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Contributions to the Flora of Southeast Asia

IV. A List of Labiatae Known from Thailand

by

Gen Murata*

The object of this work is to bring together into one list the scattered records of previous papers on Labiatae from Thailand, supplemented by new materials.

In our enumeration, the genera and species are arranged in alphabetical order.

I have examined the specimens kept in the following herbaria, the names of which are cited in this paper by the abbreviations in general use.

AAU: Aarhus University, Denmark.
C : University of Copenhagen, Denmark.
KYO: Kyoto University, Japan.
TI : University of Tokyo, Japan.

Prof. Dr. Bunzo Hayata collected many specimens in Thailand in 1917 and 1921. His specimens, preserved in the Herbarium of the University of Tokyo, are not yet studied. Prof. Dr. Takasi Tuyama visited Thailand in 1957-58, and collected many specimens. These also are in the University of Tokyo. Some of those collected by Dr. T. Ogawa, Dr. K. Yoda and Mr. Matsuoka on the Expedition of Osaka City University to Southeast Asia in 1957-61, are preserved in Tokyo, the remainder in the Herbarium of Kyoto University. Dr. M. Tagawa, Dr. K. Iwatsuki and Mr. N. Fukushima of Kyoto University went to Thailand for botanical collecting in 1965-66. In 1967, Dr. M. Tagawa, Dr. K. Iwatsuki, Dr. T. Shimizu, Dr. M. Hutoh, Dr. H. Koyama and Mr. N. Fukushima again went there. These collections, are preserved in Kyoto, and are cited in this paper as No. T. The specimens collected by the Thai-Danish Botanical Expedition in 1957-68 are preserved in the University of Copenhagen and partly in the Herbarium of Aarhus University.

The present writer is grateful to Prof. Kai Larsen who sent him on loan the specimens of Labiatae collected by the Thai-Danish Expedition, and to Prof. H. Hara who sent him on loan the specimens of the University of Tokyo.

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**Achyrospermum Blume**

*Achyrospermum wallichianum* Benth. ex Hook. f. Fl. Brit. Ind. 4: 673 (1885); Mukerjee, Lab. Ind. 154 (1940); Murata in Hara, Fl. E. Himal. 270 (1966).


Distribution: Sikkim, Bhutan, Khasia, Naga Hills, Burma, and Thailand. This is a new record for Thailand.

**Acrocephalus Benth.**


Prunella indica Burm. f. Fl. Ind. 130 (1768).


O. acrocephalum Bl. Bijdr. 834 (1826).


Distribution: India, Burma, Laos, Thailand, N. & S. Vietnam, Cambodia, Malay, Java, Borneo, and China (Yunnan).

**Ajuga L.**

Ajuga macrosperma Wall. ex Benth. in Wall. Pl. As. Rar. 1: 58 (1830), Lab.

A. repens Roxb. Fl. Ind. 3: 3 (1832).
In evergreen forest of North Thailand.
Distribution: Himalaya (Kumaon to Bhutan), Assam, Burma, N. Thailand, Laos, N. Vietnam, and China (Yunnan).

Anisochilus Wall.

Distribution: E. Himalaya, Burma, N. Thailand, Laos, N. Vietnam, and China (Yunnan).

Distribution: Thailand.

Anisomeles R. Br.

Anisomeles candicans Benth. in Wall. PI. As. Rar. 1: 59 (1830), and in DC. Prodr. 12: 456 (1848); Hook. f. Fl. Brit. Ind. 4: 457 (1885); Collett & Hemsly in Journ. Linn. Soc. Bot. 28: 116 (1890); Mukerjee, Lab. Ind. 153 (1940).
Grassy slopes or mixed forest at high altitude of Northern Thailand.
Distribution: Upper Burma and N. Thailand (new to Thailand).


Ceratanthus MUELL ex G. TAYLOR


Distribution: Thailand.

Colebrookia Smith


C. ternifolia ROXB. Hort. Beng. 45 (1814), Pl. Coromandel. 3: 40, pl. 245 (1819), and Fl. Ind. 3: 25 (1832).

Payap, Pang Mapha, 800 m (Feb. 27, 1968 B. Hansen & T. Smitinand, No. 12747 C).

