



CHAPTER I

INTRODUCTION

The genus *Clausena*, belongs to the family Rutaceae is a member of the subfamily Aurantiae, subtribe Clauseneae. It is shrubs or trees with imparipinnate, mostly deciduous leaves, leaflets membranous; flower, small, petals imbricate; ovary stipitate, 4-5 celled, ovules 2 in each cell, style deciduous immediately after flowering or later. Fourteen species, chiefly Indo-Malayan, a few in China, Africa and Australia⁽¹⁾ are the following

- Clausena anisata* Hook. f.
- Clausena anisum-olens* (Blco.) Merr.
- Clausena dentata* (Willd.) R. & S.
- Clausena excavata* Burm. f.
- Clausena harmandiana* Pierre
- Clausena heptaphylla* Wight & Arn.
- Clausena indica* Oliv.
- Clausena lansium* (Lour.) Skeels
- Clausena lenis* Drake
- Clausena macrophylla* Hook. f.
- Clausena pentaphylla* DC.
- Clausena guillauminii* Tanaka
- Clausena suffruticosa* Wight & Arn.
- Clausena Wallichii* Oliv.

There are only six species of *Clausena* growing in Thailand⁽²⁾ have been reported and those are

Clausena cambodiana Guill., สมุยทอม (Samui hom)

Clausena excavata Burm.f., ทวดทมอน (Huat mon)

Clausena guillauminii Tanaka, ส่องฟ้า (Song faa)

Clausena harmandiana Pierre., ส่องฟ้าดง (Song faa dong)

Clausena lansium Skeels (*C. wampi* Oliv.), มะไฟจีน (Mafai cheen)

Clausena wallichii Oliv., เพี้ยพาน (Phia faam)

The plants and their folkloric use have been widely told in many countries.

Clausena guillauminii Tanaka (Fig. 1) is the plant growth in the northeastern of Thailand. It is a shrub 30-40 cm. high, common in dry deciduous forest⁽³⁾, leaf 15-20 cm. long; folioles 1-5 alternate, sometime opposite, unequal, the terminal leaf are longer, obovate or oblong (2-11 cm. x 1-4 cm.), obtuse of globose or terminal, is obtuse, slightly oblique at the base, rigides or coriaceous, entire or crenulate prominent margin, lateral vein 5-11 paires, the veinlet very prominent in lower surface; petiolulate and rachis have glanular and margin. Inflorescence is terminal, panicles, shorter than leaves. Sepal 5, petal 5, staman 10; filament broad and have a papillose at base; anther short globose, terminal have a gland; ovary globose, hairy; style cylindrical, stigma broadly capitate.^(1,4,5)

In Thailand, this plant has been told to be used as a folkloric medicine as a stomachica, treatment of snake-bite and as a detoxification agent.

