
绣线菊属  xiu xian ju shu

Lu Lingdi (陆玲娣 Lu Ling-ti); Crinan Alexander

Shrubs deciduous. Winter buds small, with 2–8 exposed scales. Leaves alternate, usually shortly petiolate, simple; stipules absent; leaf blade veins usually pinnate, rarely 3–5 from base, margin serrate or incised, sometimes lobed, rarely entire. Flowers in umbels, umbel-like racemes, corymbs, or panicles, bisexual, rarely ± unisexual. Hypanthium campanulate or cupular, lined by nectariferous disk. Sepals 5, valvate or slightly imbricate, usually slightly shorter than hypanthium. Petals 5, imbricate or contorted, usually longer than sepals. Stamens 15–60, borne between disk and petals. Disk annular, usually lobed. Carpels (3–)5(–8), free; ovules (2 to) several per carpel, pendulous; styles terminal, subterminal, or abaxial; stigma capitate or disciform. Follicles bony, often dehiscent along adaxial suture. Seeds linear to oblong, minute; testa membranous.

Between 80 and 100 species: N temperate zone, extending S to mountainous subtropical areas; 70 species (47 endemic) in China.


Many of the following species are ornamental, nectar-secreting plants long established in horticulture and often cultivated in gardens and parks.

In the following key, leads 1a and 1b are not quite mutually exclusive. If identifying plants with short, lateral inflorescences, it is advisable to work from lead 3a as well as 1b.

1a. Inflorescences borne on erect, long, leafy shoots of current year arising from base of shrub, sometimes on short, lateral branchlets arising from branches of previous year.

2a. Inflorescences paniculate, oblong or pyramidal ................................................................. 1. S. salicifolia

2b. Inflorescences broadly compound corymbose.

3a. Inflorescences borne on erect, long, leafy shoots of current year.

4a. Inflorescences glabrous; flowers white; follicles erect .......................................................... 7. S. fritschiiana

4b. Inflorescences pubescent; flowers usually pink, rarely purple-red; follicles divergent.

5a. Leaf blade base truncate to rounded; petiole (2–)4–8 mm.

   6a. Branchlets glabrous; leaf blades 3–7 cm, glabrous on both surfaces, margin crenate to doubly serrate; flowers bisexual, dark purple-red .......................................................... 5. S. purpurea

   6b. Branchlets pubescent or subglabrous; leaf blades 2–4 cm, slightly pubescent on veins on both surfaces or glabrous axially, margin sharply serrate or doubly serrate; flowers usually ± unisexual, pink, rarely white .......................................................... 6. S. bella

5b. Leaf blade base cuneate to broadly so; petiole 1–3 mm.

7a. Leaf blades glabrous on both surfaces; inflorescences to 5 × 5.5 cm ........................................ 4. S. hayatana

7b. Leaf blades pubescent on both surfaces or only on veins; inflorescences 6–12 × 4–14 cm.

   8a. Branchlets glabrous or pubescent when young; leaf blades doubly incised serrate at margin, rarely singly serrate, apex acute to acuminate ................................................. 2. S. japonica

   8b. Branchlets densely yellow pubescent when young; leaf blades doubly serrate at margin, apex acute ........................................................................................................................................................................... 3. S. formosana

3b. Inflorescences borne on short, lateral branchlets arising from branches of previous year.

9a. Buds oburate at apex, with several exterior scales.

   10a. Stamens 2–3 × as long as petals ......................................................... 8. S. miyabei

   10b. Stamens shorter than or nearly equaling petals.

   11a. Leaf blade margin with a few teeth above middle or near apex.

       12a. Follicles glabrous or hairy only along adaxial suture .................. 11. S. sargentiana

       12b. Follicles hairy.

           13a. Branchlets angled; leaf blades tomentose abaxially; pedicels 1–2 mm .................................. 10. S. schochiana

           13b. Branchlets terete; leaf blades densely thinly villous abaxially; pedicels 4–8 mm.

               14a. Bracts 2–4 mm; follicles thinly villosus .............................. 9. S. henryi

               14b. Bracts 4–6 mm; follicles densely pubescent ........................ 12. S. wilsonii

   11b. Leaf blade margin entire, rarely with a few teeth apically.

   15a. Leaf blades glabrous on both surfaces or thinly villous along margin; branchlets angled ........ 16. S. schneideriana

   15b. Leaf blades softly hairy abaxially or on both surfaces; branchlets terete.

       16a. Follicles glabrous .............................................................. 15. S. veitchii

       16b. Follicles softly hairy.

           17a. Inflorescences glabrous; leaf blades glabrous or sparsely pubescent only on veins abaxially .......... 14. S. ovalis

           17b. Inflorescences and both surfaces of leaf blades softly hairy.
1b. Inflorescences borne on short, lateral branchlets arising from (often arching) branches of previous year.

9b. Buds acute to acuminate at apex, with 2 exterior scales.

19a. Leaf blade margin entire or with a few teeth above middle.

20a. Branchlets cylindric or slightly angled; inflorescences glabrous ........................................ 28. S. uratensis

20b. Branchlets angled; inflorescences puberulous to pubescent.

21a. Flowers red; leaf blades 0.8–1.2 cm, sometimes lobed apically; follicles usually glabrous, rarely puberulous on adaxial suture .......................................................... 25. S. arcuata

21b. Flowers white; leaf blades 1–3 cm, not lobed apically; follicles pubescent.

22a. Leaf blades ovate or obovate to obovate-lanceolate, 1–2 cm, pubescent abaxially, margin obtusely 3–5-dentate above middle .................................................. 26. S. canescens

22b. Leaf blades oblong to ovate- or obovate-oblong, 1.5–3 cm, glabrous on both surfaces, margin often entire .......................................................... 27. S. trichocarpa

19b. Leaf blade margin singly or doubly serrate, sometimes incised.

23a. Buds small, shorter than petioles.

24a. Shrubs to 3 m tall; leaf blades abaxially slightly hairy on veins.

25a. Leaf blades elliptic to elliptic-ovate, margin sharply singly serrate; inflorescences and hypanthium abaxially softly hairy .................................................. 17. S. teniana

25b. Leaf blades ovate to elliptic-ovate, margin obtusely singly or doubly serrate; inflorescences and hypanthium abaxially glabrous ........................................ 18. S. kingshanensis

24b. Shrubs to 0.5 m tall; leaf blades abaxially glabrous.

26a. Leaf blades ovate or rhomboid-ovate, margin sharply singly serrate above middle; flowers white; ovary basally slightly pubescent .................................................. 19. S. morrisonicola

26b. Leaf blades ovate, margin doubly serrate; flowers pink; ovary glabrous .................................. 20. S. kweichowensis

23b. Buds usually large, nearly equaling or longer than petioles, very rarely shorter.

27a. Inflorescences and follicles subglabrous or pilose ............................................................... 24. S. longigemmis

27b. Inflorescences and follicles densely softly hairy.

28a. Buds glabrous; leaf blades abaxially pubescent .......................................................... 23. S. rosthornii

28b. Buds densely tomentose-villous; leaf blades abaxially sericeous-villosus, sometimes glabrescent.

29a. Petioles 3–5 mm; leaf blades ovate or ovate-lanceolate, abaxially sericeous-villosus, later glabrescent, margin often entire ................................................ 21. S. velutina

29b. Petioles 6–10 mm; leaf blades broadly ovate or rhomboid-ovate, abaxially sericeous-villosus, not glabrescent, margin lobed .................................................. 22. S. lobulata

18b. Inflorescences densely and thinly pubescent; leaf blades 6–11 × 4–7 mm, thinly pubescent on both surfaces when young, later glabrescent, adaxially with papillae, margin entire ..... 13. S. teretiuscula

39b. Branchlets prominently angled, pubescent or villous; pedicels and hypanthium abaxially hairy.
41a. Branchlets and buds appressed villous; pedicels and hypanthium abaxially villous when young; follicles glabrous or slightly pilose on adaxial suture .............................................. 63. S. daochengensis
41b. Branchlets and buds densely pubescent; pedicels, hypanthium abaxially, and follicles pubescent ...
30b. Flowers in pedunculate umbels or umbel-like racemes, with clustered leaves at base.
42a. Buds with 2 exterior scales.
43a. Buds with 2 exterior scales.
44a. Leaf blades oblong-elliptic to oblong-ovate, margin sharply serrate above middle or near apex; petioles 2–5 mm; stamens ca. 20 .......................................................................................................................... 55. S. flexuosa
44b. Leaf blades broadly ovate, margin minutely serrate or doubly serrate; petioles 4–7 mm; stamens 35–50 .............................................................................................................................................. 56. S. chamaedryfolia
43b. Leaf blade margin entire or apically crenate-serrate; stamens subequaling petals; sepals erect or spreading in fruit.
45a. Branchlets, leaf blades, and inflorescences glabrous; follicles glabrous or slightly hairy on adaxial suture ................................................................. 57. S. mongolica
45b. Branchlets, leaf blades, and inflorescences villous; follicles pubescent ............................................. 58. S. mollifolia
42b. Buds with several exterior scales.
46a. Leaf blade margin entire or apically crenate-serrate.
47a. Leaf blades abaxially hairy; follicles hairy; sepals reflexed in fruit.
48a. Leaf blade margin with a few obtuse teeth above middle; racemes dense ....................................... 49. S. tarokoensis
48b. Leaf blade margin entire or on sterile shoots with sharp teeth apically; racemes lax.
49a. Branchlets glabrous or subglabrous; leaf blades abaxially glabrous or slightly pubescent in vein axils ........................................................................................................................................ 48. S. media
49b. Branchlets densely villous; leaf blades abaxially densely long sericeous.
50a. Shrubs erect, to 2 m; leaf blades ovate-elliptic or elliptic, 1.5–4.5 cm; inflorescences 15–30-flowered; stamens longer than petals .................................................................................................................. 46. S. sericea
50b. Shrubs prostrate; leaf blades broadly ovate, 0.8–1.5 cm; inflorescences 7–15-flowered; stamens slightly shorter than petals ........................................................................................................ 47. S. prostrata
51a. Branchlets terete, glabrous; sepals reflexed .......................................................................................... 54. S. dahurica
51b. Branchlets angled, pubescent; sepals erect or slightly spreading.
52a. Leaf blades 2–4 mm wide; veins inconspicuous.
53a. Flowers white; styles subterminal, divergent ................................................................................. 50. S. alpina
53b. Flowers pink-red; styles abaxial, suberect ......................................................................................... 51. S. xizangensis
52b. Leaf blades 4–9 mm wide, ± conspicuously 3-veined at base.
54a. Inflorescences 2–4 cm; styles terminal, divergent ........................................................................ 52. S. myrtilloides
54b. Inflorescences 1–1.5 cm; styles abaxial .............................................................................................. 53. S. ningsiaiensis
46b. Leaf blade margin serrate or incised, sometimes lobed.
55a. Stamens longer than or rarely subequalling petals; flowers in umbel-like racemes.
56a. Follicles pubescent or hispure; sepals erect in fruit.
57a. Pedicels and hypanthium abaxially pubescent; leaf blades abaxially pubescent, margin lobed .... 40. S. sublobata
57b. Pedicels and hypanthium abaxially glabrous; leaf blades abaxially pubescent on veins or in vein axils, margin not lobed.
58a. Leaf blades oblong-elliptic to lanceolate-elliptic, abaxially pubescent in vein axils, base cuneate, margin irregularly incised serrate, sometimes doubly serrate above middle ................. 41. S. elegans
58b. Leaf blades triangular-ovate or lanceolate-ovate, abaxially pubescent on veins, base truncate, rarely subrounded, margin doubly serrate except near base ......................................................... 42. S. anomal
56b. Follicles glabrous or subglabrous; sepals reflexed in fruit.
59a. Leaf blades ovate to elliptic-ovate, glabrous or abaxially with tufted hairs in vein axils, margin singly serrate, leaves on sterile shoots often incised doubly serrate .............................................................. 43. S. laeta
59b. Leaf blades oblong or ovate, margin with a few coarse teeth.
60a. Leaf blades sericeous-villous on both surfaces, margin with 3–7 large, acute teeth on each side above middle; inflorescences 12–20-flowered; flowers 8–10 mm in diam. ........................................ 44. S. papillosa
60b. Leaf blades glabrous on both surfaces, margin with 3–5 inconspicuous, triangular, obtuse teeth on each side above middle; inflorescences 5–10-flowered; flowers 10–12 mm in diam. .......... 45. S. lichiangensis
55b. Stamens shorter than or subequalling petals; flowers in umbels.
61a. Leaf blades, inflorescences, and follicles glabrous.
62a. Leaf blade apex acute.
63a. Leaf blade rhombic-lanceolate to rhombic-oblanceolate, pinnately veined, margin serrate above middle ........................................................................................................................................... 36. S. cantoniensis
63b. Leaf blade rhombic-ovate, inconspicuously 3-veined or pinnately veined, margin usually 3-lobed, incised doubly serrate ........................................................................................................................................... 37. S. ✧vanhouttei
62b. Leaf blade apex obtuse.
64a. Leaf blades suborbicular, 3–5-veined, base rounded to subcordate, rarely cuneate, margin with a few crenate teeth above middle, apex usually 3-lobed ........................................................................................................................................... 38. S. trilobata
64b. Leaf blades rhombic-ovate to ovate, inconspicuously 3-veined or pinnately veined, base cuneate, margin with a few crenate, incised teeth or 3–5 lobes above middle ........................................................................................................................................... 39. S. blumei
61b. Leaf blades hairy abaxially.
65a. Inflorescences glabrous; follicles glabrous except on adaxial suture ......................................................... 35. S. pubescens
65b. Inflorescences and follicles hairy.
66a. Leaf blades glabrous abaxially, pilose or subglabrous abaxially ........................................................................................................................................... 34. S. siccanae
66b. Leaf blades pilose abaxially.
67a. Leaf blades pubescent abaxially.
68a. Leaf blades abaxially sericeous-pubescent, margin coarsely obtusely dentate, apex usually 3-lobed; inflorescences 2–3 cm in diam.; pedicels 6–10 mm ........................................................................................................................................... 29. S. nishimurae
68b. Leaf blades abaxially sparsely pubescent, margin obtusely or sharply serrate above middle or near apex, apex not 3-lobed; inflorescences 4–5 cm in diam.; pedicels 12–22 mm ................................................. 30. S. hirsuta
67b. Leaf blades tomentose abaxially.
69a. Sepals ovate-lanceolate; leaf blades abaxially densely white tomentose, deeply sharply incised serrate ........................................................................................................................................... 31. S. chinensis
69b. Sepals triangular to ovate-triangular; leaf blades abaxially densely yellow tomentose, shallowly obtusely serrate.
70a. Leaf blades rhombic-ovate, 2–4.5 cm, margin obtusely incised serrate or lobed, apex acute, rarely obtuse ........................................................................................................................................... 32. S. dasyantha
70b. Leaf blades ovate to obovate, 1–2 cm, margin ± obtusely serrate or doubly serrate, apex obtuse or slightly 3-lobed ........................................................................................................................................... 33. S. yunnanensis

1b. Leaf blade margin deeply serrate, not pubescent.

