and Japan

The CITES Management Authority of Japan has informed the CITES Secretariat that, upon the instruction of the Japanese Government, the number of ports of entry for clearance of specimens of species listed in the CITES Appendices (including for personal and household effects) has been limited to thirty-five out of the former 222 places. This measure entered into force on 1 May 1985.

## Parrots and Monkeys Found Dead

French authorities have uncovered an important trafficking in wild animals from Latin America following the discovery recently of 115 monkeys and 170 parakeets and parrots at Orly Airport, Paris, France.

The shipment, from French Guiana, had been flown to Roissy-Charles de Gaulle Airport, Paris on 16 July 1985 and taken by a transit company to Orly, from where it was due to be flown to the island of Réunion. Airport employees at Orly, alerted by the smell, opened the boxes containing the animals to discover them without food or water, and three quarters of them dead. The surviving animals, once recovered, were returned to French Guiana.

The investigation that followed showed that the 'transit' company did not exist. French authorities have discovered that not all the animals originated from French Guiana but that some had been illegally introduced through this country in order to evade CITES regulations.

*Source: CITES Secretariat*

## \* Caiman Skin Smugglers Face Jail . . .

Skins from at least 45 000 Spectacled Caiman (*Caiman crocodylus*) were seized on 11 July 1985 from a Greek ship moored at the port of Rio de Janeiro, Brazil. Packed in eighty-nine unlabelled cardboard boxes, the nine tons of illegally imported skins are thought to comprise the largest shipment of crocodilian skins ever seized in South America.

The shipment, estimated to be worth US\$100 000, was accompanied by a Bolivian CITES export permit which appears to the Brazilian authorities to be a forgery. The exporters were Lozano Hermanos, Guayamirin, Bolivia and the consignee was Isaac de Joseh Ortiz S.A., Barcelona, Spain. The CITES Secretariat confirmed to the Brazilian authorities that, according to the permit, the shipment was destined for Italy.

The captain of the ship, Demetrius Papadopoulos, said he did not know what the shipment contained.

According to Brazilian law, the person or persons responsible may be convicted to up to three years imprisonment.

*Sources: TRAFFIC (South America)  
CITES Secretariat*

## \* . . . Bird Barbeque Organisers Jailed

Two Brazilian promoters of a wild bird barbeque, which featured a menu including some 2400 small birds as a main course, have been found guilty and condemned for environmental damages. This sets a precedent for prosecution in Brazil. The judge gave the heaviest penalty applicable, in accordance with the Fauna Protection Law, and jailed both men for one year and fined them US\$370 each. This is the first time someone has been jailed in Brazil for killing wild birds.

*Source: World Environment Report, 26.12.84*

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*Cover illustration by C. Grey-Wilson, reproduced with kind permission of the Director and Trustees of the Bentham-Moxon Trust.*

## Dolphinaria Doomed?

The UK Government is undertaking a review of dolphinaria and marine parks in the UK, to establish whether their educational, research or breeding benefits are enough to justify the import and display of live cetaceans.

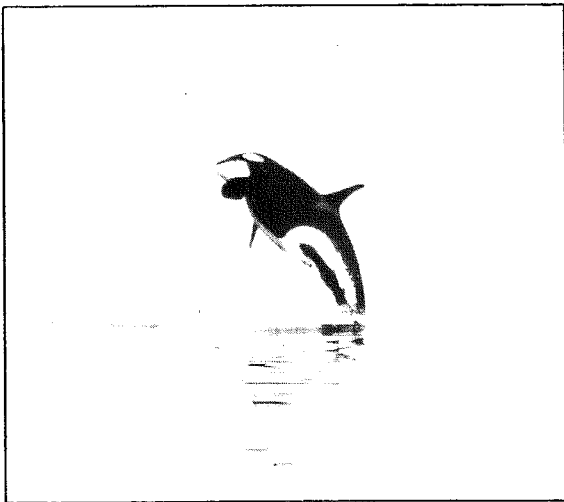
In answer to a Parliamentary Question about future applications for import licences, the UK Environment Minister, Mr William Waldegrave, said:

"My Department has not granted any permits to import dolphins or killer whales since 1983. I am aware of public concern, and it is clear that there are widely differing opinions about the value of dolphinaria.

"I have therefore decided to appoint an independent adviser to consider whether the educational, research and breeding benefits of dolphinaria and similar establishments in the UK are of sufficient value to justify the import and display of live cetaceans (whales). Advice will also be sought on the standards that should be applied to dolphinaria if they can be justified on educational, research or breeding grounds. The review will also take account of legislation, including the EEC CITES Regulation which increased the conservation status of small cetaceans. The views of operators and conservation bodies will also be sought."

The consultant appointed to carry out the review is Dr Margaret Klinowska of Cambridge University. She began work in September, and is due to submit her report by the end of January 1986. According to the Minister, "Any applications to import further dolphins or killer whales to the UK will be determined in the light of this review."

*Sources: UK Department of the Environment Press Notices, 6.6.85 and 4.9.85.*



Killer Whale (*Orcinus orca*)

© Goebel/WWF

## Shipment of Sea Turtle Skins Illegal?

On 26 June, authorities in Panama queried the legality of a transit shipment, on the Ecuadorian ship 'San Jose', of 3175 pieces of sea turtle skin destined for Japan. Japan has entered reservations with regard to trade in Hawksbill Turtle (*Eretmochelys imbricata*), Green Turtle (*Chelonia mydas*) and Olive Ridley Turtle (*Lepidochelys olivacea*). Ecuadorian authorities confirmed no export permit was issued. The skins are now presumed to be in Japan contrary to the recommendation, in CITES Resolution Conf. 4.25, that "any Party having entered a reservation with regard to any species listed on Appendix I treat that species as if it were listed on Appendix II for all purposes, including documentation and control."

*Source: CITES Secretariat*

## Taiwan Bans Rhino Horn Imports

Taiwan (Republic of China) has prohibited the import of rhinoceros horn. The official announcement of the ban, by Taiwan's Board of Foreign Trade, was made on 16 August 1985, effective immediately, and was published in the Central Daily News, the following day. The announcement (Trade (74) Commodity No. 22782) does not prohibit possession, sale or use of rhino horn already held in Taiwan. Minister Feng-shu Chang is especially to be commended for his role in achieving this most important development. Taiwan has traditionally been one of the notable consumers of rhino horn, for Chinese medicine.

*Source: TRAFFIC (Japan)*

## Project to Halt Trade in Rhino Products

A new international project to stop the trade in rhino products began in July 1985.

The project is being sponsored by the World Wildlife Fund, with assistance from the African Fund for Endangered Wildlife.

Directed by Dr Esmond Bradley Martin and co-ordinated by Lucy Vigne, specific activities will include identification of smuggling routes into and out of Asia and Africa. Emphasis will be placed on persuading the importers and wholesalers of rhino products, and heads of medical and pharmaceutical associations to use substitutes for rhino horn, such as saiga antelope horn. Attention will also be focused on trying to close down both the legal and illegal trade in rhino products, through contact with senior government officials and with the help of an advisory body.

Prices will be documented to discover whether demand has increased or decreased in the various countries where rhino products are still consumed. These countries include North Yemen, Singapore, South Korea, and Taiwan.

Considerable effort will be put into increasing public awareness of the crisis affecting rhinos, through the local press in Asia, television, radio and public displays. Posters promoting the use of substitutes for rhino horn will be distributed as part of the mass media campaign. These will stress the urgency of reducing the demand for rhino products in order to save the five rhino species from the very real threat of their extinction in the wild.

### Estimated World Population of Rhinos

Rhino Species	1970	1984
Black Rhino ( <i>Diceros bicornis</i> )	65000	8800
White Rhino ( <i>Ceratotherium simum</i> )	3500	4000
Indian Rhino ( <i>Rhinoceros unicornis</i> )	900	1700
Sumatran Rhino ( <i>Didermoceros sumatraensis</i> )	1500	660
Javan Rhino ( <i>Rhinoceros sondaicus</i> )	35	55

*Source: Dr Esmond Bradley Martin*

## Japan's Ivory Trade

by Tom Milliken, *TRAFFIC* (Japan)

Japan's US\$30 million annual import trade in African Elephant (*Loxodonta africana*) ivory is likely, once again, to provoke international controversy. Despite promising new initiatives by the Japanese Government to control the trade, and expressions of co-operation on the part of the importers earlier this year, a review of Japan's trade statistics for the first half of 1985 reveals that large quantities of illicit ivory are still being imported.

Since 1972, Japanese imports of raw ivory have fluctuated between 224 and 368 tonnes (t) a year, but since 1982 imports have dramatically increased to record levels: 476 t in 1983 and 473 t in 1984. From January to June 1985, Japan imported almost 218 t of raw ivory. This is only slightly less than the amount imported over the same period during the previous two years. Waves of massive, organised Elephant poaching, particularly in Sudan, the Central African Republic and Zaire, a drop in world ivory prices (at least until spring 1984), possibly caused by the huge amounts of ivory available to the trade, and the large-scale laundering of ivory from Japan to Hong Kong were all factors behind this sudden increased level of imports. Analysis of Customs and CITES data for the last two years indicates that as much as eighty per cent of these imports could represent illegal trade.

In the wake of international condemnation of Japan's failure to implement CITES, late in 1984, a series of government and industry initiatives were forthcoming to rectify the situation. In December 1984, Japan's major ivory importers became organised into a single unit for the first time. The Ivory Importers' Group of the Japan General Merchandise Importers' Association falls under the administrative auspices of the Ministry of International Trade and Industry (MITI), Japan's CITES Management Authority. Government intervention through Administrative Guidance directives is therefore possible. It is estimated that collectively the dealers in the new Group account for about eighty-five per cent of the ivory imported into Japan.

New regulations, effective from 1 April 1985, eliminated the use of country-of-origin certificates for imports, previously the major loophole allowing the trade in illicit ivory. Now, only proper CITES export permits or equivalent documentation from non-Parties may be used. Re-export of ivory also requires the presentation of proper documents to verify that its import had been in compliance with CITES regulations.

The ivory traders have indicated that they are willing to co-operate with the recent moves to regulate the trade. The Ivory Importers' Group has pledged to provide sixty per cent of the annual budget for the new Ivory Co-ordination Unit at the CITES Secretariat and, in another gesture, seventy-five dealers pledged to refrain from re-exporting ivory to Hong Kong for one year.

During 1984 the ivory trade was characterised by the widespread abuse of regulations in force in Africa. Of the 473 t of ivory recorded as imports in Japan's Customs data for 1984, 185 t were attributed to the Congo, Sudan, and Zaire, all countries with export bans, and 33 t to Burundi, a notorious conduit for poached ivory. The data also revealed that Uganda had apparently suddenly become a major supplier of large quantities of raw ivory. Between August and December, Japan imported almost 100 t of ivory with Uganda listed as its country of origin. This was Japan's second largest source of raw ivory after the Central African Republic. Since 1970 until now, ivory imports from Uganda to Japan had never accounted for more than three per cent of the annual trade.

The 'Ugandan' ivory has little to do with Ugandan Elephants. Indeed, Martin (in press) estimated that only 2000 Elephants remained in that country; these could not possibly produce ivory on the scale reported by Japan.

The existence of forged Ugandan export documents has been widely known, at least since January 1983 when the CITES Secretariat issued a Notification to the Parties on the subject. This document requested that copies of any Ugandan documents be forwarded to the Secretariat and that imports not be allowed until the relevant documents had been verified. Additionally, in a memorandum on ivory trade controls, sent to Japan in late 1984, the Secretariat specifically requested consultation on a shipment-by-shipment basis regarding all ivory imports alleged to be of Ugandan origin.

Finally, the Ugandan connection began to unravel in January 1985 when an 18-t shipment of ivory, with Burundi documents identifying Uganda as the country of origin, was investigated by the Japanese Government. Through contacts with the Ugandan Government, the Japanese Foreign Ministry verified that Uganda had not authorised any ivory exports to Burundi, nor was Uganda allowing any commercial trade in ivory at all. The shipment, the first ever to be refused entry to Japan on grounds of non-compliance with CITES, was sent back to Singapore, the last transit point on route.

Unfortunately, despite the landmark nature of the case, its importance apparently did not sink in to Japanese Customs officers who allowed 'Ugandan' ivory shipments totalling 17 475 kg in April and 13 754 kg in May to enter Japan. In order to curtail this trade immediately, *TRAFFIC* (Japan) officially requested MITI to investigate the April and May cases and to withhold Customs clearance on any future shipments of ivory with Ugandan documents or for which Uganda was noted as the country of origin, until verified as legitimate by the CITES Secretariat and the Ugandan Government.

The Japanese Government has complied with this request and subsequent investigations have revealed that the three April consignments were shipped from Dubai by Transamerican Airlines and were accompanied by Ugandan export permits bearing forged signatures.

Since transit through Belgium, previously a major entrepôt for raw ivory, all but ceased with that country's implementation of CITES in January 1984, Dubai seems to have become the major transit point for illicit ivory moving into Japan. This is despite the fact that the United Arab Emirates is party to CITES. In February 1985, several small shipments of ivory from Dubai had also been refused entry into Japan.

The 'paper game' continues, however, and Japanese Customs data for June 1985 reveal yet another documentation ploy. Some 4500 kg of ivory were imported with documents reporting the country of origin as Rwanda, despite the fact that only 100 Elephants remain in that country, where they are protected in National Parks. It is unlikely that the entire Elephant population of Rwanda could produce such a large quantity of ivory. Over the last fifteen years, Rwanda has only once appeared in the Japanese Customs import statistics as a supplier of ivory; 45 kg were imported in 1980.

Other trade purported to originate in Ethiopia, Congo, Tanzania, Somalia, and Sudan is also suspect, and shipments recently received from the last two countries have been refused entry. One shipment of ivory, with documents allegedly issued by the Somali Government, had come from Burundi and passed through Dubai. Unfortunately, all refused shipments are sent back to the last staging posts, usually Dubai, where it seems new documents are simply produced to attempt to move the ivory back to Japan or elsewhere.

