

# The *Pothos* L. (Araceae: Pothoideae) in Thailand

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## ABSTRACT

An account of *Pothos* for Thailand is presented as a precursor of the forthcoming Flora of Thailand treatment. Eight species are recognized of which two (*P. wallichii* Hook.f. & *P. neoroxburghii* P. C. Boyce) represent new records for Thailand, the latter is also a *nomen novum* for long-overlooked and much obfuscated *P. roxburghii* de Vriese, *nom. illeg.* (non *P. roxburghii* Schott).

## KEY WORDS

Araceae, *Pothos*, Flora of Thailand.

## INTRODUCTION

*Pothos* L. is a genus of ca. 65 species of subtropical and tropical, predominantly forest, root-climbing hemiepiphytes distributed from Madagascar to Western Oceania (east to Vanuatu) and China (north to Hubei) to Australia (south to Queensland, New South Wales). Recent revisions have established an alpha-taxonomy for Malesia (Hay, 1995; Boyce & Hay, 2001), Thailand, and Indo-china (Boyce, 2000).

Boyce (2000) was published as a precursor account for the Flora of Thailand but then, for a variety of reasons, final collation of the Thai Araceae account was delayed until last year. While undertaking updating and final compilation of the aroids, the author discovered two new Thai records for *Pothos*, including a necessary *nomen novum*. Given that two additional species represents a more than 30% increase in the number of *Pothos* for Thailand it is felt that an updated precursor account is needed.

**Pothos** L., *Sp. Pl.* 968. 1753; Hook. f., *Fl. Brit. India* 6: 551. 1893; Ridley, *Fl. Mal. Penins.* 5: 127. 1925; Gagnepain in Lecomte (ed.), *Fl. Gén. l'Indo-Chine* 6: 1082. 1942; Mayo, Bogner & Boyce, *Genera of Araceae*, 98–99, Pl. 5 & 108A, 1997; Boyce, *Blumea* 45: 147–204. 2000; Boyce & Hay, *Telopea* 9(3): 449–571. 2001. Type: *Pothos scandens* L.

## Generic Synonyms:

*Tapanava* Adanson, *Fam.* 2: 470. 1763, *nom. illeg.* Type: Based on the same type as *Pothos Batis* Blanco, *Fl. Filip.* 791. 1837. Type: *B. hermaphodita* Blanco.

*Goniurus* Presl, *Epim. Bot.* 244. 1851, '1849'— Type: *G. luzonensis* Presl [= *Pothos luzonensis* (Presl) Schott] [*Potha* O. Kuntze, *Rev. Gen.* 2 (1891) 742, *orth. var.*]

Small to very large, slender to rather robust hemiepiphytes. *Stems* rather woody, lower branches rooting, upper ones free and hanging in most species, nodes rarely bearing short, clustered spines, buds of lateral shoots sometimes perforating the leaf sheath or  $\pm$  infra-axillary. *Leaves* distichous, juvenile plants of some species with a shingle form. *Petiole* pulvinate apically, either broad, completely flattened and usually auriculate apically, or morphology normal with a long sheath, sometimes sheath reduced to a pair of hyaline ridges. *Lamina* linear-lanceolate to ovate or elliptic, mostly sometimes oblique; *primary lateral veins* either mostly arising

near base of blade, long arcuate, and running into marginal vein near apex, or pinnate, weakly differentiated, forming submarginal collective vein, 1–2 marginal veins also present and these crossing the primary lateral veins to produce a distinctive 'pothoid' venation; *higher order venation* reticulate. *Inflorescence* morphologically axillary or infra-axillary, solitary or forming short free, very rarely elongating and rooting, synflorescences of several inflorescences, bearing 4–6, or more rigid, coriaceous cataphylls at the base. *Peduncle* very short to very long, sometimes reflexed. *Spathe* ovate to linear, rarely very long, persistent into fruiting. *Spadix* globose, ovoid, cylindrical, ellipsoid or obovoid, sessile to long-stipitate, densely or laxly flowered. *Flowers* bisexual, perigoniate; tepals 4–6,

usually fornicate, free or partially to completely connate. *Stamens* 4–6, free, filaments oblong, flattened, connective slender, thecae ellipsoid, dehiscing by slit. *Gynoecium* with ovary ovoid-oblong or depressed, (2?–) 3-locular; ovules 1 per locule, anatropous, funicle short, placenta axile at base of septum, stylar region sometimes as broad as ovary, stigma discoid-hemispheric to umbonate. *Fruit* an ellipsoid to ovoid, berry 1 (–3)-seeded, usually red or rarely whitish or dull purple when ripe. *Seed* ellipsoid, testa smooth, embryo large, endosperm absent.

Sixty-five species distributed from Madagascar through to India, the subtropical eastern Himalayas throughout subtropical and tropical Asia into the tropical western Pacific and tropical eastern Australia. Eight species in Thailand, none endemic.

