

STUDIES IN THAI LILIACEAE

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This paper was made during the author's stay at the Botanical Institute (Aarhus, Denmark) and at the Botanical Museum (Copenhagen, Denmark) under Prof. Kai Larsen and Dr. Bertel Hansen during February 1972 to July 1973. My intention is to revise the family Liliaceae for the Flora of Thailand. The genus *Chlorophytum* is treated in the Thai Forest Bulletin (Botany) No. 7. 1973.

The present work covers genera *Disporum*, *Disporopsis* and *Ophiopogon*, the rest will be published successively in this bulletin.

DISPORUM

Salisb., Trans. Hort. Soc. London **1** : 331. 1812; D. Don, Proc. Linn. Soc. **1** : 45. 1839; Trans. Linn. Soc. Bot. **18** : 516. 1841; Baker, J. Bot. **13** : 230. 1875; Wang & Tang, Contr. Inst. Bot. Nat. Acad. Peiping **6** : 19. 1949; Wright, Kew Bull. **1929** : 319. 1929; Gagnep., Bull. Soc. bot. France **81** : 286. 1934; Koyama, Bot. Mag (Tokyo) **71** : 330. 1958.

Rootstock horizontal; stem erect, angular, the lower half covered with thin sheaths. Leaves sessile or sub-sessile, strongly-nerved. Inflorescence terminal or axillary, umbel. Tepals 6, free, saccate or spurred toward the base. Stamens 6, inserted on the torus or at the base of perianth, erect, much shorter than the tepals; anthers dorsifixed, exserted. Ovary 3-celled; style filiform; ovules 2-6 in each cell. Fruit a berry, globose, black or blue; seeds sub-globose, testa brown.

Species about 12 in temperate regions, 2 species so far recorded from Thailand.

KEY TO SPECIES

Leaves oblong-lanceolate 6-10 cm long, 3-7 cm broad. Spurs long, about 5 mm; anthers rounded, 3-4 mm long **1. D. calcaratum**

Leaves ovate-lanceolate 6-10 cm long, 2-4 cm broad. Spurs short 2-3 mm; anthers oblong, 3-3.5 mm long **2. D. pullum**

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1. *Disporum calcaratum* D. Don, Trans. Linn. Soc. London **18** : 516. 1814; Hook. f., Fl. Br. Ind. **6** : 359. 1892; Gagnep. in Lecomte, Fl. Gén. I. — C. **6** : 782. 1934; Craib, Kew Bull. **1912** : 412. 1912; Ridl., Fl. Mal. Pen. **4** : 338. 1921.

Thailand. — NORTHERN : Chiang Mai, Doi Suthep, 500 m, *Kerr* 3273 (AAH, BK, C, K); Nan, 450 m, *Winit* 1766 (BKF, C, K).

Distribution. — From India through Bangladesh to Burma, South China, Thailand and Malay Peninsula.

Ecology. — On sandy soil in lower montane and dry evergreen forests.

2. *Disporum pullum* Salisb., Trans. Hort. Soc. London. **1** : 330. 1833; Hook. f., Fl. Br. Ind. **6** : 360. 1862; Gagnep. in Lecomte Fl. Gén. I. — C. **6** : 378. 1934; Ridl., Fl. Mal. Pen. **4** : 338. 1934; Larsen, Dansk Bot. Arkiv. **20** : 41. 1961. —Fig. 1

Thailand. — NORTHERN : Chiang Mai, Doi Suthep, 450 m, *Soerensen, Larsen & Hansen* 3227 (AAH, BKF, C); Chiang Rai, *Put* 3914 (BK, C, K).

Distribution. — From Himalaya through Bangladesh to S. China, Burma, Laos, Vietnam, Thailand, Cambodia, Malay Peninsula and Sumatra.

Ecology. — On sandy soil in lower montane and pine-dipterocarp forests.

