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New combinations in Cenchrus (Paniceae, Poaceae) in Europe and the Mediterranean area

Abstract


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Recent molecular phylogenetic studies strongly recommend the amalgamation of the grass genera Cenchrus and Pennisetum. The generic name Cenchrus having priority, the species of Pennisetum need to be transferred to it. The correct names in Cenchrus for the 15 Pennisetum species in Europe and the Mediterranean area are provided, including four new combinations.

Additional key words: Pennisetum, taxonomy, nomenclature

The generic limits of Cenchrus and Pennisetum (Paniceae, Poaceae) have always been controversial. In its traditional sense the former is characterised by bristles subtending the spikelets that are fused well above the base while in the latter the bristles are free or only fused at their extreme bases. Cenchrus ciliaris L. was considered to be a transitional species: although originally described in Cenchrus it was a more or less anomalous species in this genus (bristles only fused at their extreme bases) and its placement in Pennisetum as P. ciliare (L.) Link was often suggested. This taxonomic view became widely accepted in the past years (see for instance Stieber & Wipff 2003).

Recent molecular phylogenetic studies shed new light on the relationships in Cenchrus and Pennisetum. Donadio & al. (2009) confirmed that Cenchrus and Pennisetum are very closely related and demonstrated that most species of Cenchrus are in fact nested in Pennisetum. At most a core group of a few American species, mainly with a basic chromosome number of x=17, could be retained in Cenchrus s.str. Chemisquy & al. (2010) confirmed these results and strongly recommend to merge both genera. The generic name Cenchrus having priority, all species of Pennisetum need to be transferred to Cenchrus.

Morrone (in Chemisquy & al. 2010) published new combinations in Cenchrus for most of the species and Symon (2010) made some additional name changes for a few Australian taxa.

In Europe and the Mediterranean area (Valdés & Scholz 2009+) 15 (accepted) taxa currently treated as members of Pennisetum are concerned. Their correct names in Cenchrus are provided in the following:


Pennisetum clandestinum Hochst. ex Chiov. = Cenchrus clandestinus (Hochst. ex Chiov.) Morrone Status of occurrence: introduced in Algeria, Canary Islands, Cyprus, Greece, Israel, Madeira, Morocco and Spain.

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Pennisetum divisum (Forssk. ex J. F. Gmel.) Henrard = Cenchrus ramosissimus Poir.
Status of occurrence: native in Algeria, Egypt, Israel, Lebanon, Libya, Morocco, Sinai, Syria and Tunisia.

Status of occurrence: native in Egypt, Libya, Sinai and Tunisia.

Synonym: Cenchrus americanus (L.) Morrone
Status of occurrence: introduced / cultivated in Algeria, Israel, Libya and Morocco.

Pennisetum macrourum Trin. = Cenchrus caudatus (Schrad.) Kuntze
Synonym: Cenchrus macrurus (Trin.) Morrone
Status of occurrence: introduced in the Canary Islands (La Palma).

Pennisetum orientale Rich. = Cenchrus orientalis (Rich.) Morrone
Status of occurrence: native in Egypt, Greece, Israel, Lebanon, Syria and Turkey.

Pennisetum purpureum Schumach. = Cenchrus purpureus (Schumach.) Morrone
Status of occurrence: introduced in Algeria, the Canary Islands, Cyprus, Israel and Morocco.

Status of occurrence: native in Algeria.

Pennisetum setaceum (Forssk.) Chiov. = Cenchrus setaceus (Forssk.) Morrone
Synonyms: Cenchrus asperifolius Desf., nom illeg.; Pennisetum tiberiadis Boiss.
Note: The earlier binomial Cenchrus asperifolius of 1799, given as a synonym by Le Floch’s & Boulos (2008), is an illegitimate name. These authors further cite in the synonymy the non-existing “Cenchrus tiberiadis Boiss.” obviously as an error for Pennisetum tiberiadis. Status of occurrence: native to Algeria, Israel, Lebanon, Libya, Morocco, Sinai, Syria and Tunisia; introduced in the Canary Islands, Sicilia and Spain.

Pennisetum sieberianum (Schltdl.) Stapf & C. E. Hubbard = Penicillaria sieberianum Schltdl. in Linnaea 25: 565. 1853 = Cenchrus sieberianus (Schltdl.) F. Verloove, comb. nov.
Status of occurrence: introduced in Egypt.

Pennisetum thunbergii Kunth = Cenchrus geniculatus Thunb.
Synonym: Cenchrus thunbergii (Kunth) Morrone
Status of occurrence: introduced in the Canary Islands (La Palma, Tenerife).

Pennisetum villosum R. Br. ex Fresen. = Cenchrus longisetus M. C. Johnst.
Synonymy: Cenchrus villosus (R. Br. ex Fresen.) Kuntze 1898, non (Spreng.) Spreng. 1824.
Status of occurrence: introduced in Algeria, the Balearic Islands, Canary Islands, Corse, Greece, Italy, Morocco, Sardegna and Spain.

Pennisetum violaceum (Lam.) Rich. ex Pers. = Cenchrus violaceus (Lam.) Morrone
Status of occurrence: native in Algeria and Morocco.

Finally, it is useful to point out that the mistakable citation of “Echinaria” as a synonym of Cenchrus in Mabberley (2008) does not refer to Echinaria Desf. (1749), which is, of course, a very distinct genus of the tribe Poeae, but to the later homonym Echinaria Fabric. (1759), which, indeed, corresponds with Cenchrus.

References


