

Taxonomic Notes on Genus *Smilax* L. (Smilacaceae) from the Mainland Southeast Asia

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ABSTRACT.— Four species of *Smilax* (*S. cambodiana*, *S. longiflora*, *S. paniculata* and *S. setosa*) are newly recorded for Thailand and one species (*S. leucophylla*) is newly recorded for Cambodia. *Smilax barbata* and *S. leucophylla* var. *platyphylla* are lectotypified. *Smilax barbata* is a superfluous name of *S. setosa* and *S. leucophylla* var. *platyphylla* proposed as a new synonym of *S. leucophylla*. Detailed descriptions, photographs, illustrations, notes and distribution maps for each of the species are provided.

KEY WORDS: distribution, morphology, new record, nomenclature, *Smilax*

INTRODUCTION

Smilax L. is the sole genus of the family Smilacaceae, with *ca* 260 species, and is distributed mainly in tropical Africa, Asia, Australia, America and Europe (Cameron and Fu, 2006; Qi et al., 2013; Judd et al., 2016; Christenhusz et al., 2017). The family comprises dioecious climbers or shrubs that are glabrous or covered with prickles and bristles on the stem. The leaves are simple and alternate with palmate main veins. The petioles usually have petiolar sheaths and paired tendrils. The inflorescences comprise a solitary umbel or 1–many umbellate racemes arising in the leaf axils. The flowers have six tepals that are free or connate. The staminate flowers mostly have six stamens, rarely three or 9–18. The pistillate flowers have a superior, 3-locular ovary and the fruits are berries with 1–3 seeds.

Taxonomic studies of Smilacaceae in Asia have been carried out by several workers. For example, 33 species were enumerated for India (Hooker, 1892), three

for Sri Lanka (Dassanayake, 2000), 14 for Bhutan (Rae, 1994), 88 for China (Chen and Koyama, 2000), 21 for Hong Kong (Koyama, 2000) and 11 for the Philippines (Merrill, 1922).

In mainland Southeast (SE) Asia, comprising Myanmar, Thailand, Laos, Cambodia, Vietnam, Peninsular Malaysia and Singapore, 30 species have been reported for Myanmar (Kress et al., 2003), 28 for Thailand (Koyama 1975, Kladwong et al. 2018a,b), 36 for Indo-China (Gagnepain, 1934), 32 for Cambodia, Laos and Vietnam (Koyama, 1983) and 14 for the Malay peninsula (Ridley, 1924).

While preparing a new treatment of the family for mainland SE Asia, we examined unidentified material from this region which we were able to assign to *S. cambodiana*, *S. leucophylla*, *S. longiflora*, *S. paniculata* and *S. setosa*. The distribution of each species was investigated, which included comparisons with the work of Ridley (1911, 1924), Gagnepain (1934), Koyama (1975, 1983, 1984), Kress et al. (2003) and Newman et al. (2007). We found that *S. cambodiana*, *S.*

