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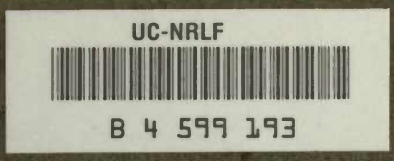

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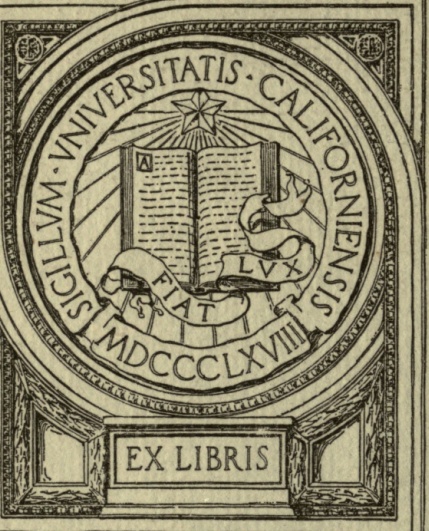

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Contributions

to the

Flora of Siam

Monocotyledones

By

William Grant Craib, M.A.

Assistant for India

Royal Botanic Gardens, Kew

Printed for the University of Aberdeen

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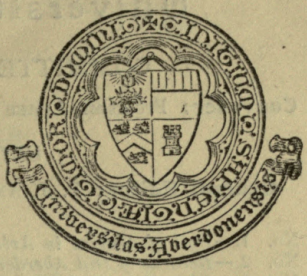

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Contributions

to the

Flora of Siam

v. 2

Monocotyledones

By

William Grant Craib, M.A.

Assistant for India

Royal Botanic Gardens, Kew

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CONTRIBUTIONS

TO THE

FLORA OF SIAM.

MONOCOTYLEDONES.

The present contribution, dealing with the Monocotyledones and Gymnosperms with the exception of the Family Orchidaceae, which is reserved for a separate paper, is continued on exactly the same lines as the earlier papers dealing with the Dicotyledones.

Just before the publication of the first contribution—the Polypetalae — there appeared in Bot. Centralbl., Beihefte xxvii. 2, pp. 455-507, a paper by C. C. Hosseus entitled "Beiträge zur Flora Siams," and before the publication of the second contribution—the Gamopetalae and Incompletae—there appeared in the same publication (vol. xxviii. 2, pp. 357-457) a paper entitled "Die botanischen Ergebnisse meiner Expedition nach Siam" by the same author. In the following enumeration these papers are cited briefly Hosseus i. and Hosseus ii., respectively.

MONOCOTYLEDONES.

HYDROCHARIDACEAE.

Enhydrias angustipetala, *Ridley*—Fl. Indo-Chine, vi. p. 17. *Lagarosiphon Roxburghii*, F.B.I., v. p. 659, in part.
Chiengmai, Doi Sootep, in swamp, 330 m., *Kerr*, 1626*b*.
Distr. Malay Peninsula, Indo-China, Japan.

Ottelia alismoides, *Pers.*—F.B.I., v. p. 662.
Chiengmai, in marsh at foot of Doi Sootep, 300 m., *Kerr*, 654.
Distr. Trop. Asia and Australia.

BURMANNIACEAE.

Burmannia disticha, *Linn.*—F.B.I., v. p. 664; Fl. Indo-Chine, vi. p. 25.
Chiengmai, Doi Sootep, in open marshy ground, 660 m., *Kerr*, 1204.
Distr. S.E. Asia to Australia.

299214

Burmannia uniflora, *Rottler ex Spreng.* ?

Chiengmai, in open marshy ground on Doi Sootep, 480–720 m., *Kerr*, 929, 2644 ; Wang Djao, 100 m., *Hosseus*, 115.

This is *B. coelestis*, Don, in the wide sense as understood in the Flora of British India. Hosseus ii. p. 374 refers his 115 and a plant from Ban Jang not seen by the writer to *B. coelestis*.

Burmannia Wallichii, *Hook. f.*, F.B.I., v. p. 666 ; Fl. Indo-Chine, vi. p. 21.

Chiengmai, Doi Sootep, on mossy bank in evergreen jungle by a stream, 540 m., *Kerr*, 926.

Distr. Burma, Hong-Kong.

Scitamineae.

Globba Clarkei, *Baker*, F.B.I., vi. p. 201 ; K. Schum., Engler Pflanzenr., Zingib., p. 134.

Chiengmai, Doi Sootep, in evergreen jungle, 900–1500 m., *Kerr*, 1370, 1370*a*.

Distr. Sikkim, Khasia.

Globba Kerrii, *Craib*, sp. n., ob staminodia majuscula distincta.

Herba erecta, 43–82 cm. alta. *Folia* lanceolata, apice acuminata, acuta, basi in petiolum brevissimum attenuata, 12–22 cm. longa, ad 2 cm. lata, utrinque glabra ; vaginae infimae circiter 6, parum rubrescentes, sub-tomentosae, supremae parce breviter pubescentes, omnes ciliatae ; ligula circiter 2 mm. longa. *Panicula* erecta, ad 9 cm. longa, ramis inter se satis distantibus mox patulis infimis ad 3 cm. longis glabris ; bracteae bracteolaeque deciduae ; bulbilli rari. *Calyx* 5 mm. longus, lobis deltoideis 1·5 mm. longis ciliatis. *Corollae* tubus 1·3 cm. longus, extra puberulus, lobi ad 7 mm. longi. *Staminodia* lateralia subelliptica, 1·7 cm. longa, 8 mm. lata, corollae lobos insigniter excellentia ; labellum 1·2 cm. longum, bilobatum, lobis oblongis obtusis 5 mm. longis 1·5 mm. latis ; anthera 2·25 mm. longa, ala inaequaliter bilobata 2·5 mm. longa utrinque instructa. *Ovarium* ad 4 mm. altum.

Chiengmai, Doi Sootep, in open grassy jungle, 900–1200 m., *Kerr*, 1278.

Globba Nisbetiana, *Craib*, sp. n., *G. pauciflorae*, King ex Baker, facie similis sed indumento crassiore distinguenda.

Caules 7–15 cm. alti. *Folia* ovato-lanceolata, acuminata vel inconspicue acuminata, acuta, basi late cuneata, 2–4·5 cm. longa, 0·8–1·6 cm. lata, breviter petiolata, supra pilis longis rigidis hic illic instructa, subtus tenuiter pilosa, ciliata ; vaginae infimae ad 4, parce hirsutae, ciliatae ; ligula vix 1 mm. longa, pilosa. *Inflorescentia* pauciflora, erecta ; bracteae oblongae, acuminatae, 6 mm. longae, 3 mm. latae. *Calyx* 2·5 mm. longus, lobis brevibus acutis. *Corollae* tubus 1·6 cm. longus, extra puberulus, lobi ad 5 mm. longi. *Staminodia* lateralia elliptica, circiter 8 mm. longa et 5 mm. lata ; labellum 8 mm. longum, bilobum, lobis parum lobatis ; anthera 2 mm. longa, ala inaequaliter biloba (lobo infero supero parum minore) ad 2·5 mm. longa 1·25 mm. lata utrinque ornata. *Ovarium* 1·5 mm. altum.

Chiengmai, Doi Sootep, in evergreen jungle, 900–1200 m., *Kerr*, 129..

Globba platystachya, *Baker*, F.B.I., vi. p. 206 ; K. Schum., Engler Pflanzenr., Zingib., p. 144 ; Fl. Indo-Chine, vi. p. 33.

Petchabouri River (ex *Fl. Indo-Chine*).

Distr. S. India.

Globba purpurascens, *Craib*, sp. n., *G. cernuae*, Baker, affinis sed foliorum pagina inferiore glabra et ut vaginis purpurascente, panicula erecta distinguenda.

Herba ad 37 cm. alta, vaginis praesertim supremis foliorumque pagina inferiore purpureis. *Folia* ovato-lanceolata vel lanceolata, apice acuminata, acuta, basi cuneata, 6–11·3 cm. longa, 1·1–3·2 cm. lata, brevissime petiolata, utrinque pilosula ; vaginae infimae ad 6, parce breviter pubescentes, conspicue ciliatae ; ligula brevis, superne strigosa, strigoso-ciliata. *Panicula* 4–5 cm. longa, erecta ; bracteae infimae virides, lanceolatae vel ovato-lanceolatae, acutae, ad 1·8 cm. longae, bulbilliferae ; bulbilli ovoidei, obtuse acuminati, verrucosi, 3 mm. longi. *Calyx* 3 mm. longus, breviter 3-lobatus. *Corollae* luteae (ex *Kerr*) tubus 1·7 cm. longus, lobi ad 5 mm. longi. *Staminodia* lateralia oblongo-lanceolata, 5 mm. longa, 1·5 mm. lata ; labellum 6 mm. longum ; anthera 2 mm. longa, alis duobus oblongo-lanceolatis supremis ad 3 mm. longis et 1 mm. latis infimis paullulo minoribus utrinque ornata. *Ovarium* vix 2 mm. altum, parum verrucosum.

Chiengmai, Doi Sootep, in evergreen jungle, 1050 m., *Kerr*, 1316.

Globba reflexa, *Craib*, sp. n., a *G. versicolore*, Smith, foliis angustioribus rigidioribus, panicula nutante, bracteis sub anthesin reflexis recedit.

Caulis 40–56 cm. altus. *Folia* lineari-lanceolata, apice acuta, basi obtusa, 6·5–20 cm. longa, 0·7–1·4 cm. lata, sessilia, supra fere glabra, subtus pilosa, chartacea ; vaginae infimae saltem 5, ciliatae ; ligula brevis, longe ciliata apicemque versus pilosa. *Panicula* cernua, ramis satis remotis obliquis vel fere patulis primo ut rachi puberulis mox glabris circiter 2 cm. longis ; bracteae oblongo-lanceolatae, persistentes, reflexae, ad 1·5 cm. longae et 3 mm. latae ; bulbilli deficientes. *Calyx* 4·5 mm. longus, breviter 3-lobatus. *Corollae* luteae (ex *Kerr*) tubus 1·6 cm. longus, lobi 5–6 mm. longi. *Staminodia* lateralia 1·2 cm. longa ; labellum 8 mm. longum, bilobatum, lobis anguste oblongis obtusiusculis ; anthera 2·5 mm. longa, latere utroque alis duobus acutis 2·5 mm. longis supremis 1 mm. latis infimis 0·5 mm. latis ornata. *Ovarium* verruculosum, 2 mm. altum.

Chiengmai, Doi Sootep, 600–900 m., *Kerr*, 616, 1202.

Globba Schomburgkii, *Hook. f.*—Williams, Bull. Herb. Boiss., iv. (1904) p. 361, *in part* ; K. Schum., Engler Pflanzenr., Zingib., p. 153 ; Fl. Indo-Chine, vi. p. 38 ; Hosseus, ii. p. 374.

Chiengmai, Doi Sootep, in mixed and deciduous jungles, 330–450 m., *Kerr*, 1298 ; Kampeng, 50 m., *Hosseus*, 33 ; Bangkok, *Schomburgh*, 306 ; Petchabouri, *Pierre*, 48.

Distr. Cambodia.

The Anhin plant (*Schomburgh*, 255) referred by Williams, l.c., to this species has been described as a distinct species under the name *G. colpicola*, K. Schum.

Globba xantholeuca, *Craib*, sp. n., *G. panicoidi*, Miq., affinis sed foliis haud glabris facile distinguenda.

Caules 30–58 cm. alti. *Folia* anguste lanceolata, apice attenuata, acuta, basi late cuneata, 9·5–15 cm. longa, ad 1·7 cm. lata, brevissime petiolata, supra pilis longis rigidis basi tuberculatis hic illic instructa, subtus pilis similibus nisi tenuioribus numerosioribus; vaginae infimae circiter 5, conspicue ciliatae; ligula ad 2·5 mm. longa, ciliata. *Panicula* erecta, ad 6 cm. longa, pedunculo ad 6 cm. longo suffulta, glabra; rami patuli, inter se remoti, infimi ad 3 cm. longi, pauciflori; bracteae bracteolaeque cito deciduae; bulbilli rari, ambitu oblongi, acuminati, ad 1·5 cm. longi, glabri. *Calyx* vix 5 mm. longus, glaber; lobi lanceolati, acuti vel subacuti, vix 2 mm. longi. *Corollae* albae (ex *Kerr*) tubus 1·2 cm. longus, lobi 3·5–4 mm. longi. *Staminodia* lateralia 4 mm. longa; labellum luteum (ex *Kerr*), emarginatum; anthera 1·5 mm. longa, latere utroque ala lineari-lanceolata acuta 3·5 mm. longa 0·75 mm. lata instructa.

Meh Ping, Kampeng, in mixed jungle, *Kerr*, 2031.

Globba Yeatsiana, *Craib*, sp. n., a *G. versicolore*, Smith, foliis subtus glabris recedit.

Caules circiter unimetrales. *Folia* lanceolata vel late lanceolata, apice acuminata, acutissima, basi late cuneata, ad 28 cm. longa et 4 cm. lata, petiolo ad 7 mm. longo suffulta, utrinque glabra; vaginae infimae circiter 5, stramineae, ciliolatae; ligula 2–2·5 mm. longa, ciliolata. *Panicula* plerumque cernua, ad 13 cm. longa; rami divaricati, satis distantes, ad 6 cm. longi, pauciflori, glabri; bracteae deciduae, oblongo-lanceolatae, acutiusculae, dorso carinatae, 5 mm. longae, 1·75 mm. latae. *Calyx* 5 mm. longus, 3-lobatus. *Corollae* luteae (ex *Kerr*) tubus 1·7 cm. longus, extra puberulus, lobi ad 7 mm. longi. *Staminodia* lateralia linearia, 1·4 cm. longa, vix 2 mm. lata; labellum 1·2 cm. longum, bilobum, lobis oblongis apice rotundatis; anthera 2 mm. longitudinis paululo excedens, ala subaequaliter bilobata 2·5 mm. longa 1·5 mm. lata lobis acutis utrinque instructa. *Ovarium* 4 mm. altum.

Chiengmai, Doi Sootep, in evergreen jungle, 960 m., *Kerr*, 1214.

Gagnepainia Godefroyi, *K. Schum.*, Engler Pflanzenr., Zingib., p. 130; Fl. Indo-Chine, vi. p. 43.

Chiengmai, Doi Sootep, generally in shady spots near a stream, 720 m., *Kerr*, 615.

Distr. Laos (ex *Fl. Indo-Chine*).

I am indebted to Mons. Gagnepain for the identification of this plant after comparison with the types in Herb. Mus. Paris. At first I had regarded it as a new species allied to *G. Godefroyi* but from the copious notes supplied by Mons. Gagnepain the appendages of the lip are very variable. There are 5 glands or appendages to the labellum all subject to variation in length and sometimes some of them are almost completely wanting as must have been the case with the flower serving for the figure in Engler Pflanzenr., l.c., fig. 18e where the two lower ones are not represented at all.

Kaempferia elegans, *Wall.?*—F.B.I., vi. p. 222; K. Schum., Engler Pflanzenr., Zingib., p. 82.

Chiengmai, Doi Sootep, in mixed jungle, 330 m., *Kerr*, 1911.

Distr. Burma.

Kaempferia Galanga, *Linn.*—F.B.I., vi. p. 219; K. Schum., Engler Pflanzenr., Zingib., p. 77; Fl. Indo-Chine, vi., p. 49.

Meh Ping, Muang Hawt, in deciduous jungle, 240 m., *Kerr*, 2012.

Distr. S.E. Asia.

Lao name, Wan Ten Din Yen (ex *Kerr*).

Kaempferia pandurata, *Roxb.*—F.B.I., vi. p. 220 ; K. Schum., Engler Pflanzenr., Zingib., p. 82 ; Fl. Indo-Chine, vi. p. 52.

Chiengmai, Doi Sootep, in mixed jungle, 330 m., *Kerr*, 1341.

Distr. S.E. Asia—often cultivated.

Kaempferia rotunda, *Linn.*—F.B.I., vi. p. 222 ; K. Schum., Engler Pflanzenr., Zingiber., p. 87 ; Fl. Indo-Chine, vi. p. 47 ; Hosseus, ii. p. 374.

Chiengmai, very common in deciduous and open jungles on Doi Sootep, 300–1350 m., *Kerr*, 637 ; Doi Sootep, 700–1300 m., *Hosseus*, 437.

Distr. S.E. Asia—often cultivated.

Stahlianthus macrochlamys, *Craib*, comb. nov. *Kaempferia macrochlamys*, Baker, F.B.I., vi. p. 223 ; K. Schum., Engler Pflanzenr., Zingib., p. 85.