Distribution: India, Himalaya, Burma, Thailand, and China (Yunnan).

Coleus LOUR.

Coleus atropurpureus BENTH. in WALL. Pl. As. Rar. 2: 16 (1831), Lab. Gen. Sp. 54 (1832), and in DC. Prodr. 12: 74 (1848); HOOK. f. Fl. Brit. Ind. 4: 626 (1885);
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*Herba perennis simplex yel paueiramosa ereeta 40-60 em alta, eaulibus robustiuseulis tetragonis brevissime puberulis, internodiis quam folia brevioribus 2-5 cm longis. Folia petiolata ovato-oblonga 6-12 cm longa 2-5 cm lata subcarnosa, apice acuminata, margine crenato-serrata, basi cuneata, utrinque grandulosos-punctata supra brevissime puberula subitus subglaabra saepius purpurea laxe reticulato-venosa; petiolus 1-3 cm longus basi ad caulem pulvinato-articulatus. Inflorescentia racemoso-paniculata ad 15-30 cm longa ramosa pilis brevibus patentibus dense vestita, superne pedicellisque pilis glandulosus commixta; verticillasti 2-flori, pedicellis 1-3 mm longis. Bracteae ovatae acutae caducae. Calyx campanulatus 2 mm longus, extus glandulosos-puberulus, intus glaber, fructifer 6 mm longus 5-dentatus, dente supermo rotundato reflexo 2 mm lato, dentibus lateralisinae inaequilaterali late ovatis 2 mm latis apice brevissime acutis, inferioribus subulatis 2.5 mm longis. Corolla 10 mm longa extus glandulosos-punctata, tubo cylindrico declinato ad faucem ampliato decurvato 5 mm longo, labio superiore abbreviato obtuso 3-4 fido, inferiore integro elongato concavo 4.5 mm longo extus glandulosos et puberulo. Stamina 4; filamenta ecleptula basi in tubum stylem vaginatem connexa. Stylus apice subulatus aequaliter bifidus. Nuculae ellipsoidae 1.5 mm longae atro-bruneae laeves.

Chiang Mai, middle elevation of Doi Chiang Dao, 1500 m, crevices in open limestone (Sept. 15, 1967 No. T 10153, Holotypus KYO).


**Plectranthus tuberosus** BL. Bijdr. 838 (1826).

Distribution: India. Cultivated in Thailand.

**Colquhounia Wall.**


*C. mollis* SCHLECHT in Linnaea 24: 681 (1851).

*C. tomentosa* HOULETT in Rev. Hort. 1873: 131 (1873).

Chiang Mai, Doi Chiang Dao, 1900–2170 m (Jan. 5, 1966 No. T 4353), same loc. 1600–2100 m (Jan. 4, 1966 No. T 4140).

Distribution: Sikkim, Bhutan, Assam, Upper Burma, N. Thailand, and China (Yunnan).


Distribution: N. India, Burma, N. Thailand, Laos, N. Vietnam, N. Cambodia, and China (Yunnan, Kweichau, Hupeh).


Distribution: Burma, Thailand, and China (Yunnan).

Cymaria Benth.

Cymaria dichotoma Benth. in Wall. Pl. As. Rar. 1: 64 (1830), Lab. Gen. Sp. 706 (1836), and in DC. Prodr. 12: 603 (1848); Hook. f. Fl. Brit. Ind. 4: 705 (1885); Ridley, Fl. Malay Penins. 2: 654 (1923); Doan in Lecomte, Fl. Gén. Indo-Chine 4: 1043 (1936); Mukerjee, Lab. Ind. 227 (1940).

Warncke, No. 1180 AAU).

Distribution: Burma, Thailand, Cambodia, Malay Peninsula, Java, and China (Hainan).

**Dysophylla Blume**


*Mentha auriculata* L. Mant. pI. 81 (1767).

*Mentha foetida* Burm. f. Fl. Ind. 126 (1768).

*Heliotropium tetrandrum* Lour. Fl. Cochinch. 103 (1790).


Distribution: India, Burma, Thailand, Laos, N. & S. Vietnam, Cambodia, Malaya, Borneo, Philippines, China (Kwantung, Hainan, Yunnan), and Formosa.


