

ICE ALGAE OF THE KUYALNIK LIMAN

Kiryushkina A.N.¹, Gerasimiyuk Y.P.², Shikhaleeva G.N.¹

¹*Institute of Physics and Chemistry for Environmental and Human Protection, Odessa, Ukraine*

²*I.I. Mechnikov Odessa National University, Odessa, Ukraine*

E-mail: ekko@ukr.net; fornute@ukr.net

Liman ice is a peculiar biotope defined by a hard surface, which is in a contact zone "liman-coast-air". In this connection it has unique peculiarities, which distinguish it from liman water. Well-known, that melted water from saline ice is in a quasi-crystalline state and so has strong biological stimulator effect (Buynitskiy, 1974). Ice algae of the Kuyalnik liman as autonomous group are not researched until now.

Research is based on samples of ice and water sampled in south part of the liman at February 2006. At January 2006 air temperature was ranged from minus 13 to minus 21 °C, that was due to the noticeably supercooling of liman water and formation of ice. At the end of January the liman have been completely covered by the 8-10 cm ice that stayed until end of February. Ice was turbid, milk-white, hard. Physical-chemical research shows that mineralization of the melted water a third of the under ice water; oxygen content in two-four times accordingly, which probably explain good state of cryophilic algae of the liman. Found algae were alive, had fulvous chromatophores. Its species composition in the ice mass were presented by 14 species, that 14,3 % - algae plankton, 85,7 % - benthos.

Taxonomic composition of algae is presented by two divisions: Bacillariophyta and Chlorophyta. In species diversity prevailed diatoms (13 species), that are 92,9 % from general number of found taxons. Diatoms were frequently presented by *Cyclotella meneghiniana* Kttz., *Synedra tabulata* (Ag.) Kttz., *Cocconeisplacentula* Ehr., *Rhoicosphenia abbreviate* (Ag.) L.-B., *Navicula cryptocephala* Kttz., *Gomphonema truncatum* Ehr.. Division Chlorophyta was presented only by *Dunaliella salina* Teod.

Determined that in common in the ice prevailed group of freshwaters or oligohalobes (57,1 %). The part of mesohalobes are 35,7 %, Only *Dunaliella salina* (7,1 % of species diversity) can live in hyperhaline water.

ВОДОРОСТІ ЛЬОДУ КУЯЛЬНИЦЬКОГО ЛИМАНУ

Кірюшкіна Г.М., Герасимюк В.П., Шихалєєва Г.М.

Наведені відомості про 14 видів водоростей льоду Куяльницького лиману, які відносяться до двох відділів: діатомових (13 видів) та зелених (1 вид). Більша частина їх мали хроματοфори бурого кольору і активно рухалися. В шарі льоду були знайдені як бентосні (85,7 %) так і планктонні (14,3 %) форми.