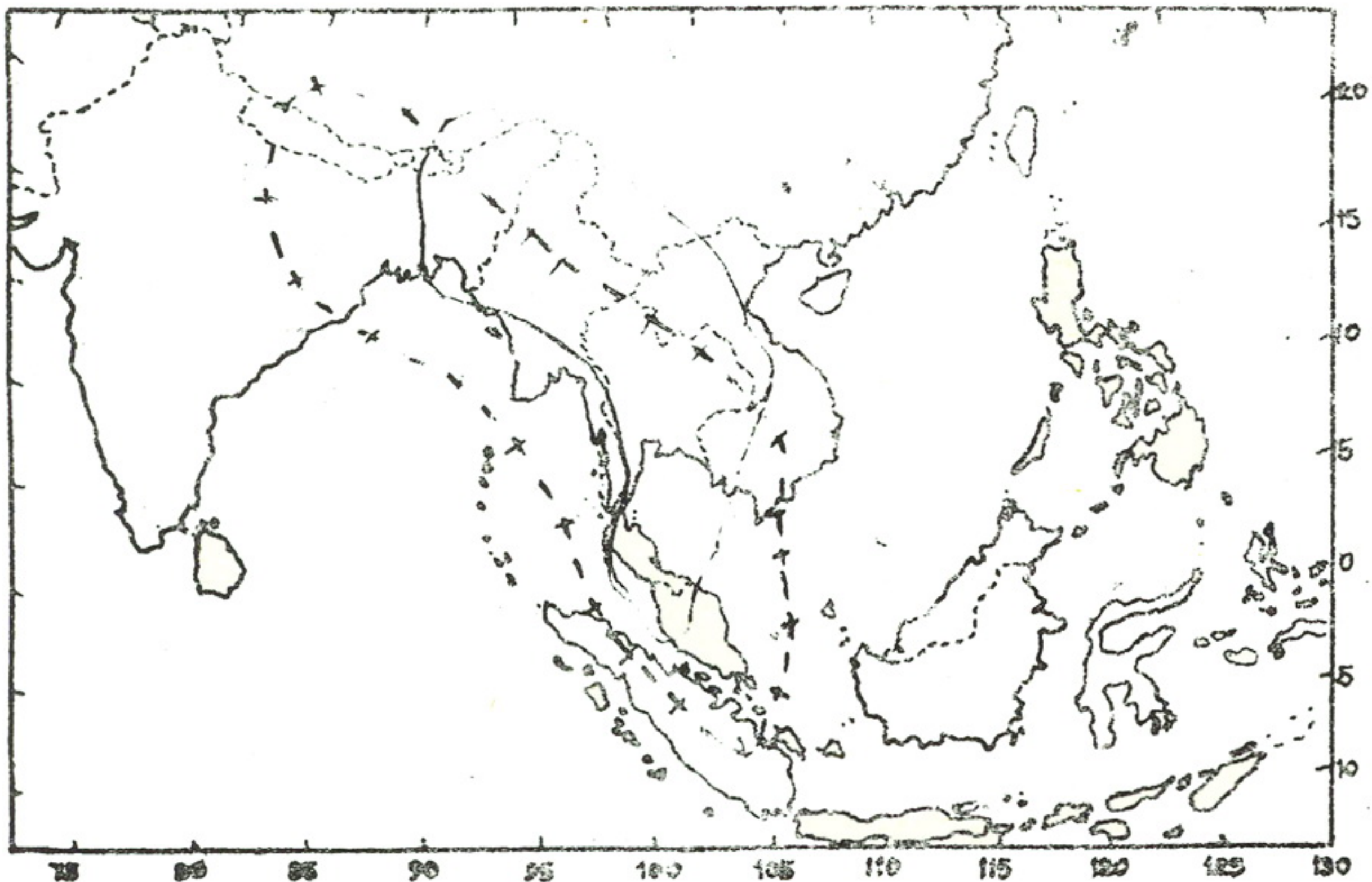


Fig. 1. Map showing the distribution of *Disporum* spp.

— *D. calcaratum*
+--+ *D. pullum*

DISPOROPSIS

Hance, J. Bot. **21** : 278. 1883; Hayata, Ic. Pl. Formos. **5** : 230. 1915.

Rootstock short, stout; stem smooth; leaves lanceolate or ovate-lanceolate; 3–5 main nerves. Inflorescence in fascicles of 5–6 flowers or more. Tepals 6, connate towards the base. Stamens 6; anthers dorsifixed; filaments thin. Ovary trigonous, 3–locular; style short. Fruit a berry globose.

About 10 species widespread in temperate regions; only one species so far recorded from Thailand.

Disporopsis longifolia Craib, Kew Bull. **1912** : 410. 1912. —Fig. 2

Thailand. — NORTHERN : Chiang Mai, Doi Suthep *Kerr* 687, 687a (K, C, BK—Type); *Soerensen, Larsen and Hansen* 55759 (AAH, L, BKF); Chiang Rai, Phu Langka, *T. Smitinand* 1718 (AAH, BKF, C, L).

Distribution. — Himalaya, Burma, S. China, Laos, N. Thailand and N. Vietnam.

Ecology. — In lower montane and dry evergreen forests.