**Dysophylla cruciata** Benth. in Wall. Pl. As. Rar. 1: 30 (1830), and in DC. Prodr. 12: 157 (1848); Hook. f. Fl. Brit. Ind. 4: 639 (1885); Doan in Lecomte, Fl. Gén. Indo-Chine 4: 967 (1936); Mukerjee, Lab. Ind. 80 (1940).

*D. tetraphylla* Wight, Ic. pl. 1444 (1850).

*Mentha quadrifolia* D. Don, Prodr. Fl. Nepal. 113 (1825).

Loei, Phu Kradung, 1100–1200 m (Nov. 28, 1965 No. T 479).


Distribution: Sikkim, Burma, and Thailand.


Distribution: Thailand.


Distribution: Bhutan, Assam, Thailand, and China (Yunnan).


Distribution: Burma, Thailand, Cambodia, Cochinchina, and China (Hainan).


Pogostemon verticillatus (Roxb.) Miq. Fl. Ind. Bat. 2: 965 (1856).


D. fauriei Lev. in Fedde Repert. 9: 248 (1911).

D. esquirolii Lev. in Fedde Repert. 10: 476 (1912).


Distribution: India, Indo-China, Malaya, Philippines, Australia, China, and Japan.

Elsholtzia Willd.


Distribution: Himalaya (Nepal to Bhutan), Khasia, Burma, Thailand, Laos, N. Vietnam, Sumatra, and China (Yunnan).

Elsholtzia winitiana Craib in Kew Bull. 1918: 368, f. 102, 1-5 (1918); Doan in Lecomte, Fl. Gén. Indo-Chine 4: 980 (1936).


Geniosporum WALL.

Geniosporum coloratum (D. DON) O. KUNTZE, Rev. Gen. Pl. 2: 517 (1891); BRIQ. in ENGL. & PRANTL, Pfl.-fam. IV, 3 a: 367 (1897); MUKERJEE, Lab. Ind. 32 (1940); MURATA in HARA, Fl. E. Himal. 275 (1966).


Distribution: India, Burma, Thailand, Laos, and China (Yunnan).


Herba perennis 50-70 cm alta. Rhizoma breve crassum lignescens. Caulis erectus simplex vel pauciramosus quadrangularis pilis patentibus breviusculis dense obtecti. Folia opposita breviter petiolata; lamina oblonga 3-6 cm longa 1-2.5 cm lata rugulosa, supra scabroso-pubescentis, subtus subvillosa, apice acuta, margine serrata, basi cuneata; petiolis 0.5-1 cm longis. Paniculæ angustissimæ terminales 6-10 cm longae 1.5-2 cm latae. Cymæ contiguæ subsessiles. Verticillastris multifloris. Bracteæ late ovatae 7-20 mm longæ 3-10 mm latae albidae apice brachycuspiter acuminatae, deciduae. Pedicelli 3-5 mm longi puberuli. Calyx hirsutus tubulosus 2-labiatus declinatus, fructifer 6 mm longus, labio superiore 3-fido, lobo medio latissimo orbiculato reflexo 2.5 mm lato, lateralis minusculus deltoideus, lobo inferiori 2-fido, tubo subinflato transverse nervoso. Corolla alba hirsuta calycé fere duplo longior, limbo bilabiato labio superiore 4-fido erecto, inferior integro declinato. Stamina 4 didynamæ, declinata, filamentis edentulis. Nuculae ellipsoideaæ 1.3 mm longae atro-bruneæ, apice paucipapillosæ.

Chiang Mai (Sept. 25, 1921 B. Hayata TI), Doi Suthep (Oct. 12, 1921 B. Hayata TI). Along highway between Mae Sariang and Chom Thong, 1100 m (Sept. 19, 1967 No. T 10400, Fr. Holotypus in Herb. KYO). Lamphun, en route from Ban Khun Tan to Doi Khun Tan, ca. 800 m (Sept. 4, 1967, No. T 9126, Fl.).

In light deciduous forest.

Distribution: Thailand.