2a. Leaf blade margin densely sharply serrate, sometimes doubly serrate

2b. Leaf blade margin deeply incised doubly serrate

1a. Spiraea salicifolia var. salicifolia

1b. Spiraea salicifolia var. grosseserrata

Leaf blade margin densely sharply serrate, sometimes doubly serrate.

River banks, damp grasslands, gullies, clearings; 200–900 m. Hebei, Heilongjiang, Jilin, Liaoning, Nei Mongol, Shansi [Japan, Korea, Mongolia, Russia; Europe, North America].


巨齿绣线菊 jù chǐ xiù xiàn jú

Leaf blade margin deeply incised doubly serrate.

River banks, slopes. Heilongjiang, Jilin.


贫齿绣线菊 pín chǐ xiù xiàn jú

Leaf blade margin entire or distantly shallowly serrate above middle, thinly pubescent.
2. **Spiraea japonica** Linnaeus f., Suppl. Pl. 262. 1782.


- Forests, forested slopes, forest clearings, thickets, grassy slopes, mountain valleys, gullies, river banks, alpine steppes, rocky and stony places; also commonly cultivated; 700–4000 m. Anhui, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Henan, Hunan, Jiangsu, Jiangxi, Shaanxi, Shandong, Sichuan, Xizang, Yunnan, Zhejiang (Japan, Korea).

Eight varieties may be recognized in China. In addition, **Spiraea japonica** var. *stellaris* Rehder (in Sargent, Pl. Wilson. 1: 452. 1913) was described on the basis of a fruiting specimen (*A. Henry 9280*) from W Yunnan.

1a. Leaf blades glabrous on both surfaces.  
2a. Inflorescences glabrous .......................... 2b. var. *glabra*

2b. Inflorescences pubescent.  
3a. Leaf blades elliptic or broadly ovate, 2–4 cm, margin crenulate to doubly serrate, apex obtuse or subacute; inflorescences 7–12 cm in diam.; flowers white .............................. 2f. var. *ovalifolia*  
3b. Leaf blades oblong-lanceolate, 5–10 cm, margin sharply doubly serrate, apex shortly acuminate; inflorescences 4–8 cm in diam.; flowers pink ............................. 2g. var. *fortunei*

1b. Leaf blades pubescent abaxially.  
4a. Leaf blade apex acute.  
5a. Leaf blades ovate to ovate-elliptic, base cuneate, margin incised doubly serrate, rarely singly serrate; inflorescences 4–14 cm in diam.  
.......................... 2a. var. *japonica*

5b. Leaf blades ovate to elliptic, base broadly cuneate to rounded, margin distantly doubly serrate; inflorescences 2.5–4 cm in diam.

4b. Leaf blade apex acuminate.  
6a. Leaf blade margin not pinnatifid, sharply doubly serrate ........... 2c. var. *acuminata*  
6b. Leaf blade margin incised pinnatifid and doubly serrate.  
7a. Leaf blades ovate-oblong to oblong-lanceolate, 6–9 × 1–3 cm, base broadly cuneate to rounded; inflorescences 5–7 cm in diam.  
............................... 2d. var. *incisa*  
7b. Leaf blades oblong-lanceolate, 13–16 × 3–4 cm, base cuneate; inflorescences 7–14 cm in diam.  
.......................... 2e. var. *pinnatifida*

2a. **Spiraea japonica** var. *japonica*


- Forests, forested slopes, forest clearings, thickets, grassy slopes, mountain valleys, gullies, river banks, alpine steppes, rocky and stony places; also commonly cultivated; 700–4000 m. Anhui, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Henan, Hunan, Jiangsu, Jiangxi, Shaanxi, Shandong, Sichuan, Xizang, Yunnan, Zhejiang (Japan, Korea).

Eight varieties may be recognized in China. In addition, **Spiraea japonica** var. *stellaris* Rehder (in Sargent, Pl. Wilson. 1: 452. 1913) was described on the basis of a fruiting specimen (*A. Henry 9280*) from W Yunnan.

1a. Leaf blades glabrous on both surfaces.  
2a. Inflorescences glabrous .......................... 2b. var. *glabra*

2b. Inflorescences pubescent.  
3a. Leaf blades elliptic or broadly ovate, 2–4 cm, margin crenulate to doubly serrate, apex obtuse or subacute; inflorescences 7–12 cm in diam.; flowers white .............................. 2f. var. *ovalifolia*  
3b. Leaf blades oblong-lanceolate, 5–10 cm, margin sharply doubly serrate, apex shortly acuminate; inflorescences 4–8 cm in diam.; flowers pink ............................. 2g. var. *fortunei*

1b. Leaf blades pubescent abaxially.  
4a. Leaf blade apex acute.  
5a. Leaf blades ovate to ovate-elliptic, base cuneate, margin incised doubly serrate, rarely singly serrate; inflorescences 4–14 cm in diam.  
.......................... 2a. var. *japonica*

5b. Leaf blades ovate to elliptic, base broadly cuneate to rounded, margin distantly doubly serrate; inflorescences 2.5–4 cm in diam.

羽叶绣线菊 由叶绣线

Leaf blades oblong-lanceolate, 13–16 × 3–4 cm, base cuneate, margin incised pinnatifid, sharply doubly serrate. Inflorescences 7–14 cm in diam.

- Slopes in mixed forests; ca. 2900 m. Xizang.


椭圆绣线菊 椭圆绣线

Leaf blades ovate-oblong to long elliptic, 3.5–9 cm, margin crenate to doubly serrate, slightly revolute, slightly spreading, subglabrous or puberulous on adaxial suture; styles persistent, spreading. Fl. May–Jun, fr. Aug–Sep.

- Montane regions; 3000–3500 m. C Taiwan.


假绣线菊 假绣线

*Spiraea formosana* Hayata var. *brevistyla* Hayata; *S. japonica* Linnaeus f. var. *formosana* (Hayata) Masamune subvar. *brevistyla* (Hayata) Masamune

- Shrubs to 1.5 m tall. Branches reddish brown, slender; young branchlets terete, puberulous. Petiole 1–2 mm, winged, pubescent; leaf blade paler abaxially, green adaxially, ovate-oblong, 2–3.5 × 1–1.8 cm, papery, glabrous on both surfaces, midvein and 4 or 5 pairs of lateral veins raised abaxially, slightly depressed adaxially, base cuneate, margin sharply doubly serrate, apex acute to acuminate. Corymbs terminal, compound, to 5 × 5.5 cm; rachis and pedicels finely pubescent; pedicels slender, 3–4 mm, to 6–8 mm in fruit; bracts subulate, ca. 1 mm. Flowers 4–5 mm in diam. Hypanthium rotate-campanulate, pubescent abaxially. Sepals triangular, 0.5–1 mm, apex subacute. Petals obovate, 2–3 mm, apex obtuse or submarginate. Stamens ca. 20, long exerted; filaments 4–5 mm. Follicles erect, 2–3 mm, glabrous, slightly rostrate.

- Mixed forests, thickets on slopes; 2800–3300 m. Sichuan, Xizang, Yunnan.
6. **Spiraea bella** Sims, Bot. Mag. 50: t. 2426. 1823.

**Zang nan xiu xian ju**

Shrubs deciduous, to 2 m tall. Branchlets yellow-brown to red-brown, slightly angled, subglabrous to pubescent; buds ovoid, 5–6 mm, lustrous, robust, conspicuously angled, glabrous or sparsely pubescent when young, later glabrescent; rachis and pedicels 5–8 mm; bracts elliptic-lanceolate, 3–5 mm, puberulous, apex acuminate. Hypanthium campanulate, glabrous throughout. Flowers ± unisexual, 5–7 mm in diam. Sepals triangular-ovate, 1.5–2.5 × 1.5–2 mm, reflexed in fruit, margin irregularly doubly or singly serrate, apex acute. Petals white, pinkish in bud, ovate, 2–4 × 2–2.5 mm, glabrous, apex obtuse. Carpels suberect, spreading, glabrous or pubescent only on adaxial suture; styles terminal, erect or slightly divergent.


**Da ye hua bei xiu xian ju**

Shrubs deciduous, 1–2 m tall. Branchlets purple-brown to brownish, lustrous, robust, conspicuously angled, glabrous or sparsely pubescent when young, later glabrescent; rachis and pedicels pubescent on both surfaces, mostly longer than petals, base broadly cuneate. Fruiting inflorescences more than 6 cm in diam.

8. **Spiraea hemicryptophyta** Grierson (Notes Roy. Bot. Gard. Edinburgh 44: 262. 1987), described from China (SE Xizang, NW Yunnan), N Myanmar, Nepal, and Sikkim, may be synonymous with *S. bella* and that further study is necessary to determine its identity. The new species was said to differ from *S. bella* in having stems annual, rarely branched, 20–40 cm tall, and corymbs all terminal.

**7a. Spiraea fritschiana** var. **fritschiana**

Leaf blades 3–8 × 1.5–3.5 cm, ± pubescent on both surfaces or glabrous adaxially, base broadly cuneate. Fruiting inflorescences more than 6 cm in diam.
7c. Spiraea fritschiana var. parvifolia Liou, Ill. Fl. Lig. Pl. N. E. China, 279, 563. 1955.

小叶华北绣线菊   xiao ye hua bei xiu xian ju

Leaf blades broadly ovate, ovate-elliptic, or suborbicular, 1.5–3 × 1–2 cm, glabrous on both surfaces. Fruiting inflorescences 3–6 cm in diam.


长蕊绣线菊   chang rui xiu xian ju

Spiraea silvestris Nakai.

Shrubs erect, 1–2 m tall. Branchlets red-brown or gray-brown, terete or slightly angled, pubescent when young, finally glabrous; buds ovoid, 1–2 mm, with several scales, glabrous, apex subobtuse. Petiole 2–5 mm, glabrous; leaf blade occasionally glaucescent abaxially, ovate or oblong-ovate to broadly lanceolate, 4–7 × 1–2 cm, membranous, glabrous or slightly puberulous on both surfaces, veins slightly raised abaxially, base subrounded or broadly cuneate, margin sharply serrate or doubly serrate, sometimes incised serrate, apex acute to acuminate. Corymbs terminal, compound, 4–6(–8) × 3–6 cm, many flowered; rachis and pedicels glabrous or pubescent; pedicels 6–10 mm; bracts linear, 2–3 mm. Flowers 6–7 mm in diam. Hypanthium campanulate or obconic, glabrous abaxially. Sepals triangular-ovate, 1.5–2 mm, spreading in fruit. Petals white, orbicular or obovate, (2–)3–4 × 2–3 mm, glabrous, base shortly clawed. Stamens 20–25, nearly equaling petals. Disk annular, crenulate. Carpels fusiiform, slightly tomentose; styles shortly clawed. Follicles 1.5–1.8 × 0.7–0.8 mm, slightly gray tomentose; styles recurved. Seeds linear. Fl. May–Jun, fr. Jul–Aug.

Mixed forests, forest margins, slopes, gullies; 1000–2000 m. Anhui, Hubei, Shaanxi, Sichuan, Yunnan [Japan].

Three varieties occur in China; var. miyabei is native to Japan.

1a. Leaf blades ± pubescent on both surfaces, more densely so abaxially ......................... 8c. var. pilosula

1b. Leaf blades glabrous on both surfaces.

2a. Leaf blades 5–7 cm, not glaucescent abaxially, base subrounded or broadly cuneate; petiole 3–5 mm ............... 8a. var. glabrata

2b. Leaf blades to 7 cm, glaucescent abaxially, base cuneate; petiole to 1 cm ........................................... 8b. var. tenuifolia


无毛长蕊绣线菊   wu mao chang rui xiu xian ju

Petiole 1 cm; leaf blade not glaucescent abaxially, 5–7 cm, glabrous on both surfaces, base subrounded or broadly cuneate. Inflorescences and hypanthium abaxially glabrous.


细叶长蕊绣线菊   xi ye chang rui xiu xian ju

Petiole to 1 cm; leaf blade glaucescent abaxially, to 7 cm, glabrous on both surfaces, base cuneate. Inflorescences and hypanthium abaxially glabrous.

- Mountain slopes; C Sichuan (Emei Shan).


毛叶长蕊绣线菊   mao ye chang rui xiu xian ju

Leaf blade ± pubescent on both surfaces, more densely so abaxially, base cuneate. Inflorescences and hypanthium abaxially sparsely pubescent.

- Mountain forests; 1000–1600 m. Hubei, Sichuan, Yunnan.


翠蓝茶   cui lan cha

Spiraea omiensis Hemsley.

Shrubs 1–3 m tall. Branchlets brownish, red-brown, or gray-brown, terete, pubescent when young, later glabrescent; buds brown when young, ovoid, with several scales, pubescent when young, apex usually obtuse, rarely acute. Petiole 2–5 mm, thinly villous; leaf blade adaxially dark green, elliptic-elliptic-oblong, or obovate-oblong, 2–7 × 0.8–2.3 cm, abaxially densely thinly villous, more densely on veins, adaxially glabrous or sparsely softly hairy, base cuneate, margin sometimes with a few coarse teeth above middle, sometimes entire, apex acute or subobtuse. Corymb terminal on short, lateral branchlets, compound, 3–7 × 4–7 cm, many flowered; rachis and pedicels glabrous or villous; pedicels 5–8 mm; bracts lanceolate, rarely narrowly elliptic, 2–4 mm, more densely villous abaxially, sparsely so adaxially. Flowers 5–6 mm in diam. Hypanthium campanulate, ± thinly villous. Sepals ovate-triangular, 1–1.5 × 1–1.5 mm, erect in fruit, apex acute. Petals white, broadly obovate to suborbicular, 2–2.5 × 2–3 mm, glabrous, base shortly clawed, apex often emarginate, rarely obtuse. Stamens ca. 20, nearly equaling petals. Disk annular, with 10 thick, globular lobes. Styles slightly shorter than stamens. Follicles spreading, thinly villous; styles terminal, slightly divergent. Fl. Apr–May, fr. Jul–Aug.

- Mixed forests, roadside thickets, foothills, slopes; 1300–3000 m. Gansu, Guizhou, Henan, Hebei, Shaanxi, Sichuan, Yunnan.

Three varieties occur in China; var. henryi is native to Japan.

1a. Inflorescences villous; leaf blades densely thinly villous abaxially ......................... 9a. var. henryi

1b. Inflorescences glabrous; leaf blades subglabrous or sparsely villous abaxially

9a. Spiraea henryi var. henryi

翠蓝茶(原变种)   cui lan cha (yuan bian zhong)

Leaf blades densely thinly villous abaxially. Inflores-


9b. Spiraea henryi ❏ e mei cui lan cha

Spiraea henryi var. glabrata ❏ T. T. Yu & L. T. Lu.

Leaf blades subglabrous or sparsely villous abaxially. Inflorescences glabrous.

