

Amendment of the annotation to Cactaceae spp. and all taxa with annotation #1

Delete annotations #1 and #4 and replace them both with the following new annotation for plant taxa listed in Appendix II:

All parts and derivatives, except:

- a) seeds (including seedpods of Orchidaceae), spores and pollen (including pollinia) except those seeds from Cactaceae spp. exported from Mexico;
- b) seedlings or tissue cultures obtained *in vitro*, in solid or liquid media, transported in sterile containers;
- c) cut flowers of artificially propagated plants;
- d) fruits and parts and derivatives thereof of naturalized or artificially propagated plants of the genera *Vanilla* (Orchidaceae), *Opuntia* subgenus *Opuntia* (Cactaceae), *Hylocereus* and *Selenicereus* (Cactaceae);
- e) stems, flowers, and parts and derivatives thereof of naturalized or artificially propagated plants of the genera *Opuntia* subgenus *Opuntia* and *Selenicereus* (Cactaceae); and
- f) finished products of *Euphorbia antisiphilitica* packaged and ready for retail trade.

Amend footnote 6 as follows (delete struck-through text):

Artificially propagated specimens of the following hybrids and/or cultivars are not subject to the provisions of the Convention:

- *Hatiora x graeseri*
- *Schlumbergera x buckleyi*
- *Schlumbergera russelliana x Schlumbergera truncata*
- *Schlumbergera orssichiana x Schlumbergera truncata*
- *Schlumbergera opuntioides x Schlumbergera truncata*
- *Schlumbergera truncata* (cultivars)
- Cactaceae spp. colour mutants lacking chlorophyll, grafted on the following grafting stocks: *Harrisia 'Jusbertii'*, *Hylocereus trigonus* or *Hylocereus undatus*
- *Opuntia microdasys* (cultivars)

Proponents: Mexico and the United States of America on behalf of the Plants Committee

Background

Currently the following taxa listed in Appendix II are subject to annotation #1: *Caryocar costaricense*, Cycadaceae spp., Didiereaceae spp., *Cibotium barometz*, *Dicksonia* spp. populations of the Americas, *Dioscorea deltoidea*, *Dionaea muscipula*, Succulent *Euphorbia* spp., *Fouquieria columnaris*, *Oreomunnea pterocarpa*, *Aloe* spp., *Platymiscium pleiostachyum*, *Swietenia humilis*, *Nepenthes* spp., *Cistanche deserticola*, *Beccariophoenix madagascariensis*¹, *Neodypsis decaryi*¹, *Anacampseros* spp., *Avonia* spp., *Lewisia serrata*, *Cyclamen* spp., *Orothamnus zeyheri*, *Protea odorata*, *Prunus africana*, *Sarracenia* spp., *Bowenia* spp., *Aquilaria* spp., *Gonystylus* spp., *Gyrinops* spp., *Welwitschia mirabilis*, *Zamiaceae* spp., *Hedychium philippinense* and Orchidaceae spp..

Annotation #1 currently reads as follows:

#1 All parts and derivatives, except:

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

- b) seedling or tissue cultures obtained *in vitro*, in solid or liquid media, transported in sterile containers;
- c) cut flowers of artificially propagated plants; and
- d) fruits and parts and derivatives thereof of artificially propagated plants of the genus *Vanilla*.

¹ note: Proposals have been submitted to the present CoP to remove the exemption for seeds of the Malagasy palms *Beccariophoenix madagascariensis* (proposal Prop. 32) and *Neodypsis decaryi* (proposal Prop. 33 as *Dypsis decaryi*). If these are accepted, this would be reflected in any new annotation.

Currently Cactaceae spp. are annotated with #4 and footnote 6.

#4 reads: "All parts and derivatives, except:

- a) seeds, except those from Mexican cacti originating in Mexico, and pollen;
- b) seedling or tissue cultures obtained *in vitro*, in solid or liquid media, transported in sterile containers;
- c) cut flowers of artificially propagated plants;
- d) fruits and parts and derivatives thereof of naturalized or artificially propagated plants; and
- e) separate stem joints (pads) and parts and derivatives thereof of naturalized or artificially propagated plants of the genus *Opuntia* subgenus *Opuntia*".

Footnote 6, which currently only applies to Cactaceae spp., currently reads:

"Artificially propagated specimens of the following hybrids and/or cultivars are not subject to the provisions of the Convention:

- *Hatiora x graeseri*
- *Schlumbergera x buckleyi*
- *Schlumbergera russelliana x Schlumbergera truncata*
- *Schlumbergera orssichiana x Schlumbergera truncata*
- *Schlumbergera opuntioides x Schlumbergera truncata*
- *Schlumbergera truncata* (cultivars)
- Cactaceae spp. colour mutants lacking chlorophyll, grafted on the following grafting stocks: *Harrisia 'Jusbertii'*, *Hylocereus trigonus* or *Hylocereus undatus*
- *Opuntia microdasys* (cultivars)".