It is expected that the new Ivory Co-ordination Unit of the CITES Secretariat will reduce the successful use of the paper ploys of the last two years. It would appear, however, that the present situation in Japan remains serious and continues to reflect the inability to control Elephant poaching in many regions of Africa.

**Reference:** Martin, R. (In press): Establishment of African Ivory Export Quotas and Associated Control Procedures. CITES Secretariat, Switzerland.

## The Western European Trade in Cacti and other Succulents

by Sara Oldfield

### INTRODUCTION

Cacti and other succulents have been widely grown in Europe for at least the past century. Most of the species are well-established in cultivation and have long been artificially propagated by amateur growers and commercial nurseries. At the same time, however, wild specimens of certain species have been continually imported from their countries of origin. Concern about the effects of such international trade lead to the inclusion of all Cactaceae and certain other succulents in the Appendices of CITES in 1973.

CITES listing of these plants brought about the control of international trade in the taxa concerned, which allowed monitoring of the levels of trade. Of the European countries which are party to CITES, however, only the UK has published data on CITES plant imports in any detail. With the inception of the provisions of EEC Regulation (3626/82) on CITES, on 1 January 1984, other EEC countries are also now required to provide trade data on CITES-listed species.

There is no doubt that Europe remains an important market for succulent plants imported from their native habitats but the nature and extent of the trade has only previously been studied for the UK (Jarvis, 1979). It is now particularly important to view the trade in a European context because the EEC Regulation provides a common external border for CITES controls.

The current survey was carried out between January and June 1985. The main aims were:

- 1) to determine volumes and patterns of trade within Europe, of wild and artificially propagated cacti and other succulents;
- 2) to assess the effectiveness of CITES, EEC and national legislation in controlling trade in rare species;
- 3) to assess the role of nurseries in helping to conserve rare plants through propagation; and
- 4) to determine the extent to which non-CITES species may benefit from international protection.

Within Europe there are well-established links for the trade in succulent plants between various countries. These operate at both the wholesale and retail level. Wholesale production is for example carried out in southern France, Spain and Italy to supply firms in northern Europe. Specialist collector interest in succulents is mainly concentrated in Belgium, F.R. Germany, the Netherlands and the UK. In these countries specialist nurseries supply the species which are rarer in the wild and in cultivation. At the same time, countries such as the Netherlands and Denmark have an important commercial production of succulents as part of the pot plant trade.

The scope of this survey covers the EEC countries, with an emphasis on the UK trade, together with Austria, Malta, Spain and Switzerland, where the succulent plant trade is also important. Incidental information on the trade in other countries, such as Sweden and the USSR, has been collected for storage at WTMU but is not included in this report.

Cacti and the other succulent plant groups are renowned for taxonomic and nomenclatural problems. This is in part a direct result of the intensive cultivation and study in cultivation of these plants away from their natural habitats. The term "succulent" is itself very

broad and open to interpretation. Cacti are defined botanically as a distinct family. The other succulents cover a wide range of families and, as Rowley (1980) points out, 'The amateur grows anything that in looks and cultural requirements blends with his cacti, agaves, crassulas and unquestionable succulents, frequently stretching the limits where rarity or novelty is involved.' This survey covered the same ground.

### METHODS

The primary source of trade data used in this survey was the annual reports of CITES party states. Availability of the CITES data is hindered by the fact that the UK is the only European country which has published detailed information on plants in annual reports. With the exception of 1981, all UK data since 1976 have been reported only at generic level for plants that are listed in Appendix II at family level.

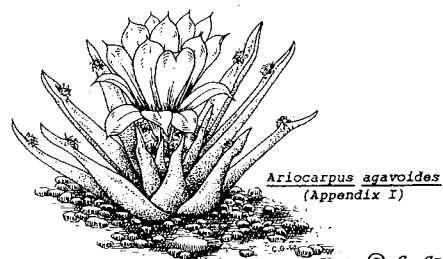
The most detailed CITES information on cacti and other succulents is provided in the annual reports of the USA. Some other countries, such as Madagascar and South Africa, also provide useful export trade information.

Unfortunately the data in CITES annual reports are rarely subdivided into wild and artificially propagated plants. Even where they are, some caution is necessary in accepting the information as correct. Trade through specialist "nurseries" may all too easily be assumed to consist entirely of artificially propagated plants.

The second source of information was nursery plant lists and catalogues, some of which provide particularly interesting comments on cultivation and conservation. Most of the catalogues obtained were from UK nurseries but some were also obtained directly from nurseries in the Netherlands and F.R. Germany.

The plant lists and catalogues show the very wide range of cacti and other succulents available. They also show the wide range of names used in trade for the same species. Generally in this report the names given by traders have been used. An exception is made for CITES Appendix I species where the names used by various nurseries have been standardized. In addition, Annex 1 gives alternative names, where known, for names which are generally considered to be synonyms, used in the Tables in this report. It is often very difficult to relate trade names of cultivated plants to botanically "acceptable" species names and this makes it particularly difficult to relate the trade situation back to wild populations.

The third source of information was correspondence and interviews with CITES Management Authorities, TRAFFIC offices, other conservation organisations, botanists, and nurserymen. In addition, a number of nursery visits were made during the survey, either by arrangement or unannounced. Whenever possible, a list of the species on sale was prepared, with an assessment of which species were wild-collected, how many specimens were available, and the prices. Details of the visits are not included in this report, but are available to the relevant CITES Management Authorities.



*Ariocarpus agavoides*  
(Appendix I)

© C. Grey-Wilson

## TRADE IN CACTI

Cactus production in European nurseries is on a huge scale, as exemplified by the national production figures for Denmark (p.51) and Spain (p.54). The bulk of the production in Europe is independent of wild-source material, including seed. Some species which are rare or threatened in the wild, such as *Echinocactus grusonii* and *Mammillaria carmenae*, are commonly propagated. Very little information is available on which species of South American cacti are threatened but it is possible that commonly propagated species of *Rebutia* and *Sulcorebutia* for example, may include some which have a restricted distribution in the wild. However the artificial propagation of rare cacti is not generally a direct response to conservation needs.

The emphasis in commercial cactus cultivation is on quick-growing and free-flowering species. Rarity is only an important factor to specialist nurseries supplying the more serious collector.

Cactus seed is quite readily available in Europe but several UK nurserymen, particularly those in recently established nurseries, find their ability to grow rare species is restricted by seed availability. Some traders concentrate partly or exclusively on the sale of seed, and two important suppliers, both to nurseries and amateurs, are de Herdt and Kohres. One of the main US suppliers, Steven Brack, has agents in F.R. Germany and the UK. Brack commented at a meeting of the CITES Technical Committee Plant Working Group in Tucson, Arizona (27 February-3 March, 1984), that most of the seed in the world industry comes from France and Spain.

Seed of Endangered cacti is available now through general retail outlets. For example, Thompson and Morgan, a UK seed firm, offers seed of *Echinocactus grusonii*, *Obregonia denegrii*, *Pelecypora aselliformis* and *Turbincarpus* "Sp. Mxd".

The commercial production of cacti mainly involves raising the plants from seed. An alternative method of propagation is by cuttings, used for those species which form side-shoots. The use of grafting is fairly common practice in cactus propagation and is particularly popular in Belgium. Grafting is used for cacti which are difficult or slow-growing in cultivation. It can be used either for seedlings or for cuttings which are grafted onto stock plants of fast-growing species.

Despite the availability of propagated cacti of both common and threatened species, there is still a demand for wild-collected cacti and wild-collected Appendix I species can still be purchased in Belgium, the Netherlands and F.R. Germany. It appears from CITES statistics that most of the Mexican species now on Appendix I have been re-exported from the USA in the past. European nurseries are now, however, importing cacti directly from Mexico. This new situation is mainly due to action in the USA where the Wildlife Permit Office is no longer issuing re-export permits (Fuller, *in litt.*, 26.3.85).

Very few CITES data exist on European imports of South American cacti. The UK has recorded the import of small numbers of *Copiapoa* specimens, for example, but there is no doubt that large quantities of Chilean and Brazilian cacti have entered F.R. Germany and the Netherlands unrecorded. Two of the main cactus traders in South America are K. Knize, who has a nursery in Peru and re-exports Chilean plants, and L. Horst, now operating with his son in Brazil.

Certain genera of Cactaceae are considered to be particularly sensitive to the effects of trade, because they have a high proportion of threatened species, are also particularly sought after by collectors and may be relatively difficult to propagate. The UK takes stricter domestic measures for these genera than required by the terms of the EEC Regulation on CITES. Visits to nurseries in Belgium, the Netherlands and F.R. Germany revealed a much wider availability of habitat-collected specimens of these genera than in the UK. A number of species within the genera are listed in CITES Appendix I and are therefore subject to strict trade controls internationally.

## GENERA OF CACTACEAE PARTICULARLY THREATENED BY TRADE

The following notes summarise information on those genera of cacti which are thought to be particularly sensitive to the effects of trade. The conservation status of species in the wild is given where known, following IUCN Red Data Book (RDB) categories. These have been assigned by IUCN's Threatened Plants Unit for Mexican endemic species. For a definition of the categories see Lucas & Syngé (1978). The term "threatened" in the following notes is used as a general term encompassing all the IUCN RDB categories, Endangered, Vulnerable, Rare or Indeterminate, except in relation to the genus *Coryphantha*. For this genus, whose distribution includes the USA, the US Government category 'Threatened' is used.

A list of threatened and insufficiently known Mexican endemic cacti was published in the proceedings of the fourth meeting of the Conference of the Parties to CITES (Oldfield, 1984). Similar information on the status in the wild of South American cacti is not yet available.

### Ancistrocactus

There are two species in this genus, one of which, *A. tobuschii* is in CITES Appendix I. This is not currently offered by the UK nurseries contacted during the survey and was not seen during visits to continental nurseries.

It is the other species, *A. scheeri*, which is more common in European trade, in the form of propagated plants. In 1983, fifty Mexican specimens of this species were re-exported from the USA to F.R. Germany.



*Ariocarpus scapharostrus*  
(Appendix I)

### Ariocarpus

A genus of six slow-growing species, of which five are Mexican endemics recognised as threatened by IUCN. Three of these, *A. agavoides*, *A. scapharostrus* and *A. trigonus* are listed in CITES Appendix I.

In the UK, wild-collected plants of CITES Appendix II species *A. fissuratus* and *A. retusus* are on sale at several nurseries but the demand for Appendix I species appears to be met by seedlings. According to one UK nurseryman, *A. agavoides* and *A. scapharostrus* are the two species of the genus which adapt most readily to cultivation (Mottram, *in litt.*, 16.1.85). *A. agavoides* has flowered at six years from seed in cultivation (Preston-Mafham, *in litt.*, 28.1.85). According to Preston-Mafham, *A. kotschoubeyanus* and *A. trigonus*, together with *A. agavoides*, grow well from seed but other species never really come to resemble habitat plants.

It has been suggested by another nurseryman that prohibiting the sale of certain wild-collected *Ariocarpus* spp. has encouraged propagation, and forces collectors to buy small plants which they would not do if mature imports were available (Comer, *in litt.*, 23.1.85).

Aztekium ritteri - Appendix I

A monotypic genus which is one of the slowest of all cacti to propagate from seed. Not currently offered by UK nurseries but wild-collected specimens are available from a Belgian nursery.

Backebergia militaris - Appendix I

A monotypic genus, endemic to Mexico, with an IUCN RDB category of Indeterminate. This species is not currently offered for sale in the UK. Wild-collected specimens were seen at one Dutch nursery despite Appendix I listing and specimens have recently been on sale in Switzerland (see p.54). It is the topcuts of branches which are sold. According to Mottram (*loc. cit.*) few plants of this species are ever imported as, 'It is expensive on heating requirements. The cuttings are heavy and the airfreight made them very expensive.'

Copiapoa

A Chilean genus, with over fifteen species, which is in need of further field study to establish proper species limits (Taylor, 1981a). More species names are used for plants in cultivation; Backeberg (1977) gives over forty, and over fifty were extracted from current UK nursery catalogues.

Most of the plants available in the UK are grown from seed but some habitat-collected specimens are also offered. A relatively high proportion of species has been imported directly from Chile in recent years. Generally the numbers of each species reported as imports in UK CITES statistics have been low, the largest transaction of a named species being forty-two specimens of C. cinerea imported from Chile in 1983. There are no data to suggest that wild-collected specimens of Copiapoa are re-exported by other European traders to the UK, but wild-collected plants are certainly readily available from nurseries in F.R. Germany.

Coryphantha

A genus consisting of approximately thirty species which grow in Mexico and the south-west states of USA. Fifteen Mexican species are recognised as threatened or Insufficiently Known by IUCN. One of these, C. werdermannii, is listed in CITES Appendix I together with two US species. Sixteen US taxa are considered to be "Threatened" or "Endangered" according to US Government definitions. Most Coryphantha species, can be raised quite readily from seed and there is not thought to be any collector interest in wild plants in Europe. Some species are produced commercially on a large scale.

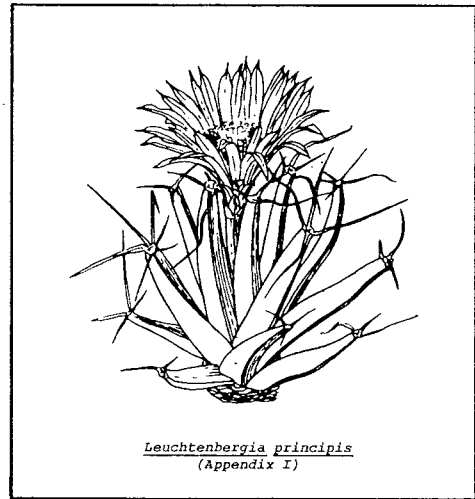
Discocactus

Five species are currently recognised in this genus by Taylor (1981b). They occur in Brazil, east Bolivia and Paraguay. Discocactus is recognised as one of the most difficult genera of cacti to cultivate. Imported plants are hard to establish and suffer from cold winters in the UK (Mottram, *loc. cit.*). Imports into Europe lead to the loss of thousands of plants in the 1970s (Mace, 1980).

