

37. **SIBBALDIA** Linnaeus, Sp. Pl. 1: 284. 1753.

山莓草属 shan mei cao shu

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Sibbaldianthe Juzepczuk.

Herbs perennial, often woody based. Flowering stems prostrate to erect. Leaves pinnate or palmately 3–5-foliolate; leaflets serrate at apex or margin, rarely entire. Inflorescence a cyme or solitary flower. Flowers usually bisexual, rarely unisexual. Hypanthium saucer-shaped or cupular. Sepals (4 or)5, alternate, persistent; epicalyx segments (4 or)5. Petals (4 or)5, yellow, purple-red, or white. Disk usually markedly broad, rarely not so. Stamens (4 or)5(–10); anthers 2-loculed. Carpels 4–20, free; ovule usually ascending; style sub-basal, lateral, or subterminal. Achenes few, inserted on elevated, dry receptacle. $x = 7$.

About 20 species: arctic and alpine regions of N hemisphere; 13 species (four endemic) in China.

- 1a. Radical leaves pinnately 3–11-foliolate.
 - 2a. Leaflets abaxially sericeous, strigose, or subglabrous.
 - 3a. Flowers 5-merous; petals yellow or white, longer than sepals; leaflets abaxially strigose, adaxially subglabrous, terminal one (2 or)3-serrate at apex 10. *S. adpressa*
 - 3b. Flowers 4- or 5-merous; petals white, equaling or only slightly longer than sepals; leaflets appressed sericeous on both surfaces, margin entire 11. *S. sericea*
 - 2b. Leaflets abaxially densely white tomentose.
 - 4a. Flowering stems and petioles densely white tomentose; leaflets abaxially inconspicuously veined and densely white tomentose 12. *S. micropetala*
 - 4b. Flowering stems and petioles yellow pilose and white tomentose; leaflets abaxially prominently veined 13. *S. phanerophlebia*
- 1b. Radical leaves palmately 3–5-foliolate.
 - 5a. Radical leaves 5-foliolate.
 - 6a. Leaflets densely white sericeous on both surfaces 9. *S. omeiensis*
 - 6b. Leaflets appressed pilose on both surfaces.
 - 7a. Leaflets obovate-oblong or oblong, central and lateral ones subequal, apex 2–6-serrate; petals 5, purple-red, longer than sepals 7. *S. purpurea*
 - 7b. Leaflets obovate, 2 lateral ones much smaller than 3 central ones, apex (2 or)3-serrate; petals 4(or 5), yellow-white, nearly equaling sepals 8. *S. pentaphylla*
 - 5b. Radical leaves 3-foliolate.
 - 8a. Leaflet margin entire except for (2 or)3–5-dentate apex.
 - 9a. Petals 5, shorter than sepals 1. *S. procumbens*
 - 9b. Petals 4 or 5, nearly equaling or slightly longer than sepals.
 - 10a. Leaflets broadly obovate, base rounded to broadly cuneate; flowers numerous, in cymes; petals 5, equaling sepals 2. *S. cuneata*
 - 10b. Leaflets obovate-oblong, base cuneate; flowers 1(–3); petals 4, nearly equaling or slightly longer than sepals 3. *S. tetrandra*
 - 8b. Leaflet margin serrate or lobed.
 - 11a. Flower solitary, terminal; petals white, longer than sepals 4. *S. perpusilloides*
 - 11b. Flowers 2–6, in cymes; petals red or purple-red, shorter than or nearly equaling sepals.
 - 12a. Leaflets broadly obovate to suborbicular, 0.3–1.5 cm, both surfaces appressed pilose; petals red, nearly equaling sepals 5. *S. tenuis*
 - 12b. Leaflets broadly elliptic, 1.3–2.5 cm, abaxially densely yellow hirsute; petals purple-red, slightly shorter than or equaling sepals 6. *S. sikkimensis*

1. **Sibbaldia procumbens** Linnaeus, Sp. Pl. 1: 307. 1753.