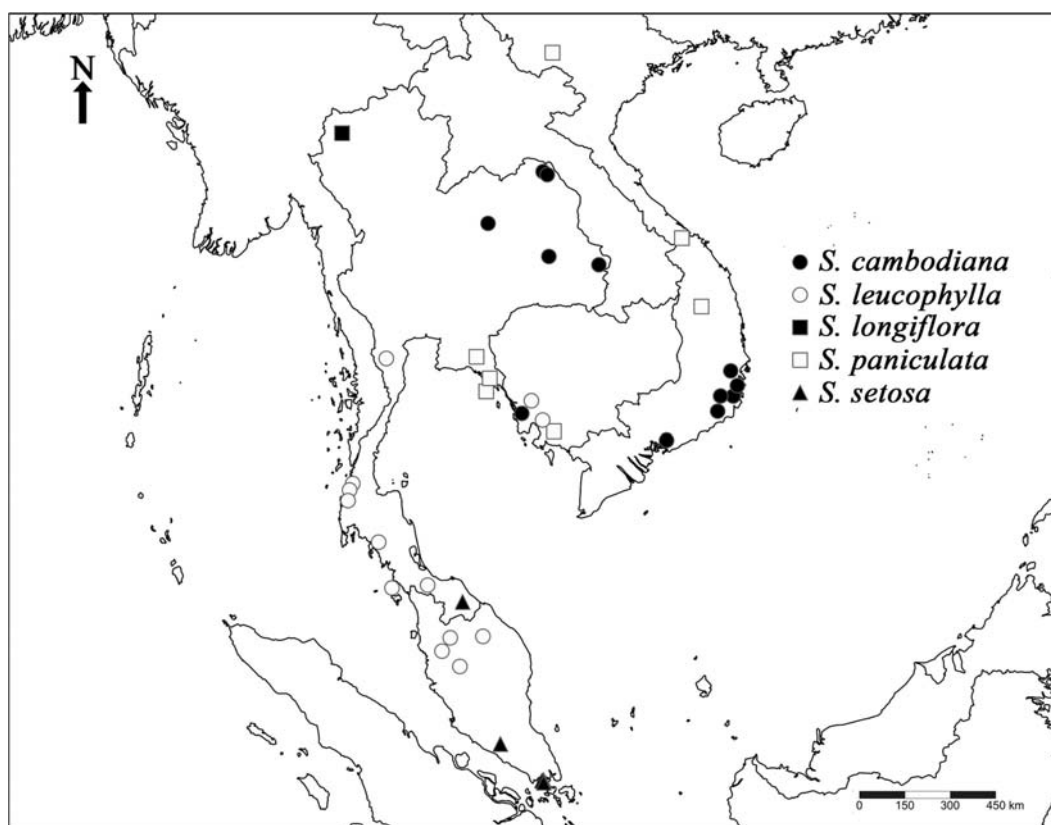


FIGURE 1. Distribution of some *Smilax* species in the Mainland SE Asia. Created with SimpleMappr

longiflora, *S. paniculata* and *S. setosa* are newly recorded for Thailand and *S. leucophylla* is a new record for Cambodia.

MATERIALS AND METHODS

This work is based on the examinations of herbarium specimens, which included type specimens from following herbaria: A, AAU, BM, BK, BKF, E, HITBC, HN, K, KGU, L, NY, P, PE, PSU and SING (herbarium acronyms follow Thiers, 2020, continuously updated). Field observations in various localities in Thailand were made.

Distribution maps of the studied species in the mainland SE Asia were plotted (Fig. 1).

The morphological characters, typification and nomenclature for each species have been determined and taxonomic descriptions, together with photographs, illustrations, distribution and notes are provided. Nearly all of the specimens cited here have been examined. Type specimens which have been examined are indicated by '!'; those seen as digital images are indicated by 'image seen'. Types not seen are indicated by *n.v.* (*non vide*).



FIGURE 2. *Smilax cambodiana*: A. male plant; B. female plant; C. infructescences. Photos A.–B. by P. Kladwong; C. by S. Poompo

TAXONOMIC TREATMENT

Smilax cambodiana Gagnep., Bull. Soc. Bot. France 81: 74. 1934. Type: Cambodia, ♂, Magnen et al. 7 (lectotype **P!** [P00686771], designated by Koyama (1983); isoelectotype A [A00030111], image seen), Fig. 2.

Climber, stem and branches terete, with sparse prickles, 1–2 mm long, whitish green or reddish. *Petiole* 0.8–2 cm long, subterete, ridged on abaxial surface; sheath narrow, 0.5–1.5 by *ca* 0.2 mm, herbaceous. *Tendrils* up to 10 cm long on stem but very short or wanting on flowering branches. *Leaf blade* ovate to ovate-lanceolate, 7–18 by 2–10.5 cm,

whitish green, chartaceous to thinly coriaceous, base rounded or cuneate to attenuate, apex attenuate or acuminate to mucronate; main veins 3–5, prominent on both surfaces, ridged beneath, separating at lamina base; lateral veinlets very slender, conspicuous on both surfaces. *Inflorescence* 1–2-umbellate raceme, 11–27-flowered per umbel; axis 1–2 cm long, 1–2-noded; prophyll ovate or ovate-lanceolate, 5–7 by 3–4 mm, herbaceous; peduncles of umbels terete, 1.3–5 cm long; bracts ovate-lanceolate, 2–4 by 0.6–1.4 mm; receptacles globose 2–3 mm in diameter; bracteoles ovate-lanceolate, 1–1.5 by 0.5–0.8 mm; pedicels 3–7 mm long, yellowish green. *Tepals* free, spreading and recurved when mature. *Male flower*: tepals ovate-oblong to linear-oblong, 5–6 by 0.8–1 mm, apex obtuse, yellowish green; stamens 6; filaments 3–4 mm long; anthers elliptic-oblong, *ca* 1.5 mm long, whitish. *Female flower*: tepals ovate-oblong to linear-oblong, 4–5 by 0.8–1 mm; ovary ovoid, greenish; style *ca* 0.2 mm long; stigmas *ca* 1 mm long; staminodes 3, *ca* 1 mm long, needle-like. *Berry* globose, 5–7 mm in diameter, reddish when mature, with 1–2 seeds.

Distribution.— Thailand, Cambodia, Vietnam.

Ecology.— In deciduous dipterocarp and mixed deciduous forests, sandstone bedrock, 200–600 m alt., flowering and fruiting May to Aug.

Note.— *Smilax cambodiana* superficially resembles to *S. verticalis* Gagnep. in having a similar leaf shape which is whitish green, turning brown when dry, and a 1–2-umbellate raceme, which is subtended by herbaceous prophyll. *Smilax cambodiana* is a climber whereas *S. verticalis* is a shrub or subscandent. *S. cambodiana* is the first record for Thailand where it distributes in Eastern and North-Eastern floristic regions. The species was formerly known only from Cambodia and Vietnam but it may also

occur in Lao PDR. Fieldwork and specimen collections are needed to obtain a better understanding of this species distribution.

