

11. *Fagraea fragrans* Pit

Taxonomy and Commercial Grade

Cambodian name	: Ta trao
Scientific name	: <i>Fagraea fragrans</i> Pit
Family	: Loganiaceae
Commercial grade-Cambodia	: Luxury

Distribution and Habitat: This species is widely distributed in Vietnam, Cambodia, Laos, Thailand, Java, Sumatra, Malaysian Peninsular, and India. In Cambodia, it is usually found in semi-deciduous forests and rarely in dense or open forests (FA,1997). The tree prefers sandy soils that are periodically inundated along streams or rivers, usually below 800 m a.s.l. This is a pioneer species in burnt forestlands (FIPI, 1996). It is found in Koh Kong, Pursat, Stung Treng, Kratie, Kampong Thom, Mondulkiri and Preah Vihear (Khorn,2002; see map).

Gene-Ecological Zones: Coastal Cardamoms (A), Northern Cardamoms (B), Central Lowlands (d), Lower Mekong Floodplain (E), Southern Annamites (g).

Botanical Description: An evergreen, medium to large-sized tree, up to 20 m in height, and with boles to 150 cm in diameter. This tree often produces small buttresses at the base. The timber is yellow, very hard and heavy, with a density of 0.85 (FIPI, 1996) to 1.0 (FA, 1997). It is fine-grained and durable in water as well as in open air. The bark is yellowish-gray or brown, longitudinally fissured, with a fibrous inner bark to 1cm thick. The twigs are slender, almost cylindrical, glabrous, nodding, and yellowish-brown when dry. The leaves are simple, entire, elliptic or lance-shaped, the tips pointed, and the base is wedge-shaped. Leaf-blade are 7-12 cm long and 1.5-5 cm wide (FIPI, 1996), glabrous and leathery, and with an evident midrib below. 10-16 pairs of horizontal, parallel lateral veins are evident on both surfaces (FIPI, 1996).

Flowering and Fruiting Habit: Terminal flowering stalks bear 20-30 flowers. Flowers are white and very aromatic, with pedicels from 1-2 cm long. Sepals are 5 and fused into a bell-shaped tube; the petals are 5, unequal in size, and the stamens are 5, exceeding the length of the petals. The ovaries are naked, and produce a style that exceeds the stamens. According to FIPI (1996), flowering occurs from April-June, with fruits from July – November. However, the Forestry Magazine (FA, 1997) states that flowering occurs in February-March and fruiting from May-June.

Fruit and Seed Description: The fruit is a round, sharp-tipped, one-seed berry, reddish in colour, about 1 cm in diameter, bearing angular seeds.

Seed Collection: The seed is mature when the fruits become dark brown. The fruits are often collected as soon as the colour turns from green to yellow to minimize insect predation. Branches are cut or shaken, and the seeds collected from tarpaulin spread on the ground.



Uses: The wood is used for house pillars in construction, but also in the manufacture of furniture coffins (FIPI, 1996). In Khmer culture, *Fagraea fragrans* Pit is used for making doors and doorframes, particularly in some historic temples (FA, 1997). The bark is used in traditional medicine. The tree can be planted to provide shade (FIPI, 1996).

Current Status: Because this wood is very valuable and in high demand, the species is over-exploited and in danger of extinction if adequate protection measures are not implemented. Its distribution is scattered and its habitats are being destroyed by forestland conversion and selective, illegal logging. The number of mature trees has been reduced significantly and it is now difficult to find significant sources of germplasm.

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

References:

- Cambodian Forestry Law No. 35, 25th June 1988
- FA, 1997, Forestry & Wildlife Magazine, No 15
- FA, 2002, (draft), List of Trade Names of Commercial Wood in Cambodia, Trade Names of Commercial Wood, unpublished
- Dy Phon, 2000, Dictionary of Plants used in Cambodia
- FIPI, Forest Inventory and Planning Institute, 1996, Vietnam Forest Trees
- Heng Ponley, Director General of the Department of Traditional Medicinal Plants, Ministry of Health, 2002, per.comm.
- Khorn, S, 2002, Distribution of Selected Tree Species for Gene Conservation in Cambodia
- Ministry of Agriculture, Forestry and Fisheries, 1986, Decision No. 050 SSR.KSK 12-09-1986: Wood Classification and Minimum Diameter for Allowable Cutting, 12th September
- CTSP Seminar, 29 Jan. 2002 on Forest Gene Conservation Strategy

