

2. POTHOS Linnaeus, Sp. Pl. 2: 968. 1753.

石柑属 shi gan shu

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Tapanava Adanson.

Plants climbing against trees with aid of adhesive roots, or creeping over rocks. Primary shoots branching to produce further adherent shoots and both types (in most species) sterile but giving rise to free, sympodial or physiognomically monopodial flowering shoots, often highly ramified, arising from leaf axil (subg. *Pothos*) or beneath it [subg. *Allopothos*]. Leaves simple, distichous; petiole conspicuously winged [or wingless]; petiolar sheath minute or well developed, amplexicaul; articulation distinct (pulvinus at junction of petiole and blade); leaf blade with primary lateral veins on each side of midrib traversed by 1 or more intramarginal veins running ± from base and from ca. midway along midrib to apex or first to distal margins and then to apex. Inflorescences in axils of leaves or seemingly extra-axillary, sometimes pseudoterminal, usually several along stem; peduncle partly or entirely enveloped by sheathlike organs (cataphylls). Spathe inconspicuous, cymbiform or elongate, not constricted, at last entirely spreading, and either spreading or recurved. Spadix sessile or stipitate, varying in shape, with reduced flowers at very base, otherwise fertile. Flowers many, bisexual, sometimes reduced; tepals 6, with vaulted-truncate apex. Stamens 6; filaments strap-shaped; anthers ovoid, longitudinally dehiscent. Ovary 3-loculed; ovule 1 per locule, subbasal; stigma sessile, initially umbilicate. Berry 1–3-seeded. Seeds large, without endosperm.

About 75 species: tropical and subtropical regions of Asia, Australia, Madagascar, and Polynesia; five species in China.

- 1a. Petiole 13–15 cm, much longer than leaf blade, leaf blade 3–4 cm; spadix cylindrical, 5–6 × 0.15–0.2 cm 5. *P. repens*
- 1b. Petiole shorter than or as long as leaf blade; spadix cylindrical to globose.
 - 2a. Petiole nearly as long as to slightly exceeding blade.
 - 3a. Peduncle at anthesis reflexed or recurved; spadix subglobose or ellipsoid, 5–6 mm 1. *P. scandens*
 - 3b. Peduncle erect; spadix cylindrical, ellipsoid, ovoid, or subglobose, 4–25 mm 2. *P. chinensis*
 - 2b. Petiole much shorter than leaf blade.
 - 4a. Petiole narrow and long, obovate-oblong or cuneate; veins inconspicuous; branchlets not 4-angled 2. *P. chinensis*
 - 4b. Petiole broad, small, obovate, length and width only 1/8–1/6 of blade; veins conspicuously branched; branchlets 4-angled.
 - 5a. Peduncle and stipe short and broad, together 1.3–2 cm; peduncle stout 3. *P. pilulifer*
 - 5b. Peduncle and stipe long and narrow, together 7.5–8 cm; peduncle very slender 4. *P. kerrii*

1. *Pothos scandens* Linnaeus, Sp. Pl. 2: 968. 1753.

螳螂跌打 tang lang die da

Batis hermaphrodita Blanco; *Podospadix angustifolia* Rafinesque; *Pothos angustifolius* (Rafinesque) C. Presl; *P. chapelieri* Schott; *P. cognatus* Schott; *P. decipiens* Schott; *P. exiguiiflorus* Schott; *P. fallax* Schott; *P. hermaphroditus* (Blanco) Merrill; *P. horsfieldii* Miquel; *P. leptospadix* de Vriese; *P. longifolius* C. Presl; *P. longipedunculatus* Engler, nom. illeg. superfl.; *P. microphyllus* C. Presl; *P. roxburghii* de Vriese; *P. scandens* var. *cognatus* (Schott) Engler; *P. scandens* var. *helferianus* Engler; *P. scandens* var. *sumatranus* de Vriese; *P. scandens* var. *zeylanicus* de Vriese; *P. scandens* var. *zollingerianus* (Schott) Engler; *P. zollingerianus* Schott; *Tapanava indica* Rafinesque; *T. rheedii* Hasskarl.

