
绿绒蒿属  lü róng hāo shǔ

Zhang Mingli (张明理); Christopher Grey-Wilson

Herbs, monocarpic or perennial, yellow lacticiferous. Taproot distinct in monocarpic species, plump, extended or napiform thickened, accompanied by fibrous roots, or fibrous. Stems, when present, branched or not, bristly, setose, pubescent, or glabrous. Leaves cauline and basal or all basal and forming a rosette; rosette leaves persistent in winter or dying away to a resting bud or buds; blade entire, serrate, or pinnatifid to pinnate, glabrous to bristly; basal leaves and lower cauline leaves usually petiolate; upper cauline leaves shortly petiolate or sessile, sometimes amplexicaul. Inflorescence a raceme, panicle, or pseudoumbel, with uppermost flower opening first, or flowers solitary, then often on basal scapes. Flowers large, often bowl- or saucer-shaped. Sepals 2, very rarely 3 or 4 in terminal flowers, caducous. Petals 4–10, occasionally more, blue, purple, pink, red, or yellow, rarely white. Stamens numerous; filaments mostly linear, rarely dilated in lower part. Ovary nearly spherical, ovoid, or obovoid to narrowly terete, 1-loculed, with 3 or more carpels, containing numerous ovules; styles distinct, usually short, sometimes almost absent, regularly stout or basally expanding into a disk covering top of ovary; stigmas free or united, capitate or clavate. Capsule nearly spherical, ovoid, obovoid, or elliptic to cylindrical, spinous, setose, pubescent, or glabrous, 3–12(–18)-valvate; segments slightly lobed or divided to 1/3 length or more from apex to base. Seeds many, ovoid, reniform, falcate-oblong, or oblong, smooth or longitudinally concave, without a caruncle.

About 54 species: one in W Europe, the others in the Sino-Himalayan region; 43 species (23 endemic) in China.

The four species of *Meconopsis* sect. Discogyne G. Taylor (species nos. 40–43) are confined to S Xizang and the C and E Himalayan region. They are readily distinguished by the presence of a flat disk (a basal extension of the style), surmounting and overlapping the top of the ovary. All of the species form a dense rosette in the years before flowering, often with the dead leaf remains forming a thick felt beneath the living leaves. The inflorescence is a simple, often dense raceme, bracteate below, ebracteate above.

1a. Styles abruptly expanded (ampliate) at base and disklike, covering top of ovary and often projecting beyond its edge (*M. sect. Discogyne*).

2a. Styles almost obsolete; petals sparsely setose outside ................................................................. 43. *M. torquata*

2b. Styles distinct, 3–7 mm; petals glabrous.

3a. Stylar disk pentagonal in outline, shallowly lobed, not projecting beyond ovary edge; petals maroon; stigmas capitulate; stem leafy up to inflorescence .......................................................... 42. *M. tibetica*

3b. Stylar disk sinuate, 8-angled, lobed or fringed at margin, projecting beyond ovary edge; petals pale yellow or bluish purple to deep purple, rarely red; stigmas clavate.

4a. Leaf blade pinnatifid or pinnatilobate for full length; stems leafy (excluding leaflike bracts) ........... 40. *M. pinnatiloba*

4b. Leaf blade 3–5-toothed at apex, rarely subentire or entire ............................................................ 41. *M. discigera*

1b. Styles equally thick or basally expanded, but never extended and disklike (*M. sect. Meconopsis*).

5a. Leaves basal and cauline; inflorescence compound, cyme or racemose panicles or bracteate racemes.

6a. Inflorescence branched, with many flowers in cyme or racemose panicles; petals 4, mostly yellow; leaf blade pinnate or pinnately lobed.

7a. Roots large, fibrous; inflorescences cymose panicles; herbaceous perennial.

8a. Ovary narrowly oblong or subterete, glabrous; capsules subterete .................................................. 1. *M. oliveriana*

8b. Ovary elliptic, glabrous or very sparsely pilose; capsules elliptic .................................................. 2. *M. chelidoniifolia*

7b. Taproot present, plump, extended or napiform; inflorescence paniculate, racemose toward top; plant monocarpic.

9a. Petals wine-red, wine-crimson, or purple ........................................................................................................ 5. *M. wilsonii*

9b. Petals yellow.

10a. Flowering stems early sparsely setose and later glabrous; capsules densely setose, slightly 4–7-valvate from apex; petals ca. 3 cm ........................................................................................................ 3. *M. gracilipes*

10b. Flowering stems villous and densely barbellate-tomentose; capsules densely barbellate-tomentose and villous, slightly 6–12-valvate from apex; petals ca. 5 cm .................................................................................. 4. *M. paniculata*

6b. Inflorescence simple; flowers forming bracteate racemes; petals 4–8, yellow, blue, or purple, rarely white; leaf blade entire or lobed.

11a. Roots fibrous, not swollen or tuberlike; stem base with persistent leaf bases, setose.

12a. Cauline leaves alternate, blade trifoliolate ......................................................................................... 6. *M. smithiana*

12b. Uppermost cauline leaves in a whorl, pseudoverticillate, all leaves entire.

13a. Flowers yellow.

14a. Leaves 3-veined for at least 2/3 of their length; flowers ascending to erect at anthesis; stigmas sessile or almost so ........................................................................................................ 7. *M. integrifolia*

14b. Leaves pinnately veined, sometimes 3-veined at base; flowers nodding to half-nodding

5b. Leaves all basal, cauline leaves absent; flowers several, forming ebracteate racemes or simple on basal scapes.

11b. Taproot radishlike; stem bases or without persistent leaf bases, glabrous.

16a. Plant with stiff spiny hairs (bristles).

17a. Leaf blade pinnatifid.

18a. Styles broad; ovary densely rubiginous setose ................................................................................. 21. M. speciosa

18b. Styles narrow; ovary with golden fulvous to stramineous prickles ......................................................... 22. M. aculeata

17b. Leaf blade entire to somewhat shallowly and irregularly lobed or toothed.

19a. Leaves broad, irregularly toothed or lobed, glaucous, with dark base to sparse bristles; stigmas protruding, elongate .................................................................................................................. 19. M. rudis

19b. Leaves narrow, not toothed nor glaucous, usually rather densely bristly, without dark base to rather dense bristles.

20a. Capsule with spreading bristles; tall plant usually to 1 m tall in flower; stigmas included within boss of stamens, pale green or yellowish ................................................................................. 20. M. pratii

20b. Capsule with appressed to ascending bristles; plant to 50 cm tall in flower; stigmas slightly protruding beyond boss of stamens, whitish .................................................................................. 18. M. racemosa

16b. Plant glabrous or pubescent.

21a. Plant with large evergreen leaf rosettes in years before flowering.

21b. Plant with overwintering buds; leaves withering in autumn.

22a. Flowers white; leaves entire .................................................................................................................. 11. M. superba

22b. Flowers bluish violet; leaves pinnate to pinnatifid .................................................................................. 17. M. violacea

21b. Plant with overwintering buds; leaves withering in autumn.

23a. Petals blue or purple.

24a. Flowers 1–5 from upper cauline axils, often only 1 open; capsules narrowly oblong or suberetate ......................................................................................................................... 14. M. lyrata

24b. Flowers usually 3 from axillary pedicels, all open; capsules narrowly obvoid to narrowly ellipsoid .............................................................................................................. 15. M. primulina

23b. Petals white or yellow.

25a. At least some leaves pinnate; petals white ............................................................................................... 16. M. argemonantha

25b. All leaves entire, sometimes toothed at margin; petals yellow.

26a. Taproot narrow and elongate; capsules with spreading spines ................................................................... 12. M. georgei

26b. Taproot napiform; capsules glabrous or sparsely setose ........................................................................ 13. M. florindae

5b. Leaves all basal, cauline leaves absent; flowers several, forming ebracteate racemes or simple on basal scapes.

27a. Flowers several, forming ebracteate racemes; petals 4–8, blue or purple.

28a. Flowers on upper flowering stems, without mixed basal scapes; capsules narrowly cylindrical; styles absent or nearly so ........................................................................................................ ... 23. M. forrestii

28b. Flowers on upper and lower flowering stems, often with mixed basal scapes; capsules elliptic or narrowly obovoid; styles distinct ......................................................................................... 24. M. lancifolia

27b. Flowers solitary on basal scapes; petals 4–10, blue, purple, or red.

29a. Fibrous roots fibrous; plant base with persistent leaf bases, setose.

30a. Petals red; filaments straplike .............................................................................................................. 25. M. punicea

30b. Petals blue or purple; filaments linear.

31a. Capsule 2.5–5 cm, sparsely usually deflexed setose; flowers 5–8 cm in diam., with 5–8 petals; ovary narrowly elliptic or oblong-elliptic ........................................................................................................ 26. M. simplicifolia

31b. Capsule 1.5–2.5 cm, densely appressed setose or glabrous; flowers 2.5–5 cm in diam., with 4–6 petals; ovary spheroidal, ovoid, or oblong ............................................................................................. 27. M. quintuplinervia

29b. Taproot distinct.

32a. Filaments clearly dilated in proximal half.

33a. Flowers broadly saucer-shaped, with spreading petals; petals unblotched at base .................................. 28. M. henrici

33b. Flowers deeply cup-shaped, with erect petals; petals dark blotched at base ..................................... 29. M. sinomaculata

32b. Filaments linear, not dilated.

34a. Leaf blade with firm spines or bristles, often densely so.

