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SOME NOTEWORTHY PLANTS FROM THAILAND (SIAM)

after working for some-times in 1953 on the identification of Thai flowering plants at the Indian Forest Institute, Dehra Dun; the Herbarium of the Indian Botanic Garden, Calcutta and the Herbarium of the Royal Botanic Gardens, Kew, I came across many plants that appeared to be new records to the Flora of Thailand.

The determination of special groups of plants had been whole-heartedly assisted by members of the Kew Staffat: Orchidacese, Mr. V.S. Summerhayes; Graminese, Dr. N.L. Bor and Mr. H.E. Hubbard; Cyperaceae, Mr. E. Nelmes.

Thanks are due to Mr. M.B. Raizada and Mr. R.N. Chatterjee, of Dehra Dun, India, Dr. J. Hutchinson late of Kew and Mr. L.L. Forman of Kew, England, whose advice is indispensible.

I wish also to tender my gratitude to the Director-General of the Royal Forest Department, Bangkok, who makes the publication of this work possible and Mr. Khid Suvarnasuddhi, Chief Forest Products Research Division, who kindly read through the manuscript, last but not least Miss Vilai Chinda Sa-nguan, who patiently bears the heavy burden of typing.

ANNONACEAE

1. **Fissistigma bicolor (Hk.f. et Thomps.) Merrill** in Philip. Journ. Sc., XV: 130 (1910).

Melodorum bicolor Hk. f. et Thomps., Fl. Ind., p. 119 and Fl. Brit. Ind., I:8 (1875)

Pen. Thailand : Nakawn Sritamarat, Kiriwong Tap Charng, 400 m., woody climber 20 m. long, common in evergreen jungle near plantation, flowers greenish, scented. **R.F.D. Herb. No. 6123 (Smitinand 768).**

Local name : Kluay Ma–sang (กล้วยมะสัง)

Distribution : India and Burma.

POLYGALACEAE

2. **Epirhizanthes elongata Blume,** Flor. Bot. Zeit., p. 113 (1825); Gagnepain in Lecomte, Fl. Gen. Indo–chine, I : 249 (1909); Ridley, Fl. Mal. Penins., I : 140 (1922).

Salomonia aphylla Griff., Bennett in Hk. f., Fl. Brit. Ind., I : 207 (1875).

Pen. Thailand : Nakawn Sritamarat, Kao Luang, 600 m.; herb common on sandy bank; flowers white. **R.F.D. Herb. No. 7213 (Plernchit 315).**

Distribution : Burma, Malaya, Java, Sumatra, Borneo, Tonkin and China.

3. **Polygala arillata Ham.** in Don Prodr., p. 199 ; Bennett in Hook. f., Fl. Bait. Ind., I : 200 (1875).

N.E. Thailand : Loie, Phu Krading, 1,300 m. ; small tree with yellow flowers; **R.F.D. Herb. No. 7640 (Dee 384).**

Distribution : India, Burma, Ceylon, Malay Islands and S. China.

FLACOURTIACEAE

4. Ryparosa wrayi King In Journ. Asist. Soc. Beng., LIX:126 (1890) et Ann. Bot Gard. Calc., V (2) 133, pl. 155; Ridley, Fl. Mal. Penins., I:164 (1922).

Pen. Thailand : Nakawn Sritamarat, Khaw Luang, 600 m. ; tree 20 m. high 80 cm. girth, not common in evergreen forest; fruits brown with white top. **R.E.D. Herb. No. 7547 (Plernchit 117)**; flowers yellowish, **R.F.D. Herb. No. 7544 (Smitinand 848).**

Local name : Ai bao (ข้ายเบา) Daeng Khao (แดงเขา)

Distribution : Malaya (Perak, type).

RUTACEAE

5. Citrus japonica Thunb., Fl. Jap., p. 292

Citrus microcarpa Bunge in Mem. Sav. Etr. Petersb., II. 84 (1835)

S.E. Thailand : Trat, Hauy Raeng, Charng Kluae, under 50 m. ; small tree, 5 m. tall, cultivated for fruits; fruits; globose, acid; used in local culinary. **R.F.D. Herb. No. 7303 (Smitinand 1323).**

Local name : Som–ma–pid (ส้มมะปิด)

Distribution : Chin and Japen.

MELIACEAE

6. **Chisocheton macrophyllus King** in Journ. Asiat. Soc. Beng., LXIV : 31 (1895) Ridley, Fl. Mal. Penins., I : 389 (1922).

Pen. Thailand : Nakawn Sritamarat, Kiriwong, Tap chang, 400 m.; tree 30 m. high, 150 cm. girth; common along edge of evergreen Jungle near plantation; flowers whitish, slightly scented. **R.F.D. Herb. No. 6098 (Smitinand 756).**

Local Name : Ta-suae (ตาเสือ)

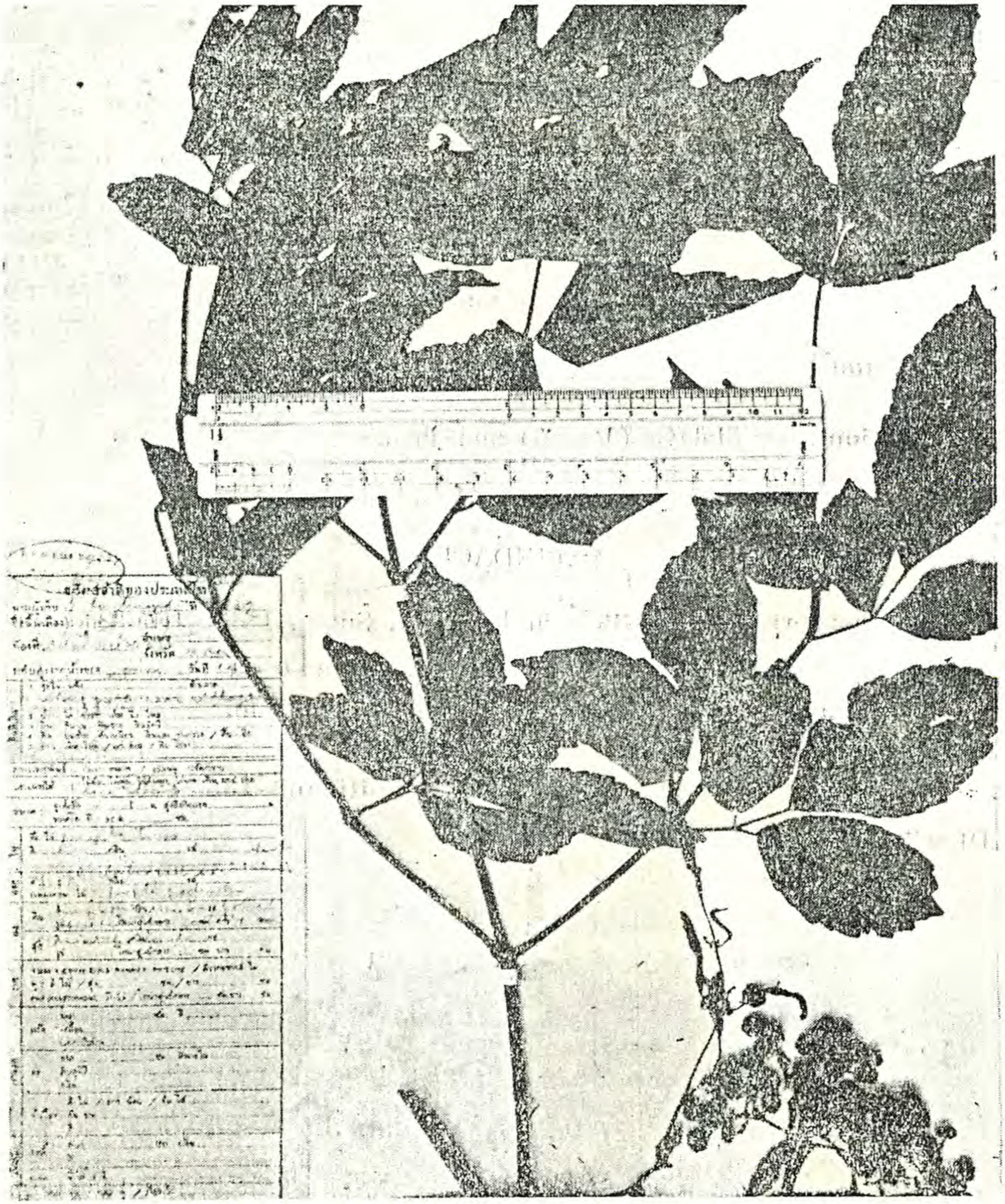
Distribution : Malaya (Perak) ann Java.

