

文章编号: 1000-4025(2006)07-1464-04 *

中国赖草属(禾本科)一新种——贫穗赖草

蔡联炳

(中国科学院西北高原生物研究所, 西宁 810001)

摘要:报道了中国西部赖草属一新种——贫穗赖草。该种相似于若羌赖草和广叉赖草,但它不同于前者在于穗状花序的中部或下部具孪生小穗,外稃披针形、无毛,具1.0~1.5 mm长的短尖头,内稃短于外稃1.0~1.5 mm,沿上部脊疏生小刺,叶鞘无毛,具非膜质边缘;不同于后者在于秆较高,叶片内卷,穗状花序稀疏、狭窄,小穗较短,颖较长,外稃披针形、较长,具5条不明显的脉。

关键词:赖草属;贫穗赖草;中国

中图分类号: Q949; Q949.71⁺4.2

文献标识码: A

Leymus paucispiculus, a New Species of Poaceae from China

CAI Lian-bing

(Northwest Plateau Institute of Biology, Chinese Academy of Sciences, Xining 810001, China)

Abstract: A new species of *Leymus* from western China, *L. paucispiculus* L. B. Cai, is described and illustrated. This species is similar to both *L. ruoqiagensis* S. L. Lu et Y. H. Wu and *L. devaricatus* (Drobov) Tzvelev, but distinguished from the former by having twinborn spikelets in the middle or lower part of the spike, glabrous and lanceolate lemmas with short mucros 1.0~1.5 mm long, shorter paleas (usually being shorter than the lemmas by 1.0~1.5 mm) with sparse spinules along the upper keels and glabrous leaf sheaths with non-membranous margins, and from the latter by taller culms, involute leaf blades, lax and narrower spikes, shorter spikelets, longer glumes, and lanceolate and longer lemmas with 5 obscure nerves.

Key words: *Leymus* Hochst.; *L. paucispiculus* L. B. Cai; China

Leymus Hochst. is a delicate genus belonging to tribe Triticeae of Poaceae, also an important genus of possessing economic value in animal husbandry. The genus has been a main subject of author's work in recent years. As part of this research work, we have completed orderly the analyses of karyotype, leaf epidermis and leaf anatomy of some species of *Leymus* since 2000^[1~3]. Especially in 2004, we checked the vast majority of herbarium specimens of the genus, which are preserved in principal herbaria over the distribution area of Chi-

nese *Leymus* (CDBI, HNWP, HON, KUN, LZAH, LZU, PE, QG, SZ, WUK, XJA, XJBI, XZ, XZDC). As a result, several sheets of specimens belonging to a previously unrecognized taxon of *Leymus* were discovered. Though these specimens show no difference in overall morphology, they differ conspicuously from all other species of *Leymus* hitherto published according to the descriptions of species in literature^[4~17]. Hence, this taxon is reported as a new species here.

Leymus paucispiculus L. B. Cai, sp. nov. (Plate I)

* 收稿日期: 2005-02-03; 修改稿收到日期: 2006-05-15

基金项目: 国家自然科学基金资助项目(30370110)

作者简介: 蔡联炳(1948-), 男(汉族), 研究员, 主要从事植物分类学研究。E-mail: cailib@nwipb.ac.cn

Species nova *L. ruoqiangensis* S. L. Lu et Y. H. Wu valde similis, sed spiculis in medio vel parte inferiore spicae geminis, lemmatibus glabris, lanceolatis, apice mucronibus 1.0 ~ 1.5 mm longis praeditis, paleis lemmatibus 1.0 ~ 1.5 mm vulgo brevioribus, superne ad carinas sparsim spinulosis, vaginis foliorum glabris, margine non membranaceis differt. Haec species *L. divaricato* (Drobov) Tzvelev necnon similis, sed culmis superioribus (55 ~ 90 cm), laminis involutis, spicis laxis, angustioribus (6 ~ 10 mm), spiculis brevioribus (11 ~ 13 mm), glumis longioribus (9 ~ 11 mm), et lemmatibus lanceolatis, longioribus (9 ~ 10 mm), obscure 5-nerviis differt.

