

**VI International Conference
ADVANCES IN MODERN PHYCOLOGY**

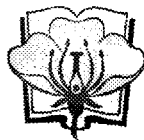


BOOK OF ABSTRACTS

15-17 May 2019, Kyiv, Ukraine



**National Academy of
Sciences of Ukraine**

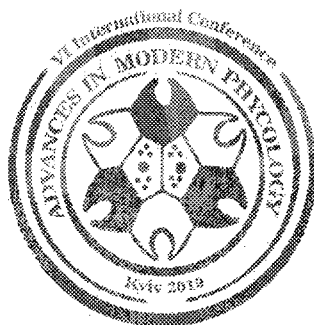


**M.G. Kholodny
Institute of Botany**



**Ukrainian Botanical Society
Physiological Section**

**VI International Conference
ADVANCES IN MODERN PHYCOLOGY**



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ALGAE OF SALT RESERVOIRS ON THE BERDYANSK SPIT

The reservoirs with brackish and saline water are considered a valuable recreational resource. A group of shallow reservoirs on the Berdyansk spit (Zaporizhzhja Region, Ukraine) has high recreational potential. Specificity of the hydrochemical composition, temperature and water regime determines a growth of algae in these water bodies. Algae often can be the primary producers in these water bodies; they can affect the chemical composition of water and form the conditions for peloid genesis. There is a need to investigate algae as an important component of these reservoirs.

The data on algae of the Berdyansk spit are very limited (Yarovoi et al., 2007, 2008) and only concerns the algae of salt marsh at the Krasne Lake. Other reservoirs of the Berdyansk spit have not yet been studied in terms of the diversity of algae.

Specific water regime causes significant changes in the size and depth of these reservoirs, even to possible partially or complete evaporization. That is why we have studied planktonic and benthic algae and algae from the areas of evaporization of these reservoirs. We have obtained information on the species composition, dominant families and species for the salt lakes of the northern part of Berdyansk Spit named Dovge, Seredne, Krasnoper and Krugle. In addition, we have supplemented data on algae of the Krasne lake.

As a result of investigations, we have found 52 species of algae from Cyanoprokaryota – 31 species (59.6 % of the total species number), Bacillaryophyta – 13 (25 %), Chlorophyta – 7 (13.5 %) and Rhodophyta – 1 (1.9 %). Identified species belong to 30 families and 38 genera. Peculiar features of the studied lakes algoflora are prevalence of Cyanoprokaryota representatives, the presence of some marine algae (for example, *Polysiphonia opaca* (C.Agardh) Moris & De Notaris) and absence of Xanthophyta species.

The most numerous genera are *Nostoc* – 4 species; *Leptolyngbya*, *Lyngbya*, *Calothrix*, *Trichormus* – 3 species; *Pseudanabaena*, *Oscillatoria*, *Schizothrix*, *Cocconeis*, *Phormidium* – 2 species. The average number of species in families – 2.0. The leading families in algal flora of investigated water bodies having a level of

species richness above this value are Nostocaceae (8 species), Oscillatoriaceae (7), Leptolyngbyaceae (3) and Rivulariaceae (2).

The largest number of algae species was recorded in the Krasne Lake (23 species). Lakes Krasnoper (21) and Dovge (19) rank next in species richness followed by Krugle (16) and Seredne (15) lakes.

The most common species of investigated reservoirs were cyanoprokaryotes *Spirulina tenuissima* Kützing and *Lyngbya aestuarii* Liebman ex Gomont, green alga *Cladophora siwaschensis* C.J. Meyer and diatom *Amphora coffeaeformis* (C. Agardh) Kützing.

Cladophora siwaschensis and *Lyngbya aestuarii* formed macroscopic algal growths in studied lakes (these two species were prevailing in biomass). The growths covered the bottom of the reservoirs and formed solid algal mats on the bottom of dried up water bodies. *C. siwaschensis* formed felt-like green coating, while *L. aestuarii* – dark green slimy films. Such macroscopic algal growths are widely distributed along the North-Western Coast of the Sea of Azov. Occasionally, *Leptolyngbya perelegans* (Lemm.) Anag. & Kom. formed green spots on the dried up bottom of reservoirs.

Thus, in conditions of changing water, temperature and salt regimes, in the amphibious saline waters the most adapted to existence is a group of algae with prevailing of *Cladophora siwaschensis* and *Lyngbya aestuarii* that are capable of forming macroscopic algal growth.

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TAXONOMIC COMPOSITION OF MICROALGAE OF THE SEVASTOPOL COASTAL AREA (BLACK SEA, CRIMEA)

Apart from the most common groups of microalgae: diatoms and dinoflagellates (investigated by authors earlier), Sevastopol coastal area phytoplankton is represented by 7 other divisions of phytoplankton, that we