SAPINDACEAE

7. **Allophyllus serrulatus Radlk.** in Rec. Bot. Surv., India, III : 341 (1907); Gamble, Fl. Madras., I, 246 (1935).

S.E. Thailand : Trat, Huay Raeng, Dong Tapid, 40 m.; small shrub 1 m. tall, common along path in evergreen jungle; flowers white. **R.F.D. Herb. No. 7304 (Smitinand 1383).**

Distribution : India.



Leea aculeata Bl.

8. **Allophyllus littoralis Blume,** Rhumphia, III, p. 124.

Pen. Thailand : Trang, Ka – chawng, 100 m. ; shrub with white flowers. **R.F.D. Herb. No. 7593 (Boonkird 33).**

Distribution : Java.

LEEACEAE

9. **Leea aculeata Blume.** Bijdr., p. 197 ; Blanco, Fl. Filip., ed. II, p. 127, Merrill, Spec. Blanc., p. 247 (1918).

S.E. Thailand : That, Huay Raeng, Charng Kluae, under 50 m. ; low shrub 1 m. high ; common along path near village ; twigs and peduncles purple ; fruit purplish green. **R.F.D. Herb. No. 7237 (Smitinand 1432).**

Local name : Pha–narng Bai Tiae (พะนางใบเตีย)

Distribution : Malaya and Philippines.

CAESALPINIACEAE

10. **Cassia hirsuta Linn.,** Spec. Pl., p. 378 ; Ridley, Fl. Mal. Penins., 1 : 618 (1922).

N. Thailand : Chiengmai, roadside, 300 m. ; shrub with yellow flowers. **Winit s.n.**

Pen. Thailand : Nakawn Sritamarat, Kiriwong, 200 m. ; shrub 1.50 m., not common, near village ; flowers yellow. **R.F.D. Herb. No. 7268 (Plernchit 268).**

Local Name : Dap Pit (ตับพิษ)

Distribution : Tropical Ameri ca and Malaya.



Bauhinia penicilliloba Pierre ex Gagnep.

11. Bauhinia penicilliloba pierre ex Gagnep. in Lecomte et Finet, Not. Syst., II. 171 (1912) et in Lecomte, Fl. Gen. Indo – chine, II. 141 (1913).

N.E. Thailand : Loie, Phu Krading, Samkae, 1,100 m. ; climber in forest, flowers red., **Din 52.**

Distribution : Laos and Cambodia.

12. Bauhinia penicilliloba Pierre ex Gagnep., var. harmandiana Gagnep. in Lecomte, Fl. Gen. Indo–chine, II : 142 (1913).

N.E. Thailand : Loie, Phu Krading, 1,300 m. ; climber in deciduous forest : flowers red ; **R.F.D. Herb. No. 9003 A (Dee).**

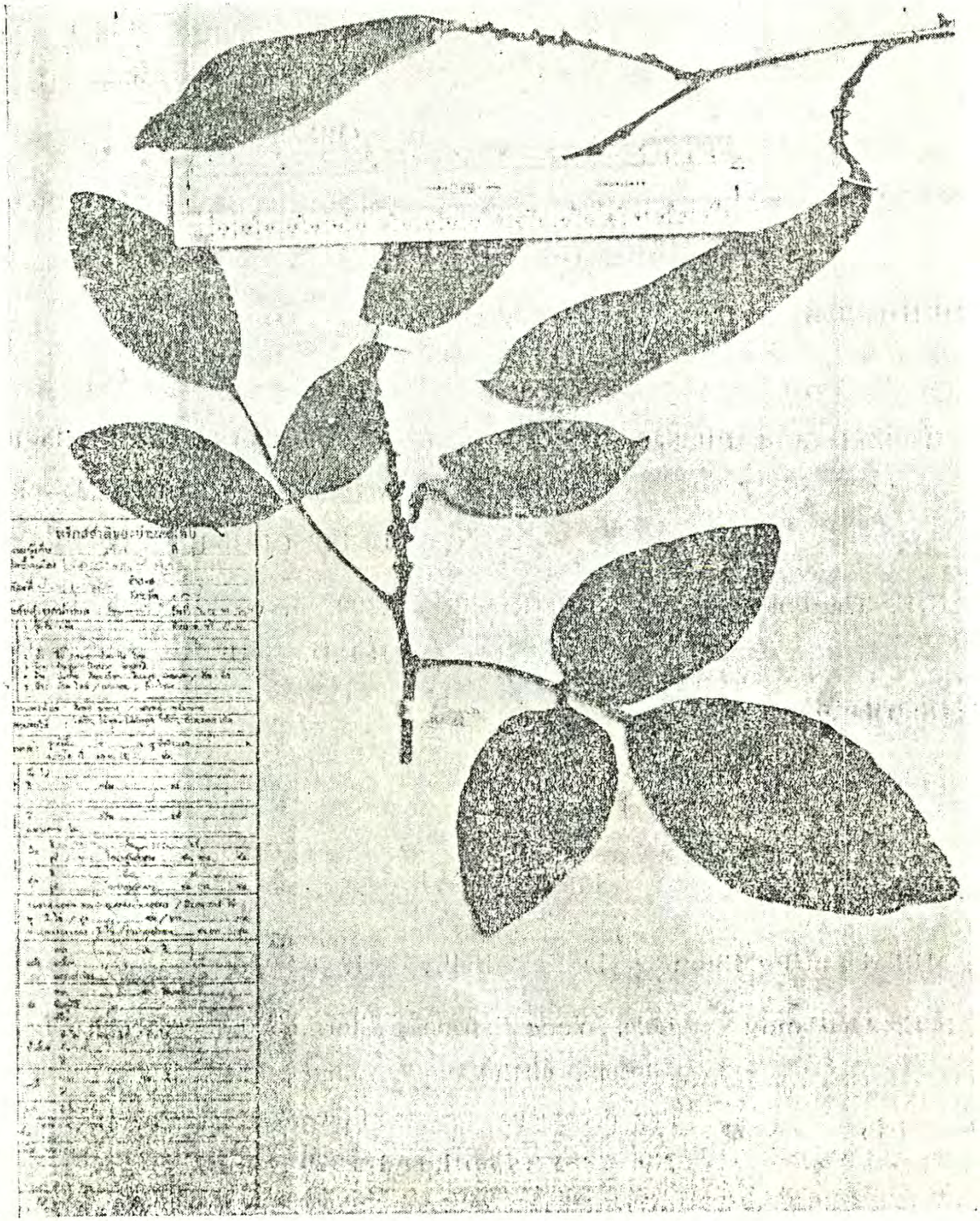
Distribution : Laos.

PAPILIONACEAE

13. Milletia utilis Dunn in Kew Bull., 1904, p. 207.

N.E. Thailand : Loie, Wang Sapoong, Sitarn, 300 m. ; tree 15 m. high, 100 cm. girth ; not common, on damp localities in dry deciduous forests : flowers white. **R.F.D. Herb. No. 7381 (Smitinand 1220).**

Distribution : Lower Burna (type).



Millettia utilis Dunn

14. **Dialium platysepalum Baker** in Hook. f., Fl Brit. Indo: II : 270 (1875) Ridley, Fl. Mal. Penins., I : 623 (1922).

Pen. Thailand : Nakawn Sritamarat, Kiriwong, Tap Charng, 400 m.; tree common in evergreen jungle. **R.F.D. Herb. No. 6120 (Smitinand 800).**

Local name : Yi (หยี)

Distribution : Malaya (Malaoca, type).

MELASTOMACEAE

15. **Pogonanthera pulverulenta Blume** in Flora, XIV : 521 (1831) ; Ridley, Fl. Mal. Penins., I : 805 (1922).

Pen. Thailand : Nakawn Sritamarat, Khao Luang, 600 m. ; shrub on dead tree ; flowers red with white stamens ; peduncle orange. **R.F.D. Herb. No. 7362 (Plernchit 325) : 7570 (Plernchit 216).**

Distribution : Malaya ; Sumatra ; Java and Borneo.

