

22. MEEHANIA Britton, Bull. Torrey Bot. Club 21: 33. 1894.

龙头草属 long tou cao shu

Herbs annual or perennial, stoloniferous. Stems erect, nodes hairy, base sometimes woody. Leaves cordate-ovate to lanceolate, papery, margin dentate. Verticillasters few flowered, lax, in terminal or sometimes axillary racemes, sometimes 2-flowered; floral leaves leaflike, lanceolate, gradually reduced upward; bracteoles 2, small, subulate or nearly bristly. Calyx campanulate or tubular-campanulate, hairy, glabrous inside, 15-veined, dilated in fruit, 2-lipped; teeth ovate-triangular to lanceolate, 3 in upper lip, 2 in abaxial. Corolla purplish to purple, tubular, base narrower, gradually dilated to throat, not hairy annulate inside, 2-lipped; upper lip shorter, straight, apex emarginate or 2-lobed; lower lip long, 3-lobed, with middle lobe larger. Stamens 4, didynamous, included or posterior 2 slightly exerted, sometimes slightly complanate; anther cells 2, puberulent. Style slender, exerted, apex equally 2-cleft. Nutlets oblong to oblong-ovoid, glabrous.

About seven species: six in temperate to subtropical Asia, one in North America; five species in China.

- 1a. Leaves ovate to narrowly lanceolate, base slightly cordate or cuneate.
 - 2a. Leaves ovate, base subtruncate to slightly cordate, 2.8–5 cm wide; inflorescence short, floral leaves different from cauline leaves 4. *M. faberi*
 - 2b. Leaves narrowly lanceolate to lanceolate, 1.2–2.5 cm wide; inflorescence long, floral leaves similar to cauline leaves 5. *M. pinfaensis*
- 1b. Leaves cordate to ovate, base cordate, rarely truncate to rounded.
 - 3a. Verticillasters in terminal and lateral racemes; calyx tube narrowly tubular 3. *M. henryi*
 - 3b. Verticillasters in terminal racemes or 2-flowered inserted in leaf axils of upper 2 or 3 leaf pairs on stem; calyx campanulate or ± tubular.
 - 4a. Calyx campanulate, inconspicuously veined, floccose-villous on veins, teeth ovate to ovate-triangular, subequal 1. *M. urticifolia*
 - 4b. Calyx narrow, ± tubular, conspicuously veined, sparsely pubescent on veins, teeth triangular to narrowly triangular 2. *M. fargesii*

1. *Meehania urticifolia* (Miquel) Makino, Bot. Mag. (Tokyo) 13: 159. 1899.

荨麻叶龙头草 qian ma ye long tou cao

Dracocephalum urticifolium Miquel, Ann. Mus. Bot. Lugduno-Batavum 2: 109. 1865; *Cedronella urticifolia* (Miquel) Maximowicz; *D. sinense* S. Moore; *Glechoma urticifolia* (Miquel) Makino.

Herbs perennial. Stems slender, erect, tufted, 20–40 cm, unbranched, villous or retrorse villous when young, glabrous or subglabrous except for nodes. Leaves largest at mid stem; petiole 0.5–4 cm, shorter toward apex, sometimes obsolete; leaf blade cordate to ovate-cordate, 3.2–8.2×2.6–6.8 cm, pilose, base cordate, margin serrate to crenate-serrate, apex acuminate to acute. Verticillasters 2- to few flowered, in terminal racemes; adaxial floral leaves ovate to lanceolate, less than 3.5 cm, villous; bracteoles subulate, ca. 1 mm. Pedicel 3–9 mm. Calyx campanulate, 1.3–1.8 cm, floccose-pilose or sparsely puberulent; teeth ovate to ovate-triangular, ca. 3 mm, ciliate, apex acute or cuspidate, rarely acuminate, adaxial teeth longer. Corolla bluish purple to purple-red, 2.2–4 cm, villous, gradually dilated at apex; upper lip straight, elliptic, 2-lobed, lobes circular to suboblong; lower lip dilated, middle lobe flabellate, apex emarginate; lateral lobes small, subovate to oblong, 2/5–1/2 as long as middle lobe. Nutlets ovoid-oblong, adaxially slightly triquetrous at base, pubescent, base small umbonate. Fl. May–Jun, fr. Jun.

Mossy areas in mixed and coniferous forests. Jilin, Liaoning [Japan, Korea, Russia].

