

55. LIRIOPE Loureiro, Fl. Cochinch. 1: 190, 200. 1790.

山麦冬属 shan mai dong shu

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Herbs perennial, shortly rhizomatous, often stoloniferous. Roots sometimes with fleshy, tuberous part near tip. Leaves basal, tufted, sessile, grasslike or narrowly linear. Scape simple, naked, terminating in a reduced panicle. Flowers bisexual, often in clusters of 2–4, sometimes solitary, small, subtended by a bract and a few bracteoles; pedicel articulate. Tepals 6, free. Stamens 6, inserted at base of tepals; filaments narrowly linear; anthers basifixed. Ovary superior, 3-loculed; ovules 2 per locule. Style columnar, slightly 3-angled; stigma small. Fruit bursting irregularly at an early stage and exposing young seeds. Seeds deep blue to purple at maturity, berrylike, globose or ellipsoid.

About eight species, E Asia, extending to Japan, the Philippines, and Vietnam; six species (three endemic) in China.

- 1a. Filaments ca. 2 × as long as anthers; leaves 1–2 mm wide 1. *L. kansuensis*
- 1b. Filaments equaling or slightly longer than anthers; leaves 2–35 mm wide.
 - 2a. Plants not stoloniferous.
 - 3a. Pedicel (5–)6–8 mm; anthers slightly shorter than filaments 4. *L. longipedicellata*
 - 3b. Pedicel (2–)4–5 mm; anthers equaling filaments 6. *L. muscari*
 - 2b. Plants stoloniferous.
 - 4a. Anthers ca. 2 mm 5. *L. spicata*
 - 4b. Anthers 1–1.5 mm.
 - 5a. Inflorescence 1–3 cm 2. *L. minor*
 - 5b. Inflorescence 6–15 cm 3. *L. graminifolia*

1. *Liriope kansuensis* (Batalin) C. H. Wright, J. Linn. Soc., Bot. 36: 79. 1903.

甘肃山麦冬 gan su shan mai dong

Ophiopogon kansuensis Batalin, Trudy Imp. S.-Peterburgsk. Bot. Sada 13: 103. 1893; *Mondo kansuense* (Batalin) Farwell.

Roots without fleshy, tuberous part. Stolons creeping, slender. Leaves filiform-linear, 15–20 cm × 1–2 mm, 3-veined, margin revolute, serrulate. Scape ca. 25 cm. Inflorescence ca. 5.5 cm, 10–12-flowered; bracts setiform, scarious, basal one ca. 2.5 mm. Flowers solitary, sometimes paired; pedicel 5–6 mm, articulate near apex. Tepals purplish, oblong to elliptic-lanceolate, ca. 5 × 2 mm. Filaments filiform, ca. 2 mm; anthers ca. 1 mm. Ovary subglobose. Style ca. 2.8 mm, slender; stigma slightly 3-lobed. Fl. Jun.

• River banks, hillsides along streams. S Gansu, NW Sichuan.

2. *Liriope minor* (Maximowicz) Makino, Bot. Mag. (Tokyo) 7: 323. 1893.

矮小山麦冬 ai xiao shan mai dong

Ophiopogon spicatus (Thunberg) Ker Gawler var. *minor* Maximowicz, Bull. Acad. Imp. Sci. Saint-Petersbourg 15: 85. 1871; *Liriope cernua* (Koidzumi) Masamune; *L. graminifolia* (Linnaeus) Baker var. *minor* (Maximowicz) Baker; *L. spicata* (Thunberg) Loureiro var. *minor* (Maximowicz) C. H. Wright; *Mondo cernuum* Koidzumi; *M. tokyoense* Nakai.

Roots with fusiform, fleshy, tuberous part near tip. Stolons creeping, elongate, slender. Leaves narrowly linear, 7–20 cm × 2–3(–4) mm, 5-veined, basally surrounded by many membranous-margined sheaths. Scape 6–7(–15) cm, much shorter than leaves. Inflorescence 1–3(–5) cm, 5–12-flowered; bracts ovate-lanceolate, basal one ca. 4 mm, margin membranous. Flowers

solitary, sometimes in clusters of 2 or 3; pedicel 3–4 mm. Tepals purplish, ovate-oblong, ca. 3.5 × 0.7 mm. Filaments ca. 1.5 mm; anthers ca. 1.5 mm. Style ca. 2 mm; stigma small. Seeds dark blue at maturity, subglobose, 4–5 mm in diam. Fl. Jun–Jul, fr. Aug–Sep. 2n = 36.

Forests, shady hillsides, grassy slopes; 600–2600 m. Fujian, Guangxi, Henan, Hubei, Jiangsu, Liaoning, Shaanxi, Sichuan, Taiwan, Zhejiang [Japan].

3. *Liriope graminifolia* (Linnaeus) Baker, J. Linn. Soc., Bot. 14: 538. 1875.

禾叶山麦冬 he ye shan mai dong

Asparagus graminifolius Linnaeus, Sp. Pl., ed. 2, 1: 450. 1762; *Dracaena graminifolia* (Linnaeus) Linnaeus; *Liriope angustissima* Ohwi; *L. crassiuscula* Ohwi; *Mondo graminifolium* (Linnaeus) Koidzumi.

Roots sometimes with fusiform, fleshy, tuberous part near tip. Stolons creeping, slender. Leaves narrowly linear, ca. 60 cm × 2–3(–4) mm, 5-veined, base surrounded by many sheaths and fibers, margin serrulate apically. Scape 20–50 cm. Inflorescence 6–15 cm, many flowered; bracts ovate, scarious, basal one 5–6 mm. Flowers in clusters of 2–4, sometimes solitary; pedicel ca. 4 mm, articulate near apex. Tepals white or purplish, suboblong, 3.5–4 × 1.5–1.8 mm. Filaments 1–1.5 mm, flat; anthers ca. 1 mm. Style ca. 2 mm; stigma as wide as style. Seeds blue-black at maturity, ovoid or subglobose, 4–5 mm in diam. Fl. Jun–Aug, fr. Sep–Nov. 2n = 36*, 72*, 108*.

