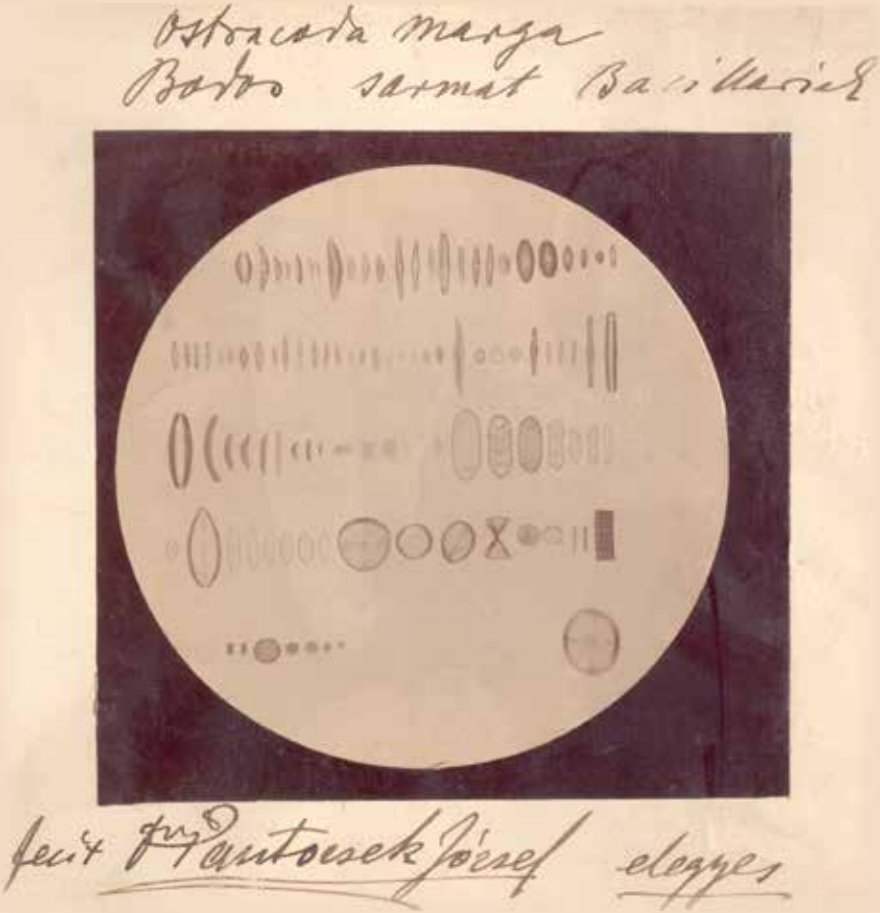
# 10th Central European Diatom Meeting

## ABSTRACT & PROGRAM BOOK

EDITED BY ÉVA ÁCS AND KRISZTINA BUCZKÓ



20 – 23 April 2016 Budapest, Hungary

10th Central European Diatom Meeting
April 20-23, 2016
Budapest, Hungary

# ABSTRACT & PROGRAM BOOK

# WELCOME

In the name of the Organizing Committee we are pleased to invite you to participate in and contribute to the **10th Central European Diatom Meeting** (10th CEDM). The meeting will be held on **20 – 23 April, 2016** in Budapest, Hungary.

**Budapest** is the capital and the largest city of Hungary, and one of the largest cities in Central Europe. It is the principal political, cultural, commercial, industrial, and transportation centre of the country.

The **history of Budapest** began with Aquincum, originally a Celtic settlement that became the Roman capital of Pannonia Inferior. The re-established town became one of the centres of Renaissance humanist culture by the 15th century. Following the Battle of Mohács and nearly 150 years of Ottoman rule, the region entered a new age of prosperity in the 18th and 19th centuries, and Budapest became a global city after the unification of **Buda** and **Pest** in 1873. It also became the second capital of the Austro-Hungarian Empire, a great power that dissolved in 1918, following World War I.

Cited as one of the most beautiful cities in Europe, Budapest's extensive World Heritage Site includes the banks of the Danube River, the Buda Castle Quarter, Andrássy Avenue, Heroes' Square and the Millennium Underground Railway, the second-oldest metro line in the world. The city has around 80 geothermal springs, the world's largest thermal water cave system, second largest synagogue, and third largest Parliament building. The city attracts about 4.4 million tourists a year, making it the 25th most popular city in the world, and the 6th in Europe, according to Euromonitor.

The main patron of the congress is **DR. JÁNOS ÁDER**, President of the Republic.