#### KEY TO THE THAI SPECIES

1. Leaf with petiole expanded and flattened, the leaf resembling that of many *Citrus*
2. Stipe of spadix sharply bent at anthesis, fertile portion of spadix held adjacent to peduncle; inflorescences generally arising in many leaf axils along a flowering branch . . . . . **7. *P. scandens***
2. Stipe of spadix  $\pm$  straight at anthesis; inflorescences either few at shoot tips, or arising singly in most axils of a flowering branch.
  3. Peduncle not more than 2.5 cm, green or purple; spathe green or purple; spadix stipe never exceeding 1.5 cm; fertile portion ovoid, ca. 3.5–13  $\times$  3–11 mm, white to cream at anthesis
    4. Inflorescences few per flowering shoot, mostly at the tips; stipe stout, less than  $\frac{1}{4}$  as long as fertile portion of spadix, spathe green. . . **1. *P. chinensis***
    4. Inflorescences many per flowering shoot; arranged along the entire distal portion; stipe slender, equalling or slightly exceeding fertile portion of spadix; spathe purple . . . . . **6. *P. neoroxburghii***
  3. Peduncle 4–10 cm dull orange-yellow; spathe white; spadix stipe 2.75–4 cm; fertile portion clavate, 12.5–15  $\times$  10–12 mm, mid-yellow . . . . . **5. *P. macrocephalus***
1. Leaf with petiole slender, canaliculate
  5. Spadix with flowers densely clustered, the whole appearing uniformly cylindrical
    6. Spathe deeply cucullate, deep purple; inflorescence carried below the flowering shoot on a sharply deflexed peduncle . . . . . **3. *P. kingii***
    6. Spathe lorate or lanceolate; inflorescence erect or spreading, peduncle not sharply deflexed
      7. Peduncle less than 1 mm diam., arching, inflorescence spreading; spathe 4–5 cm long, lanceolate . . . . . **8. *P. wallichii***
      7. Peduncle 2–3 mm diam., erect or curving and ultimately ascending, inflorescence held erect, spathe 2.5–10 cm long, lorate . . . . . **4. *P. leptostachyus***
  5. Spadix with flowers scattered along a slender axis . . . . . **2. *P. curtisii***



Plate 1. **A–B:** *Pothos chinensis*, Note the inflorescence situated at the tip of the flowering shoot; **C:** *Pothos kingii*, showing the diagnostic hooded deep purple spathe; **D:** *Pothos lorispathusi*, the erect inflorescences and green, lorate spathe distinguish this from the somewhat similar *P. wallichii*. Images: A–B: © Forest Herbarium; C: © Dept. Plant Sciences, Faculty of Research Science and Technology, Unimas; D: © Peter Boyce. Used with permission.

1. *Pothos chinensis* (Raf.) Merr., *J. Arn. Arb.* 24: 210. 1948; Hook.f., *Fl. Brit. India* 6: 552 (sub. *P. cathcartii*). 1893; Gagnep. in Lecomte, *Fl. l'Indo-Chine*, 6: 1086–1087 (sub. *PP. cathcartii, yunnanensis* & *balansae*). 1942; Boyce, *Blumea* 45: 155. 2000. Type: *Bot. Reg.* 16 (1830) pl. 1337.

*Tapanava chinensis* Raf., *Fl. Tellur.* 4: 14. 1837

*Pothos seemannii* Schott, *Aroid.* 22, t. 43. 1856–7. — *Bonplandia* 5: 45. 1857.

*Pothos cathcartii* Schott, *Aroid.* 22, t. 44–45. 1858 (as '*cathcartii*').

*Pothos warburgii* Engl., *Bot. Jahrb. Syst.* 25: 2. 1898.

*Pothos balansae* Engl., *Bot. Jahrb. Syst.* 25: 3. 1898.

*Pothos yunnanensis* Engl. in Engl., *Pflanzenr.* 21(IV.23B): 28. 1905.

*Pothos chinensis* (Raf.) Merr. var. *lotienensis* C.Y. Wu & H. Li, *Acta Phytotax. Sin.* 15(2): 101. 1977.

Small to very large, slender to robust, homeophyllous root-climbing hemiepiphyte to 10 m. *Stem* weakly four-angled, slightly compressed or terete in cross section, mid-green, becoming greyish brown with age; fertile shoot often branching to three or more orders. *Leaves* many. *Petiole* broadly winged, obovate-oblong to linear-oblong or elongate-triangular, 5–14 × .5–2 cm, with 2–3 secondary veins and numerous veinlets per side, base decurrent to clawed, apex truncate, rounded or auriculate; *lamina* ovate to elliptic or lanceolate, 3–21 × 1.5–25 cm, leathery, drying chartaceous. *Flowering shoot* much abbreviated, arising from most of the mid- to distal leaf axils of fertile shoots, bearing a minute prophyll and a few 3–15 mm sequentially longer cataphylls. *Inflorescence* 1–2. *Peduncle* rather stout, 3–25 × 1.5–2.5 mm, erect to variously curved, green to brown-tinged; *spathe* 4–12 × 4–10 mm, ovate, concave, margins in-rolled, base cordate, clasping and slightly decurrent on the peduncle, apex fornicate to recurved, acute to subacute with a rather stout mucro, greenish white to green, occasionally

faintly purple-tinged, somewhat waxy; *spadix* stipitate; *stipe*, terete in cross section, 5–10 × 1–1.25 mm, erect, straight, green; fertile portion globose to ovoid, 3.5–13 × 3–10 mm, pale green to white. *Flowers* ca. 1–2 mm diam. *Infructescence* with 1–5 berries; *fruit* obclavate to ovoid or ellipsoid, 1–1.8 × 1–1.4 mm, mid-green ripening to scarlet, often with basal chartaceous tepal remains.