Lianas, medium sized to rather large, to 6 m. Stems weakly 4-angled or subterete, to 10 mm in diam. Leaves paler abaxially, bright to deep green adaxially; petiole obovate-oblong to linear-oblong, 20–140 × 5–20 mm, broadly winged, base decurrent, apex truncate, rounded, or auriculate; each side with 2 or 3 secondary veins and numerous veinlets; leaf blade ovate to elliptic or lanceolate, 2–10 × 3–14 cm, base rounded to acute, apex attenuate-mucronate; each side with 2 intramarginal veins arising from base and either reaching leaf tip or merging

into a prominent submarginal collecting vein, all additional veins arising obliquely from midrib. Flowering shoot much abbreviated, arising from most of mid- to distal leaf axils of fertile shoots, bearing a minute prophyll and a few cataphylls 3–10 mm, sequentially longer. Inflorescence solitary; peduncle erect to spreading, green to purple tinged, 3–15 × 0.5–2 mm, slender. Spathe greenish to maroon, ovate, concave, 4–8 × 4–7 mm, base short or somewhat long clawed, margins variously in-rolled, apex rounded to acute with a tiny, rather stout mucro. Spadix stipitate; stipe erect, greenish to maroon, terete in cross section, 5–10 × ca. 1 mm, distally erect to bent through 270°; fertile zone yellow-green to off-white, globose or ovoid to sub-clavate, 4–10 × 3.5–10 mm. Flowers 1–2 mm in diam. Infructescence with 1–5 berries. Fruit mid-green, ripening to deep scarlet, obclavate, 10–17.5 × 10–14 mm. Fl. and fr. throughout year.

Rain forests, monsoon rain forests, mountain or river terraces, creeping on trees or on rocks; 200–1000 m. SE Xizang (Mêdog), S and SE Yunnan [Bangladesh, Brunei, Cambodia, India, Indonesia, Laos, Malaysia, Myanmar, ?Nepal, Philippines, ?Singapore, Sri Lanka, Thailand, Vietnam; Indian Ocean islands (Comoros), Madagascar].

This plant is used medicinally in Yunnan for treating traumatic injuries and rheumatic arthralgia. The leaves are used as tea by the Dai ethnic minority.

2. *Pothos chinensis* (Rafinesque) Merrill, J. Arnold Arbor. 29: 210. 1948.

石柑子 shi gan zi

Tapanava chinensis Rafinesque, Fl. Tellur. 4: 14. 1838; *Pothos balansae* Engler; *P. cathcartii* Schott; *P. chinensis* var. *lotienensis* C. Y. Wu & H. Li; *P. seemannii* Schott; *P. warburgii* Engler; *P. yunnanensis* Engler.

Lianas, small to very large, to 10 m, root-climbing. Stem weakly 4-angled or terete in cross section, to 12 mm in diam. Leaves paler abaxially, bright to mid-green adaxially; petiole obovate-oblong to linear-oblong or narrowly triangular, 50–140 × 4–20 mm, broadly winged, base decurrent to clawed, apex truncate, rounded, or auriculate; each side with 2 or 3 secondary veins and numerous veinlets; leaf blade ovate to elliptic or lanceolate, 3–20.5 × 1.5–20.5 cm, apex attenuate-mucronate to acute or attenuate, minutely tubulate; each side with 2–4 intramarginal veins arising from base and either immediately diverging or remaining very close and parallel to midrib and then diverging further along leaf blade, submarginal collecting vein prominent. Flowering shoot much abbreviated, arising from most of mid- to distal leaf axils of fertile shoots. Inflorescences solitary or in pairs; peduncle erect to variously curved, green to brown tinged, 3–25 × 1.5–2.5 mm, rather stout. Spathe greenish white or green, occasionally faintly purple tinged, ovate, concave, 4–12 × 4–10 mm, base cordate, clasping and slightly decurrent on peduncle, margins inrolled, apex arched to recurved, acute to subacute with a rather stout mucro. Spadix stipitate; stipe erect, straight, green, terete, 5–10 × 1–1.25 mm; fertile zone pale green or white, globose to ovoid, 3.5–13 × 3–10 mm. Flowers 1–2 mm in diam. Fruit mid-green, ripening to scarlet, obclavate to ovoid or ellipsoid, 10–17.5 × 10–14 mm. Fl. and fr. throughout year.