# GENERAL INFORMATION

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Research Centre for Natural Sciences, Hungarian Academy of Sciences (MTA TTK)
Address: H-1117 Budapest, Magyar Tudósok körútja 2.

Five diatom samples were selected from different sites and watertypes. The samples were taken and analysed 18 years ago in 1996 and 1997. These samples were reanalysed with the current taxonomical and ecological knowledge.
Two different countingprotocols were used. The first protocol was the same as used in 1996-1997. The second protocol was a counting of 1000 valves. The number of valves was noted for each field of view in order to perform statistical processing. In this counting the observations of every separate field of view was noted.
Al sites were resampled in 2014. The sampling took place in the same period (September) and also the same plant material was collected. The counting protocols were the same as the ones used for the 1996-1997 samples.
From the counting of 1000 valves several countings of 200, 300, 400 and 500 valves were compiled for further statistical analysis in combination with various ecological parameters. This in order to answer questions such as: Is the current counting strategy still sufficient? Do rare diatom species have a greater impact on the ecological assessment than has been assumed today? Should the impact of rare species on the ecological assessment be valued differently?
In this poster presentation some of the preliminary conclusions will be presented.

***P31 - Taxonomy, floristics***

**Interesting Navicula Bory de Saint-Vincent species from Serbia**

Vidaković Danijela P.[1], Jakovljević Olga S.[1], Šovran Sanja I.[1], Lazović Vladimir[2], Krizmanić Jelena Ž.[1]

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The genus *Navicula* was originally described in 1822 by Bory de St. Vincent. The concept of *Navicula* has changed from extremely heterogeneous collective genus to a narrowly defined, apparently homogeneous genus. The group *Navicula* sensu stricto involves 250-300 species and the great majority of them live in fresh, inland waters, and few inhabit brackish waters (Lange-Bertalot 2001).
Knowledge about diatom biodiversity increase as a result of a more detail morphometric analysis of the frustula by light (LM) and scanning electron microscopy (SEM).
*Navicula splendicula* was described by Van Landingham (1975). According to Lange-Bertalot (2001) it is known to inhabit southern and central Europe, with certainty. Distribution of *N. splendicula* from 2001 till today become wider, but in published papers SEM micrographs, as well as the dimensions of frustula, were not given and specified. LM and SEM observation of species from Serbia (Rasina and Mlava rivers) showed a variation from literature data regarding dimensions of frustula and variability of the ultrastructure of the central raphe ends.

The poster illustrates all differentiating characters with brief notes on the ecology of the *N. splendicula* from two rivers in Serbia.

References:
Lange-Bertalot H. (2001). *Navicula* sensu stricto. 10 genera separated from *Navicula* sensu lato. Frustulia. In: Lange-Bertalot H. (ed.), Diatoms of Europe: diatoms of the European inland waters and comparable habitats. Vol. 2. Ruggell: A.R.G. GantnerVerlag. K.G., pp. 1-526.

***P21 - Diatoms in biomonitoring***

**Land use control on terrestrial diatom communities: can indices based on aquatic diatoms be applied to soils?**

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Aquatic diatoms are commonly employed in the assessment of water bodies' ecological status due to their well-known sensitivity to many environmental factors (i.e. eutrophication level, organic and inorganic pollution, pH and salinity). Water quality indices such as the IPS (Specific Pollution Sensitivity Index), the TDI (Trophic Diatom Index) and the BDI (Biological Diatom Index) are commonly used. For this reason, aquatic diatoms are widely studied and their ecology is well characterised. Studies on terrestrial diatoms are less common. Recent studies highlighted the difficulty in identifying which environmental factors can directly affect soil diatom communities' composition and species distribution. The main objective of this study is to provide additional information about the ecology of soil diatom species investigating the environmental controls on communities. Moreover, since soil diatom communities seem to be characterised by species belonging to different soil moisture categories, we investigate (1) if quality indices developed exclusively for aquatic diatom communities can be applied to soil communities and (2) if they can provide information about the quality status of terrestrial sites.

The present study was carried out at the Attert basin (outlet in Useldange, 245 km2, Grand Duchy of Luxembourg). Diatom samples were collected at the soil surface in 34 locations during three sampling campaigns (August 2014, November 2014 and March 2015). Sampling points were chosen in order to optimize the relative representation of geology, soil type (schist, marl and sandstone) and land use (forest, grassland and agriculture) that are characteristic for this basin. Soil samples were collected during all three campaigns at the same locations and analysed for electrical conductivity, pH,

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