# Overlooked diversity in *Epipterygium tozeri*

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**Jubiläumssymposium zum 50-jährigen Bestehen der BLAM e.V.**

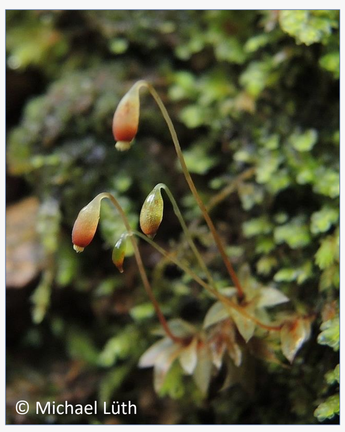
**20. - 22. April 2018, Frankfurt, Germany**

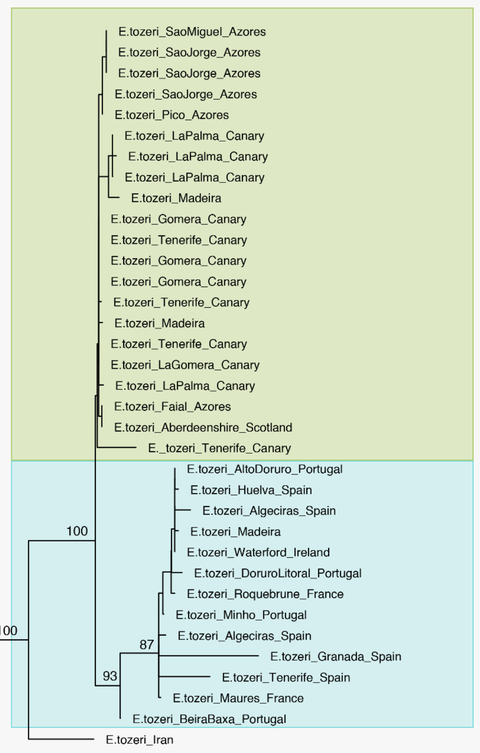
*Epipterygium tozeri* (Grev.) Lindb. (Bryaceae) shows a holarctic distribution with disjunct areas in western North America, the Mediterranean and Central Asia. Specimens from different geographic regions were all lumped into *E. tozeri*.

**Questions:**

1. Are the different populations morphologically distinguishable?
2. Is there genetic variation between the populations?


## Results





## Material & Methods

**Material:**
68 specimens from Alfons Schäfer-Verwimp, E, LG, LISU, MO, M, NY, S, TUM

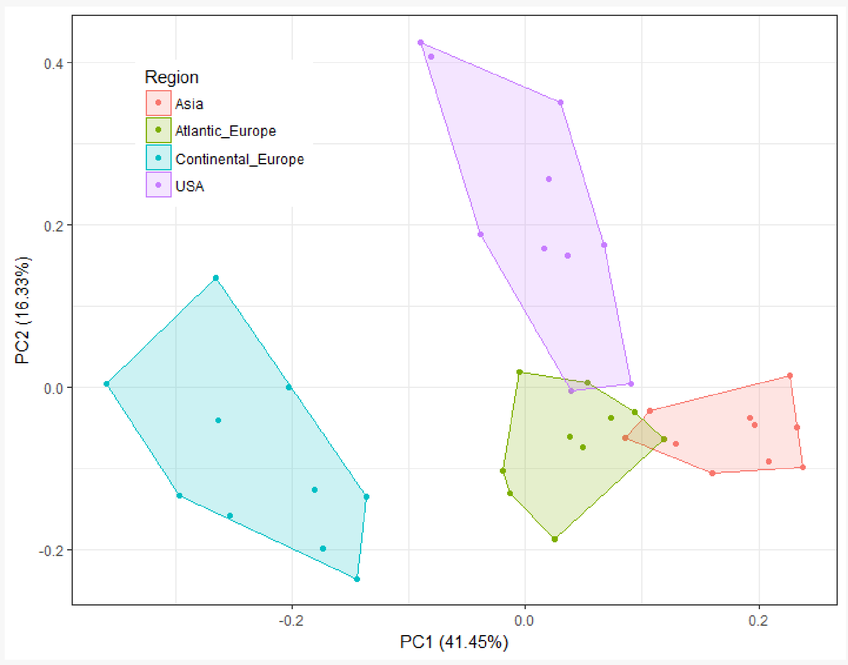
**Molecular Phylogenetics:**
194 newly generated sequences of one nuclear (ITS) and two chloroplast (psbD + trnG) regions.

Maximum-Likelihood-Tree with 5000 Ultra-Fast-Bootstrap replicates.

**Morphological Analysis:**
PCA of 10 distinct characters and 4 ratios:

| | | | | |
|---|---|---|---|---|
| Lateral leaf length | Dorsal leaf length | Median cell length | Marginal cell length | Stem length |
| Lateral leaf width | Dorsal leaf width | Median cell width | Marginal cell width | Costa length |
| Lateral leaf L:W | Dorsal leaf L:W | Median cell L:W | Marginal cell L:W | |

## Results




***Epipterygium „Atlantic Europe“***

Dorsal leaves irregularly developed
Lateral leaves ovate
Leaf tip caudate

***Epipterygium tozeri***

Dorsal leaves arranged in one row
Lateral leaves spearshaped
Wide internodal space

***Epipterygium „USA“***

Dorsal leaves in two rows
Lateral leaves lanceolate
Complanate appearence

***Epipterygium „Asia“***

Dorsal leaves well developed
Lateral leafs acute
Leaf surface mammilose

## References

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