### Ecology

On rocks and trees and in clearings in tropical or subtropical primary or disturbed lowland wet or dry evergreen forest, rain-forest, sandstone, limestone, granite, clay, loam or sandy soil; altitude: 250–1,970 m.

### Distribution

Nepal through NE India and Bhutan, Bangladesh, Burma to SW China, including Hong Kon, through Thailand, Cambodia, Lao P.D.R., Vietnam, Taiwan.

### Thai Distribution

NORTHERN: Chiang Mai, Nan, Lampang, Phrae, Tak, Phitsanulok, Petchabun, Loei. EASTERN: Nakhon Ratchasima. SOUTH-WESTERN: Kanchanaburi. CENTRAL: Saraburi. SOUTH-EASTERN: Prachin Buri, Chantaburi. PENINSULAR: Phangnga

### Notes

Confusion between *P. chinensis*, *P. neoroxburghii*, and *P. scandens* is easy. In flower *P. chinensis* is immediately recognizable by the straight, not bent, stipe and the generally larger, paler, fewer, more scattered inflorescences. Generally *P. scandens* has flowering shoots arising at many of the leaf axils of long pendent fertile shoots, thus there are often numerous inflorescences. By contrast *P. chinensis* tends to produce flowering shoots at only the distal-most leaf axils of short spreading fertile shoots, thus inflorescences are rather few. *Pothos neoroxburghii* also produces inflorescences with a straight stipe but with the inflorescences arising as in the manner

of *P. scandens*. Inflorescence colours also differ; purple spathe and cream fertile spadix in *P. scandens*, green spathe and white to yellow fertile spadix in *P. chinensis*. Field observations have detected a faint but sweet odour from inflorescences of *P. chinensis* but no detectable odour from *P. scandens*.

Sterile material of *P. chinensis* can be difficult to differentiate from *P. scandens* and *P. neoroxburghii*. Generally the petioles of *P. chinensis* are less than half as long as the lamina, and the lamina is twice or more as broad as the petiole, narrower and with a attenuate apex. However, variation is such that intermediates are common. A feature noted in *P. chinensis*, but yet to be recorded for *P. scandens* and *P. neoroxburghii*, is the occurrence of flagelliform foraging shoots.

**2. *Pothos curtisii*** Hook. f., *Fl. Brit. Ind.* 6:554. 1893; Ridley, *Fl. Mal. Penins.* 5: 1279 (sub *P. latifolius*). 1925; Boyce, *Blumea* 45: 186. 2000; Boyce & Hay, *Telopea* 9(3): 547. 2001. Lectotype selected by Boyce (2000): Malaysia, Perak, Larut, *Kunstler* ('Dr King's collector') 3887 (K!).

*Pothos peninsularis* Alderw., *Bull. Jard. Bot. Buitenzorg* 3, 1: 381. 1920.

*Pothos latifolius* Hook. f., *Fl. Brit. Ind.* 6: 554. 1893, *nom. illeg., non Pothos latifolius* L.

*Pothos kunstleri* Hook. f., *Fl. Brit. Ind.* 6: 554. 1893.

*Pothos maingayi* Hook. f., *Fl. Brit. Ind.* 6: 554. 1893.

Slender, heterophyllous, root-climbing hemiepiphyte to 3 m. *Stem* (juvenile) ca. 1.5 mm diam., terete to slightly angled in cross section, shingle-leaved; stem (mature) ca. 6 mm diam., terete in cross section. *Leaves* scattered, spreading. *Petiole* slender, canaliculate, rounded abaxially, 2–10.5 cm × 1–6 mm, base decurrent, apex prominently pulvinate; *petiolar sheath* distinct, prominent, erect, apically ligulate in young growth, ligule later disintegrating, base amplexicaule or decurrent to almost free; *lamina* broadly to narrowly oblong elliptic, 8–26 × 1.6–9.5 cm. *Flowering shoot*

much abbreviated to rarely rather elongated through reiteration, (foliage) leafless or, occasionally, bearing developed but undersize foliage leaves. *Inflorescence* solitary on each reiterating flowering shoot but many such shoots arising sequentially; *peduncle* somewhat robust, strongly curving or straight, the inflorescence held erect, 2.5–6.5 cm × 1–4 mm, mid-green; *spathe* linear-triangular to narrowly oblong, 3.4–6.7 × ca. 1 cm, base rounded, annulately inserted onto peduncle, apex acuminate, slightly rough to smooth, pale brown tinged reddish pink; *spadix* stipitate; *stipe* 3–19 × 1–2 mm, terete; *fertile portion* 3.5–13.5 cm × .5–3 mm, very slender-cylindric, occasionally sterile at the tip, pale greyish pink, older inflorescences blackish red. *Flowers* 3 × 2.1 × 1.6 mm diam., widely scattered, arranged in a lax spiral along the spadix. *Infructescence* not observed.

### Ecology

Wet hill and lowland evergreen forest; altitudes 60–600 m.

### Distribution

Thailand, Peninsular Malaysia (type), Singapore, Sumatera.

### Thai Distribution

PENINSULAR. Narathiwat.

