

29. **HACKELIA** Opiz ex Berchtold, Oekon.-Techn. Fl. Bohmens. 2(2): 147. 1839.

假鹤虱属 *jia he shi shu*

Herbs perennial or annual, appressed strigose or villous, 20–100 cm tall. Leaves alternate, green, large, thin. Inflorescences rarely solitary, terminal, not branched or paniculate. Fruiting pedicel deflexed. Calyx 5-parted to base or nearly so; lobes enlarged in fruit, vertical to reflexed. Corolla blue, light blue, or light purple, rarely yellow or white, campanulate-rotate to campanulate-tubular; throat with appendages, rarely appendages obscure or absent; lobes 5, imbricate in bud, vertical or divaricate at anthesis. Stamens inserted on corolla, included; anthers orbicular, ovate to oblong. Style and stigma solitary, usually not exceeding nutlets. Gynobase short pyramidal, to 2–3 mm. Nutlets 4, all or some developed, turbinate to ovoid, triangular-ovoid and dorsally compressed, marginal rib with compressed triangular to lanceolate glochids.

About 45 species: mainly in temperate regions of the Northern Hemisphere, and Central and South America; three species in China.

Lian & Wang (Acta Phytotax. Sin. 18: 514–520. 1980; Fl. Reipubl. Popularis Sin. 64(2): 116–151. 1989) argued that the differences between *Eritrichium* and *Hackelia* are insufficient to keep them as separate genera. However, the gynobase in *Eritrichium* is cushion-shaped, to 1 mm high, while in *Hackelia* it is distinctly conical and 2–3 mm high. It is likely that other species from China listed under *Eritrichium* will need to be transferred to *Hackelia* in the future.

- 1a. Calyx lobes oval; corolla appendages long elliptic; style hidden, lower than nutlet 1. *H. uncinatum*
- 1b. Calyx lobes oval-lanceolate to lanceolate; corolla appendages trapeziform; style not hidden, longer than nutlet.
 - 2a. Calyx ca. as long as corolla tube; corolla 7–9 mm in diam.; appendages 1.6–2 × as long as wide; nutlets homomorphic 2. *H. brachytuba*
 - 2b. Calyx longer than corolla tube; corolla 9–12 mm in diam.; appendages 1–1.5 × as long as wide; nutlets heteromorphic 3. *H. diffformis*

1. *Hackelia uncinatum* (Benth) C. E. C. Fischer, Bull. Misc. Inform. Kew 1932: 298. 1932.

Arbor. 18: 25. 1937.

卵萼假鹤虱 *luan e jia he shi*

大叶假鹤虱 *da ye jia he shi*

Cynoglossum uncinatum Benth in Royle, Ill. Bot. Himal. Mts. 1: 34. 1836; *C. laxum* G. Don; *C. roylei* Wallich ex G. Don; *Echinosperrum glochidiatum* A. de Candolle; *Eritrichium uncinatum* (Benth) Y. S. Lian & J. Q. Wang; *Hackelia glochidiata* (A. de Candolle) Brand; *H. roylei* (Wallich ex G. Don) I. M. Johnston; *Lappula glochidiata* (A. de Candolle) Brand; *Paracaryum glochidiatum* (A. de Candolle) Benth & J. D. Hooker.

Paracaryum brachytubum Diels, Notes Roy. Bot. Gard. Edinburgh 5: 168. 1912; *Eritrichium brachytubum* (Diels) Lian & J. Q. Wang; *Hackelia dielsii* (Brand) I. M. Johnston; *Lappula dielsii* Brand.