Dense forests, moist mountain valleys, climbing on trees or creeping over rocks; below 2400 m. Guangdong, Guangxi, Guizhou, Hainan, Hubei, Hunan, Sichuan, Taiwan, SE Xizang (Mêdog), Yunnan [Bangladesh, Bhutan, Cambodia, India, Laos, Myanmar, Nepal, Thailand, Vietnam].

Pothos balansae, *P. cathcartii*, *P. chinensis*, and *P. warburgii* are without doubt synonymous. They might be separable when only a few specimens of each entity are studied, but when a wide range of material is used the four merge together as one species, for which the earliest name is *P. chinensis*. See Boyce (Blumea 45: 147–204. 2000).

The whole plant is used medicinally to treat rheumatic arthralgia, traumatic injuries, fractures, coughs, and infantile malnutrition caused by intestinal parasites.

3. *Pothos pilulifer* Buchet ex P. C. Boyce, Blumea 45: 175. 2000.

地柑 di gan

Lianas, medium sized to large, to 5 m, root-climbing. Stems rectangular in cross section, ± compressed, to 12 mm in diam., angles minutely but prominently winged. Leaves paler abaxially, when fresh mid-green adaxially; petiole obovate-oblong to linear-oblong or narrowly triangular, 10–40 × 4–17 mm,

somewhat narrowly to rather broadly winged, base decurrent, apex truncate, rounded, or auriculate; each side with 2–4 secondary veins and numerous veinlets, all veins, but particularly secondary veins, prominent; leaf blade ovate to elliptic or lanceolate, 3.5–11 × 2–5 cm, base rounded to subacute, apex attenuate, somewhat prominently tubulate; each side with 2–4 intramarginal veins arising from base and either immediately diverging or remaining very close and parallel to midrib and then diverging further along leaf blade, either reaching leaf tip or merging into a prominent submarginal collecting vein, additional veins arising obliquely from midrib, remaining parallel. Flowering shoot much abbreviated, arising mostly from upper-middle to distal leaf axils of fertile shoots. Inflorescence solitary; peduncle erect, green, stout, 0–3(–5) × ca. 1 mm. Spathe green to greenish purple, ovate, concave, 4–5 × 2.5–4 mm, base decurrent on peduncle, margins strongly inrolled, apex arched to recurved, acute. Spadix stipitate; stipe erect, straight to slightly curved, green to greenish purple, terete, stout, 10–12 × 1–1.25 mm; fertile zone yellow, globose, 4–5 × 4–5 mm. Flowers 1–2 mm in diam. Infructescence not seen. Fl. Dec–Jul.

Dense forests, on rocks; 200–1000 m. SW Guangxi, SE Yunnan [N Vietnam].

The name *Pothos pilulifer* was first published by Gagnepain (in Lecomte et al., Fl. Indo-Chine 6: 1084. 1942) but not validly so because no Latin description or diagnosis was provided (*Vienna Code*, Art. 36.1).

All parts of the plant are used medicinally for treating epilepsy.

4. *Pothos kerrii* Buchet ex P. C. Boyce, Blumea 45: 168. 2000.