### Notes

*Pothos curtisii* is the only species of the *luzonensis* group (see Boyce & Hay, 1998) occurring in Thailand. Fertile material is unmistakable by the slender spadix and scattered flowers. Sterile specimens may be confused with other species of the *Allopothos* supergroup, especially those occurring in the same region of peninsular Thailand (e.g. *P. kingii* and *P. leptostachyus*). *Pothos leptostachyus* and *P. kingii* have thinly chartaceous leaves, while *P. curtisii* has more coriaceous leaves.

**3. *Pothos kingii*** Hook. f., *Fl. Brit. Ind.* 6:553. 1893; Ridley, *Fl. Mal. Penins.* 5: 131. 1925; Boyce, *Blumea* 45: 189.

2000; Boyce & Hay, *Telopea* 9(3): 515.  
2001. Lectotype selected by Boyce  
(2000): Malaysia, Perak, Larut, *Kun-  
stler* ('Dr King's Collector') 2723 (K!).

*Pothos grandispathus* Ridl., J. Straits Br.  
Roy. Asiat. Soc. 41: 48. 1904 ('*grand-  
ispatha*').

*Pothos ridleyanus* Furtado, Gard. Bull.  
Sing. 8: 150. 1935.

*Pothos ellipticus* Ridl., J. Straits Br. Roy.  
Asiat. Soc. 41: 48. 1904, *nom. illeg.*,  
*non P. ellipticus* Moon ex Miq.

Moderate, slender, heterophyllous, root-  
climbing hemiepiphyte to 7 m. *Stem* (juve-  
nile) ca. 3 mm diam., terete in cross section,  
shingle-leaved; stem (mature) to 8 mm  
diam., terete in cross section, leaves dense.  
*Petiole* slender, 4–12 cm × 2–2.5 mm; *peti-  
olar sheath* extending to pulvinus, clasping  
basally on juvenile and mature sterile shoots,  
prominent and sheathing to 4/5 of its length  
on fertile shoots; *lamina* ovate to elliptic or  
lanceolate, 5–25 × 2.5–9 cm, stiffly chartace-  
ous, air drying dull green with the midrib  
pale yellow and prominently raised. *Flow-  
ering* shoot elongated, leafy, arising from  
most of the mid- to distal leaf axils of fertile  
shoots. *Inflorescence* solitary; *peduncle* re-  
flexed ca. 90° at the base, the inflorescence  
held inverted beneath the shoot, 2–5 cm ×  
1.5–2.5 mm, stout, yellow to orange-brown;  
*spathe* ovate, deeply cucullate, 4–10 × 2.5–  
6 cm, base slightly decurrent on the pedun-  
cle, apex acute, deep purple inside and out,  
softly-leathery and rather prominently net-  
veined; *spadix* sessile, cylindrical, 2.5–7 cm  
× 3–8 mm, deep purple-brown. *Flowers* ca.  
1 mm diam.. *Infructescence* not observed.

### Distribution

Thailand, Peninsular Malaysia.

### Thai Distribution

PENINSULAR: Ranong, Surat Thani, Na-  
khon Si Thammarat, Songkhla, Narathiwat.

### Ecology

Shady to open areas in wet primary  
evergreen forest, often on steep slopes.

Frequently, but not exclusively, associated  
with limestone; altitudes 50–450 m.

### Notes

Unique by the deeply cucullate, softly  
leathery, deep purple spathe, *P. kingii* is  
restricted to southern Peninsular Thailand  
and a few localities in Peninsular Malaysia  
where it occurs in wet forest. Fertile speci-  
mens are instantly recognizable but sterile  
material could be confused with vegetative-  
ly similar *P. lorispathus* (to which *P. kingii* is  
allopatric), and *P. curtisii*. The latter is  
known from one locality in Peninsular  
Thailand but is widespread and locally  
common in Peninsular Malaysia.

4. *Pothos leptostachyus* Schott, *Prodr.*  
*Syst. Aroid.*: 71. 1860; Ridley, Fl. Mal.  
Penins. 5: 130 (sub. *P. lorispathus*  
(*'lorispatha'*)). 1925; Boyce, *Blumea*  
45: 195 (sub. *lorispatha*). 2000; Boyce  
& Hay, *Telopea* 9(3): 498. 2001. Type:  
Indonesia, S Kalimantan, Bangarmas-  
sin, *Motley 1197* (K, holo).

*Pothos lorispathus* Ridl., J. Straits Branch  
Roy. Asiat. Soc. 86: 310 1922 (*'loris-  
patha'*).