山莓草 shan mei cao

Herbs perennial, woody based. Flowering stems prostrate or ascending, 4–30 cm tall, appressed pilose, or strigose throughout. Radical leaves 3–12 cm including petiole; stipules brown, membranous; petiole pilose; leaf blade 3-foliolate; leaflets shortly petiolulate or subsessile, oblong or obovate, 1–3 × 0.6–1.5 cm, abaxially appressed pilose, adaxially sparsely pilose or sometimes glabrous, base cuneate, margin 3–5-dentate,

apex truncate; teeth triangular, rarely ovate and acute; cauline leaves 1 or 2, resembling radical ones but petiole shorter; stipules lanceolate or ovate, sparsely pilose, margin entire. Inflorescence terminal, compact, corymbose, 8–12-flowered. Flowers 4–6 mm in diam. Sepals ovate to triangular-ovate, apex acute; epicalyx segments much shorter than to nearly equaling sepals. Petals yellow, obovate-oblong, slightly or much shorter than sepals, apex rounded. Stamens ca. 5. Style lateral. Achenes glabrous. Fl. and fr. Jul–Aug.

Forests, meadows on mountain slopes, dry mountain slopes,

grasslands by lakes, rock crevices; 2400–4000 m. Gansu, Jilin, Qinghai, Shaanxi, Sichuan, Xinjiang, Xizang, Yunnan [widely distributed in N temperate zone, extending N nearly to arctic circle].

- 1a. Flowering stems 4–20 cm tall, appressed pilose; cauline leaf 1; epicalyx segments much shorter than sepals; petals slightly shorter than sepals 1a. var. *procumbens*
1b. Flowering stems to 30 cm tall, strigose throughout; cauline leaves 1 or 2; epicalyx segments slightly shorter than sepals; petals much shorter than sepals 1b. var. *aphanopetala*

1a. *Sibbaldia procumbens* var. *procumbens*

山莓草(原变种) shan mei cao (yuan bian zhong)

Potentilla procumbens (Linnaeus) Clairville (1811), not Sibthorp (1794); *P. sibbaldia* Griesselich; *P. sibbaldii* A. Haller; *Sibbaldia macrophylla* Turczaninow ex Juzepczuk; *S. procumbens* var. *macrophylla* (Turczaninow ex Juzepczuk) Gubonov.

Flowering stems 4–20 cm tall, appressed pilose. Cauline leaf 1. Epicalyx segments much shorter than sepals. Petals slightly shorter than sepals. Fl. and fr. Jul–Aug.

Dry mountain slopes, grasslands by lakes; 2400–2600 m. Jilin, Xinjiang [widely distributed in N temperate zone, extending N nearly to arctic circle].

1b. *Sibbaldia procumbens* var. *aphanopetala* (Handel-Mazzetti) T. T. Yu & C. L. Li in T. T. Yu, Fl. Reipubl. Popularis Sin. 37: 337. 1985.

隐瓣山莓草 yin ban shan mei cao

Sibbaldia aphanopetala Handel-Mazzetti, Acta Horti Gothob. 13: 327. 1939.

Flowering stems to 30 cm tall, strigose throughout. Cauline leaves 1 or 2. Epicalyx segments slightly shorter than sepals. Petals much shorter than sepals. Fl. and fr. Jul–Aug.

• Forests, meadows on mountain slopes, rock crevices; 2500–4000 m. Gansu, Qinghai, Shaanxi, Sichuan, Xizang, Yunnan.

This variety is used medicinally.

2. *Sibbaldia cuneata* Hornemann ex Kuntze, Linnaea 20: 59. 1874.

楔叶山莓草 xie ye shan mei cao

Sibbaldia taiwanensis H. L. Li.

