

9. Tribe EUCHRESTEAE

山豆根族 shan dou gen zu

Sun Hang (孙航); Kai Larsen

Shrubs. Leaves pulvinate, imparipinnate; stipules small, caducous; stipels absent. Inflorescences racemose. Calyx campanulate to tubular. Standard attenuate into a stalk; wings similar to keel. Stamens diadelphous, vexillary stamen free, remainder connate; anthers uniform, dorsifixed. Ovary long stipitate, often 2-ovuled. Legumes drupelike, bluish purple, indehiscent, 1-seeded. Testa membranous, adherent to fruit wall.

One genus and about four species: Bhutan, China, India, Indonesia, Japan, Korea, Laos, Nepal, Philippines, Thailand, Vietnam; four species (one endemic) in China.

46. EUCHRESTA Bennett in Bennett & R. Brown, Pl. Jav. Rar. 148. 1840.

山豆根属 shan dou gen shu

Shrubs. Leaves alternate, imparipinnate; leaflets 3–7, opposite, estipellate. Flowers solitary along inflorescence rachis; bract persistent, small; bractlets absent. Calyx campanulate to tubular, very oblique and gibbous at back, caducous in fruit; teeth 5. Corolla much exerted; standard suberect, narrow, slightly longer than wings and keel; wings oblong, obtuse, slightly falcate, free, claw very long; keel rather like wings, scarcely cohering at apex. Stamens 10, diadelphous (9+1), vexillary free, remainder slightly connate; anthers small, versatile. Ovary stipitate, 1- or 2-ovuled; style filiform, incurved; stigma capitate, small. Legume stipitate, ovoid or ellipsoid, drupelike, indehiscent, 1-seeded. Seeds exalbuminous, without strophiole; testa white, membranous. $x = 9$.

Geographic distribution is the same as that of the tribe.

- 1a. Calyx tubular, longer than 1 cm, upper part broader, lower part narrower 4. *E. tubulosa*
1b. Calyx cup-shaped or campanulate, shorter than 1 cm.
2a. Leaflets often 3(–5); calyx cup-shaped, 2–5 mm; standard not concave at apex 1. *E. japonica*
2b. Leaflets (3–)5–7(–9); calyx obliquely campanulate, ca. 9 mm; standard retuse at apex.
3a. Leaflets to 9, elliptic-lanceolate or narrowly elliptic, tapering at apex 2. *E. formosana*
3b. Leaflets (3–)5, often obovate or broadly elliptic, apex cuspidate, abaxially appressed lanulose 3. *E. horsfieldii*

1. *Euchresta japonica* J. D. Hooker ex Regel, Gartenflora 14: 321. 1865.

山豆根 shan dou gen

Euchresta trifoliata Merrill.

Climbing shrubs, nearly not branched. Stems often with adventitious roots. Leaves 3-foliolate; petiole 4–5.5 cm, appressed pubescent, adaxially with a conspicuous groove; terminal petiolule 0.5–1.3 cm, lateral petiolule nearly absent; leaflets abaxially pale green, adaxially dark green, elliptic, 8–9.5 × 3–5 cm, thickly papery, abaxially appressed pubescent, adaxially glabrous, corrugated when dried, lateral veins very inconspicuous, base broadly cuneate, apex acuminate to obtuse. Racemes 6–10.5 cm; peduncle 3–5.5 cm; pedicel 0.5–0.7 cm, both surfaces appressed pubescent; bract fine, subulate. Calyx cup-shaped, 3–5 × 4–6 mm, outside and inside appressed pubescent; lobes bluntly triangular. Corolla white; standard elliptic-oblong, ca. 1 cm × 2–3 mm, abaxially sparsely appressed pubescent at base, apex rounded, stalk linear, slightly reflexed, ca. 2 mm; wings oblong, ca. 9 × 2–3 mm, apex obtuse, stalk linear, ca. 2.5 mm, less than 1 mm wide; keel elliptic, ca. 1 cm × 3.5 mm, with distal margins connate, base with small auricle, stalk ca. 2 mm. Ovary prolate or linear, ca. 5 mm, stipe ca. 4 mm; style ca. 3 mm. Infructescence ca. 8 cm. Legume dark, ellipsoid, 1.2–1.7 × ca. 1.1 cm, glabrous, apex obtuse, mucronulate; pedicel ca. 1 cm, with carpopodium ca. 4 cm, glabrous.

Valleys, mountain slopes, dense forests; 800–1400 m. Guangdong, Guangxi, Guizhou, Hunan, Jiangxi, Sichuan, Zhejiang [Japan, Korea].

