



PHYSCOMITRIUM ARENICOLA LAZ. IN THE PANNONIAN REGION

Physcomitrium arenicola Laz. a Pannon-régióban

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Physcomitrium arenicola was described by Andrey S. Lazarenko in 1928 from saline areas of Ukraine. Until now, it was considered endemic to the southern part of Eastern Europe, known from Ukraine, Central and Southeast Russia and Caucasus. According to the IUCN Red List published in 2019, it has been assessed as Endangered (EN) both globally and in Europe due to its restricted area of occupancy, small and isolated populations and extreme fluctuations throughout its range. Furthermore, it was also highly prioritized in species conservation in Europe. In the last years, *Ph. arenicola* was found during field surveys conducted in saline grasslands in Slovakia at a total of 12 localities. This species is morphologically very similar to *Entosthodon hungaricus* (Boros) Loeske described by Ádám Boros from Hungary in 1924 and, as it turned out, the two species frequently co-occur in the same habitat (e.g. at roughly half of the known *E. hungaricus* localities in Slovakia). The main distinctive morphological differences are on the sporophytes: size and shape of the spores and size and wall thickness of the exothecial cells of the capsule.

This finding prompted further research into the distribution of *Ph. arenicola* in the Pannonian region. During the revision of 244 herbarium specimens deposited at the Bryophyte Collection of the Hungarian Natural History Museum (BP) previously identified as *E. hungaricus*, 53 specimens were found to be *Ph. arenicola*, and 31 specimens partially contained this species. Thus, *Ph. arenicola* was present in 34.4% of the *E. hungaricus* specimens. The earliest specimens were collected in Hungary in 1926 and in Austria in 1927. In the Bryophyte Collection of the HHNM historical specimens were also found from Moldova, Romania, Serbia and Slovakia and several recent collections (18 specimens) from the last 30 years from Greece, Hungary, Serbia and Slovakia. Based on these records, *Ph. arenicola* seems to be not rare and is continuously present in the Pannonian region.

To further support this, in April 2026 a field trip was organized to Western Romania. Sixteen saline grasslands were visited, and *Ph. arenicola* was found in eight localities, in seven localities together with *E. hungaricus*.

The new records significantly extend the distribution range of *Ph. arenicola* westwards and enhance our knowledge on its ecology and habitat requirements. Consequently, its Red List status is expected to be reduced in a new assessment.