- Roadside thickets, slopes; 1300–1500 m. C Sichuan (Emei Shan).


Round stem ❏ yuan zhi xiu xian ju

Spiraea aemulans ❏ Rehder.

Spiraea henryi var. mao wen xiu xian ju

Shrubs to 2 m tall. Branchlets spreading, red-brown to gray-brown, slender, terete, sometimes angled, pubescent when young, finally glabrous; buds brown, ovoid, small, with several scales, pubescent initially, apex obtuse or acute. Stems ca. 20, nearly equaling petals. Disk annular, 10-lobed; lobes emarginate at apex. Carpels pubescent basally; styles shorter than stamens. Follicles spreading, glabrous or hairy on adaxial suture; styles terminal on abaxial side, slightly divergent. Fl. Jun-Jul, fr. Sep-Oct.

- Thickets, open slopes, roadsides; 1000–2400 m. Henan, Hubei, Sichuan, Yunnan.

1000–3200 m. Gansu, Guizhou, Henan, Hubei, Shaanxi, Sichuan, Yunnan.


Mao Mei Cui Lan ❏ mao wen xiu xian ju

Spiraea aemulans ❏ Rehder.

Spiraea henryi var. mao wen xiu xian ju

Shrubs to 2 m tall. Branchlets arching; branchlets brown or reddish-brown, angled, densely yellow villous initially, finally glabrescent; buds ovoid, with several scales, pubescent, apex acute. Petiole 1–2 mm, densely villous; leaf blade abaxially yellowish green, elliptic to obovate-oblong, 1.5–2 × 0.8–1 cm, abaxially densely tomentose initially, later papillose, adaxially sparsely tomentose, lateral veins 3 or 4 on each side of midvein, base broadly cuneate, margin with a few coarse teeth above middle or near apex, apex acute or subobtuse. Flowers 6–7 mm in diam. Hypanthium campanulate, villous abaxially. Sepals triangular, 1–1.5 mm, erect or spreading in fruit, apex obtuse. Petals suborbicular, 1.5–2 mm in diam., glabrous, base slightly clawed. Stamens 25–30, nearly equaling stamens. Disk distinct, 10-lobed. Styles slightly shorter than sepals. Follicles somewhat erect, softly hairy; styles terminal, slightly divergent.

- Forested slopes, mountain valleys; 2000–2200 m. C Yunnan.


圆枝绣线菊 ❏ yuan zhi xiu xian ju

Shrubs 1.5–2.5 m tall. Branchlets spreading, arching, brownish or purplish turning purple-brown or gray-brown when old, terete, pubescent, finally glabrous; buds ovoid, with a few scales, pubescent, apex obtuse. Petiole 2–5 mm, villous; leaf blade abaxially yellow-green, oblong, obovate, or elliptic-oblong, 1–3 × 0.5–1 cm, abaxially villous, more densely so on veins, adaxially sparsely villous, base cuneate, margin entire or with a few teeth apically, apex acute, rarely obtuse. Flowers 6–7 mm in diam. Hypanthium campanulate, villous abaxially. Sepals triangular, 1–2 mm, erect in fruit, apex acute. Petals white, broadly obovate or suborbicular, 2–3 mm, almost as broad as long, apex emarginate or subobtuse. Stamens ca. 20, subequaling petals. Disk annular, 10-lobed; lobes sometimes emarginate at apex. Styles shorter than stamens. Follicles spreading, densely pubescent; styles terminal on abaxial side, slightly divergent. Fl. May–Jul, fr. Aug–Sep.

- Mountain valley forests, rocky slopes, open places, roadsides; 1000–3200 m. Gansu, Guizhou, Henan, Hubei, Shaanxi, Sichuan, Yunnan.


陕西绣线菊 ❏ shan xi xiu xian ju

Shrubs 1.5–3 m tall. Branchlets arching, laxly branched, yellowish or purple-yellowish, grooved, puberulous; young branchlets red-brown or brownish, grayish when old, terete; buds small, ovoid, with several scales, pilose. Petiole 1–2 mm, puberulous; leaf blade abaxially gray-green, adaxially greenish, ovate or ovate-elliptic, 6–11 × 4–7 mm, abaxially gray-green, pilose initially, later glabrous, papillose, adaxially greenish, slightly pubescent when young, later glabrous, lateral veins 3 or 4 on each side of midvein, prominent abaxially, base cuneate, margin entire; apex obtuse, sometimes subemarginate. Corymbs compound, 1–3 × 1.5–2.5 cm, up to 25-flowered; rachis and pedicels densely finely pubescent; pedicels 5–9 mm; bracts lanceolate or linear, 2–3 mm, thinly pubescent. Flowers 5–6 mm in diam. Hypanthium turbinate, thinly pubescent abaxially. Sepals broadly triangular, 1–1.5 mm, about as broad as long, apex acute. Petals white, suborbicular, 1.5–2 mm in diam., glabrous, base shortly clawed. Stamens ca. 20, nearly equaling petals. Disk annular, 10-lobed. Carpels sparsely hairy basally; styles terminal, much shorter than stamens.

**川滇绣线菊**  guang tuo xiu xian ju

Shrubs 2–3 m tall. Branches spreading, slender; branchlets dark red-brown, turning brown or gray-brown when old, terete, glabrous; buds ovoid, small, with several scales, pubescent when young, finally glabrescent, apex obtuse. Petiole 3–5 mm, glabrous or puberulous; leaf blade abaxially greenish, adaxially dark green, broadly elliptic to oblong, rarely obovate, 1.5–3.5 × 1–2 cm, glabrous on both surfaces or sparsely pubescent on veins abaxially, base broadly cuneate or subrounded, margin entire, rarely with a few shallow teeth apically, apex obtuse, rarely acute. Corymbs terminal on lateral branchlets, compound, 3.5–6 × 3.5–5.5 cm, many flowered; rachis and pedicels glabrous; pedicels 4–7 mm; bracts elliptic to lanceolate, 7–10 × 1–1.5 mm, glabrous. Flowers 5–6 mm in diam. Hypanthium campanulate, glabrous abaxially. Sepals ovate-triangular, 1.5–2 mm, erect in fruit, apex acute. Petals white, broadly ovate or suborbicular, 1.5–2 × ca. 2 mm, glabrous, base shortly clawed, apex obtuse. Stamens ca. 20, subequaling to slightly longer than petals. Disk annular, 10-lobed; lobes sometimes emarginate at apex. Carpels puberulous; styles shorter than stamens. Follicles spreading, glabrous or puberulous only on adaxial suture; styles terminal on abaxial side, suberect or divergent. Fl. May–Jun, fr. Jul–Sep.


**鄂西绣线菊** e xi xiu xian ju

*Spiraea atemnophylla* H. Léveillé.

Shrubs 2–4 m tall. Branchlets arching, red-brown to gray-brown, slender, terete, slightly angled, pubescent when young, later glabrous; buds ovoid, small, with several scales, pubescent, apex acute or obtuse. Petiole 2–3 mm, thinly pubescent; leaf blade abaxially gray-green, glaucescent, adaxially green, oblong, elliptic, or obovate, 1.5–3 × 0.7–1 cm, abaxially sometimes thinly pubescent, adaxially glabrous, inconspicuously pinnately veined, base cuneate, margin entire, apex obtuse or mucronulate. Corymbs terminal on lateral branchlets, compound, dense, 4–8 × 4.5–7 cm, numerous flowered; rachis and pedicels densely thinly pubescent; pedicels 3–4 mm. Flowers 4–5 mm in diam. Hypanthium campanulate, puberulous abaxially. Sepals triangular, 1–1.5 mm, erect in fruit, apex acute. Petals white, ovate or suborbicular, 1.5–2 × 1–2 mm, glabrous, base shortly clawed, apex obtuse. Stamens ca. 20, somewhat longer than petals. Disk annular, 10-lobed; lobes shallow, apex usually slightly emarginate. Carpels subglabrous; styles shorter than stamens. Follicles spreading, small, glabrous; styles terminal on abaxial side, divergent. Fl. May–Jul, fr. Jul–Oct.


**川滇绣线菊** chuan dian xiu xian ju

Shrubs 1–2 m tall. Branchlets red-brown, later gray-brown, angled, villous, later glabrescent; buds ovoid, with several brown scales, puberulous, later glabrescent, apex subobtuse or acute. Petiole 1–3 mm, usually glabrous; leaf blade ovate to ovate-oblong, 8–15 × 5–8 mm, glabrous or thinly villous near margin on both surfaces, veins indistinct, sometimes 3-veined basally, base cuneate to rounded, margin entire, rarely with a few teeth apically, apex obtuse or subacute. Corymbs terminal on short, lateral branchlets, compound, 2.5–5 × 3–6 cm, many flowered; rachis and pedicels glabrous to thinly villous; pedicels 4–9 mm; bracts lanceolate, 2–3 mm, puberulous, caducous, base cuneate, margin entire, apex acute. Flowers 5–6 mm in diam. Hypanthium campanulate, ± thinly pubescent. Sepals ovate-triangular, 1.5–2 mm, erect in fruit. Petals white, orbicular or ovate, 2–2.5 × 2 mm, glabrous, base shortly clawed, apex obtuse or emarginate. Stamens ca. 20, slightly longer than petals. Disk annular, 10-lobed; lobes sometimes emarginate at apex. Carpels puberulous; styles shorter than stamens. Follicles spreading, glabrous or puberulous only on adaxial suture; styles terminal on abaxial side, suberect or divergent. Fl. May–Jun, fr. Jul–Sep.

- Mountain forests; 2500–3000 m. S Sichuan.

16a. Young branchlets and inflorescences thinly villous, rarely subgla

16b. Young branchlets and inflorescences usually glabrous

16a. *Spiraea schneideriana* var. *schneideriana*

川滇绣线菊(原变种) chuan dian xiu xian ju (yuan bian zhong)

Young branchlets and inflorescences thinly villous, rarely subglabrous.

- Mixed forests, alpine coniferous forest margins, thickets; 2500–4000 m. Fujian, Gansu, Hubei, Shaanxi, Sichuan, Xizang, Yunnan.


**无毛川滇绣线菊** wu mao chuan dian xiu xian ju

Young branchlets and inflorescences usually glabrous.

- Forests, mountain valleys, rocky slopes, stream sides; 2500–3800 m. Gansu, Shaanxi, Sichuan, Xizang, Yunnan.


**伏毛绣线菊** fu mao xiu xian ju

Shrubs erect, 1–3 m tall. Branchlets brownish red to brown, terete, sparsely pubescent initially, finally glabrous; buds small, with 2 scales, glabrous. Petiole 1–2 mm, subglabrous; leaf blade abaxially glaucescent, adaxially dark green, elliptic or elliptic-ovate, 2.2–5.8 × 1–1.5 cm, abaxially accumbent pilose on veins, adaxially glabrous, lateral veins 4–6 on each side of midvein, slightly raised abaxially, base broadly cuneate, margin ciliate, sharply singly serrate except toward base, apex acute. Corymbs terminal on short, lateral branchlets, compound,

- Moist mixed forests; 2000–2400 m. Yunnan.

Lu (Acta Phytotax. Sin. 38: 276. 2000) made the combination *Spiraea teniana var. mairei* (H. Léveillé) L. T. Lu, based on *S. mairei* H. Léveillé (Bull. Acad. Int. Géogr. Bot. 25: 43. 1915), described from NE Yunnan (Qiaojia Xian). However, if the two species are indeed conspecific, the name *S. mairei* (1915) has priority over *S. teniana* (1920).


兴山绣线菊 xīng shān xiù xiàn ju

Shrubs 1–2 m tall. Branchlets brownish, glabrous; buds ovoid, with 2 scales, glabrous, apex acuminate. Petiole 5–7 mm, glabrous; leaf blade ovate to ovate-elliptic, 5–7.5 × 2.5–3.5 cm, abaxially softly hairy on veins and in vein axes, adaxially glabrous, base broadly cuneate, margin subobtusely singly serrate or doubly serrate, apex acute to shortly acuminate. Corymbs terminal on short, lateral branchlets, compound, 5–7 × 4–6 cm, many flowered; rachis and pedicels glabrous; pedicels 4–6 mm; bracts lanceolate or narrowly elliptic, 3–5 mm, glabrous, apex acute to shortly acuminate. Flowers 3–4 mm in diam. Hypanthium campanulate, glabrous abaxially. Sepals triangular, 1–1.5 × 1–1.5 mm, reflexed, rarely erect in fruit. Petals white, suborbicular, 2–3 × 2–3 mm, glabrous. Stamens much longer than petals. Disk annular, crenate. Follicles spreading, densely pubescent; styles terminal, divergent.

- Forests, thickets, shady slopes. W Hubei.


新高山绣线菊 *xīn gāo shān xiù xiàn ju*

*Spiraea japonica* Linnaeus f. var. *morrisonicola* (Hayata) Kitamura.

Shrubs or subshrubs to 50 cm tall. Branchlets brownish or red-brown to gray-brown, slender, terete, pubescent when young, gradually glabrescent; buds ovoid, minute, with 2 brownish scales, puberulous, apex acute or subobtuse, petiole 1–3 mm, glabrous; leaf blade ovate or rhombic-ovate, 10–20 × 8–14 mm, glabrous on both surfaces, lateral veins distinctly raised abaxially, depressed adaxially, base cuneate to broadly so, rarely subrounded, margin entire toward base, grossly sharply serrate distally, apex obtuse or acute. Corymbs terminal on short, lateral branchlets, compound, 1.5–3 × 2–4 cm, densely many flowered; rachis and pedicels glabrous; pedicels 3–6 mm; bracts 8–12 mm, glabrous, apex with a few teeth or entire. Flowers 4–5 mm in diam. Hypanthium campanulate, glabrous abaxially. Sepals broadly triangular or ovate, 1–2 mm, erect in fruit, apex mucronate. Petals white, broadly obovate to suborbicular, longer than sepals, glabrous, base shortly clawed, apex obtuse. Stamens 10–12, nearly equaling to slightly longer than petals. Disk annular, 10-lobed; lobes triangular, apex obtuse. Carpels puberulous basally; styles subequaling stamens. Follicles slightly spreading, puberulous on adaxial suture; styles terminal on abaxial side, divergent, mostly deciduous when ripe. Fl. Jul–Aug. fr. Sep–Oct.

- Moist regions; below 4000 m. Taiwan.


贵州绣线菊 guī zhōu xiù xiàn jú

Shrubs ca. 0.5 m tall. Branchlets slightly tortuous, dark red-brown, terete, glabrous; buds long ovoid, with 2 scales, glabrous, apex acuminate. Petiole 2–5 mm, glabrous; leaf blade purplish abaxially, ovate, 1.5–4 × 1–3 cm, glabrous on both surfaces, base rounded to subcordate, margin doubly serrate, apex acute. Corymbs terminal on short, lateral branchlets, compound, 2–4 × 3–5 cm, many flowered; rachis and pedicels globose; pedicels 2–4 mm; bracts linear-lanceolate, longer than pedicels, glabrous. Hypanthium campanulate, glabrous abaxially. Sepals triangular, 1–1.5 × 1–1.5 mm, apex acute. Petals pink, suborbicular, longer than sepals, glabrous, base shortly clawed. Stamens 25–30, longer than petals. Disk annular; lobes inconspicuous. Carpels glabrous; styles terminal. Follicles unknown. Fl. Jun–Jul.