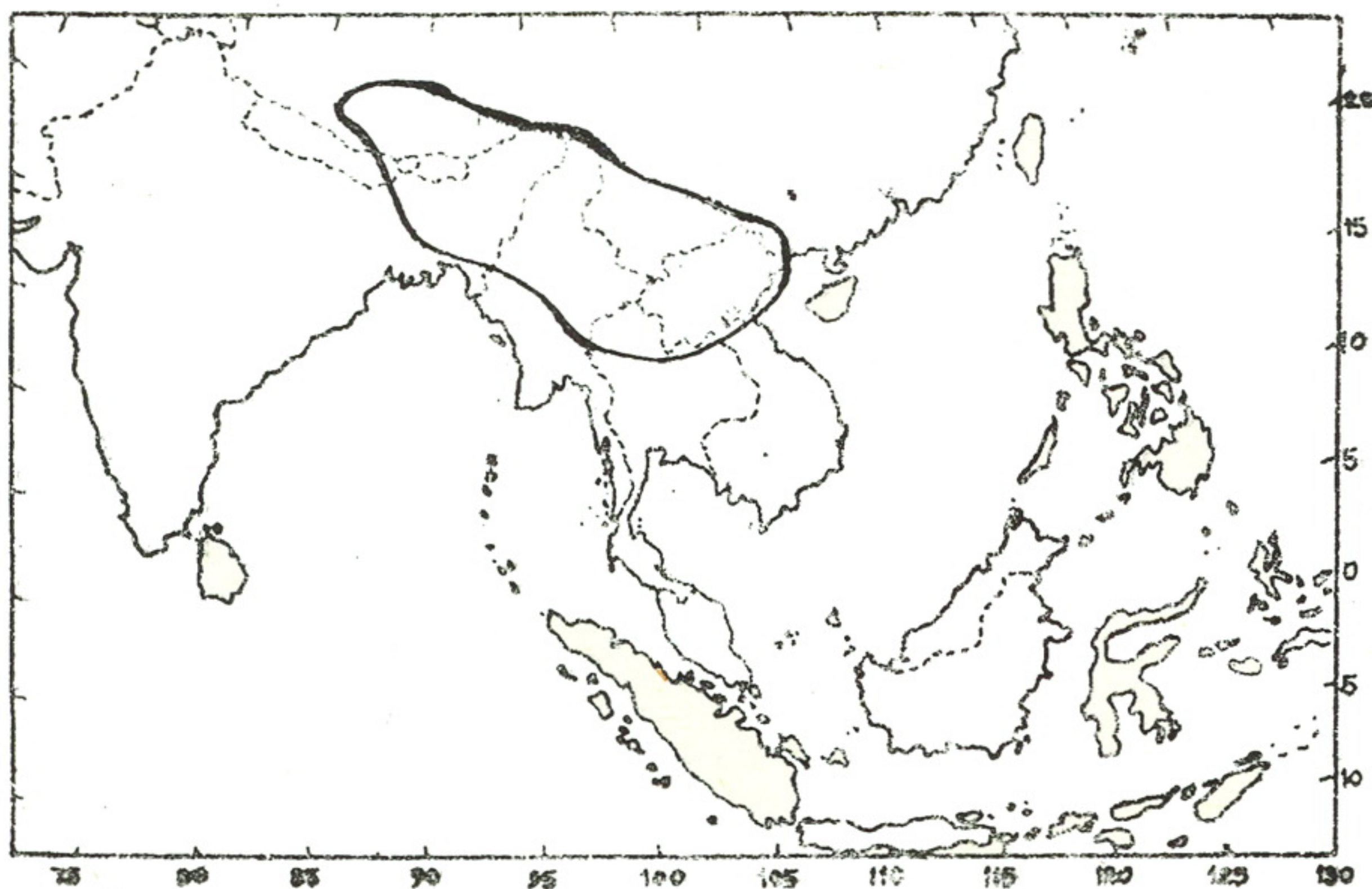


Fig. 2. Map showing the distribution of *Disporopsis longifolia* Craib.

OPHIOPOGON

Ker-Gawl., Bot. Mag. t. 1063. 1807; Hook. f., Fl. Br. Ind. 6 : 267. 1892.

Roots tuberous, fasciculate. Leaves linear or lanceolate, often glaucous on the lower surface; nerves closely parallel. Spikes terminal or axillary, many-flowered. Tepals subequal, free. Stamens 6; filaments short; anthers basifixed. Ovary superior or semi-inferior, 3-locular; style columnar; ovules 2 in each locule, collateral, erect. Fruit a berry.

Species more than 8 in East Asia; 5 species recorded from Thailand.

