47. AESCHYNANTHUS Jack, Trans. Linn. Soc. London 14: 42. 1823 (1825).

芒毛苣苔属 mang mao ju tai shu

Trichosporum D. Don.

Shrubs or climbers, epiphytic or epipetric, not rhizomatous. Stems often pendent, branched or unbranched. Leaves usually many, along stem, opposite, sometimes whorled, equal to subequal in a pair; leaf blade glabrous, rarely puberulent or pubescent, base cuneate to rounded or attenuate. Inflorescences umbel-like, lax or sometimes dense, axillary or pseudoterminal, 1–10-flowered cymes; bracts 2, opposite. Calyx actinomorphic, 5-sect from base to 5-lobed; segments equal, rarely unequal. Corolla red to orange, seldom greenish, yellow, or white, zygomorphic, inside sparsely puberulent, sparsely glandular puberulent, glabrous, or with a hair ring; tube narrowly tubular to funnelform-tubular, often curved, not swollen, much longer than limb, 0.4-1.5 cm in diam.; limb indistinctly or distinctly 2-lipped; adaxial lip 2-lobed; usually equalling, occasionally to $1/2 \times$ length of abaxial lip; abaxial lip 3-lobed, lobes equal or subequal, apex rounded to acute. Stamens 4, adnate to corolla tube near or above middle, usually exserted; anthers basifixed, usually coherent in pairs at apex, thecae parallel, not confluent, dehiscing longitudinally; connective not projecting; staminode 1 or absent, adnate to adaxial side of corolla tube. Disc ringlike. Ovary linear, 1-loculed; placentas 2, parietal, projecting inward, 2-cleft. Stigma 1, terminal, capitate to depressed-globose, undivided. Capsule straight in relation to pedicel, linear, much longer than calyx, dehiscing loculicidally to base; valves 2 or 4, straight, not twisted. Seeds with 1(or 2–50) hairlike appendages, opposite end with 1 hairlike appendage, seldom 1 linear appendage at each end.

About 140 species: Asia, Pacific Islands; 34 species in China.

The flowers of *Aeschynanthus* are strongly prontandrous. Consequently, the length of filaments and pistil will vary greatly during the duration of an individual flower. The measurements included in this treatment do not always reflect this variability, and diagnostic use of these characters should be avoided.

- 1a. Corolla inside with 5 tufts of hairs above base; seeds with 25–50 hairlike appendages at hilar end (unknown in *A. sinolongicalyx*).
 - - 3a. Calyx and corolla glabrous outside; calyx segments ca. 15 mm; corolla yellow-green; seeds with ca. 25 hairlike appendages at hilar end; leaves always opposite; leaf blade with adaxial surface drying wrinkled
 - 32. A. longicaulis
 3b. Calyx glandular puberulent outside, ca. 5 mm; corolla red, sparsely puberulent outside; seeds with ca. 50
- 1b. Corolla inside glabrous to pubescent or glandular, without tufts of hairs (unknown in *A. maculatus*); seeds with

1 or 2 hairlike or linear appendages at hilar end (unknown in *A. angustioblongus*, *A. angustissimus*, *A. dolichanthus*,

A. lancilimbus, A. lasianthus, A. lasiocalyx, A. medogensis, A. pachytrichus, A. planipetiolatus, and A. tubulosus).

- 4a. Leaf blade puberulent to pubescent at least on one surface, often glabrescent.
 - 5a. Leaf blades drying papery, margin often 1- or 2-denticulate near apex, abaxially rust-brown pubescent;

stems 20–50 cm; pedicel ca. 3 mm; corolla yellow to white; anthers of 4 stamens coherent at apex,

corolla red, often with yellow spots on central abaxial lip lobe; anthers coherent in pairs, 1-2 mm.

6a. Stems puberulent to glabrescent; petiole to 2 mm; leaf blade adaxially drying or wrinkled.

7a. Leaf blade adaxially glabrous, base attenuate to broadly cuneate; cymes pseudoterminal; calyx 5-lobed from near or above middle, segments 2–2.5 mm; corolla inside with short,

thick hairs near base, adaxial lip nearly erect; staminode ca. 1 mm; capsule 4.5–6 cm;
seed appendages 6–10 mm 17. A. humilis
7b. Leaf blade adaxially puberulent, glabrescent, base cuneate to rounded; cymes axillary;
calyx 5-sect from base, segments ca. 4 mm; corolla inside glabrous, adaxial lip reflexed;
staminode ca. 6.5 mm; capsule 9-12 cm; seed appendages 15-20 mm 20. A. gracilis
6b. Stems densely spreading hispid, sometimes glabrescent; petiole 1–15 mm; leaf blade adaxially drying smooth.
8a. Leaves mostly clustered near stem apex; petiole $1-4(-8)$ mm; leaf blade obovate to
oblong obovate
or elliptic, base attenuate to cuneate; cymes pseudoterminal, 2–5-flowered; calyx
glabrous outside; corolla 1.7–2 cm, inside puberulent basally; capsule 6–8 cm 18. A. andersonii
8b. Leaves in whorls of 3; petiole 10–15 mm; leaf blade narrowly ovate to ovate, base
rounded;
cymes axillary, 1-flowered; calyx sparsely puberulent outside; corolla ca. 2.9 cm, inside
glabrous; capsule ca. 12 cm 19. A. mengxingensis
4b. Leaf blade glabrous.
9a. Stems pubescent, sericeous, or glandular at least near branch apices.
10a. Leaf blade 0.7–2 cm, apex acute to rounded; stems glabrous, glandular near apex; leaves
opposite or in whorls of 3; corolla mouth oblique, limb distinctly 2-lipped, adaxial lip ca.
$1/2 \times \text{length of abaxial lip}$
10b. Leaf blade 2.9–12.2 cm, apex attenuate to acute; stems pubescent or sericeous, often
glabrescent;
leaves opposite; corolla mouth not oblique, limb indistinctly 2-lipped, lips nearly equal.
11a. Stems rust-brown pubescent; petiole 2–3 mm; leaf blade linear to narrowly
oblanceolate, 0.4–0.7 cm wide, base attenuate; peduncle 5.2–10 cm; calyx lobes 3.2–
4.5 mm wide; corolla glabrous outside
11b. Stems brown-sericeous, glabrescent; petiole 3.5–10 mm; leaf blade narrowly ovate to
ovate or elliptic, 1.4–2.9 cm wide, base cuneate to rounded; peduncle absent; calyx
lobes 0.6–2 mm
wide; corolla pilose outside
9b. Stems glabrous even when young.
12a. Calyx (3–)5-lobed, tube at least 2 mm.
13a. Leaf blade 4–6.3 cm, abaxially sparsely punctate; calyx tube ca. 2 mm in diam. at
mouth; ovary puberulent
13b. Leaf blade 5–23 cm, abaxially not punctate; calyx tube 3–8 mm in diam. at mouth;
ovary glabrous.
14a. Calyx lobes 5–9 mm; leaf blade papery; lateral veins distinct
14a. Caryx lobes $3-5$ mm, leaf blade papery, lateral veins distinct
indistinct or invisible.
15a. Pedicels and outer calyx surface puberulent or glandular puberulent; calyx
4–7 mm.
16a. Leaf blade nearly linear to narrowly oblanceolate or narrowly elliptic,
0.8-2(-3) cm wide, base attenuate, adaxially drying wrinkled; stems
ca. 100 cm
16b. Leaf blade narrowly elliptic or oblong to oblanceolate-oblong, 1.8–4.5
cm wide, base cuneate, adaxially drying smooth or nearly smooth;
stems
ca. 30 cm.
17a. Corolla ca. 5.8 cm; leaf blade $7-9 \times 1.8-3.3$ cm, papery to thin
leathery; petiole 5–9 mm; pedicel ca. 12 mm; calyx ca. 7 mm,
lobes 3.2–5 mm;
style puberulent
17b. Corolla ca. 3 cm; leaf blade $11-13 \times 2.8-4.5$ cm, thick leathery;
petiole

