Journal of Threatened Taxa

Building evidence for conservation globally

www.threatenedtaxa.org

ISSN 0974-7907 (Online) | ISSN 0974-7893 (Print)

Note

The oat-like grass *Trisetopsis aspera* (Munro ex Thwaites) Röser & A.Wölk (Poaceae): a new record for the flora of central Western Ghats of Karnataka, India

H.U. Abhijit, Y.L. Krishnamurthy & K. Gopalakrishna Bhat

26 January 2021 | Vol. 13 | No. 1 | Pages: 17601–17603
DOI: 10.11609/jott.6181.13.1.17601-17603

Journal of Threatened Taxa | www.threatenedtaxa.org | 26 January 2021 | 13(1): 17601–17603
ISSN 0974-7907 (Online) | ISSN 0974-7893 (Print)
https://doi.org/10.11609/jott.6181.13.1.17601-17603
#6181 | Received 17 May 2020 | Final received 05 January 2021 | Finally accepted 07 January 2021
PLATINUM OPEN ACCESS

NOTE

The oat-like grass *Trisetopsis aspera* (Munro ex Thwaites) Röser & A.Wölk (Poaceae): a new record for the flora of central Western Ghats of Karnataka, India

H.U. Abhijit [1], Y.L. Krishnamurthy [2] & K. Gopalakrishna Bhat [3]

[1,2] Department of P.G. Studies and research in applied Botany, Kuvempu University, Jnanasahyadri, Shankaraghatta, Karnataka 577451, India.
[3] Taxonomy Research Centre, Department of Botany, Poorna Prajna College, Volakadu Road, Udupi, Karnataka 576101, India.
[1] abhitrogon@gmail.com, [2] murthy_ylk@yahoo.co.in (corresponding author), [3] kakunje_bhat@yahoo.co.in

During the survey of grasses of Baba Budangiri Hills, Western Ghats of Chikkamagaluru District, Karnataka (13.431^{0}N & 75.758^{0}E), some interesting grass specimens were collected from the montane highlands associated with *Chrysopogon zeylanicus* (Steud.) Thwaites, *Arundinella pumila* (Hochst.) Steud. and *Agrostris pilosula* Trin. Initially, these were identified as *Helictotrichon aspera* by referring to Flora of the Presidency of Madras (Fischer 1934–36) and The Grasses of Burma, Ceylon, India and Pakistan (Bor 1960). The identity of this grass was later confirmed by matching our sample with photograph of the type specimen. A scrutiny of literature revealed that this species has now been transferred to the genus *Trisetopsis* by M. Röser and A. Wölk (Wölk & Röser 2013) as the morphological and phylogenetic studies by them revealed that *Helictotrichon* s.l. is polyphyletic and heterogeneous (Wölk & Röser 2017). The genus *Trisetopsis* is characterized by its apical, bifid lemma. This species, *Trisetopsis aspera* (Munro ex Thwaites) Röser & A.Wölk, was hitherto known only from Kerala and Tamil Nadu (Sreekumar & Nair 1991; Kabeer & Nair 2009). Sreekumar & Nair (1991) reported this species as *H. virescens* (Nees ex Steud.) Henrard. They followed Henrard (1940) and Sevenstert & Veldkamp (1983) to treat *H. aspera* as a synonym of *H. virescens*; however, in this work by following Kellogg et al. (2020), it is considered as *Trisetopsis aspera* and reported here as an addition to the grass flora of Karnataka. A brief description along with photographs is provided to facilitate easy recognition of this grass. The herbarium specimens are deposited in Herbarium of Department of Applied Botany, Kuvempu University, Shankaraghatta, Shivamogga, Karnataka.

Trisetopsis aspera (Munro ex Thwaites) Röser & A. Wölk in Taxon 66(1): 38. 2017 *Avena aspera* Munro ex Thwaites, Enum. Pl. Zeyl. 372. 1864. *Helictotrichon asperum* (Munro ex Thwaites) Bor in Indian Forest Rec., Bot. n.s., 1: 68. 1938; Bor, Grasses Burma, Ceylon, India & Pakistan: 438. 1960. *Avenastrum asperum* (Munro ex Thwaites) Vierh. in Verh. Ges. Deutsch. Naturf. 85(2;1): 672. 1914; Fischer in Gamble, Fl. Madras: 1802. 1934. *Helictotrichon virescens* sensu Sreek. & V.J. Nair Fl. Kerala: Grasses: 351. 1991,

Editor: V. Sampath Kumar, Botanical Survey of India, Coimbatore, India.

Date of publication: 26 January 2021 (online & print)

Citation: Abhijit, H.U., Y.L. Krishnamurthy & K.G. Bhat (2021). The oat-like grass *Trisetopsis aspera* (Munro ex Thwaites) Röser & A.Wölk (Poaceae): a new record for the flora of central Western Ghats of Karnataka, India. *Journal of Threatened Taxa* 13(1): 17601–17603. https://doi.org/10.11609/jott.6181.13.1.17601-17603

Funding: DST- Inspire (IF170707).

Competing interests: The authors declare no competing interests.

Acknowledgements: The authors wish to thank the authorities of Karnataka Forest Department for giving the necessary permission to collect the specimens from the forest. The first author acknowledges the Department of Science and Technology (DST), Inspire for financial assistance and also Mr. Vishwajith H U, Mr. Pavan kumar K S, Mr. Krishna Karanth K M, Mr. Bharath B T and Mr. Srinivasa Murhty M V for their support during the research work.

Image 1. *Trisetopsis aspera* (Munro ex Thwaites) Röser & A.Wölk. A—Habitat | B—habit | C—raceme | D—leaf | E—spikelet | F—lower & upper glume | G—lemma & palea | H—stamens | I—dissected spikelet. © H.U. Abhijit.

