

1. HYPOLYTRUM Persoon, Syn. Pl. 1: 70. 1805.

割鸡芒属 *ge ji mang shu*

Dai Lunkai (戴伦凯); David A. Simpson, Gordon C. Tucker

Herbs, perennial, moderately robust to robust, rhizomatous [or stoloniferous]. Roots coarse. Culms central or lateral, if lateral then with cataphylls at base. Leaves 3-ranked, basal or cauline, ligulate; basal leaf sheath folded, adaxially open, cauline leaf sheath tubular; leaf blade leathery, glabrous. Involucral bracts leaflike or glumelike, basal bract usually longest. Inflorescence usually an open compound panicle or capitate, with 1 to many spikes. Spikes comprising many spirally imbricate glumelike bracts each subtending a bisexual spikeletlike unit with a much reduced axis (pseudospikelet). Pseudospikelets comprising a naked apparently terminal female flower and 2(or 3) glumes all subtending a male flower comprising 1 stamen; basal 2 glumes opposite, keeled. Perianth bristles absent. Stigmas 2 or 3. Nutlet with a sculptured hard outer surface, apex often conically rostrate or sometimes mucronate.

About 60 species: tropical and subtropical regions; four species (two endemic) in China.

- 1a. Culms central; inflorescences paniculate with many spikes; basalmost involucral bract 15–30 × 0.7–1.7 cm, much longer than inflorescence 1. *H. nemorum*
- 1b. Culms lateral; inflorescences capitate, with 1 to many spikes; basalmost involucral bract 1.5–5 × ca. 5 cm, shorter to slightly longer than inflorescence.
 - 2a. Culms 30–45 cm; leaf blade 2–6 mm wide; spike 1(or 2) 4. *H. shurenii*
 - 2b. Culms 5–40 cm; leaf blade 1–2 cm wide; spikes few to many.
 - 3a. Culms 5–10 cm tall; spikes few; nutlet olivaceous, subglobose, ca. 2 mm, apex mucronate 2. *H. paucistrobiliferum*
 - 3b. Culms 30–40 cm tall; spikes many; nutlet brown, obovoid to ovoid, ca. 3 mm, apex conically rostrate 3. *H. hainanense*

1. *Hypolytrum nemorum* (Vahl) Sprengel, Syst. Veg. 1: 233. 1824.

割鸡芒 *ge ji mang*

Schoenus nemorum Vahl, Symb. Bot. 3: 8. 1794; *Hypolytrum formosanum* Ohwi; *H. latifolium* Persoon.

Roots few, hard, fibrous. Rhizomes short, slightly thick, woody, with dense reddish scales. Culms central, 30–90 cm tall, 3–4 mm thick, 3-angled, stiff. Leaves basal and 1 or 2 cauline, longer than culm; basal leaf sheath brownish, 5–15 cm, margin thickly membranous, basal few bladeless; leaf blade 35–120 × 0.8–2.6 cm or longer, flat, stiff, subleathery, base folded, margin scabrous near apex. Involucral bracts 3–5, leaflike, at base of inflorescence and branches, basalmost much longer than inflorescence, not sheathing. Inflorescences paniculate, ovoid-globose to subglobose, 3–7 × 4.5–6 cm, with many spikes; rachis and rachilla angles scabrous. Spikes obovoid, becoming globose when mature, 3–7 × 3–6 mm, with many glumelike bracts. Glumelike bracts brown, spirally and imbricately arranged, obovate, ca. 2 mm, mid-veined, each subtending a pseudospikelet, apex rounded and mucronate. Pseudospikelets ca. 1.5 mm, with 2 glumes, 2 male flowers, and 1 female flower; glumes brown, lateral and opposite, cymbiform, ca. 1.2 mm, membranous, keeled, connate on adaxial side, spinulose on keel, each with a male flower. Filaments slender; anthers narrowly oblong. Stigmas 2. Nutlet dark grayish brown, subglobose, 2–2.5 mm (including rostrum), compressed, longitudinally rugose, apex conically rostrate. Fl. and fr. Apr–Aug.

Wet places in forests or scrub, valleys; 100–1200 m. Fujian, Guangdong, Guangxi, Hainan, Taiwan, Yunnan [Bhutan, Cambodia, India, Indonesia, Laos, Malaysia, Myanmar, Papua New Guinea, Philippines, Sri Lanka, Thailand, Vietnam; tropical Africa and America, NE Australia, Indian Ocean islands, Pacific islands].

2. *Hypolytrum paucistrobiliferum* Tang & F. T. Wang, Fl.

Reipubl. Popularis Sin. 11: 234. 1961.

少穗割鸡芒 *shao sui ge ji mang*

Roots few, thick, hard, fibrous. Rhizomes ± thick, woody. Culms purple, lateral, 5–10 cm tall, with several cataphylls toward base. Leaves basal, distichous; leaf sheath 1–1.8 cm, smooth, not closed, margin narrowly thickly membranous; leaf blade 55–105 × 1.5–2 cm, apically gradually narrowed, flat, papery, smooth, margin and abaxial midvein apically serrulate and scabrous. Involucral bracts 3–5, leaflike, 2–5 cm, basalmost bract equaling inflorescence, basally closed into sheath. Inflorescence a corymbose panicle congested into a head, with few spikes. Spikes with many glumelike bracts, each subtending a pseudospikelet. Pseudospikelets ca. 2 mm, with 2 glumes, 2 male flowers, and 1 female flower; glumes lateral and opposite, cymbiform, membranous, keeled, connate on adaxial side, hispidulous on keel, each with a male flower, margin hyaline. Anther linear; connective apex slightly prominent beyond anther. Stigmas 2, longer than style. Nutlet olivaceous, shortly stipitate, subglobose, ca. 2 mm, both lateral sides angular, abaxial and adaxial surfaces irregularly longitudinally rugose, apex mucronate. Fl. and fr. Aug–Sep.