Herba perennis, rhizomate deorsum extenso. Culmi erecti, caespitosi, laeves, 55 ~ 90 cm alti, 1.5 ~ 2.0 mm diam. 3 ~ 4-nodes. Vaginae foliorum glabrae, inferiores internodiis longiores, superiores internodiis breviores, eae vetae basales persistentes interdum laceratae in fibras; ligulae membranaceae, obtusae, circ. 0.5 mm longae; laminae involutae vel margine leviter involutae, 3 ~ 12 cm longae, 1.5 ~ 3.5 mm latae, supra puberulae, infra glabrae. Spica erecta, laxa, 5 ~ 11 cm longa, 6 ~ 10 mm lata; internodia rhachidium generatim 6 ~ 10 mm longa, superne in dorso dense pubescentia; spiculae e nodo rhachidis solitariae, raro gemellae, interdum pedicellis 0.5 ~ 1.0 mm longis, plerumque purpurascens, 11 ~ 13 mm longae, 4- ad 7-florae; internodia rhachillarum 1.3 ~ 2.5 mm longa, dense puberula; glumae linearisubulatae, enerviae vel obscure 1-nerves, dorso glabrae, margine scabrae, superne in aristas breves gradatim prolongatae, duae subaequales, 9 ~ 11 mm longae; lemmata lanceolata, glabra, obscure 5-nervia, id primum 9 ~ 10 mm longum, apice mucronatum, mucrone 1.0 ~ 1.5 mm longo; paleae lemmatibus 1.0 ~ 1.5 mm vulgo breviores, superne ad carinas sparsim spinulosae, apice retusae; antherae 3, flavae, 3.4 ~ 4.1 mm longae; ovarium cuneatum, superne dense tomentosum.

China, Qinghai (青海): Lenghu (冷湖), Suganhu (苏干湖), in sabulosis, alt. 2 820 m, 38°48' N, 94°00' E, Aug. 6, 1983, Veget. Geogr. Exped. (植被地

理组) 097 (holotype, HNWP); Gansu (甘肃), Aksay Kazakzu Zizhixian (阿克塞哈萨克族自治县), Changcaogou (长草沟), alt. 1 700 m, 39°24' N, 94°12' E, Aug. 8, 1991, R. F. Huang (黄荣福) 3 409 (paratype HNWP); Qinghai (青海), Delhi (德令哈), Huaitoutala (怀头他拉), alt. 2 950 m, 37°22' N, 96°44' E, Aug. 1, 1983, Veget. Geogr. Exped. (植被地理组) 064 (paratype HNWP).

Perennial herb, with a downward extended rhizome. Culms erect, caespitose, smooth, 55 ~ 90 cm tall, 1.5 ~ 2.0 mm diam. 3- or 4-noded. Leaf sheaths glabrous, the lower ones longer and the upper ones shorter than the internodes, the basal sheaths persistent, sometimes disintegrating into fibers; ligules membranous, obtuse, ca. 0.5 mm long; leaf blades involute or slightly involute at the margins, 3 ~ 12 cm long, 1.5 ~ 3.5 mm broad, puberulous on the upper surface, glabrous on the lower surface. Spike erect, lax, 5 ~ 11 cm long, 6 ~ 10 mm broad; rachis internodes generally 6 ~ 10 mm long, densely pubescent in upper part on the back. Spikelets solitary or rarely twinborn at each node of the rachis, sometimes with a pedicel 0.5 ~ 1.0 mm long, usually purplish, 11 ~ 13 mm long, 4- to 7-flowered; rachilla internodes 1.3 ~ 2.5 mm long, densely puberulent; glumes linear-subulate, nerveless or obscurely 1-nerved, glabrous on the back, scabrous on the margins, gradually prolonged into short awns, nearly equal, 9 ~ 11 mm long; lemmas lanceolate, glabrous, obscurely 5-nerved; first lemma 9 ~ 10 mm long, with a short mucro 1.0 ~ 1.5 mm long; paleas usually shorter than the lemmas by 1.0 ~ 1.5 mm, sparsely spinulate along the upper keels, apically retuse; anthers 3, yellow, 3.4 ~ 4.1 mm long; ovary cuneate, densely tomentose in upper part.