Moderate, robust, (heterophyllous?),  
root-climbing hemiepiphyte to 8 m. Stem  
(mature) to 6 mm diam., terete in cross-  
section; fertile shoots seldom branching,  
stem of fertile shoot to 4 mm diam., dense-  
ly clothed with leaves; *Leaves* dense. *Petiole*  
slender, 3–7 m long; *petiolar sheath* some-  
what prominent, extending to just below  
apical pulvinus, basally clasping, apically  
briefly auriculate to slightly ligulate; *lami-  
na* oblong-elliptic, often falcate, unequal,  
occasionally quite strongly so, 10–34 ×  
2.5–10 cm, base rounded, apex acute to  
acuminate, very briefly tabulate, stiffly but  
thinly chartaceous, air drying dull greenish.  
*Flowering shoot* arising from below the leaf  
axils of fertile shoots, abbreviated, usually  
leafless but with 1–several well-developed  
cataphylls, very occasionally with one or  
more fully developed but reduced leaves.  
*Inflorescence* solitary but flowering shoots  
almost always reiterating and thus several

inflorescences at varying degrees of developmental maturity often present; *peduncle* moderately stout 3–5 cm × 2–3 mm, erect or curving and ultimately ascending and the inflorescence held erect, dull green; *spathe* lorate, 2.5–10 cm × 5–15 mm, spreading, base auriculate, auricle margins in-rolled, barely decurrent on the peduncle, apex obtuse, acuminate, mid-green; *spadix* stipitate; *stipe* 8–15 × ca. 2 mm, slender, terete, lime green; *fertile portion* 5–6.5 cm × 3–4 mm, cylindrical to tapering slender-cylindrical, straight to slightly curved, base unequal, slightly cochleate, creamy-yellow. *Flowers* ca. 1.5 mm diam. *Infructescence* with numerous berries; fruit 1–1.5 cm × 5–8 mm, obclavate to ellipsoid, ripening deep scarlet, with basal chartaceous tepal remains.

### Ecology

Damp to rather dry evergreen hill forest on limestone; altitudes 50–100 m.

### Distribution

Thailand, Peninsular Malaysia (type), Sumatra (Aceh), Borneo.

### Thai Distribution

Thailand. PENINSULAR: Yala.

### Notes

Confusion with *P. wallichii* is possible, although the stout (2–3 mm diam.) erect peduncles and longer, lorate spathe readily distinguishes *P. leptostachyus*.

5. *Pothos macrocephalus* Scort. ex Hook. f., *Fl. Brit. Ind.* 6: 553. 1893; Ridley, *Fl. Mal. Penins.* 5: 128. 1925; Boyce, *Blumea* 45: 172. 2000; Boyce & Hay, *Telopea* 9(3): 476. 2001. Lectotype selected by Boyce (2000): Malaysia, Perak, Larut, *Scortechini 116b* (CAL!, K!).

Large, robust, homeophyllous, root-climbing hemiepiphyte to 15 m. *Stem* (juvenile) to 8 mm diam., weakly angled or subterete in cross section; stem (mature)

12 mm diam. *Leaves* dense. *Petiole* broadly winged, oblong to obovate-oblong, 5–14 cm × 5–15 mm, with 4–5 secondary veins per side, base decurrent to clawed, apex truncate, rounded or auriculate; *lamina* ovate to elliptic or lanceolate, 3–18 × 1.5–20.5 cm, with 2–4 intramarginal veins per side, base rounded to acute, apex attenuate-mucronate to acute or attenuate, minutely tabulate, leathery. *Flowering shoot* much abbreviated, arising from mostly the middle to distal leaf axils of fertile shoots, sometimes arising on older (foliage) leafless parts, bearing a minute prophyll and a few 5–35 mm, sequentially longer cataphylls. *Inflorescence* solitary; *peduncle* rather stout, 4–10 cm × 1.5–2 mm, erect, dull orange-yellow; *spathe* ovate, 2.5–3 × 2–2.5 cm, flat to convex, base cordate, clasping the peduncle, apex slightly raised, acute to subacute with a stout micro, white, somewhat waxy; *spadix* stipitate; *stipe* terete in cross section, 2.5–4 cm × 2–2.5 mm, erect, straight, pale green; *fertile portion* ovoid-clavate, 1.25–1.5 × 1–1.5 cm, mid-yellow. *Flowers* ca. 1–2 mm diam. *Infructescence* with 1–5 berries; fruit obclavate to ovoid or ellipsoid, 1–1.75 × 1–1.4 cm, deep green ripening to scarlet, epidermis of upper part of ovary roughened in submature fruits, more or less smooth when ripe.

### Ecology

Rainforest on rock along streams, moist evergreen forest on moderate slopes. Frequently associated with limestone or granite; altitudes 50–300 m.

### Thai Distribution

PENINSULAR: Yala, Narathiat.

### Distribution

Thailand, Peninsular Malaysia, Sumatra.

### Notes

A large distinctive hemiepiphyte which, for the area under review, has so far been collected only in Yala and Narathiwat provinces of peninsular Thailand where its occurrence is sporadic. The large yellow-