Chiengmai, Doi Sootep, in evergreen jungle, 900 m., *Kerr*, 1807.

Distr. Tenasserim.

To *Stahlianthus* also belong *K. involucrata*, King ex Baker and probably *K. Andersoni*, Baker.

Gastrochilus longiflora, *Wall.*—F.B.I., vi. p. 217, in part ; K. Schum., Engler Pflanzenr., Zingib., p. 95.

Chiengmai, Doi Sootep, in evergreen jungle, 750 m., *Kerr*, 1379.

Distr. Himalaya, Parasnath, Assam, Burma.

Gastrochilus parvula, *Wall. ex Baker*, F.B.I., vi. p. 218 ; K. Schum., Engler Pflanzenr., Zingib., p. 92.

Chiengmai, Doi Sootep, in damp evergreen jungle, 900–1200 m., *Kerr*, 737.

Distr. Upper Burma.

Hedychium ellipticum, *Ham. ex Smith*—F.B.I., vi. p. 228 ; K. Schum., Engler Pflanzenr., Zingiber., p. 47.

Chiengmai, Doi Sootep, on rocks in open jungle, 900–1350 m., *Kerr*, 788, 2658.

Distr. Himalaya, Khasia.

Hedychii elliptici, *Ham. ex Smith*, var. vel sp. nov.? Differt habitu robustiore, spicis bracteisque longioribus, floribus paulo majoribus.

Chiengmai, Doi Sootep, 1650 m., *Kerr*, 1304.

Hedychii Gardneriani, *Wall.*, var.? Differt spicis densioribus, bracteis majoribus floribusque albis.

Chiengmai, Doi Sootep, 1650 m., *Kerr*, 1305.

Curcuma (Exantha) ecomata, *Craib*, sp. n., ob inflorescentiam densam comamque deficientem distincta.

Folia oblongo-elliptica, apice breviter acuminata, acuta, basi in petiolum attenuata, ad 39 cm. longa et 13 cm. lata, supra glabra vel costa tantum parcissime setulosa, subtus tenuiter hirsutula ; petioli ad 20 cm. longi ; vaginae aphyllae saltem 4, superiore 20 cm. longa. *Pedunculus* ad 7 cm. longus, basi squamis duobus pedunculo paululo longioribus instructus ; bracteae inter se plus

minusve connatae, sicco stramineae vel brunneae, interdum apicem versus rubrescentes, apice rotundatae, ad 3 cm. longae et 2·7 cm. latae, marginatae, glabrae. *Calyx* hyalinus, circiter 1 cm. longus. *Corollae* tubus vix 3 cm. longus, superne ampliatus, pilis deflexis extra instructus; lobi lanceolati vel oblongo-lanceolati, acuti, inter se subaequales, ad 15 mm. longi et 4·5 mm. lati. *Staminodia* purpurea (ex *Kerr*), subrhomboidea, acuta, 15 mm. longa, 7 mm. lata; labellum subrotundatum, basi angustatum, 1·2 cm. diametro, purpureum nisi medio luteum (ex *Kerr*); filamentum latum, circiter 5 mm. longum; anthera 8 mm. longa, calcare circiter 2 mm. longo.

Chiengmai, Doi Sootep, 660 m., *Kerr*, 1155 (leaf-specimens collected three weeks after flowering specimens).

Curcuma longa, *Linn.*—F.B.I., vi. p. 214; K. Schum., Engler Pflanzenr., Zingiber., p. 108; Fl. Indo-Chine, vi. p. 63.

Chiengmai, Doi Sootep, in damp evergreen jungle, 900 m., *Kerr*, 688.

Probably native in E. India or Indo-China—cultivated in the tropics.

Lao name, Kamin Pah (ex *Kerr*).

Curcuma parviflora, *Wall.*—F.B.I., vi. p. 215; Williams, Bull. Herb. Boiss., iv. (1904) p. 232; K. Schum., Engler Pflanzenr., Zingib., p. 102; Fl. Indo-Chine, vi. p. 61; Hosseus, ii. p. 373.

Chiengmai, Doi Sootep, in deciduous jungle, 300–720 m., *Kerr*, 719; Wang Djao, 100 m., *Hosseus*, 56.

Distr. Burma, [Laos, ex *Fl. Indo-Chine*, Siamese Malay Peninsula, ex *Williams*].

Curcuma zedoaria, *Roscoe*, forma, Hosseus, ii. p. 374.

Wang Djao, 140 m. (ex *Hosseus*).

Curcuma sp. aff. *C. sessili*, Gage.

Chiengmai, in deciduous jungle on lower slopes of Doi Sootep, 300–600 m., *Kerr*, 634.

According to Dr. Kerr the whole inflorescence is eaten by the natives.

Lao name, Dawk Aaow (ex *Kerr*).

Amomum siamense, *Craib*, sp. n., ab *A. Robertsonii*, Craib, foliis glabris distinguenda.

Caules ad 2·7 m. alti (ex *Kerr*), basi paulo ultra 2 cm. diametro, superne tantum foliati. *Folia* ad 79 cm. longa et 15·5 cm. lata, apice acuminata, acuta, basi in petiolum attenuata, utrinque glabra, subtus glaucescentia, petiolo 7 cm. longo suffulta; ligulae omnes mancae, saltem 3 cm. longae; vaginae glabrae, stramineae. *Spicae* radicales, densae, globosae vel ovoideae, ad 3 cm. longae, breviter pedunculatae; bracteae exteriores subrotundatae, ad 2 cm. longae, interiores paulo angustiores, glabrae. *Calycis* extra parce pubescentis tubus 1 cm. longus, lobi lanceolati, acuti, cornuti, 1·3 cm. longi. *Corollae* albae (ex *Kerr*) tubus 2 cm. longus; lobi oblongo-oblanceolati, acuti, ad 17 mm. longi et 6·5 mm. lati. *Staminodia* lateralia parva, dentiformia; labellum album, luteo-maculatum (ex *Kerr*), 2·2 cm. longum, 7 mm. latum, intra parce pubescens; anthera 7 mm. longa, filamento circiter 2 mm. longo. *Ovarium* 3 mm. altum, sericeum; stylodia 6 mm. longa.

Chiengmai, in evergreen jungle on Doi Sootep, 1200–1650 m., *Kerr*, 597.

Zingiber (Cryptanthium) Bradleyanum, *Craib*, sp. n., ab affini *Z. barbato*, Wall., foliis latioribus subtus villosis bracteis angustioribus recedit.

Herba 58–63 cm. alta. *Folia* lanceolata vel oblongo-lanceolata, apice acuminata, acuta, basi attenuata, plerumque circiter 40 cm. longa et 6·5 cm. lata, fere sessilia, supra glabra, subtus villosa ; ligula bifida, 3 cm. longitudinis vix attingens, ad 5 mm. lata, viridis, parce pubescens ; vaginae infimae 2–3, ut superiores substrigosae. *Inflorescentia* e spicis 4 per paria lateraliter disposita superpositis constituta ; pedunculus spicae inferioris 2–4 cm. longus, superioris multo brevior, squamis imbricatis tectus ; spicae circiter 3–3·5 cm. longae ; bracteae dorso substrigosae, infimae 3 cm. longae ; bracteolae 23 mm. longae, 3 mm. latae. *Calyx* hyalinus, 9 mm. longus. *Corollae* albae (ex *Kerr*) tubus 3·7 cm. longus ; lobi oblongo- vel lineari-lanceolati, acuti, circiter 2·3 cm. longi, 3–7 mm. lati. *Staminodia* lateralia lobos laterales labelli simulantia ; labellum 1·8 cm. longum, 1·3 cm. latum ; anthera circiter 1 cm. longa, connectivi appendicula paulo longior.

Chiengmai, in rather damp, evergreen jungle on Doi Sootep, 300 m., *Kerr*, 763.

Zingiber (Lampujum) Kerrii, *Craib*, sp. n., ab affini *Z. officinali*, Roscoe, inflorescentia multo robustiore recedit.

Herba unimetralis vel paulo altior. *Folia* lineari-lanceolata, apice gradatim attenuata, acuta, basi in petiolum brevissimum strigosum attenuata, ad 31 cm. longa et 2 cm. lata, chartacea vel interdum rigide chartacea, utrinque glabra ; ligula ad 3 mm. longa, plerumque 2 mm. longa, superne strigosa ; vaginae pilis perpaucis instructae ; vaginae infimae 5–6, basales brunneae, ceterae virides. *Pedunculus* 8–11 cm. longus, squamis 6–8 superne gradatim majoribus extra tenuiter pilosis instructus ; spica fusiformis, ad 10 cm. longa, 3–3·5 cm. lata ; bracteae ad 3·3 cm. longae et 2·2 cm. latae, apice obtusae vel subrotundatae, superne rubro-brunneae, margine scariosae, uniflorae ; bracteolae late lanceolatae, acutiusculae, ad 2·7 cm. longae, vix 1 cm. latae, extra apice basique praecipue parce pubescentes. *Calyx* hyalinus, brunneo-striatus, 7 mm. longus, inferne pilosus. *Corollae* tubus circiter 3 cm. longus ; lobi parum inaequales, ad 1·7 cm. longi, 4 mm. lati. *Staminodia* oblonga, ad 9 mm. longa et 3 mm. lata, brunneo-lineata ; labellum suborbiculare, basi attenuatum, 1·1 cm. longum, 1 cm. latum ; anthera 7 mm. longa, connectivi appendiculae aequilonga. *Ovarium* 2·5 mm. altum.

Chiengmai, in evergreen and open jungle on Doi Sootep, 900–1200 m., *Kerr*, 1290.

Zingiber Parishii, *Hook. f.*— F. B. I., vi. p. 248 ; K. Schum., Engler Pflanzenr., Zingib., p. 173.

Chiengmai, Doi Sootep, in evergreen jungle, 660 m., *Kerr*, 1314.

Distr. Burma.

Zingiber (Cryptanthium) Smilesianum, *Craib*, sp. n., ab affini *Z. rubente*, Roxb., statura minore, foliis angustioribus distinguenda.

Herba 20–40 cm. alta. *Folia* lineari-lanceolata vel lanceolata, apice longe acuminata, acuta, basi in petiolum ad 5 mm. longum

attenuata, 9–20 cm. longa, 1·5–3·2 cm. lata, supra glabra, subtus tenuiter parce pilosa ; ligula oblonga, circiter 2 mm. longa, bifida ; vaginae infimae 4–5, ut superiores tenuiter parce pilosae. *Spicae* fusiformes vel ovoideae, 3–4 cm. longae, pedunculo brevi validiusculo subhorizontali vel ad 7 cm. longo tenuiore ascendente paucisquamato suffultae ; bracteae oblongae vel late lanceolatae, exteriores ad 2·5 cm. longae, dorso tenuiter parce pilosae ; bracteolae ad 3·5 cm. longae, 3 mm. latae. *Calyx* 1·3 cm. longus, ima basi adpresse fulvido-pubescens. *Corollae* tubus circiter 3 cm. longus ; lobi lanceolati vel late lanceolati, acutissimi, ad 3 cm. longi et 6 mm. lati. *Staminodia* lobos laterales oblongos vix 1 cm. longos 1·5 mm. latos labelli formantia ; labellum ellipticum (apice retusum?) circiter 2 cm. longum et 1·2 cm. latum ; anthera 1·2 cm. longa, connectivi appendiculam aequans. *Ovarium* 3·5 mm. altum, dense adpresse fulvido-hirsutum.

Chiengmai, Doi Sootep, on edge of evergreen jungle, 1200 m., *Kerr*, 1311 and in evergreen jungle, 1200–1500 m., *Kerr*, 1311 a.

Zingiber Zerumbet, *Roscoe ex Smith*—F.B.I., vi. p. 247 ; K. Schum., Engler Pflanzenr., Zingiber., p. 172 ; Fl. Indo-Chine, vi. p. 84.

Chiengmai, Doi Sootep, in mixed jungle, 330 m., *Kerr*, 1299.

Distr. Tropical Asia—often cultivated.

Costus speciosus, *Smith*, var. **argyrophyllus**, *Baker*, F.B.I., vi. p. 250. *C. speciosus*, var. *sericea*, K. Schum., Engler Pflanzenr., Zingib., p. 399.

Chiengmai, Doi Sootep, in damp places near streams, 300–900 m., *Kerr*, 775.

Distr. (of var.) Burma, Malaya.

Alpinia bracteata, *Roxb.*—F.B.I., vi. p. 255 ; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 136 ; K. Schum., Engler Pflanzenr., Zingiber., p. 336 ; Fl. Indo-Chine, vi. p. 95.

Chiengmai, in thick, damp, evergreen jungle on Doi Sootep, 900–1500 m., *Kerr*, 559 ; Doi Sootep, 1500 m., *Hosseus*, 508.

Distr. E. India, Indo-China.

Alpinia oxymitra, *K. Schum.*—K. Schum., Engler Pflanzenr., Zingiber., p. 336 ; Williams, Bull. Herb. Boiss., iv. (1904) p. 231.

Sriracha, Nawng Kaw, 30 m., *Kerr*, 2069 ; Koh Chang, *Schmidt*, 798.

Siamese name, Ton Lao (ex *Kerr*).

Alpinia siamensis, *K. Schum.*, Engler Pflanzenr., Zingiber., p. 357 ; Fl. Indo-Chine, vi. p. 100. *A. conchigera*, Williams, Bull. Herb. Boiss., iv. (1904) p. 231, in part.

Bangkok, *Schomburgk*, 123.

Distr. Cochinchina, Cambodia—ex *Fl. Indo-Chine*.

Alpinia sp. aff. *A. nutanti*, Roscoe.

Chiengmai, Doi Sootep, 1050 m., *Kerr*, 623.

Probably nearly allied also to *A. platychilus*, K. Schum. this plant may represent a new species.

Schumannianthus dichotomus, *Gagnep.*—Fl. Indo-Chine, vi. p. 122. *Clinogyne dichotoma*, Salisb.—F.B.I., vi. p. 258. *Donax Arundastrum*, K. Schum., Engler Pflanzenr., Marant., p. 33 ; Williams, Bull. Herb. Boiss., iv. (1904) p. 361, *vix* Lour.

Chiengmai, 300 m., cultivated, used for basket work, *Kerr*, 1857 ; Bangkok, *Schomburgk*, 130, *Zimmermann*, 46.

Distr. S. E. Asia.

Lao name, Dawk Yĕng (ex *Kerr*).

Donax arundastrum, Hosseus, ii. p. 374, may also be this plant.

Phrynium capitatum, *Willd.*—F.B.I., vi. p. 258, in part ; K. Schum., Engler Pflanzenr., Marant., p. 53 ; Williams, Bull. Herb. Boiss., iv. (1904) p. 361.

Chiengmai, Doi Sootep, on marshy ground in evergreen jungle, 660 m., *Kerr*, 1799.

Distr. India, China, Indo-China, Malay Archipelago.

Halopegia brachystachys, *Craib*, sp. n., ab *H. macrostachya*, K. Schum., bracteis multo minoribus facile distinguenda.

Herba circiter semimetralis. *Folia* oblonga vel late oblonga, apice abrupte acuminata, acuta, basi rotundata vel cuneato-rotundata, 12–21 cm. longa, 5·5–9 cm. lata, supra glabra, subtus parcissime pubescentia, petiolo ad 13 cm. longo parte suprema incrassata ad 1·3 cm. longa suffulta, vaginis strigosis et strigoso-ciliatis. *Inflorescentia* in vaginis inclusa, floribus (omnibus infeliciter mancis) albis (ex *Kerr*) tantum exsertis ; bracteae lanceolatae, acutae, 4·5 cm. longae, 7 mm. latae, utrinque glabrae ; flores gemini, breviter pedunculati, altero pedicello alato 5 mm. longo altero pedicello brevi haud alato suffulto. *Sepala* duo lanceolata, acuta, ad 4 mm. longa, dorso parce pubescentia, tertium minutum. *Ovarium* basi apicēque strigosum. *Caryopsis* cylindrica, 8 mm. longa, 3·5 mm. diametro, monosperma.

Meh Ping, Kampeng, in mixed jungle, *Kerr*, 2030.

To this species probably also belongs the plant collected in Rangoon by Scott which is included under *Phrynium spicatum* in the Flora of British India and under *Stachyphrynium spicatum* by K. Schumann in his monograph of the Marantaceae in Engler's Pflanzenreich. The writer has not seen the plant collected at Pahombuk by Hosseus and referred by him (ii. p. 374) to *Stachyphrynium spicatum*.

Iridaceae.

Iris Collettii, *Hook. f. I. nepalensis*, forma depauperata, Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 136.

