

Conference abstract PO-64

Morphological and Anatomical Characterisation of *Athyrium distentifolium*, *A. filix-femina* and *Dryopteris dilatata*

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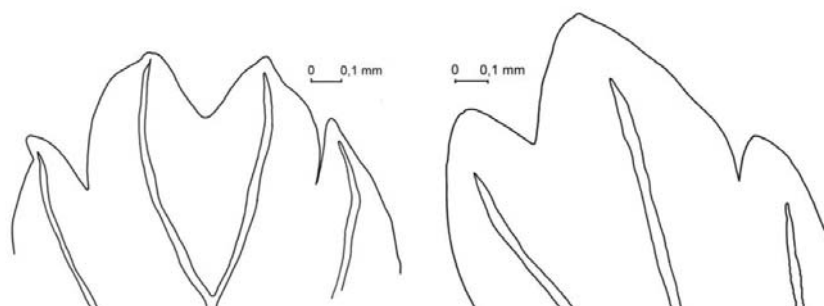
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Sci Pharm. 2009; 77: 263

doi:10.3797/scipharm.oephg.21.PO-64

The Volksmed database [1] shows the usage of native representatives as remedy for rheumatic ailments, which makes this plant group interesting for modern pharmacognostic research. Because the current tools for identification of the different species are not satisfying, a re-examination was started.

The aim of this research is the development of several techniques which enable the unambiguous differentiation between these very similar species. Comparative qualitative and quantitative analyses with both microscope and electron microscope (ESEM-type) were conducted in search of attributes which enable a simple, fast and reliable characterisation of each species.



Vein tips from *Athyrium distentifolium* (left) and *A. filix-femina* (right)

For an accurate capture of the leaf shape we used a method developed for the comparison of *Achillea* species [2]. For the statistical analysis we performed different methods of cluster and discriminant analyses.

The results of the computations show that a small number of attributes, in particular those that are visible only under the microscope, enable a reliable distinction of the species.

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