Herbs perennial, woody based. Flowering stems erect or ascending, 5–14 cm tall, appressed or subappressed pilose. Radical leaves 1.5–10 cm including petiole; stipules brown, membranous, abaxially sparsely strigose; petiole appressed pilose; leaf blade 3-foliolate; leaflets usually shortly petiolulate or subsessile, green on both surfaces, broadly obovate or elliptic, 0.8–2.5 × 0.6–1.8 cm, both surfaces sparsely pilose, base cuneate, margin 3–5-dentate, apex truncate; teeth ovate, apex acute or obtuse; cauline leaves 1 or 2, resembling radical ones but leaflets smaller; stipules green, lanceolate, herbaceous, apex acumi-

nate. Inflorescence terminal, compact, corymbose. Flowers 5–7 mm in diam. Sepals ovate or oblong, apex acute; epicalyx segments lanceolate, equaling sepals, abaxially pilose, apex acuminate. Petals yellow, obovate, nearly equaling or slightly longer than sepals, apex rounded. Stamens ca. 5. Style lateral. Achenes glabrous. Fl. and fr. May–Oct.

Alpine meadows, rock crevices; 3400–4500 m. Qinghai, Sichuan, Taiwan, Xizang, Yunnan [Afghanistan, Bhutan, Nepal, Pakistan, Russia, Sikkim].

3. *Sibbaldia tetrandra* Bunge, Verz. Altai Pfl. 17. 1836.

四蕊山莓草 si rui shan mei cao

Dryadanthé bungeana Ledebour; *D. tetrandra* (Bunge) Juzepczuk; *Potentilla tetrandra* (Bunge) J. D. Hooker.

Herbs perennial, low, tufted. Rhizome robust, terete. Flowering stems 2–5 cm tall. Radical leaves 0.5–15 cm including petiole; stipules brown, dilated, membranous, abaxially pilose; petiole white pilose; leaf blade 3-foliolate; leaflets green on both surfaces, obovate-oblong, 5–8 × 3–4 mm, both surfaces white pilose, base cuneate, apex truncate and 3-dentate. Flowers 1(–3), usually unisexual, 4–8 mm in diam. Sepals 4, triangular-ovate, apex rounded or acute; epicalyx segments lanceolate or ovate, minute, nearly equaling sepals, apex acute to acuminate. Petals 4, pale yellow, obovate-oblong, nearly equaling or slightly longer than sepals. Stamens 4, inserted away from broad, 4-fid disk. Style lateral. Achenes glabrous. Fl. and fr. May–Aug.

Forests, meadows on mountain slopes, rock crevices; 3000–5400 m. Qinghai, Xinjiang, Xizang [Mongolia, Nepal, Pakistan, Russia (W Siberia), Sikkim; C Asia].

4. *Sibbaldia perpusilloides* (W. W. Smith) Handel-Mazzetti, Symb. Sin. 7: 520. 1933.

短蕊山莓草 duan rui shan mei cao

Potentilla perpusilloides W. W. Smith, Rec. Bot. Surv. India 4: 188. 1911; *P. brachystemon* Handel-Mazzetti.

Herbs perennial, small. Roots slender, slightly woody; rootlets slender. Flowering stems 1–1.5 cm tall. Radical leaves 0.7–1.5 cm including petiole; stipules brown, membranous, pilose or subglabrous; petiole pilose or subglabrous; leaf blade 3-foliolate; leaflets shortly petiolulate or subsessile, broadly obovate, 2–3.5 × 1.5–2.5 mm, both surfaces subglabrous, base cuneate, margin 2–5-serrate; teeth ovate, apex acute, rarely obtuse. Flower solitary, terminal, ca. 6 mm in diam., base pilose. Sepals broadly ovate, apex acute; epicalyx segments elliptic-lanceolate, slightly shorter than sepals, abaxially sparsely pilose or subglabrous, margin ciliate, apex acute. Petals 5, white, obovate, nearly 2 × as long as sepals, apex rounded. Stamens up to 10; filaments short. Style lateral. Achenes glabrous. Fl. and fr. Jul–Aug.

