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### 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

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## 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

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During the survey of grasses of Baba Budangiri Hills, Western Ghats of Chikkamagaluru District, Karnataka (13.431°N & 75.758°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,

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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.

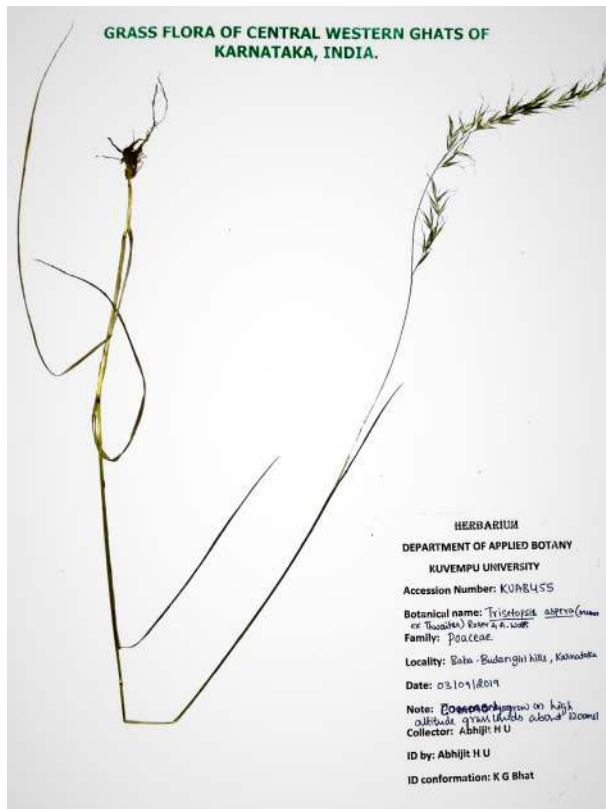


Image 2. Herbarium of *Trisetopsis aspera* (Munro ex Thwaites) Röser & A.Wölk.

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°E & 75.758°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. Ganeshiah, 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.







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