RUBIACEAE

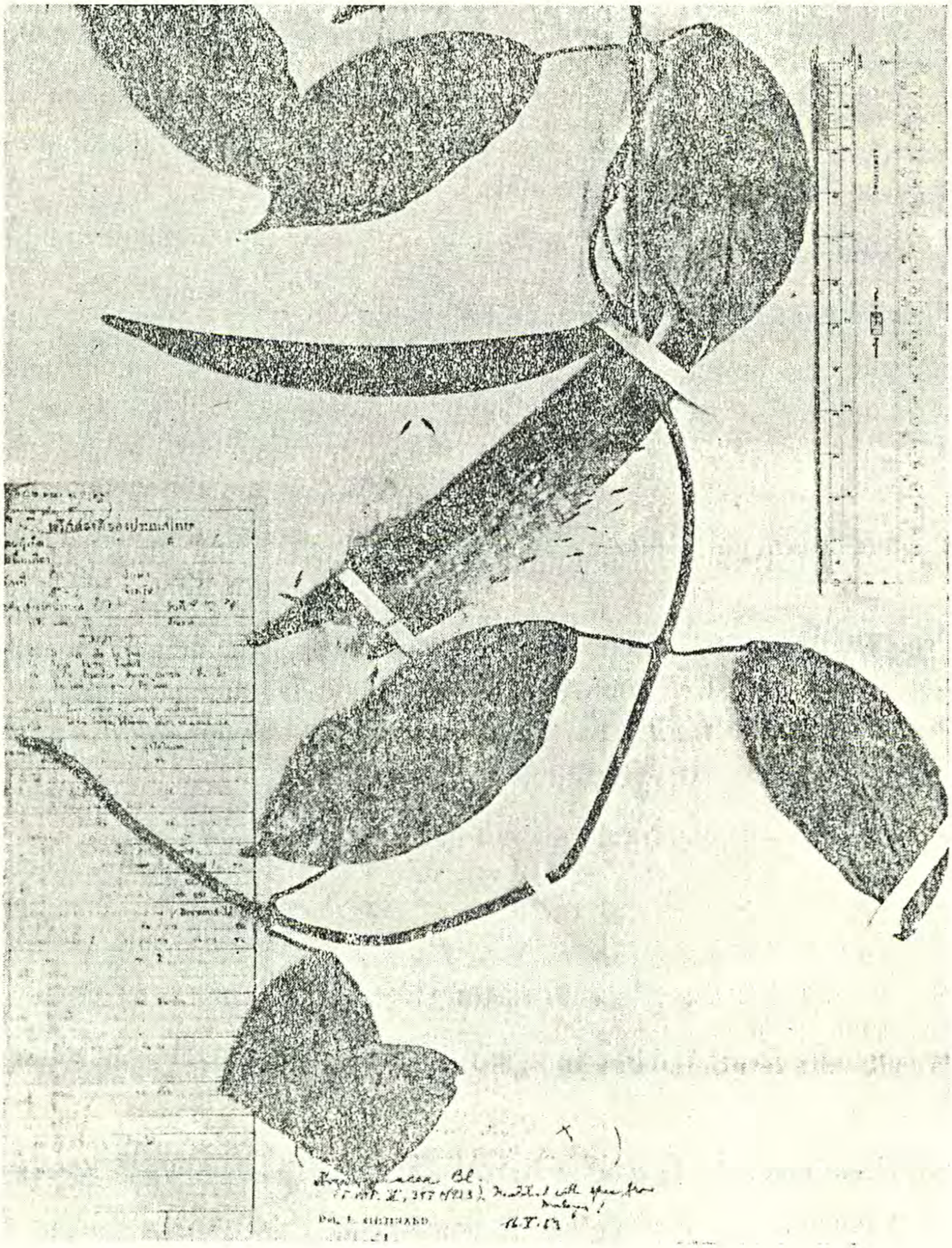
16. **Wendlandia ternifolia Cowan** in Notes Roy. Bot. Gard. Edinb., XVI : 279 (1932).

N.E. Thailand : Loie, Phu Krading, **R.F.D. Herb. No. 7856 (Dee 386)**

Local name : Daeng Dong (แดงดง)

Distribution : Tonkin.

แดงดง



Hoya coriacea Bl.

ASCIEPIADACEAE

17. **Hoya coriacea Blume,** Bijdr., p. 1063; Ridley, Fl. Mal. Penins., II : 397 (1923).

Hoya maingavi Craib, Fl. Siam. Enum., III (1) : 38 (1951) non **Hook. f.**

Pen. Thailand : Nakawn Sritamarat,Kiriwong Tap Charng, 400 m.; climber, not common, along bank of stream in ever–green jungle ; fruits green, white–striated. **R.F.D. Herb. No. 7505 (Plernchit 239).**

Pattani, Khao Kalakiri, 900 m., evergreen forest **Kerr 7780.** (Herb Kew).

Distribution : Malaya, Java, Borneo and Sarawak.

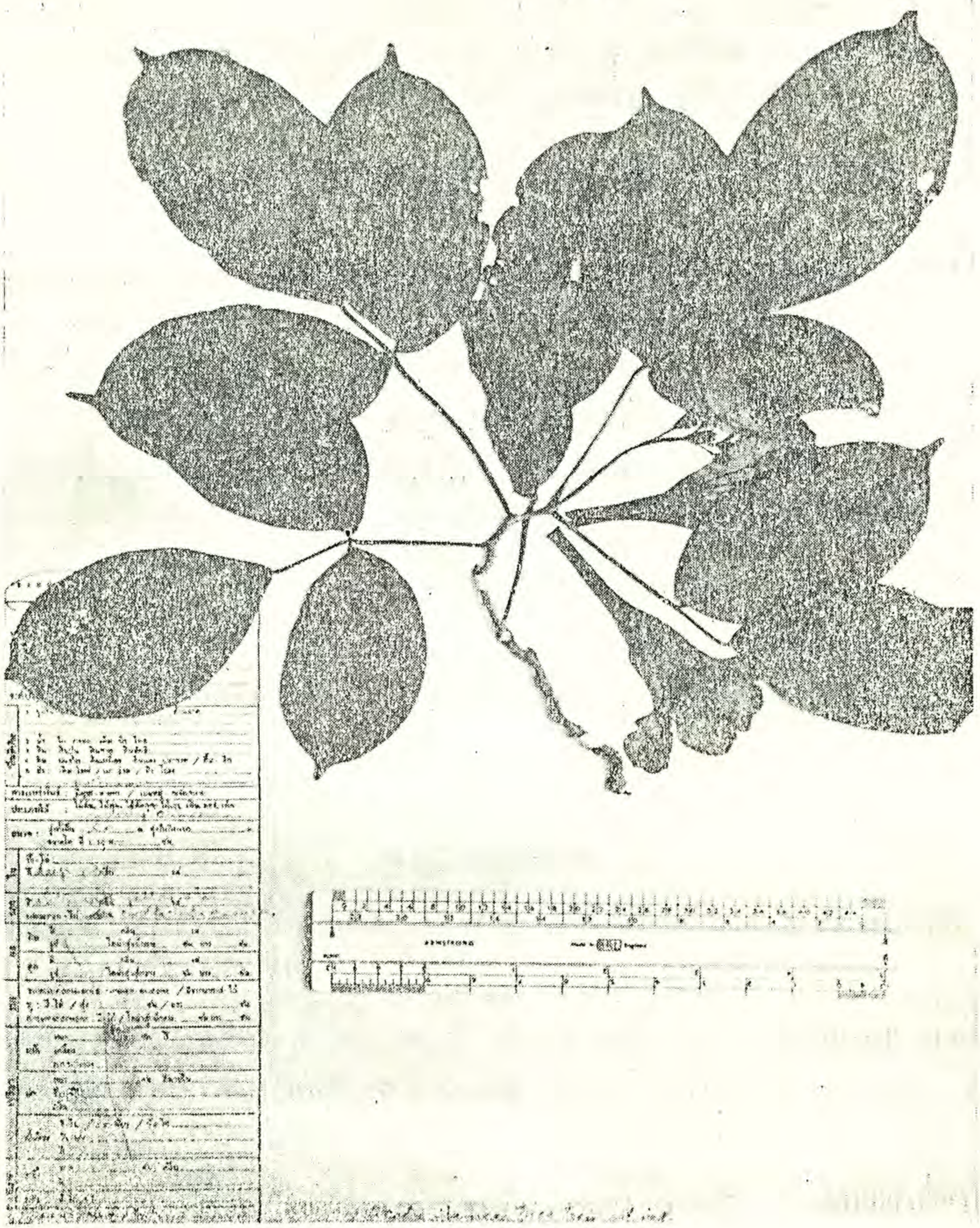
Kerr 7780 was determined as **H. maingayi Hook. f.,** but it turns out to be **H. coriacea Blume.**

BIGNONIACEAE

18. **Nyctocalos shanica MacGregor & W.W. Smith** in Rec. Bot. Sur. India, IV : 280 (1911).

S.E. Thailand : Trat, Huay Raeng, Dong Tapid, under 50 m. ; woody climber, 20 m. long **R.F.D. Herb. No. 7310 (Smitinand 1390)**

Distribution : Burma (Shan States type).



