

**Inclusion of *Guaiaicum* spp. in Appendix II. Annotation: Designates all parts and derivatives, including wood, bark and extract. Proponent: Germany (on behalf of the Member States of the European Community).**

**Summary:** The genus *Guaiaicum* consists of four to six species of evergreen trees and shrubs distributed from southern North America to northern South America and in the Caribbean. *G. sanctum* and *G. officinale* are already listed in Appendix II. IUCN has classified *G. sanctum* and *G. officinale* as Endangered and *G. coulteri* as Lower Risk/Conservation Dependent. Modification of habitat and deforestation pose a significant threat to the genus. *Guaiaicum* species are mainly used for their timber. Residual products are usually a by-product of timber production. The main timber importers are Asia, Europe and USA. There is currently no simple and easily applicable technique for differentiating the timbers of any of the commercially used *Guaiaicum* species. *G. sanctum* may be exported under the name of *Guaiaicum* species not regulated by CITES; such trade would not be reflected in CITES trade data. The proponent seeks to include all species of *Guaiaicum* in Appendix II in accordance with Res Conf. 9.24, Annex 2b, Article II, paragraph 2b on the basis that the specimens resemble specimens of a species included in Appendix II such that a non-expert is unlikely to be able to distinguish between them, or on the basis that the remaining species of the taxon must be included in Appendix II to bring trade in specimens of the other species under effective control. The proposal also includes the annotation: Designates all parts and derivatives, including wood, bark and extract. This proposal has the support of the CITES Plants Committee.

**Analysis** Following Resolution Conf. 9.24, the genus *Guaiaicum* appears to meet the criteria for inclusion in Appendix II on the basis that the specimens resemble specimens of a species already included in Appendix II. Timber and other products of *G. officinale* and *G. sanctum*, which are already listed in Appendix II, cannot be easily distinguished from other members of the genus. Some trade of *G. officinale* and *G. sanctum* appears to be misreported as *G. coulteri*, and so CITES trade data may not record actual levels of trade of these two species. Confusion over the taxonomy of this genus may also lead to difficulty in enforcing the existing CITES legislation if only part of the genus is included in Appendix II. The proposed annotation states that all parts and derivatives including wood, bark and extract will be subject to the provisions of the Convention. However, normally an annotation is only required if some parts or provisions are to be excluded. Both *G. sanctum* and *G. officinale* are already covered by Annotation #1 indicating that all parts and derivatives are included, except: a) seeds, spores and pollen (including pollinia); b) seedling or tissue cultures obtained in vitro, in solid or liquid media, transported in sterile containers; and c) cut flowers of artificially propagated plants. It is unclear whether the proposed annotation is intended to replace the existing annotation for the two species already in Appendix II.

Supporting Statement (SS)	Additional information
<u>Taxonomy</u>	
<p>Species to be listed include: <i>G. angustifolium</i>, <i>G. coulteri</i>, <i>G. guatemalense</i>, <i>G. officinale</i>, <i>G. sanctum</i> and <i>G. unijugum</i>.</p> <p>A number of synonyms exist within this genus and the taxonomy is open to question. <i>G. guatemalense</i> may be a hybrid between <i>G. sanctum</i> and <i>G. coulteri</i>.</p>	<p>In their report to the 11<sup>th</sup> meeting of the CITES Plants Committee, Grow and Schwartzman (2001) list 21 binomials for the genus but note that most experts consider there to be 4-6 true species. Schwartzman (2002) believes that <i>G. guatemalense</i> is most likely not a hybrid between <i>G. sanctum</i> and <i>G. coulteri</i>.</p> <p>Schwartzman (2002) lists additional synonyms.</p>
<u>Range</u>	
<p><i>G. angustifolium</i>: USA and Mexico.</p> <p><i>G. coulteri</i>: Mexico, possibly Guatemala. Naturalised populations in southern USA.</p> <p><i>G. unijugum</i>: Mexico</p>	<p><i>G. guatemalense</i> has been reported to occur in Nicaragua, Mexico and Guatemala (Grow and Schwartzman, 2001; Schwartzman, 2001).</p> <p><i>G. sanctum</i>, already in Appendix II, is found in Mexico, Central America, the Caribbean and the USA (Grow and Schwartzman, 2001).</p> <p><i>G. officinale</i>, already in Appendix II, is found in northern South America, the Caribbean and Panama (Grow and Schwartzman, 2001)</p>

Supporting Statement (SS)	Additional information
<u>IUCN Global Category</u>	
<i>G. sanctum</i> : (already in Appendix II) EN C2a	<i>G. coulteri</i> : LR/cd <i>G. officinale</i> : (already in Appendix II) EN C2a

**Inclusion in Appendix II to improve control of other listed species**

**Specimens resemble other species and are difficult to distinguish, or most of taxon is already listed**

All traded commodities of *Guaiaicum* species are difficult to distinguish from each other. In the form of wood, *G. coulteri* and *G. sanctum* (App. II) are particularly similar in appearance.

International trade data do not distinguish among *Guaiaicum* species. International trade data are only listed as 'lignum-vitae' without disclosing the exact species. The main export markets are Asia and Europe and only a relatively small portion is reported to be exported to the USA. The annual demand from Germany alone is estimated be ca 50-90 tonnes of *G. coulteri* per annum.

Although in the past some species have been used in medicine, to produce soap, and as colouring agents, this practice appears to have declined. Only one shipment of *Guaiaicum* has reportedly entered international medicinal trade within the last 20 years.