35a. Plant dwarfish, ca. 9 cm tall; taproot broad, ca. 5 cm in diam.; leaf blade ovate or narrowly so, margin pinnately lobed ...................................................................................................................... 37. M. pseudohorridula

35b. Plant 15–20 cm tall; taproot plump and extended, 1–1.5 cm in diam.; leaf blade lanceolate, margin entire or undulate.
36a. Plant with dense, sharp bristles; ovary conical, with compressed or inclined, firm spines .......... 38. *M. horridula*
36b. Plant with stiff hairs; ovary elliptic to narrowly obovoid, adpressed setose .................................. 39. *M. impedita*
34b. Leaf blade glabrous on both surfaces, rarely somewhat setose or pubescent.
37a. Plant perennial, with rootstock branched at apex, each branch terminating in a single leaf rosette and bearing 1 basal scape .......................................................... 33. *M. delavayi*
37b. Plant monocarpic, with simple rootstock terminating in a single leaf rosette bearing 1, several, or occasionally many scapes.
38a. Leaf blades entire; plant with persistent, fibrous leaf bases.
39a. Petals normally 6, with a dark base, 4 cm or more; filaments ca. 15 mm; style ca. 4 mm .......... 30. *M. barbista*
39b. Petals normally 4, without a dark base, 2–3 cm; filaments 6–8 mm; style 1.5–2 mm ............ 34. *M. zangnanensis*
38b. Leaf blades usually pinnately lobed, rarely entire on same plant, glabrous or almost so; plant with or without persistent fibrous leaf bases.
40a. Basal scapes few, not more than 5; taproot napiform or shortly elongated; plant without persistent fibrous leaf bases.
41a. Leaf blade pinnate or bipinnate, small, subfleshy; petals 1–1.5 cm ........................................ 31. *M. concinna*
41b. Leaf blade lobed, large, thin; petals ca. 3 cm ........................................................... 32. *M. wumengensis*
40b. Basal scapes usually 8 or more; taproot stout and elongated; plant with persistent fibrous leaf bases.
42a. Capsule ovoid to narrowly ellipsoid, 4–10 × longer than wide; petals usually more than 4 .......................................................... 35. *M. pseudovenusta*
42b. Capsule narrowly oblong or subterete, scarcely 4 × longer than wide; petals 4 ................... 36. *M. venusta*


**柱果绿绒蒿** zhu guo lü rong hao

Herbs, perennial, 50–100 cm tall in flower, colorless hyaline lactiferous. Roots many, slender; rootstock with persistent leaf bases, densely yellow-brown barbellate-setose. Stems erect, branched, obviously channeled, near base sparsely setose. Cauline leaves glaucous abaxially, dark green adaxially, ovate or narrowly ovate, 5–10 × 3–5 cm, both surfaces sparsely yellow-brown hisurate, near base pinnatisept, near apex pinnatilobate; lobes 3–5, distant, petiolulate to almost sessile, pinnatifid; lobules ovate to obovate, base broadly cuneate, truncate, or slightly cordate, apex obtuse; lower cauline leaves like basal leaves, petiolate, but upper ones smaller, sessile or nearly so, slightly amplexicaul. Flowers 1 or 2, at uppermost leaf axils, forming cymose panicles, ascending to half-nodding. Pedicel 5–10 cm, slender. Flower buds spherical or ovoid. Sepals 2, elliptic, 7–10 mm, glabrous. Petals 4, yellow, broadly ovate to orbicular, 1–1.5(–2) × 0.8–1.5(–2) cm. Filaments filiform, 4–7 mm; anthers yellow, narrowly ovate, ca. 1 mm. Ovary narrowly oblong or almost terete, ca. 8 × 1 mm, glabrous; styles very short; stigmas 4– or 5-lobed, lobes slightly decurrent. Capsule narrowly oblong or almost cylindrical, 2.4–4.5 cm × 3.5–5 mm, glabrous, gibbose costate, 4- or 5-valvate, slightly divided downward from apex. Seeds many, brown, shiny, elliptico-ovoid, ca. 1 mm, seed coat distinctly longitudinally striate and clathrate impressed. Fl. May–Aug.

- Forest understories on slopes, among shrubs; 1500–2400 m. Chongqing, Henan, W Hubei (Badong, Shennongjia), S Shaanxi, E Sichuan.


**细梗绿绒蒿** xi geng lü rong hao

Herbs, perennial, 50–150 cm tall in flower. Roots long, slender, 3–5 mm in diam., much branched, fibrous; rootstock with persistent leaf bases, densely barbellate-setose. Stems erect, greenish purple, branched, longitudinally channeled, near base slightly barbellate-setose. Basal and lower cauline leaves: petiole densely yellow-brown setose; blade axially glaucous, ovate-oblong or broadly ovate, 7–8 × 6.5–7 cm, pinnatisect in lower part, apically pinnatilobate; lobes 3–5, distant, pinnatipartite or pinnatilobate again; lobules ovate, both surfaces sparsely hirsute, apex obtuse or subrounded; upper cauline leaves sessile or nearly so, small; blade broadly ovate, slightly pilose, 3-pinnatisect or 3-pinnatipartite. Flowers 1 or 2 in uppermost leaf axils, forming cymose panicles, ascending to half-nodding. Pedicel slender, glabrous. Flower buds spherical. Sepals 2, suborbicular, ca. 1 cm, glabrous, with one margin membranous. Petals 4, yellow, obovate to suborbicular, 1.5–2.3 cm. Filaments filiform, ca. 7 mm; anthers yellow, narrowly oblong, 3–4 mm. Ovary elliptic, 5–6 × 4.5–5 mm, glabrous or near base slightly hispid; styles short; stigmas capitate. Capsule elliptic, 1–1.5 cm × 7–10 mm, glabrous, 4(–6)-valvate for a short distance from apex. Seeds falcate-oblong, less than 1 mm; seed coat with shallow impressions forming longitudinal stripes. Fl. May–Aug.

- Shade of forest understories, creek sides, roadsides; 1400–2700 m. N and W Sichuan, NE Yunnan (Daguan, Yongshan).


**细梗绿绒蒿** xi geng lü rong hao

Plants monocarpic, 40–60 cm tall. Stems branched, yellow-brown barbellate-setose, later glabrous or only with remaining scabrous firm bases. Basal leaves absent at flowering time, pinnate with 3 or 4 pairs of lateral lobes; lobules alternate to subopposite, ovate to oblong, 1.5–5 × 1.4–2.5 cm, end lobe larger than lateral ones, both surfaces and margin sparsely yellow-brown shortly barbellate-setose, later glabrous or only with remaining scabrous firm bases, base auriculate, margin pin-
nately lobate, apex obtuse to rounded. Upper cauline leaves lanceolate, 5–12 × 2–3 cm, merging with bracts, often auriculate at base. Inflorescence many flowered, paniculate below, racemose above, lower branches usually 3-flowered, upper ones 1-flowered; peduncles 4–8.5 cm, pubescent like stems. Pedicel 4–5.8 cm, slender, pubescent like stems, but apically more densely so. Petals 4, pale yellow, obovate or suborbicular, 1.8–3.1 × 1.6–2.8 cm. Filaments filiform; anthers orange to black-brown. Ovary spherical to elliptic, 1.5–1.8 cm × 8–10 mm, densely appressed or inclined setose; styles distinct, 7–8 mm; stigmas capitate. Capsule elliptic or oblong-elliptic, sparsely setose, or only with remaining scabrous firm bases, 4–7-valvate for a short distance from apex. Seeds black, reniform, ca. 0.5 mm.

3300–4800 m. S Xizang (Nyalam) [C Nepal].


锥花绿绒蒿 zhui hua lü rong hao

Papaver paniculatum D. Don, Prodr. Fl. Nepal, 197. 1825; Meconopsis napaulensis Candolle; M. paniculata var. elata Prain; Stylorhaphus nepalense (Candolle) Sprengel.

Herbs, monocarpic, to 2.5 m tall in flower. Taproot radish-like, or long and narrow, to 18 × 2 cm. Stems terete, branched, yellow or rufous barbellate-pubescent, with a sparse underlay of similar but much shorter hairs. Basal leaves in a dense evergreen rosette; petiole to 28 cm; blade variously shaped, lanceolate, oblong, or oblong-elliptic to ob lanceolate, 25–49 × 6.5–12 cm, usually near base pinnatisect, near apex pinnatifid; lobes 6–10 pairs, lanceolate, oblong, or deltoid, margin entire or lobed, apex acute or rounded; lower lobes distant, both surfaces densely yellow barbellate-setose, with an underlay of similar but much shorter hairs. Lower cauline leaves similar to basal ones but shorter petiolate; upper cauline leaves sessile, lanceolate, pilose like basal leaves, base amplexicaul or auriculate, apex obtuse or rounded. Inflorescence paniculate below, racemose above, with lowermost peduncles 3–9-flowered; flowers cup-to-saucer-shaped, horizontal to nodding; peduncles 11–19 cm, pubescent like stems. Pedicel 4.7–13.5 cm (to 20 cm in fruit), slender, pubescent like stems, densely so apically. Petals 4, rarely 5, cream to yellow, obovate to suborbicular, 3.2–5.7 × 3–4.8 cm. Filaments similar in color to petals, filiform; anthers yellow to orange. Ovary spherical or nearly so, golden barbellate-tomentose; styles distinct, 6–9 mm (to 13 mm in fruit), near base obviously thickened; stigmas purple or reddish purple, 6–12-lobed. Capsule ellipsoid to ellipsoid-oblong, 1.5–4 × 1.1–1.5 cm, densely golden barbellate-tomentose, sometimes becoming subglabrescent, 6–12-valvate a short distance from top. Seeds reniform, shorter than 1 mm, adaxially alveolate when dried. Fl. Jun–Aug.

Grassy slopes, forest understories and margins, channel sides, roadsides, shrublands; 3000–4000 m. S Xizang [Bhutan, NE India, Nepal].


