



ON THE IDENTITY OF *FESTUCA SANJAPPAE* CHANDRA SEK. & S.K.SRIVAST. (FAMILY: POACEAE, SUBFAMILY: POOIDEAE, TRIBE: POEAE, SUBTRIBE: LOLIINAE)


Sutrishna Kar<sup>1</sup> and Paramjit Singh

Botanical Survey of India, CGO Complex, 3<sup>rd</sup> MSO Building, Block F, 5<sup>th</sup> and 6<sup>th</sup> floor, DF Block, Sector I, Salt Lake City, Kolkata- 700064.

**ABSTRACT:** Available evidences on examination of the type materials together with some other relevant specimens suggests that the new species *Festuca sanjappae* Chandra Sek. & S.K.Srivast. Described by Chandra Sekar and Srivastava (2005) from Pin Valley National Park, Himachal Pradesh, India is actually *Bromus gracillimus* Bunge. Thus, here current status of *Festuca sanjappae* Chandra Sek. & S.K.Srivast. has been assigned and now onwards shall be treated as a new synonym of *Bromus gracillimus* Bunge.

**Key words:** *Festuca sanjappae* Chandra Sek. & S.K.Srivast., *Bromus gracillimus* Bunge, current status, synonym.

\*Corresponding author: Sutrishna Kar, Botanical Survey of India, CGO Complex, 3<sup>rd</sup> MSO Building, Block F, 5<sup>th</sup> and 6<sup>th</sup> floor, DF Block, Sector I, Salt Lake City, Kolkata- 700064, E-Mail: me.sutrishna@gmail.com

Copyright: ©2017 Sutrishna Kar. This is an open-access article distributed under the terms of the Creative Commons Attribution License , which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

## INTRODUCTION

*Festuca* L. is one of the largest genera in Poaceae, accounting about 640 species distributed almost in all continents. As per present study, the genus is now represented by 37 species with 3 subspecies in India of which 6 species are endemic to the country. Most of them occur in the higher altitude areas of Eastern and Western Himalayas, North-East India. Clayton and Renvoize (1986) had classified the genus into 9 subgenera of which 5 subgenera had their representatives in India.

In the course of an ongoing revision of *Festuca* L. in India for the Flora of India Project, the current status of *Festuca sanjappae* Chandra Sek. & S.K.Srivast. has been ascertained.

## Taxonomic, Nomenclature treatment

Chandra Sekar and Srivastava [1] while describing *Festuca sanjappae* Chandra Sek. & S.K.Srivast. as a new and interesting species from Pin Valley National Park, Himachal Pradesh stated “*Festuca sanjappae* Chandra Sek. & S.K.Srivast. is closely allied to *Festuca alaica* Drobow in general appearance in having densely tufted perennial habit without rhizomes; erect culms; leaf-blades with 3 sclerenchyma strands and 4–5-flowered spikelets but differs from the later in having longer culms (35–43cm); leaf-blades flat, sparsely hairy at lower surface, ligules longer (1–1.4 mm); panicle longer, elliptic to oblanceolate; spikelets short (4–5.5 mm); lemma hairy on upper part with longer awn (14–16 mm); palea longer (3.2–3.8 mm); anthers short (0.3–0.4 mm) long with hispidulous ovary”.

But in course of our revisionary study on the Indian Festucas, examination of the holotype of *Festuca sanjappae* Chandra Sek. & S.K.Srivast. (K. Chandra Sekar 103271, Holo.-CAL, CAL0000002501!, Fig. 2; Iso.- BSD, BSD000000189!), it was observed that the characters of the species are much similar to the characters of *Bromus* rather than *Festuca* being annual and in having closed leaf sheath, outer and inner glumes with acuminate apex and chiefly the characters resembles the characters of *Bromus gracillimus* Bunge in having culm erect–geniculately ascending, awn of the lemma sub-apical and 1.4–1.6 cm long; ovary with a fleshy appendage above the style insertion and is prominently pubescent on apex.

Examination of the type materials together with some other relevant specimens of *Bromus gracillimus* Bunge from Kashmir, Ladakh, N.W. Himalaya: J.F. Duthie 11714, 11759(CAL); A. Meebold 1695, 1696(CAL) and Afghanistan: J.E.T. Aitchison 570(CAL) reveal that the particular species i.e. *Festuca sanjappae* Chandra Sek. & S.K.Srivast. is actually *Bromus gracillimus* Bunge. (Fig. 3) and thus now onwards to be treated as a synonym of it.

The synonymy is as follows:

*Bromus gracillimus* Bungein Mém. Acad. Imp. Sci. St.-Pétersbourg Divers Savans 7: 527. 1851.

Type: Turkestan, In der Wüste Karakum bei Kuk-Kabak, 19. Mai. 1842, *Lehmann* 1495(Holo.- P, P02615196, image!) (FIG. 1.)

*Bromus crinitus* Boiss. & Hohen. In Diagn. Pl. Orient., ser. 1, 13: 64. 1854.

Type: Iran, *Theodor Kotschy* - 133. (MO, MO2958277, image!)

*Deschampsia aralensis* Regel in Bull. Soc. Imp. Naturalistes Moscou 41(2): 300. 1868.

Type: Uzbekistan, steppe des Aralsesim Gebiete des Syr-Darja Borazozow 774, n.v.

*Nevskiella gracillima* (Bunge) V.I. Krecz. & Vved. In Trudy Sredne-Aziatsk. Gosud. Univ., Ser. 8b, Bot. 17: 15, 22. 1934.

Type: Type of Basionym: *Bromus gracillimus* Bunge

Turkestan, In der Wüste Karakum bei Kuk-Kabak, 19. Mai. 1842, *Lehmann* 1495 (P, P02615196, image!)