Alpine meadows, rock crevices; 3800–4300 m. Xizang, Yunnan [Bhutan, N Myanmar, Nepal, Sikkim].

5. *Sibbaldia tenuis* Handel-Mazzetti, Acta Horti Gothob. 13: 330. 1939.

纤细山莓草 xian xi shan mei cao

Herbs perennial. Roots slender, much branched. Rhizome sometimes procumbent and creeping underground. Flowering stems 1.5–6 cm tall, densely pubescent. Radical leaves 1–8.5 cm including petiole; stipules brown, membranous, appressed pilose or subglabrous; petiole appressed pilose; leaf blade 3-foliolate; leaflets sessile, green on both surfaces, elliptic or obovate, 3–15 × 2.5–13 mm, both surfaces appressed pilose, base subrounded or broadly cuneate, margin incised serrate, apex obtuse, rarely subtruncate. Inflorescence corymbose, numerous flowered. Flowers ca. 5 mm in diam. Sepals ovate-triangular, apex acuminate; epicalyx segments lanceolate, slightly shorter than sepals, abaxially appressed pilose, apex acute to acuminate. Petals pink, narrowly oblong, apex obtuse. Stamens 5(or 6), inserted away from broad, 5- or 6-fid disk. Style subterminal. Achenes not seen. Fl. Jun.

• Open places in *Picea* forests, ravines; 2500–3600 m. Gansu, Qinghai, Sichuan.

6. *Sibbaldia sikkimensis* (Prain) Chatterjee, Notes Roy. Bot. Gard. Edinburgh 19: 327. 1938.

黄毛山莓草 huang mao shan mei cao

Potentilla sikkimensis Prain, J. Asiat. Soc. Bengal 73: 201. 1904, not Th. Wolf (1908); *Sibbaldia melinotricha* Handel-Mazzetti.

Herbs perennial. Roots robust, terete. Flowering stems erect or ascending, 6–30 cm tall, yellow hirsute, glabrescent when old. Radical leaves 4–28 cm including petiole; stipules brown, membranous, abaxially sparsely yellow villous; petiole spreading yellow hirsute; leaf blade 3-foliolate; leaflets shortly petiolulate or sessile, adaxially dark green, broadly elliptic or obovate, 1.5–4 × 1–3 cm, both surfaces sparsely yellow pilose, base subrounded or broadly cuneate, margin coarsely sharply incised serrate, apex obtuse; cauline leaves 1 or 2, resembling radical ones but petiole shorter and leaflets smaller; stipules green or green-brown, ovate, herbaceous, abaxially sparsely yellow pilose. Inflorescence terminal, pseudo-umbellate. Flowers 5–6 mm in diam.; pedicel 1–1.5 cm, sparsely spreading pilose. Sepals triangular-ovate, apex acute; epicalyx segments oblong-lanceolate, slightly shorter than sepals, abaxially yellow pilose, apex acute. Petals 5(or 6), dark purple-red or violet, obovate, slightly shorter than sepals, apex rounded. Stamens 5(or 6); filaments short. Style subterminal. Achenes ovoid, purple-brown, glabrous. Fl. and fr. Jun–Aug.

Alpine meadows; 3500–4100 m. Yunnan [N Myanmar, Nepal, Sikkim].

7. *Sibbaldia purpurea* Royle, Ill. Bot. Himal. Mts. 1: 208. 1835.