Specimens examined.— THAILAND: NORTH-EASTERN Beung Kan [Chanan Waterfall, 16 May 2015, ♀, *Kladwong* 283 (KKU); *ibid.*, 12 July 2017, ♀, *Kladwong* 393, ♀, 394 (KKU); Chet Si Waterfall, 26 Aug. 2001, ♀, *Pooma et al.* 2754 (BKF); *ibid.*, 6 June 2019, ♀, *Kladwong* 473, ♀, 474, ♂, 475 (KKU); Tad Po Waterfall, 14 Sept. 2017, *Kladwong* 430 (KKU)]; Khon Kaen [Kok Phu Taka, 31 Mar. 2019, *Kladwong* 426 (KKU)]; EASTERN Roi Et [25 July 2017, ♂, *Kladwong* 405 (KKU)]; Ubon Ratchathani [Khong Chiam, 22 Aug. 2001, ♀, *Pooma et al.* 2325 (BKF-3 sheets), ♀, 2326 (BKF-3 sheets), ♀, 2327 (BKF); *ibid.*, 25 July 2008, ♀, *Pooma et al.* 7161 (BKF, K)]; CAMBODIA: Koh Kong [26 Nov. 1968, *Martin* 1028 (P)]; unknown locality [♂, *Magnen et al.* 7 (P); 1883, *Couderc s.n.* (P); 1909, ♀, *Alleizette s.n.* (P); 1912, ♂, *Lecomte & Finet s.n.* (P)]; VIETNAM: Baria-Vung Tau [Binh Chau-Phuac Buu Natural Reserve, 4 Oct. 2005, *Du et al.* HNK 1150 (HN)]; Khánh Hòa [Ba Ngoi, 22 June 1919, *Poilane* P 3 (P); Nha Tang, 10 Sept. 1922, *Poilane* 4535 (P); Ninh Hòa, 7 May 1923, ♂, *Poilane* 6276 (P)]; Ninh Thuận [Ca Na, 13 Nov. 1923, ♀, *Poilane* 8609 (P)]; Thuận Hai [Ba Ran, 2 Mar. 1924, ♀, *Poilane* 9845 (P); Krong Pha [23 June 1921, *Hayata* 979 (P); Lô O, *Phạm Hoàng Hộ* 5006]; unknow locality [*Evrard* 2271 (P)].

Smilax leucophylla Blume, Enum. Pl. Javae 1: 18. 1827. Type: Indonesia, Java, *Blume s.n.* (holotype L! [L0041479]), Figs. 3C, 3D, 3E, 3F

— *Smilax leucophylla* var. *retusa* Blume, Enum. Pl. Javae 1: 18. 1827. Type: Indonesia, Java, *Blume s.n.* (holotype L! [L0041481]).