尼泊尔绿绒蒿 ni bo er lü rong hao

Herbs, monocarpic, 70–150 cm tall, throughout with stiff, barbellate, grayish hairs, with an underlay of similar shorter or substellate hairs. Taproot dauciform. Stem erect, present in flowering specimens, terete, to 15 mm in diam. at base, slightly ridged above. Leaf rosette dense, spreading, evergreen, bluish green, to 70 cm in diam.; basal leaves long petiolar, withered or partly withered at flowering time; blade lanceolate to lanceolate-elliptic, to 26 × 10 cm, pinnatisect to subentire, with obtuse lobes, both surfaces with rather sparse gray, stiff, barbellate hairs, midvein distinct, lateral veins less obvious. Lower cauline leaves similar to basal ones but shorter petiolar; middle and upper cauline leaves gradually smaller upward on stem; uppermost sessile and semi-amplexicaul, pinnatifid, with fewer lobes than lower ones. Inflorescence a fastigiate or semi-fastigiate panicle, racemose above, many flowered; lowestmost flowers in lateral cymes of 1–5, uppermost solitary; bracts similar to uppermost leaves, decreasing in size upward on inflorescence; peduncles erect to obliquely ascending, 0.6–3.8 cm (to 10.4 cm in fruiting specimens), stout, pubescent like stem. Pedicel 0.4–1.8 cm (to 5 cm in fruit). Flowers semi-nutant; buds nutant, narrowly ovoid, with ascending to appressed barbellate hairs. Sepals pale gray-green, oval. Petals 4, purple to wine-purple, deep wine-crimson, or “light maroon,” occasionally white flushed with wine-purple, obovate to ± orbicular, 2.2–4.2 × 2.2–4.2 cm, generally rather crimped. Stamens numerous; filaments same color as petals; anthers orange to orange-yellow. Ovary ovoid, with ascending to appressed barbellate bristles; styles 4–7 mm; stigmas purple, capitate. Capsule ovoid to ellipsoid, 14–20 × 8–14 mm, generally 5-valved, covered in ascending barbellate bristles; style persistent, 6–8 mm. Fl. Jun–Sep.

Forest and scrub margins, shrublands, open scrub, rocky and stony places, grassy places, cliffs; 2700–4000 m. W Sichuan, NW and W Yunnan [N Myanmar].

1a. Basal and lower leaves with 6–8 pairs of primary segments, middle and upper cauline leaves and bracts deeply divided with 6–8 pairs of segments; peduncle and pedicel hairs ascending to subappressed

1b. Basal and lower leaves with 4 or 5 pairs of primary segments, middle and upper cauline leaves and bracts shallowly divided, with 3–5 pairs of segments; peduncle and pedicel hairs spreading

5a. Meconopsis wilsonii subsp. wilsonii

尼泊尔绿绒蒿(原亚种) ni bo er lü rong hao (yuan ya zhong)

Basal and lower leaves with 6–8 pairs of primary segments, middle and upper cauline leaves and bracts deeply divided with 6–8 pairs of segments. Peduncle and pedicel hairs ascending to subappressed.

Grassy places, open scrub; 3300–4000 m. W Sichuan (Baoxing, Mianning).

Herbs, perennial, 30–90 cm tall in flower. Rootstock short, plump, with persistent leaf bases, densely cespitose, brown, usually shortly branched, hirsute. Stems simple, distantly compressed or slightly deflexed, barbellate-hirsute, becoming glabrescent, invested at base with dead leaf remains. Cauline leaves similar to basal leaves but gradually smaller; upper ones almost sessile, narrowly elliptic, lanceolate, oblanceolate, or linear-lanceolate, smaller than lower ones; uppermost leaves bractlike, forming a whorl beneath flowers, narrowly lanceolate or narrowly oblanceolate to linear, 5–11 × 0.5–1 cm. Flowers usually 3–5, rarely to 10-flowered, to 20 cm in diam., erect to suberect at maturity, arising from axils of uppermost leaves, occasionally with a few smaller flowers alternatively from stem below whorl of leaves. Pedicle (3–)6–37(–52 in fruit) cm. Flower buds broadly ovoid, spreading hairy. Sepals cymbiform, ca. 3 cm, abaxially pilose, glabrous within, with many distinct longitudinal veins. Petals 6–8, mid- to deep yellow, suborbicular to obovate, 4–9.5 × 3–5 cm, often markedly incurved. Filaments of same color as petals, golden brown at maturity, filiform; anthers yellow or yellowish brown, ovoid to oblong, 1–2(–4) mm. Ovary broadly elliptic-oblong or ovoid to narrowly ellipsoidal, densely appressed golden hirsute; styles obsolete or very short to 4 mm, glabrous; stigmas capitulate, 4–7-lobed, decurrent and slightly actinomorphic at apex of ovary. Capsule broadly elliptic or oblong to elliptic, 2–3 × 1–1.2 cm, ascending to appressed golden or brown hirsute, 4–7-valvate for 1/3 distance from apex. Fl. May–Aug.

Grassy and rocky slopes, forest understories, open shrublands, mountain moorlands, stabilized moraines; 2700–5100 m. SW Gansu, E and S Qinghai, W Sichuan, E and S Xizang, NE and NW Yunnan [NE Myanmar].

1a. Stem with scattered leaves and superfluous flowers below leaf whorl; petals mid- to deep yellow, incurved; stigmas sessile, 10–12 mm in diam.

---------------------------------------------  7a. subsp. integrifolia

1b. Stem leafless below whorl or with 1 or 2 leaves but no superfluous flowers; petals lemon yellow, often very pale, not incurved; stigmas 5–7 mm in diam., styles very short (2–4 mm)

---------------------------------------------  7b. subsp. lijiangensis

7a. Meconopsis integrifolia subsp. integrifolia

7b. Meconopsis integrifolia subsp. lijiangensis

Plants mostly 50–100 cm tall, with a prominent stem bearing several alternate leaves and often superfluous flowers below whorl of leaflike bracts. Flowers several, deeply cup- or goblet-shaped. Pedals often markedly incurved, mid-yellow to deep gamboge. Ovary barrel-shaped, densely hairy; stigmas sessile, with 4–6 broad radiating arms, forming a cap usually 10–12 mm in diam.

Grassy and rocky slopes, forest understories, open shrublands; 2700–5100 m. SW Gansu (Huichuan, Xiahe), E and S Qinghai, NW and W Sichuan, E and S Xizang, NE and NW Yunnan [NE Myanmar].

7b. Meconopsis integrifolia subsp. lijiangensis

Plants mostly 45–75 cm tall, with a well-defined stem but...
few cauline leaves except for whorl beneath flowers. Flowers
cup-shaped. Petals not markedly incurved, pale to mid-lemon
yellow. Ovary narrowly obconical, densely hairy; styles short
but distinct, 2–4 mm, glabrous; stigmas 5–7 mm in diam., with
4–7 rays.

- Mountain moorlands, open shrublands. SW Sichuan, NW Yun-
nan.

20: 353. 1906.

横断山绿绒蒿 heng duan shan lucui long hao

Herbs, monocarpic, 25–120 cm tall, covered for most part
in soft golden or rufous hairs, overwintering as a large bud at
ground level. Stem usually present, erect, or flowers scapose;
when present with a whorl of bractlike leaves subtending flowers.
Leaves mostly aggregated into a basal rosette, elliptic to
ground level. Stem usually present, erect, or flowers scapose;
plump, with persistent petiolar bases, densely shortly branched
and solitary; ovary densely hairy. Plants rather robust, 50–120 cm tall, always with a well-
developed and stout stem, often with several alternate leaves and
superfluous flowers below whorl of leaflike bracts. Flowers
several, often more than 3, on top of a distinct stem, often with
several leaves and 1 or 2 superfluous flowers below “bracts”;
styles barbellate-villous. Basal leaves are probably
best considered to be ecotypes (there is some evidence, for instance, that
intermediates to more robust plants at lower elevations and are probably
maintained in cultivation). Dwarf
forms, particularly those from the bleaker exposed
habitats of the Xizang Plateau, can be very dwarf, sometimes as little as
15 cm, and bear a solitary flower; however, they appear to be linked by
intermediates to more robust plants at lower elevations and are probably
best considered to be ecotypes (there is some evidence, for instance, that
this dwarf habit is to some extent maintained in cultivation). Dwarf
plants of this kind have been described as M. integrifolia var. uniflora
C. Y. Wu & H. Chuang, described from NW Yunnan (Zhongdian), but
similar plants are certainly to be found in W Sichuan and S and SE Xizang.

1a. Small, densely sericeous plant, not
more than 25 cm tall; flowers erect
to suberect ................................. 8a. subsp. daliensis

1b. Larger plant, mostly 30–120 cm tall,
hairy or bristly but not sericeous;
flowers nodding or half-nodding.
2a. Flowers appearing to be scapose
and solitary; ovary densely
hairy, styles bristly ........ 8a. subsp. pseudointegrifolia

2b. Flowers several, often more
than 3, on top of a distinct stem,
often with several leaves and
1 or 2 superfluous flowers below
“bracts”; ovary sparsely hairy,
styles glabrous ............................. 8b. subsp. robusta

8a. Meconopsis pseudointegrifolia subsp. pseudointegrifolia
横断山绿绒蒿(原亚种) heng duan shan lucui long hao (yuan ya zhong)

Plants seldom more than 50 cm tall, with leaflike bracts
held close to basal leaf rosette. Flowers appearing to be sca-
pose; nodding to half-nodding, pale sulfur yellow. Ovary
densely hairy; styles and stigmatic rays shortly bristly, styles
3–6 mm. Capsule densely hairy.

Mountain moorlands, scree, woodland margins; 2700–4200 m.
SE Xizang, NW Yunnan.