Summaries and analyses

Significant changes proposed are discussed below.

Cactus seeds

At present, seeds of Appendix-II listed Mexican cacti originating in Mexico are not excluded from the Convention, that is they require CITES certificates when traded, unlike all other Appendix-II cactus seeds, which are excluded from the Convention. Under this wording, both exports of seeds of Mexican cacti from Mexico, and re-exports of such seeds from other countries require certificates. However, exports of seeds of non-Mexican cacti originating in Mexico, from cultivated or naturalised plants, are not subject to the Convention.

The proposed amendment refers only to "seeds of Cactaceae spp. exported from Mexico" as not being excluded from the Convention. This means that all cactus seeds exported from Mexico, including those of non-Mexican cacti, will be subject to the Convention and require CITES certificates when traded, but that re-exports of any Appendix-II cactus seeds, including of Mexican cacti, from countries other than Mexico will not be subject to the Convention.

Analysis: This will simplify implementation both in Mexico and elsewhere and will have no adverse conservation impacts.

Cactus fruits, flowers and stems

At present cut flowers of artificially propagated plants and the fruits and parts and derivatives of fruits of naturalized or artificially propagated plants of all Appendix-II cactus species, as well as the separate stem joints (pads) and parts and derivatives of these joints of naturalized and artificially propagated plants of the genus *Opuntia* subgenus *Opuntia* are excluded from the Convention.

Fruits: The proposed amendment will restrict the exemption for fruits and parts and derivatives of fruits to naturalized or artificially propagated plants of the genera *Opuntia* (subgenus *Opuntia*), *Selenicereus* and *Hylocereus*.

There is an extensive trade in fruits of various cultivated cacti, much of it originating outside the natural range of the species concerned. The most important traded fruits are “dragon fruits” or pitaya, chiefly from *Hylocereus undatus* (Red Pitaya) and *Selenicereus megalanthus* (Yellow Pitaya), and prickly pears or cactus figs of various *Opuntia* species, such as *O. ficus-indica*. There is also some export from Israel of fruits of *Cereus peruvianus*, marketed as koubo (Mizrahi *et al.* 2002). Some other cactus genera, notably *Stenocereus*, are also cultivated for their fruits although apparently only within their natural range and for domestic consumption (Pimienta-Barrios and Nobel, 1994). The current exemption (existing annotation #4) ensures that international trade in any cactus fruits and parts and derivatives from naturalized and artificially propagated plants is exempt. The suggestion made, for example in the supporting statement to proposal CoP14 Prop. 26, that paragraphs d) and e) of existing annotation #4 are somehow linked, so that the reference to genus *Opuntia* (subgenus *Opuntia*) in paragraph e) also applies to paragraph d) is clearly erroneous. If they were linked, then by analogy the exemption in paragraph c) of annotation #1, concerning cut flowers of artificially propagated plants of a wide range of species, most importantly Appendix-II listed orchids, would in fact only apply to plants of the genus *Vanilla* as this is the subject of paragraph d) in that annotation, which it does not.

Flowers: With regard to flowers, “cut flowers of artificially propagated plants” of all Appendix II-listed cacti are already exempt from the Convention under existing para c) of annotation #4, which will remain as para c) of the new annotation. New paragraph e) will, in addition, allow exemption of flowers and flower derivatives of naturalized (as opposed to artificially propagated) plants of the genera *Opuntia* subgenus *Opuntia* and *Selenicereus* (Cactaceae) as well as parts and derivatives of flowers of artificially propagated plants of these genera.

Dried flowers and extracts of flowers of some *Opuntia* and *Selenicereus* species are traded as medicines. The great majority of this trade is believed to originate in naturalized or artificially propagated plants.

Stems: The proposed amendment will widen the exemption for stems to include those of *Selenicereus* and their parts and derivatives. It simplifies the wording for the exemption for stems of *Opuntia* (subgenus *Opuntia*).

Stems (“pads”) of typical *Opuntia* species are grown and traded as a vegetable. The great majority of this trade is derived from artificially propagated and naturalized stock; such trade is already exempt from the Convention. Stems and derivatives from stems of some *Selenicereus* species are traded for medicinal purposes. The great majority of this trade is also believed to originate in naturalized or artificially propagated plants.