Chiang Mai, Doi Suthep (Oct. 14, 1921 B. Hayata TI), same loco (Dec. 6, 1957 T. Tuyama, No. 57209 TI), same loc. 1100-1685 m (Sept. 8, 1967 No. T 9419 & 9496). Fls. white. Fruiting calyx 4-5 mm long, lobes short, subequal.

Distribution: Cambodia and Thailand (new to Thailand).
**Gomphostemma Wall.**

**Gomphostemma crinitum** Wall. ex Benth. in Wall. Pl. As. Rar. 2: 12 (1831), Lab. Gen. Sp. 648 (1834), and in DC. Prodr. 12: 552 (1848); Miq. Fl. Ind. Bat. 2: 978 (1858); Hook. f. Fl. Brit. Ind. 4: 698 (1885); Ridley, Fl. Malay Penins. 2: 652 (1923); Mukerjee, Lab. Ind. 209 (1940).


Phangnga, limestone hill, east of Phangnga, 30-150 m (Aug. 23, 1967 No. T 7880).
Nakawn Sritamarat, east slope of Khao Luang, 150-1100 m (Jan. 22, 1966 No. T 5319).
Trang, lower elevation of Khao Chong, 100-600 m (Jan. 28, 1966 No. T 6998).

In evergreen forest of southern Thailand. Fls. yellow.

Distribution: Assam, Burma, Thailand (new to Thailand), and Malay Peninsula.


**Prasium javanicum** Bl. Bijdr. 840 (1826).

Distribution: Java and Thailand.


Chiang Mai, Doi Chiang Dao, 500-600 m (Sept. 11, 1967 No. T 9788 & 9789 Fl.).

Fls. white. In evergreen forest.

Distribution: Assam, Burma, Thailand, Laos, Vietnam, and China (Yunnan, Hai-

Nakawn Sritamarat, Khao Luang, 400 m (Jan. 28, 1966 B. Hansen & T. Smitinand, No. 12142 C).

Distribution: Assam and Thailand (new to Thailand).


Huoi Hai to Naw Tao (Nov. 29, 1921 B. Hayata T). Ban Don Mo to Khon Pae (Nov. 20, 1921 B. Hayata T).

Distribution: Laos, Thailand (new to Thailand), and China (Yunnan).


Common in evergreen forest. Fls. white.

Distribution: Andaman, Burma, S. Vietnam, Thailand, Cambodia, Malay Peninsula, and Java.


G. dichotomum Zoll. & Mor. Syst. Verz. Zoll. 54 (1854); Walp. Rep. 6: 684 (1845); Benth. in DC. Prodr. 12: 553 (1848); Miq. Fl. Ind. Bat. 2: 986 (1858).


In evergreen forest. Fls. yellow.

Distribution: India, Burma, Thailand, Malay Peninsula, and Java.

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299 (1907), and Enum. Philipp. Fl. Pl. 3: 409 (1923).


Distribution: Philippines and Thailand.


In deciduous forest mixed with bamboo or pine.


Distribution: Burma and Thailand.


**G. viride** Wall. ex Benth. in Wall. Pl. As. Rar. 2: 12 (1831), Lab. Gen. Sp. 647 (1835), and in DC. Prodr. 12: 550 (1848); Walp. Rep. 3: 896 (1845); MIQ. Fl. Ind. Bat. 2: 989 (1858).

Sai Yok, 250 m, evergreen forest (Dec. 14, 1961 K. Larsen, No. 8718 C).

Distribution: India, Burma, and Thailand.


**G. dentatum** Muschler in Fedde Repert. 4: 270 (1907).

**G. strobilinum** var. *elatus* Benth. in Wall. Pl. As. Rar. 2: 12 (1831).

Chiang Mai, Doi Chiang Dao (Dec. 8, 1957 Tuyama, No. 57327 T) & (Dec. 7, 1957 Tuyama, No. 57257 T). Wang Tao, 800 m (Feb. 13, 1958 K. Larsen, B. Han-

Distribution: Assam, Burma, Thailand, and China (Yunnan).

Hyptis Jacq.


Distribution: Tropical America (native), Africa, India, and S. E. Asia (Malaya to Formosa).

Isodon Schrader ex Kudo


Ocimum coetsa SPRENG. Syst. Veg. 4, Chr. Post. 223 (1827).