8b. Meconopsis pseudointegrifolia subsp. robusta Grey-

单花横断山绿绒蒿 dan hua heng duan shan lucui long hao

Plants rather robust, 50–120 cm tall, always with a well-
developed and stout stem, often with several alternate leaves and
superfluous flowers below whorl of leaflike bracts. Flowers
several, often more than 3, on top of a distinct stem, often with
several leaves and 1 or 2 superfluous flowers below “bracts,”
nodding to half-nodding, pale lemon or sulphur yellow, to 20
cm in diam. Petals spreading widely apart. Ovary densely hairy;
styles 7–11 mm, glabrous. Capsule glabrous or subglabrous.

Rhododendron moorlands and woodlands, margins of swamps, rock-
slopes, stabilized moraines; ca. 3400 m. SW Sichuan, S and SE
Xizang, NW Yunnan [NE Myanmar].

8c. Meconopsis pseudointegrifolia subsp. daliensis Grey-

多花横断山绿绒蒿 duo hua heng duan shan lucui long hao

Plants not more than 25 cm tall, densely sericeous on
stems, leaves, and pedicels. Stem short, not exceeding 10 cm.
Leaves elliptic to oblanceolate, 3-veined only at base, otherwise
pinnately veined. Bracts like leaves, in a single whorl just above
basal leaf rosette. Flowers erect to suberect, yellow, to 9 cm in
diam. Ovary densely sericeous; styles short but distinct, 2–5
mm. Capsule barrel-shaped, densely hairy.

- Rocky slopes, mountain moorlands. NW Yunnan.


藿香叶绿绒蒿 huo xiang ye lucui long hao

Cathcartia betonicifolia (Franchet) Prain.

Herbs, perennial, occasionally biennial. Rootstock short,
plump, with persistent petiolar bases, densely shortly branched
rubiginous villous. Stems erect, 30–90(–150) cm tall, stout, to
1.3 cm in diam. at base, simple, glabrous or sparsely rubiginous
barbellate-villous. Basal leaves slightly glaucous abaxially,
Meconopsis superba

Fl. Jun–Aug.

Herbs, monocarpic, to 1 m tall in flower, throughout appressed, usually silvery white barbellate-pilose. Taproot napi-form. Basal leaves in a large, dense, evergreen rosette; petiole 7–15 cm; blade oblanceolate, oblanceolate-oblong, elliptic, or ovate-oblong, ca. 35 × 9 cm, sericeous and barbellate-villous when young; base attenuate, margin serrulate, apex acute. Lower cauleine leaves similar to basal leaves, but petioles shorter; upper cauleine leaves sessile, base auriculate. Inflorescence racemose. Flowers nodding or half-nodding. Pedicel to 12 cm (to 25 cm in fruit), stout, densely appressed barbellate-tomentose. Petals 4, 6 in terminal flowers, white, obovate to suborbicular, ca. 6 × 6 cm. Filaments white, filiform; anthers deep yellow. Ovary spheroidal to narrowly elliptic, appressed barbellate-tomentose; styles distinct, 9–11 mm; stigmas deep purple, obviously lobed. Capsule narrowly ellipsoid-oblong, 7–11-valvate from apex for a short distance. Seeds reniform, seed coat densely papillate.

4100–4300 m. SC Xizang [W Bhutan].

11. 

Meconopsis grandis


Herbs, monocarpic, to 33 cm tall in flower. Taproot ca. 7.5 × 1.2 cm. Leaves aggregated near base of plant with a few higher up on stem; petiole linear, ca. 5 cm; blade oblanceolate, ca. 10 × 1.8 cm, both surfaces glabrous or sparsely setose, abaxially glaucous, base tapered into petiole, sheath at base, margin entire or repand, apex acute or rounded. Inflorescence racemose, with up to 10 flowers, nearly glabrous or densely spreading setose, only lowermost bracteate. Pedicel ca. 20 cm, usually setose. Petals 5–8, yellow, obovate, ca. 3.8 × 2.5 cm, apex obtuse, acute, or serrulate. Filaments filiform; anthers orange, to black on aging. Ovary elliptic to narrowly elliptic, usually densely extended yellowish setose; styles ca. 7 mm; stigmas capitate. Capsule narrowly elliptic, spreading setose, 3–5-valvate for a short distance from apex. Seeds falcate-elliptic, seed coat irregularly rugose or inconspicuously pitted.

• 3600–4300 m. NW Yunnan [Weixi].

13. Meconopsis florindae


Herbs, monocarpic, with a slender stem to 45 cm tall. Taproot radishlike, ca. 3.7 cm. Stems tenuous, glabrous, rarely sparsely villous. Basal leaves few, soon withering; petiole ca. 2.5 cm, lower part amplexicaul; blade oblanceolate, ca. 3.7 × 1.2 cm, both surfaces glabrous or slightly tomentose, abaxially glaucous, base attenuate and extending into petiole, margin entire, deeply undulate, broadly crenate, bipinnatilobate, or bipinnatisect, apex acute or rounded. Lower cauleine leaves similar to basal leaves; upper cauleine leaves with margin serrate, basally slightly amplexicaul, or like basal leaves. Flowers 2–6 from upper cauleine leaf axils, semi-nutant. Pedicel ca. 13 cm at fruiting, only apically sparsely setose. Petals usually 5–7, rarely 4, lemon yellow, oevate or obovate, ca. 1.3 × 1 cm, apex acute or rounded, usually irregularly serrulate. Filaments filiform; an-
thers pale orange. Ovary ovoid to elliptic-oblung, glabrous or sparsely setose; styles distinct, ca. 6 mm; stigmas yellow, almost clavate or with separate lobes. Capsule elliptic-oblong, glabrous or sparsely setose, 3–5(or 6)-valvate for ca. 1/3 its length from apex.

- Woodlands; 3300–3900 m. SE Xizang.


琴叶绿绒蒿 qin ye lü rong hao


Herbs, monocarpic. Taproot ovoid, ca. 1 cm, sometimes long and narrow. Stems tenui-

-thin, thin, curved or compressed yellow-brown pubescent, sometimes glabrous. Basal leaves few, soon withering; petiole 1.5–4 cm; blade pale green abaxially, green adaxially, ovate, oblong-ovate, spatulate, or oblancoate, 1.5–4 × 0.5–2 cm, both surfaces sparsely yellow-brown pilose or glabrous, base cuneate or slightly cordate, margin entire, lobed, pinnatilobate or pinnatifid, apex rounded or acute. Cauline leaves similar to basal but lower ones with petiole ca. 6 cm, upper ones shortly petiolate. Flowers opening in succession, 1–5 in axils of upper cauline leaves, usually only terminal flowers open, half nutant, 1.5–2.5 cm in diam. Sepals glabrous. Petals 4, rarely 5 or 6, pale blue or rarely pink, pale rose, or white, ovate, broadly ovate, or sometimes broadly lancelolate, 1.2–1.9 × 0.4–1.5 cm, apex rounded or acute. Stamens 24–36; filaments of same color as petals but white at base, filiform; anthers golden, oblong to suborbicular, ca. 1 mm. Ovary obovate or elliptic-oblong to narrowly oblong, 5 × 2 mm, glabrous; styles very short; stigmas green. Capsule narrowly oblong or nearly cylindric, ca. 4 cm, 3- or 4-valvate for ca. 1/3 its length from apex. Seeds falcate-elliptic, seed coat rugose. Fl. and fr. May–Sep.

Grassy slopes, alpine meadows; 3400–4200(–4800) m. S Xizang (Gyirong, Yadong), NW Yunnan (Dêqên, Gongshan) [Bhutan, India (Sikkim), Nepal].


报春绿绒蒿 bao chun lü rong hao

Herbs, monocarpic, to 20 cm tall. Taproot radish-like. Basal leaves in a dense, evergreen, sea-green rosette; petiole ca. 7.5 cm; blade elliptic-oblong, ca. 16 × 4 cm, both surfaces especially midvein and margin villous and mixed barbelate-pubescent, pinnatisect or pinnatifid; lobes oblong or lanceolate-oblong, margin entire or irregularly lobed, apex acute. Lower cauline leaves similar to basal ones but shorter petiolate; upper cauline leaves sessile, basally auriculate-amplexicaul, pinnatifid. Inflorescence racemose, barbellate-tomentose. Flowers nutant, bracteate. Pedicel ca. 6.2 cm, to 13 cm at flowering, slender, apically densely pilose. Petals 4(–6), pale blue, blush violet, or sometimes purple, ovate to suborbicular, ca. 3.7 × 2.5 cm. Filaments of same color as petals but white at base, filiform; anthers bright orange. Ovary elliptic to elliptic-oblong, densely appressed or inclined slightly golden pubescent; styles distinct, to 7–9 mm, usually slender; stigmas vinctly, nearly clavate or sometimes with separate lobes. Capsule elliptic-oblong, 3.5–3.7 × 1.4–1.5 cm, densely ascending pubescent or basally setose, 7–9-valvate for a short distance from apex. Seeds elliptic-oblong to reniform, seed coat densely papillose. Fl. Jun–Jul.

Steep alpine meadows, gravelly slopes; 3000–3900 m. SE Xizang [N Myanmar].