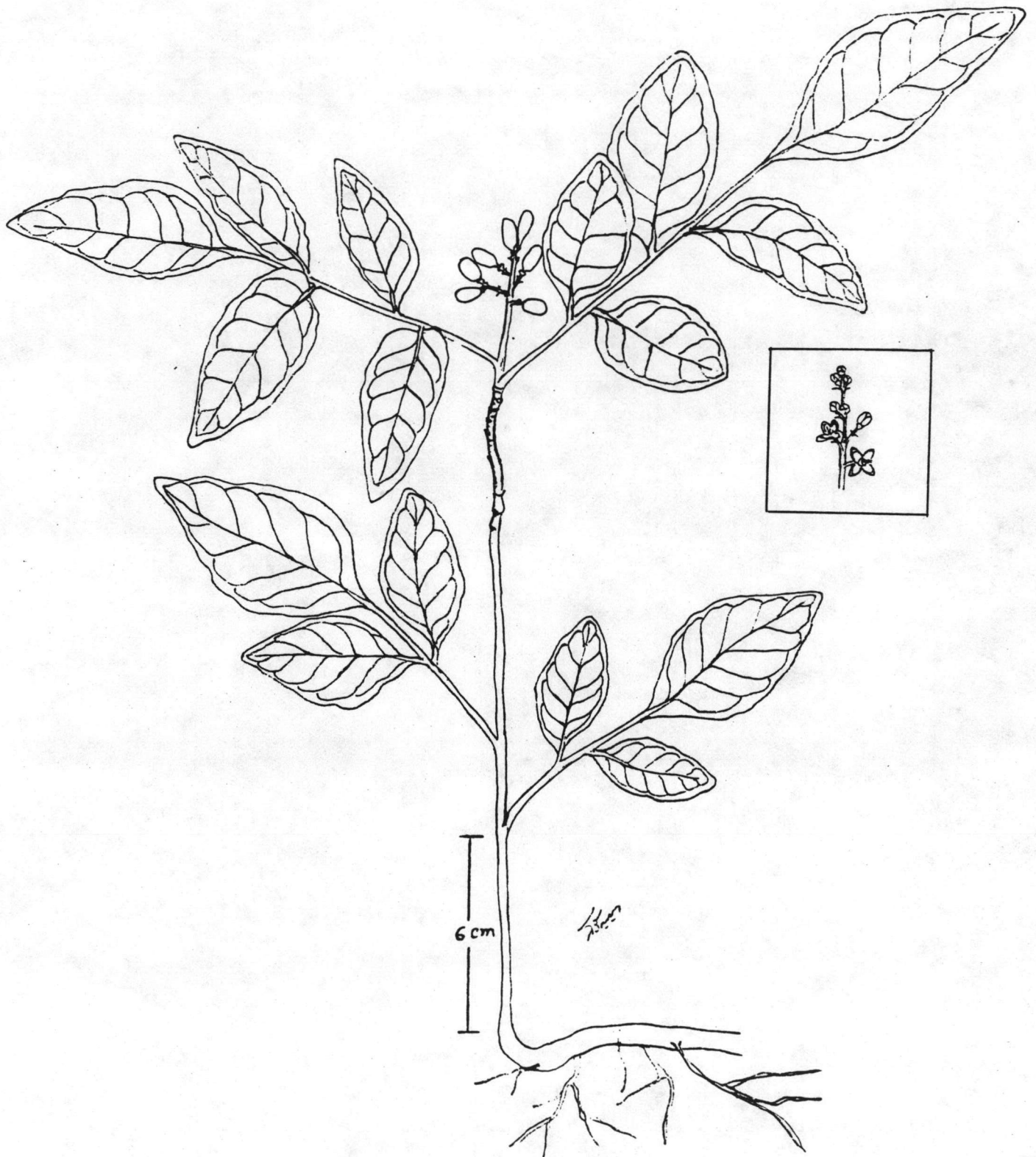


Fig. 1 สองฟ้า *Clausena guillauminii* Tanaka. Rutaceae

In Philippines, a decoction of the root and fruit of *Clausena anisum-olens* (Blco.) Merr. is prescribed for cough with fever; that of the leaves to treat nausea during pregnancy. The leaves are added to baths to treat rheumatism and if stuffed into pillows placed under the head, they have a soporific effect. The volatile oil from the leaves produced narcosis in frogs. The fresh leaves have a narcotic effect on a person who are not in pain but if they are in pain, no benefit is noticed. ⁽⁶⁾

Clausena excavata Burm.f. ranges from India and south China through southeast Asia. ⁽⁶⁾ It is a wild shrub which has been claimed to be a useful folk medicine in the treatment of snake-bite and as a detoxification agent. ⁽⁷⁾

In Burma, *Clausena excavata* Burm. f. is a good remedy for stomach trouble but in Taiwan, a decoction of the root is sudorific, the leaves are insecticidal. People in Indo-China use the Plant as bitter tonic, astringent, and emmenagogue; a poultice of the leaves is applied to treat paralysis, an infusion of the stem may be taken against colic. ⁽⁶⁾ In Malay Peninsula, a decoction of the roots is drunk for bowel complaints, chiefly colic. The pounded root is used as a poultice for sores, including ulceration of the nose. The leaves are used also for poulticing; and may be pounded and applied to the head for headaches. The flowers and leaves may be boiled, and the decoction taken for colic : and that a decoction of the leaves is given after childbirth. ⁽⁸⁾ The juice pressed or pounded out of the leaves which have been used in Indonesia, is both a medication for fever, and a vermifuge; it may be given to lying-in women. ⁽⁶⁾

Clausena lanisum (Lour.) Skeels, is a tree very commonly cultivated in China for its edible fruit,⁽⁸⁾ is considered to be stomachica, cooling, and anthelmintic. The rind of the fruit is a resolvent for rheumatic swellings, cures enlarged spleen which causes fever; warmed in gin, it is taken to help urination; the seed is treatment for hernia. In Indo-China, the leaves are employed in the care of the hair; they are reputed to be useful against dandruff. But in Vietnam, they buy the immature fruits; cut them in half and dry in the sun, then use them to treat bronchitis.⁽⁶⁾

Another species *Clausena lenis* Drake. (*C. kerrii* Craib) have been used for washing the hair. The fruits are utilized to treat bronchitis; the roots, stem, and leaves are employed to care for persistant furuncles.⁽⁶⁾

Clausena harmandiana Pierre had been studied chemically by Jinda Wangboonskul.⁽⁹⁾ The coumarins and carbazole alkaloid are found in root bark of this species. This plant have been told to be used as a folkloric medicine as stomachica.⁽⁹⁾

Clausena guillauminii Tanaka have been used as a folkloric medicine as same as *Clausena harmandiana* Pierre. The phytochemical study of this plant may be found the compounds such a coumarin and carbazole alkaloid which might exert physiological effects.