

Carex sequeirae Míguez, Jim.-Mejás & Martín-Bravo is morphologically indistinguishable from *Carex pendula* Huds. s. str.

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Abstract. *Carex sequeirae*, newly described from Madeira in 2021, is morphologically indistinguishable from *Carex pendula* s. str. and therefore does not warrant taxonomic recognition. The characteristics used to distinguish the Madeiran plants are present throughout the range of the latter species, whose overall morphological variability has not been adequately considered when separating the former as a distinct species.

Key words: Madeira, taxonomy, speciation, border population, morphological variability, *Carex sequeirae*, *Carex pendula*

1. Introduction

Field research on the distribution and morphology of *Carex pendula* Huds. s. str. and *Carex agastachys* L. f. in south-western Germany (Sonnberger in progress) has shown that the tendency to develop androgynous lateral spikes in *C. pendula* (in contrast to the normally completely female lateral spikes in *C. agastachys*) is a reliable distinguishing feature for the 2 species, in addition to the characteristics listed by Míguez *et al.* (2018). It is also mentioned in the recently published Flora of the Czech Republic (Grulich & Řepka 2024) and can be considered as characteristic at least for Central European populations.

Surprisingly, just this feature is cited by Míguez *et al.* (2021) as being unique to plants from Madeira and is used, along with some other characteristics, to justify separating the Madeiran population of *C. pendula* as a discrete species: *Carex sequeirae*. This discrepancy prompted me to review carefully the data and arguments presented in that paper.

2. Results

According to Míguez *et al.* (2021), *Carex sequeirae* differs from *C. pendula* by: (1) its invariably androgy-

nous lateral spikes, terminated in a narrowly conical tip 10-30 mm long, composed of staminate flowers (vs. lateral spikes female in the latter species, exceptionally shortly androgynous); (2) awned pistillate glumes, with an awn 0.4-0.7 mm long (vs. acute to mucronate, with a mucro 0-0.5 mm long); and (3) oblong-ovate achenes (vs. elliptical ones).

(1) A specimen of *C. pendula* from mainland Portugal (Fig. 1), found in the online herbarium of the Botanical Garden Meise (Belgium), has all lateral spikes bearing a distinct male tip > 1 cm long. Similar specimens are well represented among the almost 400 sheets of *C. pendula* from the European mainland. An internet research yielded pictures of *C. pendula* showing marked androgynous lateral spikes from the Iberian Peninsula, Great Britain, Italy, and other countries (see Internet links in the References). Obviously, this feature is regularly occurring throughout the range of *C. pendula*, being an intrinsic part of its morphological variability.

(2) According to HAMON (2022) and personal observations, the tip of the pistillate glumes in *C. pendula* may be distinctly aristate, not only mucronate as stated by Míguez *et al.* (2021). This fact is indirectly confirmed by the same research team in a preceding publication (Míguez *et al.* 2018), by an analytical illustration

