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III МІЖНАРОДНОЇ КОНФЕРЕНЦІЇ МОЛОДИХ ВЧНИХ
«РОЗМАІТТЯ ЖИВОГО. ЕКОЛОГІЯ. АДАПТАЦІЯ. ЕВОЛЮЦІЯ.»,
ПРИСВЯЧЕНОЇ 100-РІЧЧЮ З ДНЯ НАРОЖДЕННЯ
ВИДАТНОГО УКРАЇНСЬКОГО ЛІХЕНОЛОГА М.Ф. МАКАРЕВИЧ
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high phenotypic plasticity have a growth advantage under heterogeneous conditions. Phenotypic plasticity can be exhibited in plant morphology. We have explored leaf-level plastic responses to light of four Acer species grown in forest conditions such as shade-tolerant A. platanoidea and sun-tolerant A. campestris, A. saccharum, A. negundo. Leaf phenotypic plasticity, assessed by plasticity index, was studied in 8 leaf morphological variables. All the morphological traits included in this study have shown plasticity under natural light conditions and the traits differed significantly in their plasticity across species. These traits could be ranked according to their plasticity as follows: petiole length, leaf area, fresh mass, dry mass, stomata density, specific leaf area, specific leaf mass, petiole length. Values of plant trait plasticity also varied depending on the stage of plant ontogeny (seedling or young trees). As a rule, seedlings have higher plasticity in most traits than young trees of the same species. In all traits showed significant differences in plasticity among species. The degree of species’ plasticity was dependent on the leaf trait examined, and no one species was consistently the most or least flexible across the various traits. Ranking Acer species according to their mean plasticity (A. pseudoplatanus, A. negundo, A. tataricum, A. campestris) indicated that leaf morphology of A. platanoidea was more flexible than that of other Acer species studied. However, despite significant interspecific variation in the plasticity of individual traits, species differed little overall in their mean plasticity. This was the result of each species having some traits that were more flexible than the other. Different species achieved their overall plasticity in different ways. Evidence of different strategies of morphological plasticity across species was obtained in several traits. Thus, we discuss the extent to which contrasting plant species differ in their ability to acclimate their morphological traits to light conditions. We showed that highly plastic, shade-tolerating species exhibit greater light-mediated adjustments within leaves than their less plastic, sun-growing counterparts. Given that acclimation is developmentally dependent, increased ability to alter leaf structure under contrasting light should also enable greater light acclimation of photosynthesis and transpiration; the possibility will be discussed.

ECOLOGICAL AND GEOGRAPHICAL CHARACTERISTICS OF DIATOM ALGAE OF MICROPHYTOMYCETOSIS OF THE TILIGULSK ESTUARY

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The original analysis of diatom algae flora of the Tiligul estuary in relation to salinity of water has shown that its core is made of marine euryhaline species. Oligohalobes are represented in estuary by 6 species (94.4%). This group includes halophytes (27.1%), and euryhalines (16.0%). Indifferent (29 taxa) or (16.0%) yield a little to halophytes in number. The quantity of mesohalobes in the Tiligul Estuary has distinctly reduced now; the number of polyhalobes species on the average on reservoir has remained at a former level and the quantity of indifferent has increased.

The main core of taxa in relation to pollution is formed by mesohalobes. The greatest quantity of species (34) was marked for j-enantiomer groups whereas only 20 α-mesohalobes and 15 euryhalobes were found. One species Sphenodiscus minula, which is met in oligo-β-mesohalobes zone and is less tolerant in fouling of macrophytes, is revealed. Two species from j-enantiomer zone - Cyclotella mitis and Anthropella humina are found out. It is revealed 6 oligohalobes.

The analysis of 57 years shows that the quantity of α-mesohalobes has decreased only for 1% and of j-enantiomer has increased for 1.8%. The quantity of euryhalobes (from 10.7 to 8.3%) has also decreased a little. Species with unknown salinity have marked 4.5%.

In relation to pH alkaliphilic species have prevailed in the reservoir. They are revealed with 149 taxa (82.3%). The group of indifferent considerably conceals (16 taxa or 10.7%) to alkaliphilic species.

In biogeographical aspect boreal phytoplanktonic groups (73 taxa or 73.0%) has taken up the leading position. The number of taxons of widespread group conceals to boreal (54 taxa or 32.9%) and has decreased in 2.7%, in comparison with 60-ies of XX century. In total the boreal element with subgroups in the Tiligul Estuary make 59.7% or 118 species and intraepisub groups. Among found algae there were 2 endemic species: Amphora enkleri and Cocconeis kujatii.

ЭКОЛОГО-ГЕОГРАФИЧЕСКАЯ ХАРАКТЕРИСТИКА ДИАТОМОВЫХ ВОЛОКОННОЙ МИКРОФИТОБЕНИСЕС ТИЛІГУЛЬСЬКОГО ЛІМАНА

Корчук О.А.
На основі аналізу видового складу діатомових водоростей бентоного Тилігульського лиману за 1990-2003 р., вивчено дані по сучасному екологічному стану водойми. Проведено свідомо-аналітичний аналіз, а також галузеві відношення і pH середовища. Ставки, що за проміжки близько 50 років проводили незважаючі зміни екологічного спектра. Берегова флористична група у водоймі складається 108 видами або 59.7%.

INVESTIGATION OF CHARACTERISTICS OF UREASE PREPARATIONS FROM SOYBEAN

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Studying urease is of interest from various positions. Urease meets beside many alive organisms. First of all, it plays the important role in circulation of nitrogen in natural conditions. From the practical point of view an opportunity of urease