

## The occurrence of *Cyperus strigosus* (Cyperaceae) in Serbia and Montenegro

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**Abstract.** *Cyperus strigosus*, was collected during an excursion to the wetlands of Southeastern Banat province during the XI OPTIMA meeting held in Belgrade between 5<sup>th</sup> and 11<sup>th</sup> September 2004. It is a species native to America which has now spread to Europe. It was previously documented only from Italy and more recently in 2003, from the Danube valley in northern Bulgaria.

**Key words:** adventive species, Banat province, *Cyperus strigosus* (Cyperaceae)

During the XI OPTIMA meeting held in Belgrade between 5<sup>th</sup> and 11<sup>th</sup> September 2004, a one day excursion was made on 8 September to Deliblatska Peščara (Deliblato Sands) and the wetlands in the southeastern part of the Banat province in Serbia. Several interesting plants were collected under the guidance of V. Stevanović from the Botanical Institute and Garden, University of Belgrade. The emergent vegetation of muddy banks of marshes, ponds and old river beds was explored by P. Uotila from the Botanical Museum, University of Helsinki. Towards the end of the day, at the penultimate stop before returning to Belgrade, a visit was made to Mali Lap marsh close to the village of Dubovac. There, at the shallow water's edge and along the cracks at the base of huge concrete embankments, numerous plants of *Cyperus strigosus* L. in full flower were found. The population, consisting of more than a hundred individuals, were extremely luxuriant in growth and varying in size, from 10 cm tall, caespitose plants in the cement cracks to tall emergent ones in the water reaching nearly half a metre in height.

Collections were made by Kit Tan and P. Uotila, the accompanying native botanists had already noted and collected it on previous occasions.

### *Cyperus strigosus* L., Sp. Pl. 47 (1753)

Province Banat, southeastern part: near village Dubovac, shallow water at edge of Mali Lap marsh and surrounding concrete embankments, 70–80 m, 8 September 2004, coll. Kit Tan, 27840 (C); ibidem, coll. Uotila 45577a, small plants on embankment (H), 45577b tall plants in water (H); small, relatively isolated populations in several places on the right bank of the islet of Žilovo, on the left bank of the Danube, Mali Lap Marsh, Dolnice bay, Stevanović & al. observed (Stevanović & al. 2003, 2004).

*C. strigosus* is widespread in Canada and the United States, and extends to tropical South America. The first documented species in Europe was in 1915, from Piedmont in north Italy (Mattirolo 1915). Since then

it has spread further in Italy, occurring particularly in the Po valley (Pignatti 1997). A comprehensive account of its distribution and occurrence in Bulgaria is provided by Tzonev & al. (2003) where it is predicted that in the near future the species will be found in other parts of Europe. The occurrence in Bulgaria is also the first documented record of the plant's existence in the Balkan Peninsula and SE Europe. Although previously reported in proceedings of conferences more geared to limnologists, the present information is a small contribution for those more interested in floristics and chorology. We predict it would not be long before its discovery in Greece.

Transport by the river Danube or by water birds is most likely to account for its existence in Serbia. The species is easily distinguished from other members of the genus by its narrowly linear, almost patent spikelets. It appears to be in the early phases of invasion and is possibly hindered by strong competition from native species such as *Phragmites australis*, *Typha latifolia*, *T. angustifolia*, *Cyperus serotinus*, etc.

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