Leymus paucispiculus resembles *L. ruoqiangensis* S. L. Lu et Y. H. Wu, but differs by the twinborn spikelets in the middle or lower part of the spike, the glabrous and lanceolate lemmas with short mucros 1.0 ~ 1.5 mm long, the paleas usually being shorter than the lemmas by 1.0 ~ 1.5 mm, with sparse spinules along the upper keels, and the

glabrous leaf sheaths with non-membranous margins. Moreover, the new species also resembles *L. divaricatus* (Drobov) Tzvelev from central Asia, but differs by the taller culms (55 ~ 90 cm), the involute leaf blades, the lax and narrower (6 ~ 10 mm) spikes, the shorter spikelets (11 ~ 13 mm), the longer glumes (9 ~ 11 mm), and the lanceolate and longer (9 ~ 10 mm) lemmas with 5 obscure nerves.

References :

- [1] ZHIL (智 力), CAIL B (蔡联炳). Karyotypes and evolution of five species of *Leymus* Hochst. [J]. *Acta Bot. Boreal. -Occident. Sin.* (西北植物学报), 2000, **20**(5) :876 - 881 (in Chinese).
- [2] CAIL B (蔡联炳), ZHANG M N (张梅妞). Leaf epidermal characteristics and classification of sections of *Leymus* from China [J]. *Bulletin of Botanical Research* (植物研究), 2005, **25**(4) :400 - 405 (in Chinese).
- [3] CAIL B (蔡联炳), ZHANG T L (张同林). Genetic relationship between *Leymus* and its related taxa in terms of the anatomical characteristics of their leaves [J]. *Acta Bot. Boreal. -Occident. Sin.* (西北植物学报), 2006, **26**(3) :537 - 543 (in Chinese).
- [4] TZVELEV N N. *Zlaki SSSR (Poaceae URSS)* [M]. Leningrad: Nauka, 1976: 176 - 189.
- [5] L ÖVEÁ. *Conspectus of the Triticeae* [J]. *Feddes Repertorium*, 1984, **95**(7 - 8) :425 - 521.
- [6] BOR N L. *Grasses of Burma, Ceylon, India and Pakistan* [M]. St. Albans: Campfield Press, 1960: 652 - 680.
- [7] YEN CH (颜 济), YANG J L (杨俊良). New species of *Leymus* from China [J]. *Acta Botanica Yunnanica* (云南植物研究), 1983, **5**(3) : 275 - 276 (in Chinese).
- [8] 郭本兆, 崔乃然, 杨永昌, 等. 中国植物志(第九卷, 第三分册) [M]. 北京: 科学出版社, 1987: 15 - 22.
- [9] SUN GL, YEN CH, YANG J L. *Leymus aemulis* (Nevski) Tzvel., a new record from west China - its morphological and cytological observations [J]. *Journal of Sichuan Agricultural University*, 1992, **10**(4) :574 - 580.
- [10] WU Y H (吴玉虎). Two new species of *Leymus* Hochst. from Xinjiang [J]. *Bulletin of Botanical Research* (植物研究), 1992, **12**(4) :343 - 347 (in Chinese).
- [11] 马毓泉, 富象乾, 杨锡麟, 等. 内蒙古植物志(第二版, 第五卷) [M]. 呼和浩特: 内蒙古人民出版社, 1994: 150 - 155.
- [12] CAIL B (蔡联炳). New taxa of *Leymus* from China [J]. *Acta Phytotaxonomica Sinica* (植物分类学报), 1995, **33**(5) :491 - 496 (in Chinese).
- [13] CAIL B (蔡联炳). Material for the genus *Leymus* (Poaceae) [J]. *Bulletin of Botanical Research* (植物研究), 1997, **17**(1) :28 - 32 (in Chinese).
- [14] CAIL B. Two new species of *Leymus* (Poaceae: Triticeae) from Qinghai, China [J]. *Novon*, 2000, **10**(1) :7 - 11.
- [15] CAIL B (蔡联炳). A new species and a new variety of *Leymus* Hochst. (Poaceae) from Qinghai, China [J]. *Acta Phytotaxonomica Sinica* (植物分类学报), 2001, **39**(1) :75 - 77 (in Chinese).
- [16] 崔乃然, 崔大方, 刘国钧, 等. 新疆植物志(第六卷) [M]. 乌鲁木齐: 新疆科技卫生出版社, 1996: 213 - 229.
- [17] CUID F (崔大方). New taxa of *Leymus* Hochst. from Xinjiang [J]. *Bulletin of Botanical Research* (植物研究), 1998, **18**(2) :144 - 148 (in Chinese).