The species which may be most vulnerable to over-collecting are D. horstii, a narrow endemic from Minas Gerais, and D. zehntneri, restricted to north Bahia. No wild-collected plants of these species are currently offered by UK nurseries. Grafted plants of D. horstii are quite readily available in the European trade. Wild-collected Discocactus spp. were seen in quantity in F.R. Germany and the Netherlands. There have been no recent Brazilian exports of Discocactus recorded in CITES statistics, however two specimens were re-exported from F.R. Germany to the UK in 1980.

Echinocereus lindsayi - Appendix I

Possibly extinct in the wild as a result of over-collecting following its discovery in 1975. Propagated artificially by at least one nursery in F.R. Germany.

Echinomastus erectocentrus and E. mariposensis - Appendix I

US species which are not currently advertised by UK nurseries although several nurserymen claim to have propagated them. Neither species was seen during nursery visits. They are difficult to raise from seed (Taylor, pers. comm.).

Epithelantha

A genus with one variable species, E. micromeris. Six varieties are recognised by IUCN as Endangered, Indeterminate or Insufficiently Known. Wild-collected specimens are quite commonly seen in trade, and are currently offered by nurseries in F.R. Germany and the Netherlands.

Eriosyce

One variable species from Chile. Plants were exported from Chile and Peru to the UK in 1982 and 1983. A few wild-collected specimens were seen at one UK nursery during the survey. They have, however, restricted availability and interest in the UK. Plants were not noted during visits to nurseries in other countries.

Islaya

This genus consists of from four (Donald & Rowley, 1966) to twelve (Backeberg, 1977) species occurring in south Peru and north Chile. Of limited interest in the UK, several species are currently offered. Wild-collected plants were seen at Dutch and German nurseries. Trade in the genus in CITES statistics for 1980-1983 is recorded under Neoporteria.

Leuchtenbergia principis - Appendix I

A monotypic genus with an IUCN RDB category of Vulnerable. It is commonly grown from seed in Europe and is one of the most widely available artificially propagated Appendix I cacti in trade. When grown from seed, it flowers at five years old (Preston-Mafham, *loc. cit.*).

Lobeira macdougallii - Appendix I

A monotypic genus with an IUCN RDB category of Vulnerable. This species is not currently offered by UK traders nor recorded in any CITES annual reports from 1980-1983. It is an epiphytic cactus and, according to Mottram (*loc. cit.*), as epiphytic cacti are so easily grown from cuttings, there is unlikely to be any commercial collecting from the wild.



Mammillaria pectinifera - Appendix I

Three UK nurseries are currently offering this species. It is Endangered in the wild but can be grown easily from seed (Preston-Mafham, *loc. cit.*) and will flower in two to three years (Taylor, *pers. comm.*). Wild specimens are unlikely to be sold in Europe.

Mammillaria plumosa - Appendix I

This species is considered to be Vulnerable in the wild and wild-collected specimens have been available in European trade in the past. Specimens were, for example, offered for £85 (\$122) at the 1981 British Cactus Sales Fair. It is, however, extensively grown from seed and offsets and artificially propagated plants are now widely available from European nurseries. It is not considered to be a specialist plant. M. plumosa is also extensively propagated in the USA (Fuller, *in litt.*, 26.3.85). Current prices for propagated plants are around £0.4-1.00 (\$0.6-1.4) in the UK.

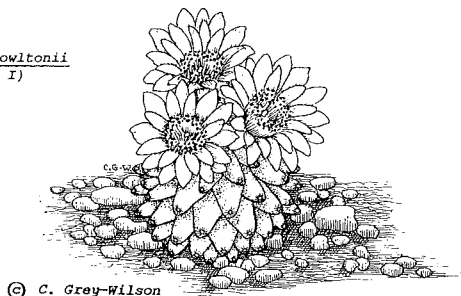
Mammillaria solisioides - Appendix I

A Vulnerable species in the wild, this species is not uncommon in cultivation and is readily available as propagated material. According to CITES statistics 17 395 artificially propagated plants were exported from the USA to the UK in 1983.

Obregonia denegrii - Appendix I

A monotypic genus with an IUCN RDB category of Endangered. Three UK nurseries are currently offering artificially propagated specimens. It is easy but slow to raise from seed (Taylor, *pers. comm.*).

Pediocactus knowltonii  
(Appendix I)

Pediocactus

Eight species are listed in CITES Appendix I. All species, except for P. simpsonii, are difficult in cultivation and are severely threatened in the wild. Some success has been achieved in artificial propagation, by tissue culture techniques, in the USA (Starling & Dodds, 1983). Plants of this genus are rarely available from European nurseries. One UK nursery has advertised, P. despainii, P. paradinei, P. papyracanthus (as Toumeyia papyracantha) and P. winkleri and it is assumed from the advertisement that these are artificially propagated (Fussell, 1985).

Pelecyphora

Two species are generally recognised, P. aselliformis and P. strobiliformis, and both are listed in CITES Appendix I. A third species name advertised in trade, Pelecyphora pseudopectinata, is considered to be a synonym of Turbincarpus pseudopectinatus. Both P. aselliformis and P. strobiliformis are propagated by several UK nurseries. According to one nurseryman, however, the seedlings take many years to resemble the

wild plant. P. aselliformis has been described as 'one of the unique phenomena of the vegetable kingdom. The first specimens of P. aselliformis were imported into Europe a hundred years ago, by one or two Belgian nurserymen. For a long time this plant was esteemed as the rarest jewel of any collection' (Barthlott, 1979).

Pilocopiapoa

A monotypic genus with one species now recognised as Copiapoa solaris.

Sclerocactus

Four species of this US genus are listed in CITES Appendix I. According to Backeberg (1977), plants of the genus are difficult to grow and 'even grafting seldom provides a longer-term solution'.

Not common in European trade. Ten plants were imported to the UK from the USA in 1983 and plants were advertised in 1985 by one UK nursery (Fussell, 1985). It is assumed that these are artificially propagated. Plants of this genus were not seen during visits to continental nurseries.

Strombocactus disciformis - Appendix I

A monotypic genus, S. disciformis has an IUCN RDB category of Vulnerable. 175 specimens of this Mexican cactus were re-exported from the USA to the UK in 1982, prior to its listing in Appendix I of CITES in 1983. In 1985 several UK nurseries were offering seedlings of this species but it is very slow to grow from seed.

Thelocactus

A genus of about ten species, occurring in the USA and Mexico. Three Mexican species are recognised by IUCN as threatened. Twenty-four 'species' are offered by UK nurseries and wild-collected plants are not currently being sold. According to Mottram (*loc. cit.*), plants are easily grown from seed. In CITES statistics, five plants are recorded as being imported from Mexico into the UK via the USA in 1983. Wild-collected specimens are sold in F.R. Germany. 330 specimens of Mexican species were re-exported to F.R. Germany by the USA in 1983, including 210 specimens of the Rare Thelocactus maddowellii. According to Barthlott (1979) T. bicolor 'has perhaps the finest flowers of all the spherical cacti, and for this reason it was at one time imported by the thousand from its homelands'.

Turbincarpus - Appendix I

An Endangered genus endemic to Mexico. Plants are much sought after by collectors, but the majority of those in European trade are now grown from seed. CITES statistics show that a relatively high number of plants were re-exported by the USA to the UK in 1982 and 1983, prior to Appendix I listing. Several UK nurserymen have, however, commented that all species are easy to grow from seed, which is commonly available and from which plants will flower at two years.

Uebelmannia

A Brazilian genus with three to five species. According to Backeberg (1977), 'Cultivated specimens in Britain are mostly imported plants which have shown a discouraging loss rate as they are very slow to establish and require considerable heat. However both imports and the few available seedlings have been grafted successfully and the natural characters appear unaffected.' The recorded imports to the UK in 1982 and 1983 are mainly from Denmark and the USA. Presumably these were grafted specimens but wild-collected plants are available in the UK.

## TRADE IN SUCCULENTS, OTHER THAN CACTI

Cacti dominate the European market for succulent plants for both specialist collectors and the general house plant trade. The range of other succulents available in trade is extremely diverse with plants of one other important family, the Aizoaceae, together with genera and species of over twenty other families. In terms of volume the succulent plants listed in Tables 3 and 6 may be the most abundantly produced. These are all 'house plants'. In addition, hardy European and non-European succulents are produced as garden, usually rockery, plants but the trade in these is considered to be outside the scope of this survey. This is partly because the plants are sold by different trade outlets.

The present listing of succulent plants in the Appendices of CITES is somewhat random and may appear illogical to traders. Trade data on genera and species not covered by CITES are generally hard to come by but limited data on South African exports have been provided for this survey (see Table 2).

Several European nurseries specialise in succulents other than cacti, for example van Donkelaar, in the Netherlands, and Barleyfield in the UK. Both these nurseries sell only artificially propagated specimens. Generally nurseries sell a mixture of cacti and other succulents, with cacti being the most varied and abundant plants offered. The interest in "other succulents" appears to be strongest in the UK.

From CITES statistics for 1982 and 1983 it can be seen that the USA and Japan are major exporters of succulent *Euphorbia* and *Aloe* spp. to Europe. The USA exports a greater range of species, including a number which are rare in the wild, whereas Japan exports a high volume. For example, Japan exported 28 400 specimens of *Euphorbia* spp. to F.R. Germany in 1983, and 18 000 to the Netherlands. 1400 *Aloe* specimens were exported from Japan to F.R. Germany in the same year. It is likely that most of these succulents exported by Japan and the USA are artificially propagated. Campbell (1984) reports, however, that the USA has exported threatened species of *Aloe* which could be of wild origin.

Of more concern is the export of succulents from their countries of origin. Two countries with a rich succulent flora, where monitoring of exports is carried out, are Madagascar and South Africa. It has been suggested that wild plants of these countries are imported into Europe 'one step ahead of the law' (Graham, 1984).



*Kalanchoe blossfeldiana*

Madagascan succulents

Madagascar is a major exporter of native CITES succulents to Europe. There is one commercial succulent plant nursery in Madagascar which offers rare species of *Aloe*, *Euphorbia*, *Pachypodium*, *Didierea* and *Alluaudia*. According to Madagascan CITES statistics, all specimens of these succulents exported are artificially propagated, but visitors to Madagascar report that the nursery has many field-collected specimens also (Rauh, 1983; Hardy, in litt., 1983).

Wild-collected Madagascan succulents are currently offered by nurseries in the UK and F.R. Germany. It is thought that bulk imports into Europe are mainly via France (see p.52). Madagascar records the export of large quantities of *Euphorbia* spp. to F.R. Germany. In 1983, for example, 82 500 specimens of *E. lophogona* were exported and, in 1982, 200 073 *Euphorbia* spp. One major West German wholesale nursery has an arrangement with a nursery in the south of France, where plants are established after import via Paris.

Propagated specimens of Madagascan succulents are also available. For example, Whitestone Gardens, UK, has *Alluaudia procera* cuttings imported from Japan. Certain Madagascan species have become particularly well-established in wholesale production. These include *Pachypodium lamerei*, together with some "crown-of-thorn" *Euphorbia* species and species of *Kalanchoe* such as *K. tomentosa*. Rauh (1983) points out however that, apart from these few species, most of the rare Madagascan plants he has seen on sale in nurseries, supermarkets and flower shops, have been collected from habitat.

South African succulents

CITES data on imports of South African succulent plants to Europe, as reported in the annual reports of Parties, are given in Table 1. Trade in cacti is excluded although some species, including Appendix I *Leuchtenbergia principis*, have been exported to Europe. Data on trade in *Aloe ferox* are also excluded as this is not for the horticultural market.

It can be seen from Table 1 that the reported volume of trade in named CITES species is very small. The species listed are not currently considered to be threatened and the specimens are nearly all reported to be artificially propagated. Considerably larger quantities of specimens of *Aloe*, *Ceropegia*, *Euphorbia* and *Pachypodium*, recorded at generic level, were imported by the UK in 1982 and 1983 with no indication as to whether the plants were artificially propagated.

Visits to European nurseries during this survey did not reveal many South African CITES-listed succulents on sale, and it appears that there is not a high demand for these at present. Wild-collected specimens of *Euphorbia bupleurifolia* are however available from several nurseries.

There is, in fact, currently a greater interest in certain other South African succulent genera, not listed on CITES, amongst UK collectors at least. South African succulents which are not covered by CITES but which should perhaps be considered for listing in the Appendices are given on p.55. Wild-collected plants of these genera, and in some cases of rare species, are all currently on sale in Europe. Furthermore it has been suggested that the demand for these South African succulents is greater in Japan and the USA than it currently is in Europe (Bayer, in litt., 11.5.85).

Exports of non-CITES succulent species from the Transvaal to Europe in 1984 are given in Table 2. The data refer to "cultivated" plants exported by three nurseries. Four other specialist nurseries are also exporting succulents from South Africa.

According to van Jaarsveld (in litt., 21.5.85) the latest fashion in succulent plants is for the genus *Haworthia* and for caudiciform plants. He considers that these are the most likely to be field collected and illegally exported from South Africa, including *Fockea* spp.