2. *Meehania fargesii* (H. Léveillé) C. Y. Wu, Acta Phytotax. Sin. 8: 12. 1959.

华西龙头草 hua xi long tou cao

Herbs perennial. Stems slender, base prostrate or stoloniferous, ascending-erect, 10–20(–45) cm, pubescent. Leaves larger basally; petiole 0.5–2.5 cm, shorter toward apex; leaf blade cordate to oblong-ovate, 2.5–15×2–4.5 cm, papery, adaxially sparsely strigose, abaxially pilose, base cordate, margin crenate to obtuse serrate, apex apiculate. Verticillasters 2- (to many) flowered, at upper 1–3 nodes or in a terminal raceme; bracts reduced toward stem apex, narrowly ovate to sublanceolate, margin dentate; bracteoles ca. 1 mm. Pedicel 2–6 mm. Calyx tubular, 1.5–1.8 cm, densely puberulent, upper lip longer; teeth ovate-triangular to narrowly triangular, sometimes slightly curved, 2–3 mm, ciliate, apex acuminate. Corolla reddish to purple-red, 2.8–4.5 cm, pubescent; tube straight, tubular, gradually dilated at apex; limb partly villous inside; upper lip straight, lobes circular to oblong; middle lobe of lower lip subcircular, margin undulate; lateral lobes oblong to circular, 1/2 as long as middle lobe. Nutlets unknown. Fl. Apr–Jun, fr. Jul.

• Shady areas in mixed evergreen, and coniferous forests; 700–3500 m. Guangdong, Guangxi, Guizhou, Hubei, Hunan, Jiangxi, Sichuan, Yunnan, Zhejiang.

- 1a. Verticillasters 6- to many flowered, conspicuously pedunculate, in terminal racemes 2c. var. *pedunculata*
- 1b. Verticillasters 2-flowered, inconspicuously pedunculate, inserted in 1–3 upper stem nodes.
 - 2a. Stem much branched, bearing trailing stolons; leaves oblong-ovate, 3–15 cm, crenate 2b. var. *radicans*
 - 2b. Stem unbranched, base prostrate; leaves cordate or ovate to ± triangular, 2.5–6.5 cm, sparsely serrate or obtusely serrate.
 - 3a. Leaves ovate to triangular-ovate, papery, short petiolate to sessile 2d. var. *pinetorum*

- 3b. Leaves cordate, ovate-cordate to triangular-cordate, 2.8–6.5 cm, thin papery; petioles 0.5–2.5

..... 2a. var. *fargesii*

2a. *Meehania fargesii* var. *fargesii*

华西龙头草 hua xi long tou cao

Dracocephalum fargesii H. Léveillé, Repert. Spec. Nov. Regni Veg. 9: 246. 1911.

Stems unbranched, base procumbent. Petiole 0.5–2.5 cm; leaf blade cordate or ovate-cordate to triangular-cordate, 2.8–6.5 cm, papery. Verticillasters 2-flowered, inconspicuously pedunculate, inserted in upper 1–3 stem nodes.

- Shady areas in mixed and coniferous forests; 1900–3500 m. Sichuan, Yunnan.

Used medicinally.

2b. *Meehania fargesii* var. *radicans* (Vaniot) C. Y. Wu, Acta Phytotax. Sin. 8: 13. 1959.

走茎变种 zou jing bian zhong

Dracocephalum radicans Vaniot, Bull. Acad. Int. Géogr. Bot. 14: 180. 1904; *Meehania radicans* (Vaniot) A.L. Budantzev.

Stems tall, much branched, stoloniferous. Leaves oblong-ovate, 3–15 cm, base cordate, margin crenate. Verticillasters 2-flowered, short pedunculate, inserted in upper 1–3 stem nodes.

- Evergreen and mixed deciduous broad-leaved forests; 1200–1800 m. Guangdong, Hubei, Jiangxi, Sichuan, Yunnan, Zhejiang.

Used medicinally for colds and snake bites.

2c. *Meehania fargesii* var. *pedunculata* (Hemsley) C. Y. Wu, Acta Phytotax. Sin. 8: 14. 1959.

梗花变种 geng hua bian zhong

Dracocephalum urticifolium Miquel var. ? *pedunculatum* Hemsley, J. Linn. Soc., Bot. 26: 293. 1890.