- Rocky mountain summits; below 2000 m. NE Guizhou (Fanjing Shan).


绒毛绣线菊 róng máo xiù xiàn jú

Shrubs to 2 m tall. Branchlets spreading, yellow-brown turning gray-brown, robust, slightly angled, densely villous when young, gradually glabrescent; buds long ovoid, nearly equaling to longer than petioles, with 2 scales, densely tomentose-villos, apex acuminate. Petiole 3–5 mm, densely villous; leaf blade adaxially dark green, ovate or ovate-lanceolate, 3–8 × 1.5–3.5 cm, subglabrous on both surfaces or abaxially densely sericeous-villos (especially on veins) and adaxially pilose, base cuneate, margin coarsely serrate with a few double teeth, apex acute. Corymbs terminal on short, lateral branchlets, compound, 3–6 × 4–7 cm, sometimes to 14 cm in fruit, many flowered; rachis and pedicels thinly villous; pedicels 5–7 mm; bracts linear-lanceolate or ovate-lanceolate, 5–7 mm, villous on both surfaces. Flowers 5–6 mm in diam. Hypanthium campanulate, villous abaxially. Sepals triangular, 1–2 mm, reflexed in fruit, apex acute. Petals white, suborbicular, 2–3 × 2–3 mm, apex obtuse. Stamens ca. 20, longer than petals. Disk annular, 10-lobed; lobes broad, apex usually emarginate. Styles longer than stamens. Follicles spreading, densely gray-white villous; styles terminal, slightly divergent. Fl. May–Jun, fr. Aug–Oct.


21a. Spiraea velutina var. velutina

Leaf blades densely sericeous-villous, especially on veins abaxially.

1a. Leaf blades densely sericeous-villous, especially on veins abaxially .................. 21a. var. velutina
densely sericeous-villous, especially on veins abaxially.

1b. Leaf blades glabrescent, subglabrous, or sparsely hairy only on veins abaxially

21b. var. glabrescens

21a. Spiraea velutina var. velutina

Leaf blades glabrescent, subglabrous, or sparsely hairy only on veins abaxially.

Shrubs to 2.5 m tall. Branchlets slightly tortuous, brown to gray-brown, slender, puberulous when young, later glabrous; buds long ovoid, usually longer than petioles, with 2 scales, glabrous, apex acuminate. Petiole 2–5 mm, glabrous; leaf blade ovoid-lanceolate to oblanceolate, 2–4 × 1–2 cm, abaxially glabrous or pilose on veins, adaxially pilose initially, glabrescent later, base broadly cuneate or rounded, margin incised doubly serrate and with some simple teeth, apex acute. Corymbs terminal on lateral branchlets, compound, 4–8 × 4–6(–8) cm, densely many flowered; rachis and pedicels pilose or subglabrous; pedicels 4–6 mm; bracts ovate-lanceolate to linear-lanceolate, 4–6 mm, pubescent on both surfaces when young, eventually glabrescent. Flowers 5–6 mm in diam. Hypanthium campanulate, ± pubescent abaxially. Sepals triangular, 1–1.5 mm, reflexed in fruit, petals white, suborbicular, 2–2.5 mm, about as broad as long, glabrous, base shortly clawed, apex obtuse. Styles shorter than stamens. Follicles spreading, pilose or glabrous; styles terminal on abaxial side, divergent. Fl. May–Jul, fr. Aug–Oct.

22. Spiraea arcuata

Shrubs to 2 m tall. Branchlets spreading, yellow-brown, pubescent when young, later glabrescent; buds long ovoid, nearly equaling petioles, with 2 scales, glabrous, apex acuminate. Petiole 5–7 mm, hairy; leaf blade abaxially gray-green, adaxially green, ovate-oblong to ovate-lanceolate, 2.5–5(–8) × 1–2(–3) cm, abaxially pubescent, more densely so on veins, adaxially pilose, base rounded to subtruncate, margin incised doubly serrate, apex acute or shortly acuminate. Corymbs terminal on lateral branchlets, compound, 6–10 × 7–11 cm, many flowered; rachis and pedicels pubescent; pedicels 5–7 mm; bracts ovate-lanceolate to linear-lanceolate, 5–8 mm, pubescent on both surfaces, base cuneate, margin with a few teeth, apex acute. Flowers 5–7 mm in diam. Hypanthium campanulate, ± pubescent abaxially. Sepals triangular, 1–2 mm, reflexed in fruit, petals white. Petals ovate to suborbicular, 2–3.5 × 2–3 mm, glabrous, base shortly clawed, apex obtuse. Styles shorter than stamens. Follicles spreading, pubescent; styles terminal, divergent.

- Broad-leaved and mixed forests, thickets, slopes, gullies, river banks; 2000–3300 m. Xizang, Yunnan.
- Leaf blades densely sericeous-villous, especially on veins abaxially.

1a. Leaf blades densely sericeous-villous, especially on veins abaxially .................. 21a. var. velutina
densely sericeous-villous, especially on veins abaxially.

1b. Leaf blades glabrescent, subglabrous, or sparsely hairy only on veins abaxially

21b. var. glabrescens

21a. Spiraea velutina var. velutina

Leaf blades glabrescent, subglabrous, or sparsely hairy only on veins abaxially.

Shrubs small. Branches arched, dark brown, shining, stout, slightly angled, deeply grooved, glabrous when old; buds long ovoid, with 2 scales. Petiole short, slender, glabrous or subglabrous; leaf blade long elliptic to ovate, 8–12 × 3–5 mm, glabrous or subglabrous on both surfaces, base cuneate, margin entire or obtusely 3–8-serrate or lobed apically, apex obtuse,

**楔叶绣线菊** xie ye xiu xian ju

Shrubs 2–4 m tall. Branches tortuous; branchlets brown or gray-brown, angled, pubescent when young, later glabrescent; buds long ovoid, with 2 brown scales, apex acute to shortly acuminate. Petiole 2–4 mm, pubescent; leaf blade ovate or obovate to obovate-lanceolate or oblong, 1–2 × 0.8–1.2 cm, abaxially pubescent, sometimes subglabrous or glabrous, adaxially often glabrous, base cuneate, margin entire or obtusely 3–5-dentate above middle, apex obtuse, sometimes inconspicuously 3-lobed. Corymbs terminal, compound, 2–4 mm, pubescent. Flowers 5–6 mm in diam. Hypanthium campanulate, pubescent abaxially. Sepals triangular, 2–2.5 mm, erect or spreading in fruit, apex acute. Petals white or pinkish, suborbicular, 1.5–2.5 mm, many flowered; rachis and pedicels densely pubescent; pedicels 4–8 mm; bracts linear, 2–4 mm, pubescent. Follicles 5–6 mm in diam. Hypanthium campanulate, pubescent abaxially. Sepals triangular, 2–2.5 mm, erect or spreading in fruit, apex acute. Petals white, suborbicular, 1.5–2.5 mm, about as long, apex obtuse. Petals white, broadly obovate or suborbicular, 1.5–3 × 0.7–1.5 cm, glabrous on both surfaces, base cuneate, margin entire (leaves on sterile shoots with a few teeth near apex), apex acute or subobtuse. Corymbs terminal on short, lateral branchlets, compound, 4–7 × 3.5–5 cm, many flowered; rachis and pedicels densely pubescent; pedicels 5–9 mm; bracts linear or lanceolate, 4–6 mm, sometimes larger and leaflike at base of pedicels, pubescent. Flowers 5–7 mm in diam. Hypanthium campanulate, pubescent abaxially. Sepals triangular, 1.5–2 mm, usually persistent and erect in fruit, apex acute. Petals white, broadly obovate or suborbicular, 2–3.5 mm, about as broad as long, glabrous, apex emarginate or obtuse. Stamens 9–12, subequaling petals; disk annular; lobes irregular, apex emarginate. Styles shorter than stamens. Follicles erect, densely pubescent; styles terminal on abaxial side, divergent. Fl. Jul.–Aug. 

26a. **Spiraea canescens** var. canescens

**楔叶绣线菊** xie ye xiu xian ju (yuan bian zhong)

*Spiraea rotundifolia* Lindley; *S. canescens* var. *oblanceolata* Rehder.

Leaf blades ovate or obovate to obovate-lanceolate, abaxially pubescent, sometimes subglabrous, margin entire or obtuse 3–5-dentate above middle. Follicles slightly pubescent.

- Gallicy, slopes, cliffs; 1000–2400 m. Gansu, Henan, Nong Mongol, Shaanxi, Shanxi.


金州绣线菊 jin zhou xiu xian ju

Shrubs much branched. Branchlets tortuous, gray-brown, dark brown, or dark purple-brown, pubescent when young; buds ovoid, with several brownish scales, pubescent, apex subobtuse. Petiole 1–3 mm, densely sericeous-pubescent; leaf blade abaxially greenish, adaxially green, rhombic-ovate to elliptic, rarely obovate, 7–24 × 4–8 mm, abaxially sericeous-pubescent, adaxially sparsely pubescent, base cuneate, margin deeply obtusely serrate, 3-lobed apically, middle lobes larger, apex obtuse. Umbels on short, lateral, leafy branchlets, pedunculate, 2–3 cm, 7–25-flowered; pedicels 6–10 mm, pubescent; bracts linear, puberulous. Flowers 5–6 mm in diam. Hypanthium campanulate, pubescent abaxially. Sepals triangular, erect in fruit, apex acute or shortly acuminate. Petals white, broadly obovate or suborbicular, 2–3 mm, about as broad as long, apex obtuse or emarginate. Styles shorter than stamens. Disk undulate annular or irregularly lobed. Stamens 22–25, shorter than to nearly equaling petals. Disk annular, 10-lobed; lobes obtuse at apex, rarely suborbicular, 2.5–3 × 3–4 mm, glabrous, base shortly clawed, apex obtuse or emarginate. Stamens 18–20, shorter than petals. Disk annular, 10-lobed; lobes broad, apex emarginate. Carpels pubescent; styles shorter than stamens. Follicles slightly spreading, pilose; styles terminal on abaxial side, divergent. Fl. May–Jun, fr. Jul–Aug.


1a. Leaf blades obovate or elliptic, rarely ovate, base narrowly cuneate .......................... 30a. var. hirsuta
1b. Leaf blades ovate, base broadly cuneate to rounded .............................. 30b. var. rotundifolia

30a. Spiraea hirsuta var. hirsuta

疏毛绣线菊 (原变种) shu mao xiu xian ju (yu an bian zhong)


Leaf blades obovate or elliptic, rarely ovate, base narrowly cuneate.

- Thickets, slopes, rocky places; 600–1700 m. Fujian, Gansu, Hebei, Henan, Hunan, Jiangxi, Shaanxi, Shandong, Shanxi, Sichuan, Zhejiang.


圆叶疏毛绣线菊 yuan ye shu mao xiu xian ju


Leaf blades ovate, base broadly cuneate to rounded.


中华绣线菊 zhong hua xiu xian ju

Shrubs 1.5–3 m tall. Branchlets arched, red-brown and yellow tomentose initially, black-brown and glabrous when old; buds ovoid, 2–5 mm, with several scales, pubescent, apex acute or obtuse. Petiole 4–10 mm, slightly tomentose; leaf blade adaxially dark green, rhombic-ovate to obovate, 2.5–6 × 1.5–3 cm, abaxially yellow tomentose, adaxially pubescent, veins prominent abaxially, deeply impressed adaxially, base broadly cuneate or rounded, margin deeply sharply incised serrate or inconspicuously 3-lobed, apex obtuse or acute. Umbels pedunculate, 16–25-flowered; pedicels 5–9 mm or more, tomentose; bracts linear, 2–5 mm, pubescent. Flowers 3–10 mm in diam. Hypanthium campanulate, puberulous abaxially. Sepals ovate-lanceolate, 2–3 × 1–2 mm, erect or rarely reflexed in fruit, apex slightly acuminate. Petals white, suborbicular, 2–5 mm, nearly as broad as long, apex obtuse or emarginate. Stamens 22–25, shorter than to nearly equaling petals. Disk undulate annular or irregularly lobed. Styles shorter than stamens. Follicles erect or spreading, wholly pubescent; styles terminal, erect or divergent. Fl. Mar–Jun, fr. Jul–Oct.

1a. Follicles erect, styles erect; pedicels more than 10 mm.......................... 31c. var. erecticarpa
1b. Follicles spreading, styles divergent; pedicels usually not more than 10 mm.
   2a. Flowers 3–6 mm in diam.; petals 2–3.5 mm.......................... 31a. var. chinensis
   2b. Flowers 8–10 mm in diam.; petals 4–5 mm.......................... 31b. var. grandiflora

31a. Spiraea chinensis var. chinensis

中华绣线菊(原变种) zhong hua xiu xian ju (yu an bian zhong)
   Follicles usually 5–9 mm. Flowers 3–6 mm in diam. Petals 2–3.5 mm. Follicles spreading; styles divergent.
   • Thickets on slopes, open places, roadsides; 500–2000 m. Anhui, Fujian, Gansu, Guangdong, Guizhou, Hebei, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Nei Mongol, Shaanxi, Shanxi, Sichuan, Yunnan, Zhejiang.


大花中华绣线菊 da hua zhong hua xiu xian ju
   Follicles not more than 10 mm. Flowers 8–10 mm in diam. Petals 4–5 mm. Follicles spreading; styles divergent.
   • Hill roadsides. SW Hebei (Hefeng Xian).


直果绣线菊 zhi guo xiu xian ju
   Follicles more than 10 mm. Follicles and styles erect.
   • Slopes; ca. 300 m. C Shandong (Tai Shan).


毛花绣线菊 mao hua xiu xian ju

Spiraea nervosa Franchet & Savatier.

Shrubs 2–3 m tall. Branchlets tortuous, red-brown to brown, slender, densely tomentose when young, glabrous when old; buds small, with several brown scales, softly hairy initially, later glabrescent, apex acute. Petiole 2–5 mm, densely tomentose; leaf blade adaxially dark green, rhombic-ovate, 2–4.5 × 1.5–3 cm, abaxially densely white tomentose, adaxially sparsely pubescent, rugose, prominently pinnately veined, base cuneate, margin obtusely incised serrate in upper 2/3 or lobed, apex obtuse or acute. Hypanthium campanulate, gray tomentose abaxially. Sepals triangular or ovate-triangular, 1–1.5 mm, nearly as broad as long, erect in fruit, rarely reflexed. Petals white, broadly obovate or suborbicular, 2–3 × 2–3 mm, glabrous, base shortly clawed, apex emarginate or obtuse. Stamens 20–22, ca. 1/2 as long as petals. Disk annular, 10-lobed; lobes broad. Styles shorter than stamens. Follicles spreading, white tomentose throughout; styles divergent, rarely suberect. Fl. May–Jun, fr. Jul–Aug.