Chiengmai, Doi Sootep, in deciduous jungle, 480–750 m., *Kerr*, 656.

Distr. Upper Burma, Yunnan.

Part of this collection is typical in having the leaves quite small at the flowering stage, whereas part—also in the flowering stage—has leaves up to 48 cm. long.

Amaryllidaceae.

Hypoxis aurea, *Lour.*—F.B.I., vi. p. 277 ; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 136 ; Williams, Bull. Herb. Boiss., iv. (1904) p. 230.

Chiengmai, Doi Sootep, among grass in open jungle, 1200–1500 m., *Kerr*, 1280.

Distr. S.E. Asia.

Curculigo gracilis, *Wall.*—F.B.I., vi. p. 278.
Chiengmai, Doi Sootep, in evergreen jungle, 900 m., *Kerr*, 1812.
Distr. E. Himalaya.

Curculigo latifolia, *Dryand.*—F.B.I., vi. p. 280; Hosseus, ii. p. 373.
Koh Yai (ex *Hosseus*).
Distr. India, Burma, Malaya.

Curculigo orchioides, *Gaertn.*—F.B.I., vi. p. 279.
Chiengmai, in mixed jungle at foot of Doi Sootep, 330 m., *Kerr*, 1195.
Distr. S. China to Australia.

Curculigo recurvata, *Dryand.*—F.B.I., vi. p. 279.
Chiengmai, Doi Sootep, in evergreen jungle by streams, 660 m., *Kerr*, 1176.
Distr. S. China to Australia.

Curculigo sp.
Chiengmai, in mixed jungle, 660 m., *Kerr*, 1873.

Crinum Wattii, *Baker*—F.B.I., vi. p. 281.
Chiengmai, Doi Sootep, in mixed jungle, 300–900 m., *Kerr*, 1844.
Distr. Manipur, Upper Burma.

Taccaceae.

Tacca Garrettii, *Craib*, sp. n., a *T. laevi*, Roxb., involucro multo majore e segmentis 4 quorum duobus aliis multo majoribus constituto recedit.

Folia anguste elliptica, apice acuminata, acuta, basi rotundata, ad 45 cm. longa et 18·5 cm. lata, chartacea, glabra, nervis lateralibus primariis circiter 12 subtus cum costa prominentibus supra conspicuis subprominulis, petiolo ad 45 cm. longo suffulta. *Pedunculus* 66 cm. longus, glaber. *Involucri* bracteae glabrae, majores 7 cm. longae et 8 cm. latae, minores 7 cm. longae, 3·5 cm. latae; bracteae filiformes, ad 20·5 cm. longae. *Pedicelli* 3–3·5 cm. longi, glabri. *Receptaculum* 7 mm. altum, subalatum. *Perianthii* tubus circiter 6 mm. longus; lobi exteriores oblongi, apice rotundati, circiter 11 mm. longi et 8 mm. lati; interiores exterioribus paulo majores.

Doi Intanon Range of the Pah Ngeam, 1230 m., in wet jungle among rotting wood, *Garrett*, 45.

Tacca laevis, *Roxb.*—F.B.I., vi. p. 288.
Chiengmai, Doi Sootep, in evergreen jungle by a stream, 690–900 m., *Kerr*, 1168, 1168a—"fruit lying on ground, underneath fallen leaves."
Distr. S.E. Asia.

Dioscoreaceae.*

Dioscorea alata, *Linn.*
Chiengmai, 300 m., in scrub jungle, *Kerr*, 1528a; Doi Sootep, 330 m., in scrub jungle, *Kerr*, 1528b.

* The specimens of *Dioscorea* have been kindly named for me by Mr I. H. Burkill who, with Sir D. Prain, is at present engaged on a monograph of the genus. Owing to the involved synonymy references to published works have been omitted.

Distr. India, Assam, Burma, Yunnan, Polynesia, Mascerene Is., West Tropical Africa.

Dioscorea birmanica, *Prain et Burkill.*
Chiengmai, in scrub jungle at foot of Doi Sootep, 330 m., *Kerr*, 1326.
Distr. Burma.

Dioscorea brevipetiolata, *Prain et Burkill.*
Sriracha, Nawng Kaw, edge of railway track, 30 m., *Kerr*, 2047.

Dioscorea bulbifera, *Linn.*
Chiengmai, in scrub jungle, 300 m., *Kerr*, 1529b ; near Muang Hawt, 225 m., *Kerr*, 2206 ; Phre, 156–240 m., *Luang Vanpruk*, 127.
Distr. Through India except the driest parts, Ceylon and eastwards to Tahiti reaching Japan northwards and entering Australia southwards. Probably only an introduction in other parts of the world (*e.g.*, Africa and W. Indies).
Lao name, Koii (ex *Kerr*).

Dioscorea daemona, *Roxb.*, var. **mollissima**, *Prain et Burkill.*
Chiengmai, in mixed jungle at foot of Doi Sootep, 300 m., *Kerr*, 681.
Distr. Through India except the dry parts of the North West, Ceylon and eastwards through southern China, Malaya to New Guinea ; var. *mollissima* in the Malay region only.

Dioscorea decipiens, *Hook. f.*
Chiengmai, Doi Sootep, in mixed jungle, 360 m., *Kerr*, 1449.
Distr. Burma, just entering Southern China and reaching Cochinchina.

Dioscorea glabra, *Roxb.*
Chiengmai, Doi Sootep, in scrub jungle, 330 m., *Kerr*, 1485.
Distr. From Orissa and Bengal eastwards to the Malay Islands.

Dioscorea kamoonensis, *Kth.*
Chiengmai, Doi Sootep, in open jungle, 1560 m., *Kerr*, 1374.
Distr. Along the Himalaya to South-Western China and thence southwards in a few ranges.

Dioscorea Kerrii, *Prain et Burkill.*
Chiengmai, *Kerr*, 1404.

Dioscorea membranacea, *Pierre.*
Chiengmai, Doi Sootep, in mixed jungle, 360 m., *Kerr*, 1245 ; Meh Hia, 330 m., in mixed jungle, *Kerr*, 1951.
Distr. Chin Hills, Cochinchina.

Dioscorea pentaphylla, *Linn.*
Chiengmai, Doi Sootep, 900 m., *Kerr*, 1383, 1383a.
Distr. India, except the Punjab, Ceylon and eastwards to Tahiti entering Southern China.

Dioscorea pentaphylla, *Linn.*, var. near var. *Jacquemontii.*
Chiengmai, Doi Sootep, in mixed jungle, 360 m., *Kerr*, 1450.
This variety is confined to Western India. *Kerr*, 1450 cannot be proved to be the same with the root and abundance of ♂ flowers.

Dioscorea pentaphylla, *Linn.*, var. malaica.

Chiengmai, in scrub jungle, 300 m., *Kerr*, 2251 ; Doi Sootep, in mixed jungle, 330 m., *Kerr*, 2251a.

Distr. (of *var.*). Malaya and perhaps in the Pacific.

Roxburghiaceae.

Stemona aphylla, *Craib*, sp. n., caulibus florigeris crassis, foliis ad bracteas squamoideas reductis, pedunculo communi brevi distincta.

Caules florigeri ad 4·5 mm. diametro, teretes, primo leves, mox striati, hic illic glaucescentes, glabri. *Folia*, saltem caulium florigerorum, ad squamas deltoideas acutas 7 mm. longitudinis et basi fere 7 mm. latitudinis attingentes glabras reducta. *Pedunculus* communis abbreviatus, squama brevior vel eam subaequans, glaber ; bracteae lanceolatae, acutae, ad 4·5 mm. longae, squamiformes, glabrae ; pedicelli plerumque circiter 1·5 cm. longi, glabri, medium prope articulati ; flores virides (ex *Kerr*). *Fl.* ♂. *Perianthii* segmenta 4, exteriora anguste oblonga, acuta, 2·5 cm. longa, 5·5 mm. lata, interiora oblongo-ovata, acuta, exterioribus subaequilonga, circiter 1 cm. lata. *Stamina* 4 ; filamenta brevia, basi breviter connata ; antherae (appendice inclusa) 21 mm. longae. *Ovarii* rudimentum parvum. *Fl.* ♀ (vel ♂ ?). *Perianthiium* masculi sed minus. *Stamina* 4, (fertilia ?). *Ovarium* 4 mm. altum, stylo obtuso vix distincto, ovulis pluribus erectis.

Near Phre, Me Ta, perennial with trailing shoots, roots numerous thick and fleshy, in dry bamboo jungle, 240 m., *Kerr*, 2351.

Stemona Burkillii, *Prain*, Journ. As. Soc. Beng., lxxiii. p. 43, *ex descr.*

Chiengmai, Doi Sootep, in evergreen jungle, 420 m., *Kerr*, 1403, in mixed jungle, 570 m., *Kerr*, 1403a.

Distr. Upper Burma (ex *Prain*).

Stemona Griffithiana, *Kurz*—F.B.I., vi. p. 299 ; Prain, Journ. As. Soc. Beng., lxxiii. p. 42.

Phre, Rawng Kwang, in deciduous jungle, 180 m., *Kerr*, 2365.

Distr. Burma.

Stemona Kerrii, *Craib*, sp. n., a *S. Curtisii*, Hook. f., foliis minoribus haud glabris facile distinguenda.

Herba erecta vel volubilis ; radices e rhizomate perenni fusiformes, ad 10 cm. longae, 7 mm. diametro ; caules breviter crispatim pubescentes, juventute gracillimi, si erecti flexuosi. *Folia* ovata vel late ovata, apice acuminata, acuta, basi cordata, plerumque altius cordata, 3-8 cm. longa, 2-6·3 cm. lata, basi plerumque 11-13-nervata, nervis lateralibus supra conspicuis subtus prominentibus, nervis transversis densis parallelis utrinque conspicuis, nervis nervulisque pagina superiore pilis albis parcissime instructa, inferiore piloso-pubescentia, sicco viridia ; petioli 0·7–3 cm. longi, supra canaliculati, indumento ut caules. *Inflorescentia* axillaris, 1–3-flora, petiolos subaequans, floribus polygamo-dioicis. *Fl.* ♂. *Perianthii* segmenta 4, lineari-lanceolata vel late lanceolata, acuta, 9 mm. longa, 2·25–3·25 mm. lata, extra pilis paucis rigidis erectis instructa, intra glabra. *Filamenta* brevissima, ima basi connata, ovarii rudimentum minutum cingentia ; antherae sicco subvirides, 2·25 mm. longae ; connectivi appendicula sicco rubra, inaequaliter trialata, alis

lateralibus 6 mm. longis utraque 0·75 mm. lata intra paulo supra alae mediae apicem corpusculo albido circiter 1 mm. longo ornatis ala media 1·75 mm. longa. *Fl.* ♂. *Perianthium staminaque* maris nisi paulo longiora. *Pistillum* glabrum, 2·5 mm. altum, ovulis 2 erectis.

Chiengmai, Doi Sootep, 720–900 m., erect or scandent on low herbage, *Kerr*, 707.

Liliaceae.

Smilax Hemsleyana, *Craib*, sp. n., a *S. lanceaefolia*, Roxb., foliis late ellipticis vel ovato-ellipticis distinguenda.

Ramuli straminei, striati vel minute striati, glabri, aculeis sparsissime instructi. *Folia* elliptica, late elliptica vel ovato-elliptica, apice breviter acuminata, basi truncato- vel rotundato-cuneata, 9–12 cm. longa, 6–9·5 cm. lata, glabra, rigide chartacea, 5-nervia, nervis cum nervulis pagina utraque prominulis, petiolo 1·5–2 cm. longo suffulta ; vaginae petiolis 5–7 mm. adnatae. *Pedunculus* inflorescentiae ♀ 3·7 cm. longus, 8 mm. e basi bibracteatus, glaber ; pedicelli circiter 8 mm. longi, glabri. *Perianthii* albi (ex *Kerr*) segmenta medio reflexa, exteriora suboblonga, apice cucullata, medio (ubi reflexa) parum angustata, 4·5 mm. longa, 2·25 mm. lata, interiora 4·5 mm. longa, basi 1 mm. lata, superne 0·75 mm. lata. *Staminodia* 3, filiformia, 2·5 mm. longa. *Ovarium* 3 mm. altum, glabrum. *Fructus* globosus, sicco substramineus, 7–8 mm. diametro.

Chiengmai, Doi Sootep, climbing over bushes in evergreen jungle by stream, 660 m., *Kerr*, 596.

Collett, 653 referred to by Coll. and Hemsl., Journ. Linn. Soc., xxviii. p. 137 under *S. lanceaefolia*, probably also belongs to this species.

Smilax lanceaefolia, *Roxb.*—F.B.I., vi. p. 308 ; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 137 ; Hosseus, ii. p. 373.

Chiengmai, Doi Sootep, in evergreen jungle, 1050–1350 m., *Kerr*, 522 ; Doi Intanon, 1300 m., *Hosseus*, 337.

Distr. Sikkim, Assam, Burma, China.

Smilax macrophylla, *Roxb.*—F.B.I., vi. p. 310 ; Hosseus, ii. p. 373.

Chiengmai, Doi Sootep, in mixed jungle, 330 m., *Kerr*, 1847.

Distr. India, Burma, Assam.

Smilax peguana, *A. DC.*—F.B.I., vi. p. 303.

Chiengmai, Doi Sootep, in evergreen jungle, 1050–1350 m., *Kerr*, 679.

Distr. Burma.

Smilax prolifera, *Roxb.*—F.B.I., vi. p. 312.

Chieng Kŭm, 390 m., *Kerr*, 2465.

Distr. India, Assam, Burma.

Lao name, Mai dao (ex *Kerr*).

Smilax sp.

Chiengmai, Doi Sootep, 300–750 m., *Kerr*, 632.

Smilax sp., *Hosseus*, ii. p. 373.

Chiengmai, Doi Sootep, 1675 m. (ex *Hosseus*).

Asparagus acerosus, *Roxb.*—F.B.I., vi. p. 317.

Chiengmai, cultivated, 300 m., *Kerr*, 2626—"said to have been brought from the jungle."

Distr. Bengal, Assam, Burma (N. Australia?).

Asparagus racemosus, *Willd.*—F.B.I., vi. p. 316; Williams, Bull. Herb. Boiss., iv. (1904) p. 230.

Sriracha, on rocks by beach, *Kerr*, 2096.

Distr. Trop. Asia, Australia and Africa.

Asparagus racemosus, *Willd.*, var. **subacerosa**, *Baker*—F.B.I., vi. p. 317.

Chiengmai, 300 m., in scrub jungle, *Kerr*, 1961.

Distr. Sikkim.

Asparagus sp., *Hosseus*, ii. p. 373.

Doi Intanon, 1100 m. (ex *Hosseus*).

Disporopsis longifolia, *Craib*, sp. n., a speciebus adhuc descriptis foliis multo longioribus facile distinguenda.

Herba glabra, *Polygonati* speciebus facie persimilis; rhizoma repens, circiter 1 cm. diametro; caules solitarii vel bini, 33–107 cm. alti. *Folia* lanceolata vel late lanceolata, apice longe acuminata, acuta, basi cuneata vel rotundato-cuneata, 12–30 cm. longa, 2·6–5·2 cm. lata, nervis primariis 3–5 pagina utraque prominulis, secundariis conspicuis, petiolo brevi validiusculo suffulta. *Flores* in fasciculas ad 7-floras axillares dispositi; pedicelli ad 1·5 cm. longi, sulcati vel subalati. *Perianthii* albi (ex *Kerr*) tubus subglobosus, 3–4 mm. altus, lobi exteriores elliptico-lanceolati, acutiusculi, 7 mm. longi, 4·5 mm. lati, interiores exterioribus paulo breviores latioresque, apice rotundato-truncati vel fere truncati. *Corona* 1·75 mm. alta, paulo ultra medium lobata, lobis apice emarginatis. *Stamina* ad apices coronae loborum affixa, filamentis brevissimis; antherae dorsifixae, basi saccatim productae, 3 mm. longae. *Pistillum* corona occlusum; ovarium 3 mm. altum, stylo vix 2 mm. longo.

Chiengmai, in evergreen jungle on Doi Sootep, 960 m., *Kerr*, 687a; in evergreen jungle, 900 m., *Kerr*, 687.

Distr. S.W. China: Szemao, 1350–1800 m., *Henry*, 12,225, 12,225b, 12,225c; Lungchow, *Morse*, 603.

The description has been drawn up from *Kerr* 687a which is the type of the species and which agrees with Morse's plant and with part of Henry's. Part of Kerr 687 agrees with the type but part agrees with the remainder of Henry's plants in having shorter and relatively broader leaves which are not nearly so long acuminate.

