
Senna timoriensis

Scientific Name

Senna timoriensis (DC.) H. S. Irwin & Barneby

Philippines: Malamalunggai

Thai : Khi Lek Daeng, Khi Lek Lueat, Khi Lek Pa

Vietnamese: Muồng Đỏ, Muồng Tía, Khi Pòi

Synonyms

Cassia arayatensis Litv., *Cassia exalta* Blume, *Cassia goensis* Dalzell, *Cassia montana* Naves & Villar, *Cassia montana* auct.non Roth, *Cassia timoriensis* DC., *Cassia timoriensis* DC. basionym, *Senna glauca* Roxb.

Origin/Distribution

The species is native to India, Ceylon, Myanmar, Thailand and through the Malay Peninsula to Northern Australia.

Family

Fabaceae also placed in Caesalpiniaceae

Agroecology

It is a drought-tolerant species naturalized in low elevations from sea level to 200 m. It usually occurs in disturbed sandy sites, sandstone outcrops, stony slopes or in thickets in limestone areas in its native range. It is also cultivated as ornamental and avenue trees.

Common/English Names

Arremene, Golden Bird, Limestone Cassia

Edible Plant Parts and Uses

The bitter young leaves and inflorescence/flowers are edible, cooked as vegetables in Thailand (Pongpangan and Poobrasert 1985). Young leaves and flowers can be used as vegetable by soft boiling and eating with chilli sauce (Monkheang et al. 2011). Both plant parts are sold in local markets in Thailand.

Vernacular Names

Burmese: Taung-Mezali, Taw-Mezalie

Indonesia: Eheng, Hing, Ihing, Nyinging, Ture, Waringinan (*Javanese*), Haringhin (*Sundanese*) Kayu Pelen (*Timor*)

Malaysia: Beresksa, Beksa, Babatai, Bebatiai, Sinteng Hutan (Malay)

Botany

A small, evergreen, perennial tree or shrub usually 2–6 m but may grow to 10 m high, pubescent on vegetative parts, inflorescence, sepals and ovary, otherwise glabrous. Leaves pinnate, 14–20 cm long with a terete 10–15 mm long petiole, acicular stipules and comprising 10–20 pairs of narrowly oblong to narrowly elliptic, 1.5–5.5 cm long by 0.8–1.7 cm wide leaflets, obtuse, apiculate and eglandular (Plates 1 and 2). Inflorescence corymbose paniculate, axillary or terminal, bract linear, flowers pedicellate, pentamerous with five unequal sepals, five yellow obovate, clawed petals and ten stamens (seven fertile and three staminodes) with subequal filaments and unequal anthers, ovary superior with 1 style and stigma (Plate 1). Fruit a long narrow, flat, legume, 6–15 cm long by 1–1.5 cm wide, septate with 10–20 shiny brown, suborbicular seeds.



Plate 1 Flowers, pods and leaves



Plate 2 Young tender leafy shoots sold as vegetables in the local markets

Nutritive/Medicinal Properties

Aloe emodin and 2,5-dimethyl-3 α H-pyrano [2,3,4-de]-1-benzopyran-3 α ,8-diol (barakol) were isolated from *Cassia timoriensis* leaves (Gritsanapan et al. 1984).

Cassia timoriensis plant extract was one of several Thai medicinal plants that exhibited good antioxidant activity and could completely inhibit Heinz body formation at the dilution of 1:20 (Palasuwan et al. 2005). Heinz bodies are intracellular precipitates formed by damage to the haemoglobin component molecules in erythrocytes, usually through oxidant damage.

Traditional Medicinal Uses

C. timoriensis is used for scabies and itch and as a vermifuge (Toruan-Purba 1999). The plant is used as medicine for menstrual disorders, tonic, antitumour, blood stasis and cough in Thailand (Palasuwan et al. 2005); the heartwood is used as a traditional medicine by women to stimulate menstrual blood flow (Monkheang et al. 2011).

Other Uses

The plant is commonly grown as ornamental tree in parks and gardens or as shade trees along roads. The wood is used for matchsticks, matchboxes, joinery, cement casks and decorative items.

Comments

The plant is propagated from seeds or stem cuttings.

Selected References

Backer CA, Jr van den Brink RCB (1963) Flora of Java, (spermatophytes only), vol 1. Noordhoff, Groningen, 648 pp

- Burkill IH (1966) A dictionary of the economic products of the Malay Peninsula. Revised reprint. 2 vols. Ministry of Agriculture and Co-operatives, Kuala Lumpur, Malaysia. vol 1 (A–H) pp 1–1240, vol 2 (I–Z). pp 1241–2444
- Gritsanapan W, Tantisewie B, Jirawongse V (1984) Chemical constituents of *Cassia timoriensis* and *Cassia grandis*. J Sci Soc Thail 10(3):189–190
- Monkheang P, Sudmoon R, Tanee T, Noikotr K, Bletter N, Chaveerach A (2011) Species diversity, usages, molecular markers and barcode of medicinal *Senna* species (Fabaceae, Caesalpinioideae) in Thailand. J Med Plant Res 5(26):6073–6181
- Palasuwan A, Soogarun S, Lertlum T, Pradniwat P, Wiwanitkit V (2005) Inhibition of Heinz body induction in an in vitro model and total antioxidant activity of medicinal Thai plants. Asian Pac J Cancer Prev 6:458–463
- Pongpangan S, Poobrasert S (1985) Edible and poisonous plants in Thai forests. Science Society of Thailand, Science Teachers Section, Bangkok, 206 pp
- Randell BR, Barlow BA (1998) *Senna*. In: George AS (ex ed) Flora of Australia, vol 12. Australian Government Publishing Service, Canberra. pp 89–138
- Toruan-Purba AV (1999) *Senna* Miller. In: de Padua LS, Bunyaphatsara N, Lemmens RHMJ (eds) Plant resources of South East Asia No 12(1), medicinal and poisonous plants 1. Prosea Foundation, Bogor, pp 442–447
- Whitmore TC (1972) Leguminosae. In: Whitmore TC (ed) Tree flora of Malaya, vol 1. Longman, London, pp 237–304