• Forests, open dry slopes, roadsides; 400–1200 m. Gansu, Hebei, Hubei, Jiangsu, Jiangxi, Liaoning, Nei Mongol, Shanxi, Zhejiang.

33. Spiraea yunnanensis Franchet, Pl. Delavay. 200. 1890.

云南绣线菊 yun nan xiu xian ju

Spiraea sinobrahuica W. W. Smith; S. sinobrahuica var. aridicola W. W. Smith; S. tortuosa Rehder; S. yunnanensis f. tortuosa (Rehder) Rehder.

Shrubs 1–2 m tall. Branchlets suberect, slightly bent or distinctly tortuous, brownish to gray-brown, slender, gray-white tomentose when young, later glabrous; buds ovoid, small, softly hairy initially, apex obtuse. Petiole 2–5 mm, tomentose; leaf blade adaxially dark green, obovate or ovate to suborbicular, 1–2 × 0.5–1.5 cm, abaxially densely gray tomentose, adaxially pubescent, 3–5–veined at base, lateral veins prominent, base cuneate, margin obtusely serrate or doubly serrate, sometimes slightly 3-lobed, entire near base, apex obtuse. Hypanthium campanulate, tomentose abaxially. Sepals triangular, 1.5–2 × 1–1.5 mm, erect in fruit, apex acute or shortly acuminate. Petals white, broadly obovate or suborbicular, 3–4 × 2.5–3.5 mm, glabrous, base shortly clawed, apex emarginate or obtuse. Stems ca. 20, ca. 1/2 as long as petals. Disk annular, almost divided into 10 emarginate lobes. Carpels gray-white pubescent; styles shorter than stamens. Follicles spreading, sparsely pubescent; styles abaxial, somewhat divergent. Fl. Apr–Jul, fr. Jul–Oct.

• Dry thickets, mountain valleys, slopes, rocks along gullies, roadsides; 1300–2800 m. W Sichuan, Yunnan.


干地绣线菊 gan di xiu xian ju


Shrubs 1–1.5 m tall. Branchlets brown or red-brown, slender, terete, pubescent when young, later glabrescent; buds ovoid, with several scales, pubescent initially, apex acute. Petiole 2–5 mm, sparsely pubescent or glabrous; leaf blade abaxially gray-green, adaxially dark green, obovate or oblong, 1–2.5 × 0.7–1.8 cm, abaxially subglabrous or puberulous only on veins, adaxially glabrous, prominently 3–5–veined, base broadly cuneate or subrounded, margin irregularly crenate above middle, usually shallowly 3-lobed, apex obtuse. Hypanthium campanulate, densely pubescent abaxially. Sepals triangular, 1.5–2 × 1–1.5 mm, mostly erect in fruit, apex acute. Petals white, broadly obovate, 3–3.5 × 3.5–4.5 mm, glabrous, base shortly clawed, apex emarginate. Stamens 18–20, shorter than or nearly equaling petals. Disk conspicuous, 10-lobed. Styles shorter than stamens. Follicles spreading, pubescent; styles terminal, slightly divergent, ca. 1 mm. Fl. Jun–
Slopes, open rocky places; 2500–2800 m. NW Yunnan.


Shrubs 1–2 m tall. Branchlets spreading, slightly bent, yellow-brown to black-brown, pubescent when young, later glabrous; buds ovoid or subglobose, with several scales, pubescent, apex acute or obtuse. Petiole 2–4 mm, pubescent; leaf blade rhombic-ovate to elliptic, 2.5–4 × 2.5–3.5 cm, abaxially gray-pubescent, adaxially pilose, base broadly cuneate, margin deeply incised serrate, sometimes 3-lobed above middle, apex acute. Umbels pedunculate, 2–4 × 2–3.5 cm, 15–20-flowered; pedicels 7–12 mm, glabrous; bracts linear, 2–3 mm, pubescent. Flowers 5–7 mm in diam. Hypanthium campanulate, glabrous or abaxially pubescent. Sepals ovate-triangular or triangular, 1.5–2 mm, erect in fruit, apex acute. Petals white, ovate, broadly obovate, abaxially pubescent. Inflorescences and hypanthium glabrous. Styles shorter than stamens. Follicles straightly erect in fruit, apex acute or shortly acuminate. Carpels glabrous, or pubescent. Disk annular, 10-lobed; lobes unequal, suborbicular, apex obtuse or emarginate. Stamens 20–28, slightly shorter than to nearly equaling petals. Disk annular, lobed; lobes unequal, suborbicular, apex emarginate. Styles shorter than stamens. Follicles spreading, puberulous on adaxial suture or wholly pubescent; styles terminal, usually divergent. Fl. May–Jun, fr. Jul–Aug.

Mixed forests, open forests, shady slopes, dry rocky slopes; 200–2500 m. Anhui, Gansu, Hebei, Heilongjiang, Henan, Heilongjiang, Henan, Hubei, Jilin, Liaoning, Nei Mongol, Shaanxi, Shandong, Shanxi, Sichuan [Korea, Mongolia, Russia].

1a. Follicles puberulous only on adaxial suture .................................................... 35a. var. pubescens
1b. Follicles wholly pubescent ....................... 35b. var. lasiocarpa

35a. Spiraea pubescens var. pubescens


Slopes; 200–300 m. Native at least in N Jiangxi; widely cultivated elsewhere in China [Japan].

1a. Branchlets pubescent; leaf blades 2–8 × 0.7–1.5 cm, abaxially pubescent ........................................... 36a. var. jiangxiensis
1b. Branchlets glabrous; leaf blades 3–5 × 1.5–2 cm, glabrous.

2a. Inflorescences and hypanthium glabrous ........................................... 36a. var. cantoniensis
2b. Inflorescences and hypanthium abaxially pubescent ......................... 36b. var. pilosa

36a. Spiraea cantoniensis var. jiangxiensis


Spiraea aquilegifolia Pallas var. vanhouttei Briot, Rev. Hort. 37: 269. 1866.

Shrubs to 2 m tall. Branchlets arching, red-brown, turning gray-brown to black-brown when old, glabrous; buds ovoid, small, with several scales, glabrous, apex obtuse. Petiole 3–5 mm, glabrous; leaf blade bluish gray abaxially, dark green adaxially, rhombic-ovate, 1.5–3.5 × 0.9–1.8 cm, glabrous on both surfaces, inconspicuously 3-veined or pinnately veined, base cuneate, margin usually 3–5-lobed, incised doubly serrate, apex acute. Umbels pedunculate, 2.5–4 cm, many flowered, leafy at base; pedicels 7–12 mm, glabrous; bracts linear, 2–5 mm, glabrous. Hypanthium campanulate, glabrous abaxially. Sepals triangular or ovate-triangular, erect in fruit. Petals white, apex acute. Umbels pedunculate, 2.5–4 cm, many flowered, both surfaces, inconspicuously 3-veined or pinnately veined, adaxially, rhombic-ovate, 1.5–3.5 × 0.9–1.8 cm, glabrous on both surfaces, cuneate, margin slightly crenate above middle, usually 3-lobed, base shortly clawed, apex obtuse. Stamens 20–22, much shorter than petals, some abortive. Disk annular, unevenly lobed. Carpels glabrous; styles shorter than stamens. Follicles slightly spreading; styles sub erect. Fl. May–Jun, fr. Aug–Sep.

Cultivated. Guangdong, Guangxi, Jiangsu, Jiangxi, Shaanxi, Shanxi, Shandong, Sichuan [of cultivated, hybrid origin].

This taxon is a hybrid between S. cantoniensis and S. trilobata.

38. Spiraea trilobata Linnaeus, Mant. Pl. 2: 244. 1771.

三裂绣线菊 san li xiu xian ju

Shrubs 1–2 m tall. Branchlets spreading, tortuous, yellow-brown or purple-brown, turning dark gray-brown, slender, glabrous; buds broadly ovoid, small, with several scales, glabrous, apex obtuse. Petiole 3–5 mm, glabrous; leaf blade suborbicular, 1.7–3 × 1.5–3 cm, glabrous or abaxially sparsely pubescent, conspicuously 3–5-veined, base subcordate or rounded, rarely cuneate, margin slightly crenate above middle, usually 3-lobed, apex obtuse. Umbels pedunculate, 2–4(–5) cm, 15–30-flowered; pedicels 8–13 mm, glabrous or sparsely pubescent; bracts oblanceolate or linear, 4–7 mm, deeply divided into slender lobes. Flowers 6–8 mm in diam. Hypanthium campanulate, glabrous or sparsely pubescent abaxially. Sepals triangular, 1.5–2 mm, erect in fruit, apex acute. Petals white, broadly obovate, 2.5–4 mm in diam., apex emarginate. Stamens 18–20, shorter than petals. Disk annular, 10-lobed; lobes unequal, apex emarginate. Carpels glabrous, puberulous only on adaxial suture, pubescent; styles shorter than stamens. Follicles erect, glabrous or pubescent; styles abaxial, divergent. Fl. Apr–Jun, fr. Aug–Oct.


1a. Leaf blades, pedicels, and hypanthium glabrous .................................................. 38a. var. trilobata

1b. Leaf blades abaxially, pedicels, and hypanthium abaxially sparsely pubescent ................................ 38b. var. pubescens

38a. Spiraea trilobata var. trilobata

三裂绣线菊(原变种) san li xiu xian ju (yuan bian zhong)

Leaf blades, pedicels, and hypanthium glabrous.

Thickets, open rocky slopes; 400–2400 m. Anhui, Gansu, Hebei, Heilongjiang, Henan, Jiangsu, Liaoning, Nei Mongol, Shaanxi, Shandong, Xinjiang [Korea, Russia].


毛叶三裂绣线菊 mao ye san li xiu xian ju

Leaf blades abaxially, pedicels, and hypanthium abaxially sparsely pubescent.

- Montane regions, lower elevations. Nei Mongol, Shanxi.


绣球绣线菊 xiu qiu xiu xian ju

Shrubs 1–2 m tall. Branchlets spreading, dark red-brown or dark gray-brown, slender, glabrous; buds ovoid, small, with several scales, glabrous, apex acute or obtuse. Petiole 2–4 mm, glabrous; leaf blade bluish green abaxially, rhombic-ovate to obovate or broadly ovate, (0.6–0.9 or)2.5 × 1–1.8 cm, glabrous on both surfaces, inconspicuously 3-veined or pinnately veined, base cuneate, margin remotely obliquely incised crenate or 3–5-lobed above middle, apex obtuse or mucronate. Umbels pedunculate, 10–25-flowered; rachis glabrous; pedicels 6–10 mm, glabrous to puberulous; bracts lanceolate, 1–3 mm, glabrous. Flowers 5–8 mm in diam. Hypanthium shallowly campanulate, glabrous to puberulous abaxially. Sepals triangular or ovate-triangular, 1.5–2.5 mm, erect in fruit, apex acute or shortly acuminate. Petals white, broadly obovate, 2–5 mm, about as broad as long, apex emarginate. Stamens 18–20, shorter than petals. Disk annular, 10-lobed; lobes thin, apex emarginate. Carpels glabrous, puberulous on perianth, pubescent; styles shorter than stamens. Follicles erect, glabrous or puberulous; styles abaxial, divergent. Fl. Apr–Jun, fr. Jul–Aug.


1a. Carpels and follicles wholly pubescent

1b. Carpels and follicles glabrous.

2a. Leaf blades broadly ovate, 0.6–0.9 cm ................................. 39c. var. microphylla

2b. Leaf blades rhombic-ovate to obovate, 2–3.5 cm

3a. Pedicels and hypanthium abaxially glabrous; petals 2–3.5 mm .................................. 39a. var. blumei

3b. Pedicels and hypanthium abaxially puberulous; petals 4–5 mm .................................. 39b. var. latipetala

39a. Spiraea blumei var. blumei

绣球绣线菊(原变种) xiu qiu xiu xian ju (yuan bian zhong)

Spiraea obtusa Nakai.

Leaf blades rhombic-ovate to obovate, 2–3.5 cm. Pedicels
and hypanthium abaxially glabrous. Petals 2–3.5 mm. Carpels and follicles glabrous.


- Leaf blades rhombic-ovate, to 3.5 mm. Pedicels and hypanthium abaxially puberulous. Petals 4–5 mm. Carpels and follicles glabrous.
- Stream sides, roadsides; low elevations. Anhui, Guangdong, Zhejiang.


- Leaf blades broadly ovate, 0.6–0.9 cm. Pedicels and hypanthium abaxially glabrous. Carpels and follicles glabrous.
- Dry sunny slopes, limestone mountain valleys; low to medium elevations. Gansu, Henan, Shanxi.


- Leaf blades triangular, 2–4 mm, with several scales, apex acute. Petiole 4–6 mm, glabrous; leaf blade oblong-elliptic, 1.5–3.5 × 1–1.8 cm (those on sterile branches to 5.5 × 2.6 cm), abaxially pubescent only in vein axils, adaxially glabrous, base cuneate, margin irregularly incised serrate, sometimes doubly serrate above middle, apex subobtuse or acute. Racemes umbellate, 2–3.5 cm in diam., 6–16-flowered; pedicels 7–12 mm, to 16 mm in fruit, glabrous. Flowers 10–15 mm in diam. Hypanthium shallowly campanulate. Sepals triangular, erect in fruit, apex acute or shortly acuminate. Petals obovate or suborbicular, longer than sepal, apex obtuse. Stamens much longer than petals. Carpels pubescent; styles shorter than stamens. Follicles erect, yellowish pubescent throughout or only at apex; styles terminal, mostly erect. Fl. May–Jun. fr. Aug–Sep.
- Mixed forests, open slopes, rocks; 100–2000 m. Hebei, Heilongjiang, Jilin, Nei Mongol [Mongolia, Russia].