D. longifolia differs from Hance's original plant in some important points besides the diagnostic character given above. The flowers are here arranged in axillary fascicles whereas in Hance's plant they are solitary. Again the structure of the corona is markedly different. In the original plant the lobes alternate with the stamens whereas here the stamens are situated at the apex of the lobes.

Ophiopogon brevipes, *Craib*, sp. n., ob racemum breviusculum validum subcernuum foliaque longiuscula angusta distincta.

Rhizoma repens, radices longiusculas satis crassas emittens. *Folia* rigidiuscula, sub anthesin circiter 20 cm. longa et 4 mm. lata, deinde in fructu ad fere 40 cm. longa et 7 mm. lata, petiolo circiter 4 cm. longo suffulta, pagina utraque glabra, inferiore nervis

prominulis, pallidiora, minute serrulata. *Racemi* sub anthesin 3·7 cm. longi, pedunculo crassiusculo circiter 5 cm. longo sulcato superne bracteis 4 sterilibus paleaceis instructo suffulti ; bracteae normales persistentes, infimae ovato-lanceolatae, acutae, 4 cm. longae, supremae gradatim minores, 2–3-florae ; pedicelli recurvi, 3·5 mm. longi, circiter medium articulati. *Perianthii* albi (ex *Kerr*) segmenta exteriora lineari-oblonga, vix 7 mm. longa et 2 mm. lata, interiora late lanceolata, exterioribus paululo latiora. *Filamenta* brevia, complanata ; antherae vix 3 mm. longae, connectivo producto. *Stylus* validiusculus, glaber, perianthio aequialtus.

Chiengmai, Doi Sootep, 660 m., *Kerr*, 1197, 1197a, 1840, 2609.

Ophiopogon gracilipes, *Craib*, sp. n., ob perianthii lobos reflexos, facie *Peliosanthis* speciebus similis distincta.

Folia oblongo-oblanceolata, utrinque acutata, 12–21 cm. longa, 1·5–3 cm. lata, chartacea, glabra, nervis primariis circiter 5 supra prominentibus subtus conspicuis vel prominulis, petiolis ad 15 cm. longis suffulta. *Racemi* laxiflori, circiter 8 cm. longi, pedunculo communi 3·5–8·5 cm. longo glabro sulcato bracteis pluribus sterilibus bracteis floriferis similibus superne gradatim minoribus instructo suffulti ; bracteae floriferae ovato-lanceolatae, plerumque arcuatae, ad 7 mm. longae, albidae ; pedicelli rigidi, decurvi, circiter 6 mm. longi, apicem versus articulati, glabri ; bracteola ovato-lanceolata, acuta, superne falcata, bractea conspicue minor. *Perianthii* albi (ex *Kerr*) segmenta exteriora lanceolata, acuta, 4 mm. longa, 1·5 mm. lata, interiora paululo longiora latioraque, apice subrotundata. *Filamenta* brevia, ima basi connata ; antherae circiter 2·5 mm. longae. *Ovarium* superum, in stylum gradatim fastigatum ; ovula in loculo quoque gemina, erecta, collateralia.

Chiengmai, Doi Sootep, in evergreen jungle, 660 m., *Kerr*, 1087.

Ophiopogon Malcolmsonii, *Royle ex Hook. f.*, F.B.I., vi. p. 269.

Chiengmai, Doi Sootep, by a stream, 720 m., *Kerr*, 1198.

Distr. Burma.

Dracaena sp.

Phre, 120–180 m., *Luang Vanpruk*, 152.

Chlorophytum intermedium, *Craib*, sp. n., a *C. orchidastro*, Lindl., foliis multo angustioribus, a *C. undulato*, Wall., floribus minoribus, pedicellis brevioribus recedit.

Herba 0·5–1 m. alta ; radices satis crassae, elongatae. *Folia* ad 58 cm. (petiolo incluso) longa et 2·2 cm. lata, apice acuta, basi in petiolum vix distinctum attenuata, petiolo basi expanso pedunculum amplectente, nervis primariis pagina utraque prominulis. *Racemi* solitarii, vel simplices vel inferne tantum furcati, pedunculo communi folia saepissime subaequante superne bractea sterili lanceolata vel lineari-lanceolata acuta 1·5–6·5 cm. longa instructo ; bracteae normales lanceolatae vel ovato-lanceolatae, acutae, 0·4–1 cm. longae ; pedicelli 7 mm. longi. *Perianthii* albi (ex *Kerr*) segmenta lineari-lanceolata, obtusiuscula, inter se subaequalia, circiter 8 mm. longa, 1·5 mm. lata. *Filamenta* 4 mm. longa, quam antherae basi bilobae paulo breviora. *Ovarium* 1·5 mm. altum, loculis 4-ovulatis ; stylus 8 mm. longus.

Chiengmai, in deciduous jungle on Doi Sootep, 450–750 m., *Kerr*, 773.

Chlorophytum simplex, *Craib*, sp. n., racemis laxis simplicibus folia lata plerumque paululo excedentibus, floribus majusculis distinguenda.

Herba 18–34 cm. alta, glabra; radices satis crassae, anguste fusiformes, ad 16 cm. longae, circiter 4 mm. diametro. *Folia* plerumque oblongo-lanceolata, apice subacuminata, acuta, basi in petiolum plus minusve distinctum contracta, 14–30 cm. (petiolo incluso) longa, 2·5–4 cm. lata, nervis primariis subtus prominentibus supra conspicuis vel prominulis, petiolis basi in vaginam expansis pedunculum amplectentibus. *Racemi* solitarii, simplices, circiter 15 cm. longi, pedunculo communi racemo subaequali suffulti; bracteae 1–3 infimae plerumque steriles, anguste lanceolatae, acutae, 1·5 cm. longae; bracteae fertiles plerumque 3-florae; pedicelli sub anthesin circiter 3 mm. longi, fructescentes paululo incrassati elongatique; alabastra ambitu plus minusve oblongo-ovata, obtusa. *Perianthii* segmenta alba (ex *Kerr*), inter se subaequalia, linearia vel lineari-oblonga, apice obtusiuscula, vix 1 cm. longa, 2 mm. lata. *Filamenta* circiter 4 mm. longa, ut antherae, superne praecipue, minute papillosa; antherae 6 mm. longae, basi bilobae. *Ovarium* 1·5 mm. altum, trigonum; stylus 9 mm. longus; loculi 4-ovulati. *Fructus* 5 mm. altus, 7 mm. latus.

Muang Hawt, in deciduous jungle, 210 m., *Kerr*, 2204.

Anthericum sp., *Hosseus*, ii. p. 373.

Wang Djao, 150 m. (ex *Hosseus*).

Dianella ensifolia, *Redouté*—F.B.I., vi. p. 347. *D. sp.*, Hosseus, ii. p. 373.

Chiengmai, Doi Sootep, 750–1400 m., *Kerr*, 1319, *Hosseus*, 456.

Distr. Tropical Asia and Australia, Mascerene Is.

Urginea indica, *Kunth*—F.B.I., vi. p. 347.

Chiengmai, Doi Sootep, in deciduous jungle, 330–450 m., *Kerr*, 1754, 1754a, 1754b.

Distr. India, Burma.

Lilium nepalense, *D. Don*—F.B.I., vi. p. 350; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 138.

Chiengmai, Doi Sootep, in open grassy jungle along tops of ridges, 1260–1560 m., *Kerr*, 734. Also flowered in Hort. Trin. Coll., Dublin in August this year.

Distr. Himalaya, Upper Burma.

Iphigenia indica, *Kunth*—F.B.I., vi. p. 357.

Chiengmai, Doi Sootep, among grass in an open spot, 600 m., *Kerr*, 752.

Distr. India to Australia.

Disporum calcaratum, *Don*—F.B.I., vi. p. 359; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 139. *D. latipetalum*, Coll. et Hemsl., l.c., p. 139.

Chiengmai, Doi Sootep, among grass in open jungle on ridges, 1350–1500 m., *Kerr*, 672 and in deciduous jungle, 720–900 m., *Kerr*, 693.

Distr. Himalaya, Assam, Burma, Yunnan.

Disporum pullum, *Salisb.*—F.B.I., vi. p. 360.

Chiengmai, Doi Sootep, in evergreen jungle, 1500–1650 m., *Kerr*, 617.

Distr. Himalaya to China, Assam, Malay Archipelago.

Paris polyphylla, *Smith*—F.B.I., vi. p. 362; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 139.

Chiengmai, Doi Sootep, in open grassy jungle, 1380 m., *Kerr*, 1189.

Distr. Himalaya to China.

Pontederiaceae.

Monochoria hastata, *Solms*—Williams, Bull. Herb. Boiss., iv. (1904) p. 229; Hosseus, i. p. 471. *M. hastaefolia*, Presl.—F.B.I., vi. p. 362.

Chiengmai moat, 300 m., *Kerr*, 1361—"eaten as vegetable."

Distr. S.E. Asia.

Lao name, Puk tope (ex *Kerr*).

Monochoria vaginalis, *Presl.*—F.B.I., vi. p. 363; Hosseus, i. p. 471 et ii. p. 372.

Doi Intanon, 1095 m., *Garrett*, 58; Wang Djao, 100 m. and Doi Sootep, 1050 m. (ex *Hosseus*).

Distr. S.E. Asia, Tropical Africa.

Garrett's plant is referable rather to the variety *plantaginea*, Solms-Laubach.

Xyridaceae.

Xyris pauciflora, *Willd.*—F.B.I., vi. p. 365; Williams, Bull. Herb. Boiss., iv. (1904) p. 228; Hosseus, i. p. 468 et ii. p. 371.

Ban Meh Kah, above Meh Ping Rapids, in open marshy ground, 195 m., *Kerr*, 913; Wang Djao, *Lindhard*, 20, *Hosseus*, 118.

Distr. S.E. Asia to Australia.

Xyris pauciflora, *Willd.*, var.

Doi Intanon, 2150–2170 m., *Garrett*, 69.

Xyris schoenoides, *Mart.*—F.B.I., vi. p. 365.

Chiengmai, Doi Sootep, in open grassy jungle, 1350–1500 m., *Kerr*, 1503.

Distr. India, Khasia.

Commelinaceae.

Pollia Aclisia, *Hassk.*—F.B.I., vi. p. 367.

Chiengmai, Doi Sootep, in evergreen jungle by stream, 1260 m., *Kerr*, 1288.

Distr. Himalaya, Assam, Burma, China, Tonkin, Java.

Pollia thyrsiflora, *Hassk.*—F.B.I., vi. p. 367; Hosseus, i. p. 468.

Klong Sarlakpet (ex *Bot. Tidsskr.*, xxvi. p. 164).

Distr. S. Andamans, Borneo, Celebes, Philippines.

Commelina benghalensis, *Linn.*—F.B.I., vi. p. 370.

Chiengmai, 300 m., *Kerr*, 1344—"a garden weed."

Distr. Trop. Asia and Africa.

Commelina nudiflora, *Linn.*—F.B.I., vi. p. 369; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 139.

Chiengmai, Doi Sootep, by open streams, 330 m., *Kerr*, 1251.
Distr. Tropics and subtropics.

Commelina obliqua, *Ham.*—F.B.I., vi. p. 372 ; Hosseus, i. p. 469 et ii. p. 372.
Chiengmai, in open grassy jungle on Doi Sootep, 900–1200 m., *Kerr*, 1292 ; Wang Djao, Koh Yai, 110 m., *Hosseus*, 93.
Distr. Tropical Asia.
Part of *Kerr* 1292 is referable to *f. viscida*, Clarke.

Commelina salicifolia, *Roxb.*—F.B.I., vi. p. 370 ; Hosseus, i. p. 469.
Bangkok (ex *Hosseus*).
Distr. India, Assam.

Commelina spp.
Chiengmai, on mud bank of Meh Ping, 300 m., *Kerr*, 850 ; Doi Sootep, in evergreen jungle, 1050–1500 m., *Kerr*, 1289.

Aneilema bracteatum, *O. Kze. A. nudiflorum*, var. *bracteatum*, C. B. Clarke—Williams, Bull. Herb. Boiss., iv. (1904) p. 229 ; Hosseus, i. p. 470.
Chiengmai, Doi Sootep, in mixed jungle, 330 m., *Kerr*, 1458 ; Bangkok, *Schomburgk*, 329.
Distr. Annam (ex *O. Kze.*).

Aneilema clandestinum, *Ridley*.
Chiengmai, Doi Sootep, edge of stream in evergreen jungle, 660 m., *Kerr*, 1615 b.
Distr. Perak.

Aneilema discretum, *Craib*, sp. n., ab *A. divergente*, C. B. Clarke, inflorescentiae ramulis alternis nunquam oppositis nec verticillatis, ab *A. scapiflorae*, var. *latifolia*, N. E. Brown, habitu robusto, pedunculo communi haud aphyllo recedit.

Folia 15–30 cm. longa, circiter 2·5 cm. lata, apice acuta, inferne sensim angustata, dein in vaginam ampliata, supra marginem undulatum cartilagineum secus lineis paucis pilorum ornata, praeterea glabra, subtus subglabra, chartacea, nervis primariis paucis pagina superiore prominulis inferiore vix conspicuis. *Pedunculi* a foliis discreti, decumbentes, saepe nodis inferioribus radicantes, ad 80 cm. longi, pilis ascendentibus hirsutuli, sicco canaliculati, ima basi vaginis duobus dein foliis 6 supremis ad vaginam meram reductis instructi ; folia infima limbo circiter 10 cm. longo foliis normalibus simili basi in vaginam pedunculum laxe includentem eunte ; vaginae supremae circiter 1 cm. longae. *Panicula* circiter 7 cm. longa et 1·5 cm. diametro, staminibus exceptis glabra ; rami secundi, infimi ad 1·5 cm. longi ; bracteae ad ramorum bases brunneae, basi rachin cingentes, ad 3 mm. longae ; bracteae normales similes sed minores ; flores albi, vespere expansi (ex *Kerr*). *Sepala* 7 mm. longa, apice cucullata. *Petala* sepalis parum breviora. *Filamenta* inferne dense villosa ; antherae versatiles, 2 mm. longae. *Ovarium* 2 mm. altum, stylo 5 mm. longo. *Capsula* ad 7 mm. longa, pedicello 7 mm. longo suffulta, valvis apice cuspidatis, seminibus vix maturis.
Chiengmai, Doi Sootep, in mixed jungle, 330 m., *Kerr*, 1909.

Aneilema divergens, *C. B. Clarke*—F.B.I., vi. p. 376 ; Hosseus, i. p. 469.

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Chiengmai, Doi Sootep, in eng jungle, 420 m., *Kerr*, 1315; Doi Saket (ex *Hosseus*).

Distr. Himalaya, Khasia, S. China.

Aneilema esculentum, *Wall.*—F.B.I., vi. p. 377 ; Hosseus, i. p. 469 et ii. p. 371.

Chiengmai, Doi Sootep, 350–1200 m. (ex *Hosseus*).

Distr. S. India, Ceylon.

Aneilema giganteum, *R. Br.*—F.B.I., vi. p. 379 ; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 140 ; Hosseus, i. p. 469 et ii. p. 371.

Wang Djao, 100 m., *Hosseus*, 75.

Distr. Trop. Asia, N. Australia, Africa.

Aneilema herbaceum, *Wall.*—Hosseus, i. p. 469 et ii. p. 372.

Doi Saket (ex *Hosseus*).

Aneilema Loureirii, *Hance*—F.B.I., vi. p. 375 ; Williams, Bull. Herb. Boiss., iv. (1904) p. 228 ; Hosseus, i. p. 470 et ii. p. 372.

Chiengmai, Doi Sootep, 660 m., *Kerr*, 1177.

Distr. S. China, Burma.

Aneilema nudiflorum, *Br.*—F.B.I., vi. p. 378.

Chiengmai, among pasture grass, 300 m., *Kerr*, 849 ; Doi Sootep, on damp rocks by stream, 720 m., *Kerr*, 1419.

Distr. S. E. Asia.

Aneilema scaberrimum, *Kunth*—F.B.I., vi. p. 382.

Chiengmai, Doi Sootep, 1650 m., in evergreen jungle, *Kerr*, 1508.

Distr. Nepaul to Khasia, Yunnan, Philippines, S. India.

Aneilema scapiflorum, *Wight*—F.B.I., vi. p. 375 ; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 140.

Chiengmai, Doi Sootep, 330–660 m., *Kerr*, 1786—"flowers blue, opening in morning only."

Distr. India, Burma, Philippines.

Aneilema siamense, *Craib*, sp. n., *A. Thomsoni*, C. B. Clarke, facie similis sed nodis radicantibus, foliis haud scabris, ovario subgloboso distinguenda.

