

### 3. *Dalbergia cochinchinensis* Pierre

#### Taxonomy and Commercial Grade

Cambodian name	: Kra-nhourng
Scientific name	: <i>Dalbergia cochinchinensis</i> Pierre.
Syn	: <i>Dalbergia cambodiana</i> Pierre.
Family	: Fabaceae
Sub-family	: Faboideae
Commercial Grade-Cambodia	: Luxury

**Distribution and Habitat:** Native to Indochina and adjacent countries, this tree species is shade-tolerant when young. It usually occurs sparsely in open and semi-deciduous forests from 400 – 500 m a.s.l., and prefers deep sand, clays, or calcareous soils (Khorn, 2002). This rosewood prefers uniform rainfall that ranges from 1200-1650 mm per year. The species requires high amounts of light to thrive, and is drought tolerant and able to grow on most soils (DFSC, 2000). Within Cambodia, the species is found in Kampong Thom, Preah Vihear, Ratanakiri, Pursat, Siem Reap, Kratie, Koh Kong, Stung Treng, and Modulkiri (Khorn, 2002; see map).

**Gene-Ecological Zones:** Coastal Cardamoms (A), Northern Cardamoms (B), Northwestern Lowlands (D), Central Lowlands (d), Central Annamites (G), Southern Annamites (g).



**Botanical Description:** *Dalbergia cochinchinensis* is a large evergreen tree species, reaching from 25–30 m in stature and producing boles to 60 cm in dbh. The species is easily recognized by its light yellow bark and ramified canopies. Its wood is hard, durable, and red-coloured with prominent, beautiful veins. It exhibits a density of 1.0-1.8 and is resistant to termites. The plant is identified by its pinnate leaves, which generally have 7 – 9 leaflets, the upper-most of which is the largest (CTSP, 2001). The species regenerates naturally and coppices well, but the growth rate is rather slow (DFSC, 2000).

**Flowering and Fruiting Habit:** Flowering occurs in May and June, while fruits ripen in November and December (DFSC, 2000).

**Fruit and Seed Description:** The fruit is long and tapering and generally contains 1 or 2 seeds. The weight of 100 seeds is 18.5 g, and 100 g of seed can provide up to 54,000 propagules (CTSP, 2001).

**Seed Collection:** The seed is mature when the pod dark brown in colour. The pods are often collected as soon as the colour turns from green to yellow, so as to minimize insect predation. The branches are cut or shaken, and the seeds collected from tarpaulin spread on the ground (DFSC, 2000).

**Seed Handling:** After collection, the pods are dried in the sun for about three days. The dry pods remain closed and must be cut into one-seeded pieces. A seed thresher could probably extract the seeds effectively, but care should be taken not to damage the seeds (DFSC, 2000).

**Sowing and Germination:** The plant can also be propagated by air layering, cuttings, and graftings. Stands can be established through natural regeneration or using planting stock (DFSC, 2000).

**Uses:** Wood can be exported at a high price, and is used for making high quality furniture, art handicrafts, and musical instruments. The root base and root can also be used for high quality art handicrafts (CTSP, 2001).

**Current Status:** *Dalbergia cochinchinensis* has been found during field surveys in concessions (commercial forest), protected areas, and various regions in the Northern Highlands of Cambodia. Illegal cutting in many areas has resulted in few and sparse populations of this species. This presents difficulties in finding germplasm sources within and outside protected forests/national parks.

In 2002, the second CTSP meeting on the Forest Gene Conservation Strategy defined *Dalbergia cochinchinensis* Pierre as a priority species in need of immediate conservation intervention and appropriate protection. This species is protected by Cambodian Forestry Law No.35.

**IUCN Classification:** VU A1cd

#### **References:**

- Cambodian Forestry Law No. 35, 25<sup>th</sup> June 1988
- CTSP, Cambodia Tree Seed Project, 2001, Some Endangered Species of Cambodia, Unpublished
- FA, 2002 (draft), List of Trade Names of Commercial Wood in Cambodia, Trade Names of Commercial Woods, unpublished
- DFSC, 2000, Seed Leaflet No.26, *Dalbergia cochinchinensis* Pierre. Danida Forest Seed Centre, September
- Dy Phon, 2000, Dictionary of Plants used in Cambodia.
- Khorn, S, 2002, Distribution of Selected Tree Species for Gene conservation in Cambodia
- Ministry of Agriculture, Forests and Fisheries, 1986, Decision No. 050 SSR.KSK: Wood Classification and Minimum Diameter for Allowable Cutting, 12<sup>th</sup> September
- UNEP World Conservation Monitoring Centre, 2002, Red List for Cambodia.
- CTSP Seminar, 29 Jan. 2002 on Forest Gene Conservation Strategy.