Scutellaria japonica BURM. f. Fl. Ind. 130 (1768).


P. macraei BENTH. Lab. Gen. Sp. 42 (1832), and in DC. Prodr. 12: 59 (1848); Wight, Ic. pl. 1430 (1850).


*P. rugosa* f. tomentosa Benth. in Wall. Pl. As. Rar. **2**: 17 (1831).

*P. cavaleriei* Lév. in Fedde Repert. **9**: 247 (1911).


Distribution: India, Ceylon, Burma, Thailand, Laos, N. Vietnam, and China (Yunnan and Szechuan).


Distribution: Assam, Burma, and Thailand.


Herba perennis, fere omnino pubescens. Caulis erectus 50-110 cm altus simlex vel ramosus quadrangularis tomentosus vel villosus; internodia media 3-5 cm longa ca. 3 mm crassa. Folia petiolata; lamina ovata vel late ovata 4-9 cm longa cremato-serrata apice acuminata basi sub truncata supra hispida subtus pubescens et glandulosus nigro-punctatus nervis reticulatis prominulis, petiolis 1-4 cm longis. Folia floralia gradatim minora sessilia. Inflorescentia paniculata ramosa 30-10 cm longa multiflora; pedunculis 1-1.5 cm longis, pedicellis gracilibus 3-6 mm longis pubescensibus. Bractaeae minutae. Calyx subcampanulatus 2 mm longus intus glaber extus glandulosus nigro-punctatus et pilis longis articulatis eglandulosis dense obtectus, apice subaequaliter 5-dentatus, dentibus ca. 1 mm longis acutis, fructifer tubulosum-campanulatus 4-5.5 mm longus subcurvatus, nervis prominulis. Corolla 6-7 mm longa, glabra bilabiata, pallide purpurea, tubo 3.5-4 mm longo striceo, labio superiore 4-fido erecto purpureo maculato extus glandulosus nigro-punctato, labio inferiore 2.5 mm longo late ovato. Stamina 4, longe exserta, filamentis glabris. Nuculae ellipsoidae 1 mm longae 0.5 mm latae bruneae laeves.


Allied to *Isodon hispidus* (Benth.) Murata from Assam and upper Burma, but markedly different by the much larger flowers with long exerted stamens and the form of the leaf base, which is truncate and not decurrent into the petiole.
Distribution: Thailand.

**Isodon racemosus** (HEMSL.) MURATA, comb. nov.


Chiang Mai, Doi Chiang Dao, 500–1600 m (Jan. 3, 1966 No. T 4049).

Distribution: Thailand and China (Szechuan and Hupeh).


*P. oblongifolius* WALL. PI. As. Rar. 2: 17 (1831); BENTH. Lab. Gen. Sp. 40 (1932) and in DC. Prodr. 12: 56 (1848).

*P. gerardianus* var. brachyantha HOOK. f. Fl. Brit. Ind. 4: 618 (1885).


Distribution: Himalaya (Kashmir to Assam), Burma, Laos, Thailand, Vietnam, and China (Yunnan, Kweichau and Kwangtung).


Distribution: Thailand.

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E. lychnitis Lev. et Van. in Fedde Repert. 8: 425 (1910).


Isodon volkensianus (Muschler) Murata, comb. nov.


Distribution: Thailand.

Leucas R. Br.


Leucas pluknetii (Roth) Spreng. Syst. Veg. 2: 743 (1825); Benth. in Wall. Pl. As. Rar. 1: 60 (1830).

L. dimidiata Benth. in DC. Prodr. 12: 532 (1848).
P. esculenta Roxb. Fl. Ind. 3: 10 (1832).

Distribution: India, Burma, Thailand, Cambodia, Vietnam, Java, and Philippines.


Distribution: India, Nepal, Sikkim, Bhutan, Burma, Thailand, Laos, N. Vietnam, and China (Yunnan).


L. parviflora Benth. in Wall. Pl. As. Rar. 1: 62 (1830).

L. melissaefolia Benth. in Wall. Pl. As. Rar. 1: 62 (1830).

Phlomis moluccana Roxb. Hort. Bengal. 95 (1814), and Fl. Ind. 3: 11 (1832).


