

P12: Morphological and anatomical variability of taxa in the *Sphagnum subsecundum* complex (*Sphagnaceae*)

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Ninety-seven samples of taxa in the *Sphagnum subsecundum* complex originating from various regions of the Northern Hemisphere were examined with respect to 13 morphological and anatomical traits. Taking advantage of discriminant analysis including the shortest and statistically significant Mahalanobis distances and agglomerative groupings the existence of sub-groups was demonstrated within the analyzed complex. To a certain extent the sub-groups correlated with the recognized species: *Sphagnum subsecundum* Nees, *S. denticulatum* Brid., *S. inundatum* Russ., and *S. lescurii* Sull. The subgroups are not only clearly separated from one another but they also show strong within-group variability. The highest Mahalanobis distance has separated individuals defined as *S. subsecundum* and *S. denticulatum* and the lowest distance has been detected between taxa *S. inundatum* and *S. lescurii*. Samples of *S. lescurii* were found almost exclusively in North America whereas *S. inundatum* in Eurasia. However, very seldom morphotypes of both taxa were recognized from other continent respectively. Both *S. inundatum* and *S. lescurii* are highly differentiated with respect to size and shape of stem and branch leaves and number and size of pores. This within taxa differentiation could be a result of separate histories (different origins) and environmental influences. Even though multiple authorities regard *S. lescurii* to be a synonym of *S. auriculatum* Schimp. (*S. auriculatum* is considered synonymous with *S. denticulatum*) the last-mentioned was found to be restricted to European regions. Samples of *S. denticulatum* were highly differentiated. This was indicated by a high number of statistically significant Mahalanobis distances between the analyzed samples of the taxon in comparison to all the remaining material. Among the analyzed samples a number of intermediates were identified which were impossible to classify unambiguously as *S. denticulatum*/*S. inundatum* (in particular, samples from Spain and the Netherlands).

Morphological data did not indicate that differentiation of samples belonging to *S. subsecundum* was related to its geographic distribution (in North America or in Eurasia).

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