总状绿绒蒿  zong zhuang lü rong hao

Herbs, monocarpic, 20–50 cm tall, throughout with fulvous or yellowish, firm spines. Taproot terete, attenuate toward base, ca. 20 × 0.5–1.5 cm. Stem erect, terete, 5–10 mm in diam. near base, basally with smooth persistent leaf bases. Basal leaves: petiole 3–8 cm, narrowly winged; blade green on both surfaces, oblong-lanceolate, oblanceolate, or rarely narrowly ovate, 5–20 × 0.7–4.2 cm, both surfaces with fulvous or yellowish, pale, spreading spines, midvein ridged abaxially, lateral veins obscure on both surfaces, base narrowly cuneate, decurrent into petiole, margin entire or undulate, rarely irregularly crenate or shallowly lobed, apex acute or obtuse. Lower cauline leaves few, shortly petiolate, like basal leaves, decreasing in size upward on stem and merging with bracts; uppermost leaves sessile. Inflorescence a simple raceme with up to 14 flowers, sometimes with additional, solitary, scapose flowers in axils of basal leaves. Pedicel 2–5 cm. Flower buds nodding, suborbicular or ovoid, ca. 1 cm in diam. Sepals oblong-ovate, adaxially spiny-hairy. Petals 5–8, blue or blue-purple, sometimes wine-purple or reddish, obovate-oblong, 2–3 × 1–2 cm, glabrous. Filaments of same color as petals, often rather darker, ca. 1 cm; anthers yellow or cream, oblong, 1.25–1.5 mm. Ovary ovoid, 5–8 mm, densely spiny-hairy; styles conical, 2–4 mm, ridged, glabrous, protruding from boss of stamens; stigmas whitish, oblong, 1–2 mm. Capsule ovoid or narrowly ovate, 0.5–15 × 0.4–1 cm, with dense, spreading bristles, 4–6-valvate to 1/3 its length from apex; persistent styles 7–10 mm. Seeds oblong, 1–2 mm, seed coat clathrate-tessellate. Fl. May–Aug.

● Grassy slopes, stony slopes, sometimes in forest understories; 3000–4000(–4900) m. S Gansu, E and S Qinghai, NW and W Sichuan, Xizang, NW Yunnan.

1a. Petals without spines on both sides ...... 18a. var. racemosa
1b. Petals: medial and lower with sparse slender spines on both sides .... 18b. var. spinulifera

18a. Meconopsis racemosa var. racemosa
总状绿绒蒿(原变种)  zong zhuang lü rong hao (yuan bian zhong)

Meconopsis horridula J. D. Hooker & Thomson var. racemosa (Maximowicz) Prain.

Petals without spines on both sides.

● Grassy slopes, stony slopes, sometimes in forest understories; 3000–4000(–4900) m. S Gansu, E and S Qinghai, NW and W Sichuan, Xizang, NW Yunnan.

刺瓣绿绒蒿  ci ban lü rong hao


Petals sparsely thinly spiny below middle on both sides. Filaments narrowly linear. Styles with 4 ridges, membranous winged, ca. 1.5 mm wide.

● About 4000 m. S Qinghai (Yushu).

One of us (Grey-Wilson) has not seen authenticated material of this taxon and is unable to evaluate its status.


宽叶绿绒蒿  kuan ye lü rong hao


Herbs, monocarpic, to 90 cm tall in flower, often 20–45 cm. Stem terete, 5–10 mm in diam., sparsely to moderately densely stiffly hairy. Leaves all in a basal rosette; petiole narrowly winged, 2.2–10.5 cm; blade pale abaxially, glaucous adaxially, elliptic to elliptic-oblong-ovate, 6–14 × 1.5–4.2 cm, adaxially with sparse, purple-black-based bristles, midvein abaxially ridged, lateral veins rather obscure on both surfaces, base attenuate into petiole, margin shallowly lobed and somewhat undulate, apex acute to subacute. Inflorescence racemose, with up to 15 flowers, only lowermost bracteate. Flowers nodding to lateral-facing, 4.4–8.4 cm in diam.; sometimes with an additional solitary scapose flower, from axes of basal leaves. Pedicel 0.7–8.5(–11.5) cm (to 18 cm in fruit), with sparse, stiff, spreading bristles. Sepals oblong-ovate, abaxially bristly, bristles with a purple-black base. Petals 5–7(or 8), blue, purple, or violet-blue, occasionally pale blue or pinkish purple, obvolute to ovate, 2–3.8 × 1.8–3.2 cm, glabrous. Filaments of same color as petals, often darker; anthers gray or yellowish gray, 0.5–1.25 mm. Ovary ovoid, densely bristly; styles narrowly conical, 1–3 mm; stigmas yellowish, 1.5–2 mm, protruding beyond boss of stamens. Capsule ovoid, 8–15 × 7–14 mm, with stiff, erect bristles, 4–6-valvate for a short distance from apex; persistent styles 6–7 mm. Fl. Jun–Sep.

● Grassy slopes, stony pastures, rocky places, scree, cliff ledges; 3400–4800 m. SW and S Sichuan, NW Yunnan.


草甸绿绒蒿  cao dian lü rong hao


Herbs, monocarpic, 30–92 cm tall in flower. Stem stiffly erect, 10–15 mm in diam. at base, spreading bristly, pale overall. Basal leaves in a spreading rosette; petiole to 6.5 cm; blade pale green abaxially, mid-green adaxially, elliptic-oblong-ovate to oblanceolate, 8–20 × 1.4–3.6 cm, both surfaces with spreading, pale, stiff, bristlelike hairs to 6 mm, base attenuate into petiole, margin undulate, entire to shallowly and unevenly lobed, apex acute to subacute. Lower cauline leaves similar to basal leaves, decreasing in size upward on stem and merging with lower bracts, but most of inflorescence ebracteate. Inflorescence a simple raceme with up to 32 flowers, sometimes with several solitary, scapose, deapauperate flowers from axes of basal leaves. Pedicel 0.8–7.2 cm, with stiff bristlelike hairs. Flowers lateral-facing to half-nodding, 3.8–7 cm in diam., fragrant. Sepals oblong to oblong-ovate, adaxially with spreading
pale bristles. Petals 5 or 6, blue, purple, blue-purple, or lavender, occasionally wine-purple or whitish, obovate to oblong, 1.8–3.6 × 1.5–3 cm, glabrous. Filaments of same color as petals, often darker; anthers white to orange-yellow or yellowish gray, 1–1.5 mm. Ovary ovoid, spiny; styles narrowly conical, 2–4 mm, glabrous; stigmas pale green or cream, 2–3 mm, included within boss of stamens. Capsule ovoid to ovoid-elliptic, 1.7–2 × 0.8–1 cm, with rather sparse, spreading, pale-colored bristles, 5–7-valvate. Fl. Jun–Sep.

Open stony pastures and meadows, cliffs, scree, roadside embankments, margins of Pinus woodlands, forest understories; 3400–3900 m. SW and W Sichuan, SE Xizang, NW Yunnan [N Myanmar].

The position of Meconopsis prainiana Kingdon Ward (Gard. Chron., ser. 3, 79: 308. 1926, described from Gongbo’gyamda, SE Xizang) requires further investigation. The plants are very similar to M. pratii in general characteristics and proportions, but the flowers are consistently 4-petaled and these can be blue or pale yellow.


美丽绿绒蒿 mei li lü rong hao

Meconopsis cavodariana Kingdon Ward; M. ouvrardiana Handel-Mazzetti.

Herbs, monoparctic, 15–60 cm tall, throughout rubiginous or yellowish bristly. Taproot long and stout, ca. 30 × 2.5 cm. Stems erect, tetrate, rubiginous or yellowish bristly, basally with persistent leaf bases. Basal leaves: petiole 2–11 cm, including wings 2–6 mm wide; blade lanceolate or narrowly ovate, 5–13 × 2.5–4 cm, midvein broad, shallowly channeled, lateral veins slender, basally attenuate into petiole, margin pinnatifid, apex rounded or acute; lobes oblong, apex rounded, rarely acute, usually rounded-incised. Cauline leaves like basal leaves but smaller, shortly petiolute or sessile to subsessile. Inflorescence racemose; flowers 6–20, very fragrant, only lowermost bracteate, sometimes accompanied by solitary-flowered basal flowers. Pedicel erect, 2–8 cm. Flower buds spheroidal, 1–2 cm in diam. Sepals adaxially fulvous spreading bristly. Petals 4–8, blue to fleshy-mauve, obovate to suborbicular, 2.4–5 × 2.4 cm, apex rounded. Filaments of same color as petals but more deeply colored, filiform, ca. 1 mm; anthers oblong, ca. 1 mm. Ovary spheroidal to ovoid, ca. 5 mm, densely rubiginous spiny-hairy; styles 2–4 mm, ridged, sometimes near base spiny-hairy; stigmas oblong, 2–3 mm. Capsule elliptic, 1.5–2.5 × 0.5–1.2 cm, densely rubiginous but base purple or fulvous spiny-hairy; styles stout, extended to 1 cm, 4–8-valvate for ca. 1/3 its length from apex. Seeds reniform, seed coat longitudinally pitted. Fl. and fr. Jul.–Oct.

- Among alpine shrubs, grasslands, rocky slopes, cliff ledges and crevices, alpine scree; 3700–4400 m. W Sichuan (Kanding), SE Xizang (Mêdog), NW Yunnan (Déqên, Gongshan, Weixi).


皮刺绿绒蒿 pi ci li lü rong hao

Herbs, monoparctic, 30–60 cm tall in flower. Taproot long and narrow, or napiform, to 13 cm. Basal leaves in a deciduous rosette; petiole 10–15 cm, basally expanded and sheathing stem; blade variously shaped, oblong or cordate to deltoid, 10–20 × 3.5–5 cm, pinnatifid or irregularly pinnatisect, rarely bifid-pinnatifid, usually broadly incised among lower lobes, both surfaces with rather sparse, simple bristlike hairs, apex obtuse or rounded to acute. Lower cauline leaves similar to basal ones but upper cauline leaves sessile, smaller and with fewer divisions. Inflorescence a raceme with up to 20 flowers, all but uppermost bracteate or in axils of leaves. Flowers shallowly cup-shaped, lateral-facing to semi-nutant. Pedicel erect, 2.5–13.5 cm. Petals usually 4, rarely 5 or 6, sky blue or rarely blue-purple or red, obvate or suborbicular, ca. 3.7 × 3.7 cm. Filaments filiform, of same color as petals but deeper; anthers golden. Ovary globose to elliptic, densely golden fulvous to bristly, bristles at first appressed, later ascending to spreading; styles distinct, ca. 1.2 cm, basally thickened in fruiting; stigma lobes free or connate, oblong or spherical. Capsule spheroidal to elliptic-oblong, densely bristly, (3 or)4–6–(8)-valvate for a short distance from apex. Seeds reniform. Fl. Jun–Aug. 2n = 56.