- Shrubssmall. Branchlets slightly angled, glabrous; buds ovoid, with several scales, apex subacute. Petiole 4–6 mm, glabrous or pilose; leaf blades triangular-ovate or lanceolate-ovate, 3–4 × 1.5–2 cm, abaxially pubescent on veins, adaxially glabrous, midvein prominent on both surfaces, lateral veins 3 or 4 on each side of midvein, base usually truncate or subrounded, margin densely doubly serrate above base, apex acuminate. Racemes borne on new, leafy shoots, umbellate, 3–5 × 2–3 cm, 3–6-flowered; pedicels 10–17 mm, pilose basally; bracts linear, 3–4 mm, glabrous, caducous. Flowers 6–9 mm in diam. Hypanthium campanulate, glabrous abaxially. Sepals broadly triangular, 2.25 × 2.25–3 mm, margin ciliate, apex acute to shortly acuminate. Petals white, ovate or suborbicular, 5–6 × 4–5 mm, glabrous, base shortly clawed, apex subacute or obtuse. Stamens ca. 30, longer than petals. Disk annular. Styles shorter than stamens; stigma discoid. Follicles slightly spreading, hirsute; styles terminal. Fl. May–Jun.
- Open places, roadsides. Hubei.
times with tufted hairs in vein axils abaxially, or sparsely sericeous-pubescent abaxially, base cuneate to subrounded, margin irregularly serrate from base or above middle (on sterile branchlets incised doubly serrate), or sparsely shallowly incised crenate, apex acute. Racemes umbellate, 3–4 × 2–3 cm, 5–15-flowered; pedicels 8–17 mm, glabrous; bracts linear, 1.5–3 mm, glabrous. Flowers 8–12 mm in diam. Hypanthium campanulate, glabrous abaxially. Sepals broadly triangular, 2–3 × 1.5–2.5 mm, usually reflexed in fruit, apex acute. Petals white, broadly ovate or suborbicular, 2.5–5 × 2–4.5 mm, glabrous, base shortly clawed, apex obtuse. Stamens 30–40, slightly longer than petals. Disk annular, shallowly crenate. Styles shorter than stamens. Follicles slightly spreading, glabrous or slightly pubescent adaxially; styles terminal, divergent or suberect. Fl. Apr–Jun, fr. Jul–Oct.

- Mixed forests on slopes, thickets, stream sides, open places, roadsides; below 3200 m. Gansu, Guizhou, Henan, Hubei, Sichuan, Yunnan.

1a. Leaf blades sparsely sericeous-pubescent abaxially .................. 43c. var. subpubescens
1b. Leaf blades glabrous on both surfaces or with tufted hairs in vein axils abaxially.

2a. Leaf blades ovate or elliptic-ovate, 1.5–5.5 × 1.4–3.5 cm, margin irregularly serrate or incised doubly serrate; inflorescences 6–15-flowered ........................................... 43a. var. laeta
2b. Leaf blades ovate to broadly so, 1–2 × 0.7–1.5 cm, margin sparsely shallowly incised crenate; inflorescences 5–10-flowered ............................................. 43b. var. tenuis

43a. Spiraea laet var. laeta

华西绣线菊(原变种) hua xi xiu xian ju (yuan bian zhong)

Leaf blades ovate or elliptic-ovate, 1.5–5.5 × 1.4–3.5 cm, glabrous on both surfaces or with tufted hairs in vein axils abaxially, margin irregularly serrate or incised doubly serrate. Inflorescences 6–15-flowered.

- Mixed forests on slopes, thickets; 1200–2500 m. Gansu, Guizhou, Henan, Hubei, Sichuan, Yunnan.


细叶华西绣线菊 xi ye hua xi xiu xian ju

Leaf blades ovate to broadly so, 1–2 × 0.7–1.5 cm, glabrous on both surfaces or with tufted hairs in vein axils abaxially, margin sparsely shallowly incised crenate. Inflorescences 5–10-flowered.

- Montane stream sides; 2700–3200 m. W Sichuan.


毛叶华西绣线菊 mao ye hua xi xiu xian ju

Leaf blades ovate, sparsely sericeous-pubescent abaxially, margin sharply incised doubly serrate. Inflorescences 5–9-flowered.

- Stream banks, open places, roadsides; low to medium elevations. Gansu, Hubei.


乳突绣线菊 ru tu xiu xian ju

Shrubs 2–3 m tall. Branchlets brownish to purple-brown, slender, slightly angled, glabrous, puberulous, or pubescent; buds brownish, ovoid, small, with several scales, puberulous, apex obtuse or acute. Petiole 2–3 mm, sericeous-villous; leaf blade gray-green abaxially, dark green adaxially, oblong or ovate, 2–4 × 0.8–1.5 cm, appressed sericeous-villous on both surfaces, papillose abaxially, base cuneate, margin with 3–7 large, sharp teeth on each side above middle, apex acute or shortly acuminate. Racemes umbellate, 3–5 × 2–3.5 cm, 12–20-flowered; pedicels slender, 6–12 mm, glabrous or pubescent; bracts linear or lanceolate, 3–5 mm, slightly villous. Flowers 8–10 mm in diam. Hypanthium campanulate, glabrous abaxially. Sepals triangular, 1.5–2 × 2–3 mm, reflexed in fruit, apex acute or shortly acuminate. Petals white, suborbicular, 3.5–4.5 mm in diam., glabrous, base shortly clawed, apex obtuse. Stamens 40–50, longer than petals. Disk annular, crenulate. Styles ca. 4 mm, shorter than stamens. Follicles suberect, glabrous or puberulous along adaxial suture; styles terminal. Fl. May–Jun, fr. Jul–Aug.

- Coniferous and broad-leaved mixed forests, thickets on slopes; 1300–3500 m. W Sichuan, NW Yunnan.

44a. Spiraea papillosa var. papillosa

乳突绣线菊(原变种) ru tu xiu xian ju (yuan bian zhong)

Branchlets, pedicels, and follicles usually glabrous ...................... 44a. var. papillosa

1a. Branchlets, pedicels, and follicles usually glabrous ................. 44a. var. papillosa
1b. Branchlets and pedicels pubescent; follicles puberulous on adaxial suture ......................................................... 44b. var. yunnanensis


云南乳突绣线菊 yun nan ru tu xiu xian ju

Branchlets and pedicels pubescent. Follicles puberulous on adaxial suture.

- Coniferous and broad-leaved mixed forests; 3300–3500 m. SW Sichuan, NW Yunnan.


丽江绣线菊 li jiang xiu xian ju

Shrubs 1.2–1.8 m tall. Branchlets brown to purple, shining, slender, glabrous; buds small, with several scales, whitish villous, apex acute. Petiole slender, 3–5 mm, glabrous; leaf blade abaxially greenish, adaxially green, broadly ovate, 2.5–3.5 × 2–2.5 cm, glabrous on both surfaces, abaxially densely minutely papillose, veins prominent, base rounded, margin with 3–5 indistinct, obtusely triangular teeth on each side above middle. Racemes pedunculate, umbellate, 2–4 × 1.5–2(–3) cm, 5–
10-flowered; pedicels 1–1.5 cm, glabrous; bracts linear or lanceolate, 1.5–3 mm, glabrous. Flowers 10–12 mm in diam. Hypanthium campanulate, glabrous abaxially. Sepals triangular, 1–1.5 × 1.5–2 mm, apex acute. Petals white, orbicular, 4–5 mm in diam., glabrous, base shortly clawed, apex obtuse, rarely emarginate. Stamens 40–50, longer than petals. Disk annular, lobed. Carpels glabrous; styles terminal, 3–4 mm; stigma capitate. Follicles unknown. Fl. Jun–Jul.

- Open Pinus forests; thickets; 3500–4000 m. NW Yunnan (Lijiang Xian).


*Sinemusia* Juan mao xiu xian ju

**Spiraea confusa** Regel & Körnicke var. *sericea* (Turczaninow) Regel; *S. media* Schmidt var. *sericea* (Turczaninow) Maximowicz.

Shrubs erect, to 2 m tall. Branchlets brown turning gray-brown or gray-red when old, subterete, sericeous-villosous initially, later glabrescent; buds long ovoid, 3–5 × 1.5–3 mm, with several brown scales, pubescent, apex acuminate. Petiole 1–2 mm, densely sericeous; leaf blade abaxially grayish green, adaxially dark green, ovate-elliptic or elliptic, 1.5–4.5 × 0.7–1.5 cm, abaxially densely accumbent sericeous, adaxially pilose, distinctly pinnately veined, base cuneate, margin entire (or on sterile branchlets 2–5-serrate on each side), apex acute. Racemes pedunculate, umbellate, 2–4 × 2–3 cm, 9–15-flowered; pedicels 1–1.5 cm, glabrous; bracts lanceolate, glabrous, caducous. Flowers 0.7–1 cm in diam. Hypanthium broadly campanulate, glabrous abaxially. Sepals ovate-triangular, 1.5–2.5 mm, glabrous or puberulous, reflexed in fruit, apex obtuse or acute. Petals white, suborbicular, 3–4.5 mm, about as broad as long, glabrous, base shortly clawed, apex obtuse or emarginate. Stamens ca. 45, longer than petals. Disk undulate annular or irregularly lobed. Styles shorter than stamens. Follicles straightly spreading, pubescent; styles terminal, divergent. Fl. May–Jun, fr. Jun–Aug.

*Open Pinus forests, thickets; 700–1600 m. Hebei, Heilongjiang, Henan, Jilin, Liaoning, Neimongol, Xinjiang [Japan, Korea, Mongolia, Russia; C Asia, Europe].


平卧绣线菊 ping wo xiu xian ju

Shrubs low. Prostrate. Branchlets dark red-brown when old, slender, terete, densely yellow-gray villous initially, later glabrescent; buds ovoid, short, with several scales, villous, apex acute. Petiole almost absent; leaf blade broadly ovate, 0.8–1.5 × 0.5–1 cm, densely sericeous on both surfaces, with 2 pairs of prominent lateral veins basally, base rounded or broadly cuneate, margin with 3–7 teeth near apex, apex acute. Racemes shortly pedunculate, umbellate, 7–15-flowered; pedicels 7–8 mm, sparsely villous; bracts lanceolate, 2–4 mm, sparsely villous, later glabrescent. Flowers 5–6 mm in diam. Hypanthium cupular, 1.5–1.5 mm, sparsely villous abaxially. Sepals ovate-triangular, nearly equaling tube, reflexed in fruit, apex acute. Petals white, orbicular, base shortly clawed. Stamens somewhat shorter than petals. Disk annular, 10 lobed; lobes triangular-ovate. Styles shorter than stamens. Follicles spreading, pubescent on adaxial suture; styles terminal on abaxial side; apex somewhat divergent. Fr. Jun–Jul.

- Thickets, mountain regions, river banks. Gansu, Hebei, Shanxi.


欧亚绣线菊 ou ya xiu xian ju

Shrubs erect, to 2 m tall. Branchlets red-brown turning gray-brown to black-brown when old, slender, subterete, glabrous or subglabrous; buds brownish, ovoid, 1–3 mm, with several scales, glabrous, apex acute. Petiole 1–2 mm, glabrous; leaf blade elliptic to lanceolate, 1–2.5 × 0.5–1.5 cm, glabrous on both surfaces or puberulous in vein axes abaxially, pinnately veined, base cuneate, margin entire or 2–5-serrate, apex acute, rarely obtuse. Racemes pedunculate, umbellate, 2–4 × 2–3 cm, 9–15-flowered; pedicels 1–1.5 cm, glabrous; bracts lanceolate, glabrous, caducous. Flowers 0.7–1 cm in diam. Hypanthium campanulate, glabrous abaxially. Sepals triangular, 1–2.5 mm, glabrous or puberulous, reflexed in fruit, apex obtuse or acute. Petals white, suborbicular, 3–4.5 mm, about as broad as long, glabrous, base shortly clawed, apex obtuse or emarginate. Stamens ca. 45, longer than petals. Disk undulate annular or irregularly lobed. Styles shorter than stamens. Follicles straightly spreading, pubescent; styles terminal, divergent. Fl. May–Jun, fr. Jun–Aug.

Mixed forests, grassy slopes, rocky montane regions; 700–1600 m. Hebei, Heilongjiang, Henan, Jilin, Liaoning, Neimongol, Xinjiang [Japan, Korea, Mongolia, Russia; C Asia, Europe].

49. **Spiraea tarokoensis** Hayata, Icon. Pl. Formos. 9: 38. 1920.

太鲁阁绣线菊 tai lu ge xiu xian ju

Shrubs low. Branchlets brownish purple, slender, slightly angled, pubescent when young, later glabrescent; buds ovoid, small, with several scales, apex obtuse or subacute. Petiole 3–4 mm, villous; leaf blade rhombic-obovate, 12–20 × 8–14 mm, abaxially sparsely villous on veins, adaxially glabrous, veins raised abaxially, impressed adaxially, base cuneate, margin sparsely crenate-serrate above middle, apex subobtuse. Racemes terminal, pedunculate, umbellate, 15–20-flowered; peduncle villous; pedicels 7–10 mm, glabrous; bracts linear. Hypanthium campanulate, glabrous abaxially. Sepals triangular, 1–1.5 mm, about as broad as long, recurved in fruit, apex acute. Petals white, subovate or orbicular, ca. 2 × 3 mm, glabrous, base shortly clawed, apex emarginate. Stamens ca. 20, unequal; filaments ca. 2 mm; anthers reniform. Disk annular, 10 lobed; lobes emarginate at apex. Carpels villous; styles shorter than stamens. Follicles spreading; styles abaxial. Fl. Mar–May, fr. Jun–Aug.

Coastal limestone areas. E Taiwan.

50. **Spiraea alpina** Pallas, Fl. Ross. 1: 35. 1784.

高山绣线菊 gao shan xiu xian ju

Shrubs to 1.2 m tall, much branched. Branches erect or spreading; branchlets red-brown, turning gray-brown when old, conspicuously angled, pubescent when young, finally glabrous;
buds ovoid, small, with several scales, glabrous. Leaves mostly tufted; petiole very short or nearly absent; leaf blade gray-green and glaucous bloomed abaxially, linear-lanceolate to oblong-ovate, 7–16 × 2–5 mm, glabrous on both surfaces, veins inconspicuous, base cuneate, margin entire, apex obtuse or acute. Racemes pedunculate, umbellate, 1.5–2.5 × 1.5–2 cm, up to 20-flowered; pedicels 5–8 mm, glabrous; bracts linear, small, caducous. Flowers 5–7 mm in diam. Hypanthium campanulate, glabrous abaxially. Sepals triangular, 1–1.5 × 1–2 mm, erect or semisemispreading in fruit, apex acute. Petals white, suborbicular, 2–3 mm, about as broad as long, glabrous, base shortly clawed, apex obtuse. Stamens ca. 20, equalling petals. Disk annular, 10-lobed. Carpels puberulous; styles shorter than stamens. Follicles spreading, glabrous or pilose on adaxial suture; styles subterminal, divergent. Fl. Jun–Jul, fr. Aug–Sep.

- Mixed forests, open forests, valleys, slopes, shady places; 1500–3100 m. Gansu, Henan, Hubei, Jiangxi, Qinghai, Shaanxi, Sichuan, Xizang, Yunnan.

1a. Follicles glabrous or puberulous only on adaxial suture

1b. Follicles densely pubescent throughout

52a. Spiraea myrtilloides var. myrtilloides

细枝绣线菊(原变种) xi zhi xiu xian ju (yuan bian zhong)

Spiraea microphylla H. Léveillé; S. virgata Franchet.

Follicles glabrous or puberulous only on adaxial suture.

- Mixed forests, open forests, valleys, slopes; 1500–3100 m. Gansu, Henan, Hubei, Jiangxi, Qinghai, Shaanxi, Sichuan, Xizang, Yunnan.

52b. Spiraea myrtilloides var. pubicarpa

细枝绣线菊毛果 var. mao guo xi zhi xiu xian ju


Follicles densely pubescent throughout.

