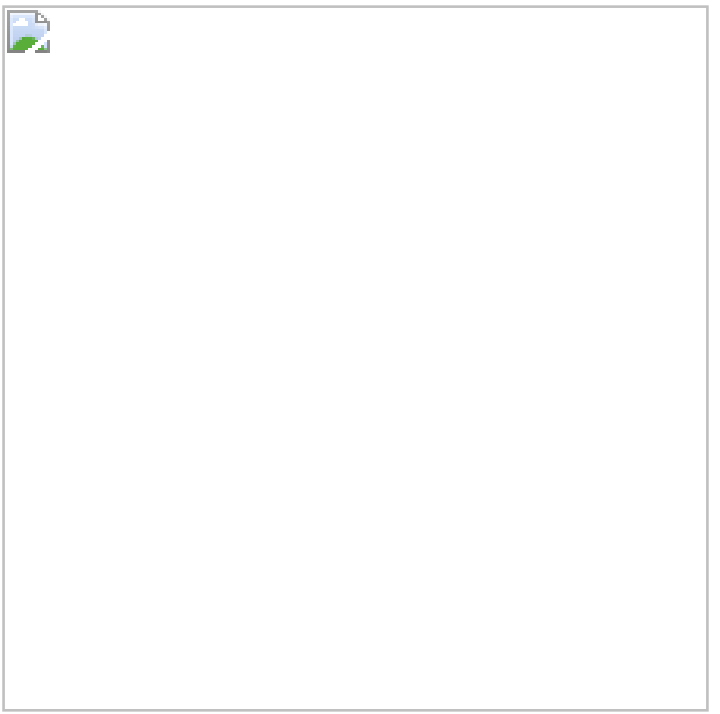

Bouteloua gracilis (Chloridoideae, Poaceae), a new American xenophyte in Europe

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Bouteloua gracilis (Chloridoideae, Poaceae), a new American xenophyte in Europe

Abstract

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The American grass species *Bouteloua gracilis* has been found for the first time in Europe as a more or less established alien on rocky talus slopes near Palafolls (NE Spain). The species is described and depicted and its local ecology and origin are discussed.

Floristic research in the Riu Tordera Basin (Spain, Province of Barcelona) in May 2003 yielded a record of a remarkable grass with persistent inflorescence branches (remnants of the previous flowering season). At a glance, the plants obviously belonged to the *Chloridoideae, Cynodonteae,* and more specifically to the American genus *Bouteloua* Lag. (Peterson & al. 2001). Further study (see Gould 1979) led to *B. gracilis* (Kunth) Lag. ex Griffiths, apparently never reported before from Europe.

Description. – Tufted and shortly rhizomatous perennial. *Culms* 24-80 cm long, usually erect or somewhat geniculate at base, nodes glabrous. *Sheaths* glabrous; ligule a fringe of short hairs, with marginal tufts of some long white hairs. *Leaf blades* 1-2.5 mm broad, conspicuously glaucous (especially on young shoots; hence the species' vernacular name 'Blue Grama'). *Inflorescence* with 1 or 2(-3) branches, each up to 55 mm long, slender and densely flowered, straight or slightly curved. *Spikelets* 40-90 per branch, pectinately spreading. *Glumes* purplish with hyaline margins, subequal, equalling the lemma, scabrous on the midvein and with scattered long, papilla-based hairs. *Lemma* 3.5-6 mm long, pubescent below, 3-awned, awns 1-3 mm long. *Palea* c. 2.5 mm long, membranous. *Caryopsis* 2.5-3 mm long, narrowly obovoid (Fig. 1).

Since *Bouteloua gracilis* has many persistent inflorescence branches, it is placed in *B.* subg. *Chondrosum* (Desv.) Gould, which is sometimes considered in its original sense at generic rank (*Chondrosum gracile* Kunth, see, e.g., Clayton & Renvoize 1986: 246).