Table 1

CITES succulent plants (excluding cacti and *Aloe ferox*) exported from South Africa to Europe in 1982 and 1983

Genus/ Species	Importing Country	1983	1982
<i>Aloe</i> spp.	UK		500
<i>A. andongensis</i>	Italy	1 (ap)	
<i>A. bainesii</i>	F.R. Germany	2 (ap)	
<i>A. bakeri</i>	Italy	1 (ap)	
<i>A. bowiea</i>	F.R. Germany	1 (ap)	1 (ap)
	Switzerland		3 (ap)
<i>A. dichotoma</i>	F.R. Germany	1 (ap)	
	Italy	1 (ap)	
<i>A. haworthioides</i>	F.R. Germany	5 (ap)	
	Italy	1 (ap)	
	Switzerland	1 (ap)	
<i>A. jacksonii</i>	Italy		1 (ap)
<i>A. plicatilis</i>	F.R. Germany	2 (ap)	
	Italy	1 (ap)	
<i>A. ramosissima</i>	F.R. Germany	1 (ap)	
	Italy	1 (ap)	
<i>A. saponaria</i>	Switzerland	1 (ap)	
<i>A. ustulata</i>	Switzerland		3 (ap)
<i>Anacampseros</i>			
<i>filamentosa</i>	Italy	1 (ap)	
<i>A. papyracea</i>	Italy	2 (ap)	
	UK	10 (ap)	10 (ap)
<i>A. telephiastrum</i>	UK	10 (ap)	
<i>A. ustulata</i>	UK		10 (ap)
<i>Ceropegia</i> spp.	UK		750
<i>Euphorbia</i> spp.	UK	335	1630
		13 (ap)	
<i>Pachypodium</i> spp.	UK	60	5
<i>P. lamerei</i>	UK		5 (ap)
<i>P. succulentum</i>	France		1 (ap)
	F.R. Germany	10 (ap)	1 (ap)
	Italy		1 (ap)
	UK		10 (ap)

Source: CITES annual reports  
ap = artificially propagated

Another caudiciform species which is commonly in trade and currently offered as a wild-collected plant in the UK and elsewhere in Europe is *Dioscorea* (*Testudinaria*) *elephantipes*, the popular 'Elephant's Foot'. Wild-collected plants of this South African species were seen at a wholesale plant nursery and one other nursery in F.R. Germany. It has also been reported that *Adenia* spp. (also caudiciforms) are often in cultivation as wild-collected plants (Walker, 1985).

Relatively few *Haworthia* spp. were seen during visits to continental nurseries, and all appeared to be propagated. It is likely, however, that rare wild-collected *Haworthia* spp. have been sold in the UK (Oldfield, 1983) where interest in the genus is currently concentrated. According to Mottram (1985) the genus has 'emerged from comparative obscurity in recent years, stimulated by a wealth of new literature'. One new specialist nursery advertised for the first time in June 1985. Another UK nursery offers a list of 'specially selected *Haworthias* imported direct from South Africa', at prices which suggest they are wild-collected. Rare species currently offered by this nursery include *H. sordida* at £18.50 (\$27) and *H. springbokvlakensis* at £14.00-16.00 (\$20-23). Several other UK nurseries also offer rare *Haworthia* species which are thought to be wild-collected.

The South African family Aizoaceae rivals the Cactaceae as the largest wholly succulent family and is

very popular in trade. There is thought to be very little trade in wild-collected specimens of the family as plants grow easily from seed. Species which are thought likely to be wild-collected however are *Conophytum burgeri*, *Gibbaeum nebrownii*, *Muiria hortenseae*, *Pleiospilos archeri* and *Pleiospilos hilmarii* (van Jaarsveld, loc. cit.). Several UK nurseries do however offer *P. hilmarii* grown from seed.

#### TRADE IN INDIVIDUAL COUNTRIES

##### UK

The UK has implemented CITES for plants since 1976 and the Endangered Species (Import and Export) Act 1976 came into force the following year. The first UK annual report to CITES with data on cacti and other succulents, was produced for 1976. Since the inception of the trade legislation, one independent survey of the UK CITES succulent plant trade has been carried out (Jarvis, 1979).

Changes in the legislation since 1979, incorporating amendments to the CITES Appendices, through the Wildlife and Countryside Act 1981 and through the implementation of the EEC CITES Regulation, have significantly altered the trade controls. More legal restrictions are now in force, which have led to the need for a re-assessment of the trade situation. At the same time, more effective reporting by exporting countries has led to increased availability of data on UK cacti and other succulent plant imports.

The overall assessment of retail trade outlets remains the same as that provided by Jarvis (1979). He described the two main categories of outlets as specialist nurserymen and more general retailers such as florists and supermarkets. In the UK there are also several specialist nurseries producing succulents on a wholesale basis. These are on a considerably smaller scale than wholesale nurseries which export to the UK, such as Edelman in the Netherlands.

Jarvis (1979) found there to be over thirty-five specialist cactus and other succulent plant nurseries in the UK. As part of the current survey, an index of addresses of fifty nurseries and three specialist seed suppliers has been drawn up, taken from recent editions of the British Cactus and Succulent Journal. The majority of these nurseries operate on a part-time basis and they do not all advertise regularly.

Table 2

Exports of non-CITES succulents from Transvaal to Europe in 1984

Species	Family	Numbers
<i>Adenia glauca</i>	Passifloraceae	10
<i>Cotyledon luteosquamata</i>	Crassulaceae	5
<i>C. paniculata</i>	"	60
<i>C. reticulata</i>	"	10
<i>C. wallichii</i>	"	10
<i>Fockea edulis</i>	Asclepiadaceae	5
<i>F. ferox</i>	"	5
<i>F. inermis</i>	"	10
<i>F. tugelensis</i>	"	20
<i>Nananthus transvaalensis</i>	Mesembryanthemaceae	600
<i>Pterodiscus aurantiacus</i>	Pedaliaceae	60

Source: du Plessis (in litt., 3.4.85)

Forty-one nurseries and one seed specialist were written to as part of the survey and twenty-seven replies were received, several to say they were closing down. Nurseries were asked for copies of their current plant lists and also for comments on the UK conservation legislation, the species protected and their propagation. Twenty catalogues or plant lists have been received and, of the nurseries not producing lists, five have indicated which Appendix I species they are propagating.

In addition, a number of nurseries reported that they are propagating, or have propagated in the past, Appendix I cacti not currently advertised.

The majority of Appendix I cacti are being propagated by UK nurseries and certain species e.g. *Mammillaria plumosa*, *Leuchtenbergia principis* and *Turbincarpus* spp. are quite commonly offered. No evidence was obtained during the survey of wild-collected Appendix I species being offered to the public, but nurseries do have wild-collected "mother" plants for seed production. One nurseryman, for example, produces 1500 seeds of *Pelecypora aselliformis* each year, for sale from imported habitat plants.

The Appendix I succulents other than cacti are scarcely available in the UK.

Jarvis (1979) pointed out that, 'Relatively few nurseries . . . sell habitat-collected plants and such plants can play a significant part in the trade for no more than three or four British nurseries.' The same seems to be true today but four of the seven nurseries visited had a few wild-collected plants. One of these nurseries was a very small part-time concern and it is possible that other similar nurseries which did not respond to the survey, have a few habitat plants. Only one catalogue received, specifically indicates wild-collected species.

No UK nursery deals in wild-collected succulents to the same extent as the traders in Belgium, F.R. Germany and the Netherlands. British succulent enthusiasts are of course able to buy directly from these continental nurseries either by post or during visits, often organized by branches of the British Cactus and Succulent Society.

Wild-collected cacti on sale in the UK include Appendix II species of *Ariocarpus*, *Copiapoa* and *Discocactus*. It has been thought in the past that a high proportion of such plants was re-exported to the UK by other European countries. CITES statistics show however that, at least for *Copiapoa* spp., plants have been imported directly from the country of origin, Chile.

At least fifteen nurseries contacted stated specifically, either in their catalogue or in correspondence, that they sell only propagated material, in some cases directly because they favour conservation. Dale (in litt., 25.1.85), for example, states that in over fifty years of growing cacti he has never imported any habitat-collected plants and he propagates Appendix I cacti and *Agave* spp. from seed.

Abbey Brook Nursery states in its catalogue that in 1968 it was 'the world's first commercial cactus nursery to make a public declaration against the importation and sale of unpropagated wild collected plants'. The nursery has a 'conservation collection' used to produce nearly two million seeds a year. Mr Graham, editor of *The Xerophyte* and owner of Barleyfield Succulent Plant Nursery, feels that 'there is no need at all for the commercial importation and sale of succulent plants' (Graham, in litt., 17.1.85). Another nurseryman has suggested a complete ban on retail sale of habitat-collected succulents with limited quantities of documented stock plants being distributed to licensed nurseries for propagation (Comer, in litt., 23.1.85).

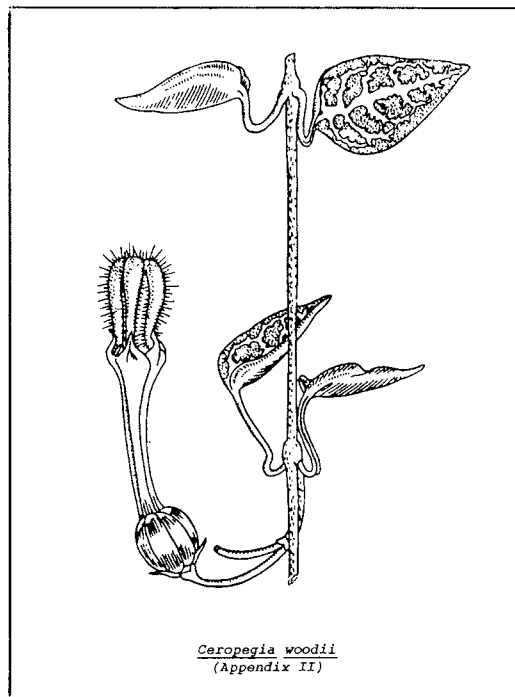
Several nurserymen consider that conservation legislation should allow some wild-collected plant material to be available for propagation purposes. Availability of seed was said to be a factor influencing the propagation of rare species. Abel (in litt., 18.2.85), for example, feels that any controls on exports from habitat should exclude seed. 'Westfield' nursery is building up stocks of seed-grown endangered species for

future seed production. This is partly because of the high cost of importing seed from the USA where a fee is required for a licence to export Appendix I seed (Northcott, in litt., 20.2.85).

Nurserymen's concern about the current conservation legislation related mainly to provisions for sale of Appendix I artificially propagated plants and the export of artificially propagated material. Under the EEC CITES Regulation, Appendix I plant specimens can only be sold if they are artificially propagated (or under certain other circumstances relating to the date of acquisition). There is some uncertainty amongst traders as to whether a licence is required to sell artificially propagated material. Several nurseries have requested permission from the Department of the Environment to sell Appendix I specimens and, following nursery inspections, two nurseries have been granted permission. Many other nurseries advertise and sell propagated Appendix I plants and it seems that some general exemption is necessary.

A common criticism of the UK legislation, among traders, is the requirement for export permits for nursery-raised plants, particularly for each individual consignment. It is felt that this acts as a disincentive to propagation and trade, whereas these should be encouraged. Mottram (in litt., 16.1.85) suggests that, as UK traders may 'acquire their stock either by propagation or by legitimate importation', a system of licensing traders would be appropriate, rather than licensing individual consignments.

The UK stricter controls on certain genera of cacti have provoked a backlash against conservation, as expressed for example by Whiteley (1984). He complains about the 'blanket ban on *Copiapoa* imports' and considers that 'conservation laws in their brief history have probably killed more plants than collectors have ever collected since man first took an interest in cacti'. Unfortunately Whiteley's article has been quoted by several nurserymen in response to the current survey.



*Ceropogia woodii*  
(Appendix II)

#### Belgium

Enforcement of CITES in Belgium began with the implementation of the EEC CITES Regulation on 1 January 1984. The first Belgian annual report to CITES was produced for 1984. The report includes data on exports of cacti, although genera and species are not given, and also on the export of *Euphorbia* species. No

information on the import of CITES succulent plants is given in the report.

CITES data provided by exporting countries give scant information on Belgian imports of these plants. For example the only exports recorded in the 1983 annual report were thirty-nine artificially propagated plants of thirty-three species exported from the USA to Belgium in 1983. Interviews with nurserymen during the survey indicated that imports of artificially propagated specimens are considerably more substantial than this. In addition, imports of wild-collected CITES plants have clearly taken place.

According to van Meines (1981), specific data on Belgian production, sale and use of cacti are unobtainable, but sales have lost significantly to the Netherlands. Particularly close trading links operate with the Netherlands in the Belgian horticultural trade. No plant health checks are required for the movement of plants between the two countries. This means in effect that there are no CITES controls on artificially propagated Appendix II cacti and other succulents moving between these countries.

The CITES plant trade is controlled in Belgium by the plant health service, Protection Vegetaux, of the Ministry of Agriculture. There are no personnel responsible solely for CITES matters within this agency. According to Protection Vegetaux there are ten cactus producers in Belgium. One of these firms visited during the survey, is in fact a wholesale general pot plant supplier. It does not appear to produce cacti but sells a range of small unnamed cacti produced elsewhere together with other pot plants (including a few wild-collected cycads).

Of the firms specialising in cacti and other succulents, only two are known to sell wild-collected plants. A visit to one during the survey revealed wild-collected *Aztekium ritteri* for sale.

An amateur group known as ABC (Aktiegroep voor de bescherming van cactussen en andere planten) has been formed in Belgium to promote succulent plant conservation through propagation and discouraging the purchase of wild-collected plants. The group has publicised conservation and CITES through articles in "Succulenta" a magazine for Belgian enthusiasts and through talks to local specialist groups. ABC is now working closely with TRAFFIC (Belgium).

The close proximity to Belgium of major Dutch and German specialist nurseries clearly increases the availability of rare cacti and other succulents to Belgian collectors.

The non-specialist pot plant trade has also given cause for concern in Belgium through the sale of wild-collected succulents. Specimens of *Beaucarnea* and *Nolina* have been sold through florists and also large specimens supplied for office reception areas (Bourdoux, in *litt.*, 10.2.83). Currently only one species of these genera, *Nolina interrata* is covered by CITES, but clearly this type of trade needs to be monitored wherever possible.

#### Denmark

Denmark is primarily a producer and exporter of cacti and other succulents but some commercial imports also take place. These are reflected in the CITES statistics and annual reports of exporting countries. The USA, for example, exported over 100,000 cacti to Denmark in 1982, although none in 1983 (Campbell, in *litt.*, 7.12.84).

