CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA

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Fourteenth meeting of the Conference of the Parties
The Hague (Netherlands), 3-15 June 2007

CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

A. Proposal

Amendment of the listing of *Taxus cuspidata* in Appendix II by:

1. Deleting the phrase "and infraspecific taxa of this species"; and

2. Annotating to read as follows:

"Specimens of hybrids and cultivars are not subject to the provisions of the Convention".

B. Proponent

United States of America

C. Supporting statement

1. Taxonomy

1.1 Class: Pinopsida

1.2 Order: Taxales

1.3 Family: Taxaceae

1.4 Genus, species or subspecies, including author and year: *Taxus cuspidata* Siebold & Zuccarni 1846

1.5 Scientific synonyms: ---

1.6 Common names: English: Japanese yew
French:
Spanish:

1.7 Code numbers: ---

2. Background

The People's Republic of China and the United States of America, in accordance with the consensus recommendation of the 12th meeting of the Plants Committee (Leiden, 2002), prepared a proposal for the 13th meeting of the Conference of the Parties (CoP13; Bangkok, 2004) to include the remaining Asian species of *Taxus* (i.e., other than *T. wallichiana*) in Appendix II, but did not propose the inclusion of *Taxus* spp. from other regions due to the lack of evidence that trade, particularly for the pharmaceutical industry, was adversely affecting species outside of Asia. The proposal for

CoP13 therefore only included *Taxus chinensis*, *Taxus cuspidata*, *Taxus fuana*, *Taxus sumatrana* and all infraspecific taxa of those species (proposal CoP13 Prop. 48). The four *Taxus* species were proposed for inclusion in Appendix II based on evidence that the species were at risk of being over-harvested in the wild for the purpose of extraction of chemical derivatives used in the production of anti-cancer drugs (i.e., paclitaxel). The proposal was also meant to resolve enforcement problems caused by taxonomic confusion and misidentification of the different species within range countries in Asia.

The proposal included an annotation (# 10) to include in the listing all parts and derivatives, except seeds, pollen, and finished pharmaceutical products. At the meeting it was proposed to further annotate the listing to exclude "whole artificially propagated plants in pots or other small containers, each consignment being accompanied by a label or document stating the name of the taxon or taxa and the text 'artificially propagated'." The proposal with the two annotations was adopted. Subsequent to CoP13, the Secretariat determined that the exemption of whole live plants of the listed *Taxus* spp. was not consistent with the terms of the Convention and therefore not allowed (see document SC54 Doc. 18).

Since the inclusion of the four *Taxus* species in Appendix II, it has come to the attention of CITES officials in Canada and the United States of America that specimens of the man-made hybrid *Taxus* x *media* are being traded internationally. Trade in such specimens has no effect on wild species, and the use of artificially propagated hybrids, particularly for the production of paclitaxel, may alleviate harvest pressure on wild species. Furthermore, trade in man-made hybrids and cultivars places an unnecessary regulatory burden on CITES authorities and commercial plant producers and exporters.

CITES Resolution Conf. 11.11 (Rev. CoP13), paragraph (a) states that hybrids are subject to the provisions of the Convention even though not specifically included in the Appendices if one or both parents are included in the Appendices, unless the hybrids are excluded from CITES controls by a specific annotation in Appendix II or III. The intent and effect of the existing *Taxus* listing, in accordance with the decision by the Conference of the Parties to only list Asian *Taxus* species in the Appendices, could be effectively maintained by exempting hybrids and cultivars of *T. cuspidata*, which occur almost exclusively as artificially propagated specimens.

3. Biological parameters

The biological parameters are not relevant for this proposal. Man-made hybrids and artificially propagated cultivars of *T. cuspidata* either do not occur naturally in the wild or are rare mutant forms that have been proliferated for the horticultural market from single specimens of either cultivated or wild origin. The most commonly grown hybrid in commercial production is *Taxus* x *media*, a hybrid of *T. cuspidata* (Appendix II) and the European yew, *T. baccata* (not listed). *Taxus* x *media* was developed in the early 1900s from cultivated plants of *T. cuspidata* and *T. baccata* growing in the United States. Today, there is extensive cultivation of *Taxus* x *media* for horticultural and pharmaceutical purposes in Canada and the United States.