Rocky habitats, scree, stream margins; 2400–4200 m. SW Xizang [NW India, Pakistan].


丽江绿绒蒿 li jiang lü rong hao

Herbs, monoparctic, to 40 cm tall in flower (to 60 cm in fruit). Taproot conical or radishlike, 2–10 × 1–1.5 cm, with fibrous slender roots. Leaves usually all basal, deciduous; petiole 2.5–3.2 cm; blade oblanceolate to elliptic-oblong or broadly linear, 5–20 × 0.5–2 cm, both surfaces sparsely appressed bright brown hirsute, midvein prominent abaxially, distinct adaxially, apex rounded or triangular, basally attenuate to wing, wing base slightly amplylate to membranous-sheathed, margin entire or somewhat repand. Inflorescence simple scapose, erect, scape with straw-colored, soft, deflexed bristles. Flowers 3–7, on upper part of scape, ebracteate, 3.4–8 cm in diam. Pedicel nutlet when young, later spreading, 1–3 cm, extended to 9 cm at fruiting, bright brown compressed-hirsute. Flower buds obovoid or globose, 1–2 × 0.7–1.3 cm. Sepals adaxially brown soft-bristly. Petals usually 4, rarely 5, slightly blue or pale indigo, occasionally whitish with a bluish base, ovate or broadly ovate, 1.4–2.5 × 1.2–2 cm. Filaments purplish, filiform, 5–10 mm; anthers golden yellow, oblong, ca. 1 mm. Ovary elliptic-oblong, glabrous or sparsely hirsute; styles very short or absent; stigmas 2–4-lobed. Capsule erect, nearly narrowly cylindrical, 3.9–6.3 cm × 4.5–7 mm, glabrous or sparsely hirsute, 2–4-valvate to 1/3 its length from apex. Seeds falcate-elliptic, seed coat inconspicuously pitted. Fl. May–Jul.

- Grassy slopes, rocky places, woodland margins, banks; (3100–)3400–4300 m. SW Sichuan, NW Yunnan (Lijiang, Yangbi, Zhongdian).

Meconopsis punicea Maximowicz, Fl. Tangut. 34. 1889.

Herbs, monocarpic, 20–50 cm tall in flower (to 85 cm in fruit), basally with dense tuft of old leaf remains accompanied by rufous or golden barbellate bristles. Taproot ca. 13 cm, slender, or absent and fibrous-rooted. Leaves all basal, forming a rosette, deciduous; petiole linear, ca. 20 cm, basally amplexicaul; blade oblanceolate or lanceolate to ovate-lanceolate, 4.5–16 × 0.9–3.5 cm, both surfaces shortly barbellate-villosous, abaxially midvein and lateral veins distinct, base attenuate into petiole, margin entire or irregularly serrate or crenate, apex acute or obtuse. Flowers solitary on scape, up to 5 per rosette, occasionally more, semi-nutant, barbellate-setose, hairs at first appressed, later spreading to deflexed. Flower buds broadly ovoid. Sepals adaxially densely spreading, barbellate-setose. Petals 5–8, purple to deep sky blue, obovate, 3.3–4.8 × 2.4–4.4 cm. Filaments of same color as petals, filiform, 1–1.5 cm; anthers orange, golden, or yellow, oblong, ca. 2 mm. Ovary narrowly elliptic to oblong-elliptic, 1.5–2 cm, glabrous or setose; styles distinct, 4–9 mm; stigmas green, brownish, or whitish, capitate or subclavate, 4–9-lobed. Capsule narrowly oblong to oblong-elliptic, 4.2–6.5 × 1.3–2.8 cm, reflexed barbellate-setose, 4–9-valvate for ca. 1/3 its length from apex. Seeds ellipsoid or reniform, seed coat densely papilllose. Fl. Jun–Aug.

Grasslands on slopes, among shrubs, rock crevices, tree line margins, stream sides; 3300–4500 m. SE Nepal [Bhutan, India (Sikkim), C Nepal].


五脉绿绒蒿 wu mai lü rong hao

Herbs, perennial, 30–50 cm tall in flower, basally with persistent leaf bases, accompanied by dense, yellowish or brown barbellate setae. Roots fibrous. Leaves all basal, forming a rosette, deciduous; petiole 3–9.8 cm; blade obovate to lanceolate, 2–10 × 1.4–2.2 cm, both surfaces with dense yellowish or brown barbellate setae, obviously longitudinally 3–5-veined, base attenuate and decurrent into petiole, margin entire, apex...
acute or obtuse. Flowers solitary on scape, up to 3 per leaf rosette, pendent. Scape costate, with fulvous, barbellate, deflexed setae, denser toward top. Flower buds broadly ovoid. Sepals ca. 2 × 1.5 cm, adaxially densely fulvous barbellate-setose. Petals 4–6, pale lilac-blue to purple, obvate or suborbicular, 3–4 × 2.5–3.7 cm. Filaments of same color as petals or white, filiform, 1.5–2 cm; anthers yellowish, oblong, 1–1.5 mm. Ovary spheroidal, ovoid, or oblong, 5–8 mm, with dense, fulvous, barbellate setae; styles short, 1–1.5 mm; stigmas capitate, 3–6-lobed. Capsule elliptic or oblong-elliptic, 1.5–2.5 cm, densely appressed barbellate-setose, slightly 3–6-valvate for a short distance from apex. Seeds black-brown, narrowly ovoid, ca. 3 mm, seed coat tessellate and corrugate. Fl. Jun–Sep. 2n = 76(ca. 84)*.

- Grassy slopes, often among shrubs, alpine grasslands, forest understories and margins, meadows; 2300–4600 m. S and SW Gansu, W Hubei, NE Qinghai, W Shaanxi (Baoji, Meixian, Taibai), NW Sichuan, NE Xizang.

1a. Ovary and capsules densely appressed setose. 27a. var. quintuplinervia

27a. Meconopsis quintuplinervia var. quintuplinervia

五脉绿绒蒿 (原变种) wu mai lü rong hao (yuan bian zhong)

Ovary and capsules densely appressed setose.

- Grassy slopes, among shrubs, alpine grasslands; 2300–4600 m. S and SW Gansu, W Hubei (Shennongjia), NE Qinghai, W Shaanxi (Baoji, Meixian, Taibai), NW Sichuan, NE Xizang.


光果五脉绿绒蒿 guang guo wu mai lü rong hao

Ovary and capsules glabrous.

- Forest understories; 2400–2900 m. Shaanxi (Ningshan).

28. Meconopsis henrici

川西绿绒蒿 (原变种) chuan xi lü rong hao (yuan bian zhong)

Inflorescence scapose, 11-flowered, sometimes partly racemose, deeply cup-shaped, often semi-nutant. 28a. var. henrici

- Alpine grasslands, meadows, open shrublands; 3200–4500 m. W Sichuan.


无葶川西绿绒蒿 wu ting chuan xi lü rong hao


Flowers: 1 per leaf rosette, lateral-facing, opening wide and almost flat.

- Alpine grasslands, open shrublands. SW Gansu, NW Sichuan.

29. Meconopsis sinomaculata

杯状花绿绒蒿 bei zhuang hua lü rong hao

Herbs, monocarpic, to 60 cm tall in flower, with a fleshy, napiform rootstock, to 24 × 15 mm. Leaves all basal, rather few, ovate to ovate-lanceolate or ovate-oblongate, 4.5–14.5 × 0.8–1.8 cm, both surfaces sparsely to densely setose, weakly 3-veined from base, base attenuate into petiole 1.5–2.5 cm, apex subacute to subobtuse. Flowers solitary on scape, generally 1 per plant, occasionally 2, horizontal to half-nodding, deeply cup-shaped, with erect rather than spreading petals. Scape erect, 20–55 cm, stout, narrowed and purple-flushed toward top, with numerous spreading to downcurved pale bristles. Sepals boat-shaped, 25–34 mm, adaxially with spreading bristles. Petals (4–)6, azure, sometimes with a purple or lilac flush, with a prominent maroon-black blotch at base, suborbicular to obovate, 4.5–7 × 2.5–4.7 cm, margin undulate to finely and unevenly toothed. Filaments of same color as petals or blackish purple, 11–16 mm, strongly dilated in lower 1/2; anthers purplish black to whitish, 8–20 mm, with cream or white pollen. Ovary ovoid, bristly; styles 10–13 mm; stigmas cream, 3-lobed, just protruding beyond stamens. Capsule unknown. Fl. Jun–early Aug.

- Low montane scrub, grassy slopes in alpine tundra, generally as scattered colonies; 3300–3900 m. SE Qinghai, NW Sichuan.