Distribution: Burma, Thailand, Malaya, Pacific Islands, and Australia.


Chiang Mai, Doi Chiang Dao, 1600-2100 m (Jan. 4, 1966 No. T. 4147).

Distribution: India, Burma, and Thailand.


Distribution: Thailand.


L. linifolia (Roth) Spreng. Syst. Veg. 2: 743 (1825); Benth. in Wall. Pl. As. Rar. 1: 60 (1830), Lab. Gen. Sp. 617 (1834), and in DC. Prodr. 12: 533 (1848); Miq.
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Fl. Ind. Bat. 2: 983 (1838); Hook. f. Fl. Brit. Ind. 4: 690 (1885); Craib in Kew Bull. 1911: 418 (1911).


*Leollurus indicus* Burm. f. Fl. Ind. 127 (1768).

Distribution: India, Burma, Thailand, Malaya, Philippines, Java, Madagascar, and China (Kwangtung).


Distribution: India, Nepal, Burma, Thailand, Laos, Malaya, Vietnam, and China (Yunnan & Hupeh).


Distribution: Nepal, Sikkim, Burma, and Thailand (new to Thailand).


Distribution: Burma and Thailand (new to Thailand).


Distribution: India, Ceylon, Indo-China, Malay Peninsula and Islands, Java, and China (Yunnan, Hainan, and Kwangtung).

Mesona Bl.

Distribution: Cambodia, Thailand, and Cochinchina.

Distribution: Thailand and Laos.

Microtoena Prain


M. esquirolii Lév. in Fedde Repert. 9: 222 (1910).

M. mollis Lév. in Fedde Repert. 9: 222 (1910).


Distribution: Himalaya (Nepal to Assam), Thailand, Vietnam, Malaya, Java, and China (Yunnan, Kweichaw, and Kwangtung).

Moschosma Reichenb.

Moschosma polystachyum (L.) Benth. in Wall. Pl. As. Rar. 2: 13 (1831), Lab.
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_O. tenuiflorum_ Burm. f. Fl. Ind. 129 (1768); Blanco, Fl. Filip. 481 (1837), non L. _Moschosma tenuiflora_ Heyn. Nomen. 1: 532 (1840); Merr. Fl. Manila 408 (1912).

_Plectranthus micranthus_ SPRENG. Syst. Veg. 2: 691 (1825).

_Basilicium polystachyon_ (L.) Moench, Meth. Suppl. 143 (1802); Doan in Lecomte, Fl. Gén. Indo-Chine 4: 926 (1936).


**Nosema Prain**


_Distribution:_ Thailand, Laos, Vietnam, and China (Hainan).

**Ocimum L.**

_Ocimum basilicum_ L. Sp. Pl. 697 (1753); Benth. Lab. Gen. Sp. 4 (1832) & in

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Chiang Mai (Dec. 7, 1957 Tuyama, No. 57146 T). Mae Hong Son, between Mae Sariang and Mae La Noi, 300–400 m (Sept. 18, 1957 No. T 10336).


Distribution: S. Asia (Formosa to Malaya), Pacific Islands, Australia, India, West Asia, and Arabia.

Orthosiphon BENTH.

Orthosiphon parishii PRAIN in Journ. As. Soc. Bengal 59: 925 (1890); MUKERJEE, Lab. Ind. 27 (1940).


Distribution: Burma, and Thailand (new to Thailand).


Flowers pale violet.

Distribution: Cochinchina and Thailand (new to Thailand).


P. virgatus D. DON, op. cit. (1825).

Lunntzera rubicunda SPRENG. Syst. Veg. 4, Cur. Post. 223 (1827).

L. virgata SPRENG. op. cit. (1827).


Distribution: India, Nepal, Burma, Thailand (new to Thailand), Laos, Cambodia, Cochinchina, and China (Yunnan, Szechwan, and Hainan).


O. aristatus (BLUME) Miq. Fl. Ind. Bat. 2: 913 (1838); MUKERJEE, Lab. Ind. 26 (1940).


Ocimum aristatum BLUME, Bijdr. 833 (1826); BENTH. Lab. Gen. Sp. 10 (1832) & in DC. Prodr. 12: 42 (1848).

