

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. difformis*

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 difformis* (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 difforme 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.