4. Utilization and trade

4.1 National utilization

Artificially propagated hybrids and cultivars of *T. cuspidata*, which are desirable in trade because they are morphologically distinct from the wild forms of the species, are commonly used as landscape plants in North America and Europe, and constitute the vast majority of horticultural trade in *Taxus* specimens. These plants are produced under controlled conditions that are intensively manipulated by human intervention for the purpose of commercial plant production.

4.2 Legal international trade

Artificially propagated hybrids and cultivars of *T. cuspidata* are traded as whole plants and as specimens (parts and derivatives) for the pharmaceutical production of paclitaxel. Such trade has no impact on wild populations; however, regulation of these specimens places a significant regulatory burden on CITES authorities and on commercial plant producers.

According to CITES trade data, 763,561 kgs of extract of *Taxus* x *media* were exported from the United States to Italy and Mexico in 2005 (UNEP-WCMC Database). In addition, a review of CITES export permits for *Taxus* x *media* issued by the U.S. CITES Management Authority revealed that seven shipments, totalling 6.5 kgs of extract of *Taxus* x *media*, were re-exported from China to the United States in 2006, from specimens originally exported from the United States (U.S. Fish and Wildlife Service 2006).

4.3 Illegal trade

4.3.1 National illegal trade

There is no information on illegal trade in hybrids and cultivars of *T. cuspidata.*

4.3.2 International illegal trade

There is no information on illegal trade in hybrids and cultivars of *T. cuspidata.*

4.4 Actual or potential trade impacts

Exemption of artificially propagated specimens of hybrids and cultivars of *T. cuspidata* will not threaten wild populations because such specimens do not occur in the wild. Concern about wild-collected specimens of CITES-listed *Taxus* species being misrepresented in trade as artificially propagated hybrids or cultivars of *T. cuspidata*, is the same risk as wild-collected specimens being traded with permits or certificates issued for artificially propagated specimens. Furthermore, wild-collected specimens of CITES-listed *Taxus* species could also be misrepresented in trade as specimens of non-listed *Taxus* species.

4.5 Artificial propagation for commercial purposes (outside of country of origin)

Hybrids and cultivars of *T. cuspidata* are easily propagated from vegetative cuttings and by air-layering techniques, and are commercially grown for the horticultural industry and for use by pharmaceutical companies for the extraction of chemical derivatives. Hybrids and cultivars, particularly *Taxus* x *media*, are common landscape plants in North America and Europe, and constitute the greater part of horticultural trade in artificially propagated *Taxus* specimens.

5. Conservation and management

5.1 Legal status

5.1.1 National

Artificially propagated hybrids and cultivars of *T. cuspidata* may be subject to legal controls at the national level to protect *Taxus* species in the wild.

5.1.2 International

Since 12 January 2005, *T. cuspidata* has been included in CITES Appendix II.

5.2 Species management

5.2.1 Population monitoring

Not relevant for this proposal.

5.2.2 Habitat conservation

Not relevant for this proposal.

5.2.3 Management measures

Not relevant for this proposal.

5.3 Control measures

5.3.1 International trade

Currently hybrids and cultivars of *T. cuspidata* are traded with CITES permits and, as appropriate, government documentation of plant health (Phytosanitary Certificate) from the country of origin.

5.3.2 Domestic measures

Unknown.

6. Information on similar species

The 10 species of *Taxus* (Farjon 2001) are all similar in appearance. However, as stated under Section 2 above, the listing of only Asian *Taxus* spp. in CITES Appendix II was intended to assist with enforcement and control within the range countries of those species. This is consistent with recent Decisions by the Conference of the Parties, as follows:

Decision 13.50	The Plants Committee shall prepare amendments to annotations for medicinal plants included in Appendix II that adequately reflect the current commodities in international trade and their relative impact on the wild populations in range States.
Decision 13.51	The amended annotations shall focus on those commodities that first appear in international trade as exports from range States and on those that dominate the trade and the demand for the wild resource.

7. Other comments

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8. Additional remarks

International trade in hybrids and cultivars of *T. cuspidata* will have little to no impact on wild populations because they are entirely artificially propagated, or nearly so; however, regulation of these specimens places a significant regulatory burden on CITES authorities and on commercial plant producers and exporters.

9. References

Farjon, A. 2001. *World Checklist and Bibliography of Conifers*. 2nd edition. The Bath Press, Bath, United Kingdom.