Trichostema spiralis LOUR. Fl. Cochinch. 371 (1790), ed. WILLD. 451 (1793).


Distribution: India, Burma, Thailand, Laos, Cambodia, Vietnam, Malaya, China (Hainan), Philippines, Borneo, Java, New Guinea, and Australia.


Herba perennis. Caulis erectus simplex quadrangularis 50-70 cm longus puberulus, internodiis 4-10 cm longis. Folia petiolata; Lamina ovata 4-7 cm longa 2-4.5 cm lata apice acuminata margine serrata basi late cuneata supra parce hirsuta subitus glanduloso-
punctata ad nervos puberula. Inflorescentia terminalia racemosa, racemi simplices erecti laxi, bracteis parvis ovatis acuminatis, verticillastris 4-6 floribus, pedicellis 3 mm longis pubescentibus. Calyx campanulatus 3.5 mm longus extus puberulus et punctatus intus glaber bilabiatus, fructifer declinatus 7-8 mm longus, labio superiore rotundato reflexo 2.5 mm lato, labio inferiore 4-dentato subulato, dentibus lateralibus 2 minutis, inferioribus 3 mm longis. Corolla tubo angusto recto 2 cm longo puberula, labio superiore obsolete 3-4 lobato 7 mm longo 4 mm lato, labio inferiore 7 mm longo. Stamina 4 longe exserta, filamentis glabris. Nuculae ellipsoidea 2 mm longae bruneae.


Flowers blue. Filaments exserted about 2.3 cm beyond the mouth of the corolla. Apparently allied to O. vellerii DOAN, but the bracts of O. tagawai are ovate and acute.

Distribution: Thailand.

Paraphlomis Prain


Gomphostemma membranifolium Miq. Fl. Ind. Bat. 2: 988 (1858).


Lamium longepetiolata HAYATA, Icon. Pl. Formos. 8: 92 (1919).

L. gesneroides HAYATA, l. c.

Loxocalyx vaniotiana Lév. in Fedde Repert. 9: 224 (1910).


Distribution: Sikkim, Bhutan, Khasia, Thailand, Laos, Malaya, Philippines, China, Formosa, and Ryukyus.

Perilla L.

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P. ocymoides var. japonica Hassk. in Retzia 2: 36 (1856).


Doi Bitcha, near Ban Pasui, SE of Mae Hong Son (Mar. 15, 1938 Tuyama, No. 58301 TI).

Distribution: Himalaya (Kashmir to Bhutan), Khasia, Burma, Thailand, Laos, Vietnam, China, Java, and Formosa.

Plectranthus L'Herit.


P. coleoides Benth. in DC. Prodr. 12: 64 (1848); Hook. f. Fl. Brit. Ind. 4: 622 (1885), Curtis's Bot. Mag. pl. 5841 (1870); Doan in Lecomte, Fl. Gén. Indo-Chine 4: 949 (1936); Mukerjee, Lab. Ind. 48 (1940).

Coleus paniculatus Benth. in Wall. Pl. As. Rar. 2: 99 (1831), and in DC. Prodr. 12: 78 (1848).


C. wightii Benth. Lab. Gen. Sp. 58 (1832), and in DC. Prodr. 12: 78 (1848); Wight, le. pl. 1433 (1850).


Pogostemon Desf.


8-9, 1966 No. T 7143).

Distribution: Sikkim, Khasia, Burma, Thailand, Java, and China (Yunnan).


**Pogostemon hispidus** (BENTH.) PRAIN in Kew Bull. 1908: 254 (1908); MUKERJEE, Lab. Ind. 70 (1940).

P. parviflorus var. hispidus BENTH. in DC. Prodr. 12: 152 (1848).

Chiang Mai, Doi Pae Poe, 90 km NW of Tak, 1400 m (Mar. 13, 1968 B. Hansen & T. Smitinand, No. 12897 C).

Distribution: Assam, Burma, and Thailand (new to Thailand).

**Pogostemon macgregori** W. W. SMITH in Rec. Bot. Surv. Ind. 6: 39 (1913); MUKERJEE, Lab. Ind. 75 (1940).


Distribution: Burma and Thailand (new to Thailand).