久治绿绒蒿  jiu zhi lü rong hao

Herbs, monocarpic. Taproot napiiform, ca. 2 × 1.2 cm. Leaves all basal; petiole broadly strip-form, 2–3 cm, near base amplitude to membranous sheath, glabrous or sparsely fulvous setose; blade oblong-obovate, 3–5 × 0.7–1 cm, both surfaces fulvous setose, base attenuate to petiole, margin entire or slightly undulate, apex obtuse or rounded. Scape 30–40 cm tall, apically slender, gradually thickened toward base, fulvous and usually reflexed setose, densely so beneath flowers. Flowers solitary on basal scapes. Flowers solitary. Flower buds globose, ca. 8 mm in diam. Petals 4(or 5), purple-blue to violet-blue, broadly obovate, oval, or suborbicular, 1.1–2.2 × 0.7–1.5 cm, apex rounded or acute. Filaments of same color as petals, filiform, ca. 4 mm; anthers orange, oblong, ca. 1 mm. Ovary elliptic or elliptic-oblong, ca. 5 mm, very sparsely fulvous hirsute; styles purplish, ca. 1–4 mm; stigmas capitatus. Capsule elliptic-oblong or elliptic, 1.7–3.3(–4) cm × 3–5(–7) mm, glabrous or very sparsely hirsute, (3 or)4-valvate for a short distance from top. Fl. May–Aug.

31. Meconopsis concinna


优雅绿绒蒿  you ya lü rong hao

Meconopsis lancifolia (Franchet) Franchet ex Prain var. concinna (Prain) G. Taylor.

Herbs, monocarpic, to 20 cm tall in flower (to 30 cm in fruit). Taproot napiiform, 1.5–4 cm × 5–7 mm. Leaves all basal, deciduous, rarely from flowering stem near base; petiole narrowly strap-shaped, 2–5 cm × 1–2 mm; blade variously shaped, oblong-obovate, oblong-oblancoate, elliptic-oblancoate, or spatulate, small, 2–5.2 × 0.4–1.2 cm, almost fleshy, both surfaces glabrous, with slender veins not obvious, pinnatisect or bipinnatisect, sometimes several entire on same plant; terminal lobes rhombic, oblong, obovate, or suborbicular; lateral lobes 2–4 pairs normally, obovate, oblong, spatulate, or linear, apex rounded. Scape basal or from axils, 4–20 cm tall, glabrous or very sparsely compressed- or curved fulvous hairy. Flowers solitary on scape, rarely several scapes agglomerated, 2.4–4.8 cm in diam. Flower buds globose, ca. 8 mm in diam. Pedals 4(or 5), purple-blue to violet-blue, broadly obovate, oval, or suborbicular, 1.1–2.2 × 0.7–1.5 cm, apex rounded or acute. Filaments of same color as petals, filiform, ca. 4 mm; anthers cream to gray-yellow, oval, ca. 0.5 mm. Ovary elliptic or elliptic-oblong, ca. 5 mm, very sparsely fulvous hirsute; styles purplish, ca. 1–4 mm; stigmas capitatus. Capsule elliptic-oblong or elliptic, 1.7–3.3(–4) cm × 3–5(–7) mm, glabrous or very sparsely hirsute, (3 or)4-valvate for a short distance from top. Fl. May–Aug.

● Alpine meadows; ca. 4400 m. SE Qinghai (Jigzhi).

One of us (Grey-Wilson) has not seen authenticated material of this taxon and so is unable to comment on its status; however, it appears to be very close to Meconopsis sinomaculate, apparently differing in its smaller leaves and flowers and in the linear filaments. As both taxa come from more or less the same area, further investigation might prove that they are one and the same species, in which case the name M. barbiseta would have priority.

32. Meconopsis wumungensis


乌蒙绿绒蒿  wu meng lü rong hao

Herbs, monocarpic, to 12 cm tall in flower (taller in fruit). Taproot napiiform, ca. 4 cm × 3–7 mm, ultimately narrowly cylindrical, to 10 cm. Leaves all basal, deciduous; petiole narrowly strap-shaped, 4–6 cm, basally amplitude to sheath ca. 4 mm wide; blade broadly ovate to lanceolate, 1.5–4.5 × 1–2 cm, both surfaces glabrous, midvein abaxially often 2 longitudinal channels, adaxially prominent, lateral veins distinct, dichotomous, base cordate-cuneate, decurrent to wings, margin basally sublobed, middle deeply lobed, apically slightly lobed, apex rounded; lobes suborbicular, sometimes mixed with a few entire leaves. Scape 1 or 2 per rosette, ca. 11 cm, fulvous appressed- or deflexed-hirsute. Flowers solitary on scape. Flower buds narrowly ovoid, ca. 1.5 cm × 6 mm. Sepals glabrous. Pedals 4, indigo, obovate, ca. 3 × 2 cm. Filaments filiform, ca. 1 cm; anthers oblong, 1.5–2 cm. Ovary narrowly elliptic, ca. 8 × 3 mm, sparsely fulvous hirsute; styles ca. 2 mm; stigmas capitatus, 4-lobbled and decurrent to styles. Fruit not seen. Fl. Jun.

● Wet stones, rocky crags; 3600–3800 m. C Yunnan (Luquan).


长果绿绒蒿  chang guo lü rong hao


Herbs, perennial, to 30 cm tall in flower (taller in fruit). Taproot cylindrical, ca. 5 mm in diam. at top, decurrent and attenuate toward base. Rootstock short, with several very short branches. Leaves all basal, deciduous, at apex of very shortly branched rootstock and forming several leaf clusters, accompanied by mixed scalelike leaf bases; petiole linear, 2–9 cm; blade glaucous abaxially, green adaxially, ovate-robicic to lancate, narrowly lanceolate, or subspatulate, 2–6 × 1–3.8 cm, both surfaces glabrous or sparsely appressed pubescent, midvein distinct, lateral veins dichotomously branched, base attenuate and winged-decurrent, margin entire, apex rounded or arguate. Scape 1–8 per rosette, 3–30 cm, to 60 cm in fruit, usually sparsely pubescent. Flowers solitary on scape, semi-nutant. Pedals 4, rarely 6–8, deep violet-blue or indigo, rarely rose-purple, longitudinally pleated, ovate, obovate, or suborbicular, 2–3.5 × 1.5–2.5 cm, apex acute or rarely rounded. Filaments of same color as petals, filiform, ca. 1 cm; anthers orange, oblong, ca. 1 mm. Ovary narrowly oblong-elliptic, glabrous; styles ca. 5 mm, sometimes very short, glabrous; stigmas capitate or sometimes almost clavate. Capsule narrowly oblong or subcylindrical, 5–10 cm × ca. 5 mm, glabrous, 3(–5)-valvate for 1/3 or less its length from apex. Seeds falcate-oblong, seed coat smooth or longitudinally striate. Fl. May–Aug.

● Grassy slopes, stabilized moraines, rocky meadows; 2700–4000 m. NW Yunnan (Heqing to Yulong Xueshan).

34. Meconopsis zangnanensis

Herbs, monocarpic, tufted, to 17 cm tall in flower, with dense persistent leaf bases. Taproot plump, extended, more than 10 cm, ca. 2.5 cm in diam. at top. Leaves all basal, rarely from lower flower stems; petiole linear, to 11 cm; blade ovate, elliptic, lanceolate, or oblancéolate, 2.5–7 × 1.8–3.6 cm, usually pinnatipartite or bipinnatipartite, rarely entire or undulate, both surfaces glabrous or midvein sparsely setose, near base with several veins, distinct on both surfaces, base cuneate, apex acute or rounded. Scapes 4–15, usually separate, occasionally partly agglomered below, 10–20 cm (to 35 cm in fruit), glabrous or spreading setose. Flowers to 18, 4–6.4 cm in diam., semi-nutant from basal scapes, rarely from bracteate flowering stems mixed with basal scapes. Flower buds globose, 1–1.5 cm in diam. Sepals glabrous or sparsely setose. Petals 4–10, wine-purple, ruddy-purple, lilac-purple, elliptic, oblanceolate, or suborbicular, 2.5–3.5 × 1–2.5 cm, base cuneate, margin irregularly incised, apex rounded or acute. Filaments of same color as petals, filiform, ca. 1 cm; anthers orange to yellow-gray, oblong, ca. 1 cm. Ovary elliptic or elliptic-oblong, 3–6 mm, sparsely appressed or extended setose; styles 1.5–2.8 mm, stigmas capitulate. Capsule narrowly ovoid to narrowly elliptic, 2–3 × 5–10 mm, sparsely pubescent, compressed- or deflexed setose, slightly 3- or 4-valvate from apex; styles prolonged, 3–6 mm. Seeds falcate-elliptic, seed coat not obviously longitudinally pitted. Fl. Jun–Aug.
spines, base attenuate to petiole, margin entire or undulate, occasionally slightly lobed or toothed, apex obtuse or acute. Flowers solitary on scape, 4–8.2 cm in diam., semi-nutant, to 29 per plant, erect, these sometimes partly agglomerated especially in lower 1/2; scapes green or purplish, 10–27 cm, firm, with fulvous spreading bristles. Flower buds nodding, globose, 8–12 mm in diam. Sepals adaxially bristly. Petals 5–10, indigo, pale to deep blue, purplish, lilac, violet-blue, or occasionally wine-purple, broadly obovate, 2–4 × 1.5–3.4 cm. Filaments of similar color as petals, often rather darker, filiform, 10–14 mm; anthers yellow or orange-yellow, oblong, 1.5–2 mm. Ovary conical, with fulvous compressed- or inclined spines; styles 6–7 mm, slightly exceeding stamens; stigmas yellow or conical, 2.5–4 mm. Capsule obovoid or elliptic-oblong, rarely broadly ovate, 1.2–2 × 0.6–1.1 cm, with rubiginous or fulvous spreading spines, spine bases thickened, usually 3–5-valvate to 1/3 its length from apex. Seeds reniform, seed coat clathrate-tessellate. Fl. Jun–Sep.