Nyctocalos shanica MacGregor et W.W. Smith

GESNERIACEAE (CYRTANDRACEAE)

19. Aeschynanthus radicans Jack in Trans. Linn. Soc., XIV : 43 (1823) ; Ridley in Journ. Asiat. Soc. Beng. ; LXXIV (2) p. 736 et in Fl. Mal. Penins., II : 500 (1924).

Pen. Thailand : Trang, Ka – chawng, 100 m. ; climber with red flower, common in evergreen forest. **R.F.D. Herb. No. 7630 (Din 329).**

Local name : Mai nom Mia (ไม้นมเมีย)

Distribution : Malaya (type)

20. Cyrtandra dispar DC., Prodr. IX., p. 282 Ridley, Fl. Mal. Penins., II : 544 (1924).

Pen. Thailand : Nakawn Sritamarat, Kao ; Luang, 600 m. ; herb 50–70 cm. high, common in evergreen jungle by stream; flowers brownish. **R.F.D. Herb. No. 7515 (Plernchit 142) ; 7516 (Plernchit 144) ; 7553 (Smitinand 820).**

Distribution : Malaya (type)

21. Didymocarpus Kompsoboea C.B. Clarke in D.C., Monogr. Phan., V : 98 ; Ridley, Fl. Mal. Penins., II : 518 (1924),

Pen. Thailand : Nakawn Sritamarat, Khao Luang, 600 m. ; under–shrub 30–100 cm. high, common on slope and near stream in evergreen jungle ; flower white, tinted with purple. throat with 2 anterior lemon lines **R.F.D. Herb. No. 7474 (Smitinand 1045).**

Distribution : Malaya Borneo (type)

AMARANTHACEAE

22. **Deeringia amaranthoides** (**Lamk**) **Merrill.** Interpr. Rumph. Herb. Amboin., p. 211 (1914) ; Gagnepain in Lecomte, Fl. Gen. Indo–chine, IV : 1055 (1936).

Deeringia celosoides Brown. Ridley, Fl. Mal. Penins., III : 4 (1924).

N.E. Thailand : Loie, Phu Krading, 1,300 m. ; climber 3 m. high, not common, in open pine forest ; flowers white. **R.F.D. Herb. No. 7386 (Dee 434).**

Local name : Kruae Yarng (เครือยาง)

Distribution : India, Burma, Indochina, Malaya, Amboina and tropical Africa.

POLYGONACEAE

23. ***Polygonum odoratum* Lour.**, Fl. Cochinch. p. 243 ; Courchet in Lecomte, Fl. Gen. Indo – chine, V : 29 (I910) ; Stewart in Contr. Gray Herb., No. 88 : 62 (1930)

N. Thailand : Chiengmai, 300 m., cultivated ; decumbent herb 30 cm. high; flowers rose. **Winit s.n.**

Local Name : Phak phai (ผักไผ่)

Distribution : Tonkin, cultivated in Cochin–China.

There is no specimen of this species at Kew, but it fits well with the description of **Stewart** in Contribution to Gray Herbarium No. 88, p. 62, and **Courchet** in **Lecomte**, Flore Generale de l'Indochine, Tome V , p. 29.

24. **Polygonum strigosum R. Br.,** Prodr., p. 420 (1810); Hook. f., Fl. Brit. Ind., V : 47 (1889); Courchet in Lecomte, Fl. Gen. Indo – chine, V : 38 (1910); Stewart in Contr. Gray. Herb., No. 88:89 (1930).

N.E. Thailand : Loie, Phu Krading, 1300 m.; tufted, decumbent herb, common by stream; flowers white. **R.F.D. Herb. No. 7698 (Dee 583).**

Local name : Phak–phode Daeng (ผักโพดแดง)

Distribution : Asia and tropical Australia.

25. **Rumex crispus Linn.,** Sp. pl., p. 335; Courchet in Lecomte, Fl. Gen Indo–chine, V : 18 (1910).

N. Thailand : Mae Hawng Sawn, Mae Sarieng, in Salween Valley, 350 m.; perennial herb 1 m. high. on wat bank of stream; flowers greenish, **Winit s.n.**

Local name : Phak Kard Som (ผักกาดส้ม)

Distribution : All over the world.

This is the first species so for recorded from Indo–Burmese region; it is also recorded from S. China. As the source of the Salween River is in Yunnan, it may be possible that seeds travel downstream and establish themselves on wet muddy banks, its favourite habitat.

PIPERACEAE

26. **Peperomia kotana C. Dc.** in Rec. Bot. Surv. India, VI : 2 (1912): Ridley, Fl. Mal. Penins, III : 27 (1924).

Pen. Thailand : Nakawn Sritamarat, Kiriwong, Tap Charng, 400 m. ; succulent herb, on rocks and trees by streams, in evergreen jungle ; flowers greenish. **R.F.D. Herb. No. 6061 (Smitinand 629).**

Local Name : Nak–a raj (นาคาราช)

Distribution : Malaya (type).

27. **Piper Kurzii Ridl.** in Journ. Asiat. Soc. Straits, LXXXII : 188 (1920).

Pen. Thailand : Nakawn Sritamarat, Kiriwong, 300 m. ; under–shrub, 50 cm. high, common in evergreen forest. **R.F.D. Herb. No. 6087 (Smitinand 641).**

Local name : Prik Nok (พริกนก)

Distribution : Burma and Malaya (type).

28. **Piper subpenninerve (C. DC.) Ridl.,** Fl. Mal. Penins., III : 47 (1924)

Piper nigrum, var. subpenninerve C. DC. in Journ. Asiat. Soc. Beng., LXXV : 314 (1914).

N.E. Thailand : Loie, Phu Krading. 1,300 m. ; climber, 3 – 4 m. long, common in evergreen forest. **R.F.D. Herb. No. 7656 (Dee 456).**

Local name : Ploo Dong (พลูดง)

Distribution : Tenasserim and Malaya.

29. **Piper flavimarginatum C. DC.** in Rec. bot. Surv. India, VI : 26 (1912); Ridley Fl. Malay. Penins., III : 31 (1924)

Pen. Thailand : Nakawn Sritamarat, Khao Luang, 600 m. ; extensive climber,

40 m. or morelong, common in evergreen forest by stream; flowers greenish. **R.F.D. Herb. No. 7588 (Smitinand 1011).**

Local naem : Yarn Prik nok (ย่านพริกนก)

Distribution : Malaya (type).

MYRISTICACEAE

30. **Knema elegans Warb.**, Nonogr., Myrist., p. 615 ; Lecomte, Fl Gen. Indo—chine, V ; 106 (1914).

Myristica elegans Pierre ex Warb. in Nov. Act. Nat. Cur., LXVIII, p. 410.

S.E. Thailand : Trat, Huay Raeng, Dong Maduae, under 50 m. ; erect tree 15 m. high, 60 cm. girth, common in evergreen jungle; flowers brown. **R.F.D. Herb. No. 7244 (Smitinand 1357).**

Local name : Luaed Kwai (เลือดควาย)

