CHAPTER I

INTRODUCTION

Albizia belongs to tribe Acaciae of the family Mimosaceae (Hooker, 1973) , most of which are trees, shrubs and some of them are woody climber. About 100 - 150 species appear in the tropical part and another 50 species also exist in the warmer part of the world. All the above-mentioned species are quite important in the economic production especially in Southeast Asia (e.g. woods from *A. amara* Boiv. and *A. odoratissima* Benth. can be used for furniture product. The barks of *A. procera* Benth. and of *A. stipulata* Boiv. use for insecticide and fish poison. (Burkill, 1935) etc.)

According to Smithinand (1980), the species of genus *Albizia* found in Thailand. are as followed.

Albizia chinensis Merr. (*A. stipulata* Boiv.)	กางหลวง Kaang luang, สารคำ Saan Kham (Northern); ค้างฮุง Khaang hung (Khon Kaen); ปื้อ Pue, ปื้อเก๊าะ Pue-koh (Karen- Mae Hong Son); สารเงิน Saan ngoen (Chiang Mai).

A. lebbeck Benth.	ก้ามปู Kaampuu ชุงรุ้ง Chungrung, พฤกษ์ Phruek (Central); กะซึก Kasuek (Central, Phichit); กาแซ Kaasae, กาไพ Kaaphai, แกร๊ะ Krae (Surat Thani); ก้านฮุ้ง Kaan hung (Chaiyaphum) ; กรีด Kreet (Krabi); คะโก Khako (Central); จะเร Cha-re (Khmer-Prachin Buri); จ๊าขาม Chaa Khaam (Northern); จามจุรี Chaamachuree, จามรี Chaamaree, ซึก Suek (Bangkok); ตุ๊ด Tut (Tak); ถ่อนนา Thon naa (Loei); ทิตา Thi-taa (Karen-Kanchanaburi); พญากะบุก Phayaa kabuk (Prachin Buri); มะขามโคก Makhaam khok, มะรุมป่า Marum paa (Nakhon Ratchasima); Indian Walnut, Siris.
A. lebbeckoides Benth.	กาง Kaang (Northern); คาง Khaang, จามรีดง Chaamaree dong, จามรีป่า Chaamaree paa (Central).
A. lucidior Nielsen	กระบุง Kra-bung (Chong-Chanthaburi)
(*A. gamblei* Prain)	จะแข Cha khae, ซะแข, สะแข Sa Khae
(*A. lucida* Benth.)	(Northern, Northeastern); ตังแข Tang khae (Ratchaburi); แทงแข Thaeng khae, พญารากขาว Phayaa raak khaao (Uttaradit); ติแข Ti khae (Loei); แถ Thae, ปันแข Pan khae, ปันแถ Pan thae (Northern); นางแหง่ Naang ngae, พฤกษ์ Phruek (Kanchanaburi); โปลต่า

	สู่ Plo-taa-suu (Karen- Mae Hong Son).
A. myriophylla Benth.	ชะเอมไทย Cha em Thai, ชะเอมป่า Cha em paa (Central); ตาลอ้อย Taan oi (Trat); เพาะซูโพ Phoh-su-pho (Karen- Mae Hong Son); ย่านงาย Yaan ngaai (Trang); ส้มป่อยหวาน Som poi waan (Northern); อ้อยช้าง Oi chaang (Songkhla, Narathiwat).
A. odoratissima Benth.	กางขี้มอด Kaang kheemot (Chiang Mai); กางแดง Kaang daeng (Lop Buri, Phrae); คางแดง Khaang daeng (Phrae); จันทน์ Chan (Tak); มะขามป่า Makhaam paa (Nan); Black Siris, Ceylon Rose Wood.
A. procera Benth.	ควะ Khwa, เยกิเด๊าะ Ye-ki-doh (Karen- Mae Hong Son); เชอะบ้อง Choe-bong, ซะบ้อง Sabong, เส่บ้อง Se-bong (Karen- Kanchanaburi) ; ถ่อน Thon, ทิ้งถ่อน Thing thon (Central) ; ส่วน Suan (Chiang Mai, Loei); White Siris, Sit.

