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# *Kengyilia zadoiensis*, a New Species (Gramineae, Triticeae) from Qinghai, China

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**ABSTRACT.** *Kengyilia zadoiensis* S. L. Lu & Y. H. Wu, a new species of Gramineae from Zadoi County, Qinghai Province, China, is described and illustrated. The new species is related to *K. kokonorica* (Keng ex Keng & S. L. Chen) J. L. Yang, C. Yen & B. R. Baum. *Kengyilia zadoiensis* is distinguished by auricles on either side of the summit of leaf sheaths, glabrous glumes, muticous glumes that lack awns, lemmas that are 7–9 mm long, with an awn 4–10 mm, and anthers that are yellow-green, ca. 1 mm long.

**Key words:** China, Gramineae, IUCN Red List, *Kengyilia*, Qinghai, Triticeae.

During July and August 2005, while on an expedition to Lancang jiang, numerous specimens of Gramineae were collected from Zadoi County, Qinghai Province, China. These specimens were all identified from the literature, and new species were discovered, including the new species for *Kengyilia* C. Yen & J. L. Yang described here.

**1. *Kengyilia zadoiensis* S. L. Lu & Y. H. Wu, sp. nov.** TYPE: China. Qinghai: Zadoi Co., Angsai, NW valley, in meadow by alpine forest & shrub, 4200 m, 10 July 2005, Wu Yu-hu 33208 (holotype, HNWP; isotype, HNWP). Figure 1.

Species nova affinis *Kengyiliae kokonoricae* (Keng ex Keng & S. L. Chen) J. L. Yang, C. Yen & B. R. Baum, sed ab ea vagina foliari auriculis lanceolatis 1–1.5 mm longis apice praedita, glumis glabris apice acuminatis muticis, lemmatibus 7–9 mm longis apice in aristam 4–10 mm longam desinentibus atque antheris flavovirentibus ca. 1 mm longis differt.

Perennial herb; culms erect, usually solitary, geniculate at base, 50–75 cm, glabrous, with pubescence on lower half of spike only, 3- to 4-noded, nodes black, upper internode only to 1/3 culm length. Leaf sheaths smooth, glabrous, shorter than internodes, with 2 lanceolate auricles at sheath apex, 1–1.5 mm; ligule ca. 0.5 mm, glabrous; leaf blades on culms erect, sometimes complanate or involute, glabrous on both surfaces, 7–10 × 2–3 mm, basal leaves to 20 cm. Spikes crowded, erect or slightly decurved, 7–10 cm; rachis internodes 3–5 mm, ca. 9 mm at base, densely pubescent. Spikelets sessile, with 4 to 8

florets, imbricate, often secund, 7–12 mm, excluding awn, ashy green or fulvous; glumes broadly lanceolate, glabrous, 3-nerved, apex acuminate, muticous, with a mucro 0.5–1 mm, without awn, with broad membranous margins, with only faint lateral nerves; proximal glumes ca. 4 mm, distal glumes ca. 5 mm; lemmas oblong to lanceolate, densely hispid, apex awned, with awn 4–10 mm, scabrous, erect or slightly recurved; callus pubescent; first lemmas 7–9 mm, paleas nearly subequal to lemmas, ciliate along 2 keels, but otherwise glabrous; anthers yellow-green, ca. 1 mm. Only immature caryopses seen.

**Habitat and distribution.** *Kengyilia zadoiensis* is endemic to China. The type specimen was collected in a meadow valley near alpine forest and shrub, at an elevation of 4200 m, in a valley northwest of Angsai village, Zadoi County, Qinghai Province, China.

**IUCN Red List category.** *Kengyilia zadoiensis* should be considered Vulnerable (VU) according to IUCN Red List criteria (IUCN, 2001). The new species has a very small range and limited population size; fewer than 10 plants were seen in this population during the collection expedition. Furthermore, habitat destruction represents a significant threat in China, and no protection is currently established in the type locality.

**Phenology.** The new species was collected in flower in July.

**Etymology.** *Kengyilia zadoiensis* is named for the type locality in Zadoi County, Qinghai Province, China.

**Discussion.** The new species is related to *Kengyilia kokonorica*, and both taxa occur in similar habitat and geographic areas. However, *K. zadoiensis* is distinguished by auricles on either side of the summit of leaf sheaths, glabrous glumes, muticous glumes that lack awns, lemmas that are 7–9 mm long, with an awn 4–10 mm, and anthers that are yellow-green, ca. 1 mm long (Keng, 1959; Yang & Wang, 1987; Cai, 1997, 1999; Wu & Wang, 1999; Chen & Zhu, 2006).

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Figure 1. *Kengyili zadoiensis* S. L. Lu & Y. H. Wu. —A. Plant ( $\times 1$ ). —B. Part of leaf sheath showing apex with auricles ( $\times 2$ ). —C. Intact spikelet ( $\times 3$ ). —D. Proximal glume ( $\times 5$ ). —E. Distal glume ( $\times 5$ ). —F. Lemmas ( $\times 5$ ). —G. Paleas ( $\times 5$ ). —H. Anthers ( $\times 6$ ). Drawn from the holotype Wu Yu-hu 33208 (HNWP) by Tao Ming-qin.

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