

**Musienko N.N.<sup>1</sup>, Pyurko V.E.<sup>2</sup>**

## **MORPHOLOGICAL AND HISTOLOGICAL BIODIVERSITY LEAVES IN PLANTS-HALOPHYTES OF NORTHWEST AZOV**

<sup>1</sup>Kiev National University of Taras Shevchenko  
ave. Glushkov 2 (k.12), Kyiv, 03022, Ukraine  
e-mail: n\_musienko@ukr.net

<sup>2</sup>Melitopol State Pedagogical University named by Bogdan Khmelnytsky  
st. Hetman, 20, Melitopol, Zaporizhia region, 72312, Ukraine  
e-mail: Vlad\_ak75@mail.ru

Formation of morphological and histological biodiversity northwestern Azov, located in the steppe zone, due to regional climatic conditions and environmental performance (humidification, acidity, trophic content in the soil of excess salts intense evaporation of water). The content of salts in the soil determines the body's vital processes at all levels of its organization and is an exogenous factor for plant protection.

Biodiversity is a great value because it has ecological, genetic, social, economic, scientific, cultural, recreational and aesthetic value and is the basis of evolution and life support systems of the biosphere, and meet the needs of a growing population, so the conservation of natural biodiversity is an urgent problem today, because it is saving the future of humanity.

Research aim was to study morphological and histological biodiversity of plant leaves in northwestern Azov (for example, *Halimione verrucifera* L., *Taraxacum bessarabicum* and *Limonium meyeri* (Boiss.) O. Kuntze). The goal involves the problem is the structural elucidation of the structure of the leaf *H. verrucifera* L., *T. bessarabicum*, *L. meyeri* (Boiss.) O. Kuntze and a study to determine which environmental groups and life forms are these plants.

Our research showed that the *Halimione verrucifera* L. leaf is amphistomatous, has atryplochoid type Kranz-anatomy, stomata complexes are anomocytic type. *Halimione verrucifera* L. refers to xerohalophytes, is in the subdominant halophytic phytocenoses northwestern Azov. We have shown that plants *Taraxacum bessarabicum* - amphistomatous type sheet, mezohalophyte type Kranz-anatomy, stomata type complexes - anomocytic. For quantitative anatomical features of leaf *Taraxacum bessarabicum* can be attributed to mezohalophyte, hemicryptophytes.

As a result of it was found that leaves *Limonium meyeri* (Boiss.) O. Kuntze have Kranz-anatomy, characterized xeromorphic structure of unicellular trichomes, because this plant is a halophyte - xerophytes, terophyte.

Our studies have shown that salinity causes resizing the main epidermal cells and stomata complex violates their arrangement on both surfaces of the leaves. So as polyfunctional information epidermis tissue structural changes which reflect the progress of adaptation processes in the leaves, can be an indicator of the impact of salt on plants in general. Salinization leads to changes in the ratio of photosynthetic tissue and can act as a marker of the state of soil salinity: in xerohalophyte shaped leaves xerophilic structure in mesophytic-xeromorphic and in halophyte - there xerophilic structure.

Salinization causes structural changes in vegetative organs which may act as a marker of the impact of excess salt on plants. Our studies have shown that the global arid climate and increased salinity in the soil causes morphological and histological biodiversity of halophytes northwestern Azov.