

ON DICRANUM DISPERSUM ENGELMARK AND  
DICRANUM ORIENTALE OTNYUKOVA

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Abstract

Two species of *Dicranum*, namely *Dicranum dispersum* Engelmark and *D. orientale* Otnyukova, which have recently been described as new to science from Eurasia, are considered to be conspecific. The correct name of this species is *D. dispersum* which antedates *D. orientale* by a year.

Abstract

Два вида *Dicranum*, а именно *Dicranum dispersum* Engelmark и *D. orientale* Otnyukova, которые недавно были описаны как новые для науки из Евразии, относятся к одному и тому же виду. Приоритетным названием является *D. dispersum*, которое было обнаружено на год раньше чем *D. orientale*.

Within a short period, two authors independently described new species of the genus *Dicranum* (Dicranaceae), namely *D. dispersum* Engelmark (Engelmark, 1999) and *Dicranum orientale* Otnyukova (Otnyukova, 2000). (It is worth noting that the paper describing the latter species was presented at the Second Conference of the Russian Botanical Society held from 26–29 May 1998 in St. Petersburg but, unfortunately, its publication was delayed for two years).

The second author was the first to recognize that these two species were similar in their diagnoses and figures; examination of the relevant type specimens confirmed their identity, which was subsequently confirmed by the first author. Thus, the following formal synonymization is necessary:

***Dicranum dispersum*** Engelmark, Stuttgarter Beitr. Naturk. Ser. A, **592**: 4, f. 1–3. 1999 (VIII). Type: Germany, Baden-Wurtttemberg, Sigma-ringen, Oberschmeien, T. Engelmark, May 13, 1980 (Holotype in S, not located; isotype in STU!).

*Dicranum orientale* Otnyukova, Bot. Zhurn. (Moscow & St. Petersburg) **85**: 82, f. 1–3. 2000 (X). Type: Russia, Tuva Republic, Todginskaya

Valley, Azas (Todga Lake) basin, 52°26' N, 96°37' E, ca. 950 m, Ilgi-Chul vicinity, larch forest, on ground, 1.VII.1995, N 1249, T. Otnyukova (Holotype in KRF!; isotypes in MHA!, LE!, KRAM!), *syn. nov.*

This new species, *Dicranum dispersum*, belongs to the small group of species within the genus which are very easily recognizable from their congeners by their leaves having differentiated dorsal and ventral epidermal layers of costal cells, extending from the leaf base to the apex, as clearly seen in cross-section. (For cross-sections of the leaf in *Dicranum dispersum* see Figs. 1b–c in Engelmark, 1999 and Figs. 2.6–18 in Otnyukova, 2000).

A similar structure of the costa is also found in *D. muehlenbeckii* Bruch & Schimp., *D. spadiceum* J.E.Zetterst., and *D. caesium* Mitt. Among these, the latter species differs mainly in usually having geminate setae in the perichaetium (Takaki, 1964). The two former species differ in their tubulose leaf apices which are clearly rounded in cross-section, whereas in *D. dispersum* the leaves are channelled or keeled in the upper part, appear V-shaped or looking like a pair of tongs in cross-section (see Figs.

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2.6–18 in Otnyukova, 2000). Another remarkable feature of *D. dispersum* is its tristratose alar cells. In this character this species is similar to some southeast and east Asian species, for example *D. crispifolium* Müll.Hal. and *D. thelinotum* Müll.Hal. The differences between these species are discussed by Engelmark (1999).

In appearance *Dicranum dispersum* is a rather robust plant, 8–12 cm tall, growing in loose green or brownish green turfs. The leaves are up to 12 mm long, straight to somewhat flexuose, erect-spreading to spreading. In addition to the above-mentioned anatomical features, *D. dispersum* has some more or less constant characters such as relatively large upper and median cells, (8-)11–16 µm long, (7-)15–35 µm wide, which are quadrate, short-rectangular or irregularly angled, thin-walled and non-pitted, whereas the lower cells are (9-)12–16(-22) long, 45–80(-125) µm wide, and are thin-walled and occasionally pitted.

Other characters usually taken into consideration in respect to species identification in the genus *Dicranum* such as excurrent vs. percurrent costa, papillose vs. smooth costa on the dorsal surface, bistratose vs. unistratose and toothed vs. entire upper leaf margins are less important, because these characters are very variable in *Dicranum* species. *D. dispersum* is one of the least variable species in the genus but nevertheless its costa is long to shortly excurrent

or sometimes percurrent and papillose or sometimes smooth on the dorsal surface; upper and median laminal cells are smooth or papillose (cfr. figs. 1–2 in Otnyukova, 2000). The lamina in the upper part is roughly to indistinctly toothed and bistratose or only partially bistratose at the margins.

*Dicranum dispersum* is a Eurasian species. It is rare in Europe where it is only quite widespread in the Swabian Jura in the province of Baden-Württemberg in SW Germany (Engelmark 1999; Sauer 2000). Other European localities are in the North Caucasus and the South Ural Mts. In Asia it is known on the Iranian Plateau at ca. 800–1200 m., Mongolia and the South Siberian Mts. including Altai, Sayan and Transbaikalia, reaching its easternmost localities in the Chita Province, with an isolated and highly disjunct station in the Southern Primorye in the Russian Far East. In the north *D. dispersum* reaches the north-western parts of the East Sayan Mts and the peatlands of South Yakutia, whereas in the south it reaches the mountains of central Mongolia.

#### ACKNOWLEDGEMENTS

We are grateful to the Curators of the herbaria in Stockholm (S) and Stuttgart (STU) for kindly allowing us to study the herbarium specimens. Thanks are also due to Robin Stevenson, King's Lynn, UK, for checking the English.

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