

Two New Species of *Juncus* from East Nepal

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東部ネパールで見い出されたイグサ属の2新種

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(Received on June 27, 1992)

Two new species of *Juncus* are described from east Nepal. *Juncus harae* is characterized by the narrowly elliptic anthers, bladeless basal leaves and proliferous flowers. *Juncus nepalicus* is distinguished from other similar species by the narrowly elliptic anthers and leafy stems.

Juncus, a cosmopolitan genus of about 250 species (Buchenau 1875, 1890) has been represented by 32 species in Nepal (Hara et al. 1978). We are carrying on the revisional work of the Himalayan species of *Juncus*. The first author, Miyamoto, collected two unknown species in screes or among rock crevices in the alpine zone of the Makalu range, east Nepal in 1990. These two belong to subgenus *Stygiopsis* and are well distinguished from their most resembling species. This paper aims to describe new species.

Juncus harae Miyamoto et H. Ohba, sp. nov.
Fig. 1

Junci biglumoidis Hara similis, sed differt perianthii segmentis aequilongis, antheris filamentis longioribus, et foliis basalis elaminaribus.

Rhizomes short-creeping with 4–5 scaly leaves,

brown, with short (3–4 mm) internodes. Stems erect, slender, complanate, striate, 8–20 cm long, 0.3–0.5 mm wide, grass-green. Leaves basal, the lamina reduced; sheaths 1.0–1.5 cm long, membranaceous, apex obliquely truncate, straw-yellow. Inflorescence pseudolateral, sessile, 1–several flowered, the lowest bract stem-like, appearing a continuation of the stem, 2–4 cm long. Flowers mostly proliferous, separate from non-proliferous flowers by inflorescence, chestnut-brown. Normal flowers 4–5 mm long, bracteoles narrowly ovate, 1.5–2.0 mm long, 0.7–1.0 mm wide, perianth segments equal in length, lanceolate, 2.0–2.5 mm long, 0.7–1.0 mm wide, apex apiculate; stamens 6, shorter than perianth, 1.3–1.8 mm long, anthers twice longer than filaments, narrowly elliptic, 1.1–1.3 mm long, ash-gray, filaments

0.6–0.9 mm long, yellowish brown, stigmas 3, 0.8–1.0 mm long; capsules 3.0–4.0 mm long, 1.3–1.5 mm wide, ovoid-trigonal, apex rostrate, unilocular: Proliferous flowers 2.5–3.8 mm long, one of inner perianth transformed into propagule, the inner perianths lanceolate, aristate, 1.8–2.5 mm long, 0.5–0.7 mm wide, outer perianth ovate, 0.8–1.0 mm long, 0.5–0.6 mm wide, stamens and capsules usually reduced. Seed fusiform, 0.3–0.4 mm long.

Hab. Nepal: Koshi Zone, Sankhuwa Sabha Distr., Sano Pokhari – Khongma, 3850 m. On rocks or banks by path, 12 Aug. 1990, M. Minaki, C. Yonebayashi, F. Miyamoto, H. Takayama, H. Sugita, H. Yagi, M. N. Subedi & H. Ikeda 9020853 (TI-holotype; KATH, A, BM-isotype); loc. cit. 3570 m, M. Minaki et al. 9020629 (TI, KATH, A, BM).

Juncus harae reproduces offsprings by proliferation. In *Juncus* proliferation is known in the species in subgenus *Ozophyllum* but seems to be rare in subgenus *Stygiopsis*. It is the first record of proliferating species of *Juncus* in the alpine Himalaya.

This species is rare and found on exposed mossy rock cliffs at elevations of 3570 m and 3850 m in the alpine zone of the Makalu range, east Nepal.

The authors name this in honor of late Professor Hiroshi Hara, University of Tokyo, for his contribution to the Himalayan and Japanese Juncaceae.

This species is similar to *Juncus biglumoides* Hara, but it is clearly distinguished from that by the equal length of perianth segments, the anthers longer than the filaments and the bladeless basal leaves. *Juncus biglumoides* has inner perianthes which are slightly longer than the outer, filaments three times longer than anthers, and basal leaves with filiform laminae.