- Open forests, slopes, shady places; 2800–3000 m. Gansu.

53. Spiraea ningsiaensis

宁夏绣线菊 ning xia xiu xian ju

Shrubs small. Branchlets dark red-brown, flexuose, distinctly angled, densely pubescent initially, subglabrous when old; buds ovoid, nearly equaling petioles, with several dark brown scales, pubescent. Petiole 1–3 mm, pubescent when young; leaf blade broadly ovate, 7–14 × 5–9 mm, slightly pubescent on both surfaces when young, glabrous when old, 3-veined basally, base broadly cuneate to rounded, margin entire or sometimes 3-lobed apically, apex obtuse. Racemes pedunculate, umbellate, 1–1.5 cm, rachis and pedicels glabrous; pedicels 4–5 mm, to 8 mm in fruit; bracts lanceolate to elliptic, 2–4 mm, glabrous, apex acute to shortly acuminate. Hypanthium campanulate, glabrous abaxially. Sepals triangular or ovate-triangular, 1–1.5 mm, about as broad as long, erect in fruit, apex acute. Follicles erect-spread ing, slightly pubescent on adaxial suture; styles on abaxial side, divergent. Fl. May–Jun, fr. Aug–Sep.

- Mountain valleys, river banks; 1700–2000 m. N Ningxia (Helan Shan).

54. Spiraea daurica

窄叶绣线菊
zhai ye xiu xian ju


Shrubs 1–1.5 m tall. Branchlets arching, red-brown when young, dark gray-brown when old, shining, slender, terete, glabrous; buds brownish, ovoid, 1–3 mm, with several scales, glabrous, apex acute. Petiole 1–2(–4) mm, glabrous; leaf blade long elliptic to linear-lanceolate, 0.9–2.5 × 0.4–0.9 cm, glabrous on both surfaces, pinnately veined, base cuneate, margin entire or 2–5-serrate apically, apex acute. Racemes umbellate, 1.5–2 cm, usually 10–20-flowered; racis and pedicels glabrous; pedicels 7–18 mm; bracts linear to lanceolate, 2–3 mm, glabrous, caducous. Flowers 6–7 mm in diam. Hypanthium broadly campanulate, glabrous abaxially. Sepals shortly triangular, 1–1.5 mm, glabrous, reflexed on anthers, 1.5–2.5 mm, about as long, glabrous; disk annular, 10-lobed. Stamens 35–50, longer than petals. Disk undulate annular, 1.5–2.5 × 1.5–2 mm, reflexed in fruit, apex acute. Petals white, broadly ovate or suborbicular, 2.5–3.5 × 2–3 mm, reflexed in fruit, apex acute. Petals white, suborbicular or broadly ovate, 1.5–2.5 mm, about as long, glabrous; disk 10-lobed; lobes suborbicular. Carpels glabrous or puberulous; styles shorter than stamens. Follicles straightly divergent, glabrous or puberulous on adaxial suture; styles terminal.

Thickets, slopes, rocks; below 1000 m. Hebei, Heilongjiang, Liaoning, Nei Mongol [Mongolia, Russia].


曲萼绣线菊
qu e xiu xian ju

Shrubs to 1.5 m. Branchlets, brown-yellow to purple-brown, slender and slightly flexuose, angled when young, glabrous; buds long ovoid, 2–5 mm, with 2 scales, puberulous initially, finally glabrous, apex acuminate. Petiole 2–5 mm, glabrous or pilose; leaf blade abaxially glaucous, oblong-elliptic to oblong-ovate, 1–5 × 0.9–2.5 cm, abaxially subglabrous to pubescent (especially on veins) or pilose, adaxially glabrous or pubescent, base cuneate to rounded, margin sharply serrate above middle or near apex, rarely entire, apex acute or shortly acuminate. Racemes pedunculate, umbellate, 1.5–3 × 1.5–2.5 cm, 4–10-flowered; racis and pedicels glabrous or pilose; pedicels 5–15(–20) mm; bracts elliptic-lanceolate to linear, 1.5–3 mm, glabrous, caducous. Flowers 5–8 mm in diam. Hypanthium campanulate, abaxially glabrous. Sepals ovate-triangular, 2–2.5 × 1.5–2 mm, reflexed in fruit, apex acute. Petals white, sometimes pinkish, ovate to oblong, 3–4 mm, nearly as long, glabrous, base shortly clawed, apex obtuse. Stamens ca. 20, longer than petals. Disk annular, 10-lobed. Styles shorter than stamens. Follicles erect, pubescent; styles terminal, erect. Fl. May–Jun, fr. Aug–Sep.

Broad-leaved and mixed forests, forest margins, river banks, sandy hills, slopes; 600–2000 m. Heilongjiang, Jilin, Liaoning, Nei Mongol, Shaanxi, Shanxi, Xinjiang [Korea, Mongolia, Russia].

1a. Leaf blades subglabrous or pilose abaxially, base cuneate, rarely subrounded; inflorescences glabrous ........................... 55a. *var. flexuosa*

1b. Leaf blades pubescent, more densely so on veins abaxially, base rounded; inflorescences pilose .............................. 55b. *var. pubescens*

55a. *Spiraea flexuosa* var. *flexuosa*

- Leaf blades subglabrous or pilose abaxially, base cuneate, rarely subrounded. Inflorescences glabrous.
- Leaf blades subglabrous or pilose abaxially, base cuneate, rarely subrounded. Inflorescences glabrous.
- Mixed forests, slopes; below 1000 m. Liaoning, Nei Mongol, Shanxi.


石蚕叶绣线菊
shi can ye xiu xian ju


柔毛曲萼绣线菊
rou mao qu e xiu xian ju

Leaf blades pubescent, more densely so on veins abaxially, base rounded. Inflorescences pilose.

- Mixed forests, slopes; below 1000 m. Liaoning, Nei Mongol, Shanxi.

55b. *Spiraea flexuosa* var. *pubescens*

- Mixed forests, slopes; below 1000 m. Liaoning, Nei Mongol, Shanxi.


蒙古绣线菊
 meng gu xiu xian ju

Shrubs 1–1.5 m tall. Branchlets brownish or red-brown, turning gray-brown when old, slender, sometimes flexuose, slightly angled, glabrous; buds long ovoid, with 2 scales, glabrous or sparsely puberulous on scale margins, apex acuminate. Petiole 4–7 mm, glabrous or sparsely pilose; leaf blade broadly ovate, 2–4.5 × 1–3 mm, tufted pubescent in vein axils abaxially, glabrous adaxially, base rounded or broadly cuneate, margin minutely sharply serrate and doubly serrate (or on sterile branchlets sometimes incised doubly serrate), apex acute. Racemes pedunculate, umbellate, 2–4 × 2–3 mm, 5–12-flowered; racis and pedicels glabrous; pedicels 6–10 mm; bracts linear, 2–3 mm, glabrous, caducous. Flowers 6–9 mm in diam. Hypanthium broadly campanulate, glabrous abaxially. Sepals ovate-triangular, 1.5–2.5 × 1.5–2 mm, reflexed in fruit, apex acute. Petals white, broadly ovate or suborbicular, 2.5–3.5 × 2–3 mm, glabrous, base shortly clawed, apex obtuse or somewhat incised. Stamens 35–50, longer than petals. Disk undulate annular. Carpels puberulous on adaxial suture; styles shorter than stamens. Follicles erect, appressed pubescent; styles terminal on adaxial side, slightly spreading. Fl. May–Jun, fr. Jul–Sep.

Slopes in mixed forests, forest clearings; 600–1000 m. Hebei, Heilongjiang, Henan, Jilin, Liaoning, Shanxi, Xinjiang [Japan, Korea, Mongolia, Russia, Europe].

蒙古绣线菊(原变种)
qu e xiu xian ju (yuan bian zhong)

*Spiraea chamaedryfolia* var. *flexuosa* (Fischer ex Cambessèdes) Maximowicz.

- Leaf blades subglabrous or pilose abaxially, base cuneate, rarely subrounded. Inflorescences glabrous.
- Broad-leaved and mixed forests, forest margins, river banks, sandy hills, rocky slopes; 600–2000 m. Heilongjiang, Jilin, Liaoning, Nei Mongol, Shaanxi, Shanxi, Xinjiang [Korea, Mongolia, Russia].
teeth near apex, apex obtuse, acute, or mucronate. Racemes pedunculate, umbellate, 2–5 × 1.5–3 cm, 8–15-flowered; rachis and pedicels glabrous; pedicels 5–10 mm; bracts linear, 1.5–3 mm, glabrous, caducous. Flowers 5–7 mm in diam. Hypanthium subcampanulate, glabrous abaxially. Sepals triangular, 1–2 × 1.5–2.5 mm, erect or slightly reflexed in fruit, apex acute. Petals white, suborbicular, 2–4 m, about as broad as long, glabrous, base shortly clawed, apex obtuse, rarely emarginate. Stamens 18–25, nearly equaling petals. Disk annular, 10-lobed; lobes orbicular. Carpels pubescent; styles shorter than stamens. Follicles straightly spreading, glabrous, wholly pubescent, or puberulous only on adaxial suture; styles abaxial. Fl. May–Jul, fr. Jul–Sep.

- Forests, thickets, sunny rocky slopes, mountain summits, rocky valleys, stream sides; 1500–4700 m. Gansu, Hebei, Henan, Nei Mongol, Ningxia, Qinghai, Shaanxi, Sichuan, Xinjiang, Xizang.

1a. Branchlets, buds, and pedioles glabrous; follicles glabrous or puberulous only on adaxial suture.

57a. Spiraea mongolica var. mongolica
蒙古绣线菊 (原变种)  mao zhi meng gu xiu xian ju (yuan bian zhong)

Branchlets, buds, and pedioles glabrous. Follicles glabrous, or puberulous only on adaxial suture.

- Thickets on slopes, mountain summits, rocky valleys; 1600–3600 m. Gansu, Hebei, Henan, Nei Mongol, Ningxia, Qinghai, Shaanxi, Sichuan, Xinjiang, Xizang.

1b. Branchlets, buds, and pedioles densely shortly tomentose; follicles wholly pubescent.

毛枝蒙绣线菊   mao zhi meng gu xiu xian ju
Spiraea mongolica var. pubescens Y. Z. Zhao & T. J. Wang; S. tomentulosa (T. T. Yu) Y. Z. Zhao (1987), not Rydberg (1908).

Branchlets, buds, and pedioles densely shortly tomentose. Follicles wholly pubescent.

- Forests, thickets, sunny rocky slopes, stream sides; 1500–4700 m. Gansu, Nei Mongol, Ningxia, Xinjiang, Xizang.

毛叶绣线菊  mao ye xiu xian ju

Spiraea mollifolia var. pubescens Zabel, in Rehder, in Sargent, Bot. Mag. t. 12057. 1913.

Shrubs to 3 m. Branchlets brown to red-brown, turning gray-brown to black-brown when old, slender, slightly angled, pubescent initially, later gradually glabrescent; buds ovoid, small, with several scales, glabrous, apex subtorse or subacute. Petiole 2–4 mm, pubescent; leaf blade ovate to oblanceolate, 1.5–3 × 0.7–1.4 cm, pubescent on both surfaces initially, later glabrescent axially or on both surfaces, or glabrous, pinnately veined, base cuneate, margin minutely sharply serrate from base or above middle to apex, or 1–4-serrate on each side near apex, apex acute. Umbels sessile, 2–3 × 1.5–3 cm, 3–6-flowered, with a few clustered leaves at base; pedicels 10–24 mm, pubescent; bracts leaflike, 4–7 × 3–5 mm, puberulous on both surfaces initially, finally glabrescent, apex indistinctly minutely serrate. Flowers single in wild plants, double in cultivated plants (var. prunifolia), to 1.2 cm in diam. Hypanthium campanulate, short-
er than sepals, pubescent or glabrous abaxially. Sepals triangular or ovate-triangular, 1.5–2 mm, shorter than petals, apex acute. Petals white, obovate or suborbicular, longer than sepals, glabrous. Follicles glabrous, or pubescent along adaxial suture. Fl. Mar–May.

Thickets, slopes, rocks, steep dry cliffs, sunny places; also commonly cultivated (var. prinuflora); near sea level to 1500 m. Anhui, Fujian, Guizhou, Guangdong, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Shaanxi, Shandong, Sichuan, Taiwan, Xizang, Zhejiang [Japan, Korea].

1a. Flowers double, 1–1.2 cm in diam. ..... 59a. var. prinuflora
1b. Flowers single, to 1 cm in diam.

2a. Leaf blades glabrous abaxially, margin 1–4-serrate on each side near apex; hypanthium often glabrous abaxially ............... 59d. var. hupehensis
2b. Leaf blades densely or sparsely pubescent abaxially, margin mostly minutely sharply serrate from near base or above middle to apex; hypanthium pubescent abaxially.

3a. Leaf blades sparsely thinly pubescent abaxially, glabrescent when old; follicles pubescent on adaxial suture .......... 59b. var. simpliciflora
3b. Leaf blades densely persistently appressed pubescent abaxially; follicles glabrous ..... 59c. var. pseudoprunifolia

59a. Spiraea prinuflora var. prinuflora

笑靥花 (原变种) xiao yan hua (yu an bian zhong)

Spiraea prinuflora var. plena C. K. Schneider.

Leaf blades thinly pubescent abaxially, margin minutely sharply serrate from near base or above middle to apex. Flowers double, 1–1.2 cm in diam. Hypanthium pubescent abaxially.

Commonly cultivated in China [native to Japan and Korea].


单瓣笑靥花 dan ban xiao yan hua


Leaf blades sparsely thinly pubescent abaxially, glabrescent when old, margin mostly minutely sharply serrate from near base or above middle to apex. Flowers double, less than 1 cm in diam. Hypanthium pubescent abaxially. Follicles pubescent on adaxial suture.

● Thickets, slopes, rocks; 500–1000 m. Anhui, Fujian, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Zhejiang.

59c. Spiraea prinuflora var. pseudoprunifolia (Hayata ex Nakai) H. L. Li, Lloydia 14: 236. 1951.

假笑靥花 jia xiao yan hua


Leaf blades densely persistently appressed pubescent abaxially, margin mostly minutely sharply serrate from near base or above middle to apex. Flowers single, less than 1 cm in diam. Hypanthium pubescent abaxially. Follicles glabrous.

● Sunny places; ca. 1500 m. Taiwan.


光笑靥花 guang xiao yan hua


Leaf blades glabrous abaxially, margin 1–4-serrate on each side near apex. Flowers single, less than 1 cm in diam. Hypanthium glabrous abaxially. Follicles glabrous.

● Steep dry cliffs; near sea level to 300 m. Hubei, Shaanxi.


