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Summary

Salt lake studies are of great interest for limnology and harbor a source of numerous discoveries in this science. This is mostly caused by hydrological closedness of watersheds which build up and fix effects of climate changes and anthropogenic impacts. Another important but underestimated motive to study salt lakes is their potential to serve good models for marine systems, some crucial properties of seas, at least; the lakes feature small response time, at that. Salt lakes are found in all continents but so far have received poor study and are still underestimated.

The book is a collection of abstract of the 8th International Conference on Salt Lakes, that maintains traditions of the previous conferences. Inherent to the conference is a meeting of INTAS project participants working on slat lake subjects. The conference is held in the Republic of Khakasia, Shira district – land of exceptional ecological cleanliness that holds innumerous salt and fresh-water lakes miraculously neighboring each other. Getting together in the land of Khakasian lakes will promote establishment of long-term international contacts for joint work on these lakes.

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PRODUCTION AND HYDROCHEMICAL CHARACTERISTICS OF SALT LAKES OF ODESSA REGION

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In 2001-2002 years 14 salty lakes of the Odessa region were investigated. Volume of reservoirs varied from 400 m^3 up to 150 millions m^3. Mineralization varied from 9 up to 184 g/l. All investigated reservoirs in the past have a sea origin. It is the lagoons separated from the sea and limans. In all reservoirs primary production of fitoplancton and concentration of basic nutritions was measured. Almost all of the investigated reservoirs in a different degree are exposed to antropogeneous influence, therefore were found out interesting features of formation of primary production in these reservoirs. The level of the total primary production have exceeded in some lakes 10 $mgC*l^{-1}*day^{-1}$ (max - 30). Thus in the most productive lakes the ratio between nitrogen and phosphorus is moved in the party of increase of phosphorus (instead of known 1:8 is present 1:2), it proves to be true by almost complete absence of accessible nitrogen (mineral); the concentration of organic nitrogen do not exceed 2,5 mg/l. The concentration of total phosphorus frequently surpass 1 mg/l. Thus the stocks of phosphorus are not spent to the full (stocks of mineral phosphorus for 2 order exceed those of nitrogen). The permanganate oxidation is very high (21,33-42,67 mgO/l). The high level of pH (8,77-8,84) even at low autumn temperatures (13-15^oC) speaks about high level of production processes; the water all time is oversaturated by oxygen; it proves to be true by measurements of primary production. The disbalance of nitrogen and phosphorus is observed practically in all supersmall ($V < 100\ 000\ m^3$) reservoirs (even in the winter period). In these lakes there is not enough of accessible mineral nitrogen at surplus of phosphorus. The concentration of organic nitrogen change within the limits of 2-4 mg/l. Only in one lake (Kuyalnitsky liman) at mineralization more than 150 g/l the lack of phosphorus is observed. The concentration of total phosphorus do not exceed 0,1 mg/l. The concentration of total nitrogen reaches 7,9 mg/l; the share of organic nitrogen is about 90%. The mineral nitrogen is in enough (up to 0,8 mg/l) basically for the account of accessable ammonia nitrogen (0,23-0,54 mg/l). Such quantity of ammonia nitrogen is explained, apparently, by *Artemia salina* excretion. The high productivity of *A. salina* is provided with high primary production, which even in february at temperature 10^oC reaches 2,7 $mgC*l^{-1}*day^{-1}$. Permanganate oxidation in Kuyalnitsky liman is high and is stable during the year (20,15-22,86 mgO/l). Thus, in all researched reservoirs (except Kuyalnitsky liman) the abnormal situation is observed, when production is limited by nitrogen not by phosphorus. The processes in Kuyalnitsky liman are limited by phosphorus, which supplies are many times less than of nitrogen.