Juncus nepalicus Miyamoto et H. Ohba, sp.

nov. Fig. 2

Juncus milashanensi A. M. Lu et Z. Y. Zhang differt cauli folioso, perianthia segmentis longitudine inaequalibus, antheris filamentis 1/2 brevioribus.

Rhizome very short, with 4–5 scaly leaves, pale brown. Stems tufted and ascending, slender, striate, 5–20 cm long, upper part nearly terete (0.4–0.7 mm wide), lower part complanate (0.6–1.0 mm wide), grass-green but yellowish green basel. Leaves flattened, grasslike; the cauline leaves 1 or 2, 1.5–2.0 mm long, 0.8–1.5 cm wide, linear-lanceolate, shorter than the stem; basal ones 3–12 cm long, 1.5–2.0 mm wide, linear, leaf sheath obliquely truncate. Inflorescence 1 or 2, capitate with several flowers, chestnut-brown; lowest bracts as long as flowers or sometimes slightly longer than flowers, lanceolate, 0.5–1.5 cm long, 0.5–1.0 mm wide, brown. Flowers 6–8 mm long, 1.8–2.2 mm wide, with 1–2 mm long pedicels; perianth segments ovato-lanceolate, inner slightly longer than outer, 3.5–4.5 mm long, 1.0–1.2 mm wide; outer 2.8–3.8 mm long, 0.8–1.0 mm wide, chestnut-brown; stamens 6, shorter than perianths, 2.5–3.5 mm long, anthers shorter than filaments, linear elliptic, ivory-yellow, 1.0–1.2 mm long, filaments 2.0–2.2 mm long, brown; stigma reddish, 3–4 mm long. Capsules 3–4 mm long, 1.5–2.0 mm wide, ovoid-trigonal, short rostrate, unilocular, deep brown. Seed unknown.

Hab. Nepal: Koshi Zone, Sankhuwa Sabha Distr., Around Cha Ding Kharka, 4400 m. On edges of *Rhododendron* shrubs, 7 Aug. 1990, M. Minaki, C. Yonebayashi, F. Miyamoto, H. Takayama, H. Sugita, H. Yagi, M. N. Subedi & H. Ikeda 9020690 (TI-holotype; KATH, A, BM-isotype); loc. cit. 4100 m, M. Minaki et al. 9020753 (TI, KATH, A, BM).

