

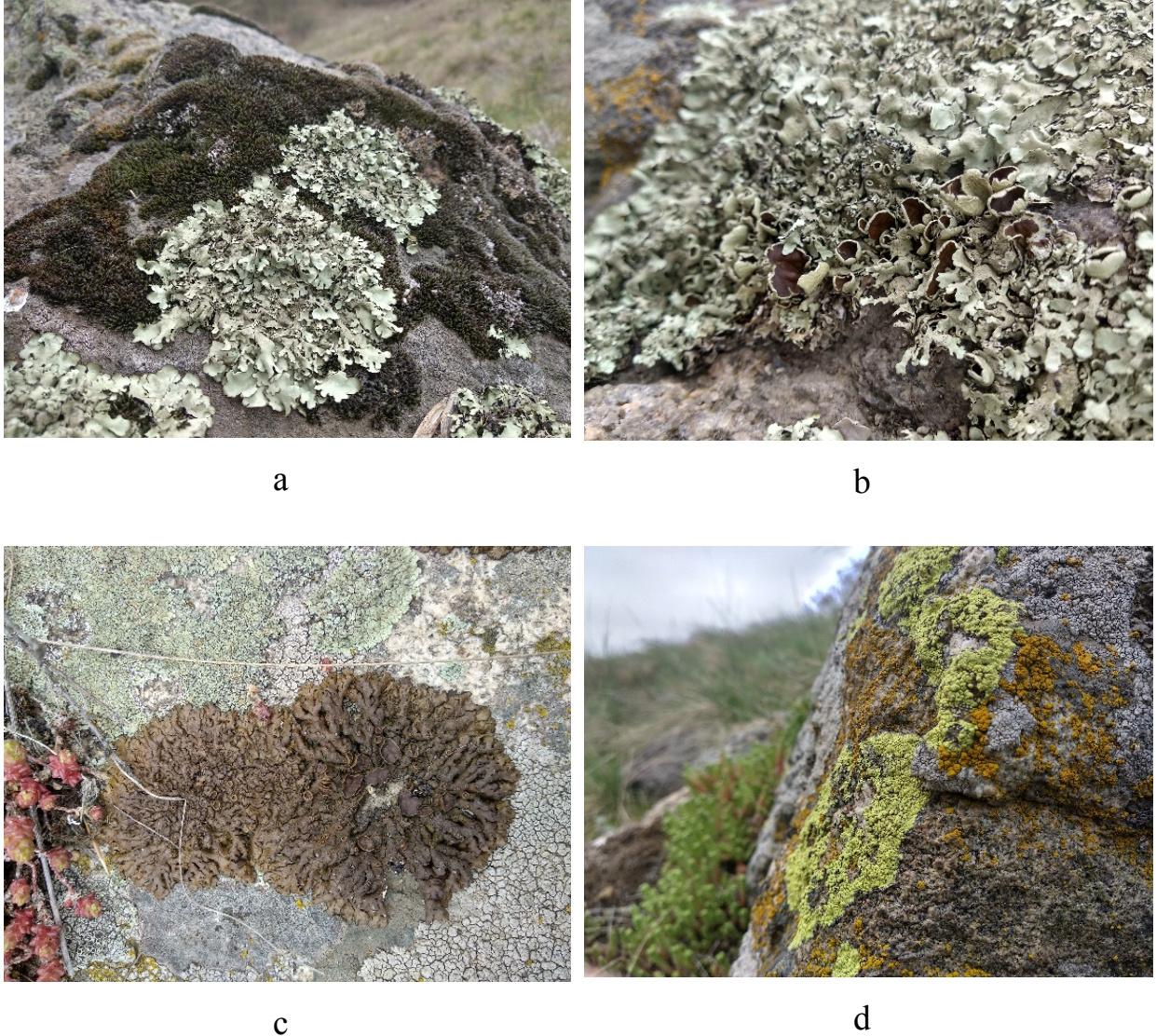
**FINDINGS OF EPILITHOUS LICHENES ON  
THE CRYSTALLINE OUTFITS OF THE LOCAL SIGNIFICANCE  
BOTANICAL RESERVOIR “BALKA ZMEYINA”  
(DNIPROVSK DISTRICT, DNIPROPETROVSK REGION)**

Lichens are pioneer organisms, as they settle on bare rocks, infertile soils, and on the walls of houses. In particular, epilithic lichens live on rock outcrops and artificial stony substrates [7]. The most important role of lichens in terrestrial ecosystems is related to their ability to promote primary succession. Lichens are one of the first organisms to settle on newly formed surfaces – rocks formed after volcanic eruptions or soil surfaces exposed by landslides. The growth and expansion of lichens leads to mechanical and chemical abrasion, which accelerates the natural process of weathering of these surfaces and therefore accelerates the soil formation [1; 2].

Accounting of the researched material was carried out by route method. Lichens were described and photographed on the outcrops of crystalline rocks on the territory of the botanical reserve “Balka Zmiina” in 2022. The identification of species was carried out according to the standard method [6].

The botanical reserve “Balka Zmiina” was created in obedience to the Decision of the Dnipropetrovsk Regional Council dated 20.06.2014 No. 550-26/VI and includes the territories of girde landscapes and a section of the valley landscape of the Mokra Sura River [3]. According to literature data, the territory adjacent to the Dnipro valley is characterized by the spread of crystalline Precambrian rocks, which in some places come to the surface. These are mainly granites and magmatites of Archaean and Proterozoic age [4].

As a result of the survey of the territory, 5 types of epilithic lichens were found (Fig. 1).



*Fig. 1 – Photographs of lichens found on outcrops of crystalline rocks on the territory of the “Balka Zmiina” botanical reserve:*

- a) *Parmelia caperata*, b) *Physcia tenella*, c) *Physcia tenella*, *Lecanora rupicola*  
d) *Rhizocarpon geographicum*, *Lecanora rupicola*, *Calloplacca saxicolla*

The study of the taxonomic diversity of the territories and objects of the nature reserve fund of Ukraine is relevant for the formation of lists of species of this territory, registration of species included in the regional red lists and the Red Book of Ukraine, international lists of nature protection.

It is also worth emphasizing that the lichen biota of the Dnieper steppe is one of the least studied components of ecosystems, which also confirms the relevance of the study.

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## ELECTRO-ANALYTICAL PROPERTIES OF SENSORS FOR DETERMINATION OF VITAMIN B6

One of the main directions of development of modern electro-analytical chemistry is the development of effective methods of research and analysis of organic compounds, in particular – vitamins. This sector of studies has theoretical and practical significance for the further search of the most effective ways of synthesis and analytical determination of these substances.

Vitamin B6, being in the form of the corresponding aldehyde – pyridoxal (Fig. 1), or as a primary amine – pyridoxamine (Fig. 2), or a primary alcohol – pyridoxine (Fig. 3), or its corresponding forms of 5-phosphate derivatives (Fig. 4) can transform from one form to another in living organisms [4].

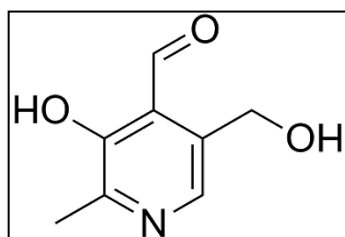


Fig. 1 – Pyridoxal