• Forests, thickets, shady places along ravines, grassy and rocky places; near sea level to 2300 m. Anhui, Fujian, Gansu, Guangdong, Guizhou, Hebei, Henan, Hubei, Jiangsu, Jiangxi, Shaanxi, Shanxi, Sichuan, Taiwan, Zhejiang.

4. *Liriope longipedicellata* F. T. Wang & Tang, Fl. Reipubl. Popularis Sin. 15: 251. 1978.

长梗山麦冬 chang geng shan mai dong

Roots without fleshy, tuberous part. Stolons absent. Leaves glaucous abaxially, narrowly linear, 30–50 cm × (3–)4–5 mm, distinctly 5-veined abaxially, base surrounded by many brown, membranous sheaths, margin serrulate. Scape 30–60 cm. Inflorescence 7–12 cm, many flowered; bracts small, 1–2 mm. Flowers in clusters of 2–4; pedicel (5–)6–8 mm, articulate near or above middle. Tepals purplish red or purple, obovate or obovate-oblong, ca. 3 × 1.5 mm. Filaments ca. 1.2 mm, flat; anthers suboblong or ovate, ca. 1 mm. Style ca. 2 mm; stigma as wide as style. Seeds blackish purple at maturity, subglobose or globose-ellipsoid, 5–6 mm in diam. Fl. Jul, fr. Aug–Sep.

• Moist grasslands, shady and moist rocky places; 1400–2000 m. NE Sichuan.

5. *Liriope spicata* (Thunberg) Loureiro, Fl. Cochinch. 1: 201. 1790.

山麦冬 shan mai dong

Convallaria spicata Thunberg in Murray, Syst. Veg., ed. 14, 334. 1784; *Liriope spicata* var. *humilis* F. Z. Li; *L. spicata* f. *koreana* (Palibin) H. Hara; *L. spicata* var. *prolifera* Y. T. Ma; *Mondo fauriei* (H. Léveillé & Vaniot) Farwell; *Ophiopogon fauriei* H. Léveillé & Vaniot; *O. spicatus* (Thunberg) Ker Gawler; *O. spicatus* var. *koreanus* Palibin.

Roots usually with fusiform, fleshy, tuberous part near tip. Stolons creeping, slender. Leaves glaucous abaxially, narrowly linear, 25–60 cm × 4–8 mm, distinctly 5-veined abaxially, base surrounded by many brownish sheaths, margin serrulate. Scape 25–65 cm. Inflorescence 6–15(–20) cm, many flowered; bracts lanceolate, basal one 5–6 mm. Flowers in clusters of (2 or)3–5; pedicel ca. 4 mm, articulate distally. Tepals purplish or bluish, suboblong, 4–5 × 2–2.5 mm. Filaments ca. 2 mm; anthers ca. 2 mm. Style ca. 2 mm; stigma as wide as style. Seeds subglobose, ca. 5 mm in diam. Fl. May–Jul, fr. Aug–Oct. $2n = 36, 72^*, (88^*), 90^*, 108^*$.

Forests, grassy slopes, hillsides, moist places; near sea level to 1800 m. Anhui, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Hainan, Hebei, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Shaanxi, Shandong, Shanxi, Sichuan, Taiwan, Yunnan, Zhejiang [Japan, Korea, Vietnam].

Widely cultivated in China for its tuberous roots, which are used medicinally.

6. *Liriope muscari* (Decaisne) L. H. Bailey, Gentes Herb. 2: 35. 1929.

阔叶山麦冬 kuo ye shan mai dong

Ophiopogon muscari Decaisne, Fl. Serres Jard. Eur. 17: 181. 1867–1868; *Liriope graminifolia* (Linnaeus) Baker var. *densifolia* Maximowicz ex Baker; *L. muscari* var. *communis* (Maximowicz) P. S. Hsu & L. C. Li; *L. platyphylla* F. T. Wang & Tang; *L. spicata* (Thunberg) Loureiro var. *densifolia* (Maximowicz ex Baker) C. H. Wright; *L. spicata* var. *latifolia* Franquet; *L. yingdeensis* R. H. Miao; *O. spicatus* (Thunberg) Ker Gawler var. *communis* Maximowicz.

Roots sometimes with fleshy, tuberous part near tip. Stolons absent. Leaves linear to narrowly so, (12–)25–65 × (0.2–)0.8–2(–3.5) cm, stiff, (5–)9–11-veined. Scape (12–)45–100 cm.

Inflorescence (2–)8–45 cm, many flowered; bracts setiform, 3–4 mm; bracteoles ovate. Flowers in clusters of (3 or)4–8; pedicel (2–)4–5 mm, articulate near middle. Tepals purple or lilac-purple, elliptic-oblong, 3.5–4 × 1.5–1.8 mm. Filaments ca. 1.5 mm; anthers equaling filaments. Style ca. 2 mm; stigma small, slightly 3-lobed. Seeds blackish purple at maturity, globose, 6–7 mm in diam. Fl. Jul–Aug, fr. Sep–Oct. $2n = 36^*, 72^*, 108, (112^*)$.

Forests, bamboo forests, scrub, shady and moist places in ravines and on slopes; 100–1400(–2000) m. Anhui, Fujian, Guangdong, Guangxi, Guizhou, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Shandong, Sichuan, Taiwan, Zhejiang [Japan].