Juncus nepalicus is found in screes with

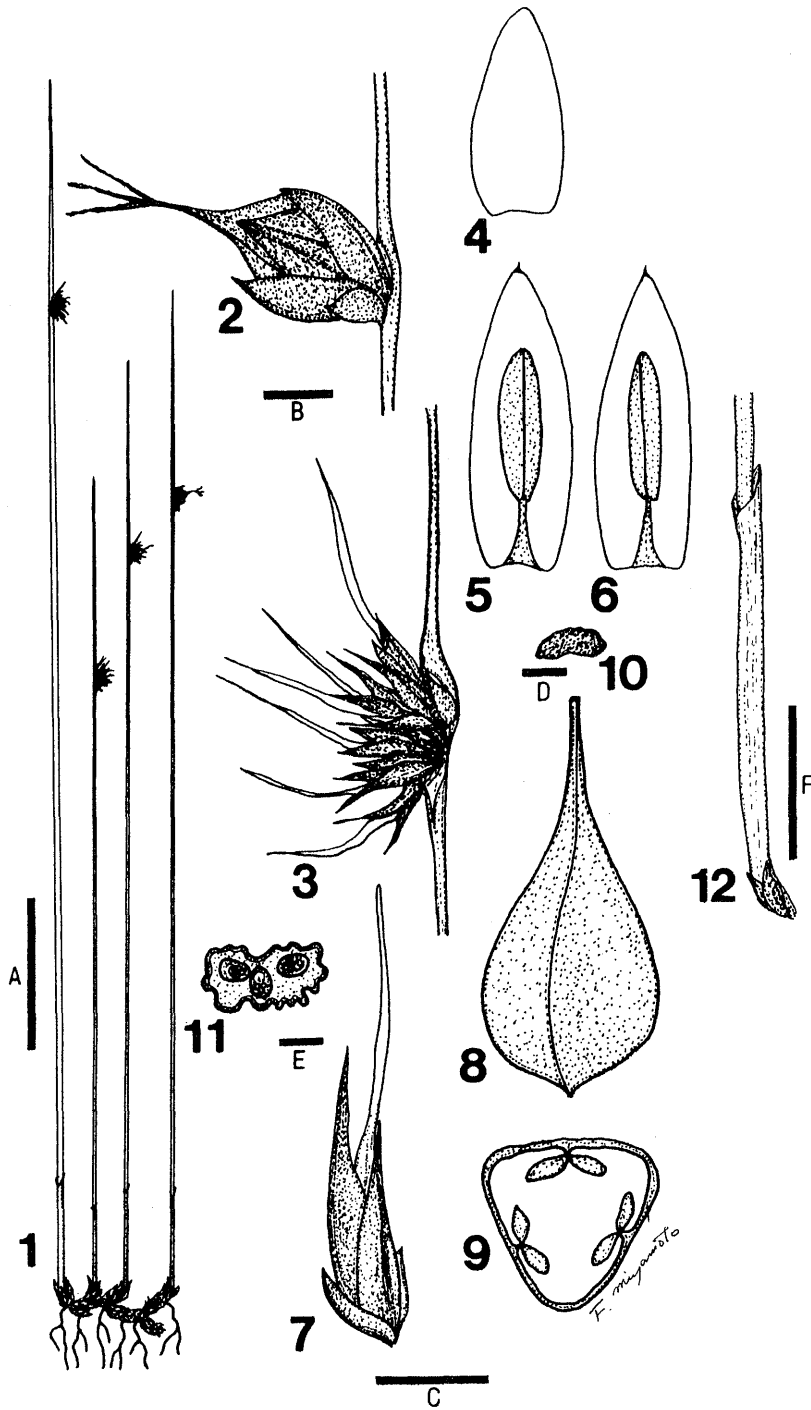


Fig. 1. *Juncus harae* (holotype). 1: Habit. 2: Normal inflorescence. 3: Proliferous inflorescence. 4: Bracteoles. 5: Inner perianth and stamen. 6: Outer perianth and stamen. 7: Proliferous flower. 8: Capsule. 9: Cross section of capsule. 10: Seed. 11: Cross section of stem. 12: Sheath at stem-base. Scales: A (2 cm) for 1; B (1 mm) for 2 and 3; C (1 mm) for 4, 5, 6, 7, 8 and 9; D (0.15 mm) for 10; E (0.2 mm) for 11 and F (5 mm) for 12.