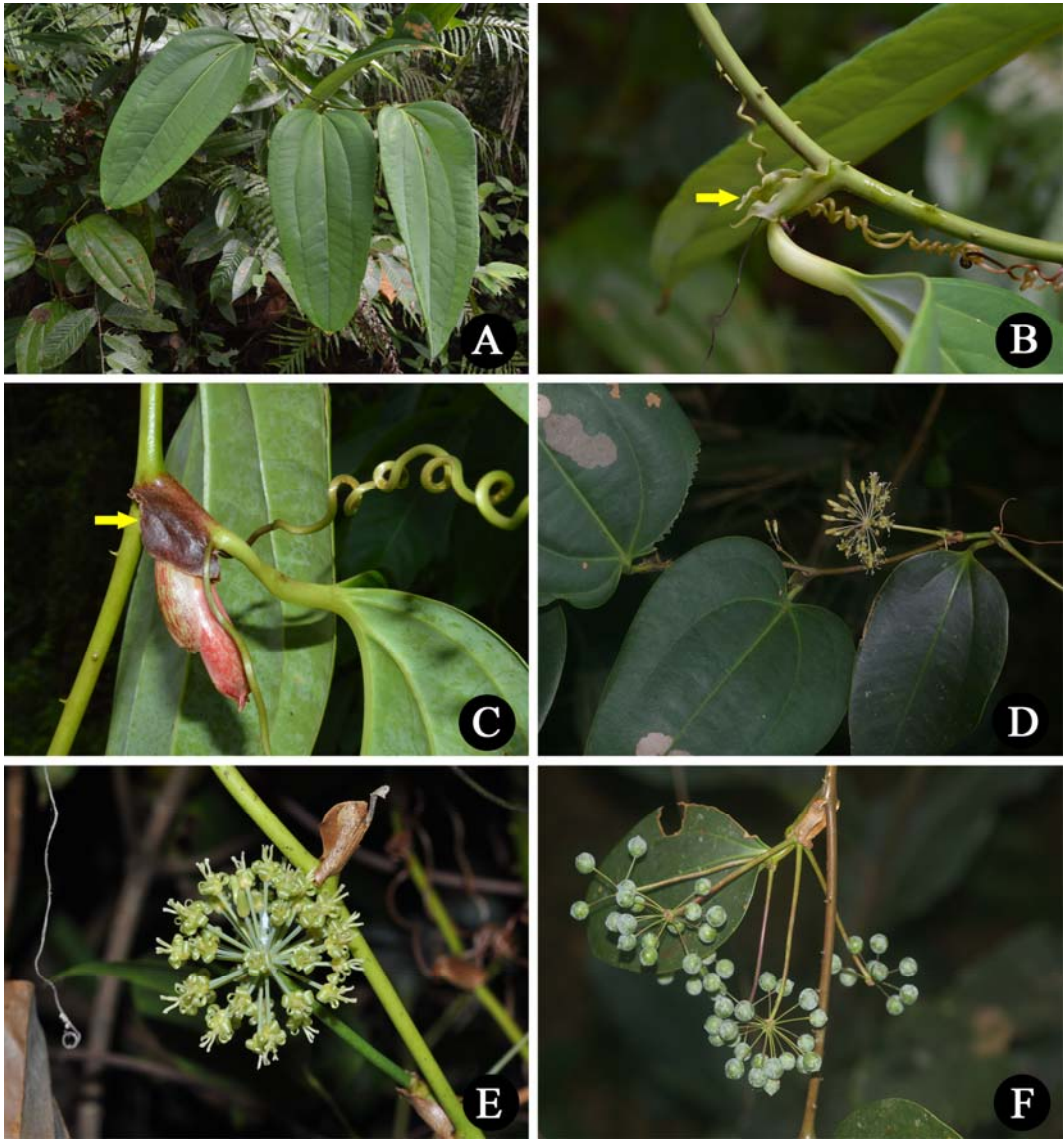


FIGURE 3. *Smilax blumei*: A. habit and leaves; B. petiolar sheaths (arrow) and tendrils; *S. leucophylla*: C. petiolar sheaths (arrow) and tendrils; D. male plant; E. female plant; F. infructescences. Photos A.–B. by P. Kochaiphath; C. by P. Kladwong; D. and F. by C. Suwanphakdee; E. by C. Leeratiwong

— *Smilax leucophylla* var. *heterophylla* Blume, Enum. Pl. Javae 1: 19. 1827. Type: Indonesia, Java, *Blume s.n.* (holotype **L!** [L0041480]).

— *Smilax leucophylla* var. *platyphylla* Merr., Rumphius's herbarium Amboinense 9: 139. 1917. Type: Maluku, Amboina, July 1913, *Robison 502* (lectotype **K!** [K000292105])

designated here; isoelectotype **K!** [K000292106]), **syn. nov.**

Large climber, stem and branches stout, terete, with sparse prickles 1–3 mm long, yellowish green or brownish. *Petiole* 4–7 cm long, terete; sheath well-developed, ovate or ovate-lanceolate, 3–4 by 0.6–1 cm, coriaceous, reddish or purple, margin straight or recurved, apex obtuse or subacute. *Tendrils* well-developed, 15–20 cm long, stout. *Leaf blade* ovate to ovate lanceolate or elliptic-lanceolate, 13–33 by 8–20 cm, coriaceous, strongly glaucous beneath, base rounded or shallowly cordate, apex attenuate or acuminate; main veins 5–7, prominent on both surfaces; lateral veinlets conspicuous on both surfaces. *Inflorescence* 1–8-umbellate raceme or verticillate, 21–45-flowered per umbel; axis 1–2.5 cm long, 1–3-noded; prophyll broadly ovate, 0.8–1 by 0.5–0.7 cm, coriaceous; peduncles of umbels stout, terete, 4–7 cm long; bracts broadly ovate, 0.8–1.2 by 0.6–0.8 cm; receptacles globose, 3–6 mm in diameter; bracteoles ovate-lanceolate, 0.6–0.8 by 0.3–0.5 mm; pedicels 1.2–3 cm long, greenish. *Tepals* free, spreading and recurved when mature. *Male flower*: tepals oblong to linear, 5–6 by 0.8–1.2 mm, apex obtuse or acute, yellowish; stamens 6; filaments 5–6 mm long, whitish; anthers oblong, *ca* 1.2 mm long, yellowish. *Female flower*: tepals oblong to linear, 5–6 by 0.6–1.2 mm; ovary ellipsoid; style shortly; stigmas *ca* 3 mm long; staminodes 3, *ca* 0.8 mm long, needle-like. *Berry* globose, 6–8 mm in diameter.

Distribution.— Myanmar, Thailand, Cambodia, Malaysia, Indonesia, Philippines.

Ecology.— In evergreen forest, 160–950 m alt., flowering and fruiting Dec. to May.