长梗石柑 chang geng shi gan

Lianas, medium sized, to 4 m, root-climbing. Stems terete in cross section, to 6 mm in diam. Leaves when fresh mid-green; petiole oblong to oblong-triangular, 10–30(–50) × 5–10 mm, broadly winged, base decurrent to clawed, apex truncate to auriculate; each side with 2–4 secondary veins, veins prominent, especially in dried material; leaf blade lanceolate to narrowly elliptic, 7.5–13 × 1.25–2.5 cm, base rounded, apex long attenuate-mucronate to acute, minutely tubulate; each side with 2 or 3 intramarginal veins arising from base and immediately diverging and reaching leaf tip. Flowering shoot much abbreviated, arising from middle to distal leaf axils of fertile shoots, bearing a minute prophyll and few cataphylls 3–10 mm, sequentially longer. Inflorescence solitary; peduncle erect to spreading, curving to bring inflorescence upright, deep purple, very long and slender, 25–40 × 0.5–1 mm. Spathe greenish purple, ovate, deeply concave to almost flat, 4–6 × 3.5–7 mm, base prominently cordate, clasping and minutely decurrent on peduncle, margins straight, apex obtuse with a small but prominent mucro. Spadix stipitate; stipe erect, straight, deep purple, terete in cross section, 10–18 × 0.23–0.75 mm; fertile zone pale yellow, globose, 3.5–4 × 3.5–4.5 mm. Flowers 1–2 mm in diam. Infructescence with 1–7 berries. Fruit obclavate to ellipsoid, 10–15 × 7.5–10 mm. Fl. Aug.

Dense forests, on rocks. SE Guangxi (Longzhou) [Laos, Vietnam].

The name *Pothos kerrii* was first published by Gagnepain (in Lecomte et al., Fl. Indo-Chine 6: 1085. 1942) but not validly so because no Latin description or diagnosis was provided (*Vienna Code*, Art. 36.1).

Pothos kerrii is quite similar to *P. pilulifer*, but it differs by the elongated peduncle and stipe (7.5–8 cm together vs. 1.3–2 cm together in *P. pilulifer*).

The plant is used medicinally to treat traumatic injuries.

5. *Pothos repens* (Loureiro) Druce, Rep. Bot. Soc. Exch. Club Brit. Isles 4: 641. 1917.

百足藤 bai zu teng

Flagellaria repens Loureiro, Fl. Cochinch. 1: 212. 1790;
Pothos loureiroi Hooker & Arnott; *P. terminalis* Hance.

Lianas, medium sized to very large, to 15 m, root-climbing. Stems weakly 4-angled or slightly compressed terete in cross section, to 20 mm in diam. Leaves paler abaxially, bright to deep green adaxially; petiole oblong-obovate-lanceolate to linear-oblong, 50–200 × 5–25 mm, broadly winged, base decurrent, apex truncate, slightly auriculate; each side with 2 or 3 barely differentiated primary veins running parallel to midrib and numerous parallel to subparallel and reticulate veinlets, primary and larger secondary veins reaching petiole tip and there curving inward to merge with leaf blade/petiole junction; leaf blade ovate to elliptic or triangular-lanceolate, 20–80 × 10–20 mm, base rounded to truncate, apex subacute to acute, briefly tubular-mucronate; primary veins 3(–5), ± parallel, arising from base reaching tip of leaf blade. Inflorescences solitary to several together, congested or spaced along a leafy to naked branching system to 2 m; peduncle curving to spreading, slender, 3–8 × 0.5–2 mm; terminal part erect, green. Spathe strongly reflexed at anthesis, greenish with margins stained purple, narrowly elliptic, 20–70 × 3–6 mm, margins recurved to reflexed, base briefly decurrent, apex apiculate to shortly filiform. Spadix stipitate; stipe erect, greenish to purple, terete in cross section, 10–13 × 1–1.2 mm; fertile zone yellow-green to off-white, narrowly cylindrical, 40–80 × 2–4 mm, sometimes strongly obliquely inserted on stipe. Flowers 1–2 mm in diam. Infructescence with few berries. Fruit turbiniiform to ellipsoidal, globose at maturity, 7–15 × 10–14 mm. Fl. Mar–Apr, fr. May–Jul.

Moist forests, climbing on trees or creeping over rocks; below 900 m. S Guangdong, S Guangxi, Hainan, S Yunnan [Laos, N Vietnam].

This plant is used for treating traumatic injuries, fractures, and abscesses.

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