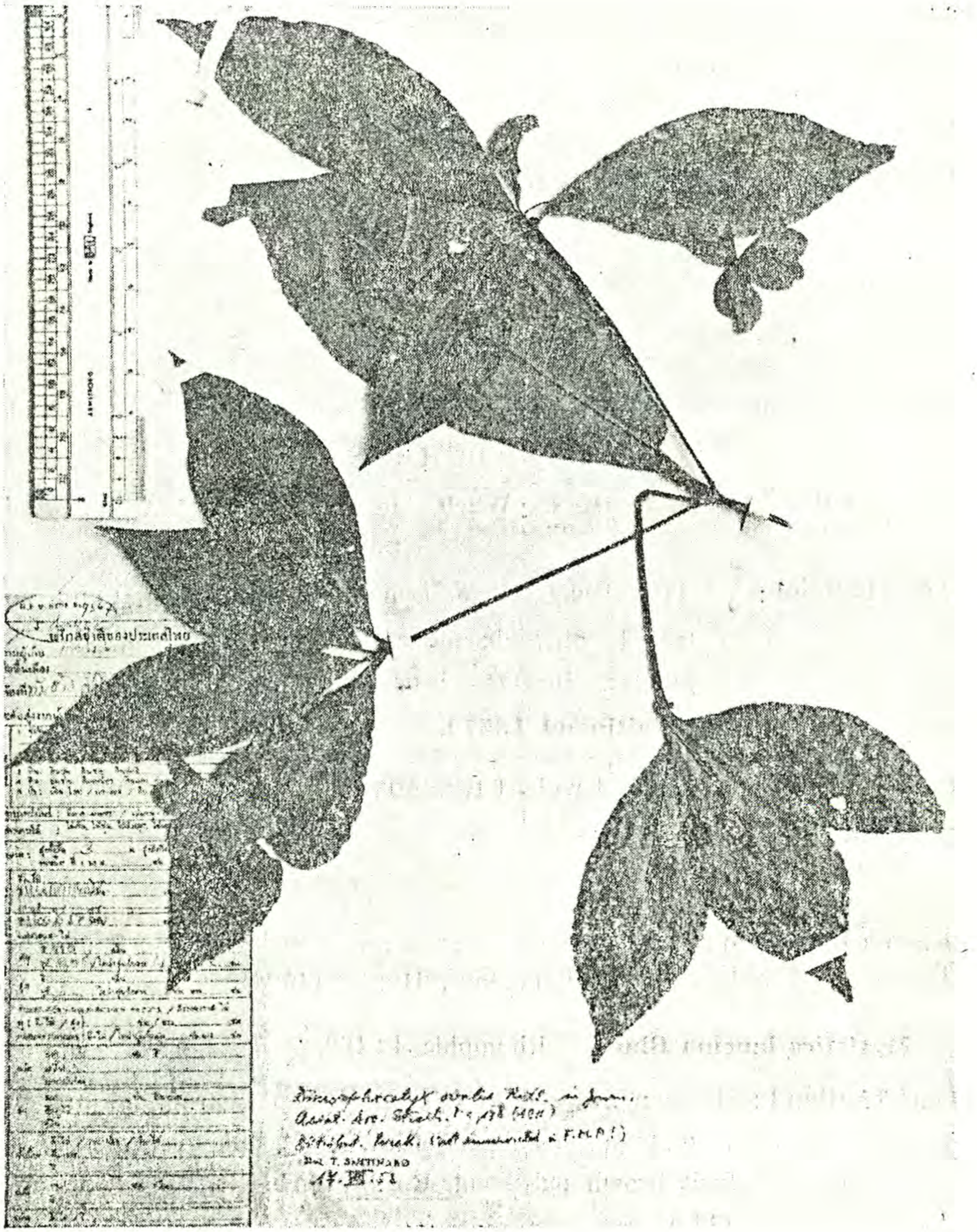
Distribution : Cambodia

31. **Knema laurina Warb.,** Monogr. Myrist., p. 606, t. XXIV; Ridley, Fl. Mal. Penins., III: 72 (1924).

Myristica laurina Blume, Rhumphia, I : 189.

Pen. Thailand : Nakawn Sritamarat, Kiriwong, Tap Charng, 400 m. ; tree, 15 m. high ; common on slope of hill, evergreen forest ; fruit brown pubescent. **R.F.D. Herb. No. 6107 (Smitinand 717).**

Distribution : Malaya (type), Java and Sumatra.



Dimorphocalyx ovalis Ridl.

SANTALACEAE

32. **Thesium psilotoides Hance** in Journ. Bot. (1868), p. 48; Lecomte, Fl. Gen. Indo-chine, V : 214 (1915).

N. Thailand : Petchaboon, Lom Kao, Nam Nao, 600 m.; herb common in pine forest. **Smitinand 335 A.**

N.E. Thailand : Loie, Phu Krading, 1,300 m.; herb, 20 cm. high, common on wet ground among grasses in open pine forest; flowers yellowish green. **R.F.D. Herb. No. 7641 (Smitinand 1116); 8872 (Smitinand 335).**

Distribution : Tonkin.

EUPHROBIACEAE

33. **Sauropus thorelii Beille** in Lecomte, Fl. Gen. Indo-chine, V : 649 (1927).

N. Thailand: Mae Hawng Sawn, Mae Sarieng, 240 m., cultivated shrub 1.50 m. high; flowers dark red, strongly scented., **Winit s.n.**

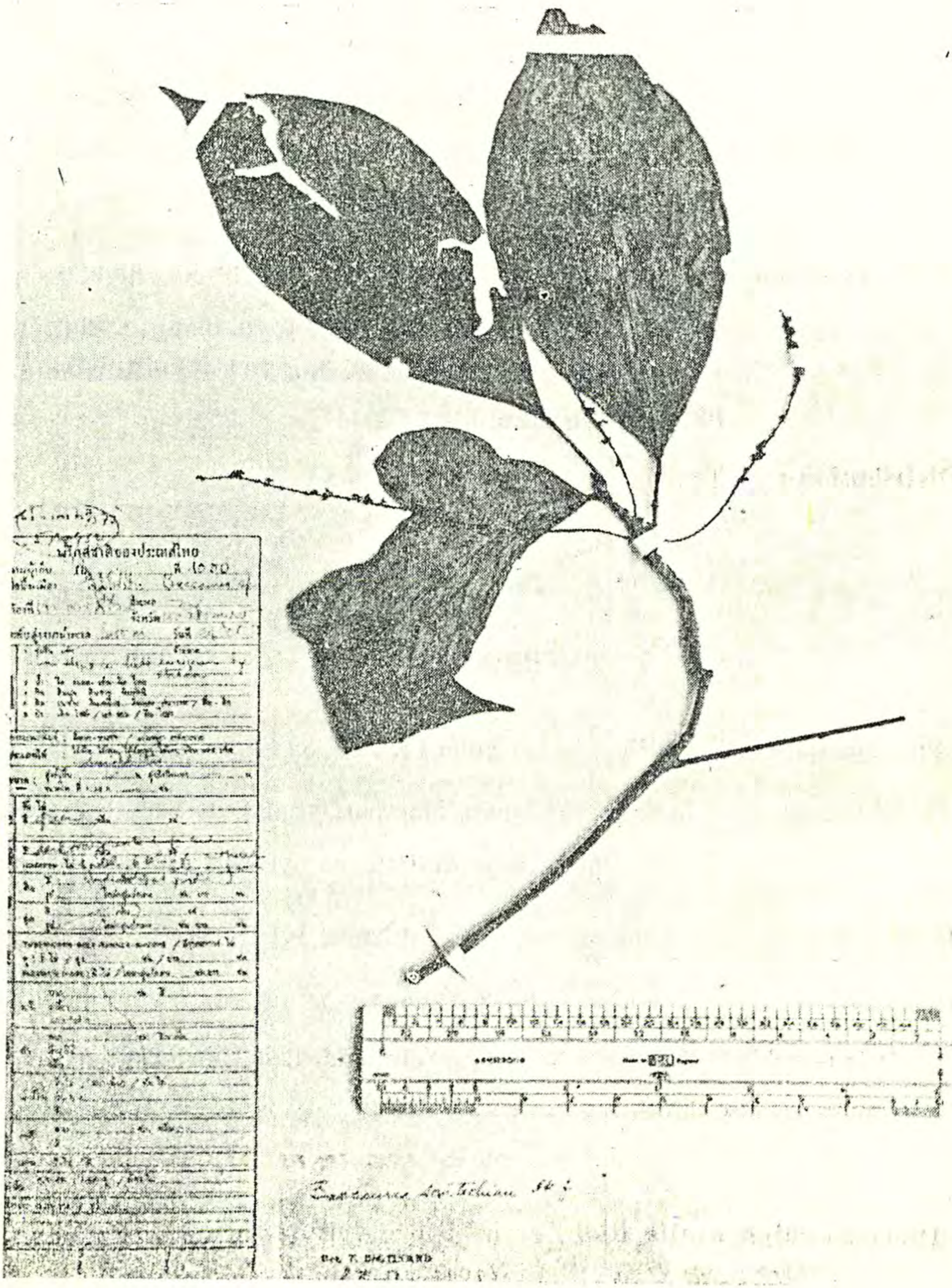
Local name : Saliam Hawn (สะเลียมหอม)

Distribution : Laos (Mae Khong, (type).

It is possible that this species may grow wild. It is cultivated for the sake of its strongly scented flowers.

34. **Dimorphocalyx ovalis Ridl.** in Journ. Asiat. Soc. Straits., LIX : 178 (1911).

Pen. Thailand : Nakawn Sritamarat, Kiriwong, Tap charng, 400 m.; low shrub 1 m. high, not common in evergreen forest;



Baccaurea scortechinii Hk. f.

flowers greenish. **R.F.D. Herb. No. 6090 (Smitinand 741) 7567 (Plernchit 209).**

Distribution : Malaya (Perak type).

There is no specimen of this species at Kew. **Ridley** bescribed this plant in his paper, Flora of Lower Siam, based on the specimens collected from Perak. He omitted it from his Flora of the Malay Peninsula.

35. Gelonium tenuifolium Ridl. in Journ. Asiat. Soc. Straits., LIX : 181 (1911) et Fl. Mal. Penins., III : 312 (1924).

Pen. Thailand : Nakawn Sritamarat, Khao Luang, 600 m. ; tree 10 m. high, not common, in evergreen forest; flowers yellow with pinkish peduncles. **R.F.D. Herb. No. 7318 (Plernchit 300);** Kiriwong, Tap Charng 400 m. **R.F.D. Herb. No. 7838 (Plernchit 266).**

Distribution : Malaya (Lankawi Island, type).