Note.— *Smilax leucophylla* has many features in common with *S. blumei* A.DC., (Figs. 3A, 3B) especially leaf shape and

inflorescence type. It differs most obviously in its distinct, ovate or ovate-lanceolate, reddish or purple petiolar sheaths which are straight or recurved at the margin and obtuse or subacute at apex, vs lanceolate, whitish green, undulate at the margin and attenuate at apex in *S. blumei* (Figs. 3B, 3C). *Smilax leucophylla* was mainly distributed in the Malay Peninsula to Indonesia and the Philippines but it is newly recorded here for Cambodia, where it was collected from Koh Kong province.

Merrill (1917) proposed var. *platyphylla* under *S. leucophylla* based on different leaves and petiole sizes. Examination of type and non-type material of the typical variety and var. *platyphylla* showed that the differences between them are so small and unreliable that they are best united. Therefore, var. *platyphylla* is regarded as a new synonym under *S. leucophylla*. In addition, *Robison 502* was cited as the type in the protologue of *S. leucophylla* var. *platyphylla*. However, this collection has two duplicates at K. Therefore, sheet K000292105 was designated as the lectotype because it has complete leaves, petioles and petiolar sheaths and also a well preserved mature infructescence.

Specimens examined.— THAILAND: SOUTH-WESTERN Phetchaburi [Khao Phanoen Thung, 4 Feb. 2016, ♂, *Kladwong 361* (**KKU**)]; PENINSULAR: Ranong [♀, *Kerr 16539* (**BK, BM, K**)]; Klong Nakha, 4 Feb. 1979, *Koyama et al. 15236* (**AAU, BKF**); Ton Kloi Waterfall, 1 Mar. 2015, *Kladwong 183* (**KKU**); Phangnga [Sri Phang Nga National Park, 2 Mar. 2015, *Kladwong 193* (**KKU**)]; Krabi [Emerald Pool, 3 Mar. 2015, *Kladwong 195* (**KKU**)]; Nakhon Si Thammarat, [Khao Luang Foothill, 16 May 1973 *Geesink & Santisuk 5498* (**L**)]; Satun [Tarutao National Park, 12 Mar. 1980, ♀, *Congdon 475* (**AAU, PSU**)]; Songkhla

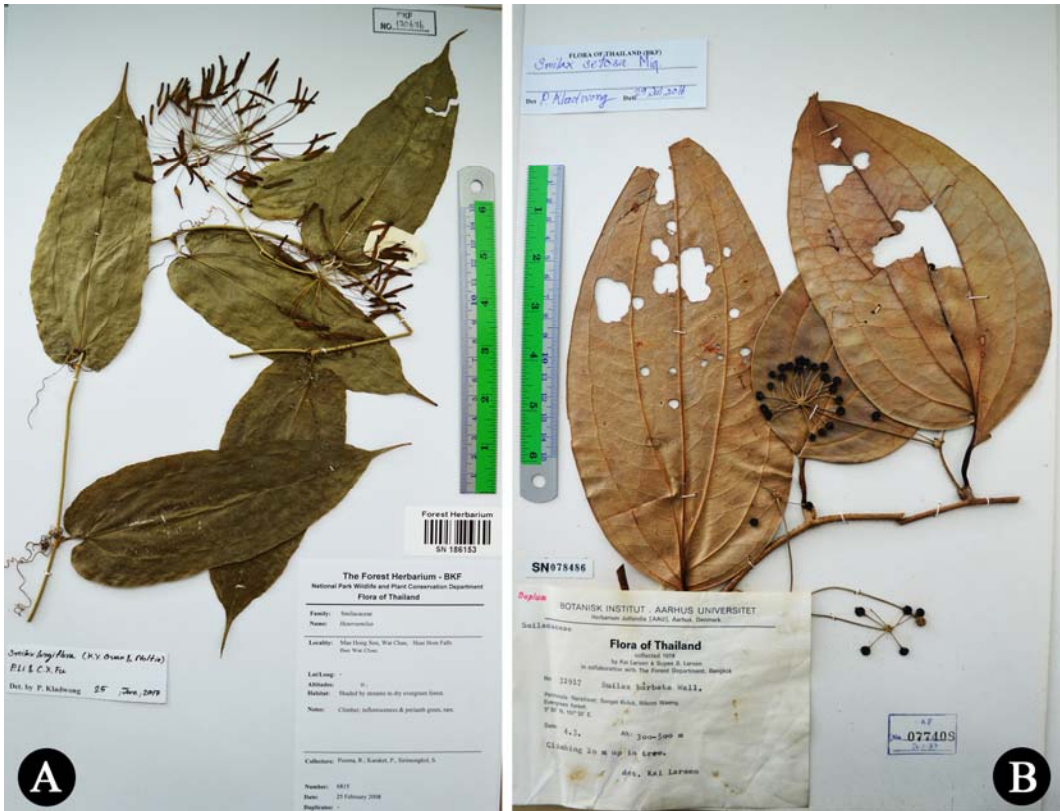


FIGURE 4. Photographs of dried specimens: A. male inflorescences of *S. longiflora*; B. infructescences of *S. setosa*.