2. *Euchresta formosana* (Hayata) Ohwi, J. Jap. Bot. 12: 659. 1936.

台湾山豆根 tai wan shan dou gen

Euchresta horsfieldii (Leschenault) Bennett var. *formosana* Hayata, Icon. Pl. Formosan. 3: 81. 1913.

Shrubs. Branches flexuose, very fine fulvous pubescent at apex. Leaflets (3–)5–7(–9), narrowly elliptic to elliptic-lanceolate, papery to membranous, base cuneate, apex acuminate; terminal leaflet ca. 9 × 3.5 cm, petiolule ca. 1.2 cm; lateral leaflets 6–8 × 2.5–2.8 cm, petiolule ca. 2 mm. Racemes 10–15 cm; flowers congested; peduncle brown appressed pubescent; pedicel 2–6 mm; bract lanceolate, small, ca. 2 mm. Flowers purple-white. Calyx campanulate, ca. 8 × 6–7 mm at tip, both surfaces very shortly pubescent; teeth short, blunt. Standard spatulate, ca. 1.5 cm × 5.5 mm, tapering to base, both surfaces pubescent at base, without stalk; wings suboblong, ca. 9 × 3 mm, base auriculate, stalk linear, ca. 6 mm, less than 1 mm wide, glabrous; keel oblong, ca. 8 × 4 mm, base auriculate, apex blunt, stalk linear, ca. 5.5 mm, less than 1 mm wide; filament equal to keel, outside pubescent at base. Anther short. Ovary stipitate, compressed, ca. 7 mm, glabrous. Legume glossy, dark at apex, oval, ca. 2.2 cm, carpopodium ca. 1 mm at base. Seed 1. Fl. Aug, fr. next Feb.

Taiwan [Japan (Ryukyu Islands), Philippines].

3. *Euchresta horsfieldii* (Leschenault) Bennett in Bennett & R. Brown, Pl. Jav. Rar. 148. 1840.

伏毛山豆根 fu mao shan dou gen

Andira horsfieldii Leschenault, Ann. Mus. Natl. Hist. Nat. 16: 481. 1810 ["*horsfieldii*"]; *Euchresta strigillosa* C. Y. Wu.

Shrubs, ca. 45 cm tall. Branches and branchlets glabrous, longitudinally striate. Leaves 3–5-foliolate; petiole 8–12 cm; leaflets thickly papery, abaxially densely adpressed lanuginose, adaxially glabrous, midvein slightly convex abaxially, slightly impressed adaxially, lateral veins 5 or 6 pairs, inconspicuous on both surfaces; terminal leaflet broadly elliptic or obovate-elliptic, 11–17.5 × 6–8 cm, base cuneate, apex cuspidate; petiolule ca. 1.3 cm; lateral leaflets nearly sessile, opposite, elliptic, 9–15 × 4.5–8 cm, base cuneate to suborbicular, apex cuspidate. Racemes 13–21 cm, densely adpressed hairy; peduncle ca. 10 cm; bract inconspicuous, ca. 1 mm. Calyx broadly campanulate, 5–6 × 5–6 mm, 5-lobed at tip, obliquely nearly truncate, with very fine appressed hairs. Corolla easily deciduous, nodding, milky, ca. 1.5 cm; standard rectangular, ca. 1.1 cm × 4 mm, apex obtuse and retuse, base small auriculate at both sides, conduplicate, reflexed, with stalk ca. 5 × 1 mm; wings rectangular, ca. 1 cm × 3 mm, apex obtuse, base small auriculate at both sides, upper lateral larger, stalk ca. 4 mm, less than 1 mm wide; keel obovate-oblong, apex rounded, base small auriculate on both sides, upper lateral larger, distal margins connate, ca. 1.1 cm × 4 mm, stalk to 4 mm, less than 1 mm wide. Stamen tube ca. 1.4 cm. Ovary oblong, ca. 6 mm, attenuate at base; stipe ca. 5 mm; ovule 1; style ca. 4 mm; stigma punctiform, small. Legume glossy black, ellipsoid, ca. 2 × 1.3 cm, indehiscent, stalk 6–8 mm, carpopodium ca. 1.2 cm, with 1 joint between both.

Evergreen broad-leaved forests in limestone areas; 1000–1400 m. SE Yunnan (Hekou, Maguan, Malipo), SE Xizang (Mêdog) [Bhutan, India, Indonesia, Laos, Nepal, Philippines, Thailand, Vietnam].