9–15 mm; pedicel 4–5 mm; calyx ca. 4 mm, lobes 1.5–1.8 mm;
style glabrous
15b. Pedicels glabrous; calyx 9–15 mm.
18a. Corolla 2–3 cm; calyx red-purple or tinged red-purple.
19a. Leaf blade 2.3–4 cm wide, base broadly cuneate, apex acuminate;
bracts 5–9 mm
19b. Leaf blade 1–2.5 cm wide, base attenuate, apex caudate or
caudate-acuminate; bracts ca. 3 mm 30. <i>A. maculatus</i> 18b. Corolla 4–5.5 cm; calyx green.
20a. Calyx 9–10 mm; corolla abaxial lip ca. 1 cm, inside with subulate
and triangular hairs basally; staminode ca. 0.5 mm; style ca. 3.2
cm; leaf
blade papery to thin leathery; cymes 2–4-flowered 28. <i>A. pachytrichus</i> 20b. Calyx 12–15 mm; corolla abaxial lip 5–6 mm, inside puberulent
below middle or sparsely pubescent basally; staminode 5–6 mm;
style
1–1.8 cm; leaf blade leathery; cymes 2–11-flowered.
21a. Leaf blade adaxial surface drying smooth; bracts deciduous;
corolla mouth not oblique; anthers 1.2–2 mm; seeds with
1 hairlike appendage at hilar end
21b. Leaf blade adaxial surface drying wrinkled; bracts persistent;
corolla mouth slightly oblique; anthers 3–4 mm; seeds with
2 hairlike appendages at hilar end
12b. Calyx 5-sect from base, without tube.
22a. Leaf blade $10-20 \times 4.4-10.5$ cm; cymes 5–15-flowered; bracts persistent, 4–5.5 cm;
calyx
segments 2-3 cm; corolla 5.5-8.5 cm; capsule 32-52 cm 6. A. superbus
22b. Leaf blade $1.7-13 \times 0.6-6.1$ cm; cymes 1–7-flowered; bracts deciduous or persistent,
0.2-3 cm; calyx segments 0.2-1.9 cm; corolla 1.5-4.2 cm; capsule 3-29 cm (unknown
in A. planipetiolatus and A. angustioblongus).
 Bracts persistent, ovate to suborbicular; calyx segments ovate to ovate-oblong or obovate.
24a. Leaves 1.4–3(–5) cm wide; peduncle 0.8–3 cm; bracts and calyx reddish,
bracts $3-9 \times 4-10$ mm; corolla $1.5-2.2$ cm; anthers $1.5-2$ mm; style
glabrous; capsule 6.5–16 cm
1. A. acuminatus
24b. Leaves (1.8–)2.4–5.5 cm wide; peduncle (3.5–)7–14 cm; bracts and calyx
green, bracts $6-10 \times 4-5$ mm; corolla 2.8-3 cm; anthers ca. 3 mm; style puberulent;
capsule 12–29 cm 2. A. moningeriae
23b.Bracts persistent or deciduous, linear to ovate; calyx segments linear to lanceolate,
linear-oblanceolate, elliptic, or subulate.
25a. Leaf blade to 3 cm; capsule 3–3.5 cm
25b. Leaf blade 1.8–13 cm; capsule 5–26 cm (unknown in A. angustioblongus
and A. planipetiolatus).
26a. Bracts persistent, rarely deciduous, red to purple, 10-30 mm; calyx red,
11–19 mm.
27a. Leaf blade broadly lanceolate to elliptic, ovate, or obovate, 1.5-
6.1 cm wide, base cuneate to rounded or subcordate; bracts
lanceolate to ovate,
$15-30 \times 6-14$ mm; corolla glabrous inside; ovary glandular
puberulent
5. A. bracteatus
27b. Leaf blade narrowly to broadly oblanceolate or rarely lanceolate, 0.6–2.5(–3.3) cm wide, base cuneate to attenuate; bracts lanceolate,

above; ovary glab 26b. Bracts deciduous, rarel sometimes tinged redd 28a. Petiole 6–21 mm; 29a. Bracts lanced segments 7–4 inside sparse capsule 7–10 peduncle abs shallowly cre 29b. Bracts linear mm, outside outside sparss cm; seed app 8–12 mm, 1	mm; corolla inside sparsely glandular puberulent prous
28b. Petiole 2–10 mm; 30a. Pedicel 4–8 m puberulent to 30b. Pedicel 5–22 31a. Pedicel corolla 31b. Pedicel thick lea 32a. Cy 60	n entire
32b. Cy mc 33	3. <i>A. stenosepalus</i> ymes 1-flowered; without peduncle; corolla buth not oblique; stems to 30 cm. a. Petiole 3–4 mm; leaf blade 1.4–2.5 cm wide, thin leathery; calyx segments 7.5–10 mm; style glabrous
 1. Aeschynanthus acuminatus Wallich ex A. P. de Candolle, Prodr. 9: 263. 1845. 芒毛苣苔 mang mao ju tai Aeschynanthus acuminatus var. chinensis (Gardner & Champion) C. B. Clarke; A. chinensis Gardner & Champion. Stems 25–150 cm, glabrous. Leaves opposite; petiole 2–11 mm; leaf blade lanceolate to elliptic or narrowly oblanceolate, rarely oblong, 4.5–12 × 1.4–3(–5) cm, thin papery to leathery, glabrous, adaxially drying smooth, abaxially sparsely punctate, base cuneate to narrowly cuneate, margin entire to shallowly crenulate, apex acuminate; lateral veins indistinct. Cymes axillary 	Pedicel 7–12 mm, glabrous. Calyx red, 5-sect from base; segments ovate to ovate-oblong or obovate, $2.5-5(-7) \times 2-3$ mm, outside glabrous. Corolla red, rarely greenish, 1.5-2.2 cm, outside glabrous, inside puberulent at base of abaxial lip, without tufts of hairs, mouth strongly oblique; limb distinctly 2-lipped; adaxial lip erect, ca. 4.5 mm; abaxial lip reflexed, ca. 5 mm. Stamens exserted; filaments $1.2-2.2$ cm; anthers coherent in pairs at apex, $1.5-2$ mm; staminode $1.2-2$ mm. Pistil 1.6-2 cm; ovary glabrous. Style ca. 4 mm, glabrous. Capsule $6.5-16$ cm. Seeds with 1 hairlike appendage at each end, appendages $1.5-4$ mm. Fl. Oct–Mar, fr. Dec– May. On trees, streamside rocks in forested valleys; 200–1900 m.

narrowly cuneate, margin e apex acuminate; lateral veir or pseudoterminal, 1–3-flowered; peduncle 0.8–3 cm; bracts persistent, reddish, suborbicular, $3-9 \times 4-10$ mm.

Guangdong, Guangxi, Sichuan, Taiwan, SE Xizang, S and SE Yunnan [Bhutan, N India, Laos, Malaysia, Myanmar, Nepal, Thailand, N Vietnam].

2. Aeschynanthus moningeriae (Merrill) W. Y. Chun, Fl. Hainan. 3: 587. 1974.

红花芒毛苣苔 hong hua mang mao ju tai

Trichosporum moningeriae Merrill, Philipp. J. Sci. 19: 677. 1921.

Stems 1-2(-12) m, glabrous. Leaves opposite; petiole 3–16 mm; leaf blade narrowly elliptic to ovate or obovate, rarely oblong, $7-13 \times (1.8-)2.4-5.5$ cm, papery to thin leathery, glabrous, adaxially drying smooth, abaxially sparsely punctate, base cuneate to broadly cuneate, margin entire, apex acuminate; lateral veins indistinct. Cymes axillary or pseudoterminal, 2-4 (-7)-flowered; peduncle (3.5–)7–14 cm; bracts persistent, green, ovate to broadly so, $6-10 \times 4-5$ mm. Pedicel 3–10(–20) mm, glabrous. Calyx green, 5-sect from base; segments ovate to oblong ovate, $3-5 \times 2-3$ mm, outside glabrous. Corolla red, 2.8-3 cm, outside glabrous, inside sparsely puberulent, without tufts of hairs, mouth strongly oblique; limb indistinctly 2-lipped; adaxial lip erect, ca. 6 mm; abaxial lip reflexed, ca. 6 mm. Stamens exserted; filaments ca. 1.5 cm; anthers coherent in pairs at apex, ca. 3 mm; staminode ca. 0.6 mm. Pistil ca. 2 cm; ovary glabrous. Style ca. 3 mm, puberulent. Capsule 12-29 cm. Seeds with 1 hairlike appendage at each end, appendages 0.8–1.2 mm. Fl. Sep-Feb, fr. Jan-May.

• On trees in forests, streamside rocks in valleys; 300–1200 m. Guangdong, Hainan.

3. Aeschynanthus stenosepalus J. Anthony, Notes Roy. Bot. Gard. Edinburgh 18: 191. 1934.

尾叶芒毛苣苔 wei ye mang mao ju tai Aeschynanthus tenuis Handel-Mazzetti.

Stems 60–100 cm, glabrous. Leaves opposite; petiole 2-5 mm; leaf blade narrowly elliptic to lanceolate or ovate, $2.2-6 \times 0.8-2.3$ cm, leathery to papery, glabrous, adaxially drying slightly wrinkled, abaxially few punctate, base cuneate to rounded, margin entire, apex long acuminate to caudate; lateral veins indistinct. Cymes axillary, 1-3-flowered; peduncle 2.2-5(-7) cm; bracts usually deciduous, green, linear, $2-6 \times 0.8-1$ mm. Pedicel 5–11 mm, glabrous. Calyx green, sometimes tinged red, 5-sect from base; segments lanceolate-linear, $3-7 \times 0.6-0.8$ mm, outside glabrous. Corolla red, 2.5-3.2 cm, outside glabrous, inside glandular puberulent, without tufts of hairs, mouth slightly to strongly oblique; limb indistinctly 2-lipped; adaxial lip erect, 3-4 mm; abaxial lip 3-4 mm. Stamens exserted; filaments ca. 1 cm; anthers coherent in pairs at apex, ca. 1.2 mm; staminode ca. 1.6 mm. Pistil ca. 1.6 cm; ovary glabrous. Style ca. 2 mm, puberulent. Capsule 5.4–8.4 cm. Seeds with 1 hairlike appendage at each end, appendages 0.8-1.2 mm. Fl. Jul-Oct, fr. Oct.