CITES trade data for plants have never been published in detail by the Danish CITES Management Authority. The trade is dominated by artificially propagated specimens. Estimates of the production of cacti and other succulents in Denmark are given in Table 3.

All the plants listed in Table 3 are included in CITES Appendix II except for *P. namaquanum*, which is in CITES Appendix I.

Table 3

#### Danish production of CITES succulents

Plant name	No. of nurseries	Approximate Annual production
<i>Agave victoriae-reginae</i>		little production
<i>Aloe</i> spp.	10	100 000
Cactaceae (mainly <i>Schlumbergera</i> )	20	15 000 000
<i>Ceropegia woodii</i>	10	100 000
<i>Euphorbia milii</i> & <i>trigona</i>	10	1000 000
<i>Euphorbia</i> (other succulent spp.)		little production
<i>Lewisia cotyledon</i>		little production
<i>Pachypodium lamerei</i>	20	400 000
<i>Pachypodium namaquanum</i>		little production

Source: Government Plant Protection Service (Mikkelsen, in *litt.*, 20.6.84).

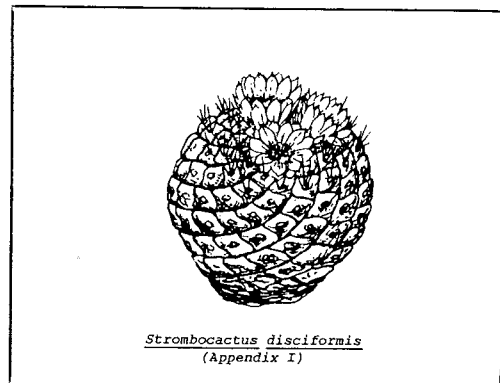
There is no evidence to suggest that Danish nurseries sell wild-collected plants of either CITES Appendix I or Appendix II plants. It is likely that specialist collectors buy rare species from nurseries elsewhere in Europe either by post or in person.

Import and export controls on CITES plants are operated by the Plant Protection Service which wishes to extend the use of phytosanitary certificates to all trade in CITES-listed plant species.

#### F.R. Germany

F.R. Germany's trade in cacti and other succulents has never been reported in its CITES annual reports. Officially all trade in such plants has been stated to be in artificially propagated specimens. Furthermore F.R. Germany has interpreted the annotation 'Cactaceae spp. (All species of the family in the Americas)', in Appendix II, to mean that only imports from the Americas have to be controlled.

Reported exports by other CITES Parties, however, shows F.R. Germany to be a major destination of cacti and other succulents, both artificially propagated and wild-collected. According to Leuenberger (in *litt.*, 11.6.85) the demand for wild-collected plants still exists and very few collectors actively propagate field-collected material. Appendix I species are advertised in a number of nursery catalogues and continue to be openly displayed for sale by those nurseries. One nursery includes nine Appendix I species in its 1985 plant list, and a visit



*Strombocactus disciformis*  
(Appendix I)

revealed that all were wild-collected. Particularly abundant were plants of the genus *Turbinicarpus*, which most nurserymen agree can be easily grown from seed.

There are about thirty cactus and succulent nurseries in F.R. Germany. Five nurseries known to trade in wild plants were visited during the week 5-12 April 1985. In addition one large nursery which trades only in propagated plants, Bisnaga, was visited. This nursery produces about 1000 different species of cacti, including rare and difficult species and indicates in its catalogue whether plants are grafted or raised from seed.

EEC trade in CITES specimens is controlled regionally in F.R. Germany by the 'Bundeslander'. The Bundeslander has compiled a list of nurseries which carry out legal propagation, consisting of eight firms (Blanke, in litt., 22.3.85). Of these, three visited during the survey have also a major trade in wild-collected plants, which the German Management Authority may not be aware of.

The continuing German trade in wild-collected rare cacti and other succulents is a cause for concern. It appears to have been largely overlooked by the CITES Authorities, presumably because it is masked by a large trade in cultivated plants. It is estimated that annual production of cacti by nurseries in F.R. Germany is about ten million plants. In addition, imports from Mediterranean countries are increasing as production costs in F.R. Germany rise through increasing costs of greenhouse heating (Menzel, in litt., 16.7.85).

Table 4

## Sales of succulent plants in F.R. Germany

Type of plant	Annual sales (millions)
Cacti	15-20
<i>Pachypodium</i>	1
<i>Euphorbia milii</i> & hybrids	more than 1
other succulents	1-2

Source: Menzel, in litt., 16.7.85

According to Menzel (loc. cit.) the most commonly available succulent species in F.R. Germany include *Agave victoria-reginae* (grown from seed in the Mediterranean region), *Ceropegia debilis*, *Euphorbia obesa*, *E. caput-medusae*, *E. grandicornis*, *E. tirucalli*, *E. trigona*, *Pachypodium lamerei*, *P. geayi* and *P. saundersii*.

## France

French CITES annual reports have provided few data on trade in cacti and other succulents. For example in the most recent published report (1982) the only such transaction recorded is the re-export of 550kg of *Aloe* spp. to Japan. More recent information on exports provided by the French Management Authority is given in Table 5. For 1984 the only imports reported were two Asclepiadaceae specimens from Thailand.

Information from the annual reports of other CITES Parties reveals relatively limited exports of cacti to France. For example 1983 statistics record the export of 3400 'cactaceae' from Japan, eight from Canada, together with forty-two specimens of twenty-four named species. There has been no strong tradition of collection of rare, habitat cacti by French succulent plant enthusiasts, unlike in F.R. Germany and Belgium.

Data on trade in other succulents in 1983 show some imports of *Pachypodium*, *Aloe*, and *Euphorbia* spp. from Madagascar and *Euphorbia* spp. from the USA. It is thought that France acts as the main entry point for Madagascar succulents imported into Europe.

Table 5

## Exports of cacti and other succulents by France

Genus/Species CITES Plants	Quantity	
	1984	1985 (Jan-March)
<i>Agave victoria-reginae</i>	501	
<i>Aloe</i> spp.		210
<i>Aloe</i> (hybrids)	1008	
<i>Euphorbia</i> spp.	2554	10642
<i>E. aeruginosa</i>	4485	
<i>E. herythera</i>	692	
<i>E. polyantha</i>	2079	
<i>Pachypodium</i> spp.	510	4084
<i>Astrophytum ornatum</i>	40	
<i>Azureocereus</i> spp.	40	
<i>Cereus</i> spp.	1260	6710
<i>C. forbesi</i>	40	
<i>C. 'vert'</i>	40	
<i>Coryphantha erecta</i>	40	
<i>Echinocactus grusonii</i>	40	
<i>Ferocactus</i> spp.		28
<i>Espositoa lanata</i>	40	
<i>Hertrichocereus beneckeii</i>	40	
<i>Lemaireocereus dumortieri</i>	40	
<i>Machaerocereus</i> ( <i>Stenocereus</i> ?) <i>thurberi</i>	40	
<i>Mammillaria</i> spp.		2250
<i>M. candida</i>	40	
<i>M. rhodantha</i>	40	
<i>M. spinosissima</i>	40	
<i>Notocactus magnificus</i>	40	
<i>Opuntia</i> spp.	960	16527
<i>O. basilaris</i>	2000	
<i>O. mayavensis</i>	4664	
<i>O. monacantha</i>	96	
<i>O. microdasys</i>	480	
<i>O. tunicata</i>	11826	
<i>Pachycereus pringlei</i>	60	
<i>Pilosocereus chrysacanthus</i>	40	
<i>Selenicereus grandiflorus</i>	1386	
<i>Trichocereus schickendantzii</i>	40	
<i>Weberbauerocereus winterianus</i>	40	

## Non-CITES Plants

<i>Aeonium</i> spp.		100
<i>Agave</i> spp.		36
<i>Conophytum</i> spp.	945	
<i>Cotyledon</i> spp.		2433
<i>Crassula</i> spp.		441
<i>Echeveria</i> spp.		2560
<i>E. pulvinata</i>	1840	
<i>Kalanchoe</i> spp.	3168	19400
<i>Lithops</i> spp.	5040	
<i>Mesembryanthemum</i> spp.		222
<i>Nolina</i> spp.		60
<i>Stapelia</i> spp.	1056	3411

Source: French CITES Management Authority (Maler, in litt., 29.3.85)

Production of cacti and other succulents in France tends to be concentrated around the Mediterranean coast. The Groupement National Syndicat des Producteurs de Cactées & Plantes Grasses has produced a list of seventeen cactus producers based in this region. The nurseries have links with traders in Belgium, F.R. Germany and the Netherlands.

### Greece

Greece is not yet a Party to CITES but implements the provisions of the Convention through the EEC CITES Regulation. No information is available yet on Greek production or exports of cacti or other CITES-listed succulents. CITES reports of exporting countries show a range of species exported to Greece in 1982 and 1983. No other information on Greek succulent plant trade was found during this survey.

### Ireland

Ireland is not yet a Party to CITES but implements the provisions of the Convention through the EEC CITES Regulation. The 1982 CITES statistics of exporting countries show a very small number of exports to Ireland of CITES-listed succulents. No other information on the Irish succulent plant trade was found during this survey.

### Italy

Italy is thought to be primarily a producer rather than a major importer of cacti and other succulents. However, one British specialist nursery reports that Italy has become its main export market (Mottram, pers. comm., 19.6.85). Trade in CITES-listed cacti and other succulents is controlled on the basis of phytosanitary certificates for artificially propagated plants and no statistical data have been collected by the CITES Management Authority (Vicentini, *in litt.*, 11.2.85).

### Luxembourg

Luxembourg has no nurseries producing cacti and other succulents and, according to the CITES Management Authority, there is no trade in "wild-collected or protected plants" (Salentiny, *in litt.*, 21.1.85). It is assumed that enthusiasts purchase plants from nurseries in neighbouring countries.

### Netherlands

CITES enforcement in the Netherlands started for plants with the entry into force of the EEC CITES Regulation on 1 January 1984. The Netherlands has not yet published any detailed data on the trade in cacti and other succulents covered by CITES.

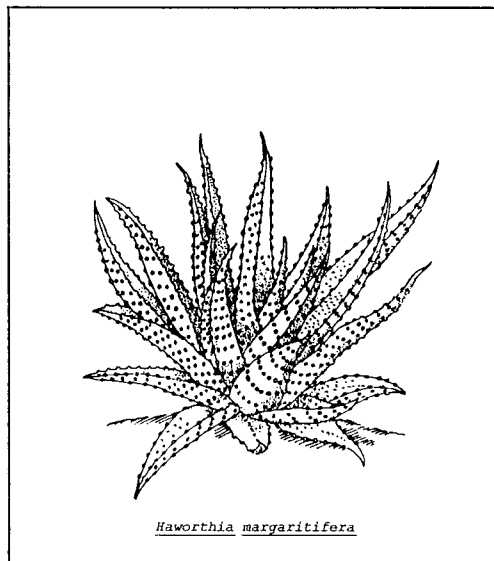
An information paper presented by the Dutch Management Authority at the fifth meeting of the Conference of the Parties to CITES (Buenos Aires, 22 April-3 May, 1985), gives the following estimated export figures for 1983:

Table 6  
Dutch exports of CITES-listed succulent plants

<u>Aloe</u> spp. (Appendix II)	59 000
Cacti (Appendix II)	5.4 million
<u>Ceropegia woodii</u> (Appendix II)	630 000
succulent <u>Euphorbia</u> spp.	620 000
<u>Pachypodium lamerei</u>	186 000

These plants are listed in a booklet produced by the Flower Council of Holland illustrating the 379 most common pot plants produced by the Netherlands.

The Netherlands produces and trades in very large quantities of mixed non-specific artificially propagated cacti. One firm alone, Edelman, sells about eighteen million a year, supplied, in part, by twenty-six small-scale Dutch growers. Plants of this nature are produced for the general house plant market and are of little interest to serious cactus collectors. The same applies to the other succulents produced in bulk and sold generally as unnamed specimens.



*Haworthia margaritifera*

Artificially propagated cacti and other succulents are also produced for traders in the Netherlands by growers in other countries, where production costs are cheaper or specialised production techniques have been developed. The Canary Islands are a major source of propagated material for Dutch nurseries. Wholesale exports of artificially propagated plants by these countries are scarcely reflected in CITES statistics.

In addition to the general succulent plant trade, there are at least eight specialist nurseries providing both propagated and wild-collected material for specialist succulent plant collectors. Two nurseries well-known for selling wild-collected plants were visited during the survey. Both these nurseries appear to specialise in South American cacti all of which are on Appendix II of CITES. There are therefore no restrictions on the sale of wild-collected specimens but imports obviously need to be carefully monitored.

One of the firms appeared to sell wild-collected plants almost exclusively and gave the greatest cause for concern of all the nurseries visited during the survey. This firm advertises through all the major European specialist societies and has recently offered botanic gardens 'very sought after landscaping dominating (sic) cacti from the Sonora desert.'

The emphasis in implementing CITES for plants by the Dutch Government is placed on imports. For imports of CITES-listed plants from outside the EEC, an import permit is required, issued by the Directorate of Nature, Environment & Fauna Management (Ministry of Agriculture & Fisheries) - the principal CITES Management Authority. This is not usually given unless a copy of the export document is produced. Customs officers check the documents at the time of import. For artificially propagated plants no import permits are required. The importer must submit an import certificate prepared by himself together with the export document (Anon, 1984).

For exports of the cacti and succulents included in Table 6 a phytosanitary certificate with the declaration 'Artificially propagated as defined by CITES' serves as a certificate of artificial propagation. Export controls for these plants are the responsibility of the Plant Protection Service.

Official enforcement of CITES controls on cacti and succulents is monitored by TRAFFIC (Netherlands) in conjunction with WSB (Werkgroep Succulenten Bescherming). WSB is an amateur group set up in 1981 to discourage the sale of wild-collected succulent plants. The group is currently carrying out a survey of Dutch nurseries with TRAFFIC (Netherlands).