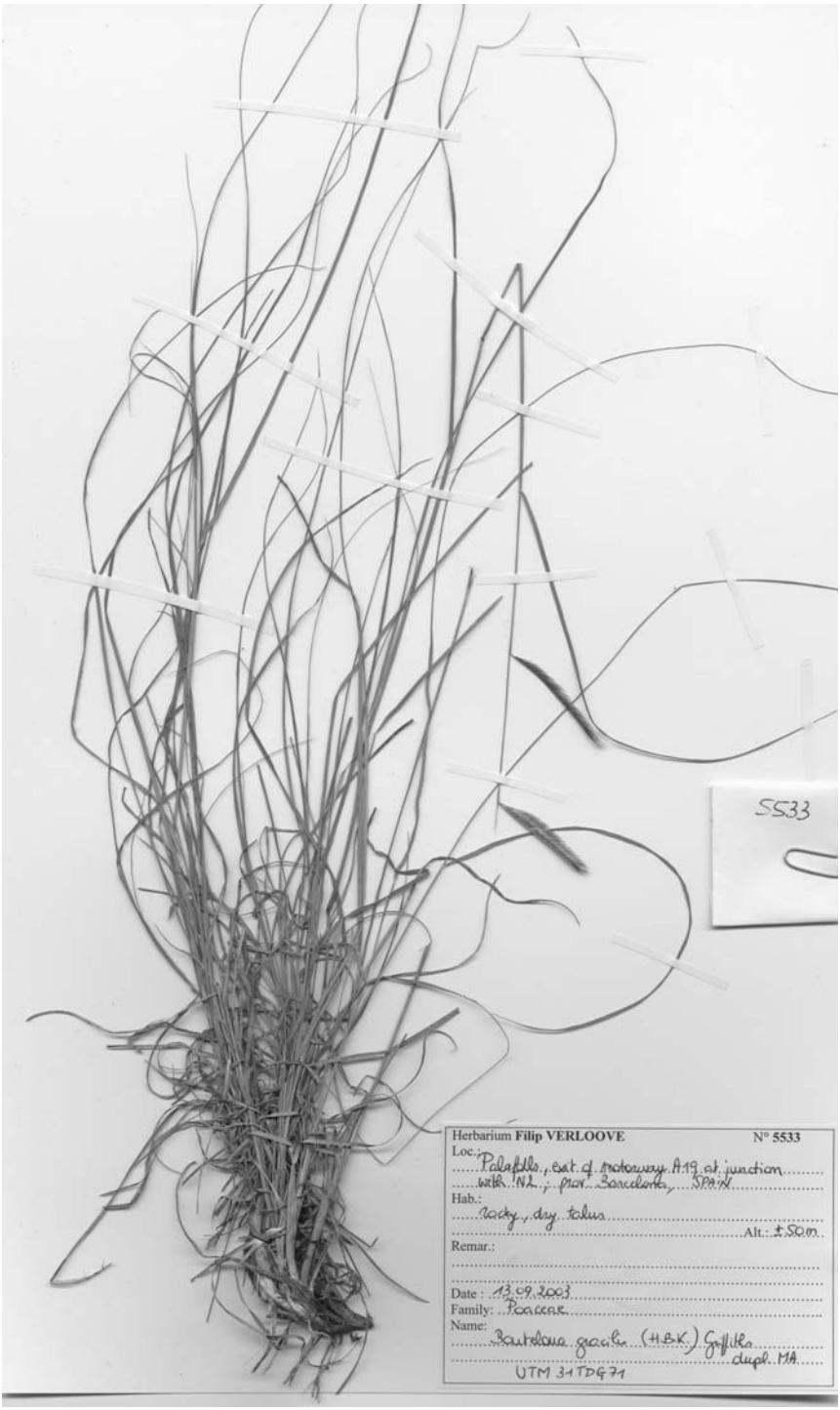

Fig. 1. *Bouteloua gracilis* – specimen from the first European population (herb. Verloove).

Habitat and ecology. – In Palafolls, NE of Malgrat de Mar, *Bouteloua gracilis* was found in a dry, rocky off-ramp at the exit of the motorway A19 near its junction with the N2. A small population of a few square metres survives near the border of natural vegetation that belongs to the Calicotomo-Cistetum crispi and the Carici depressae-Quercetum suberis (Biocat 2003). *B. gracilis* seems to be well established near Palafolls and could become naturalized. In spite of its qualities as a forage grass, the species occurs as a noxious weed in native grasslands outside its area of origin (e.g. in South America and the Indian Subcontinent, see Häfliger & Scholz 1981).

Origin. – The origin of the Palafolls population is uncertain. Nearby there was an almost monospecific stand, apparently sown for stabilization purposes, of *Eragrostis curvula* (Schrad.) Nees on the off-ramp of the A19 motorway. An introduction (as a contaminant) with the *Eragrostis* seed appears to be unlikely since *E. curvula* is South African in origin. Another possibility could be that *Bouteloua gracilis* has been introduced intentionally for off-ramp stabilization (as has been the case with several other non-native grass species in this area, viz. *Chloris gayana* Kunth, *Eragrostis curvula*, *Phalaris stenoptera* Hack., *Pennisetum villosum* R. Br. ex Fresen., see, e.g., Esteras 1988), but the present population seems to be too restricted to have been the result of sowing. Besides, *B. gracilis* grows on a rocky, almost bare talus rather than on the off-ramp itself. Thus an unintentional introduction seems more likely. *B. gracilis* is (very rarely) grown for ornament in Europe (Walters & al. 1984: 37) and in its area of origin (Canada and further south through the central and western USA to Mexico) it is one of the most important forage grasses. According to Hanelt (2001: 2622) it is the most important pasture grass in the Great Plains and it is cultivated for reseeding of denuded grassland and for soil conservation.

Voucher specimens. – Spain, province of Barcelona, Palafolls (UTM 31TDG71), exit of motorway A19 at junction with N2, rocky, dry talus, c. 50 m, 17.5.2003, *F. Verloove 5379* (B, BF, HGI; herb. F. Verloove); ibid., 13.9.2003, *F. Verloove 5533* (MA; herb. F. Verloove).

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