珍珠绣线菊 zhen zhu xiu xian ju

Shrubs to 1.5 m. Branches spreading, arching, slender; branchlets brown to red-brown, angled, pubescent at first, finally glabrous; buds ovoid, very small, with several scales, glabrous or puberulous. Petiole 1–2 mm, pubescent; leaf blade linear-lanceolate, 25–40 × 3–7 mm, glabrous on both surfaces, pinnately veined, base narrowly cuneate, margin sharply serrate above middle, apex long acuminate. Umbels sessile, with clustered leaves at base, 10–18 mm, 3–7-flowered; pedicels slender, 6–10 mm, glabrous. Flowers 6–8 mm in diam. Hypanthium campanulate, glabrous abaxially. Sepals triangular or ovate-triangular, 1.5–2 × 1–1.5 mm, erect or reflexed in fruit, apex acute. Petals white, obovate to suborbicular, 2.4–3.5 mm, glabrous, base shortly clawed, apex emarginate or obtuse. Stamines 18–20, to 1/3 as long as petals. Disk annular, 10-lobe. Carpels glabrous or puberulous; styles nearly equaling stamens. Follicles spreading, glabrous; styles subterminal, divergent. Fl. Apr–May, fr. Jul–Aug.

Native in E China; cultivated for ornament in Fujian, Jiangsu, Liaoning, Shaanxi, Shandong, Zhejiang, and other provinces [Japan].


毛枝绣线菊 mao zhi xiu xian ju

Shrubs 1.5–2.5 cm. Branchlets terete or slightly angled, yellow-brown and densely tomentose when young, brownish to red-brown and glabrescent when old; buds ovoid, small, pubescent, with several scales, apex subobtuse. Petiole 1–2 mm, yellow pubescent initially, later glabrescent; leaf blades abaxially gray, unequal, broadly obovate, rarely suborbicular or broadly elliptic, larger ones 8–17 × 5–10 mm, smaller ones 2–5 × 2–3 mm, densely yellow tomentose on both surfaces, or abaxially densely pubescent, adaxially puberulous when young and later glabrescent, pinnately veined or prominently 3-veined, base cuneate or broadly so, margin usually 3-lobed above middle, entire or with a few coarse, obtuse teeth, apex obtuse,
rarely acute. Umbels sessile, with unequal, clustered leaves at base, 1–2(–2.5) cm, 5–18-flowered; pedicels 5–15 mm, glabrous or pubescent; bracts lanceolate, 2–4 mm, puberulous or glabrous. Flowers 5–6 mm in diam. Hypanthium campanulate, 1.5–2 mm, glabrous abaxially. Sepals ovate-triangular or triangular, 1.5–2.5 mm, erect in fruit, apex acute. Petals white, suborbicular or obovate, 3–4 mm, about as broad as long, glabrous, base shortly clavate, apex obtuse. Stamens 20–25, shorter than petals. Disk prominent, annular, 10-lobed. Carpels puberulous; styles shorter than stamens. Follicles spreading, puberulous on adaxial suture or pilose; styles subterminal, erect or slightly divergent. Fl. Feb.–Mar, fr. Apr.–May.

- Thickets, mountain valleys, dry slopes, roadsides, sometimes on limestone; 700–2100 m. Guangxi, Guizhou, Sichuan, Yunnan.

1a. Leaf blades densely yellow tomentose on both surfaces .......................... 61c. var. tomentosa

1b. Leaf blades pubescent on both surfaces.

2a. Pedicels 5–9 mm, glabrous; follicles glabrous or puberulous only on adaxial suture .................. 61a. var. martini

2b. Pedicels 8–15 mm, pubescent; follicles pilose ............................. 61b. var. pubescens

61a. Spiraea martini var. martini

毛枝绣线菊（原变种） mao zhi xiu xian ju (yuan bian zhong)

Spiraea fulvescens Rehder.

Leaf blades pubescent on both surfaces. Pedicels 5–9 mm, glabrous. Follicles glabrous or puberulous only on adaxial suture.

- Thickets, mountain valleys, dry slopes, roadsides; 1400–2100 m. Guangxi, Guizhou, Sichuan, Yunnan.


绒毛枝绣线菊 chang geng mao zhi xiu xian ju

Leaf blades pubescent on both surfaces. Pedicels 8–15 mm, pubescent. Follicles pilose.

- Mountain thickets on limestone; ca. 700 m. SE Yunnan (Funing Xian).


绒毛枝绣线菊 long mao mao zhi xiu xian ju

Leaf blades densely yellow tomentose on both surfaces.

- Roadsides; ca. 2000 m. SE Yunnan (Jianshui Xian).


独山绣线菊 du shan xiu xian ju

Shrubs small. Branchlets slender, terete, pubescent; buds small, with several brown scales, apex acute or subobtuse. Petiole 2–4 mm, densely tomentose-pubescent; leaf blade broadly ovate or suborbicular, 1.5–2(–2.5) × 1–1.5 cm, abaxially densely gray tomentose-pubescent, adaxially puberulous when young, later glabrescent, base subrounded and prominently 3-veined, margin not lobed, coarsely and obtusely crenate above base, apex obtuse, sometimes mucronate. Umbels shortly pedunculate, 2–2.5 × 2.5–3 cm, 10–12-flowered, with small, bract-like leaves at base; pedicels 1–1.5 cm, glabrous; bracts linear to lanceolate, 2–4 mm. Flowers 7–8 mm in diam. Hypanthium campanulate, glabrous abaxially. Sepals triangular, 1.5–2.5 mm, apex acute to shortly acuminate. Petals white, suborbicular or obovate, 3–4 × 2.5–3.5 mm, glabrous, base shortly clavate, margin entire or slightly undulate. Stamens ca. 1/2 as long as petals or slightly shorter. Disk annular, 10-lobed. Styles shorter than stamens. Follicles divergent, pubescent apically; styles subterminal. Fl. Apr.–Jun, fr. Jul.–Sep.

- Mountain regions. S Guizhou (Dushan Xian).


稻城绣线菊 dao cheng xiu xian ju

Shrubs small, to 2 m tall. Branchlets purple-brown, distinctly angled, appressed villous; buds ovoid, small, with several scales, villous. Petiole 1–2 mm, villous; leaf blade rhombic-elliptic, rarely ovate-elliptic, 1–2 × 0.8–1 cm, appressed villous on both surfaces, more densely so abaxially, lateral veins 5–8 on each side of midvein, base cuneate, margin not lobed, with 5–9 large, sharp teeth above middle, apex acute. Umbels sessile, 1–1.5 cm, few flowered, with a few clustered, unequal leaves at base; pedicels to 1 cm, villous; bracts lanceolate, small. Flowers unknown. Hypanthium campanulate, villous when young, glabrous when mature. Sepals broadly ovate or triangular-ovate, 3–4 mm, reflexed or rarely erect in fruit, apex acute. Follicles straightly spreading, glabrous or puberulous on adaxial suture; styles terminal on abaxial side, divergent. Fl. Aug.–Sep.

- Coniferous and mixed forests on slopes; ca. 3800 m. W Sichuan (Daocheng Xian).


木里绣线菊 mu li xiu xian ju

Shrubs 1–2 m tall. Branchlets dark brown-red, prominently angled, densely pubescent; buds ovoid, with several scales, pubescent, apex obtuse. Petiole very short or almost absent, softly hairy; leaf blade elliptic or oblong, 1.5–2 × 0.5–0.8 cm, appressed villous on both surfaces, base cuneate, margin deeply 3–7-serrate above middle, rarely entire, apex acute. Umbels sessile, 0.8–1.2 × 1–1.5 cm; pedicels 4–8 mm, pubescent; bracts linear, shorter than pedicels, hairy. Flowers unknown. Hypanthium campanulate, pubescent abaxially. Sepals triangular, reflexed or rarely erect in fruit, apex acute or subobtuse. Follicles erect-spread, pubescent, more densely so on abaxial suture; styles terminal on abaxial side, divergent. Fl. May–Jun, fr. Jul.–Sep.

- Mountain summits; ca. 2700 m. SW Sichuan (Muli Xian).


广西绣线菊 guang xi xiu xian ju
Shrubs erect or spreading, to 1 m tall. Branchlets slender, terete, dark red-brown and pubescent when young, subglabrous and grayish-brown when old; buds ovoid, with several brown scales. Petiole 2–4 mm, usually glabrous; leaf blades unequal, obovate, elliptic, or suborbicular, larger ones 10–18 × 8–14 mm, smaller ones 7–10 × 4–5 mm, glabrous on both surfaces, lateral veins 3 or 4 on each side of midvein, base cuneate to rounded, margin obtusely dentate above middle or near apex, sometimes slightly 3-lobed (entire or subentire on leaves on flowering branches), apex obtuse. Umbels sessile or shortly pedunculate, 3–8-flowered, with several clustered, unequal leaves at base; pedicels 5–9 mm, glabrous; bracts linear, glabrous. Flowers 5–7 mm in diam. Hypanthium campanulate, glabrous axially. Sepals triangular, erect and persistent in fruit, apex acute. Petals white, broadly obovate, 2–3 mm, about as broad as long, base shortly clawed, apex emarginate or obtuse. Stamens ca. 20, shorter than petals. Disk annular, densely toothed, sometimes 10-lobed. Styles shorter than stamens. Follicles spreading, pubescent on abaxial suture; styles terminal on abaxial side, slightly divergent or suberect. Fl. Mar–Apr, fr. Apr–Jun.

- Bare cliffs, rocky roadsides, sunny places; ca. 600 m. Guangxi.


石灰岩绣线菊 shi hui yan xiu xian ju

Shrubs low, to 1.5 m tall. Branches spreading, arching; branchlets purple-brown, turning gray-brown to gray-black when old, distinctly angled; buds ovoid, small, with several scales, glabrous or puberulous on scale margin, apex subobtuse or acute. Leaves fascicled on short branchlets, alternate on long branchlets; petiole very short or absent, glabrous; leaf blade obovate, rarely elliptic, 5–9 × 2–6 mm, glabrous on both surfaces, base cuneate and 3-veined, margin entire, apex obtuse. Umbels sessile, 6–10-flowered, with small, clustered leaves at base; pedicels 3–7 mm, glabrous; bracts linear-lanceolate, glabrous, caducous. Flowers 4–6 mm in diam. Hypanthium campanulate, glabrous abaxially. Sepals triangular, 1–1.5 × 1.5 mm, erect in fruit, apex acute. Petals pinkish, obovate, 2–3 × 2–2.5 mm, glabrous, base shortly clawed, apex emarginate or obtuse. Stamens ca. 20, slightly shorter than to subequaling petals; disk undulate annular. Carpels puberulous; styles shorter than stamens. Follicles spreading, glabrous; styles terminal on abaxial side, somewhat divergent. Fl. May–Jun, fr. Jun–Sep.

- Limestone mountain slopes; 2700–2800 m, NW Yunnan.

Spiraea thibetica Bureau & Franchet (J. Bot. (Morot) 5: 25. 1891, not S. tibetica T. T. Yu & L. T. Lu, 1980), described from Xizang, requires further study. We are unable to treat it in this account because we have seen no specimens.


金丝桃叶绣线菊 jin si tao ye xiu xian ju

Shrubs to 1.5 m. Branches erect, spreading; branchlets brownish to gray-brown, slender, terete, glabrous or puberulous when young; buds ovoid, small, with several brownish scales, glabrous or subglabrous, apex acute. Petiole 1–4 mm, glabrous; leaf blade oblong-ovate or obovate-lanceolate, 1.5–2 × 0.5–0.7 cm, usually glabrous, rarely pubescent on both surfaces, base cuneate, indistinctly 3-veined or pinnately veined, margin entire (or on sterile branchlets obtusely 2- or 3-dentate apically), apex obtuse or acute. Umbels sessile, 1.25 cm, 5–11-flowered, with several small, clustered leaves at base; pedicels 0.8–1.8 cm, glabrous or puberulous; bracts very small, caducous. Flowers 5–7 mm in diam. Hypanthium campanulate, glabrous abaxially. Sepals triangular, 1.5–2 mm, erect in fruit, apex acute. Petals white, suborbicular or obovate, 3–3.5 × 3–4 mm, glabrous, base shortly clawed, apex obtuse. Stamens ca. 20, slightly shorter than to subequaling petals. Disk annular, 10-lobed. Carpels pubescent or subglabrous; styles somewhat shorter than stamens. Follicles straightly spreading, glabrous; styles terminal on abaxial side, divergent. Fl. May–Jun, fr. Jun–Sep.

- Hills; ca. 600 m. Gansu, Nei Mongol.


粉叶绣线菊 fen ye xiu xian ju

Shrubs to 1.5 m. Branchlets purple-brown when young, dark gray when old, angled, glabrous when young; buds ovoid, small, with several scales, apex subobtuse. Petiole 1–4 mm, glabrous; leaf blades unequal; those on flowering branchlets usually oblong-obovate, 4–8 × 2–4 mm, base cuneate, margin entire or 3-lobed apically, apex obtuse; those on sterile branchlets blue-gray and glaucous pruinose abaxially, flabellate, 7–10 × 8–12 mm, usually glabrous on both surfaces, base cuneate to subrounded, often 3-veined, margin deeply 3–5-lobed. Umbels sessile or shortly pedunculate, ca. 1 cm, 3–13-flowered, with

- Mixed forests, rocky cliffs and gullies; 2000–4000 m. NW Yunnan.

70. **Spiraea aquilegiifolia** Pallas, Reise Russ. Reich. 3: 734. 1776.

耧斗菜叶绣线菊 lou dou cai ye xiu xian ju

*Spiraea hypericifolia* Linnaeus var. *thalictroides* (Pallas) Ledebour; *S. thalictroides* Pallas.

Shrubs low, to 1 m tall. Branchlets brown or gray-brown, terete, densely pubescent initially, becoming subglabrous; buds ovoid, small, with several brownish scales, glabrous. Petiole 1–2 mm, minutely pubescent; leaf blades unequal: those on flowering branchlets usually obovate, 4–8 × 2–5 mm, base cuneate, margin entire or obtusely 3-lobed; those on sterile branchlets abaxially gray-green, often flabellate, 7–10 mm, about as broad as long, abaxially densely pubescent, adaxially glabrous or sparsely pubescent, base narrowly cuneate, inconspicuously 3-veined, margin 3–5-lobed. Umbels sessile, 1–1.5 cm, 3–6-flowered, with several small, clustered leaves at base; pedicels 6–10 mm, glabrous; bracts small, caducous. Flowers 4–5 mm in diam. Hypanthium campanulate, glabrous abaxially. Sepals triangular, 1–1.5 × 2–2.5 mm, erect or reflexed in fruit, apex apiculate. Petals white, suborbicular, 2–3 mm, nearly as broad as long, glabrous, base shortly clawed, apex obtuse. Stamens ca. 20, nearly equaling petals. Disk annular, deeply 10-lobed. Carpels pubescent; styles shorter than stamens. Follicles pubescent distally or on adaxial suture; styles terminal on abaxial side. Fl. May–Jun, fr. Jul–Aug.

Dry grasslands, stony slopes; 600–1300 m. Gansu, Hebei, Henan, Nei Mongol, Qinghai, Shaanxi, Shanxi [Mongolia, Russia].