紫花山莓草 zi hua shan mei cao

Herbs perennial, woody based. Rhizome much branched. Flowering stems ascending, 4–10 cm tall, appressed pilose. Radical leaves 1.5–4 cm including petiole; stipules dark brown, membranous, abaxially sparsely sericeous-villous or subglabrous; petiole appressed pilose; leaf blade palmately 5-foliolate; leaflets sessile or subsessile, obovate or obovate-oblong, 5–10 × 3–6 mm, subequal, both surfaces appressed white villous or

sericeous-villous, base cuneate or broadly so, margin usually 2- or 3-serrate, apex obtuse. Inflorescence axillary, corymbose and many flowered or a solitary flower. Flowers 4–6 mm in diam., unisexual or bisexual, shorter or longer than subtending leaf. Sepals triangular-ovate, apex acute; epicalyx segments lanceolate, slightly shorter than sepals, abaxially sparsely white pilose, apex acute. Petals 5, purple-red, obovate-oblong, apex emarginate. Disk well developed, purple-red. Stamens 5, alternating with petals. Style lateral. Achenes ovoid, purple-brown, glabrous. Fl. and fr. Jun–Aug.

Forest margins, alpine meadows, rock crevices; 3600–4700 m. Shaanxi, Sichuan, Xizang, Yunnan [Bhutan, NW India, ?Kashmir, Nepal, Sikkim].

- 1a. Flowers solitary, unisexual, usually shorter than subtending leaf 7a. var. *purpurea*
1b. Flowers many in corymbs, rarely solitary, bisexual, longer than subtending leaf 7b. var. *macropetala*

7a. *Sibbaldia purpurea* var. *purpurea*

紫花山莓草(原变种) zi hua shan mei cao (yuan bian zhong)

Potentilla purpurea (Royle) J. D. Hooker.

Flowers solitary, unisexual, usually shorter than subtending leaf.

Rock crevices on mountain slopes; 4400–4700 m. Xizang [Bhutan, NW India, Nepal, Sikkim].

7b. *Sibbaldia purpurea* var. *macropetala* (Muravjeva) T. T. Yu & C. L. Li in T. T. Yu, Fl. Reipubl. Popularis Sin. 37: 340. 1985.

大瓣紫花山莓草 da ban zi hua shan mei cao

Sibbaldia macropetala Muravjeva, Trudy Bot. Inst. Akad. Nauk SSSR, Ser. 1, Fl. Sist. Vyssh. Rast. 2: 235. 1936.

Flowers many in corymbs, rarely solitary, bisexual, longer than subtending leaf.

Forest margins, alpine meadows, rock crevices near snow line; 3600–4700 m. Shaanxi, Sichuan, Xizang, Yunnan [Bhutan, Sikkim].

8. *Sibbaldia pentaphylla* J. Krause, Repert. Spec. Nov. Regni Veg. Beih. 12: 410. 1922.

五叶山莓草 wu ye shan mei cao

Sibbaldia purpurea Royle var. *pentaphylla* (J. Krause) Dikshit.

Herbs perennial, woody based. Rhizome robust. Flowering stems low, tufted, 2–5 cm tall. Radical leaves 1–1.5 cm including petiole; stipules abaxially brown, membranous, sparsely pilose or subglabrous; petiole sericeous; leaf blade palmately 5-foliolate; leaflets green on both surfaces, obovate or obovate-oblong, 3–8 × 2–5 mm, 2 lateral leaflets much smaller than 3 central ones, both surfaces densely white villous or sericeous-villous, base cuneate, apex truncate or obtuse and 2- or 3-serrate. Inflorescence axillary, 1–3-flowered. Flowers ca. 4 mm in diam., unisexual. Sepals 4 or 5, triangular-ovate, apex acute; epicalyx segments lanceolate, slightly shorter than sepals, abax-

ially pilose, apex acute. Petals yellowish white, obovate-oblong, apex obtuse. Stamens 4 or 5, inserted away from broad, 4- or 5-fid disk. Style lateral. Achenes glabrous. Fl. and fr. Jun–Aug.

• Alpine meadows, rock crevices; 3700–4500 m. Qinghai, Sichuan, Xizang, Yunnan.

9. *Sibbaldia omeiensis* T. T. Yu & C. L. Li, Acta Phytotax. Sin. 19: 516. 1981.

