

# **THE INFLUENCE OF THE ROZVADIV DEPOSIT ON THE OBJECT OF THE EMERALD NETWORK OF THE STILSKE HORBOHIRIA**

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The research was conducted on the territory of the Emerald Network facility "UA0000177 Stilske Horbohiria", which is adjacent to the place of implementation of the planned activities of Rozvadiv Budmateriali LLC, and its immediate surroundings. The exploitation of the Rozvadiv deposit of sands, limestones, and sandstones with their processing continues here. The research area is located at a distance of about 0.5 km to the northeast of the village. Rozvadiv in the Stryi district (formerly Mykolaiv) of the Lviv region, 100 m west of the limestone quarry of the former Mykolaiv cement and mining plant. During the survey, the territory of the Emerald Network object "UA0000177 Stilske Horbohiria" and the area that separates it from the zone of planned activity were investigated. The purpose of the research is to study the species, coenotic, and habitat composition of the territory to establish the presence of rare or vulnerable species, their communities, and habitats.

The habitats of the studied territory belong to two groups. The first group includes forest massifs located on the territory of the Emerald Network object "UA0000177 Stilske Horbohiria". The second group includes areas of renewable and synanthropic vegetation between the zone of planned activity and the object of the Emerald Network. From the time of the environmental impact assessment before the start of planned activities and at the time of our research, the biodiversity of the territory and the structural elements of the habitats (flora and fauna) have not changed. The vegetation of the studied area corresponds to the natural and synanthropic type of vegetation of Mykolaiv-Berezhan geobotanical district, Kremenets-Khotyn district, West Ukrainian subprovince. It forms 13 groups of habitats (Hrynkevich, 2021).

Habitats of surface water in the form of streams are located on the territory more than 800 meters from the zone of planned activity. The rest of the water habitats are more than 5.8 km away from the quarry territory, and the streams that feed them are 2.4 km away. Surface temporary water bodies, located in the folds of the relief of the emerald network, do not have their original plant communities but they change the forest vegetation located nearby and sometimes form areas devoid of vegetation. Such areas can be attributed to settlements C3.62 – Unvegetated river gravel banks. *Mentha longifolia*, *Ranunculus repens*, *Tussilago farfara*, and *Agrostis stolonifera* occur here occasionally.

The condition of the flora and vegetation of surface slow-flowing water bodies has not changed under the mediated remote influence of planned activities. Habitats of resolution 4 of the Berne Convention C1.222 – Floating *Hydrocharis morsus-ranae* rafts, C1.223 – Floating *Stratiotes aloides* rafts, C1.224 – Floating *Utricularia australis* and *Utricularia vulgaris* colonies are in satisfactory condition. Their areas have practically not changed. *Hydrocharis morsus-ranae* L., *Stratiotes aloides* L., and *Utricularia vulgaris* L. are characteristic species of these habitats in the flora.

Grassland habitats are most often represented by two types: E2.2 Low and medium altitude hay meadows and E3.4 Moist or wet eutrophic and mesotrophic

grasslands. These habitats are dominated by *Dactylis glomerata* L., *Arrhenatherum elatius* (L.) J.Presl & C.Presl., *Achillea millefolium* L. *Festuca ovina* L., *Phleum pratense* L., *Elytrigia repens* (L.) Nevski, *Poa angustifolia* L., *Achillea millefolium* L., *Poa pratensis* L., *Ranunculus acris* L., *Juncus effusus* L., *Scirpus sylvaticus* L. *Trifolium pratense* L., *Galium verum* L., *Anthoxanthum odoratum* L., *Vicia cracca* L. are also found in dry and mesotrophic meadows: *Brisa media* L., *Carlina vulgaris* L., *Centaurea jacea* L., *Centaurea scabiosa* L., *Euphorbia cyparissias* L., *Festuca ovina* L., *Hieracium umbellatum* L., *Knautia arvensis* (L.) Coult., *Lotus corniculatus* L. , *Picris hieracioides* L., *Plantago lanceolata* L., *Plantago medium* L., *Scabiosa ochroleuka* L., *Scabiosa columbaria* L., *Senecio jacobaea* L., *Senecio vulgaris* L., *Silene vulgaris* (Moench) Garke, *Stenactis annua* (L.) Cass . ex Less., *Trifolium hybridum* L. *Vedicago falcata* L (Fig. 5-6). *Valeriana stolonifera* Czern is also found in wet meadows.

The main part of the territory of the object of the Emerald network "UA0000177 Stilske Horbohiria" is occupied by broad-leaved forests. G1.21 – Riverine *Fraxinus-Alnus* woodland, wet at high but not at low water is often found in low-lying areas, especially near permanent or temporary streams. *Alnus incana* and *glutinosa*, *Acer pseudoplatanus*, *Carpinus betulus*, *Fraxinus excelsior*, *Padus avium*, *Ulmus minor* form the basis of the tree stand here. Also found here are *Asarum europaeum*, *Cardamine amara*, *Chaerophyllum hirsutum*, *Chrysosplenium alternifolium*, *Equisetum sylvaticum*, *Gagea lutea*, *Glechoma hirsuta*, *Ficaria verna*, *Humulus lupulus*, *Impatiens noli-tangere*, *Lamium galeobdolon* and *maculatum*, *Lysimachia nummularia*, *Myosoton aquaticum*, *Padus avium*, *Swida sanguinea*, *Salix acutifolia*, *Urtica dioica* and *galeopsifolia*, *Viburnum opulus*. A especial role in the object of the Emerald network is occupied by beech forests classified as "G1.6 – *Fagus* woodland" settlements (Fig. 7). In addition to *Fagus sylvatica*, their stand consists of *Quercus robur*, *Carpinus betulus*, *Acer pseudoplatanus*, *Prunus avium*, *Betula pendula*, *Fraxinus excelsior*. The share of beech in such stands ranges from 80% to 100%. The forest stand is of high credit quality (mostly the credit rating of plantations is I). *Acer platanoides* and *pseudoplatanus*,

*Carpinus betulus*, *Fagus sylvatica*, *Pinus sylvestris*, *Populus alba* and *tremula*, *Pyrus communis*, *Quercus robur*, *Robinia pseudoacacia*, and *Salix caprea* are found in the undergrowth and undergrowth. Which indicates a good reproduction of the stand with moderate synatropization.

Synatropic and industrial habitats are located mainly on the periphery of the Emerald Network object "UA0000177 Stilske Horbohiria". They occupy more than half of the territory located between the planned activity zone and it. They also have an impact on the flora of its part. First of all, we are talking about the synatropization of forest edges and peripheral sparse forests. Often, such communities create complexes of habitats associated with certain types of human activity. For example, ruderal communities of the *Plantagenetea majoris* and *Polygono arenastri-Poëtea annuae* classes are located along the dirt roads closer to the track, and on their roadsides are the *Artemisietea vulgaris* or *Galio-Urticetea* classes. Similar complexes can be observed along forest and shrub communities (Khomiak et al 2023). There will be vegetation of the *Carpino-Fagetea*, *Rhamno-Prunetea* or *Robinietea* classes on one side and *Artemisietea vulgaris* or *Galio-Urticetea* on the other (Kotsiuba et al 2023). The process of synatropization of both peripheral areas of habitats of natural forests and natural meadows is observed. This is due to both the proximity of settlements and the active movement of tourists.

### **Reference:**

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