On trees, rocks in forest margins; 1500–2500 m. SE Xizang (Medog Xian), NW Yunnan [N Myanmar].

4. Aeschynanthus wardii Merrill, Brittonia 4: 173. 1941.

狭花芒毛苣苔 xia hua mang mao ju tai Stems 1-2 m, glabrous. Leaves opposite; petiole 0.7-1.5 cm; leaf blade narrowly elliptic to ovate or obovate, $5.5-10 \times 1.6-3.9$ cm, leathery to papery, glabrous, adaxially drying smooth, abaxially few punctate, base cuneate to rounded, margin entire to shallowly crenulate, apex caudate to acuminate; lateral veins indistinct. Cymes axillary, 1-4-flowered; peduncle absent to 0.5(-1) cm; bracts persistent or deciduous, green, lanceolate to narrowly ovate, $6-13 \times 2-5$ mm. Pedicel 4-10 mm, glabrous. Calyx green, 5-sect from base: segments lanceolate-linear, $7-9 \times 1.1-1.5$ mm. outside glabrous. Corolla red to orange, ca. 3.5 cm, outside glabrous, inside sparsely glandular puberul ent below abaxial lip, without tufts of hairs, mouth obligue; limb indistinctly 2-lipped; adaxial lip erect, ca. 4.5 mm; abaxial lip reflexed, ca. 4.5 mm. Stamens exserted; filaments 1.4-2 cm; anthers coherent in pairs at apex, 1.5-2 mm; staminode ca. 0.6 mm. Pistil ca. 3.5 cm; ovary sparsely glandular puberulent. Style ca. 7 mm, sparsely glandular puberulent. Capsule 7-10 cm. Seeds with 1 hairlike appendage at each end, appendages 1.5–2.5 mm. Fl. Sep-Nov, fr. Oct. Trees in forests, rocks in river valleys; 900-2800 m. NW and W Yunnan [N Myanmar]. 5. Aeschynanthus bracteatus Wallich ex A. P. de Candolle, Prodr. 9: 261. 1845.

显苞芒毛苣苔 xian bao mang mao ju tai

Aeschynanthus bracteatus var. orientalis W. T. Wang; A. bracteatus var. peelii (J. D. Hooker & T. Thomson) C. B. Clarke; A. peelii J. D. Hooker & Thomson. Stems 25–150 cm, glabrous. Leaves opposite; petiole 5-20 mm; leaf blade broadly lanceolate to elliptic, ovate, or obovate, $4.4-13 \times 1.5-6.1$ cm, leathery to papery, glabrous, adaxially drying wrinkled or smooth, abaxially few punctate, base cuneate to rounded or subcordate, margin entire to shallowly dentate, frequently undulate, sometimes revolute, apex caudate to acuminate: lateral veins indistinct. Cymes axillary or pseudoterminal, 2-7-flowered; peduncle (0.5–)3-7 cm; bracts usually persistent, red to purple, lanceolate to ovate, $1.5-3 \times 0.6-1.4$ cm. Pedicel 6-12(-20) mm. glabrous. Calyx red, 5-sect from base; segments linear to lanceolate, $1.2-1.9 \text{ cm} \times 2-4 \text{ mm}$, outside glabrous. Corolla red to pink or purple, 3.2–4.2 cm, glabrous, mouth strongly oblique; limb indistinctly 2-lipped; adaxial lip erect, 6-8 mm; abaxial lip reflexed, 6-8 mm. Stamens exserted; filaments ca. 2.5 cm; anthers coherent in pairs at apex, 1.8-2.5 mm; staminode ca. 0.5 mm. Pistil ca. 2.8 cm; ovary glandular puberulent. Style 4–6 mm, glandular puberulent. Capsule 7–16(–21) cm. Seeds with 1 hairlike appendage at each end, appendages 1.8-3 mm. Fl. Jun-Oct, fr. Jul-Jan.

On trees in forested valleys and on streamside cliffs; 900–3200 m. NW Guangxi, SE Xizang, Yunnan [Bhutan, NE India, Myanmar]. There are apparently two distinct races in *Aeschynanthus bracteatus* which have been called varieties. We do not consider the distinctions strong enough to recognize taxonomically; however, in SE Yunnan there is a race which can usually be distinguished from typical *A. bracteatus*. This race usually has leaf blades broader (elliptic to oblong or obovate) and thicker (leathery), and which dry flat adaxially and frequently abaxially cinnamon reddish. In contrast typical *A. bracteatus* specimens have leaf blades lanceolate to narrowly ovate and thin leathery to papery which dry rugose adaxially and abaxially usually yellowish green.

6. Aeschynanthus superbus C. B. Clarke, Commelyn. Cyrtandr. Bengal. 73. 1874.

华丽芒毛苣苔 hua li mang mao ju tai

Stems 50-100 cm, glabrous. Leaves opposite; petiole 5-14 mm; leaf blade elliptic to obovate, lanceolate or oblong, $10-20 \times 4.4-10.5$ cm, papery to leathery, glabrous, adaxially drying smooth, abaxially sparsely punctate, base cuneate to rounded, margin entire, apex abruptly acuminate to acuminate or acute; lateral veins indistinct. Cymes axillary, 5-15-flowered; peduncle 1-3 cm; bracts persistent, pink to red, elliptic to ovate, 4- $5.5 \times 2-3$ cm. Pedicel 0.8–1.2 cm, glabrous. Calyx orange-red to red, 5-sect from base; segments linear to lanceolate, $2-3 \text{ cm} \times 3.5-7 \text{ mm}$, outside glabrous. Corolla orange-red to dark red with darker stripes, 5.5-8.5 cm, outside glabrous, inside sparsely puberulent, without tufts of hairs, mouth oblique; limb indistinctly 2-lipped; adaxial lip erect, 1–1.6 cm; abaxial lip reflexed, 1-1.6 cm. Stamens exserted; filaments 3.2-3.5 cm; anthers coherent in pairs at apex, 3-4 mm; staminode ca. 1.5 mm. Pistil 4.2-7.6 cm; ovary with a few short hairs. Style 6-8 mm, sparsely puberulent. Capsule 32-52 cm. Seeds with 1 hairlike appendage at each end, appendages 4-8 mm. Fl. Aug-Sep.

On trees in forests; 1000–2500 m. SE Xizang (Medog Xian), SE and W Yunnan [Bhutan, NE India, N Myanmar].

7. Aeschynanthus linearifolius C. E. C. Fischer, Bull. Misc. Inform. Kew 1935: 321. 1935.

华丽芒毛苣苔 hua li mang mao ju tai

Aeschynanthus linearifolius var. oblanceolatus (J. Anthony) W. T. Wang; A. oblanceolatus (J. Anthony) C. E. C. Fischer; A. peelii J. D. Hooker & Thomson var. oblanceolatus J. Anthony.

Stems 50–100 cm, glabrous. Leaves opposite; petiole 3–8 mm; leaf blade narrowly to broadly oblanceolate or rarely lanceolate, $4.2-9 \times 0.6-2.5(-3.3)$ cm, leathery, glabrous, adaxially drying wrinkled, abaxially sparsely punctate, base cuneate to attenuate, margin entire to nearly entire, apex acuminate to subcaudate; lateral veins indistinct. Cymes axillary, 1–4-flowered; peduncle 1.8–5 cm; bracts persistent, red, lanceolate, 1–1.8 cm \times 4–5(–8) mm. Pedicel 3–10 mm, glabrous. Calyx red, 5-sect from base; segments lanceolate to elliptic, 1.1–1.3 cm \times 3–4 mm, outside glabrous.

Corolla red, 3–3.5 cm, outside glabrous, inside sparsely glandular puberulent above, without tufts of hairs, mouth slightly oblique; limb indistinctly 2-lipped; adaxial lip ca. 4 mm; abaxial lip ca. 5.5 mm. Stamens exserted; filaments 1.4–2 cm; anthers coherent in pairs at apex, ca. 2 mm; staminode ca. 1 mm. Pistil ca. 2.1 cm; ovary glabrous. Style ca. 2.5 mm, puberulent. Capsule 5–10 cm. Seeds with 1 hairlike appendage at each end, appendages ca. 1.5 mm. Fl. Jul–Sep, fr. Oct. On tree and rocks in forested valleys; 1900–3100 m. SE Xizang, Yunnan [NE India, N Myanmar].

The varieties of *Aeschynanthus linearifolius* were based on leaf shape and width. They are not recognized here because the variation in these characters is continuous.

8. Aeschynanthus angustissimus (W. T. Wang) W. T. Wang, Bull. Bot. Res., Harbin 2(4): 56. 1982.

狭叶芒毛苣苔 xia ye mang mao ju tai

Aeschynanthus linearifolius C. E. C. Fischer var. angustissimus W. T. Wang, Acta Phytotax. Sin. 17: 110. 1979.