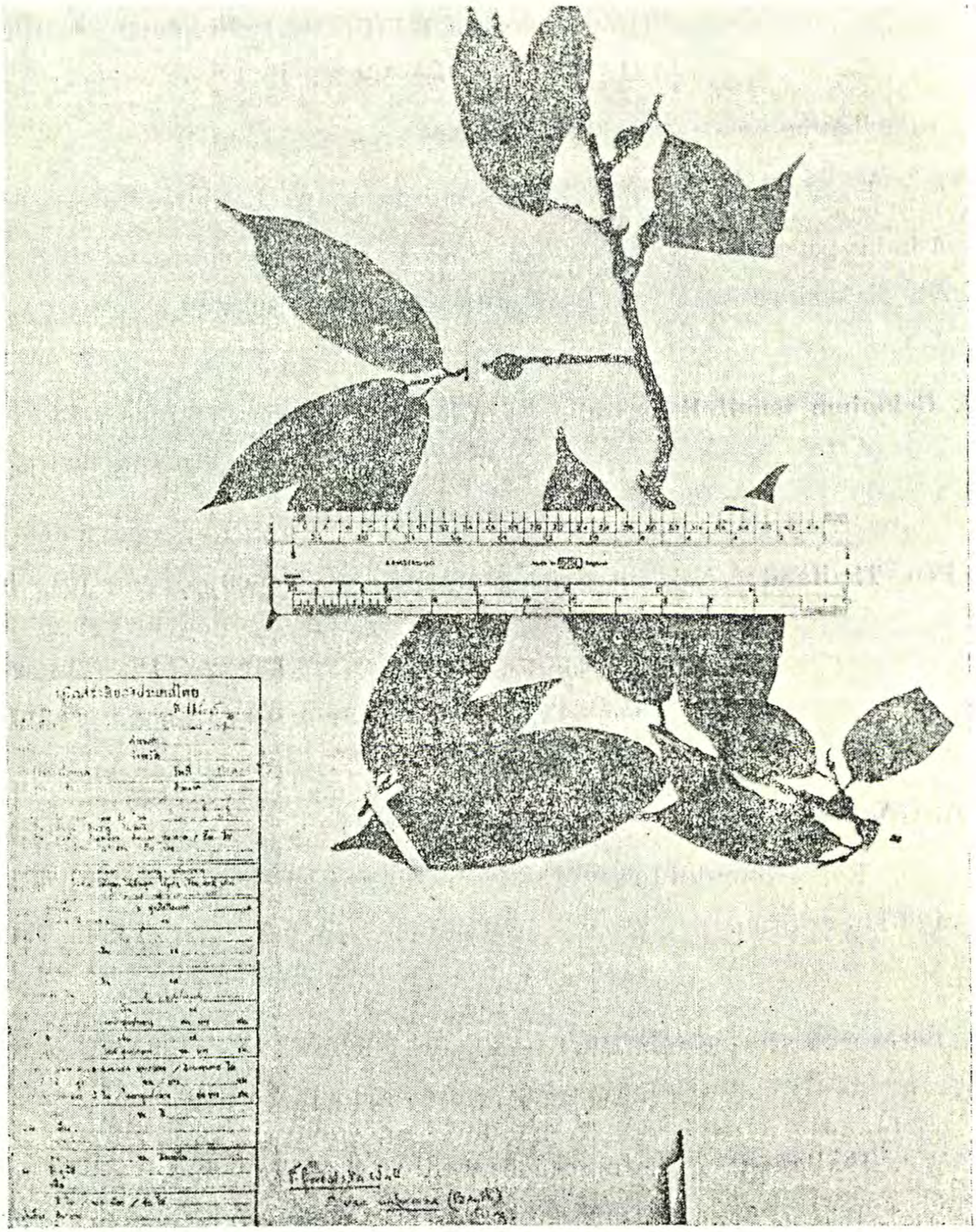
Ridley recorded this species from Lankawi Islands in his paper on the Flora of Lower Siam.

36. Baccaurea scortechinii Hk. f., Fl. Brit. Ind., V : 368 (1887); Ridley Fl. Mal. Penins., III : 244 (1924).

Pen. Thailand : Nakawn Sritamarat, Khao Luang, 600 m. ; tree, 6 m. high; common in evergreen forest; flrwers dark orange rad to dark red. **R.F.D. Herb. No. 7577 (Smitinand 1000).**

Local Name : Som-fai - Pah (ส้มไฟป่า)

Distribution : Malaya (Perak type).



Ficus foveolata Wall., var. impressa (Benth.) King

MORACEAE

37. **Ficus foveolata Wall., var. impressa King** in Ann. Bot. Gard. Calcutta, I : 133, tab. 166, 167, 168 et Fl. Brit. Ind., V : 528 (1887) ; Gagnep. in Lecomte, Fl. Gen. Indo–chine, V : 795 (1928).

N.E. Thailand : Loie, Phu Krading, Huay Hin Kawng, 1,300 m. ; prostrate shrub, on rocky ground along edge of evergreen jungle; fruits globose, lenticallate. **R.F.D. Herb. No. 7214 (Smitinand 465).**

Distribution : India, Burma, China and Tonkin.

A very variable plant. This specimen matches well with **Kingdon ward 6369** from Tsang–po, Burma.

URTICAEAE

38. **Laportea ulentissima Gagnep.** in Bull. Soc. Bot. France, LXXV : 2 (1928) et in Lecomte, Fl. Gen. Indo–chine, V : 856 (1937).

N.E. Thailand : Loie, Phu Krading, Sankae ; 1,100 ; erect, tree, 7 m. high, uncommon, in evergreen forest ; flowers winte. **R.F.D. Herb. No. 7738 (Dee 452).**

Local name : Harn Chang Rawng (หานช้างร้อง)

Distribution : Annam (Tonkin, type).

Gagnepain recorded that the effect of the toxin in this plant could even kill a small child. The Thai local name means that it causes the elephants to cry in pain.

BETULACEAE

39. Betula alnoides Ham. ap. Don., Prodr., Fl. Nepal., p. 58 (1825); Hook. f., Fl. Brit. Ind., V : 599 (1887). A. Camus in Lecomte, Fl. Gen. Indo–chine, V : 1039 (1929).

Betula cylindrostachya Wall., Pl. As. Rar., II, p. 7.

N.E. Thailand : Loie, Phu Krading, Huay Hing Kawng 1,300 m. ; tree, 20 m. high, 100 cm. girth, common along base of precipice in oak forest, flowers brown. **R.F.D. Herb. No. 7728 (Smitinand 1169).**

Distribution : India, Yunnan and Laos.

MONOCOTYLEDONES

ZINGIBERACEAE

40. Globba globulifera Gagnep. in Bull. Soc., Bot. Fr., XLVIII : 209 (1901) et in Lecomte, Fl. Gen Indo – chine, VI : 39 (1908).

N.E. Thaiand : Loie, Phu Krading, 1,300 m., **R.F.D. Herb. No. 7720 A. (Dee 581 A.).**

Distribution : Cochin–China (Poulo Condor, type).

41. **Globba villosula Gagnep.** in Bull. Soc. Bot. Fr., L : 160 (1903) et in, Lecomte, Fl. Gen. Indo–chine, VI : 34 (1908).

N.E. Thailand : Loie, Phu Krading, 1,300 m., **R.F.D. Herb. No. 4414 (Dee 303) ; 4894 (Dee 294)**

Local name : Warn Dawk Luaeng (ว่านดอกเหลือง)
Warn Kha – Min (ว่านขมิ้น)

Distriution : Cambodia (type).

There is no specimen of this species at Kew, but the plant fits well with the description.

42. **Hedychium bousigonianum Pierre ex Gagnepain** in Bull. Soc. Bot. Fr., 51 : 457 (1904) et in Lecomte, Fl. Gen. Indo–chine, VI : 72 (1909), fig. 8, p. 73.

N.E. Thaialnd : Loie, Phu Krading, 1,300 m. ; rhizomatous, tufted herb, 1 m. high ; common in open pine forest ; flowers white, slightly scented. **R.F.D. Herb. No. 7659 (Dee 403) :** Flowers white with orange red, purple – tipped column **R.F.D. Herb. No. 7660 (Smitinand 1133).**

Local name : Sahern (สะเทิน) Sahern Phoo (สะเทินภู)

Distribution : Cochine–China.

