

STYLIDIACEAE

花柱草科 hua zhu cao ke

Hong Deyuan (洪德元)¹; Juliet A. Wege²

Herbs [rarely small shrubs or cushion plants], without laticifers. Stipules absent. Leaves in rosettes or alternate [rarely whorled or imbricate], simple. Inflorescences terminal, cymes, lax spikes [racemes, panicles, pseudoheads, or corymbs], or with flowers solitary. Flowers perfect [rarely unisexual by abortion], usually zygomorphic. Calyx synsepalous; tube adnate to ovary; limb with 5[–9] distinct or partly connate lobes, occasionally 2-labiate. Corolla synpetalous, [4 or]5[–9]-lobed; lower lobe (labellum) often smaller and reflexed [rarely hooded]. Stamens 2, adnate with style, forming a gynostemium (column); gynostemium often irritable, normally bent to labellar side but snapping to an oppositely bent position when touched; anthers extrorse, 2-celled, protandrous. Ovary inferior, incompletely 2-locular [occasionally 1-locular due to reduction of septum]; ovules few to numerous, on axile or free central placentas, anatropous; stigma entire or 2-cleft. Fruit a capsule, usually septicidal. Seeds minute; seed coat thin; embryo small, embedded in copious endosperm.

Four genera and ca. 320 species: Australia, New Zealand, S end of South America, with only *Stylidium* extending into tropical Asia; one genus and two species in China.

Hong De-yuan. 1983. Stylidiaceae. *In*: Hong De-yuan, ed., *Fl. Reipubl. Popularis Sin.* 73(2): 180–182.

1. STYLIDIUM Swartz ex Willdenow, Sp. Pl. 4: 7, 146. 1805, nom. cons., not Loureiro (1790).

花柱草属 hua zhu cao shu

Herbs [rarely small shrubs or cushion plants], annual [or perennial], bearing glandular [and/or non-glandular] trichomes [seldom completely glabrous]. Leaves cauline or in a basal rosette [rarely whorled or imbricate]. Inflorescences lax spikes, cymes [racemes, panicles, pseudoheads, or corymbs], or with flowers solitary. Flowers perfect, zygomorphic. Calyx lobes 5, [distinct or] with 3 distinct and 2 connate [occasionally 2-labiate]. Corolla 5-merous, irregular; throat appendages (paracorolla) often present; lobes 5 but lowest (labellum) much smaller, usually reflexed, simple [or appendiculate]. Gynostemium usually exerted from corolla, bent and irritable [rarely erect and immobile]; anthers 2-locular; stigma entire [or 2-cleft]. Ovary incompletely 2-locular [or 1-locular due to reduction of septum]; ovules few to more often numerous.

About 300 species: tropical Asia, Australia, New Zealand; two species in China.

Almost all species occur in Australia with Asia only having seven species, six of which are endemic to Asia.

1a. Leaves basal, with a short petiole; leaf blade ovate-orbicular, ovate, or obovate; capsule ca. 0.8 cm 1. *S. uliginosum*

1b. Leaves cauline, sessile or subsessile; leaf blade oblong-obovate to lanceolate; capsule to 2 cm 2. *S. tenellum*

1. *Stylidium uliginosum* Swartz ex Willdenow, Sp. Pl. 4: 147. 1805.

花柱草 hua zhu cao

Stylidium sinicum Hance.

Herbs 5–13 cm tall, annual. Stems compressed. Leaves in a basal rosette, with a short petiole; leaf blade ovate-orbicular, ovate, or obovate, 5–8 mm, glabrous, veins obscure, base cuneate, margin entire, apex obtuse to rounded. Inflorescences lax spikes; scapes 1–3, simple or dichotomously branched, covered with sparse short glandular trichomes; bracts ovate, less than 1 mm. Flowers sessile. Calyx tube (hypanthium) linear, with sparse glandular trichomes; lobes partly connate, with 3 distinct and 2 connate into a shallowly 2-lobed segment. Corolla white, ca. 2 mm, glabrous; tube slightly shorter than [or ca. equal to] calyx lobes; throat appendages minute [or absent]; labellum minute, ovate; lower pair of lobes much longer than upper pair,

lobe apices shallowly 2-lobed [or entire]. Gynostemium ca. 3.5 mm. Capsule columnar, ca. 8 mm. Fl. Oct–Nov.

Moist grassy places by streams in coastal hilly areas. Guangdong, Hainan [Cambodia, Sri Lanka, Thailand, Vietnam].

2. *Stylidium tenellum* Swartz ex Willdenow, Sp. Pl. 4: 146. 1805.

狭叶花柱草 xia ye hua zhu cao

Herbs 5–20[–27] cm tall, annual. Stems slender, simple or laxly dichotomously branched, glabrous. Leaves alternate, sessile or subsessile; leaf blade oblong-obovate to oblanceolate, 6–10 mm, apical ones smaller and grading into bracts, glabrous, veins 3, base cuneate, margin entire, apex obtuse. Inflorescences dichotomously branched lax spikes or with flowers solitary; scapes absent; bracts linear, ca. 2 mm. Flowers sessile. Calyx tube (hypanthium) linear, with sparse glandular trichomes

¹ State Key Laboratory of Systematic and Evolutionary Botany, Institute of Botany, Chinese Academy of Sciences, 20 Nanxincun, Xiangshan, Beijing 100093, People's Republic of China.

² Western Australian Herbarium, Department of Environment & Conservation, Locked Bag 104, Bentley Delivery Centre, Western Australia 6983, Australia.

or glabrous; lobes partly connate, with 3 distinct and 2 connate into a shallowly 2-lobed segment. Corolla white or rose-purple, less than 2 mm, with sparse glandular trichomes; tube slightly longer than calyx lobes; throat appendages minute; labellum minute, subulate; lower pair of lobes longer than upper pair,

lobe apices shallowly 2-lobed. Gynostemium 4–5 mm. Capsule thinly columnar, to 2 cm. Fl. and fr. Oct.

Paddy fields, swamps; below 1000 m. SE Fujian, Guangdong, Hainan, S Yunnan (Xishuangbanna) [Bangladesh, Cambodia, India, Indonesia, Laos, Malaysia, Myanmar, Thailand, Vietnam].