Stems ca. 40 cm, rust-brown pubescent. Leaves opposite; petiole 2–3 mm; leaf blade linear to narrowly oblanceolate, $6.5-12.2 \text{ cm} \times 4-7 \text{ mm}$, leathery, glabrous, adaxially drying wrinkled, abaxially sparsely punctate, base attenuate, margin entire, apex attenuate; lateral veins invisible. Cymes axillary, 1-4-flowered; peduncle 5.2-10 cm; bracts persistent, red, lanceolate, $1.6-1.8 \text{ cm} \times 5-8 \text{ mm}$. Pedicel 0.8-1.8 cm, glabrous. Calyx red, 5-sect from base; segments narrowly oblong to lanceolate-oblong, $1.2-1.8 \text{ cm} \times 3.2-4.5 \text{ mm}$, outside puberulent. Corolla red, ca. 3.2 cm, outside glabrous, inside sparsely glandular puberulent apically, without tufts of hairs, mouth not oblique; limb indistinctly 2lipped, lips nearly equal, ca. 5 mm. Stamens exserted; filaments 1.2–1.5 cm; anthers coherent in pairs at apex, ca. 2 mm; staminode ca. 2 mm. Pistil ca. 2.4 cm; ovary glabrous. Style ca. 2 mm, glandular puberulent. Capsule 4.8-7 cm. Seeds unknown. Fl. Aug.

• On trees and rocks in broad-leaved forests; ca. 2300 m. SE Xizang (Medog Xian).

9. Aeschynanthus acuminatissimus W. T. Wang, Acta Phytotax. Sin. 13: 64. 1975.

长尖芒毛苣苔 chang jian mang mao ju tai

Stems ca. 30 cm, glabrous. Leaves opposite; petiole 3–4 mm; leaf blade lanceolate to elliptic, $5.8-7.4 \times 1.4-2.5$ cm, thin leathery, glabrous, adaxially drying smooth, abaxially densely punctate, base broadly cuneate to nearly rounded, margin entire, apex long acuminate to caudate; lateral veins indistinct. Cymes axillary, 1-flowered; peduncle absent; bracts deciduous. Pedicel ca. 1 cm, glabrous. Calyx reddish, 5-sect from base; segments lanceolate-subulate, $7.5-10 \times 0.8-1.1$ mm, outside glabrous. Corolla red, ca. 2.8 cm, outside glabrous, inside puberulent, without tufts of hairs, mouth not oblique; limb indistinctly 2-lipped; adaxial lip ca. 5 mm; abaxial lip ca. 7 mm. Stamens exserted;

filaments 0.9–1.1 cm; anthers coherent in pairs at apex, ca. 2 mm; staminode ca. 1 mm. Pistil ca. 2.9 cm; ovary glabrous. Style ca. 1 cm, glabrous. Capsule ca. 8 cm. Seeds with 1 hairlike appendage at each end, appendages 2.2–3.2 mm. Fl. Aug.

• On trees in densely forested valleys; 1200–1500 m. SE Yunnan (Xichou Xian).

10. Aeschynanthus lancilimbus W. T. Wang, Acta Phytotax. Sin. 13: 64. 1975.

披针芒毛苣苔 pi zhen mang mao ju tai Stems ca. 50 cm, glabrous. Leaves opposite; petiole 3-6 mm; leaf blade lanceolate, rarely ovate, $4-6.3 \times 1.4-2.5$ cm, leathery to papery, glabrous, adaxially drying smooth, abaxially sparsely punctate, base broadly cuneate to rounded, margin entire, apex long acuminate to acuminate; lateral veins nearly invisible. Inflorescences unknown; bracts deciduous. Pedicel ca. 1.3 cm, glabrous. Calyx green, ca. 7 mm, 5-lobed from below middle; tube ca. 2 mm in diam. at mouth; lobes linear-lanceolate, ca. $5 \times 1-1.5$ mm, outside glabrous. Corolla red, ca. 2.7 cm, outside sparsely puberulent, inside glabrous, mouth not oblique; limb indistinctly 2lipped; adaxial lip ca. 2.5 mm; abaxial lip ca. 3 mm. Stamens exserted; filaments 2.5–2.8 cm; anthers coherent in pairs at apex, ca. 2.5 mm; staminode ca. 2 mm. Pistil ca. 4.2 cm; ovary puberulent. Style ca. 2 cm, puberulent. Fruit and seeds unknown. Fl. Oct.

• Densely forested valleys; ca. 1200 m. SE Yunnan (Yanshan Xian).

This species is known only from the type specimen, which has only a detached flower.

11. Aeschynanthus tubulosus J. Anthony, Notes Roy. Bot. Gard. Edinburgh 18: 192. 1934.

筒花芒毛苣苔 tong hua mang mao ju tai Stems 40–140 cm, glabrous. Leaves opposite; petiole 2-5 mm; leaf blade narrowly elliptic to narrowly ovate, $1.7-3 \times 0.6-1.4$ cm, thin leathery to papery, glabrous, adaxially drying smooth, abaxially punctate, base cuneate to broadly cuneate, margin entire, apex acute to acuminate; lateral veins invisible. Cymes axillary, 1flowered; peduncle absent; bracts deciduous. Pedicel 4-7(-10) mm, glabrous. Calyx green, 5-sect from base; segments narrowly lanceolate to linear or narrowly triangular, $5-9 \times 0.8-1.2$ mm, outside glabrous. Corolla red, 3-3.7 cm, outside glabrous, inside sparsely puberulent basally, without tufts of hairs, mouth slightly oblique; limb indistinctly 2-lipped, lips nearly equal, 3-5 mm. Stamens exserted; filaments 2.3-3.1 cm; anthers coherent in pairs at apex, 2-3 mm; staminode ca. 1 mm. Pistil ca. 2.5 cm; ovary glabrous. Style ca. 9 mm, glabrous. Capsule 3-3.5 cm. Seeds unknown. Fl. Aug-Oct.

Rocks and trees in forests; 2200–2300 m. SW and W Yunnan [N Myanmar].

No material of var. tubulosus has been seen by the authors.

11a. Aeschynanthus tubulosus var. tubulosus

筒花芒毛苣苔(原变种) tong hua mang mao ju tai (yuan bian zhong)

Leaf blade elliptic to narrowly so. Calyx segments linear-lanceolate, $5-6 \times ca$. 1.2 mm. Fl. Aug–Oct.

On trees in forests; ca. 2200 m. SW Yunnan [N Myanmar].

11b. Aeschynanthus tubulosus var. **angustilobus** J. Anthony, Notes Roy. Bot. Gard. Edinburgh 18: 192. 1934.

狭萼片芒毛苣苔 xia e pian mang mao ju tai

Leaf blade narrowly ovate to narrowly elliptic. Calyx segments linear, $6-9 \times ca$. 1 mm. Fl. Aug.

• Rocks and trees in forests; ca. 2300 m. W Yunnan.

12. Aeschynanthus planipetiolatus H. W. Li, Acta Bot. Yunnan. 5: 33. 1983.

扁柄芒毛苣苔 bian bing mang mao ju tai

Stems ca. 30 cm, glabrous. Leaves opposite; petiole 5-10 mm; leaf blade narrowly to broadly ovate or ellipticoblong, $4-6.5 \times 2-3.4$ cm, thick leathery, glabrous, adaxially drying smooth, abaxially impressed punctate, base broadly cuneate to rounded, margin entire, apex acuminate to abruptly acuminate; lateral veins indistinct. Cymes axillary, 1-flowered; peduncle absent; bracts deciduous. Pedicel ca. 8 mm, glabrous. Calyx green, 5sect from base; segments lanceolate-linear, ca. 5×1 mm, outside glabrous. Corolla red, 2.3-2.7 cm, glabrous, inside sparsely glandular near mouth, without tufts of hairs, mouth not oblique; limb indistinctly 2lipped, lips nearly equal, ca. 3 mm. Stamens exserted; filaments 2–2.2 cm; anthers coherent in pairs at apex, ca. 2 mm; staminode ca. 1.5 mm. Pistil ca. 3.2 cm; ovary glabrous. Style ca. 1.5 cm, glandular puberulent. Fruit and seeds unknown. Fl. Sep.

• On trees on hills along roadsides; ca. 1600 m. S Yunnan (Menghai Xian).

The species is probably now extinct.

13. Aeschynanthus angustioblongus W. T. Wang, Acta Phytotax. Sin. 13: 64. 1975.

狭矩芒毛苣苔 xia ju mang mao ju tai

Stems 12–30 cm, glabrous. Leaves opposite; petiole 2– 5 mm; leaf blade narrowly oblong to oblong lanceolate or narrowly elliptic, $(1.8-)3-5.4 \times (0.8-)1-1.5$ cm, papery, glabrous, adaxially drying wrinkled, abaxially not punctate, base attenuate, margin entire, apex attenuate; lateral veins indistinct. Cymes axillary, 1flowered; peduncle absent; bracts deciduous. Pedicel 1– 2.2 cm, glabrous. Calyx green, 5-sect from base; segments narrowly lanceolate, 0.9–1.1 cm × 1.6–2.1 mm, outside glabrous. Corolla red, ca. 2.8 cm, outside puberulent, inside glabrous, mouth not oblique; limb indistinctly 2-lipped, lips equal, ca. 2.5 mm. Stamens exserted; filaments ca. 1.2 cm; anthers coherent in pairs at apex, 1.2–2 mm; staminode ca. 0.5 mm. Pistil ca. 3.2 cm; ovary glabrous. Style less than 16 mm, with a few short hairs. Fruit and seeds unknown. Fl. Sep.