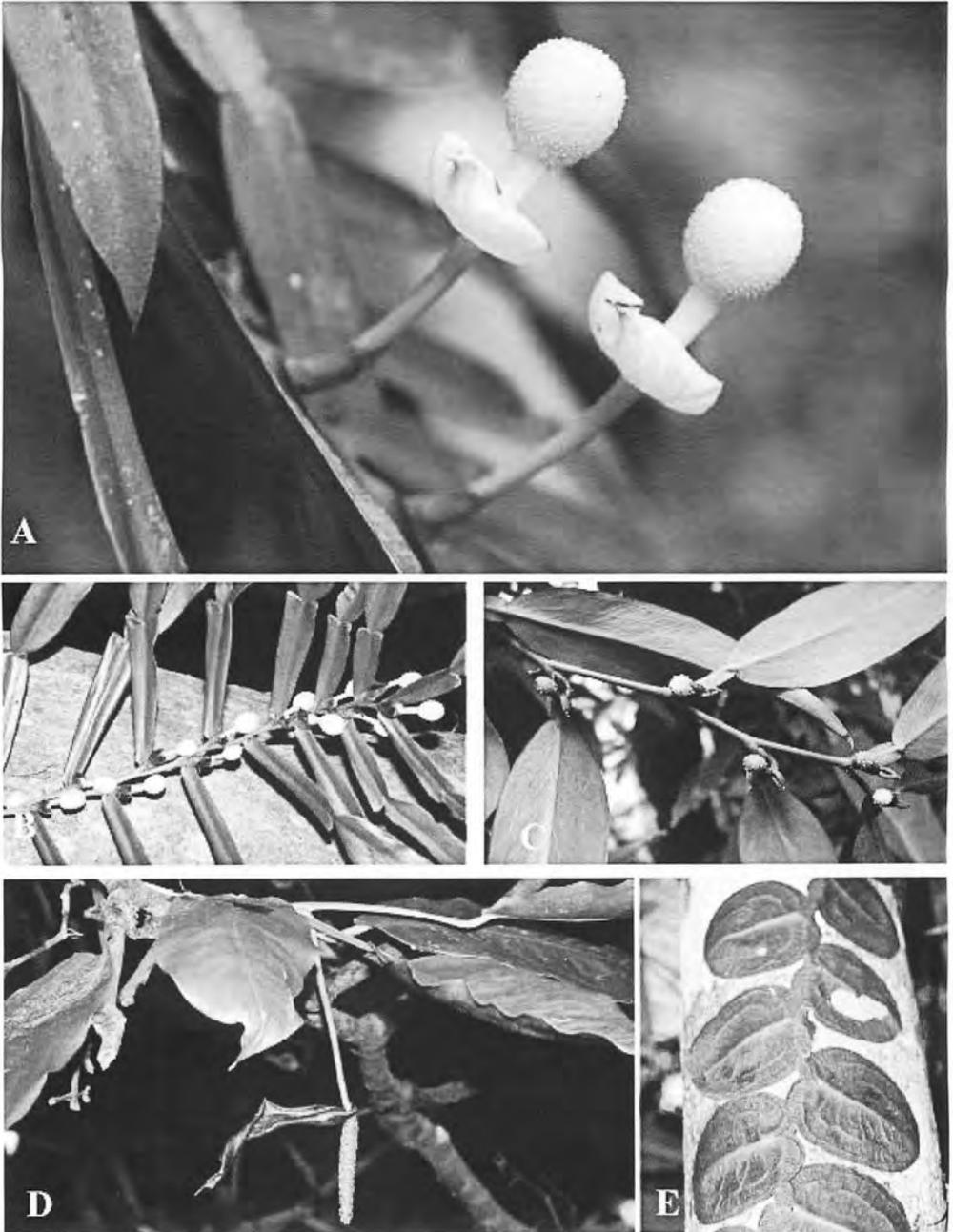


Plate 2. **A:** *Potbos macrocephalus*, the most spectacular *Potbos* in Thailand; the large white and yellow inflorescences are immediately diagnostic; **B:** *Potbos neoroxburghii*; long confused with *P. scandens*, but immediately separable by the straight, not reflexed stipe; **C:** *Potbos scandens*, note the inflorescences in each of the leaf axils and the reflexed stipe; **D–E:** *Potbos wallichii*, the deflexed peduncle and reddish purple, white-striped spathe readily separate this from *P. leptostachyus*. Images: A–B: © Forest Herbarium; C: © David Scherberich; D: © Peter Boyce. Used with permission.

and-white inflorescences are most similar in appearance to those of *P. gigantipes*. However, the form of the mature and juvenile leaves of these species is quite different. Sterile *P. macrocephalus* can be confused with *P. scandens* although in the latter the petiole is generally shorter than the lamina and overall *P. macrocephalus* is a more massive plant.

**6. *Pothos neoroxburghii* P.C. Boyce, nom. nov.**

**Basionym:** *Pothos roxburghii* de Vriese in F.A.W.Miquel, Pl. Jungh.: 103 (1851), non Schott, Aroideae: 22 (1856); *Pothos longipedunculatus* Engl., Pflanzenr., IV, 23B: 27 (1905), nom. illeg., non. Ridl., Bull. Misc. Inform. Kew 1925: 93 (1925), nom. illeg. Lectotype selected here: Wallich Cat. No. 4435D (K-WAL!). This is the only physical specimen cited by de Vriese. The other syntype is: Wight Icones III: 776,

Large moderately robust, homeophyllous, root-climbing hemiepiphyte to 15 m. *Stem* to 15 mm diam., four-angled or slightly compressed-terete in cross section; fertile shoot branching to ca. two orders, stem to 10 mm diam. *Leaves* dense. *Petiole* 2–20 cm × 5–20 mm, broadly winged, obovate-oblong to linear-oblong, with 2–3 secondary veins and numerous veinlets per side, base decurrent, apex truncate, rounded or auriculate; *lamina* 2–10 × 1–4 cm, ovate to elliptic or lanceolate with 2 intramarginal veins per side, base rounded to acute, apex attenuate-mucronate, leathery. *Flowering shoot* much abbreviated, arising from most of the mid- to distal leaf axils of fertile shoots, bearing a minute prophyll and a few 3–10 mm, sequentially longer, cataphylls. *Inflorescence* solitary; peduncle slender, 3–15 × .5–2 mm, erect to spreading, green to purple-tinged; *spathe* 4–10 × 4–10 mm, ovate, concave, margins flate to slightly concave, base short, apex rounded to acute with a tiny rather stout mucro, maroon; *spadix* long stipitate; stipe terete in cross section, 10–15 × ca. 1 mm, erect, white; *fertile* portion globose or ovoid to subclavate, 9–12 × 3.5–10 mm, white. *Flowers* ca. 1–2 mm diam.