## Other European Countries

### Austria

The 1983 CITES statistics show exports of a range of cacti from Japan, USA and F.R. Germany. The largest transaction recorded is 23 700 cacti exported by Japan.

There are several specialist cactus and succulent plant nurseries in Austria known to sell wild-collected plants. Such plants have also been sold in small flower shops there, reputedly imported in mixed consignments of plant material via the Netherlands and Hamburg (Unger, in litt., 16.3.85).

### Malta

Malta, which is not a CITES Party, has been cited as a major exporter of cacti to the UK (Jarvis, 1979). The supplier of these plants, R. Zahra, produces about 10 000 seedlings of 300 cacti and other succulent species each year. There are no commercial succulent plant nurseries in Malta and Mr Zahra operates on a part-time basis. Exports to the UK used to be about 5000 plants a year but this has fallen markedly, partly because of the length of time necessary to obtain import permits in the UK (Zahra, in litt., 21.2.85).

### Spain

Large-scale commercial production of cacti has become established in Spain over the past twenty years. By 1973, the production of cacti by Spanish nurseries reached 1 million plants. In the same year, 0.5 million plants were imported but, because of increased production, imports then decreased to 'some thousands of plants coming occasionally from England, Holland or Germany' (Ballester-Olmos, undated). Estimates of the current production figures for cacti are given in Table 7.

Table 7  
Spanish production of cacti

Region	No. of major nurseries	Annual Production
Valencia	3	4 million
Catalonia	4	2-3 million
Canaries	6	0.5 million
Majorca	3	0.3 million
S. & S.W.		0.2-0.4 million

Source: Ballester-Olmos, in litt., 18.4.85

Detailed data on the export of cacti and other succulents are not available as Spain is not party to CITES. There is, however, a substantial export of cacti to other European countries as shown, for example, by the sale, in the nurseries visited, of plants produced in the Canaries.

Cacti such as *Echinocactus grusonii* and *Melocactus* spp. are grown from seed, outdoors in the Canary Islands. One firm (Casa Cactus, Tenerife) was producing 600 000-700 000 plants in this way in 1983, mainly of *Melocactus*, *Echinocereus* and *Astrophytum*. About sixty per cent of the entire production of this nursery goes to F.R. Germany, thirty per cent to the Spanish market, and the rest to Austria, Belgium, Netherlands and Switzerland (Broogh, 1983). Several Dutch and German cactus traders own nurseries in the Canary Islands, e.g. Mr Beisel (Bisnaga, Steinfeld, F.R. Germany) and Hovens (Nr. Lottum, the Netherlands). Others such as Kohres, (F.R. Germany) have close links with nurseries based there.

The availability of mature outdoor-grown cacti on the European market may help to reduce demand for plants collected from the wild. *Melocactus* specimens with cephalia can, for example, be raised from seed on the Canaries in four years. Production costs are obviously considerably lower than in more northern climates. Doubts are however being expressed about the Canary Island plants by serious collectors. They are concerned that, as a result of hybridization, species are no longer true to type. In addition there are concerns about the quality of the plants (de Herdt, pers. comm.). Subsequent growth of the plants upon import to northern Europe can be poor (Taylor, pers. comm.).

In addition to nursery-produced plants the Canaries do have native succulents of interest to collectors. Wild-collected specimens of *Euphorbia balsamifera*, a species which is not uncommon in the wild, are currently offered by Dutch and German nurseries.

### Switzerland

Information on the plant trade has been extremely limited in Swiss CITES annual reports. Other countries do however record a substantial export trade to Switzerland of rare species of cacti.

It is only very recently that Switzerland has started to enforce CITES fully for plants. Enforcement is the responsibility of the Phytosanitary Service which issues CITES permits and carries out border controls. According to Dollinger (in litt., 10.4.84) the Phytosanitary Service has been reluctant to carry out CITES plant controls on a regular basis. Since September 1984, however, foreign CITES documents have been collected by the Service and, since February 1985, there has been full implementation of border controls (Dollinger, in litt., 4.2.85).

The reluctance of Switzerland to enforce CITES for plants, until this could be carried out effectively, resulted in reservations being placed on various CITES species. These however, have now been withdrawn.

The appointment of Mr D. Supthut, Director of the Zurich City Succulent Collection (internationally important as a reference collection and a reserve collection of the International Organisation for the Study of Succulent Plants), to the CITES Scientific Authority, further marks the now positive attitude of Switzerland to CITES plant controls. A handbook on cacti and other succulents has been prepared for enforcement officers by the Zurich Succulent Collection and a seminar held there for enforcement officers.

Switzerland has two main specialist succulent nurseries, one of which is known to trade in rare species contrary to CITES. This firm imported a consignment of wild-collected *Backebergia militaris* in 1984. Forty specimens were for sale recently, made available at a sales exhibition for Sfr350 (\$158) each. The sale was stopped by Swiss Federal Customs and an inspection of the firm carried out. This revealed other Appendix I species, i.e. *Obregonia denegrii* and *Ariocarpus trigonus* (Supthut, in litt., 7.6.85). A visit to the nursery by an independent Swiss cactus expert in 1984 revealed wild-collected plants of *Ariocarpus*, *Turbinicarpus*, *Thelocactus*, *Epithelantha micromeris*, *Astrophytum myriostigma* and *Astrophytum ornatum* on sale.

The other main specialist nursery was recently inspected and found to be selling some wild-collected CITES Appendix II plants, together with artificially propagated specimens, grown by the nursery and imported from the Canary Islands (Supthut, in litt., 7.6.85). The wild-collected plants, from shipments imported three to four years ago, were of *Copiapoa* (imported from Peru) and *Echinocereus* (imported from Mexico).



## CONCLUSIONS

This survey has shown that there is still a market for rare wild-collected succulents, both of cacti and of other groups, in Europe. For some species, artificially propagated specimens provide an acceptable alternative to collectors, no doubt in part because they are cheaper and likely to be more healthy plants. For other species, particularly those which take a long time to assume a 'habitat' appearance when grown from seed, collectors may prefer wild plants.

Appendix I listing does seem to encourage artificial propagation, by nurseries, of the slow-growing rare species or the sale of seed from "mother" plants (often from habitat) directly to enthusiasts. Wild-collected Appendix I plants are, however, still available quite freely from a few specialist nurseries in Europe. The number of Appendix I plants seen in F.R. Germany suggests that there may have been illegal importations after the Parties agreed to transfer certain cacti species to CITES Appendix I in 1981 and 1983.

The volume of trade in South American cacti may be a cause of concern; Brazilian spp. of *Discocactus* and *Uebelmannia* are commonly encountered in European trade as mature wild-collected plants. Wild-collected *Copiapo* spp. from Chile (imported via Peru) are also sold by a number of European nurseries although artificially propagated specimens are readily available. As the EEC is a major consumer of certain South American cacti and thus poses a conservation threat, it would be appropriate to consider listing certain genera in Annex C2 of the EEC CITES Regulation (see Recommendations below).

The 'further measures' taken by the UK for cacti under Article 15 of the EEC Regulation should be reconsidered in line with this proposal. The stricter controls adopted by the UK have unfortunately caused confusion and resentment amongst British nurseries and collectors, particularly as the plants continue to be freely available elsewhere in the EEC. A common line within the EEC on the relatively heavily exploited species would be desirable.

The bulk of the European trade in cacti is in artificially propagated specimens, grown in Europe. The same is true for other succulents but, for these, imports from nurseries in the countries of origin probably form a more substantial proportion of the trade. It is difficult, in such cases, to determine whether or not artificially propagated plants conform with the definition adopted by CITES (in Resolution Conf. 2.12). The present survey revealed trade in wild-collected Madagascan and South African succulents which is not reflected in official statistics.

In Madagascar, as there is only one nursery exporting succulent plants, and controls on personal collecting are particularly strict, the basis for a legitimate export trade is well-established. Doubts remain about the origin of plants exported by the nursery however.

For CITES purposes it would be useful to have an index of major succulent plant nurseries with an indication of whether or not trade is exclusively in artificially propagated plants. This would allow import licensing to take place with a greater degree of confidence that illicit trade in rare wild plants is not being legitimized.

The value of nursery visits was established during the survey, since a considerable amount of information was revealed which is not available from official sources or in fact readily apparent from nursery catalogues. Nurserymen contacted during the survey have generally been co-operative and prepared to work for more effective controls where this will clearly benefit species in the wild. Unfortunately several European nurseries do, however, appear to operate completely outside conservation controls and cause a disproportionate amount of damage to wild plant populations.

## RECOMMENDATIONS

- 1) Imports of CITES-listed plants into the EEC from their countries of origin should be monitored and reported effectively to species level.
- 2) An index of major traders, in the EEC, in cacti and other succulents, should be prepared by the EEC with information on the main type of plants sold, including whether or not artificially propagated CITES Appendix I plants are produced, and which species.
- 3) Each EEC state government should make clear to its national traders the legislation affecting the sale of artificially propagated specimens of CITES Appendix I plants in the EEC.
- 4) Stricter enforcement measures should be taken to prevent the sale of wild-collected Appendix I specimens in the EEC.
- 5) The following genera should be considered for Annex C2 listing under EEC Regulation 3626/82, for species not already listed in CITES Appendix I:

<u>Genus</u>	<u>Country of origin</u>
<i>Ariocarpus</i>	Mexico, USA
<i>Copiapo</i>	Chile
<i>Discocactus</i>	Brazil, Bolivia, Paraguay
<i>Uebelmannia</i>	Brazil

- 7) Efforts should be made to encourage field surveys for the above genera to establish the current status of species in the wild.
- 8) The following species should be considered for addition to CITES Appendix II:

<u>Taxon</u>	<u>Country of origin</u>
<i>Adenia</i> spp.	South Africa
<i>Fockea</i> spp.	South Africa
<i>Haworthia</i> spp.	South Africa
<i>Dioscorea elephantipes</i>	South Africa
<i>Nolina</i> (including <i>Beaucarnea</i> ) spp.	Mexico, USA



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## ACKNOWLEDGEMENTS

This survey was funded primarily by World Wildlife Fund-UK, with an additional grant provided by World Wildlife Fund-Belgium. I am most grateful to these organisations, and to Jon Barzdo for setting up and supervising the project. In addition thanks are due to the many people who provided information, ideas and guidance during the survey, and preparation of the report. I am particularly grateful to Minouk van der Plas-Haarsma TRAFFIC (Netherlands), Jean-Pierre d'Huart TRAFFIC (Belgium), Nico Vermeulen (WSB), Lucien Verschoren (ABC), the Belgian and Dutch CITES Management Authorities, Nigel Taylor (RBG, Kew), Dieter Supthut, Urs Egli, A. Ferrar, B. Bayer and the staff of WTMU.

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The Western European Trade in Cacti and other Succulents (ctd)

Annex 1

Alternatives for names, used in the tables, which are generally considered to be synonyms

<u>Table No.</u>	<u>Name used</u>	<u>Alternative name</u>
	Cacti:	
5	<u>Hertrichocereus beneckeii</u>	<u>Stenocereus beneckeii</u>
5	<u>Lemaireocereus dumortieri</u>	<u>Stenocereus dumortieri</u>
5	<u>Machaeocereus thurberi</u>	<u>Stenocereus thurberi</u>
5	<u>Opuntia mayavensis</u>	?
5	<u>Opuntia monacantha</u>	<u>Opuntia vulgaris</u>
5	<u>Pilosocereus chrysacanthus</u>	<u>Cephalocereus chrysacanthus</u>
	Other succulents:	
1	<u>Anacampseros ustulata</u>	?
5	<u>Euphorbia herythera</u>	?

? denotes that the species to which this name refers is unknown

### \* Colombian Firm Fined

A firm in Colombia, Mendal Hermanos, found guilty of illegal trade in animal skins, has been fined more than 1 million pesos (US\$6293).

More than 5000 skins, including 708 Capybara (Hydrochaeris hydrochaeris) skins and 4314 'babilla' (Spectacled Caiman, Caiman crocodylus) skins, amounting to more than 120m, have been confiscated.

According to the World Society for the Protection of Animals, Mendal Hermanos has long been involved in the illegal export of animal skins and, only several months ago, was fined 500 000 pesos (\$3146). Between 1977 and 1983 the firm is said to have exported skins valued at an estimated \$32 600 000. In June 1984, investigators from the newspaper El Tiempo found 27 000 'babilla' skins, valued at 50 million pesos (\$314 641), on the premises.

Now, however, the company is reported to be in bankruptcy.

Source: El Tiempo (Colombia), 6.7.85

### Frog-eating Not 'Halal' in Indonesia

Indonesian Muslims may not eat frogs but are allowed to raise them for commercial purposes, Indonesia's Muslim Council has ruled.

The Council's ruling was handed down after a two-day meeting held after government calls to increase frog-leg exports, to boost non-oil export revenues.

The Quran makes no specific judgement on frog-eating, and sources said the Council was divided on whether frog meat was 'halal' (clean) or not.

At the CITES conference in Buenos Aires the Indonesian delegation indicated that, although the Indian Bullfrog (Rana tigerina) and the Six-fingered Frog (Rana hexadactyla) occurred in their country, they were not subject to major exploitation and that Indonesian exports were of mainly captive-bred specimens of a different species.

Sources: The Star (Malaysia), 15.11.85  
David Whiting

### Chilean False Larch Trade

According to a report in El Mercurio (12.5.85), 100 000 inches of Chilean False Larch (Fitz-Roya cupressoides) are due to be exported from Contao, Chile, to Argentina, reactivating that market, said Victor Ahumada, the administrator of the wood plant SACOR. He referred to the low demand for the product and said that last year 10 000 inches of Chilean False Larch were exported to Buenos Aires via Puyehue, whilst a similar amount remained in Chile awaiting sale. He explained that problems relating to fluctuations in the dollar had caused a decline in sale and he believed that the situation was temporary. He was optimistic that in the very near future exportation would pick up again.