• On trees in forested valleys; ca. 1500 m. NW Yunnan (Gongshan Xian).

14. Aeschynanthus austroyunnanensis W. T. Wang, Acta Phytotax. Sin. 13: 63. 1975.

滇南芒毛苣苔 dian nan mang mao ju tai

Stems to 1 m, glabrous. Leaves opposite; petiole 3-8 mm; leaf blade elliptic to broadly elliptic, ovate, or obovate, $2.2-7.2 \times 1.4-3.9$ cm, thin leathery to papery, glabrous, adaxially drying wrinkled, abaxially not punctate, base cuneate to rounded, margin entire, apex acute to rounded or acuminate; lateral veins indistinct to somewhat distinct. Cymes axillary, 1- or 2-flowered; peduncle absent; bracts deciduous. Pedicel 4-8 mm, sparsely puberulent. Calyx green, 5-sect from base; segments linear-lanceolate, $4-5 \times ca. 1$ mm, outside puberulent to glabrous. Corolla red, 2-2.7 cm, outside puberulent to glabrous, inside glabrous, mouth not oblique; limb indistinctly 2-lipped; adaxial lip ca. 5 mm; abaxial lip ca. 7 mm. Stamens exserted; filaments 1.1-1.4 cm; anthers coherent in pairs at apex, 1.2–1.5 mm; staminode ca. 0.8 mm. Pistil 2.8-3.2 cm; ovary glabrous. Style ca. 1 cm, sparsely puberulent. Capsule 8-26 cm. Seeds with 1 hairlike appendage at each end, appendages 0.9–1.5 cm. Fl. Jul, Oct, fr. Dec.

• Riverside rocks, trees, and cliffs of limestone hills in forests; 400–1500 m. W Guangxi, SW Guizhou, S and SE Yunnan.

- 1a. Calyx and corolla puberulent outside, corolla 2.4–2.7 cm; leaf blade 2.5–7.2 × 2.2–3.9 cm; capsule 18.5–26 cm; seeds ca. 0.8–1.2 mm, hairlike appendages 1.2–1.5 cm 14a. var. *austroyunnanensis*1b. Calyx and corolla glabrous or nearly

14a. Aeschynanthus austroyunnanensis var. austroyunnanensis

滇南芒毛苣苔(原变种) dian nan mang mao ju tai (yuan bian zhong)

Leaf blade $2.5-7.2 \times 2.2-3.9$ cm. Calyx outside puberulent. Corolla 2.4–2.7 cm, outside puberulent. Capsule 18.5–26 cm. Seeds 0.8–1.2 mm, appendages 1.2–1.5 cm. Fl. Oct, fr. Dec.

• Riverside rocks in forests; 500-1500 m. S and SE Yunnan.

14b. Aeschynanthus austroyunnanensis var. guangxiensis (W. Y. Chun ex W. T. Wang & K. Y. Pan) W. T. Wang, Fl. Reipubl. Popularis Sin. 69: 513. 1990.

广西芒毛苣苔 guang xi mang mao ju tai

Aeschynanthus guangxiensis W. Y. Chun ex W. T. Wang & K. Y. Pan, Bull. Bot. Res., Harbin 2(2): 146. 1982.

Leaf blade $2.2-5.8 \times 1.4-3$ cm. Calyx outside glabrous to nearly glabrous. Corolla 2–2.3 cm, outside glabrous to nearly glabrous. Capsule 8–20 cm. Seeds 1.2-1.5 mm, appendages 0.9-1.5 cm. Fl. Jul, fr. Dec.

• On trees, rocks, and cliffs on limestone hills; 400–1000 m. W Guangxi, SW Guizhou (Zhenfeng Xian).

15. Aeschynanthus lasianthus W. T. Wang, Acta Phytotax. Sin. 13: 63. 1975.

毛花芒毛苣苔 mao hua mang mao ju tai

Stems 40–120 cm, brown sericeous, glabrescent. Leaves opposite; petiole 3.5–10 mm; leaf blade narrowly ovate to ovate or elliptic, $2.9-8 \times 1.4-2.9$ cm, thin leathery, glabrous, adaxially drying smooth or slightly wrinkled, abaxially not punctate, base cuneate to rounded, margin entire, apex acuminate to acute; lateral veins indistinct. Cymes axillary, 1- or 2-flowered; peduncle absent; bracts deciduous. Pedicel 0.8-1.4 cm, puberulent. Calyx green, 1–1.8 cm, 5-lobed from slightly below middle to -sect from near base in the same flower; tube 3.5–4 mm in diam. at mouth; lobes linear-lanceolate, $4.5-13 \times 0.6-2$ mm, outside sparsely to densely pilose. Corolla red, 2.5-2.8 cm, outside pilose, inside sparsely puberulent above base, without tufts of hairs, mouth not oblique; limb indistinctly 2lipped; adaxial lip ca. 3 mm; abaxial lip ca. 2.5 mm. Stamens exserted; filaments 2.5–2.9 cm; anthers coherent in pairs at apex, 1.8–2.2 mm; staminode ca. 4 mm. Pistil 3.5–4.2 cm; ovary glabrous. Style 2–2.4 cm, sparsely puberulent. Capsule ca. 20 cm. Seeds unknown. Fl. Aug–Sep, fr. Sep.

• On trees at forest margins, rocky streamside cliffs; 1700–2600 m. NW Yunnan (Gongshan Xian).

16. Aeschynanthus macranthus (Merrill) Pellegrin, Bull. Soc. Bot. France 73: 413. 1926.

伞花芒毛苣苔 san hua mang mao ju tai

Trichosporum macranthum Merrill, Univ. Calif. Publ. Bot. 13: 141. 1926.

Stems over 40 cm, glabrous. Leaves opposite; petiole ca. 7 mm; leaf blade narrowly lanceolate to lanceolate, 10- 13×2.4 –2.8 cm, leathery, glabrous, adaxially drying smooth, abaxially not punctate, base cuneate to broadly cuneate, margin entire to indistinctly denticulate, apex attenuate; lateral veins indistinct. Cymes pseudoterminal, ca. 8-flowered; peduncle absent; bracts deciduous. Pedicel ca. 1 cm, glabrous. Calyx green, 1.2–1.5 cm, shallowly 5-lobed; tube 6.5–8 mm in diam. at mouth; lobes triangular, $2-3 \times 1.5-2$ mm, outside glabrous. Corolla orange-red, ca. 5.2 cm, outside sparsely puberulent apically, inside sparsely pubescent basally, without tufts of hairs, mouth not oblique; limb indistinctly 2-lipped; adaxial lip ca. 6 mm; abaxial lip ca. 5.5 mm. Stamens exserted; filaments 2.3–3.2 cm; anthers coherent in pairs at apex, 1.2-2 mm; staminode ca. 5 mm. Pistil ca. 3 cm; ovary glabrous. Style ca. 1.8 cm, puberulent. Capsule 19-29 cm. Seeds with 1 hairlike appendage at each end, appendages ca. 1 cm. Fl. Jun.

On trees of forest margins in valleys; ca. 800 m. SE Yunnan [Laos, Thailand, N Vietnam].

17. Aeschynanthus humilis Hemsley in Dunn, J. Linn. Soc., Bot. 35: 516. 1903.

矮芒毛苣苔 ai mang mao ju tai

Stems 5-24 cm, puberulent to glabrescent. Leaves opposite or in whorls of 3; petiole to 2 mm; leaf blade oblanceolate to spatulate, $0.7-2.2 \text{ cm} \times 4-8(-12) \text{ mm}$, leathery, adaxially glabrous and drying finely wrinkled, abaxially puberulent, sparsely impressed-punctate, base attenuate to broadly cuneate, margin entire, apex rounded to obtuse, seldom acute; lateral veins invisible. Cymes pseudoterminal, 1–3-flowered; peduncle absent; bracts deciduous. Pedicel 4-10 mm, glabrous to sparsely puberulent. Calyx often tinged red-purple, 4-4.6 mm, 5-lobed from near to above middle; tube 3-4 mm in diam. at mouth; lobes narrowly triangular, 2-2.5 $\times 0.8-1$ mm, outside puberulent. Corolla red, 1.6–2.7 cm, outside sparsely puberulent, inside with short thick hairs near base, without tufts of hairs, mouth slightly to strongly oblique; limb distinctly 2-lipped; adaxial lip nearly erect, 2-2.5 mm; abaxial lip 2-4.5 mm, 3-sect from to near base. Stamens exserted; filaments 0.9-2 cm; anthers coherent in pairs at apex, ca. 1.2 mm; staminode ca. 1 mm. Pistil 1.5-3 cm; ovary glabrous. Style 1.1-1.7 cm, sparsely puberulent. Capsule 4.5-6 cm. Seeds with 1 hairlike appendage at each end, appendages 6-10 mm. Fl. Sep-Jan.

• On trees in forested valleys; 1300–2100 m. Yunnan (Jingdong Xian, Pingbian Xian, Simao Xian).