Stems robust, much branched, without trailing stolons. Leaves triangular-ovate. Verticillasters 6- to many flowered, conspicuously short or long pedunculate, in terminal racemes.

- Montane evergreen, coniferous, and mixed broad-leaved forests; 1400–3500 m. Guangxi, Hubei, Hunan, Sichuan, Yunnan.

Used medicinally for diarrhea.

2d. *Meehania fargesii* var. *pinetorum* (Handel-Mazzetti) C. Y. Wu, Acta Phytotax. Sin. 8: 15. 1959.

松林变种 song lin bian zhong

Dracocephalum urticifolium Miquel var. *pinetorum* Handel-Mazzetti, Akad. Wiss. Wien Sitzungsber., Math.-Naturwiss. Kl. Abt. 1, 57: 236. 1925; *D. simplex* Vaniot; *Meehania pinetorum* (Handel-Mazzetti) Kudô; *M. urticifolia* (Miquel) Makino var. *pinetorum* Handel-Mazzetti.

Plants xerophilous, 12–45 cm tall, erect. Leaves sessile or subsessile, smaller upward, petiole 1.3–2.5 cm; leaf blade ovate to triangular-ovate, 2.5–5 cm, papery. Verticillasters in long, loose racemes; floral leaves sessile or nearly so.

- Pine forests; 700–2700 m. Guizhou, Sichuan, Yunnan.

3. *Meehania henryi* (Hemsley) Sun ex C. Y. Wu, Acta Phytotax. Sin. 8: 15. 1959.

龙头草 long tou cao

Herbs perennial. Stems erect, 30–60 cm, pilose when young, glabrous or subglabrous except villous on nodes. Leaves subsessile at stem apex; petiole less than 10 cm, sometimes dilated at apex; leaf blade 4–13(–17) × 1.8–4(–10) cm, papery or ± membranous, adaxially puberulent, abaxially subglabrous, apex acuminate. Verticillasters 2- to many flowered, in terminal and lateral racemes 6–7 cm; bracts ovate-lanceolate or lanceolate, 3–6 mm, margin dentate; bracteoles subulate, ca. 1 mm. Pedicel 1–4 mm. Calyx narrowly tubular, opening slightly at mouth, 1–1.3 cm, puberulent, base saccate in fruit; teeth triangular, 3–4 mm, ciliate, apex acuminate, adaxial teeth longer. Corolla reddish purple or purplish, 2.3–2.7 cm, sparsely puberulent; tube straight, tubular, slender, gradually dilated at apex; upper lip slightly curved, lobes oblong; middle lobe of lower lip flabellate, apex emarginate, villous inside; lateral lobes oblong, ca. 1/2 as long as middle lobe. Stamens included. Nutlets globose-oblong, smooth, densely pubescent, adaxially slightly triquetrous, base small umbonate. Fl. Sep, fr. Oct.

- Streamsides, evergreen broad-leaved and mixed forests; 500–700 m. Guizhou, Hubei, Hunan, Sichuan.

1a. Leaf blade narrowly elliptic-oblong, base rounded

..... 3c. var. *stachydifolia*

1b. Leaf blade cordate to narrowly triangular-ovate, base truncate to cordate.

2a. Leaves cordate to ovate, base cordate, undulate-serrate to coarsely serrate 3a. var. *henryi*

2b. Leaves narrowly triangular-ovate, base truncate to shallowly cordate, sparsely serrate

..... 3b. var. *kaitcheensis*

3a. *Meehania henryi* var. *henryi*

龙头草 long tou cao

Dracocephalum henryi Hemsley, J. Linn. Soc., Bot. 26: 291. 1890; *D. cavaleriei* H. Léveillé; *Meehania urticifolia* (Miquel) Makino var. *henryi* (Hemsley) Kudô.

Leaves cordate to ovate, base cordate, margin undulate-serrate to coarsely serrate.

- Evergreen broad-leaved and mixed forests of low elevations. Guizhou, Hubei, Hunan, Sichuan.

Used medicinally as a tonic and for snake bites.

3b. *Meehania henryi* var. *kaitcheensis* (H. Léveillé) C. Y. Wu, Acta Phytotax. Sin. 8: 16. 1959.

长叶变种 chang ye bian zhong

Dracocephalum kaitcheense H. Léveillé, Repert. Spec. Nov. Regni Veg. 8: 422. 1910.