Albizia myriophylla Benth. (synonym: *A. myriophylla* Benth. *var. foliolosa* Baker., *A. microphylla* MacBride., *A. vialeana* Pierre. *var. thorelii* (P.) Pham Hoang Ho, *A. thorelii* Pierre., *Acacia myriophylla* Grah., *A. foliolosa* Grah., *Mimosa microphylla* Roxb.) has originally habitat in the tropical part of Asia. It is distributed in India, Burma, China, Thailand, Malaysia, Philippines, Cambodia, Laos and Viet-Nam(Nielsen, 1981). This plant is a woody climber, with dark brown shoots. Young branches densely clothed with ferrugineous hairs. Leaf, bipinnately compound,

pinnae 10-20 pairs, petiole and rachis with 1 or more large glands. Leaflet, small and green, 20-60 pairs, sessile, oblong-linear, 4-6 mm long and 2 mm wide, with obtuse apex and oblique base, closely crowded, caducous. Flower in small head, white and pale yellow, forming an ample panicle; calyx, campanulate, 2 mm long; corolla, funnel-shaped, 3-4 mm long, stamen 12, filament-slender, connate at the base; pistil simple, superior ovary; ovule, marginal placentation. Pods, flat, dehiscent, 6-13 cm long and 1.5-2 cm wide, glossy, brown, thin, flexible, narrow to both ends. Seed, 4-8, round, flat, brown, 3-4 mm diam (Hooker, 1973 ; Brandis, 1971).

The barks of this plant use for an expectorant, an antitussive, and a remedy for throat diseases(Pongboonrod, 1971). The infusion of roots is useful for fever. The boiled leaves lotion uses for curing ear-ache. The mixture of roots, Gardenia fruits and Jasminum leaves can be used as significant ingredient of making lotion which relieving pain and fever, particularly in children(Burkill, 1935). The toxicity of wood has dose 20 g/kg of the body weight of a mouse(Sasorith, 1969).

The most characteristic of chemical compounds, isolated from *Albizia* species are triterpenoid saponins derived from *A. lebbeck* Benth., *A. procera* Benth., *A. odoratissima* Benth., *A. amara* Boiv., and *A. lucida* Benth(Varshney, 1973). In 1935 , it was reported that glycyrrhizin can be found in the roots of *A. myriophylla* Benth. (Burkill, 1935). The flavonoid glycosides are present in *A. odoratissima* Benth (Ramachandra and Reddy, 1963)., *A. procera* Benth., and *A. lebbeck* Benth. (Deshpande and Shastri, 1977). The pipecolic acid and its derivative alkaloids were isolated from *Albizia* spp.(Raffauf, 1970)

The research of phytochemical in *A. myriophylla* Benth., in 1967 , has been reported that few saponoside can be found in the stem

and catechin tannin contains in the wood(Sasorith, 1969). Whereas, the previous isolated chemical compound from the bark has been reported, (-) -Syringaresinol 4-O-β-D-apiofuranosyl-(1→2)-β-D-glucopyranoside and new lignan glycoside, 6-epi-syringaresinol 4-O-β-D-apiofuranosyl-(1→2)-β-D-glucopyranoside (albizzioside A), buddlenol D 4′-O-β-D-apiofuranosyl-(1→2)-β-D-glucopyranoside(albizzioside B) and buddlenol D 4-O-β-D-apiofuranoside (albizzioside C) and albizzine A has been isolated from the bark of *A. myriophylla* Benth.(Ito *et al*, 1994 ; Ito *et al*, 1994) It interests the author to investigate the chemical compounds in this plant for increasing information of chemistry and chemotaxonomy. This investigation deals with the isolation of chemical compounds from the bark of *A. myriophylla* Benth. and the structural analysis by means of spectroscopy.