Caules juventute parce hirsutuli, mox glabri, nodis basalibus radicantes. *Folia* elliptica, anguste elliptica vel oblanceolata, apice acuminata, acuta, basi in petiolum attenuata, 11–13 cm. longa, 3·5–4·8 cm. lata, utrinque glabra, chartacea, nervis primariis supra subconspicuis vel fere obscuris subtus prominulis, petiolo 1–2·5 cm. longo inferne subtus parce hirsutulo suffulta ; vaginae circiter 2 cm. longae, extra parce hirsutulae. *Paniculae* pedunculo circiter 7 cm. longo medio bracteato suffultae ; rachis, rami et pedunculus parce hirsutuli ; rami infimi subverticillati et alterni, supremi alterni, erecto-patentes, 2 cm. longitudinis vix attingentes ; bracteae ad ramorum bases sub anthesin arcte reflexae, lanceolatae, acutiusculae, ad 1·2 cm. longae et 2·5 mm. latae. *Sepala* elliptico-obovata, 3·5 mm. longa, 3 mm. lata. *Petala* alba (ex *Kerr*), sepalis subaequalia. *Filamenta* petalis subaequilonga, glabra. *Ovarium* subglobosum, vix 1·5 mm. altum, stylo 6·5 mm. longo.

Sriracha, Nawng Kaw, in evergreen jungle, 30 m., *Kerr*, 2064.

Aneilema sinicum, *Lindl.*—F.B.I., vi. p. 379.

Chiengmai, Doi Sootep, in open jungle, 750–1500 m., *Kerr*, 702 —"flowers open after mid-day."
Distr. S. E. Asia, Trop. Africa.

Aneilema spiratum, *R. Br.*—F.B.I., vi. p. 377 ; Williams, Bull. Herb. Boiss., v. (1905) p. 960 ; Hosseus, i. p. 470 et ii. p. 372.
Wang Djao, near Tapotsah, *Lindhard*, 75.
Distr. S. E. Asia.

Cyanotis axillaris, *R. et S.*—F.B.I., vi. p. 388 ; Williams, Bull. Herb. Boiss., iv. (1904) p. 229 ; Hosseus, i. p. 470 et ii. p. 372.
Chiengmai, by edge of paddy fields, 300 m., *Kerr*, 801 ; Wang Djao, *Hosseus*, 171a.
Distr. India and China to Australia.

Cyanotis barbata, *Don*—F.B.I., vi. p. 385 ; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 140.
Chiengmai, Doi Sootep, on rocks by stream, 600 m., *Kerr*, 1429.
Distr. Himalaya, Assam, Burma, China, Malay Peninsula.

Cyanotis capitata, *C. B. Clarke.*
Chiengmai, Doi Sootep, creeping on damp rocks by a stream, 720 m., *Kerr*, 1416.
Distr. Cochinchina, Philippines, Java, New Guinea.

Cyanotis cristata, *R. et S.*—F.B.I., vi. p. 385 ; Williams, Bull. Herb. Boiss., iv. (1904) p. 229 ; Hosseus, i. p. 470 et ii. p. 372.
Chiengmai, 300 m., *Kerr*, 1441, "a garden weed" ; Doi Sootep, 300–600 m., in eng jungle, *Kerr*, 756 ; bank of Meh Ping, near Raheng, 120 m., *Kerr*, 504 ; Wang Djao, *Hosseus*, 72 ; near Tapotsah, *Lindhard*, 28 ; Cape Liant, *Murton*, 31.
Distr. Trop. Asia, Africa, Mascerene Is.
Of the specimens quoted probably *Kerr*, 1441, comes nearest to typical *C. cristata.*

Cyanotis nobilis, *Hassk.* *C. barbata*, Don, *f. nobilis*, C. B. Clarke—F.B.I., vi. p. 386.
Chiengmai, Doi Sootep, prostrate among rocks in open jungle, 1350–1500 m., *Kerr*, 703.
Distr. Khasia, China.

Floscopa scandens, *Lour.*—F.B.I., vi. p. 390 ; Hosseus, i. p. 471 et ii. p. 372.
Chiengmai, Doi Sootep, by stream, 690 m., *Kerr*, 1493 ; Pitsanulok, Nakontai, 300 m., *Kerr*, 722.
Distr. S.E. Asia, Australia.

Streptolirion volubile, *Edgew.*—F.B.I., vi. p. 389.
Doi Intanon, 2070 m., *Garrett*, 78.
Distr. Himalaya, Assam, Burma, China.

Palmeae.*

Wallichia caryotoides, *Roxb.*—F.B.I., vi. p. 419.
Chiengmai, Doi Sootep, in evergreen jungle by stream, 900 m., *Kerr*, 1513.

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* For the identifications of the specimens of this family the writer is indebted to Dr. O. Beccari, whose researches in this group are well known.

Distr. Bengal, Assam, Burma.
Lao name, Keuang (ex *Kerr*).

Didymosperma caudata, *Wendl. et Drude*—Beccari, Webbia, iii. p. 201 et Bull. Mus. Nat. d'Hist. Nat., 1911, p. 155.
Sriracha, Nawng Kaw, 30 m., in evergeen jungle, *Kerr*, 2077.
Frequent throughout Indo-China (ex *Beccari*).
Siamese name, Mai tan (ex *Kerr*).

Licuala spinosa, *Wurmb.*—F.B.I., vi. p. 431 ; Beccari, Webbia, iii. p. 240 et Bull. Mus. Nat. d'Hist. Nat., 1911, p. 157.

Sriracha, Nawng Kaw, in damp evergreen jungle, 30 m., *Kerr*, 2089.
Distr. Andaman and Nicobar Islands, Malaya.
Siamese name, K'Paw (ex *Kerr*).

Calamus Kerrianus, *Beccari*, sp. n., Ann. Roy. Bot. Gard. Calc., xi. suppl., p. 83.
Chiengmai, Doi Sootep, climbing on trees in evergreen jungle, 960 m., *Kerr*, 1618b.
Lao name, Wai (ex *Kerr*).

Calamus viminalis, *Willd.*, var. **fasciculatus**, *Beccari*, F.B.I., vi. p. 444 et Ann. Roy. Bot. Gard. Calc., xi. p. 206, t. 57.
Sriracha, in scrub and evergreen jungle, 15 m., *Kerr*, 2115.
Distr. India, Indo-China, Malay Peninsula.

Plectocomia khasyana, *Griff.*—F.B.I., vi. p. 478.
Chiengmai, Doi Sootep, in dense evergreen jungle, 1260 m., *Kerr*, 1817.
Distr. Khasia.

Pandanaceae.

Pandanus (Acrostigma) distans, *Craib*, sp. n. ab affini *P. Pierrei*, Martelli, syncarpiis duobus spicatis distantibus haud ad pedunculi apicem confertis recedit.
Frutex humilis, trunco 5–8 cm. tantum longo (ex *Kerr*). *Folia* 190–215 cm. longa, ad 2·3 cm. lata, dorso medio marginibusque aculeata. *Syncarpia* duo, spicata, circiter 6 cm. distantia, ellipsoidea vel ellipsoideo-globosa, 5 cm. lata, 6 cm. alta ; drupae 17 mm. longae, 5 mm. diametro, stylo acuto 8 mm. longo.
Between Phre and Nan, Hue Me Sa Kawn, in evergreen jungle, 420 m., *Kerr*, 2386.

Pandanus furcatus, *Roxb.*—F.B.I., vi. p. 484 ; Warburg, Engler Pflanzenr., Pandan., p. 75.
Chiengmai, Doi Sootep, in evergreen jungle by stream, 900 m., *Kerr*, 1830.
Distr. Himalaya, Burma, Assam, Chittagong.

Pandanus (Acrostigma) similis, *Craib*, sp. n., a *P. ovato*, Kurz, foliis multo longioribus latioribusque recedit.
Suffrutex circiter 30 cm. altus (ex *Kerr*). *Folia* paulo ultra 1 m. longa, 1·5–1·8 cm. lata, margine spinulosa, costa dorso inferne spinis rigidiusculis rectis circiter 1·5 mm. longis inter se 1·3–1·5 cm. distantibus superne spinulis prorsus directis instructa praetereaque supra spinulis prorsus directis in lineas duas dispositis additis. *Syncarpium* solitarium, vix maturum, late ellipsoideum, circiter

2·5 cm. diametro, pedunculo triquetro circiter 10 cm. longo suffultum; drupae siccae apice subtruncatae, 9 mm. altae, apice 5 mm. diametro, laeves, stylo spinoso 5 mm. longo terminatae.

Sriracha, Nawng Kaw, in evergreen jungle, 30 m., *Kerr*, 2068.

Araceae.

Arisaema album, *N. E. Brown*—F.B.I., vi. p. 498.

Chiengmai, Doi Sootep, on humus in evergreen jungle by a stream, 750 m., *Kerr*, 640.

Distr. Khasia.

A closely allied species was collected by *Murton* (No. 115) in S. Siam which has a broader spathe suddenly contracted at the top and not gradually as in *A. album* and the tip of the spathe much shorter.

Arisaema consanguineum, *Schott*—F.B.I., vi. p. 505.

Chiengmai, Doi Sootep, in evergreen jungle, 1200–1500 m., *Kerr*, 1874, in part.

Distr. Himalaya to China, Assam.

Arisaema hypoglaucum, *Craib*, sp. n., ab affini *A. erubescente*, Schott, foliorum segmentis longis subtus glaucis distinguenda.

Herba dioica, 45–70 cm. alta, tubere depresso-globoso. *Folia* solitaria, radiatisecta, petiolo 25–30 cm. longo suffulta; segmenta 7, lanceolata, apice caudato-acuminata, basi cuneata, 23–35 cm. longa, 4·5–7 cm. lata, subsessilia, glabra, subtus glauca, nervis lateralibus utrinque numerosis supra conspicuis subtus subprominulis, nervo intramarginali supra conspicuo, margine integro. *Scapus* folio brevior. *Spathae* pars tubulosa vix 4 cm. longa, limbus anguste ellipticus, caudato-acuminatus, 8 cm. longus, 3·5 cm. latus, basi auriculatus. *Spadix* ♀ sessilis; stigma sessile; appendix validiuscula, 4 cm. longa, basi 3 mm. diametro, inferne fimbriis paucis ornata.

Chiengmai, in evergreen jungle on Doi Sootep, 1200–1500 m., *Kerr*, 1874, in part.

Arisaema Kerrii, *Craib*, sp. n., ab affini *A. fraterno*, Schott, spatha appendice longa gracili instructa recedit.

Herba dioica, circiter 40 cm. alta. *Folia* solitaria, radiatisecta, petiolo maculato circiter 14·5 cm. longo suffulta; segmenta 6, lanceolata, apice acuminata, acumine lineari circiter 5 mm. longo, basi attenuata, 10 cm. longa, 1·7–fere 2 cm. lata, sessilia, glabra, nervis lateralibus cum nervo intramarginali supra subconspicuis. *Spathae* pars tubulosa 4 cm. longa, 1 cm. diametro, limbus 3·8 cm. longus, 3·3 cm. latus, cauda gracili ad fere 15 cm. longa ornatus. *Spadicis* pars antherifera 1·5 cm. longa, 2 mm. diametro; appendix superne arcuata, summo apice 4 mm. diametro, imo basi 1·5–2 mm. crassa.

Chiengmai, in evergreen jungle on Doi Sootep, 1200 m., *Kerr*, 620.

Arisaema sootepense, *Craib*, sp. n., ab affini *A. Prazeri*, Hook. f., foliorum segmentis angustioribus longioribus tenuioribus recedit.

Herba dioica, 40–55 cm. alta, tuberosa, tubere depresso-globoso 2 cm. alto 2·4 cm. lato. *Folia* solitaria, trisecta, petiolo 11–19 cm. longo suffulta; segmenta ovato-lanceolata vel anguste elliptica,

apice acuminata, acuta, basi cuneata vel latere altero rotundato-cuneata, altero rotundata, lateralia inaequilatera, 10·5–15 cm. longa, 4–6 cm. lata, subsessilia, glabra, nervis lateralibus cum nervo intramarginali supra conspicuis subtus prominulis, nervulis subtus conspicuis. *Spathae* pars tubulosa circiter 3·5 cm. longa, 1 cm. diametro, limbus apice acutus, ad 7·5 cm. longus et 3 cm. latus. *Spadix* breviter stipitata ; pars antherifera 1·5 cm. longa ; appendix ad 27 cm. longa, apice filiformis, gracilis, pendula.

Chiengmai, Doi Sootep, 660 m., *Kerr*, 1199.

Typhonium trilobatum, *Schott*—F.B.I., vi. p. 509 ; Williams, Bull. Herb. Boiss., iv. (1904) p. 227 ; Hosseus, i. p. 467.

Chiengmai, 300 m., *Kerr*, 1859—" a garden weed " ; Bangkok, *Schomburgk*, 334.

Distr. India, Burma, Malaya, Tonkin, Philippines.

Amorphophallus corrugatus, *N. E. Brown*, Kew Bull. 1912, p. 269.

Chiengmai, Doi Sootep, 1500 m., *Kerr*, 1105 ; cult. Hort. Trin. Coll., Dublin.

Amorphophallus Kerrii, *N. E. Brown*, Kew Bull. 1912, p. 43.

Cult. Hort. Trin. Coll., Dublin, whence it was sent by Dr. Kerr from Chiengmai.

Amorphophallus macrorhizus, *Craib*, sp. n., ab affini *A. variabili*, Blume, radice elongata, foliorum segmentis majoribus distinguenda.

Radix ad 6 cm. longa, apice circiter 1 cm. diametro. *Folia* solitaria, petiolo 36–80 cm. longo viridi rubro-brunneo-maculato (ex *Kerr*) suffulta ; lamina trisecta, segmentis simplicibus bisectis pinnatisectis vel furcatis et pinnatisectis ; segmenta ultima inferiora obovata, apice acuminata, acuta, basi cuneata, circiter 8 cm. longa et 4 cm. lata, terminalia oblongo-elliptica, apice acuminata, acuta, basi inaequilatera, decurrentia, ad 24 cm. longa et 9 cm. lata, supra glabra, viridia, subtus nervis minute papilloso-puberula, pallidiora, nervis lateralibus utrinque numerosis rectis vel subrectis cum nervo intramarginali supra conspicuis subtus subprominulis, chartaceo-membranacea. *Pedunculus* 52–87 cm. longus, rubro-brunneo-ocellatus (ex *Kerr*). *Spatha* erecta, 13·5–18 cm. longa, 5 cm. lata, acuta, basi convoluta. *Spadix* sessilis ; pars feminea 2–3·5 cm. longa, 0·6–1·2 cm. crassa, stigmate sessili ; pars antherifera 4·5–6 cm. longa, 1–1·6 cm. crassa ; appendix 19 cm. longa, 7 mm. diametro, basi fimbriis paucis interdum ornata.

Chiengmai, in mixed jungle at foot of Doi Sootep, 330 m., *Kerr*, 1220, 1220a.

To this species probably also belongs *Kerr*, 1140 from the same locality at 660 m. elevation.

Remusatia vivipara, *Schott*—F.B.I., vi. p. 521.

Chiengmai, Doi Sootep, on trees and rocks, 660 m., *Kerr*, 1438.

Distr. India, Khasia, Burma.

Gonatanthus sarmentosus, *Klotzsch*—F.B.I., vi. p. 522 ; Hosseus, i. p. 467 et ii. p. 371.

Chiengmai, Doi Sootep, on trees in evergreen jungle, 1500–1680 m., *Kerr*, 1487, *Hosseus*, 254.

Distr. Himalaya, Khasia.

Kerr's plant has leaves more after those of *G. ornatus*, Schott.

Acorus Calamus, *Linn.*—F.B.I., vi. p. 555 : Hosseus, i. p. 467 et ii. p. 371 ; Engler, Engler Pflanzenr., Arac.-Pothoid., p. 309.
Chiengmai, Doi Sootep, on stones in stream in evergreen jungle, 900 m., *Kerr*, 2593.
Distr. Europe, Asia, America—often naturalised.

Colocasia Antiquorum, *Schott*—F.B.I., vi. p. 523.
Chiengmai, Doi Sootep, 720 m., *Kerr*, 742.
Commonly cultivated in the tropics and subtropics.

Hapaline Benthamiana, *Schott*— F.B.I., vi. p. 521.
Chiengmai, Doi Sootep, 720 m., *Kerr*, 614.
Distr. Burma.

Aglaonema Hookerianum, *Schott*—F.B.I., vi. p. 529.
Chiengmai, Doi Sootep, in evergreen jungle, 900 m., *Kerr*, 1160, in part.
Distr. Assam, Chittagong, Arracan.