峨眉山莓草 e mei shan mei cao

Herbs perennial. Rhizome robust, terete, much branched, with many lateral roots. Flowering stems erect, 12–15 cm tall, densely appressed white sericeous. Radical leaves 3–7 cm including petiole; stipules brown, membranous, abaxially white sericeous or subglabrous; petiole appressed sericeous; leaf blade palmately 5-foliolate; 2 lateral leaflets sessile, lanceolate, margin entire or 1–3-serrate; 3 central leaflets oblong-lanceolate, larger than lateral 2, both surfaces densely white sericeous-villous and shining, base cuneate, distal margin irregularly 1–4-serrate on each side, apex obtuse or acute; cauline leaf 1, reduced and bractlike; stipules ovate-lanceolate, herbaceous, abaxially densely white sericeous. Flowers 2 or 3, ca. 1.5 cm in diam. Sepals triangular-ovate, apex acuminate; epicalyx segments lanceolate, nearly equaling sepals, abaxially densely white sericeous, apex acuminate. Petals white, obcordate. Stamens ca. 5. Style subterminal; stigma not dilated. Achenes not seen. Fl. Jul.

• Rock crevices; ca. 3000 m. C Sichuan (Emei Shan).

10. *Sibbaldia adpressa* Bunge in Ledebour, Fl. Altaic. 1: 428. 1829.

伏毛山莓草 fu mao shan mei cao

Potentilla adpressa (Bunge) Cardot; *P. bifurca* Linnaeus var. *unijuga* Th. Wolf; *P. lindenbergii* Lehmann; *Sibbaldia minutissima* Kitamura; *Sibbaldianthe adpressa* (Bunge) Juzepczuk.

Herbs perennial. Roots much branched, long, slender, woody. Flowering stems low, tufted, 1.5–12 cm tall, sericeous-strigose. Radical leaves 1.5–7 cm including petiole; stipules dark brown, membranous, abaxially subglabrous; petiole sericeous-strigose; leaf blade pinnate with 2 pairs of leaflets, sometimes 3-foliolate; terminal leaflet oblanceolate or obovate-oblong, base cuneate, rarely broadly so, apex truncate and (2 or) 3-serrate, rarely entire; lateral leaflets lanceolate or oblong-lanceolate, 0.5–2 cm × 1.5–6 mm, abaxially sericeous-strigose, adaxially sparsely appressed pilose or subglabrous, base cuneate, decurrent and adnate to the rachis in apical pair of leaflets, margin entire, apex acute; cauline leaves 1 or 2, resembling radical ones; stipules green, lanceolate, herbaceous. Inflorescence cymose and several flowered or a solitary, terminal flower. Flowers 5-merous, 6–10 mm in diam. Sepals triangular-ovate, apex acute; epicalyx segments long elliptic, slightly shorter or longer than sepals, abaxially sparsely sericeous-strigose, apex rounded or acute. Petals yellow or white, obovate-oblong. Stamens ca. 10, slightly shorter than or equaling sepals. Style subbasal. Achenes markedly rugose. Fl. and fr. May–Aug.

Meadows on mountain slopes, sandy river banks, gravels, field

margins; 600–4200 m. Gansu, Hebei, Heilongjiang, Nei Mongol, Qinghai, Xinjiang, Xizang [Mongolia, Nepal, Russia].

11. *Sibbaldia sericea* (Grubov) Soják, Folia Geobot. Phytotax. 4: 79. 1969.

绢毛山莓草 juan mao shan mei cao

Sibbaldianthe sericea Grubov, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 17: 16. 1955; *Potentilla adpressa* (Bunge) Cardot var. *sericea* Cardot.