43. **Hedychium coccineum Ham. et Smith.** in Rees, Cyclop., n. 5 ; Roscoe, Monandr. Plants ; Baker in Hook. f., Fl. Brit. Ind., VI : 231 (1894); K. Schum. in Engler, Pflanzenr. ; Gagnepain in Lecomte, Fl. Gen. Indo–chine, VI: 71 (1908).

N. Thailand : Chiengmai, Doi Sutep, Pui, 1,400 m. ; herb with red flowers. **R.F.D. Herb. No. 4347 (Soradet 8).**

Local name : Kha–dong (ข่าดง)

Distribution : India, Burma and Laos.

44. Amomum ovoideum Pierre ex Gagnep. in 11. Sec. Bot. Fr., 53 : 140 (1906) et in Lecomte Fl. Gen. Indo–chine, VI : 115 (1909).

S.E. Thailand : Trat, Huay Raeng, Khao Mai Si, 100 m. ; erect, rhizomatous herb, 2.50 m. high ; common among endergrowth in evergreen forest, fruits throny, pinkish, globose ; seeds locally used as condiment. **R.F.D. Herb. No. 7263 (Smitinand 1935).**

Local name : Reiw Daeng (เร่วแดง)

Distribution : Cambedia, Laos.

There is no specimen of this species at Kew, the descriptions of stem, leaves and fruits agree well with this plant.

45. Boesenbergia parvula (Wall.) Smitinand, comb. nov.

Gastrochilus parvula Wall., Cat., n. 6590 (nomen) ; Baker in Hookf. Fl. Brit. Ind., VI: 216 (1894).

S.E.Thailand : Trat, Huay Raeng Dong Maduae, under 50 m. **R.F.D. Herb. No. 7313 (Smitinand 1324).**

Chantaburi, Khao Sa–barb, **Put 919** (Herb. Kew).

N. Thailand Chiengmai, Doi Sutep, 3,000 – 4,000 ft. **Kerr 737** (Herb Kew).

Local name: Kratue–ling. (กระต๊อดิง)

Distribution: N. Shan State, Lace 4153 (Herb. Kew); Tavoy (type in Herb. Kew).

Prof. Holttum in Gardener's Bulletin, Singapore Vol. XIII, p. 106 (1950) pointed out that as the genus **Gastrochilus** now refers to a genus in Orchidaceae the genus **Boesenbergia** was adopted; hence a new combination is needed.

46. **Kaempfória secunda Wall.** in Roxb. Fl. Ind., ed. Carey, I; 19; Bot. Mag., t. 6999; Hook.f., Fl. Brit. Ind., VI : 223 (1894).

N.E. Thailand: Loie, Phu Krading, 1,300 m.; herb., common in open forest at summit in damp places, flowers white. **R F.D. Herb. No. 4413** (**Dee 312**): flowers white, tinted with pink and yellow–spotted throat. **R.F.D. Herb. No. 8873** (**Smitinand 336**).

Local mane: Yah Dawk Khao (หญ้าดอกขาว)

Distribution: India and Burma.

The colour of flowers is variable ranging from white to red.

ORCHIDACEAE

47. **Anoectochilus calcaratus Ridl.** Mat., I. 214 et Fl. Mal. Penins., IV : 24 (1924); Holttum, Orchids of Malaya, p. 125 (1953).

Odontochilus calcaratus Hook. f., Fl. Brit. Ind., VI (1894): 99.

Pen. Thailand: Nakawn Sritamarat; Khao Luang, 800 m., terrestrial orchid.

with prostrate succulent root–stock; flowers white, lip 3–lobed. **R.F.D. Herb. No. 7411.** (**Smitinand 814**): Kiriwong, Tap Chang, 400 m.; on rock by stream; flowers white. **R.F.D. Herb. No. 7426 (Plenchit 241).**

Distribution : Malaya (Perak, type).

48. **Phaius mishmensis Rchb. f.** in Bonplandia, V. (1857) 43; Hook.f., Fl. Brit. Ind., V: 817 (1890); Ann. Bot. Gard. Calcutta, V,t. 37 (1895); ibid, VIII, t. 152, (1898); Bot. Mag, CXXII. t. 7479 (1896).

N.E. Thailand Loie, Phu Krading, 1,300 m.; terrestrial, erect orchid not cemmon, in evergreen jungle; flowers light purple. **R.F.D. Herb. No. 7403 (Dee 407); 7404 (Dee 468).**

Distribution: India (Sikhim; Mishmi hill in Upper Assam, type); Lower Burma.

This species is related to **P. flavus Hook. f.** (P. maculatus Lindl.), differs only in the villous–disced lip.

49. **Eria paniculata Lindl.** in Wall., Pl. As. Rar., I: 32, t. 36; Hook. f., Fl. Brit. Ind., V: 789 (1890).

N.E. Thailand : Loie, Phu Krading, Tam Saw, 1,300 m.; epiphytic orchid 30 cm. tall, common on Quercus species by stream in dry hill evergreen jungle, flowers white, lip large, 3–lobed. **R.F.D. Herb.. No. 6807 (Smitinand 1080).**

Distribution : India (Himalaya, type); Upper Assam and Burma (Khasia Mt.).

50. **Eria rufinula Rchb. f.** in Hamb. Gartenz., XIX : 13; Hook.f., Fl. Brit. Ind., V: 80. (1890); King & Pantl. in Ann. Bot. Gard.

Calcutta, VIII (1898) : 128, tab. 178; Cagnep. in Lecomte, Fl. Gen. Indo–chine, V : 360 (1935).

Trichotosia rufinula Kranzl. in Engler, Pflanzenr. Orch. Dendrob. par. 2, 143 (1911).

S.E. Thailand Trat, Huay Raeng, under 50 m.; epiphytic orchid. **Smitinand s.n.**

Distribution: India, Malaya, Annam, Laos, Cambodia and Cochin–China.

51. **Calanthe tubiflora, Hook. f.,** Fl. Brit. Ind., V: 855 (1890)

N.E. Thailand: Loie, Phu Krading, 1,300 m.; terrestrial orchid, scattered in evergreen forest. **R.F.D. Herb. No. 7401 (Dee 461)**

Local mane; Kluay Mai Dong

Distribution: Burma.

52. **Bulbophyllum vaginatum (Lindl.) Rohb. f.,** Ridley, Fl. Mal. Penins., IV: 76 (1924); Holttum, Orchids of Malaya, p. 406 (1953).

Cirrhopetalum vaginatum Llnd. in Wall., Cat. No. 1979 (nomen): Hook. f., Fl. Brit. Ind., V: 773 (1890).

Pen. Thailand: Nakawn Sritamarat, Khao Luang, Hin Plowng, 400 m.; epiphytic orchid, on Sataw tree (Parkia sp.); flowers yellew, slightly scented. **R.F.D. Herb. No. 7363 (Plernchit 298).**

Distribution: Malaya and Borneo.

53. **Hebenaria acuifera Wall.ex Lindl.,** Gen. et Sp. Orch. 325; Hook. f., Fl. Brit. Ind., V: 146 (1890); Gagnep. in Lecomte, Fl. Gen. Indochine, VI: 613 (1934).

N.E. Thailand: Loie, Phu krading, 1300 m.; terrestrial orchid; flowers yellow. **R.F.D. Herb. No. 7639 (Dee 385)**

Distribution: India, Burma, French Indochina and China.

54. **Zeuzine Longilabris Benth.** in Gen. Plant., III: 600; Hook. f., Fl. Brit. Ind., V: (1890).

N.E. Thailand; Loie, Phu Krading, Samkae, 110 m.; ground orchid, 20 cm. high, on rock and humus in dry hill evergreen forest; flowers white, lip bifid with yellow spots. **R.F.D. Herb. No. 6711 (Smitinand 1061)**

Distribution: India and Ceylon.

55. **Anoectochilus geniculatus Ridl.** in Journ. Lin. Soc., XXXII: 406 et. Fl. Mal. Penins., IV: 213 (1924).

Pen Thailand: Nakawn Sritamarat, Khao Luang, 600 m., **R.F.D. 7407 (Smitinand 852);** Songkla Ronphibul hill, 2000 ft. **E. Smith 458** (Herb. Kew)

Local name; Warn Nam Thawng (ว่านน้ำทอง)

Distribution: Malay Peninsula.

E. Smith 458 is an unnamed specimen at Kew; it is identical with my specimens.

56. Appendicula koenigii Hk. f., Fl. Brit. Ind., VI: 84 (1890) et Icon. Pl., XXII (1893), t. 2149; Guillaumin in Lecomte, Fl. Gen. Indo–chine, VI: 540 (1933), fig. 50 (10–15)

S.E. Thailand: Trat, Huay Raeng, Dong Maduae, under 50 m.; epiphytic orchid, on tree trunk, in evergreen jungle, flowers white. **R.F.D. Herb. No. 6769 (Smitinand 1327).**

Distribution: Malay Peninsula?, Cambodia.

