**Spatial heterogeneity and microspatial distribution of testate amoebae communities in northern submountain territories (Northern Urals)**

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Microorganisms can provide valuable insights into the current understanding in community assembly [Wanner et al., 2008]. Soil testate amoebae as free-living protists are ecologically important in soil fauna [Wilkinson, Mitchell, 2010]. However, their community assembly rules are poorly investigated. In the present study, using principle component analysis and analysis of species co-occurrence, we aim to investigate the characteristics and assembly rules of testate amoebae communities from sub-crown locations and typical biotopes in a pristine forest.

The frequency histograms (Fig. 1) of testate amoebae species from sub-crown locations revealed an uncommonly large number of species with high frequency, which can be a cue for high resemblance of environmental conditions for testate amoebae in sub-crown biotopes.



Fig. 1. Frequency histograms of testate amoebae species in the 23 samples taken from sub-crown locations

Nevertheless, the result of Principal Component Analysis (PCA) on the testate amoeba sub-crown communities clearly suggested a heterogeneity in species composition between woody sites and woodless sites (Fig. 2).



Fig. 2. PCA ordination plot (site scores) for 23 samples from sub-crown locations

Further perspectives of this study are related to the analysis of pair-wise species co-occurrence.

**References**

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