[Kan, Zai, ♂, *Kerr* 14776 (**BK**, **BM**, **K**); Khao Nam Khang National Park, 17 Dec. 2006, ♀, *Gardner & Sidisunthorn* ST2800 (**K**); CAMBODIA: Koh Kong [Koh Kong Route to Phnom Penh, 13 Nov. 2009, ♀, *Cheng et al.* CL1138 (**K**); Thama Baing District, 15 May 2010, ♀, *Newman et al.* 2286 (**E**); MALAYSIA: Kelantan [Kuala Krai, 6 Aug. 2009, ♀, *Julius & Imim* FRI 56218 (**K**); Pahang [Cameron Highland, 6 Apr. 1988, *Sabari* FRI 32732 (**K**); Perak [Hulu Perak, 10 July 1966, ♀, *Whitmore* FRI0571 (**SING**); Larut, Mar. 1884, *King's collector* 5719 (**SING**)].

Smilax longiflora (K.Y.Guan & Noltie) P.Li & C.X.Fu, *Phytotaxa* 117: 59. 2013. — *Heterosmilax longiflora* K.Y.Guan & Noltie, *Edinburgh J. Bot.* 50(1): 59. 1993. Type: China, Yunnan, Xishuanbana, Menglun, ♂, *Li* 003287 (holotype **KUN**, n.v.; isotype **HITBC** [049888], image seen), Figs. 4A, 6A, 6B

Climber, stem and branches terete, glabrous, greenish. *Petiole* 1.3–2 cm long, with abaxial ridge; sheath narrow 3–4 by ca 0.5 mm. *Tendrils* 10–15 cm long, slender. *Leaf blade* elliptic-lanceolate to lanceolate, 4–10 by 1.5–4 cm, herbaceous, base cordate, apex acuminate; main veins 3,



FIGURE 5. *Smilax paniculata*: A. male inflorescence; B. fruits; *S. setosa*: C. leaves; D. bristles on stem and branches. Photos A.–B. by T. Srisuk; C.–D. by P. Koichaiphat

prominent beneath, separating at lamina base; lateral veinlets very slender. *Inflorescence* a solitary umbel, 19–27-flowered; prophyll absent; peduncles of umbels flattened, 1.5–4 cm long; receptacles globose, *ca* 2 mm in diameter; bracteoles ovate, 0.5–0.6 by 0.3–0.4 mm; pedicels 1.5–3.5 cm long. *Tepals* connate, non-spreading when mature. *Male flower*: perianth connate, ovate-lanceolate to ovate-oblong in outline, 1.5–3 by 0.3–0.4 cm; apex open with 3–4 teeth, acute; stamens 9–10; filaments 1.8–2 mm long, connate at base; column 1–1.5 mm long; anthers elliptic-oblong, *ca* 1 mm long, yellowish. *Female flower*: not seen.

Distribution.— China, Thailand.

Ecology.— In evergreen forest along stream in a valley of pine forest mountain, 700 m alt., flowering Feb.

Note.—*Smilax longiflora* (Figs. 6A, 6B) is distinguishable from *S. polyandra* (Gagnep.) P.Li & C.X.Fu by its larger flower with longer perianth and staminal column vs smaller flower with shorter perianth and staminal column in *S. polyandra* (Figs. 6E, 6F). *Smilax longiflora* was considered endemic to China but our work has extended its range to northern Thailand.

Specimens examined.— CHINA: Yunnan [I-Wu, ♂, *Henry 13458* (K)]; THAILAND: NORTHERN Mae Hong Son [Ban Wat

