



CHAPTER I

INTRODUCTION

Pycnarrhena lucida (Teijsm. & Binn.)Miq. is a scandent shrub, known at Krabi, Thailand, as “Klon koo” (กลอนคู่) or “Ya nang ton “ (ย่านางต้น). The genus *Pycnarrhena* belongs to the tribe Tricliseae of the family Menispermaceae. *Pycnarrhena* species are characterized by the axillary or ramiflorous flowers, mostly cymose; the peduncles sometimes, 1-flowered and fascicled. The leaves are usually elliptic and penninerved, sometimes with lower nerves crowded at base and lanceolate. The fruits are drupelets, subglobose with style-scar on the ventral side below the apex, arising from the margin of a swollen, usually thin endocarp. (Backer and Bakhuizen, 1963)

According to the flora of Thailand, the genus *Pycnarrhena* compose of nine species in south-east Asia to Australia, but only two species was found in Thailand as follows:

1. *Pycnarrhena poilanei* Gagnap.
2. *P. lucida* (Teijsm.&Binn.)Miq.

Forman (1988) described the characteristic feature of *Pycnarrhena lucida* (Teijsm.&Binn.)Miq. as below:

Leaves elliptic, 6-16 by 2.5-5.5 cm., apex acuminate, base acute to obtuse; reticulation conspicuous and prominent on both surfaces, glabrous (rarely puberulous along midrib and main nerves on lower surface); petioles 0.8-2(-3) cm. *Inflorescences* axillary or ramiflorous, fasciculate; peduncles 1-(or few) flowered, 3-5 (-10) mm., usually puberulous *Male flowers* : sepals 9-12; outer ones minute, puberulous; inner 3-

6 larger, rotund to broadly rotund, 1.25 by 1.25-1.75 mm., glabrous. *Petals* 3, cuneiform, 0.5-0.75 mm. long. *Stamens* 6-12, 0.5 mm., shortly connate. *Female flowers* unknown. *Drupe*s red, globose 8-15 mm. diam., glabrous; endocarp crustaceous. (Figure 1)

Pycnarrhena lucida (Teijsm.&Binn.)Miq. was found in the north-eastern, south-eastern and south-western of Thailand. Several species of the genus *Pycnarrhena* have been reported to be used for medicinal purpose, such as:

In Philippine: *Pycnarrhena celebrica* Diels. was reported that the fresh bark and stem is used to treat epigastric pain. Powdered root of *P. manillensis* Vidal is taken as a tonic; it is an effective vulnerary and a remedy for snake bites; an infusion is considered helpful for women in parturition. Further the roots are used to treat chlorera, other intestinal disease and be efficacious against fever and as an emmenagogue. (Perry, 1980)

In Papua-new guinea, the alcoholic extract of *Pycnarrhena ozantha* Diels. was active for antitumor activity in cell culture (Loder and Nearn, 1972). At Krabi, Thailand, *Pycnarrhena lucida* (Teijsm.&Binn.)Miq. is used in traditional medicine as an analgesic drug.

Up to now, several species of the genus *Pycnarrhena* have been studied for their chemical constituents and biological activities. Those studies indicated the present of alkaloids, some of which are biologically active compounds. But *Pycnarrhena lucida*(Teijsm.&Binn.)Miq. had never been reported on any chemical constituents and biological activities. So the phytochemical studies on this indigenous plant are undertaken in order to study the group of chemical constituents comparing within this genus and to search for compounds which might exhibit therapeutic values.