*Festuca sanjappae* Chandra Sek. & S.K.Srivast. in J. Jap. Bot. 80(2): 72.2005. **syn. nov.**

Type: Pin Valley National Park, Chhohem, 4,000–4,100m, 13.07.2003, *K.Chandra Sekar* 103271(Holo.- CAL, CAL0000002501, image!) (FIG. 2.)

*Bromus bornmulleri* Hausskn., Pl. Pers.-turc.: no. 4922. 1872., nom. nud.



Figure 1. Holotype of *Bromus gracillimus* Bunge

(Reproduced with the permission from the Board of the Trustees of Muséum National d'Histoire Naturelle herbarium, P, Paris)



Figure 2. Holotype of *Festuca sanjappae* Chandra Sek. & S.K.Srivast. (© Central National Herbarium, Botanical Survey of India)

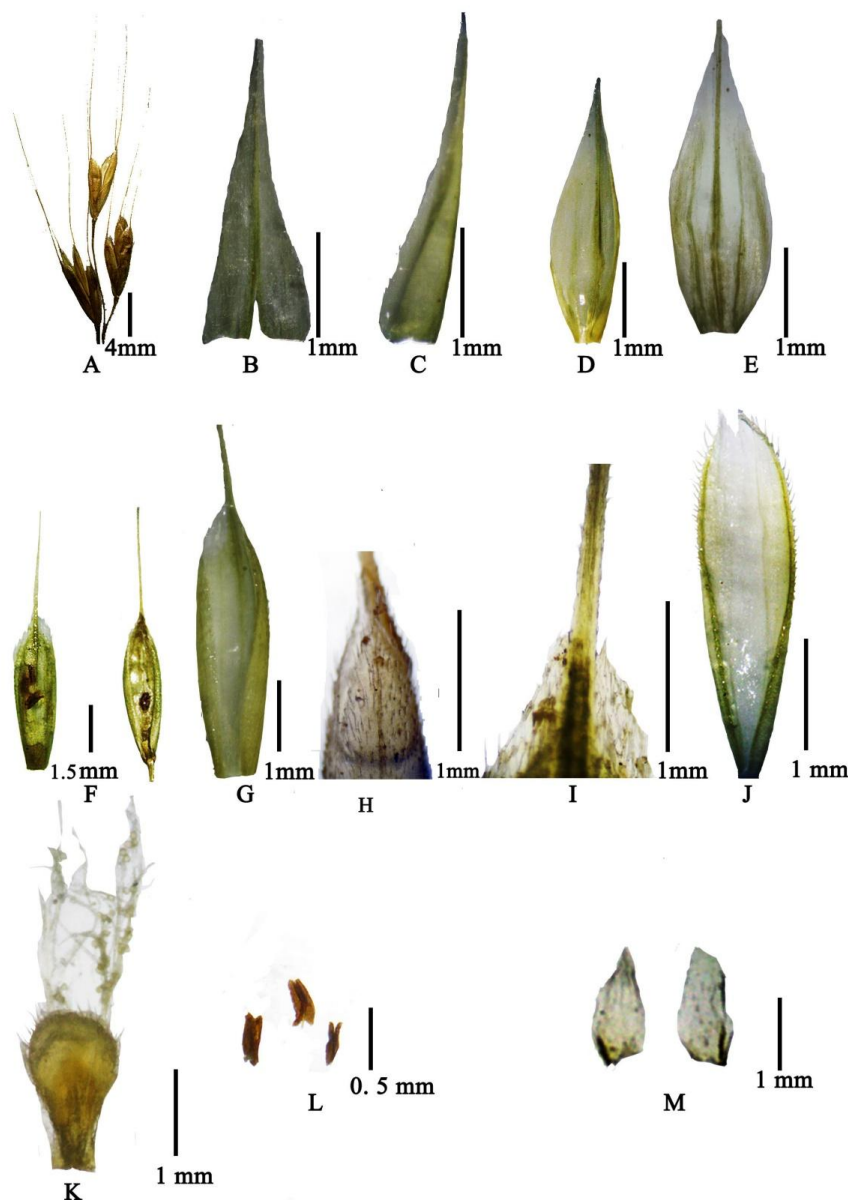


Figure 3. Dissected portions of different parts of *Festuca sanjappae* Chandra Sek. & S.K.Srivast. Specimen: Chandrasekar 103271 (Isotype, BSD)  
 A. Spikelet; B. Outer glume- adaxial surface view;  
 C. Outer glume- abaxial surface view; D. Inner glume- adaxial surface view;  
 E. Inner glume- abaxial surface view; F. Florets;  
 G. Lemma- adaxial surface view; H. Lemma- abaxial surface view of a portion;  
 I. Tip of lemma (with a portion of the awn); J. Palea; K. Pistil; L. Stamens; M. Lodicules.

### ACKNOWLEDGEMENTS

The first author wishes to express her deep sense of gratitude to the Director cum Supervisor, Dr. Paramjit Singh, Botanical Survey of India, Kolkata for his guidance, valuable suggestions and providing facilities for research and also grateful to Dr. Subir Bandyopadhyay, Scientist, Central National Herbarium, Botanical Survey of India, Kolkata for his valuable suggestions. We also thank the Curators of MO and P for making available to us the images of the type specimens and also both of the anonymous reviewers for critical review of the manuscript and useful suggestions.

### REFERENCES

Chandra Sekar, K. and Srivastava S.K. 2005. A New Species of *Festuca* L. (Poaceae: Pooideae) from India. Journal of Japanese Botany, 80(2), pp. 72–75.

# International Journal of Plant, Animal and Environmental Sciences