Distribution: Assam, Burma, Thailand (new to Thailand), Vietnam, and Java.

**Pogostemon paniculatus** (WILLD.) BENTH. in WALL. PI. As. Rar. 2: 30 (1831), Lab. Gen. Sp. 153 (1833), and in DC. Prodr. 12: 151 (1848); HOOK. f. Fl. Brit. Ind. 4: 631 (1865); MUKERJEE, Lab. Ind. 68 (1940).

**Elsholtzia paniculata** WILLD. Sp. Pl. 3: 59 (1800).

Chanthaburi, Khao Soidao, 200-700 m (Feb. 7, 1966 No. T 7095).

Distribution: India, Burma, and Thailand (new to Thailand).
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**Pogostemon wattii** C. B. Clarke in Journ. Linn. Soc. Bot. 25: 59 (1889); PRAIN in Journ. As. Soc. Bengal 59: 293 (1890); MUKERJEE, Lab. Ind. 75 (1940).

Chiang Mai, Doi Suthep (Dec. 6, 1957 *Tuyama, No. 57106* TI). Loei, Phu Luang, 700 m (Dec. 3, 1965 *No. T 1042*).

Distribution: Assam and Thailand (new to Thailand).


Loei, en route from Nam Thop to Ban Na Luang, eastern foot of Phu Luang, 300-400 m (Dec. 8, 1965 *No. T 1971*). Phu Krading, 1000 m (Nov. 27, 1965 *No. T 351*), same loc. (Nov. 27, 1965 *No. T 883*). Phitsanulok, Tung Salaeng Luang National Park, 300-600 m (Dec. 11, 1965 *No. T 2044*).

Distribution: S. India, Burma, Thailand (new to Thailand), and S. Vietnam.

**Scutellaria L.**


*S. indica* D. Don, Prodr. Fl. Nep. 109 (1825); Bl. Bijdr. 839 (1826), non L.


Distribution: Himalaya (Kumaon to Bhutan), Assam, Khasia, Thailand (new to Thailand), Laos, Cambodia, Vietnam, Java, and China (Yunnan).

**Scutellaria glandulosa** Hook. f. Fl. Brit. Ind. 4: 669 (1885); Doan in Lecomte, Fl. Gén. Indo-Chine 4: 1003 (1936); Mukerjee, Lab. Ind. 143 (1940).


In dry mixed deciduous forest.
**Distribution**: Burma, Thailand, and Cambodia.


_Distribution_: India, Thailand, Java, and China (Kiangsi).

**Teucrium** L.


_T. fortunei_ Benth. in DC. Prodr. 12: 583 (1848).


_T. fulvo-aureum_ Lév. in Fedde Repert. 8: 426 (1910).

_T. koytchense_ Lév. _op. cit._ (1910).


Distribution: Himalaya (Kashmir to Sikkim), Khasia, Burma, Thailand, Cambodia, Vietnam, and China (Hupeh, Hunan, Kiangsu, Kweichau, Yunnan, Kwangtung, and Hong-kong).


Chiang Mai, Doi Suthep (Dec. 6, 1958 Tuyama, No. 57208 & 57217 TI).

Distribution: Burma and Thailand (new to Thailand).


Chiang Mai, Tham Chiang Dao, 350 m (Feb. 18, 1968 B. Hansen & T. Smitinand, No. 1126 C).

Distribution: Ceylon, India, and Thailand.


Phetchabun, Phu Miang, 1300 m (Oct. 5, 1967 No. T 11774).

Distribution: India, Burma, Thailand, Laos, Vietnam, Malaya, Formosa, China, Korea, and Japan.

In this paper, 29 genera and 93 species are recorded from Thailand. Phytogeographically, the mountain flora of Thailand is closely tied with that of the Sino-Himalayan region. At the species level, in Labiatae, the Sino-Himalayan elements amount to about 37% of the total, and they occur at high altitudes of North Thailand. The tropical Asiatic elements amount to about 39%, and they occur on the plains and lowlands, mainly in the southern part. The endemic species are 9. Pan-tropical elements are 4.