

# 33rd Annual Meeting of the German Society for Protozoology

12-15 February 2014 in Essen

## The chaos prevails: molecular phylogeny of the Haptoria (Ciliophora, Litostomatea)

P. Vd'ačný, T. Stoeck, W. Foissner

*University of Salzburg, Austria*

The Haptoria are free-living predatory ciliates living in terrestrial and aquatic habitats all around the world. They belong to a highly diverse class, Litostomatea, whose morphological and molecular classifications harmonize poorly since both approaches produce rather different frameworks. In the present study, we analyzed the genealogy of the litostomateans, including eight new haptorian 18S rRNA gene sequences. Apart from traditional tree-building methods, we also applied phylogenetic networks, split spectrum analysis and quartet likelihood mapping to assess the information content of alignments. These analyses show that: (1) there are several strongly supported monophyletic litostomatean lineages - Rhynchostomatia, Trichostomatia, Haptorida, Lacrymariida, Pleurostomatida, and Didiniida; (2) the Rhynchostomatia are the best candidates for a basal litostomatean group; (3) sister relationship of the Trichostomatia and Haptoria is very likely, which well corroborates the traditional morphology-based classifications; (4) molecular phylogeny of the order Spathidiida is only poorly resolved very likely due to one or several rapid radiation events or due to the incomplete lineage sorting at the rRNA locus; and (5) the basal position of the genera *Chaenea* and *Trachelotractus* in molecular trees and phylogenetic networks is very likely a result of class III long-branch effects.

## Protist distribution: 100 new neotropic soil ciliates emphasize moderate ciliate endemism

Foissner, W.<sup>1</sup>

<sup>1</sup>Universität Salzburg, FB Organismische Biologie, Hellbrunnerstr. 34, A-5020 Salzburg, Austria, e-mail: w.foissner@sbg.ac.at

I studied 80 soil samples from the neotropis, mainly from Venezuela and some from the Galapagos Islands, using the non-flooded Petri dish method and classic and modern taxonomic tools. I identified about 400 species of which 120 were undescribed, representing 30 new genera and some new families. These data were compared with similar studies from Namibia (Africa) and Central Europe, showing about 60% species overlap. This and some "flagships" emphasize a moderate ciliate endemism globally and a huge number of undescribed ciliates. The new species are described in a forthcoming monograph.

Supported by the Austrian Science fund, FWF project P 22846-B17.