• Dry places on hills; ca. 100 m. Hainan (Lingshui).

3. *Hypolytrum hainanense* (Merrill) Tang & F. T. Wang, Fl. Reipubl. Popularis Sin. 11: 201. 1961.

海南割鸡芒 *hai nan ge ji mang*

Mapania hainanensis Merrill, Lingnan Sci. J. 9: 35. 1930.

Roots fibrous. Rhizomes stout, woody. Culms lateral, 30–40 cm tall, 3-angled, basally with several scales and bladeless sheaths. Basal scales broadly ovate. Bladeless sheaths dark grayish brown, densely spirally arranged. Leaves basal, tufted;

leaf sheath reddish, to 14 cm, not closed, slightly folded, smooth, margin thickly membranous; leaf blade flat, ca. 1 m × 1–1.8 cm, apically gradually narrowed, papery, glabrous, margin and abaxial midvein serrulate. Involucral bracts 2 or 3, leaf-like, 1.5–5 cm, slightly longer than inflorescence; basalmost bract sheathing. Inflorescence a corymbose panicle congested into a head, 1.3–2 × 1.5–2.5 cm, with many spikes. Spikes narrowly ellipsoid, becoming globose in fruit, 5–6 mm in diam., with many glumelike bracts and pseudospikelets. Glumelike bracts yellowish brown, spirally and imbricately arranged, oblong-obovate, 2.5–3 mm, leathery, punctate, keeled, each subtending a pseudospikelet. Pseudospikelets ca. 2 mm, with 2 glumes, 2 male flowers, and 1 female flower; glumes dark grayish brown, lateral and opposite, narrowly elliptic and cymbiform, ca. 2.5 mm, keeled, membranous, connate on adaxial side, spinulose on keel, each with a male flower. Anther narrowly oblong; connective apex not prominent beyond anther. Stigmas 2. Nutlet dark grayish brown, broadly obovoid to ovoid, ca. 3 mm, biconvex, irregularly longitudinally rugose, apex with a conic beak. Fl. and fr. May–Aug.

Forests, dry places on mountain slopes; 100–300 m. Hainan, Hong Kong [Vietnam].

4. *Hypolytrum shurenii* D. A. Simpson & G. C. Tucker, sp. nov.

树仁割鸡芒 shu ren ge ji mang

Type: China. Hainan: Changjiang, 10 Dec 1933, *Liang Xiangri 66046* (holotype, MO!).

Haec species Hypolytro humili Boeckeler affinis, sed ab eo culmis capillaribus, foliis 2–6 mm latis ad apicem caudatis, spicis 1 vel 2 atque nucula ellipsoideo-ovoidea differt.

Paratypes: Hainan: Ledong Li Autonomous County, 3 Jul 1936, *Liu Xinqi 27397* (MO); Dongfang City, 10 Dec 1955, *Hainan Station 237* (MO); Qiongzong County, 11 Dec 1956, *Anonymous 3677* (MO); Baisha County, 24 Feb 1936, *Liu Xinqi 25437* (MO); Ya County (now Sanya), 28 Jul 1933, *Huang Zhi 33414* (MO).

Perennials, 30–45 cm tall. Roots fibrous. Rhizomes to 1 cm thick, hardened, oblique to horizontal, covered with tough fibrous remnants of leaf sheaths. Culms lateral/axillary, (5–)10–20 cm tall, delicate, flexuose, smooth or scabridulous but scabrous on winged angles, basally flattened, apically becoming roundly 3-angled. Leaves basal, tufted; leaf sheath reddish, to 14 cm, not closed, slightly folded, smooth, margin thickly membranous; leaf blade linear, 15–30 cm × 2–6 mm, flat or slightly plicate, leathery, glabrous, margin and abaxial midvein serrulate, apex with a slender 3–6 cm cauda. Involucral bracts 2(or 3), deltate, 2–3 mm, shorter than spike; basalmost bract with tubular or amplexicaul sheath to 1 mm. Inflorescences of 1 or 2 spikes (if 2 then proximal one stalked, subtended by a bladeless sheath up to 6 mm). Spikes ovoid, 4–5 mm, with 10–20 glumelike bracts and pseudospikelets. Glumelike bracts yellowish brown, spirally arranged and imbricate, ovate-deltate, 2.5–3 mm, leathery, ca. 7-veined, keeled, margin white membranous, apex rounded; basal 3 bracts sterile, apical ones each with a pseudospikelet. Pseudospikelets with 2 glumes, 3 male flowers,

and 1 female flower, ca. 2 × 1 mm; glumes light brown, lateral and opposite, connate on adaxial (and ?abaxial) side, narrowly elliptic, cymbiform, ca. 2.5 mm, membranous, keeled, spinulose on keel especially distally, each with a male flower. Anther linear, ca. 0.7 mm; connective apex slightly prolonged beyond anther. Style ca. 0.5 mm; stigmas 2. Nutlet light brown, stipitate, ellipsoid-ovoid (widest at mid-length), ca. 2.3 × 1.1 mm, roundly 3-sided, irregularly rugose, apex apiculate. Fl. and fr. Dec–Jul.

- Open woods, clearings; 900–1400 m. Hainan.