Aglaonema malaccense, *Schott*. *A. Schottianum*, Hook. f., F.B.I., vi. p. 529, in part.
Chiengmai, Doi Sootep, in evergreen jungle, 900 m., *Kerr*, 1160, in part.
Distr. Burma, Malay Peninsula.
The writer cannot follow Williams and Hosseus in regarding *A. malaccense*, Schott and *A. Schottianum*, Miq. as synonymous.

Aglaonema sp., an *A. tenuipes*, Engler ?
Sriracha, Nawng Kaw, in evergreen jungle, 30 m., *Kerr*, 2070.
Differs from Engler's description in the slightly smaller leaves and the longer peduncle, but Kerr's specimens are in fruit, whereas those described by Engler were in flower.

Homalomena aromatica, *Schott*—F.B.I., vi. p. 532.
Chiengmai, Doi Sootep, in marshy ground, 660 m., *Kerr*, 1864.
Distr. Assam.

Rhaphidophora glauca, *Schott*, var. **khasiana**, *Hook. f.*, F.B.I., vi. p. 547 ; Engler, Engler Pflanzenr., Arac.-Monsteroid., p. 47.
Chiengmai, Doi Sootep, in evergreen jungle, 200 m., *Kerr*, 1813.
Distr. Khasia.

Pothos Cathcartii, *Schott*—F.B.I., vi. p. 552 ; Engler, Engler Pflanzenr., Arac.-Pothoid., p. 27.
Chiengmai, Doi Sootep, on trees in thick evergreen jungle, 1200-1650 m., *Kerr*, 1872.
Distr. Himalaya, Assam, Burma, Yunnan.

Pothos scandens, *Linn.*, forma **angustior**, Engler—Engler, Engler Pflanzenr., Arac.-Pothoid., p. 26.
Sriracha, Nawng Kai Ploi, common on trees in evergreen jungle, 90 m., *Kerr*, 2122.
Distr. (of form). Malaya, (Assam, ex *Engler.*)
Siamese name, T'Kep (ex *Kerr*).

Alismaceae.

Sagittaria sagittifolia, *Linn.*—F.B.I., vi. p. 561
Chiengmai, in moat, 300 m., *Kerr*, 1223.
Distr. Europe, Asia, N. America.

Eriocaulaceae.

Eriocaulon luzulaefolium, *Mart.*—F.B.I., vi. p. 582; Ruhland, Engler Pflanzenr., Eriocaul., p. 88.

Chiengmai, Doi Sootep, by edge of stream and in swamp, 330–420 m., *Kerr*, 1635, 1932.

Distr. India, Burma, Khasia.

Hosseus ii. p. 372–3 also records a form of *E. truncatum* from Wang Djao and a species of *Eriocaulon* from Doi Sootep.

Cyperaceae.*

Kyllinga brevifolia, *Rottb.*—F.B.I., vi. p. 588; C. B. Clarke, Ill. Cyp., t. i.

Chiengmai, in short grass, 300 m., *Kerr*, 857; Doi Sootep, in open marsh, 660 m., *Kerr*, 2650.

Distr. Warm regions of both hemispheres, except the Mediterranean.

Kyllinga monocephala, *Rottb.*—F.B.I., vi. p. 588; C. B. Clarke, Ill. Cyp., t. ii; Hosseus, i. p. 459. *Cyperus monocephalus*, F. Muell.—Williams, Bull. Herb. Boiss., iv. (1904) p. 224.

Chiengmai, in short grass, 300 m., *Kerr*, 856.

Distr. India, China, Indo-China, Malaya, Australia, Africa.

Pycreus globosus, *Reich.* *P. capillaris*, Nees—F.B.I., vi. p. 591.

Chiengmai, Doi Sootep, in marshy ground, 340 m., *Kerr*, 1916.

Distr. Asia and Africa.

Pycreus nitens, *Nees*—F.B.I., vi. p. 591; Hosseus, i. p. 370 et ii. p. 458.

Wang Djao, 100 m., *Hosseus*, 104; Chiengmai, in pastures, 300 m., *Kerr*, 862.

Distr. Warm regions of the Old World.

Pycreus unioloides, *Makino*, Bot. Mag. Tokyo, xvii. p. 49. *Pycreus angulatus*, Nees—F.B.I., vi. p. 593; C. B. Clarke, Ill. Cyp., t. iv.

Chiengmai, Doi Sootep, in marshy ground, deciduous jungle, 400 m., *Kerr*, 1901.

Distr. Tropics.

Juncellus pygmaeus, *C. B. Clarke*, F.B.I., vi. p. 596.

Chiengmai, Doi Sootep, in marsh, 340 m., *Kerr*, 1860.

Distr. Warm regions of Asia, Africa and Australia.

Cyperus babakensis, *Steud.*—F.B.I., vi. p. 610; C. B. Clarke, Ill. Cyp., t. xv.

Chiengmai, Doi Sootep, in swamp, 340 m., *Kerr*, 1925.

Distr. India, Malaya.

Cyperus cephalotes, *Vahl*—F.B.I., vi. p. 597; C. B. Clarke, Ill. Cyp., t. vi.

Chiengmai moat, 300 m., *Kerr*, 1958.

Distr. India, China, Indo-China, Malaya, Australia.

Cyperus diffusus, *Vahl*—F.B.I., vi. p. 603; Hosseus, i. p. 458.

Chiengmai, Doi Sootep, in mixed jungle, 340 m., *Kerr*, 1903.

Distr. Warm regions of both hemispheres.

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* *Cyperaceae*, by W. B. Turrill.

Cyperus distans, *Linn.*—F.B.I., vi. p. 607.
Chiengmai, Doi Sootep, beside stream, 340 m., *Kerr*, 1937.
Distr. Warm regions of both hemispheres.

Cyperus eleusinoides, *Kunth*—F.B.I., vi. p. 608.
Chiengmai, Doi Sootep, by stream in deciduous jungle, 400 m., *Kerr*, 1180 ; edge of stream, 338 m., in clumps, *Kerr*, 1923 ; in open marshy ground, 660 m., *Kerr*, 2640.
Distr. Asia, Africa, Australia.

Cyperus Haspan, *Linn.*—F.B.I., vi. p. 600 ; Williams, Bull. Herb. Boiss., iv. (1904) p. 224 ; Hosseus, i. p. 458 et ii. p. 370.
Chiengmai, Doi Sootep, in marshy ground, eng jungle, 500 m., *Kerr*, 1895.
Distr. Warm regions of both hemispheres.

Cyperus Iria, *Linn.*—F.B.I., vi. p. 606 ; C. B. Clarke, Ill. Cyp., t. xiv.
Chiengmai, coming up on recently deposited silt, 300 m., *Kerr*, 892.
Distr. Old World.
Lao name, Yak dank ding (ex *Kerr*).

Cyperus leucocephalus, *Retz.*—F.B.I., vi. p. 602.
Chiengmai, Doi Sootep, deciduous jungle, 340 m., *Kerr*, 1849.
Distr. Tropics.

Cyperus pilosus, *Vahl*—F.B.I., vi. p. 609.
Chiengmai, Doi Sootep, in swamps, 340 m., *Kerr*, 1930.
Distr. Trop. Asia, Africa, Australia.

Cyperus pulcherrimus, *Willd.*—F.B.I., vi. p. 600 ; C. B. Clarke, Ill. Cyp., t. x. ; Hosseus, i. p. 459 et ii. p. 370.
Chieng Dao, 350 m. (ex *Hosseus*).
Distr. India, Indo-China, Malaya.

Cyperus radiatus, *Vahl.*—F.B.I., vi. p. 617.
Chiengmai, in swampy ground, 310 m., *Kerr*, 1921.
Distr. Asia, Africa, America.

Cyperus rotundus, *Linn.*—F.B.I., vi. p. 614 ; Hosseus, i. p. 459 et ii. p. 370.
Chiengmai, in rice fields, 300 m., *Kerr*, 1540b, abundant in pastures, 300 m., *Kerr*, 2628 ; Wang Djao, *Hosseus*, 133a.
Distr. Warm regions of both hemispheres.
Lao name, ya m'niu mu (ex *Kerr*).

Cyperus uncinatus, *Poiret.*
Chiengmai, Doi Sootep, marshy ground, 330 m., *Kerr*, 2239a—a single small specimen mixed with *Fimbristylis schoenoides*, Vahl.
Distr. China, Malaya, Africa, Australia.

Cyperus Zollingeri, *Steud.*—F.B.I., vi. p. 613 ; C. B. Clarke, Ill. Cyp., t. xviii.
Chiengmai, Doi Sootep, in mixed jungle, 340 m., *Kerr*, 1900.
Distr. Trop. Asia, Africa, and Australia.

Mariscus Clarkei, *Turrill*, sp. n., affinis *M. Sieberiano*, Nees, sed foliis longis flaccidis, carinis sectione transverso rotundatis, spicis laxioribus differt.

Rhizoma breve. *Culmi* erecti, usque ad 5 dcm. alti, 1 mm. diametro, leves, basi noduloso-incrassati. *Folia* flaccida, apice acuminata, usque ad 3 dcm. longa et 2·5 mm. lata, carinis sectione transverso rotundatis, glabra. *Inflorescentia* e radiis quinque constituta, spiculis laxius dispositis; bracteae foliis similes, usque ad 2·7 dcm. longae. *Spiculae* 3 mm. longae; gluma prima (infima) longitudine praecipue variabilis, spicularum inferiorum setacea, apice acuta vel acuminata, usque ad 1 cm. longa, spicularum superiorum apice acuta, 1·5 mm. longa, 0·5 mm. lata; gluma secunda apice obtusa, 2 mm. longa, 0·75 mm. lata; gluma tertia nucigera, apice acuta, 3·5 mm. longa, 1 mm. lata, carina sectione transverso obtusa, alis haud striatis; rhachilla supra glumam nuciferam ad 3·5 mm. producta, uninervia, alis 2. *Stamina* 3, filamentis 4 mm. longis. *Stylus* (cum ramis) 5 mm. longus, ramis tribus 4 mm. longis. *Nux* 2·25 mm. longa, 0·5 mm. diametro.

Indo-China. Assam: Shillong, 1500 m., *C. B. Clarke*, 43,573a. Siam: Chiengmai, Doi Sootep, in deciduous jungle, 900 m., *Kerr*, 2637.

Mariscus cyperinus, *Vahl*—F.B.I., vi. p. 621; C. B. Clarke, Ill. Cyp., t. xxii.
Chiengmai, Doi Sootep, by stream, 340 m., *Kerr*, 1928.
Distr. Trop. Asia, Polynesia.

Mariscus Dregeanus, *Kunth*—F.B.I., vi. p. 620; C. B. Clarke, Ill. Cyp., t. xxi.
Sriracha, by sea shore, *Kerr*, 2043.
Distr. India, Malaya, Africa.

Mariscus microcephalus, *Presl.*—F.B.I., vi. p. 624. *Cyperus dilutus*, Vahl—Williams, Bull. Herb. Boiss., iv. (1904) p. 224.
Chiengmai, Doi Sootep, marshy ground, 340 m., *Kerr*, 1915.
Distr. India, China, Indo-China, Malaya, Mauritius.

Mariscus paniceus, *Vahl*, var. **Roxburghiana**, *C. B. Clarke*, F.B.I., vi. p. 621.
Chiengmai, Doi Sootep, deciduous jungle, 340 m., *Kerr*, 1850.
Distr. India, Indo-China.

Eleocharis equisetina, *Presl.*—F.B.I., vi. p. 626.
Chiengmai, Doi Sootep, in marshy ground, 330 m., *Kerr*, 2621.
Distr. Ceylon, Malay Peninsula, Polynesia.

Eleocharis variegata, *Kunth*, var. **laxiflora**, *C. B. Clarke*, F.B.I., vi. p. 626.
Chiengmai, Doi Sootep, growing in swamp, 338 m., *Kerr*, 1931.
Distr. India, China, Malaya, Polynesia.

Fimbristylis aestivalis, *Vahl*—F.B.I., vi. p. 637; C. B. Clarke, Ill. Cyp., t. xli.; Hosseus, i. p. 462 et ii. p. 370.
Chieng Dao, 350 m. (ex *Hosseus*).
Distr. India, China, Indo-China, Malaya, Australia.

Fimbristylis cyperoides, *Br.*, var. **cinnamometorum**, *C. B. Clarke*, F.B.I., vi. p. 650.
Chiengmai, Doi Sootep, small tufts, deciduous jungle, 450–540 m., *Kerr*, 1270.
Distr. Ceylon, Indo-China, China.

Fimbristylis dichotoma, *Vahl*—F.B.I., vi. p. 635; Hosseus, i. p. 461 et ii. p. 370.

Chieng Dao, 350 m. (ex *Hosseus*).

Distr. Warm regions of the Old World.

Fimbristylis diphylla, *Vahl*—F.B.I., vi. p. 636; C. B. Clarke, Ill. Cyp., t. xlii.; Williams, Bull. Herb. Boiss., iv. (1904) p. 224; Hosseus, i. p. 461 et ii. p. 370.

Chiengmai, Doi Sootep, marshy ground in eng jungle, 480 m., *Kerr*, 1896; by stream in deciduous jungle, 390 m., *Kerr*, 1181; in open marsh, 660 m., *Kerr*, 2649; marshy ground, 330 m., *Kerr*, 2239b (mixed with *Fimbristylis schoenoides*, Vahl, *Kerr*, 2239).

Distr. Warm regions of both hemispheres.

The four specimens quoted above, all collected by Dr. Kerr on Doi Sootep, illustrate remarkably well the polymorphic nature of this species. No. 1181 is a tall plant growing to a height of 10 dcm., with long glaucous and slightly hairy leaves and glabrous inflorescence. No. 1896 is a medium-sized plant with shorter obtuse broad (3 mm. broad) leaves. No. 2239b is a very small and slender plant, about 12 cm. high, with very narrow leaves (0·5 mm. broad). No. 2649 is a tall plant, growing to a height of 9 dcm., with the stem and inflorescence distinctly hairy and the leaves (blades and sheaths) densely white pubescent. This last plant is evidently *Fimbristylis tomentosa*, Vahl which C. B. Clarke considered only a form of *F. diphylla*, Vahl. All the above plants have the characteristic longitudinally-ribbed nut of *F. diphylla*.

Fimbristylis Eragrostis, *Hance*, Journ. Linn. Soc., xiii. p. 132.

Chiengmai, Doi Sootep, in eng jungle, 300–600 m., *Kerr*, 825.

Distr. China, Indo-China.

Fimbristylis fuscoides, *C. B. Clarke*, Kew Bull., Add. Series, vii. p. 25.

Raheng, near Tapotsah, Wang Djao forest, *Lindhard*.

Distr. Indo-China, Borneo.

Fimbristylis globulosa, *Kunth*—F.B.I., vi. p. 644; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 140.

Chiengmai, in rice fields, 300 m., *Kerr*, 1539b.

Distr. India, Ceylon, China, Indo-China, Malaya, Polynesia.

Fimbristylis miliacea, *Vahl*—F.B.I., vi. p. 644; Williams, Bull. Herb. Boiss., iv. (1904) p. 225.

Chiengmai, in rice fields, 300 m., *Kerr*, 1538b.

Distr. All warm regions.

Fimbristylis monostachya, *Hassk.*—F.B.I., vi. p. 649; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 141.

Chiengmai, in scrub jungle, 300 m., *Kerr*, 1906.

Distr. All warm regions.

Fimbristylis nutans, *Vahl*—F.B.I., vi. p. 632.

Chiengmai, Doi Sootep, in open marshy ground, 330 m., *Kerr*, 2665.

Distr. India, China, Malaya, Australia.

Fimbristylis schoenoides, *Vahl*—F.B.I., vi. p. 634.

Chiengmai, Doi Sootep, marshy ground, 330 m., *Kerr*, 2239.

Distr. India, China, Indo-China, Malaya, N. Australia.

Kerr's specimens have all single terminal spikelets. In no case is there the slightest sign of a second spikelet, or even of a prolongation of the stem.

Fimbristylis sericea, *R. Br.*—F.B.I., vi. p. 641 ; Hosseus, i. p. 462.
Klong Prao (ex *Hosseus*).
Distr. India, China, Japan, Indo-China, Malaya, Australia.

Fimbristylis straminea, *Turrill*, Kew Bull., 1911, p. 192.
Chiengmai, Doi Sootep, in eng jungle, 550–600 m., *Kerr*, 832.

