

216. PHACELURUS Grisebach, Spic. Fl. Rumel. 2: 423. 1846.

束尾草属 shu wei cao shu

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Thyrsia Stapf.

Perennial. Culms often robust. Leaf blades linear or rarely terete; ligule membranous. Inflorescence terminal, racemes usually subdigitate, rarely spread along an elongate axis or solitary. Racemes \pm flattened, bearing paired spikelets, horizontally articulated, often rather tardily disarticulating; rachis internodes inflated to clavate, glabrous, base truncate, sometimes with a central peg. Sessile spikelet flat, convex or concave across back; lower glume lanceolate to ovate, membranous to leathery, smooth, marginally 2-keeled or rounded; upper glume boat-shaped; lower floret male or barren, with or without palea; upper floret bisexual, with entire awnless lemma. Pedicelled spikelet resembling sessile but usually smaller and slightly laterally compressed; pedicel free, resembling adjacent rachis internode.

Ten species: Old World tropics, extending northward to SE Europe; three species (one endemic) in China.

Phacelurus resembles *Ischaemum* in its stout rachis internodes and pedicels and in its male lower floret, and the two genera are probably closely related. *Phacelurus* differs mainly by the absence of awns.

- 1a. Racemes borne on a long central axis; lower glume of sessile spikelet narrowly winged 1. *P. zea*
1b. Racemes subdigitate; lower glume of sessile spikelet wingless.
2a. Sessile spikelet linear-lanceolate, concave, 8–10 mm; pedicelled spikelet well developed; pedicel cuneate, widened upward; leaves usually glabrous 2. *P. latifolius*
2b. Sessile spikelet ovate-oblong, flat, 6–7 mm; pedicelled spikelet usually reduced; pedicel narrowly oblong, straight; leaves often tuberculate-hispid 3. *P. trichophyllus*

1. *Phacelurus zea* (C. B. Clarke) Clayton, Kew Bull. 33: 177. 1978.

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Rottboellia zea C. B. Clarke, J. Linn. Soc., Bot. 25: 86. 1889; *R. thyrsioidea* Hackel; *Thyrsia thyrsioidea* (Hackel) A. Camus; *Thyrsia zea* (C. B. Clarke) Stapf.

Perennial, forming large clumps. Culms stout, up to 2 m or more tall, ca. 10 mm in diam., simple or rarely branched, nodes bearded. Leaf sheaths keeled, glabrous; leaf blades linear-lanceolate, rather stiff, tough, 30–60 \times 1–2 cm, hairy near ligule on adaxial surface, margins ciliate near base; ligule 1–2 mm, margin ciliate. Inflorescence a large ovate-oblong panicle, 25–40 cm, with many racemes arranged in whorls. Lower racemes pedunculate, up to 10 cm; rachis internodes broadly cuneate, angled, ribbed, finely scaberulous. Sessile spikelet 3.5–4 mm; lower glume ovate, papery, flat on back, marginally 2-keeled, keels narrowly winged, wings scabrid-hispidulous, apex obtuse; upper glume lanceolate, acute; lower floret sterile, palea absent; upper floret with palea as long as lemma, 2 styles arising separately from ovary apex, not elongate. Pedicelled spikelet similar to sessile but slightly smaller; pedicel resembling internode but shorter. Fl. and fr. autumn.

Grassy hill slopes; 300–1000 m. Guangxi, Yunnan [Bhutan, India, Myanmar, Nepal, Thailand, Vietnam].

Rottboellia zea (February 1889) has priority over *R. thyrsioidea* (April 1889), as was acknowledged by Hackel (in A. Candolle & C. Candolle, Monogr. Phan. 6: 690. 1889).

This species is anomalous in the genus because of its elongate inflorescence of many whorled racemes.

2. *Phacelurus latifolius* (Steudel) Ohwi, Acta Phytotax. Geobot. 4: 59. 1935.

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Rottboellia latifolia Steudel, Flora 29: 21. 1846; *Phacelurus angustifolius* (Debeaux) Nakai; *P. latifolius* var. *angustifolius* (Debeaux) Kitagawa; *P. latifolius* var. *monostachys* Keng ex S. L. Chen; *Rottboellia latifolia* var. *angustifolia* Debeaux.