The amount of illegal trade is very difficult to determine. Most exports from Mexico to the USA are likely to be *G. coulteri* or *G. sanctum*. In 2000, Canada reported importing 1 450 kg of *G. coulteri*. However, reports indicate that the respective shipment had been exported as *G. sanctum* from Mexico. Apparently, trade data may reflect a number of different *Guaiaicum* species.

*CITES trade data since 1991 record shipments of Guaiaicum to, or imported by, 19 countries, with five (Germany, Japan, USA, China, UK) accounting for the largest share of imports (TRAFFIC North America, 2002).*

*A market survey in July 2002 found that 62 companies in 16 different countries advertised Guaiaicum on the Web (TRAFFIC North America, 2002). Forty of those offered Guaiaicum as an ingredient in medicinals or perfume, 15 as timber for woodworking and five as plantings for the horticultural trade. The majority were in the USA and the United Kingdom. Products identified on the Web purportedly contained Guaiaicum, lignum vitae, G. officinale, G. sanctum and G. coulteri.*

*CITES Annual Report data for exports of G. sanctum from Mexico (the major exporter), summarised for 1993-2000, are substantially lower than those obtained from CONABIO, the Scientific Authority of Mexico, and provided in the SS. CITES data also indicate that the quantity of Guaiaicum reported at import is substantially less than that recorded as exported. One possible explanation is that CONABIO determined exports based on CITES export permits issued or export quotas, while CITES trade data may be a reflection of permits actually used. It is also possible, as the SS suggests, that G. sanctum is exported under the name of Guaiaicum species not regulated by CITES and might not be reflected in CITES trade data. According to a US importer, trade of a CITES-listed Guaiaicum species under the name of an unregulated species to avoid permit requirements has occurred (TRAFFIC North America, 2002).*

*Richter (2002) notes that there is currently no simple and easily applicable technique of differentiating the timbers of any of the commercially used Guaiaicum species. Grow and Schwartzman (2001) state that lacking foliage and flowering material, G. sanctum and G. coulteri may be impossible to differentiate. Schwartzman (2001) notes that the presence of hybrid populations and regional variants may make it difficult to distinguish species and track their trade.*

**Other information**

**Threats**

The most serious threats include deforestation and land clearing. The planting of buffelgrass for cattle is thought to change the fire dynamics in the ecosystem and expose native species to an increased threat of fire.

*Schwartzman (2002) concurs that habitat loss is a serious threat to Guaiaicum species. He also notes that the age structure of the populations is being transformed as large adult trees are harvested and younger saplings and shrub forms replace them.*

**Conservation, management and legislation**

*G. coulteri* and *G. sanctum* are protected under Mexican law. They are considered 'Pr' (subject to special protection) in the NOM-059-ECOL-1994.

*Schwartzman (2002) notes that enforcement of national legislation may not be sufficient to control off take and/or trade of the taxon, particularly in the Dominican*

Supporting Statement (SS)	Additional information
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**Similar species**

Two species from the Zygophyllaceae family, *Bulnesia sarmientoi* and *B. arborea* share the common names lignum-vitae and guaiac with the *Guaiaacum* species. However it is thought that international trade in these species is unlikely. There is no reference to these species being similar in appearance.

*Guayacan* is a common name used to describe three *Guaiaacum* species (*G. coulteri*, *G. palmeri*, *G. sanctum*) as well as eight other species (Mendez, 2002). *Petitdemange (2002)* notes that the use of the word *Guayacan* to describe the wood of *Guaiaacum* and other genera could be a source of confusion among inspectors at US ports of entry.

Timber and other products from *Guaiaacum* spp cannot be easily identified to the species level. As CITES non-detriment findings require identification of specimens to the species level, the difficulties encountered in the reporting, and enforcement of trade controls, under the existing Appendix II listing will probably also be encountered if the entire genus is listed.

**Artificial Propagation**

*G. coulteri* is reported as being cultivated in a nursery in Sonora with 5 000 seedlings being raised.

**Other comments**

In 2000 it was proposed that *G. sanctum* be transferred from Appendix II to Appendix I; this proposal was later withdrawn.

At their 12<sup>th</sup> meeting, the Plants Committee decided to support the proposal to include all species of *Guaiaacum* in Appendix II for reasons of similarity of appearance.

The proposal is supported by Mexico.

**Reviewers:** Richter, H.G., Schwartzman, E., TRAFFIC North America.

**References:**

- Grow, S. and Schwartzman, E., 2001. Review of the taxonomy and distribution of the genus *Guaiaacum* in Mexico. Report to the Eleventh meeting of the Plants Committee, Langkawi (Malaysia), 3-7 September 2001. CITES PC11 Doc. 8.2.
- Mendez, A., 2002. Adriana Mendez, PPQ Officer of USDA/APHIS, Laredo, Texas, *in litt.* to Bud Petitdemange, CITES Coordinator, USDA Animal Plant Inspection Service. July 31, 2002. *in litt.* to Chris Robbins.
- Petitdemange, B., 2002. B. Petitdemange, CITES Coordinator, USDA Animal Plant Inspection Service, *in litt.* to Chris Robbins, 2002.
- Richter, H.G., 2002. *in litt.* to IUCN/SSC Wildlife Trade Programme, Cambridge, UK.
- Schwartzman, E., 2002. *in litt.* to IUCN/SSC Wildlife Trade Programme, Cambridge, UK.
- Schwartzman, E., 2001. Conservation considerations for the genus *Guaiaacum* (Zygophyllaceae): taxonomy, trade, and population status. Unpublished report.
- TRAFFIC North America, 2002. *in litt.* to TRAFFIC International, Cambridge, UK.