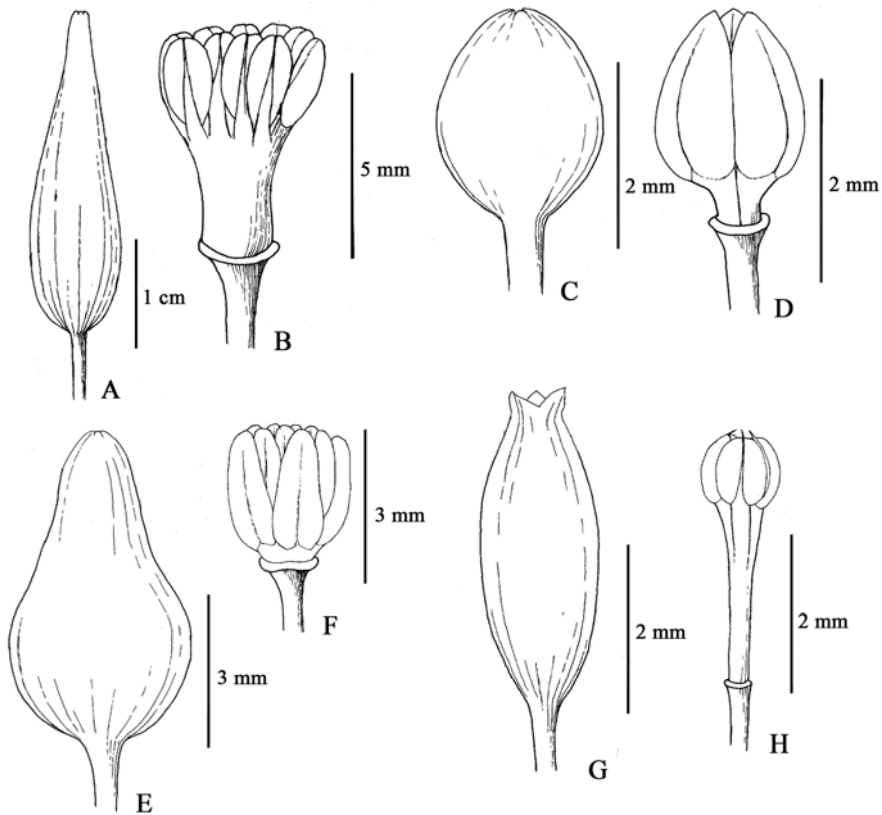


FIGURE 6. Staminate perianth and stamen: A.–B. *S. longiflora* drawn from *Pooma et al. 6815* (BKF); C.–D. *S. paniculata* drawn from *Kladwong 297* (KKU); E.–F. *S. polyandra* drawn from *Kladwong 381* (KKU); G.–H. *S. sumatrensis* drawn from *Thavorn 247* (BKF). Drawn by P. Kladwong

Chan, Huai Hom Waterfall, 25 Feb. 2008, ♂, *Pooma et al. 6815* (BKF); *ibid.*, 1 Mar. 2017, *Kladwong 429* (KKU)].

Smilax paniculata (Gagnep.) P.Li & C.X.Fu, *Phytotaxa* 117: 59. 2013. — *Heterosmilax paniculata* Gagnep., *Bull. Soc. Bot. France* 81: 69. 1934. Type: Vietnam, Phu Tho, Chan Mong, 16–17 Apr. 1914, ♂, *Chevalier 32134* (holotype **P!** [P00686748]; isotypes: **NY** [NY00319977], image seen, **P!** [P00686750 & P00686749]), Figs. 5A, 5B, 6C, 6D

Climber, stem and branches terete, smooth, greenish. *Petiole* 2–4 cm long, ridged at abaxial surface; sheath narrow, 3–5 by *ca* 0.5 mm, herbaceous. *Tendrils* 7–13 cm long, slender. *Leaf blade* broadly ovate or ovate to ovate-lanceolate, 6–20 by 3–13 cm, chartaceous, base cuneate to rounded, apex acuminate; main veins 3, prominent beneath, separating at lamina base; lateral veinlets very slender. *Inflorescence* a solitary umbel, 25–35-flowered; prophyll absent; peduncles of umbels flattened, 2–4 cm long; receptacles globose, 2–4 mm in diameter; bracteoles

ovate; pedicels 0.5–1 cm long. *Tepals* connate, non-spreading when mature. *Male flower*: perianth connate, ovate-elliptic to elliptic in outline, 2–3 by 2–2.5 mm; apex open with 3 teeth, acute; stamens 3; filaments 0.7–1 mm long, connate the lower half; anthers ovate, 1.5 mm long, yellowish. *Female flower*: perianth connate, ovate in outline, 2–3.5 by 2–3 mm; apex open with 3 teeth; ovary ovoid, whitish; style short, *ca* 0.5 mm long; stigmas *ca* 1.8 mm long; staminodes 3, *ca* 1.5 mm long, needle-like. *Berry* globose or subglobose, 6–7 mm in diameter, with 1–2 seeds.

Distribution.—Thailand, Cambodia, Vietnam.

Ecology.—In evergreen forest, flowering Apr. to Aug.

Note.—*Smilax paniculata* and *S. sumatrensis* (A.DC.) P.Li & C.X.Fu are distinct species in having three stamens. However, the shape and size of perianth and the size of filaments differs between the two species. The perianth of *S. paniculata* is ovate-elliptic to elliptic in outline and 2–3 mm long whereas it obovate-fusiform and 4–6 mm long in *S. sumatrensis*. The filament length is 0.7–1 mm long in *S. paniculata* whereas it is 2–5 mm long in *S. sumatrensis* (Figs. 6C, 6D, and 6G, 6H, respectively). *Smilax paniculata* was previously known from Cambodia and Vietnam but this is the first record for Thailand.