18. Aeschynanthus andersonii C. B. Clarke, Commelyn. Cyrtandr. Bengal. 75. 1874.

轮叶芒毛苣苔 lun ye mang mao ju tai

Stems 10-20 cm, densely spreading short hispid, glabrescent. Leaves mostly clustered near stem apex; petiole 1-4(-8) mm; leaf blade obovate to oblong obovate or elliptic, $0.8-2.2 \text{ cm} \times 4-10 \text{ mm}$, leathery, puberulent, adaxially sometimes glabrescent, drying smooth, abaxially sparsely punctate, base attenuate to cuneate, margin entire, apex nearly rounded to acute, rarely attenuate; lateral veins obscure. Cymes pseudoterminal, 2–5-flowered; peduncle absent; bracts deciduous. Pedicel 7–10 mm, glabrous to sparsely ciliate. Calyx green tinged reddish, 5-sect from base; segments linear-lanceolate to narrowly triangular, $3-4 \times$ ca. 0.5 mm, outside glabrous, margin ciliate. Corolla red, 1.7-2 cm, outside sparsely puberulent, inside puberulent basally, without tufts of hairs, mouth strongly oblique; limb distinctly 2-lipped; adaxial lip erect, indistinctly 4-lobed near apex, 5-8 mm; abaxial lip 4–7 mm, entire. Stamens exserted; filaments 1.3–2 cm; anthers coherent in pairs at apex, 1–2 mm; staminode ca. 0.5 mm. Pistil ca. 4 mm; ovary glabrous. Style ca. 1.5 mm, puberulent. Capsule 6–8 cm. Seeds with 1 hairlike appendage at each end, appendages 1-1.3 cm. Fl. Jun-Aug, fr. Aug.

On trees in forested valleys; 1300–1700 m. SW and S Yunnan [NE Myanmar].

19. Aeschynanthus mengxingensis W. T. Wang, Bull. Bot. Res., Harbin 4(1): 27. 1984.

勐醒芒毛苣苔 meng xing mang mao ju tai

Stems ca. 20 cm, densely rust-brown spreading hispid. Leaves in whorls of 3; petiole 1–1.5 cm; leaf blade narrowly ovate to ovate, $1.8-2.6 \times 0.9-1.1$ cm, leathery, adaxially glabrous and drving smooth, abaxially sparsely white appressed puberulent, not punctate, base rounded, margin entire, apex apiculate; lateral veins invisible. Cymes axillary, 1-flowered; peduncle absent; bracts deciduous. Pedicel ca. 8 mm, puberulent. Calyx reddish, 5-sect from base; segments subulate-lanceolate, $3-6 \times ca. 1$ mm, outside sparsely puberulent. Corolla red, central abaxial lobe yellow spotted, ca. 2.9 cm, outside puberulent, inside glabrous, mouth very strongly oblique; limb distinctly 2-lipped; adaxial lip strongly reflexed, entire, oblong, ca. 4 mm; abaxial lip ca. 9 mm, 3-parted, central lobe oblong, lateral lobes oblique, deltoid. Stamens exserted; filaments 1.7-2.1 cm; anthers coherent in pairs at apex, ca. 2 mm; staminode ca. 2 mm. Pistil ca. 3.2 cm; ovary with small glands. Style ca. 1.5 cm, sparsely puberulent. Capsule ca. 12 cm. Seeds with 1 hairlike appendage at each end, appendages 6.5–12 mm. Fl. Apr–May, fr. May. · Forest margins in valleys or on tree trunks in forests of limestone hills; 700-800 m. S Yunnan (Cangyuan Xian).

20. Aeschynanthus gracilis Parish ex C. B. Clarke, Commelyn. Cyrtandr. Bengal. 75. 1874. 细芒毛苣苔 xi mang mao ju tai Aeschynanthus novogracilis W. T. Wang. Stems ca. 30 cm, puberulent or spreading short hispid. Leaves opposite; petiole 1.5–2 mm; leaf blade elliptic to narrowly obovate, $0.8-2 \times 0.4-1.1$ cm, leathery. adaxially puberulent, glabrescent, drying wrinkled, abaxially puberulent, not punctate, base cuneate to rounded, margin entire, apex acute to rounded; lateral veins invisible. Cymes axillary, 1-flowered; peduncle absent; bracts deciduous. Pedicel ca. 8 mm, puberulent. Calyx green, 5-sect from base; segments narrowly triangular, ca. 4×1 mm, outside puberulent. Corolla red, central abaxial lobe yellow spotted, ca. 2.5 cm, outside puberulent, inside glabrous, mouth strongly oblique; limb distinctly 2-lipped; adaxial lip reflexed, ca. 4 mm; abaxial lip ca. 8.5 mm, 3-parted, central lobe oblong, lateral lobes oblique, deltoid. Stamens exserted; filaments 1.4–1.8 cm; anthers coherent in pairs at apex, ca. 2 mm; staminode ca. 6.5 mm. Pistil ca. 1.7 cm; ovary glabrous. Style ca. 5 mm, puberulent. Capsule 9-12 cm. Seeds with 1 hairlike appendage at each end, appendages 1.5-2 cm. Fl. Oct-Nov, fr. Apr. On trees in forested valleys; 1300-1700 m. S Yunnan [Bhutan, N Myanmar, Sikkim, Thailand, N Vietnam].

21. Aeschynanthus buxifolius Hemsley in Dunn, J. Linn. Soc., Bot. 35: 515. 1903.

黄杨叶芒毛苣苔 huang yang ye mang mao ju tai Stems 20-60 cm, glabrous, glandular near apex. Leaves opposite or in whorls of 3; petiole 2-3 mm; leaf blade elliptic to ovate, $0.7-2 \times 0.5-1$ cm, leathery, glabrous, adaxially drying wrinkled, abaxially not punctate, base broadly cuneate to rounded, margin entire, apex acute to rounded; lateral veins invisible. Cymes axillary, 1flowered; peduncle absent; bracts persistent, green, linear, $3-4.5 \times 0.6-1$ mm. Pedicel 4–10 mm, glabrous. Calyx green, 5-sect from base; segments linear to lanceolate-linear, $3.5-6 \times 0.8-1.1$ mm, outside glabrous. Corolla purple-red, 1.8-3.1 cm, outside glabrous, inside sparsely glandular puberulent, without tufts of hairs, mouth oblique; limb distinctly 2-lipped; adaxial lip ca. 4.5 mm; abaxial lip ca. 8 mm, 3-parted from near base. Stamens exserted; filaments 2-2.9 cm; anthers coherent in pairs at apex, 1.6–2 mm; staminode ca. 1 mm. Pistil ca. 2.8 cm; ovary glabrous. Style ca. 5 mm, glabrous. Capsule 6.2–9.5 cm. Seeds with 1 flat, narrowly triangular appendage at each end, appendages 0.5-1 mm. Fl. Jun-Nov, fr. Nov.

On trees and rocks in forests; 1300–2200 m. Guangxi, SW Guizhou, Yunnan [Vietnam].

22. Aeschynanthus denticuliger W. T. Wang, Acta Phytotax. Sin. 13: 65. 1975.

小齿芒毛苣苔 xiao chi mang mao ju tai Stems 20–50 cm, spreading rust-brown pubescent. Leaves opposite or in whorls of 3; petiole 1.5-2 mm; leaf blade narrowly elliptic to obovate, $1-2.1 \times 0.6-1.1$ cm, papery, adaxially nearly glabrous, drying wrinkled, abaxially rust-brown pubescent, not punctate, base cuneate to rounded, margin often 1- or 2-denticulate near apex, apex acute to nearly rounded; lateral veins invisible. Cymes axillary, 1-flowered; bracts deciduous. Pedicel ca. 3 mm, puberulent. Calyx green, deeply 5lobed; lobes triangular-lanceolate, ca. $4-5 \times ca. 1$ mm, outside densely puberulent. Corolla yellow to white, ca. 3.4 cm, outside puberulent, inside glabrous, mouth not oblique; limb distinctly 2-lipped; adaxial lip ca. 7 mm; abaxial lip ca. 9 mm, 3-lobed from slightly below middle. Stamens included; filaments 0.8-1.2 cm; anthers of 4 stamens coherent at apex, ca. 3 mm; staminode ca. 5 mm. Pistil ca. 1.7 cm; ovary glabrous. Style ca. 3 mm, glabrous. Capsule ca. 8 cm. Seeds with 1 hairlike appendage at each end, appendages 5-8 mm. Fl. Feb, fr. Oct.

On trees in dense forests; 1200–1500 m. SE Yunnan [Laos, N Vietnam].

23. Aeschynanthus lineatus Craib, Bull. Misc. Inform. Kew 1913: 201. 1913.

线条芒毛苣苔 xian tiao mang mao ju tai Aeschynanthus chorisepalus Orr.