Herbs perennial. Roots robust, terete, woody. Flowering stems tufted, 1–4 cm tall, appressed sericeous. Radical leaves 1–4 cm including petiole; stipules brown, membranous, sericeous; petiole appressed sericeous; leaf blade pinnately 5-foliolate or 3-foliolate; leaflets opposite, obovate-lanceolate or narrowly lanceolate, 0.5–1.5 cm × 2–3 mm, both surfaces appressed sericeous, base long cuneate, margin entire, apex acuminate; cauline leaves 3, resembling radical ones but smaller; stipules green, sericeous. Flowers 1 or 2, 4- or 5-merous, 3–5 mm in diam. Sepals ovate-triangular, abaxially sericeous; epicalyx segments lanceolate, abaxially sericeous, apex acute. Petals white, obovate, equaling or slightly longer than sepals. Style lateral. Achenes not seen.

Mountain slopes, desert grasslands; 600–1200 m. Nei Mongol [Mongolia].

12. *Sibbaldia micropetala* (D. Don) Handel-Mazzetti in G. Karsten & Schenck, Vegetationsbilder 22(8): 6. 1932.

白叶山莓草 bai ye shan mei cao

Potentilla micropetala D. Don, Prodr. Fl. Nepal. 231. 1825; *P. albifolia* Wallich ex J. D. Hooker.

Herbs perennial. Roots robust, terete. Flowering stems ascending, 10–30 cm tall, together with petioles densely white tomentose or sometimes sparsely tomentose. Radical leaves 3–5 cm including petiole; stipules brown, membranous, abaxially sparsely white tomentose or subglabrous; leaf blade pinnate with 4–6 pairs of leaflets; leaflets usually opposite, sessile, long elliptic or obovate-oblong, 0.5–1 cm × 3–8 mm, abaxially white tomentose, adaxially gray-white or green tomentose and pubescent, or sparsely pubescent only, base cuneate, broadly so, or subrounded, margin sharply incised serrate, apex rounded; cauline leaves resembling radical ones but leaflets fewer higher up stem, eventually 3-foliolate; stipules leaflike, adaxially green or dark green, herbaceous, abaxially white tomentose, margin incised serrate. Flower solitary, 4–8 mm in diam. Sepals long ovate, apex acuminate; epicalyx segments elliptic-lanceolate, slightly shorter than sepals, abaxially densely white tomentose, apex obtuse or acute. Petals yellow or pale orange, oblong-lanceolate, shorter than or equaling sepals, apex obtuse. Stamens 5, alternating with sepals; filaments short. Style lateral. Achenes brown, ovoid, partly glabrous and partly shallowly grooved. Fl. and fr. Jun–Aug.

Meadows on mountain slopes, sandy river banks; 2700–4300 m. Sichuan, Xizang, Yunnan [Bhutan, NW India, Nepal, Sikkim].

13. *Sibbaldia phanerophlebia* T. T. Yu & C. L. Li, *Acta Phytotax. Sin.* 19: 517. 1981.

显脉山莓草 xian mai shan mei cao

Herbs perennial. Roots much branched, long, thin. Flowering stems spreading, 4–10 cm, together with petioles yellowish pilose and white tomentose. Radical leaves 2–5 cm including petiole; stipules brown, membranous, abaxially pilose or glabrescent; leaf blade pinnate with 2–4 pairs of leaflets; leaflets opposite, rarely alternate, shortly petiolulate or subsessile, elliptic or obovate, 4–10 × 3–8 mm, abaxially densely white tomentose, adaxially pilose, rarely white tomentose, midvein and lateral veins obvious, sparsely yellow pilose, base broadly cuneate or subrounded, sharply incised serrate, apex obtuse; cauline leaves resembling radical ones but upper ones 3-foliolate; stipules green, ovate, herbaceous, abaxially white tomentose, margin sharply serrate. Flower solitary, 5–6 mm in diam. Sepals triangular, apex acute; epicalyx segments lanceolate, nearly equaling sepals, abaxially yellowish pilose and white tomentose, apex acuminate. Petals tinged yellow, long elliptic, nearly equaling sepals, apex rounded. Stamens ca. 5. Style lateral. Achenes not seen. Fl. Jun.

• Meadows on mountain slopes, rock crevices; 3500–3800 m. Xizang, Yunnan.

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