Fimbristylis tetragona, *R. Br.*—F.B.I., vi. p. 631 ; C. B. Clarke, Ill. Cyp., t. xl.
Chiengmai, rice fields, 300 m., *Kerr*, 1594 b.
Distr. India, China, Indo-China, Malaya, Australia.

Fimbristylis tortispica, *Turrill*, Kew Bull., 1911, p. 348.
Chiengmai, Doi Sootep, growing singly, deciduous jungle, 330–540 m., *Kerr*, 1271.

Fimbristylis yunnanensis, *C. B. Clarke*, Journ. Linn. Soc., xxxvi. p. 247.
Chiengmai, Doi Sootep, in deciduous jungle, 450–600 m., *Kerr*, 1193.
Distr. Yunnan, Indo-China.

Bulbostylis barbata, *Kunth*—F.B.I., vi. p. 651 ; Hosseus, i. p. 462 et ii. p. 369.
Chiengmai, Doi Sootep, 360 m., in deciduous jungle, *Kerr*, 1349 and in a clearing, 330 m., *Kerr*, 1920.
Distr. Warm regions of both hemispheres.

Scirpus grossus, *Linn. fil.*—F.B.I., vi. p. 659 ; C. B. Clarke, Ill. Cyp., t. xlix.
Chiengmai, Doi Sootep, in swamp, 330 m., *Kerr*, 1918.
Distr. India, Indo-China, Malaya.

Scirpus mucronatus, *Linn.*—F.B.I., vi. p. 657.
Chiengmai, Doi Sootep, in marshy ground, 660 m., *Kerr*, 1143.
Distr. Europe, Asia, Africa, Australia.

Scirpus squarrosus, *Linn.*—F.B.I., vi. p. 663 ; C. B. Clarke, Ill. Cyp., t. lii.
Chiengmai, Doi Sootep, eng jungle, 360 m., *Kerr*, 2244.
Distr. India, China, Trop. Africa.

Fuirena umbellata, *Rottb.*—F.B.I., vi. p. 666 ; C. B. Clarke, Ill. Cyp., t. lix.
Chiengmai, Doi Sootep, by stream in deciduous jungle, 390 m., *Kerr*, 1179 and in swamp, 330 m., *Kerr*, 1924.
Distr. Warm regions of both hemispheres.

Lipocarpha argentea, *Br.*—F.B.I., vi. p. 667 ; C. B. Clarke, Ill. Cyp., t. lx. ; Hosseus, i. p. 457 et ii. p. 370.
Chiengmai, Doi Sootep, marshy ground, 660–700 m., *Kerr*, 1178, *Hosseus*, 481.
Distr. Tropics and sub-tropics of Old World.

Ascolepis sp. n. *Scirpus squarrosus*, var. *siamensis*, C. B. Clarke apud Hosseus, i. p. 460 ; Hosseus ii. p. 371.
Chiengmai, Doi Sootep, in marshy ground by stream, 540 m., *Kerr*, 2261 ; Wang Djao, *Hosseus*, 101.

Rynchospora longisetis, *R. Br.*—F.B.I., vi. p. 669 ; C. B. Clarke, Ill. Cyp., t. lxv. ; Hosseus, i. p. 463 et ii. p. 371.

Chiengmai, rice fields, 300 m., *Kerr*, 1595b ; Wang Djao, *Hosseus*, 132 ; Raheng, *Lindhard*.

Distr. Indo-China, N. Australia.

Rynchospora Wallichiana, *Kunth*—F.B.I., vi. p. 668 ; C. B. Clarke, Ill. Cyp., t. lxiv.

Chiengmai, Doi Sootep, in deciduous jungle, 510 m., *Kerr*, 1219a ; in open marsh, 660 m., *Kerr*, 2648.

Distr. Tropical Asia, Australia, and Africa.

A specimen from Doi Sootep, in eng jungle, 450 m., *Kerr*, 1219 is almost certainly a very young example of this species.

Scleria elata, *Thwaites*—F.B.I., vi. p. 690.

Chiengmai, Doi Sootep, in mixed and evergreen jungles, 600–900 m., *Kerr*, 1691.

Distr. India, Ceylon, China, Indo-China, Malaya.

The nuts of *Kerr*, 1691 have more prominent beaks than those of the type but otherwise the plants are similar.

A specimen collected on Doi Sootep, growing in tufts, deciduous jungle, 330–540 m., *Kerr*, 1269 is probably a young example of this species.

Scleria Kerrii, *Turrill*, Kew Bull., 1910, p. 384.

Chiengmai, Doi Sootep, in eng jungle, 300–450 m., *Kerr*, 1239.

Scleria pergracilis, *Kunth*—F.B.I., vi. p. 685 ; C. B. Clarke, Ill. Cyp., t. cxxi.

Chiengmai, Doi Sootep, eng jungle, not tufted, 360–540 m., *Kerr*, 1428 ; growing in open marsh, 660 m., *Kerr*, 2647.

Distr. India, Indo-China, Trop. Africa.

Carex baccans, *Nees*—F.B.I., vi. p. 722 ; Hosseus, i. p. 463 et ii. p. 370.

Chiengmai, Doi Sootep, 1680 m. (ex *Hosseus*).

Distr. India, China, Indo-China, Malaya.

Carex speciosa, *Kunth*—F.B.I., vi. p. 729.

Chiengmai, Doi Sootep, in open ground, 330 m., *Kerr*, 1929.

Distr. India, Indo-China, Malaya.

Carex condensata, *Nees*—F.B.I., vi. p. 716 ; Franchet, Nouv. Arch. Mus. Hist. Nat. Par., Sér. iii. vol. viii. p. 252.

Chiengmai, Doi Sootep, in open grassy jungle, 1560 m., *Kerr*, 1306 ; Doi Intanon, North Peak, 2205 m., *Garrett*, 81, rising from large matted rhizomes.

Distr. India, Indo-China.

A specimen of tufted growth, collected in a young state on Doi Sootep, 330–540 m., in deciduous jungle, *Kerr*, 1268, belongs to Clarke's section *Asiaticae* and is probably either this species or *C. cruciata*, Wahl.

Carex plebeia, *C. B. Clarke*, F.B.I., vi. p. 718.

Chiengmai, Doi Sootep, deciduous jungle, 450 m., *Kerr*, 1977.

Distr. Chota Nagpur.

Carex plesiocephala, *Turrill*, Kew Bull., 1910, p. 385.
Chiengmai, in mixed jungle at foot of Doi Sootep, 330 m, *Kerr*, 1221.
Distr. Upper Burma.

Carex sp. nov.? *C.* [*Dietrichiae*, Boeck] *juvenilis*, Hosseus, i. p. 464 et ii. p. 370 (*juvenalis*).
Nakontai, 300 m., *Hosseus*, 723.
Hosseus attributes the authorship of this species to C. B. Clarke but so far as the writer can ascertain no such species has ever been published. Nor is the writer aware of a section of the genus bearing the name *Dietrichiae*.
The mistake probably arose from a misinterpretation of C. B. Clarke's determination of the plant. Considering the immature state of the specimen of *Hosseus*, 723 in Herb. Kew the writer concludes that what C. B. Clarke in all probability meant was *Carex* sp., statu juvenili affinis *C. Dietrichiae*, Boeck.

Gramineae.*

Paspalum scrobiculatum, *Linn.*—F.B.I., vii. p. 10; Williams, Bull. Herb. Boiss., iv. (1904) p. 222.
Chiengmai, Doi Sootep, in deciduous jungle, 300–540 m., *Kerr*, 1272.
Distr. Tropics of Old World.

Eriochloa annulata, *Kunth*—Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 141. *E. polystachya*, H.B.K.—F.B.I., vii. p. 20.
Chiengmai, 300 m., by roadside, *Kerr*, 1954.
Distr. Throughout India and most hot countries.

Panicum colonum, *Linn.*—F.B.I., vii. p. 32; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 142; Williams, Bull. Herb. Boiss., iv. (1904) p. 222.
Chiengmai, banks of Meh Ping, 300 m., *Kerr*, 1887.
Distr. Throughout plains of India and most warm countries.

Panicum Crus-galli, *Linn.*—F.B.I., vii. p. 30; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 142.
Chiengmai, Doi Sootep, in swamp, 330 m., *Kerr*, 1919.
Distr. All warm countries.

Panicum distachyum, *Linn.*—F.B.I., vii. p. 37.
Chiengmai, among tall herbage, 300 m., *Kerr*, 1922.
Distr. Trop. Asia, Australia.

Panicum flavidum, *Retz.*—F.B.I., vii. p. 28; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 141.
Chiengmai, Doi Sootep, in mixed jungle, 330 m., *Kerr*, 1242.
Distr. Trop. Asia and Africa.

Panicum indicum, *Linn.*—F.B.I., vii. p. 41; Williams, Bull. Herb. Boiss., iv. (1904) p. 222.
Chiengmai, Doi Sootep, in open grassy jungle, 1500 m., *Kerr*, 1509; Raheng, Wang Djao, *Lindhard*, 20.
Distr. Trop. Asia, Australia.

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* *Gramineae*, except *Bambuseae*, by O. Stapf.

Panicum interruptum, *Willd.*—F.B.I., vii. p. 40 ; Williams, Bull. Herb. Boiss., iv. (1904) p. 222.

Chiengmai, in moat, 300 m., *Kerr*, 1960 ; Doi Sootep, on marshy ground, 330 m., *Kerr*, 2663.

Distr. India, Malaya, Africa.

Panicum Kurzii, *Hook. f.*, F.B.I., vii. p. 38.

Chiengmai, Doi Sootep, in mixed jungle, 360 m., *Kerr*, 1243.

Distr. Bengal, Behar.

Panicum myosuroides, *Br.*—F.B.I., vii. p. 42 ; Williams, Bull. Herb. Boiss., v. (1905) p. 960.

Chiengmai, 300 m., on uncultivated rice-fields, *Kerr*, 2249 ; Raheng, *Lindhard*.

Distr. India, China to Australia, Trop. Africa.

Panicum patens, *Linn.*—F.B.I., vii. p. 57. *P. radicans*, Retz.—Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 142 ; Williams, Bull. Herb. Boiss., iv. (1904) p. 222.

Chiengmai, under bamboos, 300 m., *Kerr*, 1227 ; Wang Djao, Long Ison, *Lindhard*, 35 ; Bangkok, *Schomburgk*, 179.

Distr. India, Khasia, Burma, Malay and Pacific Is.

Panicum paludosum, *Roxb.* *P. proliferum*, F.B.I., vii. p. 50.

Chiengmai, on mudbank of Meh Ping, 300 m., *Kerr*, 858.

Distr. India to South China and the Malay Archipelago.

As to *P. proliferum* of Lamarck and most American authors see Hitchcock and Chase, The North American species of Panicum (Contrib. U.S. Nat. Herb., xv. p. 50).

Panicum prostratum, *Lamk.*—F.B.I., vii. p. 33 ; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 142. *P. reptans*, L.—Hitchcock and Chase, Contrib. U.S. Nat. Herb., xv. p. 36.

Chiengmai, on waste ground, 300 m., *Kerr*, 1963.

Distr. Tropics.

Panicum repens, *Linn.*—F.B.I., vii. p. 49 ; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 141 ; Williams, Bull. Herb. Boiss., iv. (1904) p. 222.

Chiengmai, in moat, 300 m., *Kerr*, 1905 ; Bangkok, *Schomburgk*, 181.

Distr. S. Europe, Asia, Africa, America.

Digitaria fibrosa, *Stapf*, comb. nov. *Panicum fibrosum*, Hackel.

Chiengmai, Doi Sootep, in deciduous jungle, 300–600 m., *Kerr*, 1153.

Distr. Canton, Hong Kong.

Digitaria pertenuis, *Buese.*

Chiengmai, in partial shade, 300 m., *Kerr*, 847.

Distr. Malay Archipelago.

Axonopus cimicinus, *Beauv.*—F.B.I., vii. p. 64.

Chiengmai, Meh Hia, in mixed jungle by wayside, 330 m., *Kerr*, 1950.

Distr. India, Burma, China, Malaya.

Oplismenus Burmannii, *Beauv.*—F.B.I., vii. p. 68.

Chiengmai, in more or less shady situations, 300 m., *Kerr*, 846.

Distr. Tropics.

Oplismenus compositus, *Beauv.*—F.B.I., vii. p. 66 ; Williams, Bull. Herb. Boiss., iv. (1904) p. 222 ; Hosseus, ii. p. 369.

Chiengmai, Doi Sootep, in evergreen jungle, 660–1020 m., *Kerr*, 867 ; Doi Sootep, 800–900 m., *Hosseus*, 305.

Distr. General in the tropics.

Setaria glauca, *Beauv.*—F.B.I., vii. p. 78 ; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 142.

Chiengmai, in pastures, 300 m., *Kerr*, 861 ; Doi Sootep, in mixed and deciduous jungle, 330 m., *Kerr*, 1246.

Distr. Tropics and warm-temperate regions.

Polytoca bracteata, *Br.*—F.B.I., vii. p. 101 ; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 143.

Chiengmai, Doi Sootep, 540–600 m., *Kerr*, 1437, 2219, 2226.

Distr. Sikkim, Assam, Burma, Tonkin.

Polytoca Wallichiana, *Benth.*—F.B.I., vii. p. 101 ; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 143.

Near Kampeng Pet, edge of pampas on banks of Meh Ping, 105 m., *Kerr*, 2157.

Distr. Burma.

Oryza granulata, *Nees*—F.B.I., vii. p. 93.

Chiengmai, Doi Sootep, in mixed jungle, 330 m., *Kerr*, 1241.

Distr. India, Assam, Java.

Leersia hexandra, *Sw.*—F.B.I., vii. p. 94.

Chiengmai, Doi Sootep, in rice-fields, 330 m., *Kerr*, 1537b.

Distr. Tropics and subtropics.

Arundinella nepalensis, *Trin. A. brasiliensis*, Hook. f., F.B.I., vii. p. 73.

Chiengmai, Doi Sootep, in mixed jungle by stream, 540 m., *Kerr*, 2228.

Distr. India, Burma, Assam, China, Australia.

Arundinella setosa, *Trin.*—F.B.I., vii. p. 70 ; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 143 ; Williams, Bull. Herb. Boiss., v. (1905) p. 960.

Chiengmai, Doi Sootep, in eng jungle, 300–600 m., *Kerr*, 824 ; Raheng, *Lindhard*.

Distr. India, China, Tonkin, Philippines.

Thysanolaena Agrostis, *Nees*—F.B.I., vii. p. 61.

Chiengmai, Doi Sootep, 1650 m., *Kerr*, 1640.

Distr. India, Burma, Penang to New Guinea.

Perotis latifolia, *Ait.*—F.B.I., vii. p. 98 ; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 144.

Chiengmai, Doi Sootep, in deciduous jungle, 360 m., *Kerr*, 1352 ; Cape Liant, *Murton*, 32.

Distr. Tropics of Old World.

Imperata arundinacea, *Cyr.*—F.B.I., vii. p. 106 ; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 144 ; Kerr, Kew Bull. 1911, p. 6.

Chiengmai, Doi Sootep, on old clearings, 750 m., *Kerr*, 1097 ; Doi Sootep, 1670 m., *Hosseus*, 502.

Distr. Most warm countries of the Old World.

This grass is cut down yearly by the natives and used for thatching (ex *Kerr*, l.c.).

Saccharum arundinaceum, *Retz.*—F.B.I., vii. p. 119.
Raheng, 120 m., *Kerr*, 900.
Distr. India, China, Malay Peninsula.

Saccharum fuscum, *Roxb.*—F.B.I., vii. p. 120.
Near Kampeng Pet, 105 m., along with 2158 (*S. spontaneum*) *Kerr*, 2159; Raheng, 120 m., *Kerr*, 901 (growing with No. 900, *S. arundinaceum*).
Distr. India, Assam, Burma.

Saccharum spontaneum, *Linn.*—F.B.I., vii. p. 118; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 144.
Near Kampeng Pet, forming extensive growths on banks of lower Meh Ping with other grasses, 105 m., *Kerr*, 2158.
Distr. Warm regions of the old world.
Lao name, Pong (ex *Kerr*).

Pollinia articulata, *Trin.*—F.B.I., vii. p. 109.
Chiengmai, Doi Sootep, in eng jungle, 540 m., *Kerr*, 1559 b.
Distr. India, Assam, Burma, China, Malaya, Australia.

Pollinia Cumingii, *Nees*—F.B.I., vii. p. 114.
Chiengmai, Doi Sootep, in open scrub jungle, 330 m., *Kerr*, 2240.
Distr. S.E. Asia, Malaya, Australia.

Pollinia speciosa, *Hack.*—F.B.I., vii. p. 113.
Chiengmai, Doi Sootep, in open grassy jungle, 1350–1500 m., *Kerr*, 1510.
Distr. Khasia and Naga Hills, China.