*Infructescence* with 1–5 berries; fruit obclavate, 1–1.75 × 1–1.5 cm, mid-green ripening to deep scarlet.

**Thai Distribution**

SOUTH-WESTERN: Kanchanaburi, Phetchaburi. SOUTH-EASTERN: Prachin Buri, Chachoengsao, Chon Buri, Rayong, Chantaburi, Trat. PENINSULAR: Surat Thani, Phangnga, Phuket, Krabi, Nakhon Si Thammarat, Trang, Songkla, Pattani.

**Distribution**

NW India through Burma as far south as Peninsular Thailand.

**Ecology**

On trees and rocks in primary and secondary wet lowland to hill evergreen tropical forest; altitude 150–450 m.

**Notes**

de Vriese erected *Pothos roxburghii* seemingly unaware that the name was preoccupied for a Sumateran species now known as *Pothos junghubnii* de Vriese. Later uncritical synonymization of de Vriese's epithet into *P. scandens*, along with the illegitimacy of Engler's attempt at renaming de Vriese's concept (as *P. longipedunculatus*) but based upon a new type has long obfuscated the status of plants that while resembling *P. scandens*, differ markedly in the larger inflorescences with the stipe not reflexing. The new epithet is chosen to continue in some way to reflect that Roxburgh, as so often, actually got the taxonomy correct but simply failed to get the name published in accordance with modern rules.

**7. *Pothos scandens* L., Sp. Pl.: 698. 1753;** Hook. f., Fl. Brit. Ind. 6: 551. 1893; Ridley, Fl. Mal. Penins. 5: 127. 1925; Gagnep. in Lecomte, Fl. l'Indo-Chine, 6: 1083. 1942; Boyce, Blumea 45: 180. 2000; Boyce & Hay, Telopea 9(3): 461. 2001. Type: *Herb. Hermann* 4: 39, No. 329 (BM! lecto.; designated by Suresh et. al., Taxon, 32 (1983) 127).

- Pothos hermaphroditus* (Blanco) Merr., Sp. Blancoanae: 90. 1918l.
- Batis hermaphrodita* Blanco, Fl. Filip. ed.1: 791. 1837.
- Pothos angustifolius* Presl, Epimel. Bot.: 243. 1849.
- Pothos chapelieri* Schott, Aroideae: 22, t. 35. 1856–1857.
- Pothos exiguiflorus* Schott, Aroideae: 21, t. 41. 1856–1857.
- Pothos cognatus* Schott, Aroideae: 22, t. 42. 1856–1857.
- Pothos scandens* L. var. *cognatus* (Schott) Engl. in A. & C. DC., Monogr. Phanerogam. 2: 84. 1879.
- Pothos zollingerianus* Schott, Oesterr. Bot. Wochenbl. 5: 19. 1855
- Pothos horsfieldii* Miq., Fl. Ned. Ind. 3: 178. 1856.
- Pothos decipiens* Schott, Bonplandia 7: 165. 1859.
- Pothos fallax* Schott, Prodr. Syst. Aroid.: 560. 1860.

Moderate to rather large, slender to moderately robust, homeophyllous, root-climbing hemiepiphyte to 6 m. *Stem* 10 mm diam., weakly four-angled or slightly compressed-terete in cross section; fertile shoot often branching to four or more orders, stem to 5 mm diam *Leaves* dense. *Petiole* 2–14 cm × 5–20 mm, broadly winged, obovate-oblong to linear-oblong, with 2–3 secondary veins and numerous veinlets per side, base decurrent, apex truncate, rounded or auriculate; *lamina* 2–10 × 1–4 cm, ovate to elliptic or lanceolate with 2 intramarginal veins per side, base rounded to acute, apex attenuate-mucronate, leathery. *Flowering shoot* much abbreviated, arising from most of the mid- to distal leaf axils of fertile shoots, bearing a minute prophyll and a few 3–10 mm, sequentially longer, cataphylls. *Inflorescence* solitary; peduncle slender, 3–15 × .5–2 mm, erect to spreading, green to purple-tinged; *spathe* 4–8 × 4–7 mm, ovate, concave, margins variously in-rolled, base short or somewhat long-clawed, apex rounded to acute with a tiny rather stout mucro, greenish to maroon; *spadix* stipitate; stipe terete in cross section, 5–10 × ca. 1 mm, erect, the distal part erect to

bent through 270°, greenish to maroon; *fertile* portion globose or ovoid to subclavate, 4–10 × 3.5–10 mm, yellow-green to off-white. *Flowers* ca. 1–2 mm diam. *Infructescence* with 1–5 berries; fruit obclavate, 1–1.75 × 1–1.5 cm, mid-green ripening to deep scarlet.