KEY TO SPECIES

1. Leaves linear-lanceolate or grass-like
 2. Spike more than 10 cm; flowers 1.2–1.5 cm diam.
 3. Bracts longer than flowers **1. *O. malcolmsonii***
 3. Bracts shorter than flowers **2. *O. reptans***
 2. Spike less than 8 cm long; flowers 0.8–1.2 cm diam.
 4. Flowers spacing, single in each bract **3. *O. intermedius***
 4. Flowers crowded, 2–4 in each bract **4. *O. brevipes***
1. Leaves oblong-lanceolate, attenuate into long petiole with yellowish spots on the blade **5. *O. marmoratus***

NOTE :

Excluded species: *O. gracilipes* Craib, Kew Bull. 1912 : 14. 1912, this was transferred to the genus *Peliosanthes* by van Steenis and R. Geesink in Blumea 20 : 434. 1972.

Ophiopogon malcolmsonii Royle ex Hook. f., Fl. Br. Ind. 6 : 269. 1892; Craib, Kew Bull. 1912 : 411. 1912; Larsen, Dansk Bot. Arkv. 20 : 39. 1961. —Fig. 3

T h a i l a n d . — **NORTHERN :** Chiang Mai, Doi Chiang Dao, 1200 m, *Beusekom & Phengklai 1352* (AAH, BKF, C, L); **NORTH-EASTERN :** Khao Kheo, Khao Yai Nat. Park, 1200–1300 m, *TDBS 10164* (AAH, BKF, C, K); Loei, Phu Kradung, 1300 m, *Nakkan 4* (AAH, BKF, C, K).

D i s t r i b u t i o n . — From Bangladesh through Burma, Northern Thailand and Indo-China.

E c o l o g y. — On sandy soil or limestone hill in evergreen forest.

Ophiopogon reptans Hook. f., Fl. Br. Ind. 6 : 268. 1892; Rodriguez in Lecomte Fl. Gén. I.-C. 6 : 660 : 1934; Larsen, Dansk Bot. Arkv. 20 : 40. 1961. —Fig. 3

T h a i l a n d. — NORTH-EASTERN : Loei, Phu Kradung, 1300 m, Soerensen, Larsen & Hansen 2336 (AAH, BKF, C, K); PENINSULAR : Nakhon Si Thammarat, Khao Luang, Beusekom & Phengkklai 990 (AAH, BKF, C, L).

D i s t r i b u t i o n. — From Burma to Thailand.

E c o l o g y. — On sandy soil in lower montane forest or in rock crevices on limestone hills.

Ophiopogon intermedius D. Don, Prod. Fl. Nep. : 48. 1829; Hook. f., Fl. Br. Ind. 6 : 269. 1892; Larsen, Dansk Bot. Arkv. 21 : 39. 1966. *Ophiopogon japonicus* Ker-Gawl. var. *intermedius* Maxim., Mal. Biol. 7 : 321; Rodriguez in Lecomte, Fl. Gén. I.-C. 6 : 662. 1934; Ridl., Fl. Mal. Pen. 4 : 327. 1924. —Fig. 3

T h a i l a n d. — NORTHERN : Chiang Mai, Doi Inthanon, 1500 m, Kerr 5300 (BK, C, K), Doi Chiang Dao, 1300–1400 m, Kerr 5568 (BK, K, L), Beusekom & Phengkklai 1102 (BKF, C, L); NORTH-EASTERN : Loei, Phu Kradung, Smitinand 486 (BKF).

D i s t r i b u t i o n. — From Himalaya to Khasia Hill, South China, Indo-China to Japan.

E c o l o g y. — In open pine and lower montane forests.

Ophiopogon brevipes Craib, Kew Bull. 1912 : 410. 1912. —Fig. 3

T h a i l a n d. — NORTHERN : Chiang Mai, Doi Suthep, 660 m Kerr 1840 (BK, C, K — Type, L); SOUTH-EASTERN : Chanthaburi, Pong Nam Ron, above 50 m, Smitinand 3361 (AAH, BKF, C), Khao Soi Dao, 400 m, Sangkha-chand 9 (AAH, BKF, C, L).

D i s t r i b u t i o n. — Endemic to Thailand.

E c o l o g y. — In mixed deciduous forests and bamboo swards.

Ophiopogon marmoratus Pierre ex Rodriguez, Bull. Soc. bot. Fr. 75 : 997. 1892. —Fig. 3

T h a i l a n d. — NORTHERN : Chiang Rai, Doi Tham Tupu, 390m, Garrett 286 (AAH, BKF, K); SOUTH-EASTERN : Chanthaburi, Khao Soi Dao, 300–400 m, Larsen 9856 (AAH, BKF, C, L); NORTH-EASTERN : Loei, Phu Kradung, Bunpheng 1085 (BKF, C, K); EASTERN : Nakhon Nayok, Nang Rong Falls, 250 m, Larsen, Warncke & Santisuk 3361 (AAH, BKF, C, K).