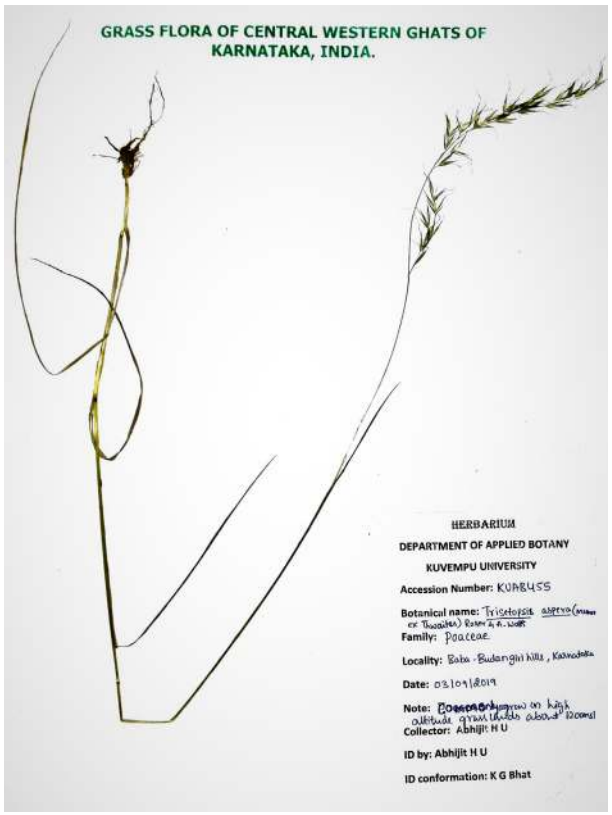

Image 2. Herbarium of *Trisetopsis aspera* (Munro ex Thwaites) Röser & A.Wölk.

p.p. quoad syn. *H. asperum*, non (Nees ex Steud.) Henrard.

Tufted perennials; culms up to 120cm high. Leaf blades up to 40 × 0.5 cm, glabrous or pubescent; sheaths glabrous or pubescent; ligule membranous, up to 4mm long. Panicles up to 30cm long, effuse, nodding. Spikelets 10–14 mm long (excluding awns); florets 3–5, uppermost floret rudimentary and sometimes reduced to awn. Glumes unequal, lanceolate-oblong, herbaceous, 3-nerved, acute to acuminate; lower 5–7 mm long; upper 8–10 mm long. Lemmas lanceolate, scabrous, 7–9-nerved, lowest 8.5–10.5 mm long, bidentate at tip and awned from back near middle; awn geniculate, 10–13 mm long, scabrous. Palea 6–6.8 mm long, ciliate on keels. Stamens 3; anthers 2.5–2.8 mm long. Styles 2; stigmas plumose. Caryopsis linear-elliptic, 3.5–3.8 mm long, pubescent. (Image 1B- I)

Flowering and fruiting: September–December

Habitat and Ecology: Grasslands of high altitude about 1,200m (Image 1A).

Distribution: India: Kerala, Tamil Nadu and in the present work from Karnataka. Endemic.

Specimens examined: KUAB455, 03.i.2019, India, Karnataka, Chikkamagaluru District, Baba Budangiri Hills, 13.431^{0}E & 75.758^{0}N, coll. H.U. Abhijit.

References

Bor, N.L. (1960). *The Grasses of Burma, Ceylon, India and Pakistan (excluding Bambusae)*. Pergamon Press, Oxford. 767pp.

Fischer, C.E.C. (1934). Gramineae, pp. 1689–1864. In: Gamble, J.S. (ed.). *The Flora of the Presidency of Madras*. Part X. Adlard & Son, London.

Fischer, C.E.C. (1934). Gramineae, pp. 1687–1864. In: Gamble, J.S. (ed.). *The Flora of the Presidency Madras*. Part X & XI. Vol. 3 (2nd Edition 1967). Botanical survey of India, Calcutta, 1802pp.

Henrard, J.T. (1940). Notes on the nomenclature of some grasses. *Blumea* 3: 411–480.

Kabeer, K.A. & V.J. Nair (2009). *Flora of Tamil Nadu - Grasses*. Botanical Survey of India, 525pp.

Kellogg, E.A., J.A. Richard, K.S. Bawa, K.N. Gandhi, B.R. Kailash, K.N. Ganeshaiah, U.B. Shrestha & P. Raven (2020). Checklist of the grasses of India. *PhytoKeys* 163: 1–560.

Sevenstert, J.G. & J.F. Veldkamp (1983). A revision of *Helictotrichon* (Gramineae) in Malaysia. *Blumea* 28: 329–342.

Sreekumar, P.V. & V.J. Nair (1991). *Flora of Kerala- Grasses*. Botanical Survey of India. 470pp.

Wölk, A. & M. Röser (2013). The new genus *Trisetopsis* and new combinations in oat-like grasses (Poaceae). *Schlechtendalia* 25: 57–61.

Wölk, A. & M. Röser (2017). Hybridization and long-distance colonization in oat-like grasses of South and East Asia, including an amended circumscription of *Helictotrichon* and the description of the new genus *Tzveleviochloa* (Poaceae). *Taxon* 66(1): 20–43.

Journal of Threatened Taxa

www.threatenedtaxa.org

PLATINUM OPEN ACCESS

ISSN 0974-7907 (Online) | ISSN 0974-7893 (Print)

January 2021 | Vol. 13 | No. 1 | Pages: 17455–17610
Date of Publication: 26 January 2021 (Online & Print)
DOI: 10.11609/jott.2021.13.1.17455-17610

Member

FJN

Publisher & Host

WILD ZOOREACH

Threatened Taxa