

On the alleged presence of *Carex pulicaris* (Cyperaceae) in Croatia

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The only record of *Carex pulicaris* published from Croatia so far is based on a misidentification and actually refers to *C. davalliana*. Therefore, *C. pulicaris* has to be cancelled from the list of vascular plants occurring in Croatia.

Keywords: *Carex pulicaris*, *C. davalliana*, Cyperaceae, Croatia

During a literature search for the compilation of an annotated checklist of the vascular plants of the Cres-Lošinj archipelago (WALLNÖFER 2008), my attention was drawn to the publication of TOPIĆ and ILIJANIĆ (2001) who recorded *Carex pulicaris* as new for the Croatian flora. Allegedly, it was found along a little stream in a bog next to Trstenik, in the region of Gorski kotar (UTM VL54), near the northwestern border of the country. Subsequently, this record was also included in the Red Book (Crvena knjiga) of the Croatian plants by NIKOLIĆ and TOPIĆ (2005). However, figures 1 in TOPIĆ and ILIJANIĆ (2001) and 77 in NIKOLIĆ and TOPIĆ (2005) depict, without any doubt, *C. davalliana* Sm., a species already known from Croatia (e.g., GAŽI-BASKOVA 1973, NIKOLIĆ 2000). Apart from also having seen them in several other countries, I am very well acquainted with both these species, since, in the course of a survey of mires, bogs and moors in South Tyrol (WALLNÖFER 1988, 1991, 1992), I have seen *C. pulicaris* in 35 and *C. davalliana* in several hundred places.

Both species only develop a single, terminal spike (inflorescence). However, while *C. pulicaris* is monoecious and has androgynous spikes with the male flowers located in the distal and the female flowers in the proximal part of the same spike, *C. davalliana* usually is dioecious, with unisexual spikes located on separate male or female plants. Occasionally the male spikes of the latter species may also bear, for unknown reasons, a few female flowers (utricles), a phenomenon also evident in figure 1 of TOPIĆ and ILIJANIĆ (2001). It is this abnormal situation which, obviously, led to the misidentification. The rare occurrence of such androgynous spikes in this prevalingly dioecious species has also been mentioned (forma *sieberana*) by SCHULTZE-MOTEL (1967–1977). As can also clearly be noticed in the first figure mentioned above, the utricles of *C. davalliana* are patent at maturity, abruptly narrowed at their base, and slightly bent downwards like a hook distally. The utricles of *C. pulicaris*, on the other hand, are flat, flexed downwards as a whole at maturity, and gradu-

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ally tapering towards their base. TOPIĆ and ILJANIĆ (2001) reported to have found only one large tussock of ca 60 cm in diameter. This also clearly indicates that the authors have confused the two species. *Carex davalliana* forms dense, usually large tussocks, whereas *C. pulicaris* develops only loose, small tufts. Assuming that the exceptionally large tussock found at Trstenik originated from a single individual only, this must consequently have been a very old plant of *C. davalliana*. As this record is the only one published from Croatia so far, *C. pulicaris* has, therefore, to be cancelled from the list of vascular plants occurring in the country.

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