Specimens examined.—THAILAND: SOUTH-EASTERN Chanthaburi [Ban Wang Tak School, 30 Aug. 2015, ♂, *Kladwong* 297 (KKU); Khao Soi Dao Waterfall, 1 Sept. 2015, *Kladwong* 300 (KKU); Klong Narai Waterfall, 31 Aug. 2015, ♀, *Kladwong* 299 (KKU)]; CAMBODIA: Kampot [Bokor, 2 Dec. 1933, ♀, *Poilane* 23024 (P)]; Koh Kong [Tatey, 28 Feb. 1966, ♀, *Martin* 411 (P)]; VIETNAM: Binh Tri Thien [Bach Ma Mountain, 17 Apr. 1939, *Poilane* 29785 (P)]; Kontum [Kon Tum Village, 21 Mar.

1941, ♀, *Poilane* 32262 (P)]; Ngoc Linh Mountain, 6 Apr. 1995, ♀, *Averyanov et al. VH* 1212 (P)].

Smilax setosa Miq., Fl. Ned. Ind., Eerste Bijv. suppl. 1: 610. 1860. Type: Indonesia, Bangka, *Teysmann s.n.* (holotype **K!** [K000292109]), Figs. 4B, 5C, 5D

— *Smilax barbata* Wall. ex A.DC. Monogr. Phan. 1: 196. 1878. Type: Singapore, 1822, *Wall. Numer. List*: 5125, 1831–1832 (lectotype **K-W!** [K001104870] designated here; isoelectotype: **P!** [P00686978]), **nom. superfl.**

Large climber, stem and branches stout, terete, with brownish or whitish bristles and prickles, 1–4 mm long, dark green. *Petiole* 1.5–4 cm long, terete; sheath well-developed, 0.3–2 by 0.3–0.5 cm, coriaceous. *Tendrils* well-developed, up to 20 cm long, greenish. *Leaf blade* ovate or broadly elliptic to ovate-lanceolate, 13–24 by 9–15 cm, coriaceous, greenish, with glaucous or whitish-powdery beneath, base rounded or subcordate, apex acute or attenuate; main veins 5–7, prominent beneath, 3 medians separating at 10–15 above lamina base; lateral veinlets slender, conspicuous on both surfaces. *Inflorescence* 1–8-umbellate raceme, 20–40-flowered per umbel; axis 4–7 cm long, 1–3-noded; prophyll ovate, 4–5 by *ca* 3 mm, coriaceous; peduncles of umbels stout, weakly compressed, 3–6 cm long; bracts ovate to ovate-lanceolate, 3–5 by 3–4 mm; receptacles globose, 2–3 mm in diameter; bracteoles ovate, 1–1.8 by 0.5–1 mm; pedicels 0.7–1 cm long, greenish. *Tepals* free, spreading and recurved when mature. *Male flower*: tepals ovate-oblong to oblong-lanceolate, 5–7 by 0.8–1.5 mm, apex obtuse, yellowish green; stamens 6; filaments 4.5–6 mm long, whitish; anthers elliptic-oblong, 1–1.5 mm long, whitish. *Female flower*: tepals ovate-oblong, 5–7 by

1.8–2 mm; ovary ellipsoid, whitish; style very short; stigmas *ca* 1 mm long, recurved; staminodes 3, *ca* 1 mm long, needle-like. Berry 6–7 mm in diameter, dark red, with 1–2 seeds.

Distribution.— Thailand, Malaysia, Singapore, Indonesia.

Ecology.— Climbing on the canopy or along the edges of evergreen forest, 300–500 m alt., flowering and fruiting Jan. to Mar.

Note.—*Smilax setosa* is distinctive on account of its dense brownish or whitish bristles on the stems, branches and inflorescence axis and strongly glaucous or powder-whitish on the abaxial leaf surface (Figs. 5C, 5D). This is the first record of this species for Thailand, it was known in Malaysia, Singapore and Indonesia. Its presence in Narathiwat province, peninsular Thailand further extends its range.

De Candolle (1878) proposed *Smilax barbata* based on an unpublished name from the Wallich collection. He also treated *S. setosa* as conspecific with *S. barbata*. However, *S. setosa* was published by Miquel (1861). Therefore, in accordance with the guidelines of Art. 52.1 of the ICN Shenzhen Code (Turland *et al.*, 2018), *S. setosa* has priority and *S. barbata* is a superfluous name. *Wallich 5125* is mentioned in the original protologue of *S. barbata* and that has two duplicates. We selected sheet K001104870 at K-W as the lectotype because it has matured leaves and branches with best preserved.

Specimens examined.— THAILAND: PENINSULAR Narathiwat [Hala-Bala, 28 Sept. 2017, *Kladwong*, 424, 425 (KKU); Nikom Waeng, 4 Mar. 1974, ♀, *Larsen* 32917 (AAU, BKF, P)]; MALAYSIA: Malacca [Bukit Beruang, Jan. 1893, ♀, *R.D. 1107* (BM-2 sheets)]; SINGAPORE: Bukit Timah Nature Reserve, 18 Jan. 2012, ♂,

Yeoh 003 (SING); *ibid*, 20 Jan. 2012, ♀, *Yeoh 007* (SING); Western Catchment SAFTI Area D, 23 Jan. 2007, ♂, *Yang et al. VSF 72* (SING).

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