Grassy slopes, scree, rock ledges, stabilized moraines; 3600–5400 m. W Gansu, Qinghai, W Sichuan, Xizang [Bhutan, NE India, N Myanmar, Nepal].


滇西绿绒蒿 dian xi lü rong hao

Herbs, monocarpic, to 25 cm tall in flower (to 40 cm in fruit), basally with persistent leaf bases. Taproot plump, to 30 cm, ca. 1.3 cm in diam. at top. Leaves all basal; petiole 3–7.2 cm; blade virecent abaxially, green adaxially, narrowly elliptic, lanceolate, oblong-lanceolate, or spatulate, 2.5–10 × 0.7–2.2 cm, both surfaces rubiginous or fulvous spiny, midvein distinct, lateral veins dichotomous, base attenuate and decurrent to wings, margin entire or undulate, sometimes with irregular and incised lobes or pinnatifid, apex obtuse to subacute. Flowers scapose, up to 21 per plant, nutant, 3–6.7 cm in diam. Scapes to 25 cm, with rubiginous or fulvous spreading flowers. Flower buds globose, 8–11 mm in diam. Sepals adaxially rubiginous or fulvous hirsute, obviously striate. Petals 4–10, dark purple, deep wine-purple, reddish purple, purple-maron, or indigo, obovate or suborbicular, 1.5–3.2 × 1.5–2.1 cm. Filaments of same color as petals or deeper, occasionally whitish, filiform, ca. 1 cm; anthers ivory, yellow, or golden, ovoid, ca. 1 mm. Ovary greenish, elliptical, elliptic-oblong, or narrowly obovate, fulvous appressed hirsute; styles clavate, 3–10 mm; stigmas ivory or green, capitulate. Capsule brownish gray, narrowly obovate to oblong-elliptic, 2–3.6 cm × 5–8 mm, with fulvous or rubiginous spreading setae, often rather sparse, 3(–5)-valvate for up to 1/3 distance from apex. Seeds black, falcate-elliptic, seed coat striate or inconspicuously longitudinally pitted. Fl. and fr. May–Nov.

Grassy slopes, rocky slopes, alpine meadows, stony pastures; 3400–4700 m. SW Sichuan (Daocheng, Muli, Xiangcheng), SE Xizang (Zayu), NW Yunnan [NE Myanmar].


吉隆绿绒蒿 ji long lü rong hao

Herbs, monocarpic, 58–100 cm tall in flower. Taproot plump, ca. 18 cm, ca. 1.5 cm in diam. at top, attenuate toward base. Stems stout, to 2.5 cm in diam. at base, longitudinally striate, sparsely fulvous, shortly branched setose, basally with persistent leaf bases, leaf bases rubiginous, shortly branched setose. Basal leaves: petiole 2.5–15 cm, ca. 5 mm in diam., basally ampiate, sparsely fulvous, shortly branched setose, near base with sparse short spines; blade elliptic to elliptic-oblong or lanceolate, 1.5–7.5 × 1.6–6.6 cm, both surfaces and margin sparsely fulvous, setose, midvein broad, lateral veins slender, pinnatifid, apex obtuse; lobes 3–6 pairs, asymmetrically elliptic to lanceolate-oblong, to 50 × 16 mm, distant, subapically pinnatifid. Lower cauline leaves like basal leaves; upper cauline leaves elliptic to ovate, both surfaces pilose; leaves sessile. Flowers several in upper axils of stem, uppermost ebracteate. Pedicel 0.6–2.5 cm, setose. Petals 4, mauve-blue, purple, or deep purplish blue, broadly obovate, 3.7–2.8 × 6.8 cm, apex truncate, irregularly serrulate. Filaments of same color as petals, linear, 1–1.5 cm; anthers yellow or golden, oblong, 1.5–2 mm. Ovary globose, 1–1.8 cm, densely fulvous, shortly branched setose; styles terete, 5–11 mm, terminating in clavate stigmas 4–5 mm, basally ampiate to disk and covering ovary; disk 6–9 mm in diam., margin deeply divided, lobes thinly deltoid. Capsule (immature) oblong, 1.6–2 cm × 7–10 mm, both ends truncate, densely pilose; persistent styles to 12 mm, style disks 10–12 mm in diam. Fl. Jun–Sep.

Rock crevices on slopes, stony and grassy places, rocky stream-sides; 3500–4900 m. S Xizang (Gyirong, Nyalam) [NC Nepal].


毛盘绿绒蒿 mao pan lü rong hao

Plants monocarpic, 30–60 cm tall (to 100 cm in fruit). Taproot dauciform, ca. 10 × 2 cm, below usually branched. Stems erect, stout, longitudinally striate, fulvous, barbellate-setose, basally ca. 1.5 cm in diam., with a thick wad of persistent leaf bases, leaf bases densely rubiginous or brown, barbellate-setose. Basal leaves forming a dense rosette; petiole long, to 1/2 length of blade, basally ampiate, densely fulvous setose; blade oblong-lanceolate, including petiole 7.5–18 × 0.8–3 cm, both surfaces fulvous, barbellate-setose, midvein broad, lateral veins very slender, base attenuate, margin entire, but shallowly 3- or 5-lobed or toothed or incised at apex, or rarely subentire, apex acute or rounded. Cauline leaves few or more often absent, stem leafless immediately below inflorescence. Inflorescence racemose; flowers 8–30, densely arranged on rachis. Pedicel 1–4 cm, densely barbellate-setose. Bracts leaflike, generally much smaller than leaves, absent from upper flowers. Petals 4, dark purple, purplish blue, blue, or red, sometimes pale yellow (Nepal; India: Sikkim), obovate to suborbicular, 4–5.2 × 3.7–4.5 cm, margin undulate. Filaments filiform, of same color as petals, often deeper, ca. 1.2 cm; anthers yellow, narrowly oblong, 1.5–2 mm. Ovary broadly oblong, ca. 1 cm, with dense fulvous spreading setae; styles terete, 3–6 mm (to 7 mm in fruit) terminated by 4–7 mm clavate stigmas that split into 6–10 linear twisted lobes, base ampiate to broad glabrous disk, disk covering and extended beyond ovary, margin fin-

康顺绿绒蒿  kang shun lü rong hao

Plants monocarpic, with an erect stem to 40 cm tall in flower, basally with few or no persistent leaf bases, greenish or flushed with red, particularly in upper part, 6–7 mm in diam., covered in dense, slender, silky, barbellate hairs, mostly 5–7 mm. Basal leaves forming a lax rosette, rather pale green with a whitish midvein; basal and lower cauline leaves elliptic-oblancoate, 4–7.8 × 0.7–5.4 cm, attenuate below into a narrow petiole 2.5–5.4 cm, margin entire or with several coarse teeth on either side, moderately covered in hairs similar to stem; upper cauline leaves similar to basal ones but gradually decreasing in size upward on stem, shortly petiolate or sessile; upper 3 sometimes forming a false whorl below inflorescence. Inflorescence a simple raceme, 7–14-flowered; bracts present in lower part of inflorescence, leaflike, lanceolate-ovate, 20–36 × 4–5 mm. Flowers semi-nutant to horizontal. Pedicel flushed with red, 12–25 mm, thickened somewhat at top, covered in spreading hairs, particularly at top. Petals 4 or 5, brilliant maroon, broadly obovate to elliptic-oblancoate, 3.1–4 × 1.9–3.6 cm, margin finely and unevenly toothed. Stamens numerous, forming a distinct ring around ovary but not enveloping it; filaments similar in color to petals, linear; anthers bright yellow. Ovary greenish, with stiff ascending bristles, with a glabrous caplike stylar disk at top, disk pentagonal in outline, 5–6 mm in diam., slightly narrower than ovary, shallowly lobed at margin; styles 5–7 mm, glabrous, terminating in white 4- or 5-lobed capitate stigmas. Capsule unknown. Fl. Jul–Aug.

Rhododendron thickets and heathlands; 4200–4700 m. S Xizang (Kangshung area on E side of Qomolangma Feng).


毛瓣绿绒蒿  mao ban lü rong hao

Plants, monocarpic. Stems erect, 25–53 cm tall, basally with persistent leaf bases, leaf bases rubiginous barbellate-setose. Basal leaves many, forming a rosette; petiole linear, basally vaginate and densely setose; blade oblancoate, including petiole 13–28 cm, 1.4–4.2 cm wide, both surfaces fulvous shortly branched setose, base cuneate, margin entire or irregularly undulate, apex obtuse or almost acute. Lower cauline leaves same as basal leaves; upper cauline leaves sessile, smaller, margin irregularly lobed. Flowering stems ca. 53 cm tall, stout, densely compressed- or slightly reflexed shortly barbellate-setose. Flowers usually 20–25, densely arranged. Pedicel 6–10 mm, densely setose, apically amplitate to broad receptacle. Upper flowers ebracteate. Petals 4, occasionally more, blue to pale red, oval to obovate, 3.8–6 × 2.8–4.5 cm, adaxially sparsely setose with fawn-colored hairs. Filaments filiform, ca. 1.2 cm; anthers yellow, narrowly oblong, ca. 2 mm. Ovary obovoid or elliptic-oblong, ca. 1 cm in diam., densely inclined, shortly barbellate-setose; styles very short, basally amplitate to mauve glabrous disk, disk covering and extended beyond ovary, margin undulate, 8-ridged; stigmas sessile or subsessile, almost capitiate. Capsule obovoid or elliptic-oblong, 10–16 cm × 11–14 mm, obviously costate, 7- or 8-valvate, slightly divided from style disk below, with dense spreading, barbellate bristles; stylar disk 10–12 mm in diam. Seeds oval, seed coat tessellate. Fl. Jun–Aug.

● Slopes, scree, bouldery places; 3400–4700 m. SC Xizang.