The coastal population of the Chilean False Larch is in CITES Appendix II and the population in The Andes is in Appendix I.

### Seal Meat for Sale?

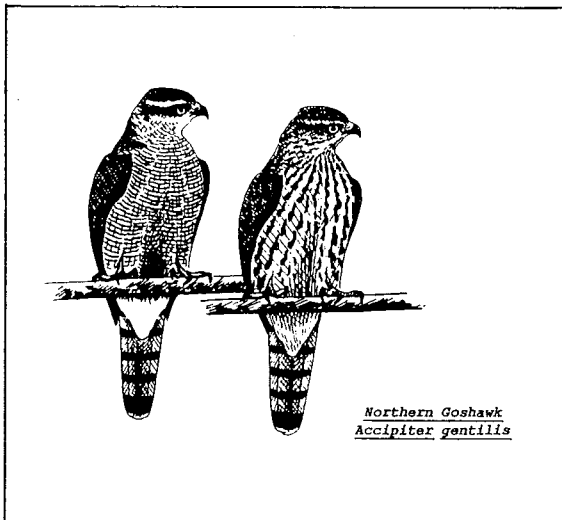
An ambitious scheme to market seal meat for human consumption is being studied in Arica, Chile. According to Oscar Nuñez Rocuant, who already has the facilities set up, he is the only one authorised by the Fisheries Subsecretariat to manufacture and trade in seal meat.

It is not known which species of seal may become involved. The main species in this area are the sub-antarctic Fur Seal (Arctocephalus tropicalis), the South American Fur Seal (Arctocephalus australis) and the Southern Sealion (Otaria byronia).

Source: El Mercurio (Chile), 22.4.85

### \* Skins Seized in Spain

According to the CITES Secretariat, Spanish authorities have seized 30 000 crocodilian skins and 10 000 Boa Constrictor (Boa constrictor) skins shipped from Panama with CITES re-export documents, apparently issued on the basis of false country-of-origin export documents. The case is currently under investigation.



© Craig Robson, reproduced from *A Guide to the Birds of Nepal* by Carol and Tim Inskipp.

### \* Falconer Convicted in UK

In one of the first cases to be brought under the UK Wildlife and Countryside Act 1981, falconer, Eric Kirkland, was fined £625 (US\$895) on 2 May 1985 and ordered to pay £500 (\$716) costs after being convicted of illegally possessing four Northern Goshawks (*Accipiter gentilis*) and illegally selling two of them. He was acquitted of a further charge of selling a Goshawk.

The case had been adjourned last month, when Mr Mark Love, prosecuting for the Royal Society for the Protection of Birds (RSPB), said that the prosecution had only to prove the defendant was physically in possession of a bird covered by the Act. It was up to the defendant to prove he held the birds legally.

However, Mr Peter Pluck, solicitor for Kirkland, claimed that the Act was "contrary to natural justice" by placing the burden of proof on the defence.

His client honestly believed that the four young birds which he was handed by a breeder had been legally bred from two adults, one of which he owned, kept legally in captivity.

But the RSPB case was that the four birds had different characteristics from the adults they were claimed to have been bred from.

After the case, Mr Pluck stated that the decision had far-reaching implications because it meant that as the law stood at the moment, and was being interpreted, the four birds and any bred from them could never be classed as being kept legally.

### Goshawks Returned to Europe

A consignment of Northern Goshawks, seized in the break-up of a wildlife smuggling ring in the USA, has been flown to the UK.

The twenty-five male and female Goshawks were seized from what is believed to have been one of the largest smuggling rings to date. It was decided that the birds should be returned to their natural environment in Europe, from where it is believed they were smuggled as fertilized eggs to the USA.

The birds are currently in captivity and, apart from one bird which sustained quite serious injuries before its capture, it is hoped that all the birds will eventually be released in the wild.

Sources: *The Times (UK)*, 3.5.85, 18.7.85  
UK Department of the Environment

### Breeding Consortium for Cockatoos

In *Bulletin V(3/4):49* we reported on the confiscation, in November 1983, of two shipments in Miami and Los Angeles, USA, of a total of 100 Palm Cockatoos (*Probosciger aterrimus*, Appendix II).

The birds had originated in Indonesia and others were claimed to have been captive-bred in the Philippines.

The US Department of Justice filed a suit against the importer and, pending the outcome, the birds were cared for by eleven American zoos. In February 1984, the importer was ordered to forfeit the birds to the US Government for violation of the Lacey Act, a federal law which prohibits the importation of wildlife illegally exported from another country. The US Fish & Wildlife Service, with the help of a number of organisations, including the American Federation of Aviculture and the American Association of Zoological Parks and Aquariums, decided to establish a breeding consortium in the USA. Each of the eleven zoos which had been holding the Cockatoos was given two pairs of birds.

On 11 March 1985, eight birds were returned to Indonesia, accompanied by Dr Donald Bruning, Curator of Ornithology at the Bronx Zoo, to ensure that facilities they had established there were adequate. It is also anticipated that a biologist from Indonesia will travel to the USA in the near future to gather information about the breeding consortium. The Bronx Zoo will be attempting to breed its two pairs of birds at its facility on St Catherine's Island, off the coast of Georgia, USA.

Collectively it is estimated that the birds are worth almost US\$1 million on the black market and that there are only several thousand in the world. Palm Cockatoos have only rarely been bred in captivity and in the wild can only be found in Indonesia, Australia and Papua New Guinea, where they are protected.

Source: *New York Zoological Society*

### \* Briton in Smuggling Ring

A Briton, John Slaytor, is to go on trial in Canada accused of heading a sophisticated rare bird smuggling ring.

The gang is accused of making hundreds of thousands of pounds by illegally supplying hawks, falcons, and other rare birds.

They allegedly set up links to supply wild birds from Britain, Iceland and Finland to the USA and Saudi Arabia. Wildlife officers say rare Gyrfalcons (*Falco rusticolus*), worth up to £75 000 (US\$107 500) each, ended up in the hands of members of the Saudi royal family.

They were reportedly among the customers of John Slaytor, who is accused of using his falconry company as a front for the smugglers. Slaytor is said to have claimed that birds he exported were reared in captivity.

Source: *Mail on Sunday (UK)*, 14.7.85

### Birds and Eggs Destroyed

A couple from New South Wales, Australia, aiming to smuggle eggs and birds into the country were frightened by an in-flight film about quarantine laws, and destroyed forty eggs and six young birds. Steven James Holzhauser and his wife Diane were each charged with bringing banned imports into Australia and being knowingly concerned with the import of banned goods. Holzhauser was fined AU\$1000 (US\$710) for the first offence and \$250 (US\$178) on the second, his wife \$500 and \$250.

Source: *Magazine of the Parrot Society*,  
Vol. XIX, July 1985

## Survey of Rhino Horn on Sale in Singapore

A survey was recently carried out in Singapore by two local graduate students in order to discover the extent of the availability of rhino horn in medicine shops, and to try and establish the volume of trade in this product. The report of this survey, supplied to us by the CITES Secretariat, is summarised below.

### METHODS

The yellow pages of the Singapore telephone directory have ninety entries under the heading "Medicines-Patent and Proprietary-Retail", and it is under this heading that most of the local shops were selected. When these shops were visited it was often found that others were nearby. To save travelling time and to increase the survey sample size, these shops were also visited. In total, thirty shops were sampled for the survey.

The students, who could speak a variety of dialects, approached shop owners on the pretext of undertaking an assignment as part of their studies. Using a questionnaire, they asked various questions concerning the trade in rhino horn. Several of the questions were not relevant to the aims of the survey but were included as 'blinds' to make the charade more convincing.

### RESULTS

Of the thirty shops approached, only one had rhino horn on sale at the time and the owner of another shop said he had some rhino horn in stock, from old business. Twenty-two of the shop owners claimed to have no knowledge of the trade and could not, or would not, answer any further questions. Eight shops had previously dealt in rhino horn and were willing to answer questions relating to the trade.

### SUMMARY OF ANSWERS

The quoted costs for rhinoceros horn ranged from S\$50 (US\$49.8) per kg to \$8000 a tahl (= 1.33oz (c. 38g)); several prices quoted were in the S\$700-3000 a tahl range. The extremely low price of S\$50 was quoted for African horn by a shop owner who also said that Indonesian rhino horn was worth \$3000 a tahl; and another confirmed that African horn was cheaper, although adding that the price range is narrower than it used to be.

All but one of the eight respondents recognised different qualities of horn. One claimed there were two types: white from Manchuria and black from Sarawak. Another said that black horn came from Indonesia. According to one dealer, inferior quality horn always has skin sticking to it.

All respondents named Asian or South-east Asian countries and states (Borneo, India, Indonesia, Java, Malaysia, Sarawak) as the origin of horn in trade and four out of seven also identified Africa.

One shopkeeper said that his supply was smuggled by sailors, and two other answers specified either sailors or smugglers as the suppliers.

Four respondents recognised that no official permit was needed to obtain rhino horn in Singapore, although one of the four confirmed that he knew it was illegal to deal in rhino horn, adding that only old stock was available.

Chinese people were identified by five shop owners as the major consumers of horn.

Only one respondent recognised the aphrodisiac reputation of the horn, and he stated that it was sold to Arabs for this purpose. All eight respondents claimed it was used mainly for its 'cooling' (fever-reducing) effects, although one stated that antlers were better for this purpose.

Only three respondents could quote any sales rates and none of these seemed to have sold any in recent years. According to one dealer, although ten to twenty pairs were sold a year, a few years ago, there was much greater demand ten years ago. The other shops had reported '1-2 sales a year' and 'one piece every 4-5 years'.

All respondents were aware of the existence of fake rhino horns and knew how to recognize it, unless it had been ground.

### DISCUSSION

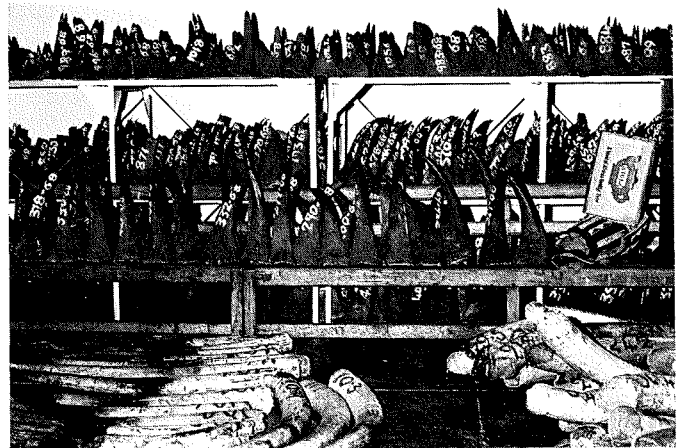
The two students who conducted this survey had recently graduated from university and held good honours degrees in a biological subject. They were intelligent and looked authentic in their roles. There is no reason to assume that their appearance or behaviour in any way influenced the answers given by traders and this is an important advantage of having such surveys carried out by local people. None of the shopkeepers seemed suspicious or to be hiding information and only two refused outright to enter into any discussion. Most of the twenty-two shops which did not yield any useful information seemed genuinely to be ignorant of the trade.

The wide range of quoted profit margins would seem to indicate a very poor knowledge of the trade or at least of the recent trade. Answers varied from five to fifty per cent. Whilst the latter figure is probably nearer the truth, only three respondents gave it, including the two who had horn in stock. It could also be that the other replies were deliberately misleading since profit margins are a particularly sensitive area for those in business.

It is apparent from the results that the level of rhino horn trade in Singapore is very low indeed. This is indicated not only from the answer to a question regarding the amount of rhino horn sold each week/month/year, but also from the disparity in the answers to other questions (e.g. costs), which suggest that the traders have only scant, or outdated knowledge of the market.

The results of this survey are in accordance with the observations of Mr K Scriven of WWF-Malaysia. Formerly he conducted business with Chinese medicine shops in Malaysia and Singapore and took an interest in items for sale. Whilst there were various other animal parts for sale, he concluded that rhino horn was not widely offered.

The general opinion is that rhino horn is a much more popular item in shops in Hong Kong. It has been suggested that this is because the Hong Kong Chinese are much more traditional than the emigrant population which make up the South-east Asian Chinese community. It is difficult to judge the validity of this suggestion. It is probable that, since the primary use of rhino horn is as a fever-reducing drug, and there are cheaper, effective alternatives available, these are used instead.



© Mark Boulton/ICCE

## Migratory Species Convention

The first Conference of the Parties to the 1979 Convention on the Conservation of Migratory Species will be held in Bonn from 21-26 October 1985. The meeting will be held at the Wissenschafts-Zentrum, Ahrstrasse 45, in Bonn-Bad Godesberg.

The current list of Parties to the Convention includes Cameroon, Chile, Denmark, Egypt, the Federal Republic of Germany, Hungary, India, Ireland, Israel, Italy, Luxembourg, the Netherlands, Niger, Portugal, Spain, Sweden and the EEC.

Invitations have also been sent by UNEP to all other States. Any State which deposited its instrument of ratification or adherence before 31 July 1985 may participate as a full Party; others may participate as observers.

Subject to approval by the Parties, "any agency or body technically qualified in protection, conservation and management of migratory species" may also participate as observers in the following categories:

- a) international agencies or bodies, either governmental or non-governmental, and national governmental agencies and bodies;
- b) national non-governmental agencies or bodies which have been approved for this purpose by the State (Party to the Convention) in which they are located.

The procedure for admission of observers is similar to the procedure under CITES. Requests for observer status should be addressed to: UNEP/CMS Secretariat, Adenauerallee 214, D-5300 Bonn 1, Federal Republic of Germany; Telex 886 885 FEC D; Telephone (0228) 2692 248.

## Animal Products in Short Supply

The Chinese Crude Drugs Company has been running short of raw material as most of its sources have become scarce and subsequently officially protected. It has now announced plans to raise tigers, bears, leopards, snakes and other animals in captivity in order to harvest their bones, bile or blood for various tonics and elixirs.

