

**Conservation Considerations for the Genus
Guaiacum (Zygophyllaceae):
Taxonomy, Trade, and Population Status**



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Introduction

Guaiacum is a genus of neo-tropical trees and shrubs distributed throughout Mesoamerica, the Caribbean, and northern South America. Native peoples have used the wood of this genus for a variety of purposes since before the arrival of Europeans to the Americas. Early Spanish explorers learned of the native use of *Guaiacum* as an anti-syphilitic and introduced the wood to Europe where by the 1600's it was worth its weight in gold (Standley, 1920). The wood was so revered for its medicinal properties, that it was termed Lignum vitae or "holy wood" and is still referred to by this common name.

Guaiacum has been harvested and traded for centuries for its purported medicinal properties. It is an extremely sturdy wood and contains resin with a self-lubricating property. Both of these traits make *Guaiacum* a valuable wood for usage in machinery and nautical purposes, particularly propeller shafts. Demand for the wood for these and other uses became so intense that populations of *Guaiacum* were severely depleted in some areas of its distribution. Since the mid-1980's, however, trade has abated and a decline noted in world exports of the wood from tropical America. Nevertheless, there has been continuing concern for its status due to accelerated exploitation during most of the 20th century.

In response to concerns of declining populations in 1992 and 1975, *G. officinale* and *G. sanctum* respectively were listed under Appendix II of the Convention for International Trade in Endangered Species (CITES). Appendix II requires that all exports obtain a CITES permit which certifies that the wood was both legally harvested and harvested in a manner that will not detrimentally affect the survival of the species (CITES, 1973). Species of *Guaiacum* are considered endangered in several of the range states and are accordingly granted protection. Costa Rica, El Salvador, Nicaragua, the Dominican Republic, Mexico, and the state of Florida all consider *G. sanctum* (and *G. officinale* in the case of the Dominican Republic) either endangered or threatened and deserving of some level of protection. Trade persists, however, and a recent proposal at the CITES 11th Conference of the Parties to transfer *G. sanctum* to Appendix I has brought about renewed interest in the status and conservation of the entire genus.

Two studies of *Guaiacum* commissioned by CITES Parties, *Guaiacum sanctum: Population Status and Trade with CITES Recommendations* (Problem Solving Class, 2000) and *A Review of the Taxonomy and Distribution of the Genus Guaiacum in Mexico* (Grow and Schwartzman, 2001) yielded information regarding trade and taxonomy of the genus. The purpose of this current paper is to synthesize the findings of these two previous works and provide additional information regarding the status of *Guaiacum* spp. Areas of initial uncertainty will be addressed and the status of *Guaiacum* reassessed in light of a new body of information regarding its taxonomy and trade. This study focuses particularly on two species of *Guaiacum* found in Mexico, *G. sanctum* and *G. coulteri*, as Mexico is currently the largest exporter of the wood (Schippmann, 1999). Though present commerce appears to be limited, the historical trade and the status of *G. officinale* are addressed as well.