Petiole dilated at apex; leaf blade narrowly triangular-ovate, base truncate to shallowly cordate, margin sparsely serrate. Racemes terminal or axillary, composed of verticillasters.

- Valley streamsides, moist forests; 500 m. Guizhou.

3c. *Meehania henryi* var. *stachydifolia* (H. Léveillé) C. Y. Wu, Acta Phytotax. Sin. 8: 16. 1959.

圆基叶变种 yuan ji ye bian zhong

Dracocephalum stachydifolium H. Léveillé, Repert. Spec. Nov. Regni Veg. 8: 422. 1910.

Petiole slightly dilated at apex, villous; leaf blade narrowly elliptic-oblong, base rounded, margin sparsely serrate. Terminal raceme shorter or ternate on stem apex.

- Streamsides in montane forests; 700 m. Guizhou.

4. *Meehania faberi* (Hemsley) C. Y. Wu, Acta Phytotax. Sin. 8: 17. 1959.

肉叶龙头草 rou ye long tou cao

Dracocephalum faberi Hemsley, J. Linn. Soc., Bot. 26: 291. 1890; *Meehania urticifolia* (Miquel) Makino var. *faberi* (Hemsley) Kudô.

Herbs perennial. Stems erect, slender, 18–25 cm, unbranched, retrorse pubescent or puberulent when young, glabrescent except on nodes. Leaves in 2 or 3 pairs, crowded upward; petiole 0.5–2.5 cm, shorter to obsolete upward; leaf blade ovate to ovate-elliptic, 5–11×1.5–5 cm, ± succulent, adaxially subglabrous or puberulent, abaxially subglabrous, veins pilose or sparsely pubescent, margin sparsely undulate-crenate to dentate, rarely subentire, apex acute to acuminate or sometimes rounded. Verticillasters 2-flowered, in terminal or rarely axillary racemes; bracts ovate-lanceolate to lanceolate, 2–3 mm. Pedicel ca. 2 mm. Calyx tubular, gradually open at mouth, 1.1–1.3 cm, puberulent; teeth triangular-ovate, ca. 1/3 as long as calyx, apex acuminate. Corolla purple or reddish, 3.5–4 cm, puberulent; tube straight or slightly curved, gradually dilated at apex; upper lip straight, lobes oblong; middle lobe of lower lip nearly square, apex truncate or emarginate; lateral lobes oblong, ca. 1/2 as long as middle lobe. Nutlets unknown. Fl. Jul-Sep, fr. Oct.

- Mixed forests; 1500 m. Gansu, Sichuan.

5. *Meehania pinfaensis* (H. Léveillé) Sun ex C. Y. Wu, Acta Phytotax. Sin. 8: 17. 1959.

狭叶龙头草 xia ye long tou cao

Dracocephalum pinfaense H. Léveillé, Repert. Spec. Nov. Regni Veg. 8: 422. 1910; *D. esquirolii* H. Léveillé; *D. urticifolia* (Miquel) Makino var. *angustifolia* (Dunn) Handel-Mazzetti.

Herbs annual. Stems ca. 50 cm, slender, erect, unbranched, pubescent or retrorse pubescent when young, glabrescent, villous on nodes. Petiole 0.4–2.5 cm, shorter toward stem apex; leaf blade narrowly lanceolate to lanceolate, sometimes slightly curved, 6–12×1.2–2.5 cm, papery, puberulent, base rounded to subtruncate, margin sparsely serrulate or undulate-serrulate, apex acuminate. Verticillasters 2-flowered, in upper axils; bracts lanceolate, less than 2.5 cm, margin dentate or subentire. Pedicel 1–4 mm. Calyx tubular, slightly open at mouth, ca. 1.2 cm, puberulent, saccate in fruit; teeth triangular-ovate to subtriangular, ca. 5 mm, apex acuminate, adaxial teeth longer. Corolla red or purple, 2.5–4 cm, pubescent; tube straight or slightly curved, gradually dilated beyond middle; upper lip straight, oblate, apex emarginate; middle lobe of lower lip

flabellate, apex emarginate, pilose; lateral lobes oblong, ca. 1/2 as long as middle lobe. Nutlets ovoid-oblong, adaxially slightly triquetrous, densely pubescent, base small umbonate. Fl. May-Jul, fr. Jul-Aug.

- Forested hillsides. Guizhou.

