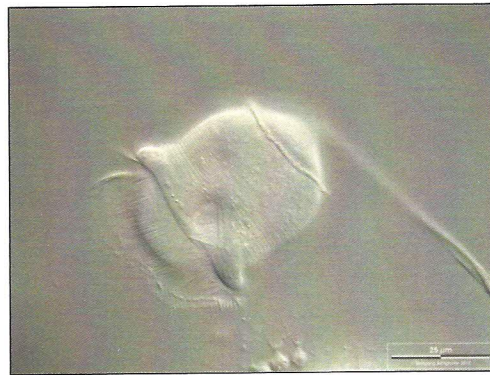


33rd Annual Meeting of the German Society for Protozoology

12-15 February 2014 in Essen



UNIVERSITÄT
DUISBURG
ESSEN

Offen im Denken



30. Characterization of an *Endoreticulatus* sp. (Microsporidia, Encephalitozoonidae) isolated from the grasshopper *Poecilimon thoracicus* (Phaneropteridae)

R. Radek, D.K. Pilarska, L.F. Solter, A. Linde, D. Takov, W.-F. Huang
Free University of Berlin

A microsporidium of genus *Endoreticulatus* was isolated from the grasshopper *Poecilimon thoracicus* collected in one site in Northwest Bulgaria. The pathogen produces intense infections in the gut tissues of the host but no behavioral changes were noted in high density field populations of the grasshopper. Prevalence of the microsporidium was monitored between May and July for 3 years, 2010 to 2012. The average prevalence was 22.2%, ranging from 7.3% in beginning of May 2011 to 88.2% in the end of July 2012. Mature spores were oval and small in size, 3.2 x 1.6 μm , with 16 to approximately 32 spores in a vacuolar envelope. Ultrastructural investigations showed that the spores were uninucleate, typical for this genus. Polar filament coils numbered 8-9 situated in a single row. The spore polaroplast was of lamellar type and the posterior vacuole was reduced. Analyses of the small subunit rDNA, 1,221 bp partial sequence indicated that the isolate is closely related to the *Endoreticulatus* clade (95% identity with *Endoreticulatus schubergi* and *Endoreticulatus bombycis*), but with earlier phylogenetic separation from other lepidopteran species.