Herbs perennial, 60–80(–100) cm high. Stems several, clustered, hollow, branched above, sparsely short pubescent. Petiole of basal leaves 25–30 cm; leaf blade ovate to wide ovate, 8–9 × 4–5 cm, short pubescent. Upper petioles of stem leaves shorter than below; leaf blade ovate to elliptic, 5–10 × 1.7–5 cm, pubescent, base cuneate or shallowly cordate or rounded; lateral veins 5–7. Inflorescences at apex of branches, 2-parted, 5–10(–15) cm; bracts absent or basal, 1 or 2 flowers bracteate. Pedicel thin, weak, 2–3(–4) mm, to 6–7 mm in fruit, minutely pubescent. Calyx lobes ovate, ca. 2 mm, pubescent. Corolla blue or bluish purple, campanulate; tube ca. 2 mm, 5–7(–9) mm in diam.; limb ovate to elliptic, 3–3.5 mm; appendages long elliptic, minutely pubescent or not. Stamens at center of tube; anthers oval. Style shorter than nutlets. Nutlets tuberculate; marginal glochids 4–5 mm, glabrous, with 1–1.5(–2) mm barbs, bases confluent into a broad wing. Fl. and fr. Jun-Aug.

Herbs perennial, 40–70 cm. Stems many, branched, sparsely short pubescent. Petiole of basal leaves to 25 cm; leaf blade cordate, 5–10(–13) × 4–9 cm, sparsely short pubescent, base cordate, apex acuminate; lateral veins 5–9. Petiole of stem leaves shorter; leaf blade ovate to narrowly ovate, 4–10 × 2–5 cm. Inflorescences at apex of stems or branches, 2-parted, 5–9 cm; bracts emarginate. Pedicel thin, long, 3–7 mm, short pubescent. Calyx triangular-lanceolate to linear-lanceolate, 3–3.5(–4) mm. Fruiting calyx enlarged, 6–7 mm, short pubescent outside. Corolla blue to light purple, campanulate; tube 3–3.5(–4) mm, 7–9 mm in diam.; limb ± rounded; appendages trapeziform, 1.8–2.1 × 0.6–1 mm, with curly soft hairs. Anthers rounded or oblong, 1–3 mm. Style higher than nutlet. Nutlets 4–4.5 × ca. 2 mm; adaxially slightly tuberculate, with few glochids or sparse minute hairs; marginal glochids 2–3 mm; abaxially tuberculate. Fl. and fr. Jul-Aug.

Slopes, forest understory; 2900–3800 m. S Gansu, Sichuan, S Xizang, NW Yunnan [Nepal].

Wet slopes, forest understory, between grasslands; 2700–4500 m. S Xizang, NW Yunnan [Bhutan, India, Pakistan].

3. *Hackelia diffformis* (Y. S. Lian & J. Q. Wang) Riedl, Novon 4: 47. 1994.

异型假鹤虱 *yi xing jia he shi*

2. *Hackelia brachytuba* (Diels) I. M. Johnston, J. Arnold

Eritrichium diffforme Y. S. Lian & J. Q. Wang in W. T. Wang, Y. S. Lian, & J. Q. Wang, Acta Phytotax. Sin. 18:

515. 1980.

Herbs perennial, 30–120 cm tall. Stems hollow, sparsely short pubescent. Leaves attenuate to long petiole, (5–)8–9 × (2.5–)5–6 cm, sparsely short pubescent, base cordate, apex acuminate; stem leaves short or indistinctly petiolate, elliptic to ovate, 4–14 × 2–7 cm, base subrounded. Inflorescences bracteate at middle or slightly below. Pedicel thin, 5–10 mm, pubescent. Calyx erect at anthesis, deflexed at fruiting; lobes linear, pubescent outside. Corolla bluish purple, campanulate-tubular, ca. 3 × 9–12 mm; appendages ca. 1.5 mm, densely pubescent on margin; lobes ovate. Anthers oblong, ca. 1 mm. Nutlets unequal, 3 or 4 developed, ca. 4 × 3 mm, adaxially without hairs; abaxially tuberculate, with or without stiff bristles, sometimes marginal rib with few prickles. Fl. and fr. Jun-Jul.

• Roadsides, slopes, forests, river banks, wet rock crevices; 2300–3800 m. Sichuan, Xizang, Yunnan.

Flora of China 16: 390–391. 1995.