

TRIURIDACEAE

霉草科 mei cao ke

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Herbs achlorophyllous, mycotrophic, reddish, purple, or yellow. Stems erect, simple or nearly so. Leaves alternate, reduced, scalelike, not green. Plants monoecious or dioecious; flowers small, unisexual, rarely bisexual or polygamous, actinomorphic, in racemes or subcorymbs, with decurved bracteate pedicels. Perianth segments 3–10, in 1 series, valvate, usually united at base, sometimes appendaged at apex, reflexed after anthesis. Stamens 2–6, inserted at base of receptacle or perianth; anthers 2- or 4-theous, extrorse, mostly opening by transverse slit; connective often reduced into long subulate appendages. Carpels 6 to many, free; style terminal to subbasal; ovule solitary, basal. Fruiting carpels crowded, opening by a slit. Seed internally fleshy, white, oily, undifferentiated.

Eleven genera and ca. 50 species: tropics and subtropics; one genus and five species in China.

Zhou Lingyun & Zhong Xiongwen. 1992. Triuridaceae. *In*: Sun Xiangzhong, ed., *Fl. Reipubl. Popularis Sin.* 8: 190–193.

1. SCIAPHILA Blume, Bijdr. 514. 1825–1826.

喜荫草属 xi yin cao shu

Roots with hairs. Stems short, slender. Inflorescences racemose. Flowers unisexual or bisexual, pedicellate. Perianth segments 3–8(–10). Stamens 2, 3, or 6; filaments absent or very short; anthers 3- or 4-theous; connectives not produced into appendages. Carpels numerous; style lateral or basal. Follicles opening by a longitudinal slit.

About 30 species: tropics and subtropics; five species in China.

1a. Plants with male and bisexual flowers.

2a. Male flowers with 6 stamens; bisexual flowers with (3–)6 stamens 1. *S. tenella*

2b. Male and bisexual flowers with 3 stamens 2. *S. maculata*

1b. Plants without bisexual flowers, monoecious.

3a. Style club-shaped; stems 0.6–1 mm in diam. 3. *S. secundiflora*

3b. Style awl-shaped; stems 0.3–0.5 mm in diam.

4a. Stems mostly not branched; pedicels 7–9 mm 4. *S. arfakiana*

4b. Stems branched; pedicels 2–4 mm 5. *S. ramosa*

1. *Sciaphila tenella* Blume, Bijdr. 515. 1825–1826.

喜荫草 xi yin cao

Stems 7–18 cm tall. Scalelike leaves broadly ovate, ca. 2 mm, amplexicaul at base. Inflorescences 5–14 cm. Flowers bisexual and male. Pedicel 4–6 mm, decurved after anthesis; bracts lanceolate, ca. 2 mm. Perianth segments of bisexual flowers 6, apex acute to acuminate and crinite; stamens (3–)6; carpels ca. 20; styles short, lateral. Perianth segments of male flowers similar to bisexual ones; stamens 6; filaments short, united at base. Follicles 1.5–2 mm in diam. Seeds elliptic, 3-ribbed. Fl. summer.

Forests. S Hainan (Sanya) [Indonesia, Japan, Malaysia, New Guinea, Philippines, Sri Lanka; Pacific islands (Solomon Islands)].

2. *Sciaphila maculata* Miers, Proc. Linn. Soc. London 2: 73. 1850.

斑点霉草 ban dian mei cao

Stems ca. 10 cm tall. Scalelike leaves oblong, ca. 1.2 mm. Inflorescences ca. 7 cm, 30-flowered. Flowers bisexual and male. Pedicels 4–6 mm, decurved after anthesis; bracts lanceo-

late, 1–1.2 mm. Perianth segments 6, 3 broad segments alternating with 3 narrower ones, ca. 0.6 mm. Stamens 3; anthers 3-theous; filaments short. Carpels 20–30; styles basal, club-shaped, apex papillate, exceeding ovary. Follicles ca. 2 mm in diam. Seeds ellipsoid, 3-grooved on adaxial side.

Forests. Taiwan (Taidong) [Malaysia (Borneo), New Guinea, Philippines].

Ohashi and Murata (*J. Jap. Bot.* 83: 20–35. 2008) treat this taxon as synonymous with *Sciaphila tenella*; however, one of us (Guo) notes that the stamen number differs.

3. *Sciaphila secundiflora* Thwaites ex Bentham, Hooker's J. Bot. Kew Gard. Misc. 7: 10. 1855.

大柱霉草 da zhu mei cao

Sciaphila megastyla Fukuyama & T. Suzuki; *S. tosaensis* Makino var. *megastyla* (Fukuyama & T. Suzuki) S. S. Ying.

Stems usually simple, 4–12 cm tall including inflorescences. Scalelike leaves ovate-lanceolate, 2–4 mm, apex mucronate or retuse. Inflorescences short, 3–9-flowered. Plants monoecious. Pedicels slightly curved upward; bracts 1–3 mm. Perianth segments 6, subulate, 2–3 mm. Stamens 2 or 3, sessile.

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Carpels club-shaped and attenuate toward base when mature; styles subbasal, club-shaped.

About 300 m. ?Guangxi, Hong Kong, Taiwan (Lan Yu, Yilan) [Indonesia, Japan, Malaysia, New Guinea, Sri Lanka; Pacific islands (Solomon Islands)].

4. *Sciaphila arfakiana* Beccari, Malesia 3: 336. 1890.

兰屿霉草 lan yu mei cao

Stems 6–12 cm tall. Scalelike leaves oblong, ca. 1 mm. Inflorescences 1–5 cm, 5–30-flowered. Flowers unisexual. Pedicels (4–)7–9 mm, spreading; bracts lanceolate, ca. 1 mm. Perianth segments 6. Male flower with segments oblong, ca. 1.3 mm, apex with stipitate globose appendage; stamens (2 or)3, anthers 4-theous. Female flower with segments ca. 0.5 mm, apex without appendage; carpels 20–30; styles subapical, awl-shaped, apex papillate, exceeding ovary. Follicles ca. 2 mm in diam. Seeds ca. 0.7 mm.

Forests. Taiwan (Lan Yu) [Indonesia, Malaysia, New Guinea,

Philippines; Pacific islands (Micronesia, W Polynesia, Solomon Islands)].

According to Jin Murata (pers. comm.), this taxon may be the same as *Sciaphila nana* Blume (Mus. Bot. 1: 322. 1851), described from Java. One of us (Guo) notes that it is better to keep these separate at this time, awaiting further research.

5. *Sciaphila ramosa* Fukuyama & T. Suzuki, J. Jap. Bot. 12: 414. 1936.

多枝霉草 duo zhi mei cao

Stems branched, ca. 12 cm tall including inflorescences. Scalelike leaves lanceolate, apex mucronate. Inflorescences short, 3–7-flowered. Plants monoecious. Pedicels erect, 2–4 mm, slender; bracts 1.5–2 mm. Perianth segments (4–)6, ovate or ovate-lanceolate, ca. 0.8 mm. Stamens 2 or 3, subsessile. Carpels obovoid and slightly curved when mature; styles subapical, filiform.

About 300 m. Hong Kong, Taiwan (Lan Yu) [Japan (Bonin Islands)].