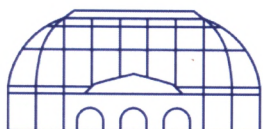


# Abstracts of the 25th International Diatom Symposium

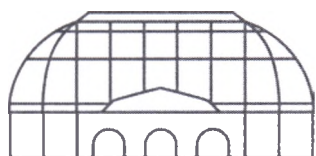
Berlin 25–30 June 2018



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Front cover: IDS 2018 Logo by N. Abarca; back cover: images of living diatoms by O. Skibbe

## Diatom taxa from the class *Coscinodiscophyceae* Round & Crawford at Vileyskoe Reservoir

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We studied the diatom flora of the Vileyskoe Reservoir, an artificial accumulative reservoir, which is supplying water to the city of Minsk. The area of the Vileyskoe Reservoir is 64.6 km<sup>2</sup>, the greatest depth is 13 m, the average is 3.7 m, the volume is 238 million m<sup>3</sup>. The total mineralization is 280-320 mg/l. The oxygen content in winter is 2-8 mg/l, in summer – 8-15 mg/l. The reservoir is characterized by a low content of organic substances and an average degree of anthropogenic transformation (Encyclopedia 1983). The characteristics of materials and methods of investigation were considered in previous publications (Turskaya 2010). As a result of studies of 45 samples of plankton, microphytobenthos and periphyton, collected in the summer of 2008, 175 species and intraspecific taxa of diatoms were identified by light microscopy. The *Coscinodiscophyceae* class is represented by 2 orders, 2 families, and 4 genera containing 11 species and 1 variety (6.7% of the total number of diatoms encountered). In the studied phytocenoses the species composition is almost identical. *Cyclotella ocellata* Pantocsek is found only in plankton samples collected at coastal stations at a depth of 4.5 m, with an abundance of 9.9% on the Davydova scale (Davydova 1985). *Handmannia bodanica* (Eulenz. ex Grunow) Kociolek & Khursevich was absent in plankton samples, but was detected in one sample of microphytobenthos (depth 5.4 m) and one sample of periphyton (pondweed, depth 0.2 m). According to ecological characteristics, these species are planktonic, indifferent to halobity and pH (Barinova 2006). In all phytocenoses *Aulacoseira granulata* (Ehrenb.) Simonsen dominated: from 23.0% in periphyton to 34.0% in microphytobenthos and 35.8% in plankton. *Aulacoseira ambigua* (Grunow) Simonsen dominated in plankton (44.4%) and microphytobenthos (38.2%), in the samples of periphyton it is a subdominant (5.8%). These diatoms are indifferent to mineralization, alkaliphilic, planktonic cosmopolites. In plankton and microphytobenthos, the dominant complexes also include the Holarctic *Stephanodiscus rotula* (Kütz.) Hende (up to 30.1%) and the boreal *Cyclostephanos dubius* (Hust.) Round (up to 27.9%) – planktonic, alkalibiontic, indifferent to mineralization species. In periphyton these species are less than 5%. In the samples of microphytobenthos, to the group of dominants are also alkaliphilic *Stephanodiscus minutulus* (Kütz.) Cleve & Möller (10.2%) and indifferent to pH *Aulacoseira granulata* var. *angustissima* (O. Müller) Simonsen (24.4%) – planktonic, alkalibiontic, indifferent to mineralization. In the studied samples of plankton, these species are subdominants; in the samples of the periphyton they were found only once. The dominant complexes of plankton and microphytobenthos concerning the presence of centric diatoms are similar consisting of planktonic, alkaliphilic cosmopolitan species indifferent to salinity, with a small proportion of alkalibiontic species.

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