Stems to 1 m, glabrous. Leaves opposite; petiole 6-21 mm; leaf blade narrowly to broadly elliptic or lanceolate to obovate, $5-12 \times 2-4.2$ cm, leathery to thin leathery, glabrous, adaxially drying wrinkled, abaxially not punctate, base broadly cuneate to cuneate, margin entire, apex acuminate; lateral veins indistinct. Cymes axillary, 1-4-flowered; peduncle absent; bracts persistent, green, linear to lanceolate, ca. $6 \times 1-2$ mm. Pedicel 3–20 mm, puberulent to glabrous. Calyx green, 5-sect from base; segments lanceolate-linear to linearoblanceolate, $4-7 \times 1.5-2$ mm, outside glabrous to rustbrown pubescent. Corolla red to yellow, 1.9-3 cm, outside sparsely puberulent, inside glabrous, mouth not oblique; limb indistinctly 2-lipped, lips nearly equal, 3.8-4 mm. Stamens exserted; filaments 1.8-2 cm; anthers coherent in pairs at apex, 1.8-2.2 mm; staminode 0.5-1 mm. Pistil 2.4-3 cm; ovary with small glands. Style ca. 8 mm, puberulent. Capsule 15–25 cm. Seeds with 2 hairlike appendages at hilar end, appendages, 0.8–1.2 cm, opposite end with 1 hairlike appendage 1.5-2 cm. Fl. Jul-Oct, fr. Nov.

On trees in forested valleys; 1500–2500 m. S and W Yunnan [N Thailand].

24. Aeschynanthus dolichanthus W. T. Wang, Bull. Bot. Res., Harbin 2(4): 58. 1982.

长花芒毛苣苔 chang hua mang mao ju tai Stems ca. 30 cm, glabrous. Leaves opposite; petiole 4–9 mm; leaf blade oblong to narrowly elliptic, 5–9.5 × 1.7-3.4 cm, papery, glabrous, adaxially drying smooth, abaxially not punctate, base cuneate, margin entire, apex acuminate; lateral veins distinct. Cymes pseudoterminal, ca. 6-flowered; peduncle absent; bracts persistent, green, linear, $2.8-4 \times 0.8-1.2$ mm. Pedicel 9–10 mm, glabrous. Calyx green, ca. 1.2 cm, 5-lobed from near to below middle; tube ca. 4 mm in diam. at mouth; lobes narrowly triangular, $5-9 \times 1-1.2$ mm, outside glabrous. Corolla red, ca. 5 cm, outside puberulent, inside above base with triangular hairs, without tufts of hairs, mouth not oblique; limb indistinctly 2-lipped; adaxial lip ca. 4 mm; abaxial lip ca. 5.5 mm. Stamens exserted; filaments 2.6–3.8 cm; anthers coherent in pairs at apex, 2.2–3 mm; staminode ca. 1.8 mm. Immature pistil glabrous. Fruit and seeds unknown. Fl. Jul.

• Riverside rocks in valleys; ca. 900 m. SE Xizang (Medog Xian). **25. Aeschynanthus lasiocalyx** W. T. Wang, Bull. Bot. Res., Harbin 4(1): 29. 1984.

毛萼芒毛苣苔 mao e mang mao ju tai Stems ca. 30 cm, glabrous. Leaves opposite; petiole 5–9 mm; leaf blade narrowly elliptic, $7-9 \times 1.8-3.3$ cm, papery to thin leathery, glabrous, adaxially drying smooth, abaxially not punctate, base cuneate, margin entire, apex acuminate; lateral veins indistinct. Cymes pseudoterminal, ca. 4-flowered; peduncle absent; bracts deciduous. Pedicel ca. 1.2 cm, puberulent. Calyx greenish, ca. 7 mm, 5-lobed from near to below middle; tube ca. 5 mm in diam. at mouth; lobes triangular to triangular-linear, $3.2-5 \times 1-2$ mm, outside puberulent. Corolla red, ca. 5.8 cm, outside puberulent, inside with sparse triangular hairs basally, without tufts of hairs, mouth not oblique: limb indistinctly 2-lipped; adaxial lip ca. 5 mm; abaxial lip slightly longer. Stamens exserted; filaments 2.8-3.5 cm; anthers coherent in pairs at apex, 2-2.5 mm; staminode ca. 1 mm. Ovary glabrous. Style puberulent. Fruit and seeds unknown. Fl. Jul.

Riverside rocks in forests; ca. 800 m. SE Xizang (Medog Xian).
26. Aeschynanthus medogensis W. T. Wang, Bull. Bot. Res., Harbin 2(4): 59. 1982.

墨脱芒毛苣苔 mo tuo mang mao ju tai Stems ca. 30 cm, glabrous. Leaves opposite; petiole 0.9–1.5 cm; leaf blade oblong to oblanceolate-oblong, $11-13 \times 2.8-4.5$ cm, thick leathery, glabrous, adaxially drying nearly smooth, abaxially not punctate, base cuneate, margin entire, apex acuminate; lateral veins indistinct. Cymes pseudoterminal, ca. 4-flowered; peduncle absent; bracts persistent, green, linear, ca. $3 \times$ 0.8 mm. Pedicel 4-5 mm, glandular puberulent. Calyx green, ca. 4 mm; 3-5-lobed from near middle; tube ca. 3 mm in diam. at mouth; lobes narrowly triangular, 1.5- $1.8 \times ca. 0.8$ mm, outside glandular puberulent. Corolla red, ca. 3 cm, outside glandular puberulent, inside glandular below abaxial lip, without tufts of hairs. mouth not oblique; limb indistinctly 2-lipped; adaxial lip ca. 3 mm; abaxial lip ca. 3.5 mm. Stamens exserted; filaments 1.2–1.6 cm; anthers coherent in pairs at apex, 1.2-1.8 mm; staminode ca. 1.5 mm. Immature pistil glabrous. Fruit and seeds unknown. Fl. Jul. • On trees in forests; ca. 1900 m. SE Xizang (Medog Xian).

27. Aeschynanthus mimetes B. L. Burtt, Bot. Mag. 162: pl. 9595. 1940.

大花芒毛苣苔 da hua mang mao ju tai Stems 30-60(-100) cm, glabrous. Leaves opposite; petiole 3-11 mm; leaf blade narrowly elliptic to broadly ovate or obovate, $5.5-14 \times 1.4-4.6$ cm, leathery, glabrous, adaxially drying wrinkled, abaxially not punctate, base attenuate to rounded, margin entire, apex acuminate to narrowly acuminate; lateral veins indistinct. Cymes pseudoterminal, 2-11-flowered; peduncle absent; bracts persistent, green, triangular, 2- 10×0.5 –1.5 mm. Pedicel 7–12 mm, glabrous. Calyx green, 1.2–1.5 cm, shallowly 5-lobed; tube 4–6 mm in diam. at mouth; lobes narrowly triangular, $3-5 \times 1.2-2$ mm, outside glabrous. Corolla orange-red. 4–5.5 cm. outside glabrous to puberulent in apical half, inside puberulent below middle, without tufts of hairs, mouth slightly oblique: limb indistinctly 2-lipped, lips nearly equal, 5–6 mm. Stamens exserted; filaments 2.6–3.5 cm; anthers coherent in pairs at apex, 3-4 mm; staminode ca. 6 mm. Pistil ca. 5.2 cm; ovary glabrous. Style ca. 1 cm, puberulent apically. Capsule 16-34 cm. Seeds with 2 hairlike appendages at hilar end, appendages 1–1.5 cm, opposite end with 1 hairlike appendage 1-1.5 mm. Fl. Jun-Sep, fr. Oct-Nov.

On trees in forests; 1000–2500 m. SE Xizang, S and W Yunnan [NE India].

28. Aeschynanthus pachytrichus W. T. Wang, Acta Bot. Yunnan. 6: 24. 1984.

粗毛芒毛苣苔 cu mao mang mao ju tai Stems ca. 20 cm, glabrous. Leaves opposite; petiole 4-8 mm; leaf blade lanceolate to narrowly oblong, 8.5-14.8 $\times 2-3.8$ cm, papery to thin leathery, glabrous, adaxially drying nearly smooth, abaxially not punctate, base attenuate, margin entire, apex long acuminate; lateral veins indistinct. Cymes pseudoterminal, 2–4-flowered; peduncle absent; bracts persistent, green, subulate, ca. 1 $\times 0.2$ mm. Pedicel 6–10 mm, glabrous. Calyx green, 9– 10 mm, shallowly 5-lobed; tube ca. 5 mm in diam. at mouth; lobes slightly unequal, triangular, $3-5 \times 1.8-2$ mm, outside glabrous. Corolla red, 5-5.5 cm, outside sparsely puberulent apically, inside with subulate and triangular hairs basally, without tufts of hairs, mouth not oblique; limb indistinctly 2-lipped; adaxial lip ca. 5 mm; abaxial lip ca. 1 cm. Stamens exserted; filaments 3-4 cm; anthers coherent in pairs at apex, 3-3.5 mm; staminode ca. 0.5 mm. Pistil ca. 6.5 cm; ovary glabrous. Style ca. 3.2 cm, sparsely puberulent. Fruit and seeds unknown. Fl. Aug.

• On trees in forests of montane regions; ca. 1000 m. W Yunnan (Yingjiang Xian).