The original locality of this species is doubtful. **Hooker** suggested it might be in the Malay Peninsula, where the species are plentiful, but since then there is no new collection other than the type in **Rottler's** Herbarium. **Guillaumin** recorded the occurrence of this species in South Cambodia, but on specimen at Kew came from this region. I believe that **Godefroy 87** from Phu Quoc Island, S. Cambodia, kept in **Podochilus** is one of the specimens referred to by **Guillaumin.**

57. Aphyllorchis striata Ribl., Mat. Fl. Mal. Penins., I: 205 (1907); et Fl. Mal. Penins., IV: 205 (1925); Holttum, ibid., 101

Pen. Thailand: Nakawn Sritamarat, Khao Luang 700 m.; terrestrial orchid, 1.20 m. high, common in evergreen forest. Scape purple–striated, petals with purple lines in the middle, lip pointed yellowish, with brown barred margin. **R.F.D. Herb. No. 7409 (Smitinand 919):** Klawng guay Nai, 400 m. **R.F.D. Herb. No. 7824 (Plernchit 275).**

Distribution: Malaya, (Pahang) and Sarawak (type).

58. **Phreatia listrophora Ridl.** in Journ. Lin Soc., XXXII, p. 307 et in Journ. Asiat. Soc. Straits., LIX: 195 (1911) et Fl. Mal. Penins., IV: 106 (1924); Williams,. in Bull. Herb. Boiss. 2 ser., IV (3): 369 (1904); Holttum, ibid 548.

Pen. Thailand: Nakawn Sritamarat, Khao Luang, 1,000 m., epiphytic orchid on trees in hill evergreen forest; flowers green. **R.F.D. Herb. No. 7293 (Smitinand 1301).**

Distribution : Malaya and Celebes.

Willams and **Ridlay** recorded this species from Langkawi Island.

59. **Tainea speciosa Blume,** Bigdr., 354; Williams in Bull. Herb. Bois., 2 Ser., IV (3): 366 (1904); Ridley, Fl. Mal. Penins. IV: 114 (1924); Holttum, ibid., 180

Pen. Thailand: Nakawn Sritamarat, 800 m.; terrestrial orchid, common on slope in evergreen forest, fruits greenish: **R.F.D. Herb. No. 7405 (Smitinand 896).**

Distribution : Malaya (Type), Java.

The locality in **Williams'** list is Kedah Peak, Federation of Malaya, not Thailand.

LILIACEAE

60. **Smilax verticalis Gagnep.** in Bull. Soc. bot. Fr. (1934): 74 et in Lecomte, Fl. Gen. Indo–Chine, VI: 764 (1934)

N.E. Thailand: Loie, Phu Krading, 1,300 m.; climbing herb by means of tendrils, 60 cm. high; common in open pine forest; flowers yellowish. **R.F.D. Herb. No. 7633 (Smitinand 1064,)**

Distribution : Annam.

TACCACEAE

61. **Tacca laevis Roxb.,** Hort. Beng. 25 (nomen); Fl. Ind. ii: 171; Hook.f., Fl. Brit. Ind., IV: 288 (1889); Limpricht. f. in Engler, Pflanzenr. Taccac. IV, 42: 17 (1928) non Craib in Aberd. Univ. Stud., 61:10 (1913).

Pen Thailand : Nakawn Sritamarat, Kiriwong, 300 m.; perennial herb, 20 cm. high; common on rocky ground by stream; flowers greenish purple. **R.F.D. Herb. No. 6064 (Smitinand 808).**

Distribution : S.E. Asia.

Craib recorded this species from Chiengmai, Doi Sutep, based on **Kerr 1168, 1168 a,** which I found at Kew to be **T. chantrieri Andre, var. vespertilis (Ridl.) Limpricht. f.**

62. **Tacca palmata Blume,** Enum. Pl. Jav., I: 83; Ridley, Fl. Mal. Penins., IV: 309 (1924); Gagnepain in Lecomte, Fl. Gen. Indo-chine, VI: 696 (1934).

S.E. Thailand: Trat, Huay Raeng, Dong Maduae, under 50 m.; tuberous, tufted herb 50 cm. high, common among undergrowth in evergreen forest; flowers purplish green. **R F.D. Herb. No. 7312 (Smitinand 1330).**

Local Name: Buk-rue-si (บุกฤาษี)

Distribution: Cymbodia, Cochin-China, Malaya, Java (type) and Philippines.

63. **Tacca roxburghii Limpr. f.** in Engler, Pflanzenr. Taccac., IV, 42: 18 (1928) **T. laevis (Roxb.) Hook. f.,** Fl. Brit. Ind., VI: 288 (1894) pro part.

Pen. Thailand: Nakawn Sritamarat; Kiriwong, Tap Chang, 400 m., herb common on rocky ground in evergreen forest; flowers dark purple. **R.F.D. Herb. No. 6076 (Smitinand 786); 6065 (Smitinand 709).**

Distribution: India, Burma, (Tennasserin) and Andamans.

64. Schizocapsa plantaginea Hance in Journ. Bot., XIX: 292 (1881); Benth. et Hook., Gen. Pl., I: 741; Limpr. in Engler, Pflanzena., IV, 42: 11 (1928); Gagnepain in Lecomte, Fl. Gen Indo–Chine, VI: 692 (1934).

N. Thailand: Petchaboon, Lomkao, Nam Nao, Huay Sam Pah–bawn, 600 m.; tuberous herb, common on banks and rocks mid–stream; flowers purplish green; **R.F.D. Herb No. 8882 (Smitinand 530).**

Local name : Phak Khi–pa (ผักคีปา)

Distribution : Tonkin, Laos and China.

PANDANACEAE

65. Pandanus thwaitesii Martelli, Webbia I: 369, (1905); l.c. IV: 35 (1913). tav. 30, figs. 1–5.

S.E. Thailand : Trat, Huay Raeng, Dong ta–pid, under 50 m.; prostrate shrub, in swamps, evergreen jungle; flowers yellowish white, sweet scented **(Smitinand 1319).**

Local Name: Toie Hawm (เตยหอม)

Distribution : Ceylon and Burma.

CENTROLEPIDACEAE

66. Centrolepis cambodiana Hance in Journ. Bot. XIV (N.S.V.): 14 (1876); Gagnepain, in Lecomte, Fl. Gen. Indo–Chine, VI: 1229 (1942).

N.E. Thailand : Loie, Phu Krading, 1,300 m., herb common in open scrub jungle at summit: flowers pinkish brown; **R.F.D. Herb. No. 4910 (Dee 147): 5736 (Din 27).**

Local name : Yah khon Kai noi (หญ้าขนไก่น้อย) Yah Khon nok Keo (หญ้าขนนกเขียว)

Distribution : Cambodia (type).

CYPERACEAE

67. **Scleria tonkinensis C.B. Clarke** in Kew Bull. Add. Ser. VIII : 57 (1868)

N.E. Thailand : Srisaket, Kanthrarom, 100 m. ; herb 30 cm. high ; common in scrub jungle, under shade; flowers greenish with brown stamens; **R.F.D. Herb. No. 4932 (Smitinand 594).**

Local name : Yah Kham pao (หญ้าขำเบ่า) Yah Kom–bao (หญ้าคมเบา)

Distribution : Indochina (Tonkin, type).

This species is not mentioned in **Lecomte,** Flore Generale de 1' Indo–Chine.

68. **Eleocharis congesta D. Don,** Prodr. Fl. Nep., p. 41 : Clark in Hook. f., Fl. Brit. Ind. VI : 630 (1890).

Heleocharis congesta Don., E.G. Camus in Lecomte, Fl. Gen. Indo–Chine VII : 88 (1912).

N.E. Thailand : Loie, Phu Krading, Tamsaw, 1,300 m., aquatic sedge 15 cm. high common in swamp underwater; flowers brown with whitish anthers. **R.F.D. Herb. No. 7665 (Smitinand 1123).**

Distribution : Nepal and Annam.

GRAMINEAE

69. **Eragrostis burmanica Bor.** in Kew Bull., 1951 : 166

S.E. Thailand : Trat, Huay Raeng, Dong Maduae, under 50 m. ; tufted erectopatent grass, 60 cm. high, common among sedges in paddy field; glumes purple. **R.F.D. Herb. No. 6783 (Smitinand 1337).**

Local name : Yah Kroke (หญ้าโกรก)

Distribution : Burma (Prome, type).