Analysis: Exempting trade in cactus fruits, flowers and stems from the provisions of the Convention under the terms of the proposed annotations is extremely unlikely to have any adverse conservation impact. The proposed exemption for fruits will no longer cover fruits of artificially propagated *Cereus peruvianus*, which will then theoretically be subject to regulation under CITES. This will increase the burden of implementation and have no conservation benefit. Reversion to the original wording of annotation #4 would solve this problem.

Grafted cacti

Under the existing annotation, grafted specimens of colour mutants of cacti grafted onto three cactus rootstocks are exempt from the Convention provided they are lacking in chlorophyll. The proposed annotation will apply to all such colour mutants whether they contain chlorophyll or not.

Analysis: There is an extensive trade in grafted colour forms of various cacti, particularly *Gymnocalycium mihanovicii*. This trade has nothing to do with wild plants and has no conservation impact. Although most of the forms do indeed lack chlorophyll, some contain small quantities and are therefore in theory not covered by the existing exemption, although there is no reason for them not to be covered. The proposed amendment rectifies this so that all such forms will now be covered by the exemption.

Euphorbia antisyphilitica

The proposed annotation will exempt finished products of *Euphorbia antisyphilitica* packaged and ready for retail trade from the Convention. At present such products are not exempt.

The genus *Euphorbia* is one of the largest, most widely distributed and most variable genera of plants. There are between 1500 and 2000 species, ranging from small annuals to trees, with most species occurring in the tropics. Around 700 species display some degree of succulence. A wide range of species is of horticultural interest. Some are mass-produced and are widely grown as ornamental garden or house plants. Some of these are traded internationally in large quantities. Others, particularly some dwarf, slow-growing succulent forms, are of interest to specialist collectors. Some of these have been traded as wild collected plants, sometimes in substantial quantities. Some species are also used as medicinal plants. The only product derived from succulent euphorbia species known to be in international trade in any quantity is candelilla wax, extracted from *Euphorbia antisyphilitica*, a species native to Mexico and the USA. Candelilla wax is used in a range of products, including cosmetics, dyes, inks, foodstuffs, pharmaceutical compounds, emulsions, wood-polishes and adhesives. The main use at present is in cosmetics. Commercial production of candelilla wax only takes place at present in Mexico, with most production apparently exported in the form of raw material (Schneider, 2009 and CITES trade database).

The entire genus was included in Appendix II of CITES in 1975 undoubtedly because of concern regarding the possible impact of collection for the horticultural trade of wild plants of some succulent species especially from South Africa. In 1997 non-succulent forms were excluded as were artificially propagated cultivars of *Euphorbia trigona*, a taxon only known in cultivation. At CoP13, a number of other forms of succulent euphorbias widely propagated for the horticultural trade were also exempted. With these exceptions, the Appendix-II *Euphorbia* species are currently covered by annotation #1. Currently 10 species of succulent *Euphorbia* from Madagascar are included in Appendix I. All are dwarf forms.

According to the CITES trade database, Mexico has reported exports of just over 2400 t of wax in the period 2001–2000, most of this (ca 1500 t) going to Germany, with virtually all the remainder going either to the USA (ca 700 t) or Japan (ca 200 t). According to other Mexican sources, quoted in Schneider (2009), export is somewhat higher than this, having averaged around 1000 t per year in the period 2002–2004, with just under 40% of this going to the USA, a similar amount to the European Union and most of the remainder to Japan (Schneider, 2009).

At present finished products containing candelilla wax are covered by the Convention, creating in theory a considerable implementation burden. The proposed annotation will place the species on the same footing in the Convention as a range of other Appendix-II listed plants that are traded principally in the form of raw or semi-processed extracts or derivatives and as finished products for the retail trade, currently annotated with annotation #2, which exempts “seeds and pollen” and “finished products packaged and ready for retail trade”. These are *Rauvolfia serpentina*, *Podophyllum hexandrum*, *Adonis vernalis*, *Picrorhiza kurrooa*, various *Taxus* species, *Nardostachys grandiflora* and *Guaiaacum* spp.

Analysis: This amendment is extremely unlikely to have adverse conservation impacts, but should help reduce implementation burdens.

Reviewers:**Traffic East/Southern Africa****References:**

CITES trade database (2010). <http://www.unep-wcmc.org/citestrade>. Viewed 4 January 2010

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Pimienta-Barríos, E. and Nobel, P.S. (1994). Pitaya (*Stenocereus* spp., Cactaceae): An Ancient and Modern Fruit Crop of Mexico. *Economic Botany* 48(1): 76–83.

Schneider, E. (2009). Trade survey study on succulent *Euphorbia* species protected by CITES and used as cosmetic, food and medicine, with special focus on Candelilla wax . Document PC18 Inf. 6. www.cites.org. Viewed 11 January 2010.