29. Aeschynanthus hookeri C. B. Clarke in A. & C. de Candolle, Monogr. Phan. 5: 21. 1883.

束花芒毛苣苔 shu hua mang mao ju tai Stems ca. 40 cm, glabrous. Leaves opposite; petiole 6– 10 mm; leaf blade narrowly elliptic to oblong, $7-9 \times$ 2.3–4 cm, thick leathery, glabrous, adaxially drying smooth or wrinkled, abaxially not punctate, base broadly cuneate, margin entire, apex acuminate; lateral veins indistinct. Cymes pseudoterminal, 4–10-flowered; peduncle absent; bracts persistent, green, triangular to lanceolate, $5-9 \times 1.5-3$ mm. Pedicel 1–1.5 cm, glabrous. Calyx red or purple, 1–1.3 cm, 5-lobed from above to near middle; tube 5–6 mm in diam. at mouth; lobes ovate to broadly triangular, $3-7 \times 2.2-3.2$ mm, outside glabrous. Corolla scarlet to orange-scarlet, 2.5-3 cm, outside puberulent, inside glabrous, mouth slightly oblique; limb indistinctly 2-lipped, lips nearly equal, ca. 4.5 mm. Stamens exserted; filaments 2.6–3 cm; anthers coherent in pairs at apex, 2.5-3 mm; staminode ca. 1 mm. Pistil ca. 3 cm; ovary glabrous. Style ca. 1.2 cm, puberulent. Capsule (outside of China) ca. 30 cm. Seeds with 2 hairlike appendages at hilar end, to 13 mm, opposite end with 1 hairlike appendage to 7 mm. Fl. Jul.

On trees in forests of montane regions; 1200–2100 m. NW and S Yunnan [Bhutan, N India, N Myanmar].

30. Aeschynanthus maculatus Lindley, Edward's Bot. Reg. 27. 1841.

具斑芒毛苣苔 ju ban mang mao ju tai Aeschynanthus maculatus var. stenophyllus C. B. Clarke.

Stems ca. 40 cm, glabrous. Leaves opposite; petiole 6-10 mm; leaf blade lanceolate to narrowly elliptic, 5- $12.5 \times 1-2.5$ cm, leathery, glabrous, adaxially drying wrinkled, abaxially not punctate, base attenuate, margin entire, apex caudate to caudate-acuminate; lateral veins invisible. Cymes pseudoterminal, 2-6-flowered; peduncle absent; bracts persistent, green, lanceolate, ca. 3×1 mm. Pedicel 5–11 mm, glabrous. Calyx green tinged purple-red, ca. 1.4 cm, 5-lobed from above middle; tube ca. 5 mm in diam. at mouth; lobes triangular, ca. 4×2.2 mm, outside glabrous. Corolla red-orange, 2–2.5 cm; mouth not or slightly oblique; limb indistinctly 2-lipped, lips nearly equal. Stamens exserted; anthers 2–3 mm. Ovary glabrous. Style glandular puberulent. Capsule ca. 12 cm. Seeds with 2 hairlike appendages at hilar end, appendages to 1.5 cm, opposite end with 1 hairlike appendage to 1.5 cm. On trees in forests; 2000-2500 m. S Xizang [Bhutan, Nepal]. Specimens from China are known only from flower buds.

31. Aeschynanthus tengchungensis W. T. Wang, Acta Bot. Yunnan. 6: 25. 1984.

腾冲芒毛苣苔 teng chong mang mao ju tai Stems ca. 1 m, glabrous. Leaves opposite; petiole 5–10 mm; leaf blade nearly linear to narrowly oblanceolate or narrowly elliptic, $(5-)17-23 \times 0.8-2(-3)$ cm, leathery to thick leathery, glabrous, adaxially drying wrinkled, abaxially not punctate, base attenuate, margin entire, apex acuminate to narrowly acuminate; lateral veins invisible. Cymes pseudoterminal, 1–14-flowered; peduncle absent; bracts persistent, green tinged purple, lanceolate, ca. 5 × 2 mm. Pedicel 3–6 mm, puberulent. Calyx green tinged purple, ca. 5 mm, 5-lobed from above middle; tube ca. 4.5 mm in diam. at mouth; lobes triangular, $1-2 \times ca. 1.6$ mm, outside sparsely puberulent. Corolla red, 2.4–3.4 cm, outside puberulent, inside very sparsely puberulent, without tufts of hairs, mouth slightly oblique; limb indistinctly 2-lipped, lips nearly equal, ca. 5 mm. Stamens exserted; filaments 1.5-2 cm; anthers coherent in pairs at apex, 1-1.5 mm; staminode ca. 1.1 mm. Pistil ca. 2.5 cm; ovary glabrous. Style ca. 8 mm, glandular puberulent. Capsule 20–30 cm. Seeds with 2 hairlike appendages at hilar end, appendages ca. 3.5 cm. Fl. May–Jun, fr. Jul–Nov.

• On trees in broad-leaved forests; 1700–2300 m. Yunnan (Gongshan Xian, Tengchong Xian).

Nearly all of the Chinese material that has been determined as *Aeschynanthus maculatus* by previous authors is now included in *A. tengchungensis.*

32. Aeschynanthus longicaulis Wallich ex R. Brown, On Cyrtandreae 116. 1839.

长茎芒毛苣苔 chang jing mang mao ju tai

Aeschynanthus marmoratus T. Moore.

Stems to 40 cm, glabrous. Leaves opposite; petiole absent to 5 mm; leaf blade elliptic to lanceolate or oblanceolate, $6.5-12 \times 2.1-3.3$ cm, papery to leathery, glabrous, adaxially drying wrinkled, abaxially sparsely punctate, base cuneate, margin crenulate and undulate, apex acuminate; lateral veins indistinct. Cymes axillary, 1–3-flowered: peduncle absent: bracts deciduous. Pedicel 0.5–1.7 cm, glabrous. Calyx green, 5-sect from base; segments lanceolate-linear, ca. $1.5 \text{ cm} \times 2 \text{ mm}$, outside glabrous. Corolla vellow-green, ca. 2 cm. outside glabrous, inside with 5 tufts of hairs below middle, mouth not oblique; limb indistinctly 2-lipped, lips nearly equal, ca. 4 mm. Stamens exserted; filaments ca. 1.6 cm; anthers coherent in pairs at apex, ca. 2.5 mm. Pistil ca. 3.4 cm; ovary glabrous. Style ca. 2 cm, sparsely puberulent. Capsule 17-32 cm. Seeds hilar end with ca. 25 hairlike appendages 1-2 cm, opposite end with 1 hairlike appendage 1–1.8 cm. Fl. Nov.

On trees in forests; 500–1800 m. S Yunnan [Malaysia, Myanmar, Thailand, Vietnam].

33. Aeschynanthus poilanei Pellegrin, Bull. Soc. Bot. France 72: 822. 1925.

药用芒毛苣苔 yao yong mang mao ju tai Stems ca. 30 cm, glabrous. Leaves opposite or in whorls of 3; petiole 3–6 mm; leaf blade narrowly oblong, 7–10 × 1.6–3 cm, leathery, glabrous, adaxially drying nearly smooth, abaxially not punctate, base attenuate, margin repand-crenulate, apex acuminate; lateral veins invisible. Cymes axillary, 1-flowered; peduncle absent; bracts deciduous. Pedicel ca. 1 cm, glabrous. Calyx 5-sect from base; segments broadly lanceolate, ca. 5×2 mm, outside glandular puberulent. Corolla red, 1.8–2 cm, outside sparsely puberulent, inside with 5 tufts of hairs above base, mouth not oblique; limb indistinctly 2-lipped, lips nearly equal, ca. 2 mm. Stamens exserted. Pistil ca. 8 mm; ovary glabrous. Style ca. 5 mm, sparsely glandular puberulent. Capsule ca. 27 cm. Seeds with ca. 50 hairlike appendages at hilar end, ca. 1.3 cm, opposite end with 1 hairlike appendage ca. 2 cm. Fr. Mar. On tree trunks in forests; 900–1000 m. SE Yunnan [Vietnam].

Flower description is based on literature.

34. Aeschynanthus sinolongicalyx W. T. Wang, Acta Bot. Yunnan. 6: 26. 1984.

长萼芒毛苣苔 chang e mang mao ju tai

Aeschynanthus longicalyx H. W. Li (1983), not Ridley (1905).

Stems to 5 m, glabrous. Leaves opposite; petiole 3-10 mm; leaf blade oblong lanceolate, $6.5-13 \times 2-3.5(-4)$ cm, papery to thin leathery, glabrous, adaxially drying smooth, abaxially not punctate, base cuneate, margin repand-crenate, apex long acuminate to caudate; lateral veins indistinct. Cymes axillary, 1-3-flowered; peduncle absent; bracts deciduous. Pedicel 1–1.3 Cm, glabrous. Calyx reddish, 5-sect from base; segments lanceolate-linear, $3-3.3 \text{ cm} \times 1.5-$ 2.5 mm, outside glabrous. Corolla red, 2.4-2.8 cm, outside puberulent, inside with 5 tufts of hairs above base, mouth not oblique; limb indistinctly 2-lipped, lips nearly equal, ca. 4 mm. Stamens exserted; filaments ca. 2.2 cm; anthers coherent in pairs at apex, 2.5–2.8 mm; staminode ca. 0.5 mm. Pistil 2-3.3 cm; ovary glabrous. Style ca. 1.5 cm, glabrous. Fruit and seeds unknown. Fl. Sep.

• Shrubs in forests and bamboo thickets of montane regions; ca. 800 m. SE Yunnan (Pingbian Xian).

Flora of China 18: 375–385. 1998.