



Identity and typification of *Diploneis ostracodarum*, *Diploneis budayana* and *Diploneis praeclara* (Bacillariophyta)

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Abstract

A lectotype and isolectotype for *Navicula budayana* Pantocsek = *Diploneis budayana* (Pantocsek) Hustedt, *Navicula ostracodarum* Pantocsek = *Diploneis ostracodarum* (Pantocsek) Jovanovska, Nakov & Levkov and *Navicula praeclara* Pantocsek = *Diploneis praeclara* (Pantocsek) Cleve-Euler from Köpecz, Neogene fossil deposits in Romania have been made. Typification for each species was based on Pantocsek's original images and material deposited at the Hungarian Natural History Museum (BP). Unfortunately, the type slides for *Diploneis budayana*, *D. ostracodarum* and *D. praeclara* were lost or destroyed during the course of World War II. Therefore, authentic material from the type locality Köpecz at BP was used to designate the lectotypes for these three species. Detailed LM and SEM observations have been assigned for each taxon, in order to ascertain the variation in valve morphology. Taxonomic descriptions and comments are made for each species.

Typification of taxa described by Pantocsek would potentially affect further stratigraphic, comparative or molecular phylogenetic work not just for Tertiary floras but for Recent floras as well. In particular, studies concerning comparisons of these species between localities, such as Lake Ohrid, will greatly benefit from this work. The outcome of such studies will shed light on the evolutionary and biogeographic history of diatoms in the context of geologic events on the Balkan Peninsula.

Key words: *Diploneis*, fossil, Köpecz, Pantocsek Collection, typification

Introduction

The Neogene fossil deposits in Central Romania are remnants of the Pannonian paleo-lake, formed approximately 12 million years ago, gradually turning from saltwater into a shallow freshwater lake by Early Pliocene (Magyar *et al.* 1999). Throughout this stretch of time the brackish inhabitants were replaced with freshwater, mostly endemic forms (Magyar *et al.* 1999). The Pannonian system was a combination of several basins, one of which was the Transylvanian Basin, situated behind the Carpathian arc (Huismans *et al.* 1996, Magyar *et al.* 1999, Krézsek & Bally 2006). This basin is characterized by freshwater fossil deposits of several groups of organisms including diatoms. Most observations on diatoms from these biologically and geologically important deposits [Köpecz (Căpeni), Bodos (Bodos) and Bibarczfalva (Baraolt), three neighboring villages] were undertaken by Pantocsek (1892, 1905). Pantocsek (1892) reported a number of diatom species many of which were new to science, among them 15 new species belonging to the genus *Diploneis* (Ehrenberg) Cleve (1894: 76), three of which are the focus of this study.