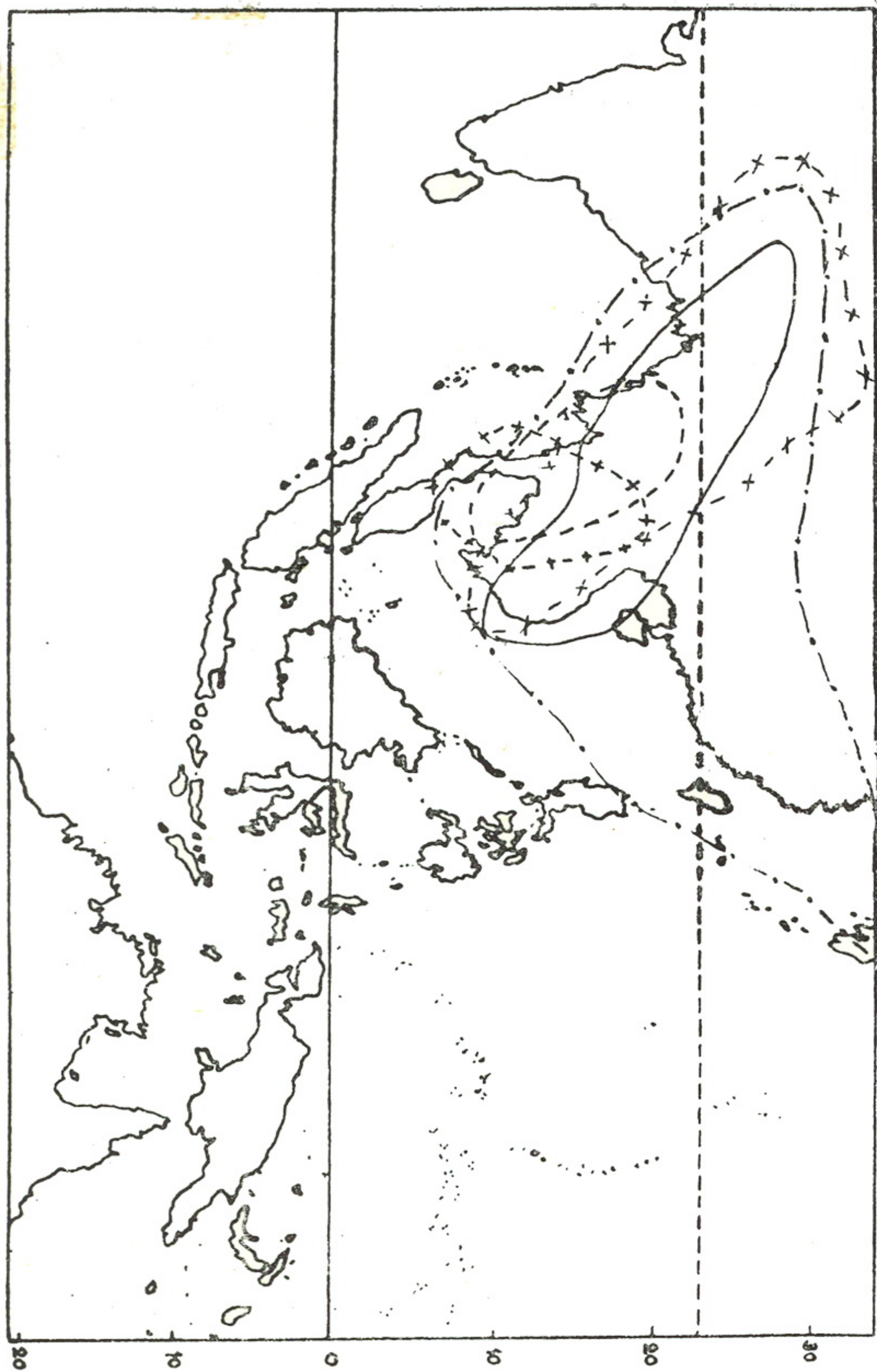


Fig. 3. Map showing distribution of *Ophiopogon* spp. in Thailand

- = *O. malcolmsonii*
- - - = *O. reptans*
- . - . = *O. intermedius*
- + - + - = *O. brevipes*
- x - x - x = *O. marmoratus*

D i s t r i b u t i o n — From South China to Laos, Vietnam, Cambodia and Thailand.

E c o l o g y. — Along stream in evergreen forest or on rocky limestone hills.

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