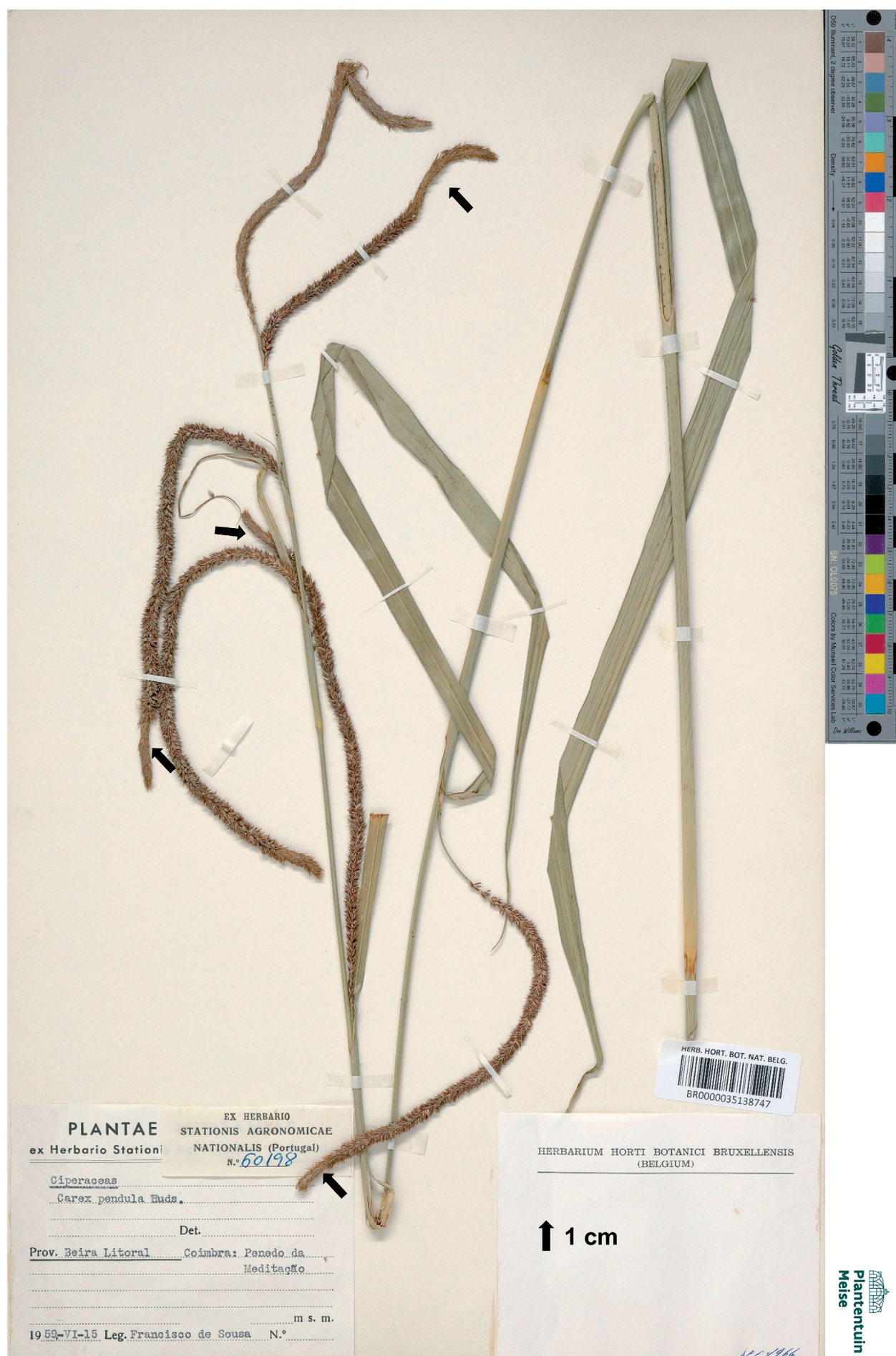


Fig. 1. Specimen of *Carex pendula* from mainland Portugal (Coimbra region) showing distinct male tips > 1 cm in all lateral spikes (© Meise Botanic Garden, use permitted under a CC-BY license)

of a pistillate glume of *Carex pendula* from France (Fig. 8 on p. 52), as the glume is tipped with a 0.6-mm-long arista.

(3) The shape of *C. sequeirae* achenes depicted by Míguez *et al.* (2021) (Fig. 6D on p. 311 and Fig. 8H on p. 317) fits into the variability of *C. pendula* as displayed in Internet link IL 3 for material from the Iberian Peninsula (Andalusia). Moreover, those authors mention a considerable degree of aborted achenes and morphological aberrations in *C. sequeirae* caused by frequent fungal infection. Such distortions may be responsible for some deviations from the elliptic achene shape of *C. pendula*.

3. Conclusion

The variability of *C. pendula* was analysed by Míguez *et al.* (2021) on the basis of 8 specimens used for the phylogenetic analysis and 28 for the macromorphological study, from 15 countries. Obviously, these numbers were not sufficient to cover its total morphological range, which as shown above includes all the traits of the Madeiran population. The small genetic and phenotypic differences of the latter as detected by DNA and statistical analysis, respectively, are not unusual for a border population of a widespread species like *C. pendula*. Thus they do not justify the separation of *C. sequeirae* at any, even low-rank taxonomic level.

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- IL 2 http://floragon.ipe.csic.es/imagenes2.php?cod_taxon=3176&genero=Carex&especie=pendula&subespecie=&variedad=&imagen=2 (Iberian Peninsula – Aragon)
- IL 3 <https://www.florandalucia.es/index.php/carex-pendula> (Iberian Peninsula – Andalusia)
- IL 4 <https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/plants/grasses-and-sedges/pendulous-sedge/> (Great Britain)
- IL 5 http://flora.provincia.modena.it/naviga_flora/poales/carex-pendula-huds.aspx (Italy)

Internet links (visited 18.11.2025)