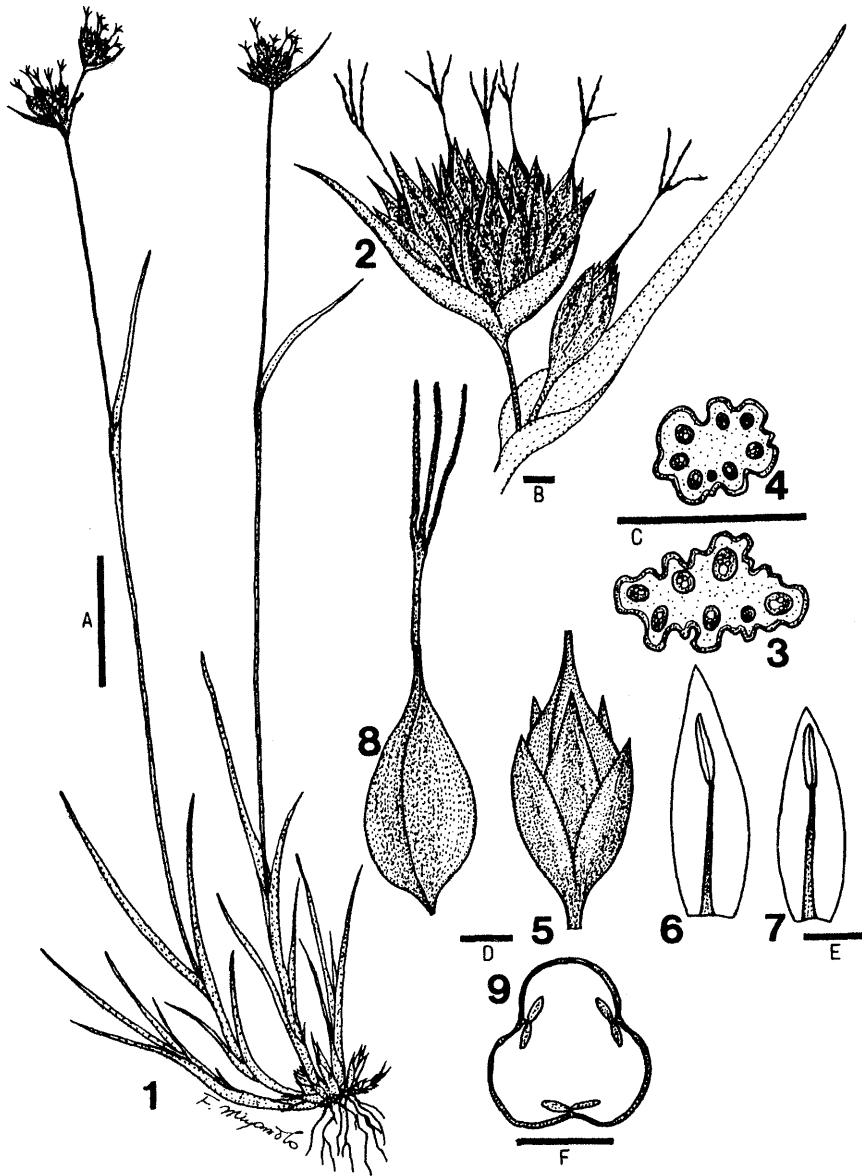


Fig. 2. *Juncus nepalicus* (holotype). 1: Habit. 2: Inflorescence. 3: Cross section of lower part of stem. 4: Cross section of upper part of stem. 5: Flower. 6: Inner perianth and stamen. 7: Outer perianth and stamen. 8: Capsule. 9: Cross section of capsule. Scales: A (2 cm) for 1; B (1 mm) for 2; C (1 mm) for 3 and 4; D (1 mm) for 5 and 8; E (1 mm) for 6 and 7, and F (1 mm) for 9.

Kobresia, *Festuca*, *Calamagrostis* and etc. at elevations between 4100 m and 4400 m in the alpine zone of the Makalu range, east Nepal.

This species is similar to *Juncus milashanensis* A. M. Lu et Z. Y. Zhang from Tibet, but it differs

in having cauline leaves, perianth segments unequal in length and anthers with half length of filaments. *Juncus milashanensis* has basal leaves only, perianth segments equal in length, 2 mm long anthers and 1 mm long filaments.

We wish to express our gratitude to Dr. Mutsuhiko Minaki, University of Marketing and Distribution Sciences. This study is supported by the Grants-in-Aid for Overseas Scientific Research No. 03041029 (1991, for H. O.), No. 02041088 (1990, for Dr. Minaki), and The Shikata Memorial Trust for Nature Conservation in 1990 (for F. M.).

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Hara H., Stearn W. T. and Williams L. H. J. 1978. *Juncus*. In: An enumeration of the flowering plants of Nepal **1**: 83–85.

要 旨

ネパールのイグサ属植物はこれまで32種が報告されている (Hara 1978). 著者らは現在ヒマラヤ産イグサ属植物の分類学的再検討を進めている. 本稿では東部ネパール高山帯から見いだされた2新種について記載をおこなった.

1) *Juncus harae* は, 中央ネパールから記載された *Juncus biglumoides* に似る. しかし, 花被片が同長であること, 葯が花糸より長いことおよび葉が鞘状になることで明確に区別できる.

2) *Juncus nepalicus* はチベットから記載された *Juncus milashanensis* に似るが茎葉を持つこと, 花被片が不同長であることおよび葯が花糸の1/2長であることで区別できる.