Pogonatherum saccharoideum, *Beauv.*—F.B.I., vii. p. 141; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 144; Hosseus, ii. p. 369.
Chiengmai, Doi Sootep, 300–900 m., *Kerr*, 950, *Hosseus*, 291, 421.
Distr. India, Assam, Burma, China, Malaya.

Apocopis Wightii, *Nees ex Steud.*—F.B.I., vii. p. 142.
Chiengmai, Doi Sootep, in eng jungle, 540 m., *Kerr*, 2229, 823.
Distr. India to China and Tonkin.

Arthraxon microphyllus, *Hochst.*—F.B.I., vii. p. 147.
Chiengmai, Doi Sootep, on old wall, 660 m., *Kerr*, 869.
Distr. India, Tonkin, Trop. Africa.

Rottboellia compressa, *Linn. f.*—F.B.I., vii. p. 153.
Chiengmai, 300 m., *Kerr*, 2005; Doi Sootep, marshy ground by stream, 300 m., *Kerr*, 1934.
Distr. Most warm countries.

Ophiurus corymbosus, *Gaertn.*—F.B.I., vii. p. 160; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 145.
Chiengmai, Doi Sootep, in mixed jungle, 660 m., *Kerr*, 1601 b.
Distr. India, Khasia, Tonkin, Australia.

Manisuris granularis, *Linn. f.*—F.B.I., vii. p. 159; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 145.
Chiengmai, Doi Sootep, in eng jungle, 360 m., *Kerr*, 2213.
Distr. Most tropical countries.

Eremochloa leersioides, *Hack.*—F.B.I., vii. p. 140.
Chiengmai, Doi Sootep, on sandy ground in deciduous jungle, 330 m., *Kerr*, 1938.
Distr. Burma, China, Tonkin.

Ischaemum angustifolium, *Hack.*—F.B.I., vii. p. 129 ; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 145.
Chiengmai, Doi Sootep, in deciduous (eng) jungle, 300–540 m., *Kerr*, 1081.
Distr. Afghanistan, India, China, Philippines.

Ischaemum aristatum, *Linn.*—F.B.I., vii. p. 126.
Chiengmai, Doi Sootep, by streams in deciduous jungle, 450 m., *Kerr*, 1166.
Distr. India, Assam, Burma, China, Tonkin, Malaya.

Ischaemum aristatum, *Linn.*, subsp. **imberbe**, *Hack.*—Hosseus, ii. p. 369.
Chiengmai, Doi Sootep, 1050 m. (ex *Hosseus*).
Distr. India, Khasia, Philippines.

Ischaemum laxum, *R. Br.*—F.B.I., vii. p. 136 ; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 145.
Chiengmai, Doi Sootep, in eng jungle, 540 m., *Kerr*, 2255.
Distr. India to Australia in the S.E. and the Cape Verd Is. in the W.

Andropogon brevifolius, *Sw.*—F.B.I., vii. p. 165.
Chiengmai, Doi Sootep, in eng jungle, 300–450 m., *Kerr*, 896.
Distr. Tropics.

Andropogon caricosus, *Linn.*—F.B.I., vii. p. 196.
Chiengmai, in uncultivated rice fields, 300 m. *Kerr*, 2614.
Distr. India, Burma, China, Mauritius, New Caledonia.

Andropogon fastigiatus, *Sw.*—F.B.I., vii. p. 167.
Chiengmai, Doi Sootep, in eng jungle, 360 m., *Kerr*, 2243.
Distr. India, Indo-China, China, Trop. Africa and America.

Andropogon micranthus, *Kunth*, var. **spicigerus**, *Hack.*
Chiengmai, Doi Sootep, in deciduous jungle, 900 m., *Kerr*, 1982.
Distr. (of var.). China, Australia, New Caledonia.

Andropogon Pseudograya, *Steud.* *A. hirtiflorus*, Hook. f., F.B.I., vii. p. 167.
Chiengmai, Doi Sootep, in eng jungle, 540 m., *Kerr*, 2227.
Distr. S. China to Khasia Hills, Singapore, Ceylon.

Sorghum halepense, *Steud.* *Andropogon halepensis*, Brot.—F.B.I., vii. p. 182.
Meh Ping, Pak Bawng, covering low-lying areas by banks of Meh Ping, *Kerr*, 2006 ; near Kampeng Pet, 105 m., *Kerr*, 2156.
Distr. Most warm countries.
Lao name, Ya Pong (ex *Kerr*).

Chrysopogon aciculatus, *Trin.* *Andropogon aciculatus*, Retz.—F.B.I., vii. p. 188.
Chiengmai, in pastures, 300 m., *Kerr*, 842.
Distr. Trop. Asia to Australia.

Chrysopogon monticola, *Trin.* *Andropogon monticola*, Schult., var. *monticola*, proper, Hook. f., F.B.I., vii. p. 193.
Kau Phra Dang, 300 m., *Hosseus*, 160.
Distr. India, Afghanistan, S. Africa.

Vetiveria zizanioides, *Stapf. Andropogon squarrosus*, Linn. f.—F.B.I., vii. p. 186.

Meh Ping, Doi Noi, 300 m., *Kerr*, 2007.

Distr. Trop. Africa and Asia.

Heteropogon contortus, *Roem. et Schult. Andropogon contortus*, Linn.—F.B.I., vii. p. 199; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 146; Williams, Bull. Herb. Boiss., iv. (1904) p. 221.

Chiengmai, Doi Sootep, in small tufts in mixed jungle, 330 m., *Kerr*, 1267.

Distr. Tropics.

Heteropogon triticeus, *Stapf*, comb. nov. *Andropogon triticeus*, B. Br.—F.B.I., vii. p. 200.

Chiengmai, Doi Sootep, in eng jungle, 300–600 m., *Kerr*, 833.

Distr. India, Burma, Malaya, Australia.

Themeda gigantea, *Hack.*, subsp. **arundinacea**, *Hack. Anthistiria gigantea*, Cav., subsp. *arundinacea*, Hook. f., F.B.I., vii. p. 217.

Chiengmai, *Kerr*, 1439.

Distr. Trop. Asia to Australia.

Themeda gigantea, *Hack.*, subsp. **villosa**, *Hack. Anthistiria gigantea*, Cav., subsp. *villosa*, Hook. f., F.B.I., vii. p. 217.

Chiengmai, by stream on Doi Sootep, 540 m., *Kerr*, 2252.

Distr. Assam, Malaya.

Apluda varia, *Hack.*—F.B.I., vii. p. 150.

Near Kampeng Pet, Meh Ping banks, 105 m., *Kerr*, 2155.

Distr. Trop. Asia to Australia.

Aristida Cumingiana, *Trin. et Rupr.*—F.B.I., vii. p. 224; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 147; Hosseus, ii. p. 368.

Chiengmai, Doi Sootep, on pasture ground, 330 m., *Kerr*, 1593 b.

Distr. Trop. Africa and Asia.

Sporobolus diander, *Beauv.*—F.B.I., vii. p. 247.

Chiengmai, in pastures, 300 m., *Kerr*, 843.

Distr. Trop. Asia and Australia.

Sporobolus pulchellus, *Br.*—F.B.I., vii. p. 252.

Chiengmai, Doi Sootep, in deciduous jungle, 360 m., *Kerr*, 1351.

Distr. Behar, Chota Nagpur, Upper Burma, Australia.

Sporobolus tremulus, *Kunth*—F.B.I., vii. p. 250.

Chiengmai, on dry mud, 300 m., *Kerr*, 1695.

Distr. India, Indo-China.

Cynodon dactylon, *Pers.*—F.B.I., vii. p. 288; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 147.

Chiengmai, 300 m., *Kerr*, 845, 944.

Distr. Most warm countries.

Lao name, Ya pet (ex *Kerr*).

Chloris delicatula, *C. B. Clarke ex Hook. f.*, F.B.I., vii. p. 290.

Chiengmai, Doi Sootep, common on stoney ground in eng jungle, 360 m., *Kerr*, 1561*b*.

Distr. Chota Nagpur, Burma.

Dactyloctenium aegyptiacum, *Willd. Eleusine aegyptiaca*, Desf.—F.B.I., vii. p. 295; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 148.

Chiengmai, 300 m., in pastures, *Kerr*, 859.

Distr. Tropics and subtropics.

Eleusine indica, *Gaertn.*—F.B.I., vii. p. 293 ; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 148 ; Williams, Bull. Herb. Boiss., iv. (1904) p. 223.

Chiengmai, 300 m., usually in partial shade, *Kerr*, 848.

Distr. Tropics of Old World.

Leptochloa chinensis, *Nees*—F.B.I., vii. p. 299.

Chiengmai, 300 m., *Kerr*, 1955—a garden weed.

Distr. Trop. Asia to Australia.

Triraphis madagascariensis, *Hook. f. Neyraudia madagascariensis*, Hook. f., F.B.I., vii. p. 305.

Chiengmai, Doi Sootep, forming thickets 3–4·5 m. high on clearings, *Kerr*, 1639.

Distr. Trop. Asia, Africa, Madagascar.

Eragrostis amabilis, *Wight et Arn. ex Nees*—F.B.I., vii. p. 317 ; Williams, Bull. Herb. Boiss., v. (1905) p. 960.

Chiengmai, in pastures, 300 m., *Kerr*, 860 ; Doi Sootep, on road, 660–1020 m., *Kerr*, 866 ; Raheng, *Lindhard*.

Distr. Trop. Asia.

Eragrostis gangetica, *Roxb. E. elegantula*, F.B.I., vii. p. 318.

Chiengmai, Doi Sootep, on pasture grounds and in rice fields, 330 m., *Kerr*, 1899, 2623.

Distr. Trop. Asia and Africa.

Eragrostis plumosa, *Link.*—Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 149. *E. tenella*, Roem. et Sch., var. *plumosa*, Stapf, F.B.I., vii. p. 315.

Chiengmai, in pastures, 300 m., *Kerr*, 844.

Distr. Trop. Asia and Africa.

Centotheca lappacea, *Desv.*—F.B.I., vii. p. 332 ; Williams, Bull. Herb. Boiss., iv. (1904) p. 223.

Chiengmai, Doi Sooetp, in evergreen jungle, 660–1020 m., *Kerr*, 868.

Distr. Trop. Asia and Africa, Polynesia.

Bambusa arundinacea,* *Retz.*—F.B.I., vii. p. 395 ; For. Fl. Burma, ii. p. 554 ; Gamble, Ann. Roy. Bot. Gard. Calc., vii. p. 51, t. 48.

Lakon, in scrub jungle, 300 m., *Kerr*, 1011 ; Phre, Me K'Mi, in scrub jungle, 180 m., *Kerr*, 2356 ; Chiengmai, Doi Sootep, 300 m., *Hosseus*, 444 ?

Distr. India, Assam, Burma.

Lao name, Mai Pai (ex *Kerr*).

Bambusa Tulda, *Roxb.*—F.B.I., vii. p. 387 ; For. Fl. Burma, ii. p. 558 ; Gamble, Ann. Roy. Bot. Gard. Calc., vii. p. 30, t. 29 ; Hosseus, ii. p. 368.

Muang Prow, Ban Long Kaut, by streams, 600 m., *Kerr*, 1029 ; Doi Chieng Dao, 1200–1500 m., *Hosseus*, 408.

Distr. Bengal, Assam, Burma.

Thyrsostachys siamensis, *Gamble*, Ann. Roy. Bot. Gard. Calc., vii. p. 59, t. 51 ; F.B.I., vii. p. 397.

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* For the identifications of the *Bambuseae* I am indebted to Mr. J. S. Gamble.

Near Lakon, forming the greater part of some dry jungles, 300 m., *Kerr*, 973 ; Siam, *Kurz*.

Distr. Upper Burma.

Lao name, Mai Hooak (ex *Kerr*).

Oxytenanthera albociliata, *Munro*—F.B.I., vii. p. 401 ; Gamble, Ann. Roy. Bot. Gard. Calc., vii. p. 70, t. 61. *Gigantochloa albociliata*, Kurz, For. Fl. Burma, ii. p. 555.

Between Lakon and Phre, near Pang Pooey, 420 m., *Kerr*, 984 ; Chieng Dao, in eng jungle, 390 m., *Kerr*, 1060.

Distr. Burma.

Lao name, Mai Pahng, Mai Bong Pah (ex *Kerr*).

Oxytenanthera Hosseusii, *Pilger*—Hosseus, ii. p. 369.

Nakontai (ex *Hosseus*).

Dendrocalamus Brandisii, *Kurz*—F.B.I., vii. p. 404 ; For. Fl. Burma, ii. p. 560 ; Gamble, Ann. Roy. Bot. Gard. Calc., vii. p. 81, t. 71.

Chiengmai, 300 m., cultivated, *Kerr*, 891.

Distr. Burma.

Lao name, Mai Sang Yen (ex *Kerr*).

Dendrocalamus membranaceus, *Munro*—F.B.I., vii. p. 404 ; For. Fl. Burma, ii. p. 560 ; Gamble, Ann. Roy. Bot. Gard. Calc., vii. p. 81, t. 71.

Between Lakon and Phre, near Ban Meh Tah, on sides of limestone ravines, 300 m., *Kerr*, 996.

Distr. Burma.

Lao name, Mai Sang (ex *Kerr*).

Dendrocalamus nudus, *Pilger*—Hosseus, ii. p. 369.

Chiengmai, 300 m., *Hosseus*, 290*a*.

GYMNOSPERMAE.

Cycadaceae.

Cycas immersa, *Craib*, sp. n., a *C. pectinata*, Griff., et *C. siamensi*, Miq., quibus affinis, costa foliolorum supra immersa haud prominente recedit.

Truncus erectus, ad 90 cm. altus (ex *Kerr*). *Folia* circiter 70 cm. longa, petiolo circiter 19 cm. longo superne lateraliter spinoso suffulta ; rachis subtus inferne conspicue carinata, apicem versus convexa, plus minusve glabrescens, supra plus minusve distincte carinata ; foliola utrinque numerosa, lineari-lanceolata, parum falcata, apice pungentia, ad 15 cm. longa, 7 mm. lata, rigida, supra glabra, subtus minute parce brunneo-pubescentia, costa supra immersa subtus valde prominente. *Carpophylla* ambitu obovata 6·5–10·5 cm. longa, ad 5 cm. lata, tota, ovulis exceptis, hirsuto-tomentosa, ochrascentia, parte inferiore pedicellum simulante ad fere 4 cm. longa superne constricta ibique utrinque ovulo solitario instructa, parte superiore laminam acuminatam pectinato-pinnatifidam simulante ad 6 cm. longa et 5 cm. lata. *Strobili* ♂ ambitu oblongi, ad 21 cm. longi et 8 cm. diametro, pedunculo communi ad 5 cm. longo basi nudo superne squamis obtecto suffulti ;

squamae circiter 25 mm. longae, ad 18 mm. latae, supra apice excepto glabrae, subtus furfuraceo-tomentellae ; acumen rigidum, sursum directum, circiter 12 mm. longum.

Between Lakon and Phre, near Pang Pooey, in deciduous jungle, 420 m., *Kerr*, 999.

Lao name, Mă Prou Tou (ex *Kerr*).

Cycas siamensis, *Miq.*—F.B.I., v. p. 657 ; For. Fl. Burma, ii. p. 503 ; Hosseus, ii. p. 367.

Ban Meh Wang, 300 m. (ex *Hosseus*).

Distr. Burma.

Gnetaceae.

Gnetum scandens, *Roxb.*—F.B.I., v. p. 642.

Chiengmai, by a stream, foot of Doi Sootep, 300 m., *Kerr*, 602.

Distr. India, Assam, Malaya.

Coniferae.

Cephalotaxus Fortunei, *Hook.* ?—Hosseus, ii. p. 368.

Doi Intanon, 1300–1650 m. (ex *Hosseus*).

Pinus khasya, *Royle*—F.B.I., v. p. 652 ; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 129 ; Hosseus, ii. p. 368.

Chiengmai, on open ridges on Doi Sootep, 900–1600 m., *Kerr*, 962, *Hosseus*, 318.

Distr. Burma, Assam, Bengal.

Lao name, Mai Kia (ex *Kerr*).

Pinus Merkusii, *Jungh.*—F.B.I., v. p. 652 ; Coll. et Hemsl., Journ. Linn. Soc., xxviii. p. 129.

Near Chiengrai, Hue San, common in eng jungle, 450–480 m., *Kerr*, 2506.

Distr. Burma, Cochinchina, Sumatra, Philippines.

Lao name, Mai Kia (ex *Kerr*).

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