Perennial, robust, with spreading, stout, scaly rhizomes. Culms tufted at nodes of rhizomes, erect, 1–2 m tall, 3–10 mm in diam., many-noded. Leaf sheaths smooth, glabrous, usually longer than internodes and overlapping; leaf blades linear-lanceolate, tough, 10–40 \times 1.5–3 cm, glabrous or sparsely appressed-pilose, base rounded, margins scaberulous, apex attenuate; ligule rounded, 0.5–3 mm. Inflorescence of (1–)3–10 racemes, digitate or shortly racemose. Racemes up to 20 cm, stiffly suberect, often white-powdery; rachis internodes stoutly oblong-cuneate, sharply 3-angled, equaling or slightly shorter than pedicels. Sessile spikelet 8–10 mm, as long as internode; callus glabrous; lower glume linear-lanceolate, leathery, back concave, margins keeled, keels scabrid; upper glume spinulose on keel toward apex; lower floret staminate, palea present; upper lemma and palea subequal, styles connate, elongate, continued into a long feathery stigma 2-branched toward its apex. Pedicelled spikelet well developed, slightly laterally compressed, weakly curved; pedicel resembling internode. Fl. and fr. autumn.

Coastal salt marshes, river banks, irrigation channels on saline soils, forming colonies; below 1400 m. Anhui, Fujian, Hebei, Jiangsu, Liaoning, Shandong, Zhejiang [Japan, Korea].

3. *Phacelurus trichophyllus* S. L. Zhong, J. S. W. Agric. Coll. 1982(4): 78. 1982.

毛叶束尾草 mao ye shu wei cao

Phacelurus latifolius (Steudel) Ohwi var. *trichophyllus* (S. L. Zhong) B. S. Sun & Z. H. Hu; *Rhytachne anisonodis* B. S. Sun; *R. lijiangensis* B. S. Sun.

Perennial, shortly rhizomatous. Culms erect, 1–2 m tall, 3–4 mm in diam., many-noded, branching in upper part. Leaf sheaths hispid with short, tubercle-based hairs or glabrous, usually longer than internodes; leaf blades lanceolate, papery, 10–20 × 1–2.5 cm, sparsely hispid with short, scattered, tubercle-based hairs, base rounded, margins serrulate, apex acuminate; ligule 0.5–1 mm. Inflorescence of 1–6 subdigitate racemes. Racemes up to 15 cm or more, stiffly suberect, spikelets normally paired, occasionally triads of 2 sessile and 1 pedicelled present; rachis internodes columnar, laterally sharply keeled, back rounded or obtusely keeled, lowest internode elongate, much exceeding sessile spikelet, successive internodes shorter. Sessile spikelet 6–7 mm; callus shortly pilose; lower glume lanceolate to ovate, leathery, back flat or slightly convex, obscurely ribbed, margins incurved, ciliolate, keeled and scabrid below apex; upper glume scabrid on keel toward apex; lower floret staminate, palea present; upper lemma and palea subequal, 2 styles arising separately from ovary apex, not elongate. Pedicelled spikelet variable, resembling sessile spikelet but slightly smaller or much reduced; pedicel stoutly oblong, straight. Fl. and fr. Aug–Oct.

• Ditches, moist meadows, river bank thickets, on damp sandy soils; 1100–2000 m. Sichuan, Yunnan.

This grass occurs at generally higher altitudes than *Phacelurus latifolius*. The pedicelled spikelet varies from well developed to much reduced, even in adjacent spikelet pairs on the same raceme.

Two specimens with solitary racemes have been described as new species in *Rhytachne*. That genus is not known in Asia and can usually be distinguished from *Phacelurus* by a much more delicate habit, cylindrical racemes, and a frequently foliaceous pedicel. The occasional occurrence of spikelet triads in this species is reminiscent of *Mnesithea*. However, it is excluded from that genus by its well-developed male lower floret, and also from *Rottboellia* by its free pedicel.

Flora of China 22: 639–640. 2006.