4. *Euchresta tubulosa* Dunn, J. Linn. Soc., Bot. 35: 492. 1903.

管萼山豆根 *guan e shan dou gen*

Shrubs. Leaves 3–7-foliolate; petiole 6–7(–10.5) cm; terminal petiolule 0.6–1(–1.5) cm, lateral petiolules 2(–5) mm; leaflets elliptic, obovate, or obovate-elliptic, terminal leaflet subequal to lateral leaflets, 8–10.5 × 3.5–4.5 cm (or terminal leaflet 13.5–14 × 9–10 cm, lateral leaflets 10.5–13 × ca. 7 cm), papery, abaxially appressed fulvous pubescent, adaxially glabrous, midvein slightly convex abaxially, flat or slightly impressed adaxially, lateral veins 5 or 6 pairs, inconspicuous, base cuneate to rounded, apex cuspidate to blunt. Racemes terminal, 8–16 cm; peduncle ca. 4 cm; pedicel ca. 4 mm, appressed fulvous pubescent. Flowers 2–2.2 cm. Calyx tubular, lower ones narrow, 4–5 mm or 9–10 mm, ca. 2 mm wide, with bursicule at base; upper ones expanded to cup-shaped, ca. 6 mm; lobes bluntly triangular, 1–1.5 mm. Standard reflexed and curved, ca. 1.5 cm, apex blunt or retuse, upper half ca. 5 mm wide, downward attenuate to stalk, base ca. 2 mm wide; wings oblong, ca. 8.5 × 3.5 mm, base truncate, without auricles, apex obtuse, claw

straight on one side and arcuate on other side, stalk ca. 7 × 1 mm; keel oblong, lower part free, upper part connate, apex obtuse, claw ca. 7 × 3 mm, with small projection at base, stalk ca. 6 mm, less than 1 mm wide. Stamen tube ca. 1.2 mm. Ovary linear, ca. 5.5 mm, stipe ca. 1.3 cm; style linear, ca. 4 mm. Legume dark brown, ellipsoid, 1.5–1.8 cm × ca. 8 mm, both ends obtuse, apex with a very short mucro; infructescence ca. 10 cm, carpopodium ca. 1.4 cm. Fl. May–Jun(–Jul), fr. Jul–Sep.

• 300–1700 m. Guangxi, NW Hubei, Hunan, Sichuan, Yunnan.

- 1a. Leaflets elliptic or obovate-elliptic, terminal leaflet subequal to lateral leaflets, 8–10.5 × 3.5–4.5 cm; inflorescence ca. 8 cm 4a. var. *tubulosa*
- 1b. Leaflets obovate or elliptic, terminal leaflet larger than lateral leaflets; inflorescence 14–16 cm.
 - 2a. Leaflets obovate; calyx tube longer below, 9–10 mm 4b. var. *longiracemosa*
 - 2b. Leaflets elliptic; calyx tube shorter below, 4–5 mm 4c. var. *brevituba*

4a. *Euchresta tubulosa* var. *tubulosa*

管萼山豆根(原变种) *guan e shan dou gen* (*yuan bian zhong*)

Leaflets elliptic or obovate-elliptic, terminal leaflet subequal to lateral leaflets, 8–10.5 × 3.5–4.5 cm. Inflorescence ca. 8 cm.

• 300–1700 m. NW Hubei, Hunan, Sichuan.

4b. *Euchresta tubulosa* var. *longiracemosa* (S. Lee & H. Q. Wen) C. Chen, Acta Phytotax. Sin. 30: 50. 1992.

长序山豆根 *chang xu shan dou gen*

Euchresta longiracemosa S. Lee & H. Q. Wen, Guihaia 4: 139. 1984.

Leaves 3–5-foliolate; petiole 7–10.5 cm; leaflets obovate, apex shortly cuspidate; terminal leaflet 13.5–14 × 9–10 cm, petiolule 1–1.5 cm; lateral leaflets 10.5–13 × ca. 7 cm, base cuneate to broadly so, petiolule 3–5 mm. Racemes 14–16 cm. Calyx tube longer below, 9–10 mm. Fl. Apr–Jun.

• Forests on limestone mountain slopes; ca. 1200 m. Guangxi.

4c. *Euchresta tubulosa* var. *brevituba* C. Chen, Acta Phytotax. Sin. 30: 50. 1992.

短萼山豆根 *duan e shan dou gen*

Leaflets elliptic. Inflorescence ca. 14.5 cm. Calyx tube shorter below, 4–5 mm. Fl. Jun.

• 700–800 m. Yunnan (Mengla).