

7. MUNRONIA Wight, Icon. Pl. Ind. Orient. 1(5): [1]. 1838.

地黄连属 di huang lian shu

Peng Hua (彭华); Bruce Bartholomew

Shrublets or small shrubs. Stem usually not branched. Leaves in spirals, odd-pinnate, trifoliolate, or simple, when compound lateral leaflets opposite; leaf blade or leaflet blades with margin entire or sparsely crenate. Flowers bisexual, few in axillary thyrses or solitary. Sepals 5, basally connate or distinct, imbricate in bud. Petals 5, much longer than sepals, basal half connate into a tube, apically distinct. Staminal tube cylindrical, base adnate with corolla tube, apex distinct, margin 10-lobed; anthers 10, oblong, basifixed, alternate with tube teeth, introrse. Disk tubular, ± as high as ovary, membranous. Ovary 5-locular, ovoid, with 2 superposed ovules per locule; style elongated, slender; stigma capitate, apex 5-lobed. Capsule 5-ridged, 5-loculicidal, with 1 or 2 seeds per locule, puberulent; pericarp thinly leathery, detached from 5-winged axis. Seeds with bony tegument; endosperm thin; cotyledons oblate, rounded; radicle short.

Three species: tropical and subtropical Asia; two species in China.

The third species, *Munronia humilis* (Blanco) Harms, is a simple leafed species that occurs in Indonesia, Malaysia, and Thailand.

- 1a. Leaves simple or extremely rarely those on apical part of branches trifoliolate ..... 1. *M. unifoliolata*
- 1b. Leaves odd-pinnate with (3 or)5–9(or more) leaflets ..... 2. *M. pinnata*

1. **Munronia unifoliolata** Oliver, Hooker's Icon. Pl. 18: t. 1709. 1887.

单叶地黄连 dan ye di huang lian

*Munronia hunanensis* H. S. Lo; *M. petelotii* Merrill; *M. simplicifolia* Merrill; *M. unifoliolata* var. *trifoliolata* C. Y. Wu ex F. C. How & T. C. Chen.

Shrublets 10–20 cm tall. Stem unbranched or few branched, puberulent, ± glabrescent. Leaves, clustered near stem apex, simple or extremely rarely apical ones trifoliolate; petiole 0.8–2(–3) cm, puberulent; leaf blade elliptic, oblong-elliptic, or ovate, 2.5–6(–12) × 1–2 cm, membranous to thickly papery, abaxially puberulent along midvein and secondary veins, adaxially glabrous or sometimes sparsely puberulent along midvein, secondary veins 3–7 on each side of midvein, base attenuate, cuneate, or rounded, margin entire or 1–3 crenate, apex obtuse, acute, or acuminate. Thyrses subterminal or axillary on apical part of stem, 3–5 cm, with 1–3 flowers. Pedicel (3–)5–10 mm, puberulent. Calyx puberulent; lobes linear to lanceolate, 2–4 mm, distinct, apex obtuse to slightly acuminate. Corolla white, 1.5–2.5 cm; tube slender, as long or longer than corolla lobes, outside sparsely puberulent; lobes oblanceolate, oblong-elliptic, or elliptic, 10–14 × 5–7 mm, apex shortly cuspidate to obtuse. Staminal tube exerted, glabrous; lobes linear to lanceolate, 1–1.5 mm, sometimes apically 2-cleft; anthers 1.6–2 mm, lanulose, apex ± mucronate. Ovary puberulent; style slightly exerted from filament tube. Capsule globose, puberulent. Seeds black, hemispheric, adaxially concave. Fl. Jun–Dec.

Forests in mountainous regions, shady places near cliffs and in rock crevices; 200–600 m. SW Guangzhou (Leizhou Bandao), Guizhou, Hainan (Wanning), W Hubei, Hunan, Sichuan, Yunnan [Vietnam].

2. **Munronia pinnata** (Wallich) W. Theobald in Mason, Burmah, ed. 4, 2: 581. 1883.

羽状地黄连 yu zhuang di huang lian

*Turraea pinnata* Wallich, Pl. Asiat. Rar. 2: 21. 1830; *Munronia delavayi* Franchet; *M. hainanensis* F. C. How & T. C. Chen; *M. hainanensis* var. *microphylla* X. M. Chen; *M. henryi* Harms; *M. heterophylla* Merrill; *M. heterotricha* H. S. Lo; *M. javanica* Bennett; *M. neilgherrica* Wight; *M. pumila* Wight; *M. sinica* Diels; *M. timoriensis* Baillon.

Shrublets (5–)10–50 cm, erect. Stems usually not branched, glabrous or apical part covered with appressed puberulence, glabrescent. Leaves odd-pinnate, usually aggregated apically on stem; rachis puberulent; petiole 1.5–4 cm, puberulent; leaflets (3 or)5–9(or more), 8–12 cm; leaflet blades oblong, ovate, elliptic, obovate, or suborbicular, 0.5–7.5 × 0.3–3 cm, basal ones smallest and increasing in size along rachis to apex with apical leaflet distinctly larger, membranous to thickly papery, abaxially sparsely puberulent but more densely so along veins, adaxially glabrous or very sparsely hispid between veins and puberulent along veins, secondary veins ca. 5 on each side of midvein and slender, base oblique and cuneate to rounded, margin entire or with sparse obtuse teeth or shallowly pinnately lobed; lateral leaflets subsessile, smaller than terminal leaflet, apex rounded, obtuse, or acuminate; terminal leaflet petiolulate, usually basally and apically more attenuate than lateral leaflets. Inflorescence axillary, 1- or few flowered in a raceme; peduncle 5–10 mm, puberulent. Pedicel to 5–12 mm, bracteolate, puberulent. Calyx 5-lobed to near base; lobes linear to lanceolate, 1.5–3 mm, apex acuminate. Corolla white; tube 1.3–4 cm, sparsely puberulent or glabrous; lobes alternate with anthers, oblong, oblanceolate, or lanceolate, 1–2 cm, apex acute. Staminal tube to 4 cm, slightly exerted, base adnate to corolla tube, apical margin with linearly lacerate teeth; anthers ellipsoid, ca. 1 mm, lanulose, apex acuminate. Ovary puberulent; style ± as long as filament tube, glabrous or basally puberulent. Capsule oblate, 6–7 mm in diam., sparsely stellate puberulent. Seeds yellowish gray. Fl. Apr–Nov.

Moist places in forests, thickets near roads, shady rock crevices,

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grassland on slopes; 200–1800 m. Chongqing (Jinfu Shan, Nanchuan), S Guangdong, NW Guangxi, S Guizhou, Hainan (Qiongzong, Wanning), Yunnan [Bhutan, India, Indonesia, Malaysia, Myanmar, Nepal, Sri Lanka, Thailand, Vietnam].

*Munronia pinnata* is a widespread species that varies greatly in character states, such as plant size, number and size of leaflets, leaflet margin, and inflorescence length. The broad interpretation used here largely follows D. J. Mabberley et al. (Fl. Males., Ser. 1, Spermat. 12(1): 30–34. 1995) and D. J. Mabberley (Rev. Handb. Fl. Ceylon 9: 236–239. 1995).

*Munronia hainanensis* var. *microphylla* is described on the herbarium label of the type specimen (*G. Q. Ding & L. Yu 6795*) as having red flowers. This is most likely either a mistake or a misinterpretation of the color once the flowers were dried.

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