蔡联炳:中国赖草属(禾本科)一新种——贫穗赖草

图版 I

CAI Lian-bing: *Leymus paucispiculus*, a New Species of Poaceae from China

Plate I

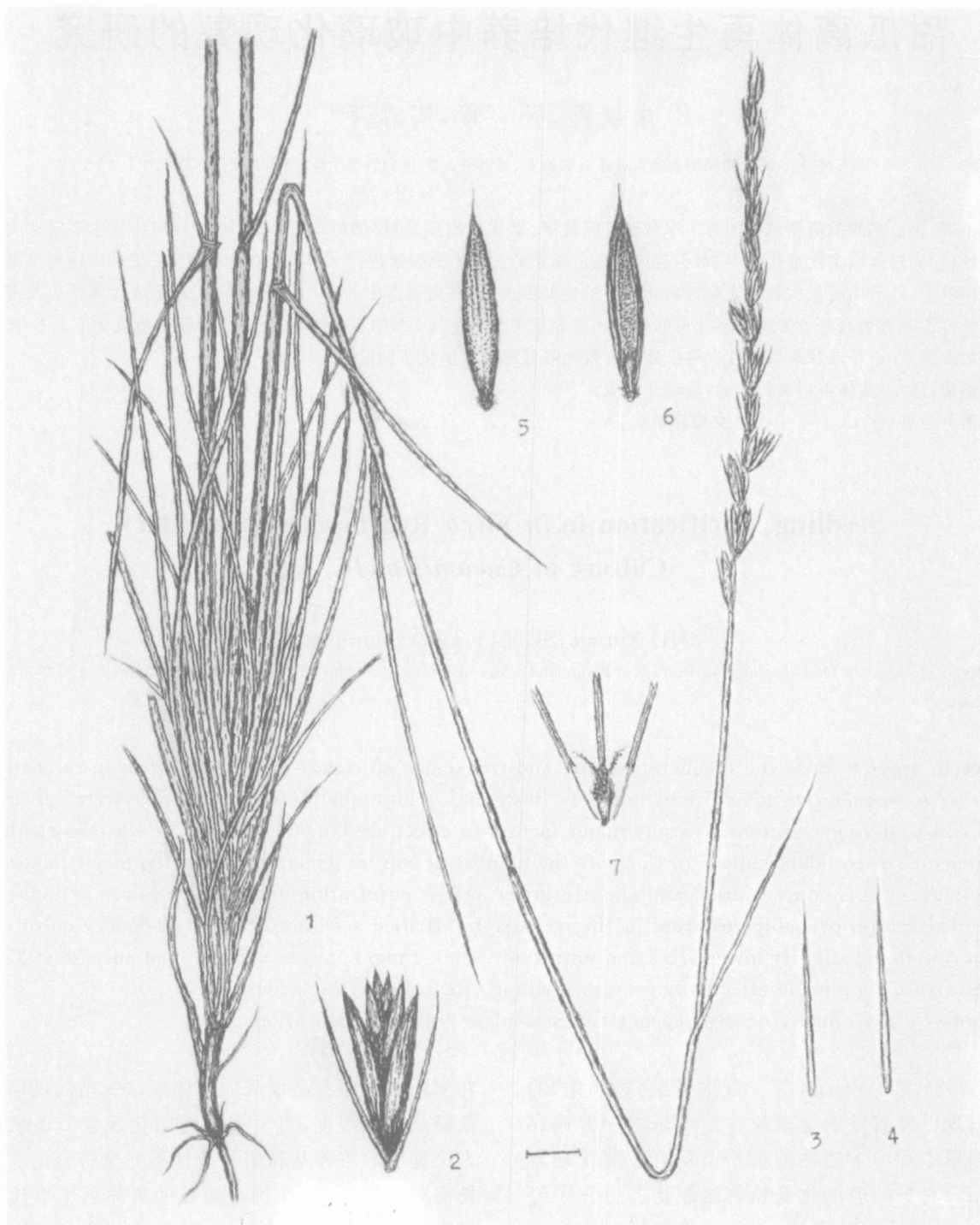


Plate I *Leymus paucispiculus* L. B. Cai.

1. Mature plant; 2. Spikelet; 3. First glume; 4. Second glume; 5. Dorsal view of the first floret; 6. Ventral view of the first floret; 7. Stamens and pistil. Scale bars: 1 = 10 mm; 2 = 3.4 mm; 3, 4, 5, 6 = 2.5 mm; 7 = 2.0 mm.