According to reports from the New China News Agency, the company has asked pharmaceutical departments and zoos to co-operate in exchange for a share of the profits.

Among the medicines most in demand are the ones made from tiger bones, which are used to treat rheumatoid arthritis.

*Source: BBC Wildlife (UK), June 1985*

## Shellshock

Sources in the Indonesian Directorate General of Small Industries say that due to the shortage of seashells on Bali, most are imported from outer islands such as the Moluccas, for use in necklaces, bracelets and other tourist souvenirs.

Supplies have become so erratic, both in quality and quantity, that several export orders have been cancelled.

Bali exports more than 700 000 shell products annually to Europe, the USA and Australia.

*Source: Business Times (Singapore), 18.6.85*

## Book Review

Wildlife Resources and Economic Development  
by S.K. Eltringham

Covering a wide range of different types of commercial wildlife exploitation, this book could provide an interesting introduction to anyone approaching the topic for the first time. The subjects include cropping of terrestrial and marine mammals; wildlife ranching and domestication; exploitation of birds, reptiles, amphibians, fish and invertebrates; big game hunting; wildlife and its impact on tourism and indigenous development. With such a wide scope, it is inevitable that some sections are treated in greater depth, and the exploitation of large mammals in Africa in the 1960s and 1970s is well described. Conversely, other topics, especially some of the more recent developments in the field of wildlife utilization, are discussed superficially or even omitted, making the book less than ideal as a serious source of reference.

The decision (presumably by the publishers) to omit all captions from the photographs, and to replace them with the name of the photographer, leads to some amusing speculation but does not improve the clarity.

*Wildlife Resources and Economic Development.*  
Published by John Wiley & Sons, Chichester, UK.  
Price £24.50.

## Bullfrogs Carry Typhoid in Taiwan

A routine check by Department of Health officials on bullfrogs' legs for sale in Taiwan has led to the discovery that approximately fourteen per cent of bullfrogs reared on farms in south Taiwan are carrying typhoid or a bacterium known as *vibrio parahaemolyticus*.

According to the Department of Health, these bacteria can cause acute diarrhoea and symptoms similar to severe food poisoning.

As a result, a Government warning to this effect issued on 4 April has meant that fried bullfrogs' legs, until recently a fashionable Taiwanese delicacy, are now being rejected by restaurants and consumers.

Prices have plummeted from a high of US\$4.50 per kg in 1984, to less than US\$1.25 in April 1985 for bullfrogs, known in Taiwan as "rice paddy chickens".

*Source: Straits Times, 28.5.85*

## Cyprus Controls Bird-Hunting

The President of Cyprus recently ordered the immediate enforcement of existing anti-hunting measures and new legislation prohibiting the importation of limesticks and mist nets, used to trap birds. This follows pressure from, among others, the International Council for Bird Preservation (ICBP) and the Working Group of European Bird Protection Societies.

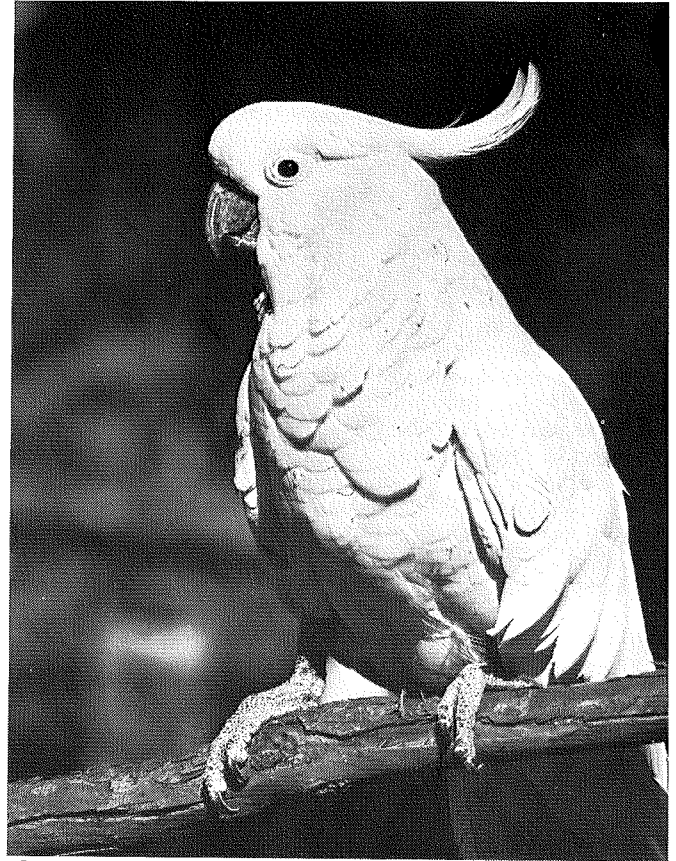
The editor of Vogeljaar, Jaap Taapken, reported in May, following a visit to Cyprus, that "although shooting of every single bird species continues, and they still use mist nets and limesticks, these activities are done more covertly than before. Police control is frequent, and those caught receive severe punishments." Cyprus Friends of the Earth believe that the hunting is "much reduced".

*Source: World Birdwatch (ICBP), 7(2)*

## News from TRAFFIC (Australia)

## \* West Australians Prosecuted

Two Western Australians, Stanley Robert Osborne of Maida Vale and John Francheschi of Neerabup, appeared at Kyneton magistrate's court in Victoria on 26 April 1985 to face charges under the Victorian Wildlife Act 1975. Both men were charged under Section 43(2) of having in their control certain protected wildlife contrary to the provisions of the Act. The animals involved were 13 Crimson Rosellas (*Platycercus elegans*), 32 Eastern Rosellas (*P. eximius*), 4 King Parrots (*Alisterus scapularis*), 4 Red-rumped Parrots (*Psephotus haematonotus*), 4 Mulga Parrots (*Psephotus varius*), 5 Red-capped Parrots (*Purpureicephalus spurius*), 10 Elegant Parrots (*Neophema elegans*), 2 Regent Parrots (*Polytelis anthoepus*), 2 Sulphur-crested Cockatoos (*Cacatua galerita*) and 4 White-tailed Black Cockatoos (*Calyptorhynchus funereus*). Each man was found guilty and fined A\$4234 (US\$3012). Both men were also charged, under Section 43(2) of the Act, that they did buy certain protected wildlife and, under Section 43(1), that they did take certain protected wildlife contrary to the provisions of the Act and, on each count, each was fined A\$92 (US\$65). Police laid separate cruelty charges and each was fined A\$200 (US\$142). The fines handed down to each of the accused totalled A\$4618 (US\$3232). A third party is believed to have been involved but no charges have yet been laid.



© J. Fitzpatrick, Australia Information Service

Sulphur-crested Cockatoo  
(*Cacatua galerita*)

## Market for Sea Horses

Australian Fisheries (Vol. 44 No. 5, May 1985) reports that Pacific Shoji Pty. Ltd of Melbourne, Victoria, Australia is seeking "quantities of unbroken, air-dried sea horses". A spokesman for the company is quoted as saying that there is a ready market for sea horse *Hippocampus* spp., which is used in Chinese traditional medicine, and that the ideal size for marketing is 10cm and larger. Good quality produce can apparently fetch as much as A\$80 (US\$56) per kg.

## Indonesian Poaching on Ashmore Reef

Australian authorities are increasingly concerned at depredations to the wildlife of the Ashmore Reef National Nature Reserve by Indonesian fishermen. The Reserve, which was declared on 28 July 1983, is part of the Australian Territory of Ashmore and Cartier Islands and is situated in the Timor Sea, 840 km west of Darwin. Under a Memorandum of Understanding, signed in 1974, between the Australian and Indonesian Governments, Australia agrees not to apply its law regarding fisheries to Indonesian 'traditional fishermen' operating in the Australian Exclusive Fishing Zone. The term 'traditional fishermen' is defined by the Memorandum as 'fishermen who have traditionally taken fish and sedentary organisms in Australian waters by methods which have been the tradition over decades of time.' The Memorandum specifically prohibits the taking of marine turtles and also does not permit 'Trochus, Beche de Mer, Abalone, Green Snail, sponges and all molluscs' to be taken from the seabed, except the seabed adjacent to Ashmore and Cartier Islands, Browse Islet and the Scott and Seringapatam Reef. The fishermen are permitted to go ashore only on East and Middle Islets of Ashmore Reef and then only for the purpose of obtaining supplies of fresh water. However, it has become evident that the number of fishermen and the frequency of their visits is increasing and large numbers of seabirds, turtles, dugongs, clams and other molluscs are being taken and transported to Indonesia where they fetch a good price in the food markets. >

> Ashmore Reef supports huge colonies of breeding seabirds and is an important breeding and feeding habitat for marine turtles. Some of the larger species of seabird, particularly the Lesser Frigatebird (*Fregata ariel*) and Brown Booby (*Sula leucogaster*) have failed to breed successfully in recent years due to the taking of the eggs and young for food. Turtles have been found tethered in the shallows, awaiting collection, and there is every indication that the fishermen collect all trochus they can find, including undersize specimens. Clamshells are also being collected and are apparently used for building foundations in Djakarta.

The Royal Australian Navy (RAN) patrols the area as part of the Civil Coastal Surveillance Program and, since the declaration of Ashmore Reef as a National Nature Reserve, the Australian National Parks and Wildlife Service has made regular visits to the Reserve. Theoretically, Indonesians apprehended illegally collecting fauna could be summarily charged but, due to the considerable distance from the mainland and the simple construction of the Indonesian vessels, it is very difficult for the RAN patrol boats to escort or tow them back to the mainland. The naval boats are unable to travel as slowly as the Indonesian boats and taking them under tow would cause the frailier boats to leak from the pressure of fast travel. There is also the consideration that a well-fed spell in an Australian gaol, followed by a flight back to Indonesia, all at Australian expense, might not be a very effective deterrent to the Indonesian fishermen!

In response to a question on the Ashmore problem asked in the House of Representatives in March 1985, the Australian Minister for Territories stated that Australia was seeking to obtain the co-operation of the Indonesian Government and considering the question of surveillance requirements and the need for an Australian presence on the islands.

## Possum Meat for Sale

The 1985 Tasmanian culling season for Brush Possums (*Trichosurus vulpecula*) opened on 13 July 1985 and runs until 15 September 1985. In a press release announcing the details, the director of the Tasmanian National Parks and Wildlife Service also stated that permit holders would be permitted to sell possum meat to licensed dealers and suggested that any person who wished to deal in possum meat should make written application to him for a licence. This is the first time that permits covering the culling of Brush Possums and the sale of their skins have been extended to include the sale of meat. The Hobart Mercury (13.6.85) quotes a possum fur dealer as stating that efforts to convince the Government to permit the sale of possum meat for human consumption were abandoned two years ago because the meat could not be monitored well enough to satisfy health regulations. For the time being, it would appear that the local pet food industry will be the only market. Possum meat is not covered by the Tasmanian Brush Possum management programme, approved under Sub-Section 10(1) of the Wildlife Protection (Regulation of Exports & Imports) Act 1982, therefore export of the meat cannot at present be permitted. However it is understood that the Tasmanian National Parks and Wildlife Service has applied to the Commonwealth Government for the meat to be included in the approved management programme. The fur trade has been in a depressed state in recent years.

## New Plan for 'Roos

At its May 1985 meeting on Norfolk Island, the Australian Council of Nature Conservation Ministers (CONCOM) approved a 'National Plan of Management for Kangaroos'. This Plan is a revision of the 'National Kangaroo Management Program' which was approved by CONCOM in 1981. The new Plan is in two Parts. Part A applies in all States and Territories in which any animals of the Family Macropodidae are subject to culling and subsequent commercial utilization. This Part states the aims of kangaroo management and sets out a range of implementation procedures from which each State or Territory should select, for its management programme, those best suited to its individual circumstances. The range of procedures includes methods for assessing population trends, determining culling levels and controlling the culling and the commercial use of culled animals. Part B of the Plan consists of the State management programmes currently approved under the Wildlife Protection (Regulation of Exports and Imports) Act 1982. Part B is also to include statements (currently in preparation) about kangaroo management and culling in States or Territories which do not permit commercial utilization of culled kangaroos.

## The International Primate Trade

The International Primate Trade, Volume I, covering legislation, trade and captive breeding of primates, is available from TRAFFIC (USA), 1601 Connecticut Avenue NW, Washington, DC 20009, USA. Price \$US15.00. Free copies are available to appropriate individuals and organisations.

Edited by David Mack and Russell A. Mittermeier, this is a joint publication of TRAFFIC (USA), WWF-US Primate Program and the IUCN/SSC Primate Specialist Group.

## \* Fur Dealer Jailed in India

A man in Palam Colony, Delhi, has been sentenced to six months imprisonment in a case that has protracted for four years. The accused was found guilty of possession, without authority, of 192 cured Jungle Cat (*Felis chaus*) skins, 175 uncured Common Fox (*Vulpes vulpes*) skins and 169 uncured Jackal (*Canis aureus*) skins, for the purpose of sale.

Source: S.K. Mukherjee, CITES Management Authority, India.

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## Errata

In our report of the fifth meeting of the Conference of the Parties to CITES (Traffic Bulletin VII(2):20-29) we stated that Budorcas taxicolor (Takin) had been included in CITES Appendix I. Although China originally submitted a proposal to include this species in Appendix I, this was later changed during the course of the meeting for inclusion in Appendix II, and this was adopted.

In addition, we omitted Mirounga angustirostris (Northern Elephant Seal) from the list of proposals withdrawn. The USA had proposed deletion of this species from Appendix II.

On page 40 of Traffic Bulletin VII(2), we incorrectly stated that the Australian National Parks and Wildlife Service was involved in the seizure of illegal bird-egg collections, rather than the New South Wales National Parks and Wildlife Service. The two organisations are not connected and we apologise for this error.

## Bulletin Subscription

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