### Ecology

On trees and rocks in primary and secondary wet to dry lowland to hill evergreen tropical to subtropical forest, occasionally on sea cliffs, on a variety of substrates including clay, limestone and granite; altitude 0–2,100 m.

### Thai Distribution

NORTHERN: Chiang Mai, Chiang Rai, Lampang, Nan, Phrae, Sukhothai, Phitsanulok, Petchabun, Loei. NORTH-EASTERN: Nakhon Phanom. EASTERN: Chaiphaphum. SOUTH-WESTERN: Kanchanaburi, Petchaburi. CENTRAL: Nakhon Nayok. SOUTH-EASTERN: Prachin Buri, Chachoengsao, Chon Buri, Rayong, Chanthaburi, Trat. PENINSULAR: Surat Thani, Phangnga, Phuket, Krabi, Nakhon Si Thammarat, Trang, Songkla, Pattani.

### Distribution

Madagascar through to India and Sri Lanka (type) through Bangladesh to SW China, south Indonesia through Peninsular Malaysia to Borneo and the Philippines.

### Notes

*Pothos scandens* is unmistakable in its typical aspect, carrying rather small inflorescences on bent peduncles. However, the species is highly variable. Some populations comprise high-climbing plants bearing tiny inflorescences (*Beusekom & Smitinand* 2150, *Geesink et al.* 7250, *Larsen et al.* 44267 and *Smitinand* 2959 are representative of this element).

- 8. *Pothos wallichii*** Hook. f., *Fl. Brit. Ind.* 6: 553. 1893; Ridley, *Fl. Mal. Penins.* 5: 129 (sub. *P. barberianus* var. *wallichii*). 1925; Boyce & Hay, *Telopea* 9(3): 521. 2001. Type: Wallich Cat. 4439 B (K-WAL!)

*Pothos barberianus* Schott var. *wallichii* (Hook.f.) Ridl., Mat. Fl. Malay Penins. 3: 49. 1907 & Fl. Malay Penins. 5: 129. 1925.

Slender, (heterophyllous?), root-climbing hemiepiphyte. *Stem* ca. 6 mm diam. sub-terete. *Leaves* dense. *Petiole* slender, 6–9 cm long; *petiolar sheath* margins in-rolled and thus sheath not prominent, extending to just below pulvinus, basally clasping, apically briefly ligulate; *lamina* lanceolate to lanceolate-elliptic, 6–16 × 2–5 cm, base acute to obtuse, apex acute to acuminate, very briefly apiculate; primary lateral veins arising at ca. 80°, very fine, stiffly but thinly chartaceous, drying dull greenish. Flowering shoot leafy, arising from the distal most portions of fertile shoots. *Inflorescence* solitary. *Peduncle* very slender, 4–11 cm × ca. .75 mm, arching, very rarely reflexed. *Spathe* lanceolate, 4–5 × .5–1 cm, spreading to weakly reflexing, base auriculate, auricle margins in-rolled, barely decurrent on the peduncle, apex acute to acuminate, dull reddish purple with paler longitudinal streaks. *Spadix* briefly stipitate; *stipe* ca. 2 mm long; *fertile portion* slender, cylindrical, 5–7.5 cm × ca. 2 mm, straight to slightly curved, base unequal, slightly cochleate, creamy yellow. *Flowers* ca. 1.2 mm diam. *Infructescence* with rather few berries, these mostly carried on the basal half of spadix. *Fruit* ellipsoid, 1–1.2 cm × 4–5 mm, with a prominent stigmatic remnant, ripening deep scarlet.

### Ecology

Evergreen forest; altitudes 100–200 m.

### Thai Distribution

PENINSULAR: Phatthalung.

### Distribution

Thailand, Peninsular Malaysia, Java.

### Notes

A new record for Thailand. *Pothos wallichii* is immediately recognizable by the inflorescences pendent from leafy shoot tips

and the slender (less than 1 mm diam.) peduncle. It is similar to *P. leptostachyus* but readily separated by the much more slender arching, not erect, peduncles and the generally shorter lanceolate spathe and the glossy reddish purple with paler longitudinal streaks, not green, spathe limb.

### ACKNOWLEDGMENTS

This work was supported by the TRF/BIOTEC Special Program for Biodiversity Research and Training grant BRT R-151008.

### LITERATURE CITED

- Boyce, P. C. 2000. The genus *Pothos* (Araceae: Pothoideae: Potheae) of Thailand and Indochina. *Blumea* 45:147–204.
- & A. Hay. 1998. Current advances in the taxonomy of *Pothos*. In H. Li, *et al.* (eds.), *Acta Bot. Yunnan. Suppl. X, Current advances in Araceae studies*, pp. 43–47.
- & ———. 2001. A taxonomic revision of Araceae tribe Potheae (*Pothos*, *Pothoidium* and *Pedicellarum*) for Malesia, Australia and the tropical Western Pacific. *Telopea* 9(3):449–571.
- Hay, A. 1995. The genus *Pothos* L. (Araceae-Potheae) in New Guinea, Solomon Islands and Australia. *Blumea* 40: 397–419.

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