



# The role of the "Yelanetsky Steppe" Nature Reserve in biodiversity conservation of the steppe zone

**Halyna Drabyniuk, "Yelanetsky Steppe" Nature Reserve, Oleksandr Shnyder, M.M. Gryshko  
National Botanical Garden, National Academy of Sciences of Ukraine, Vitalii Kolomiychuk, O.V.  
Fomin Botanical Garden of Taras Shevchenko National University of Kyiv**

**The International Conference «European Green Dimensions:  
Fundamental, Applied, and Industrial Aspects»**

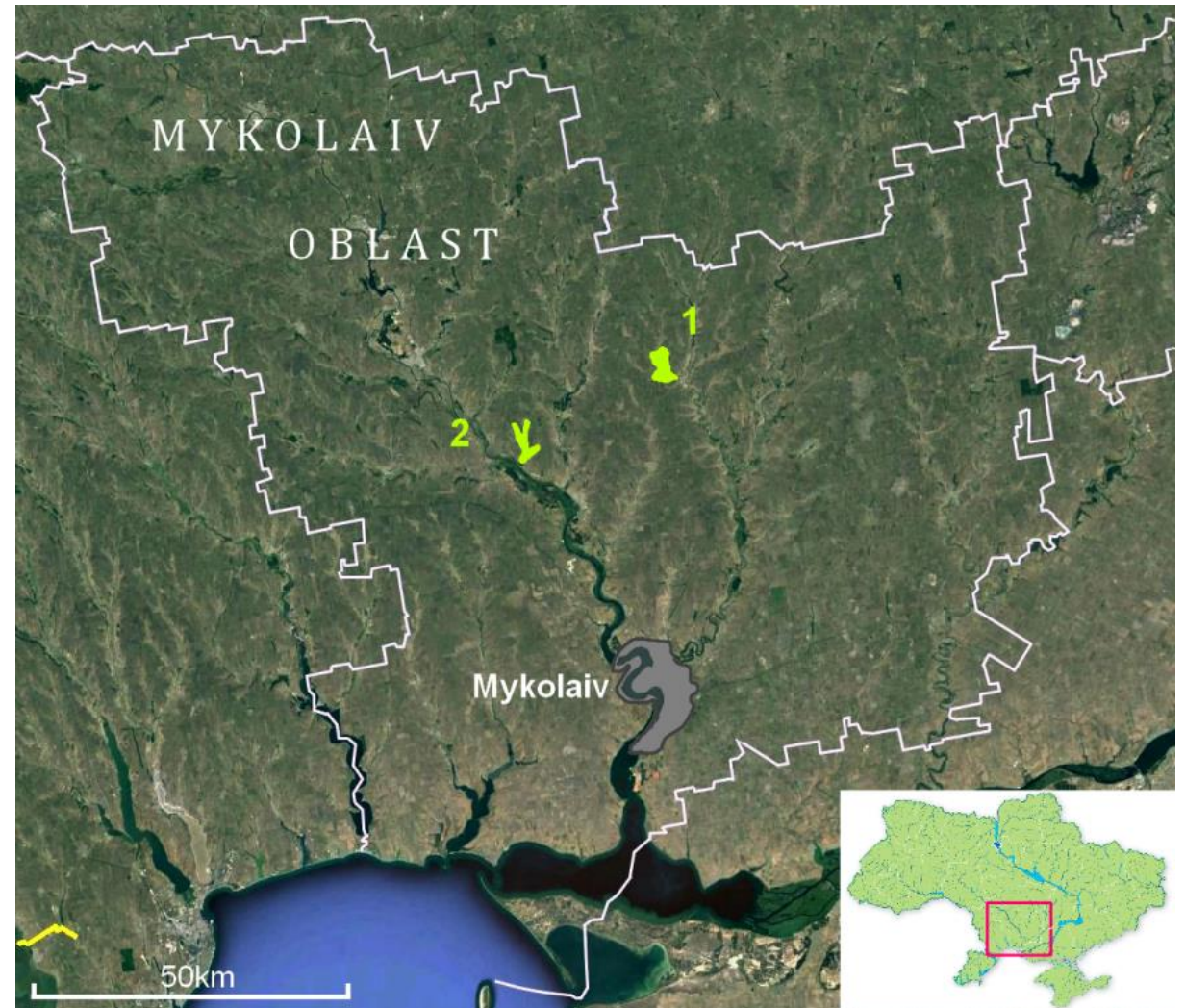
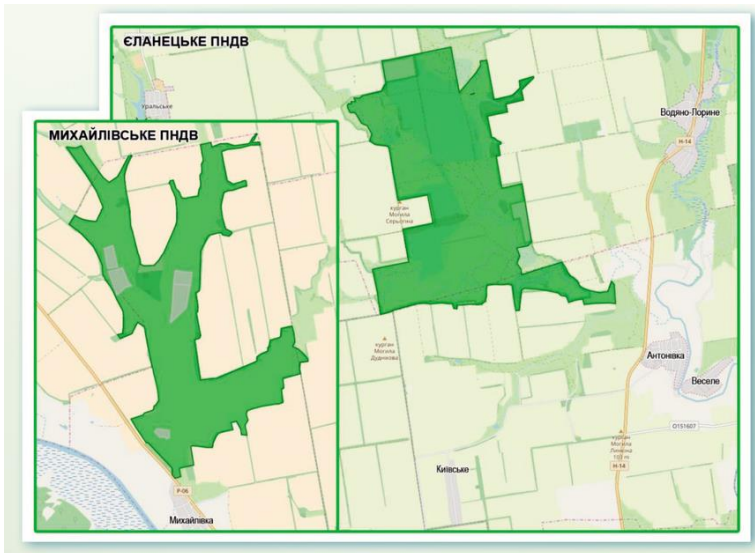
**June, 5–7, 2025  
Mykolaiv, Ukraine**



# "Yelanetsky Steppe" Nature Reserve

The "Yelanetsky Steppe" Nature Reserve is a unique gem of Ukrainian nature, representing two areas of substantial virgin steppe ecosystems in the northwestern Black Sea region (3,010.65 ha)

It is also the only steppe nature reserve in Right Bank Ukraine. It has not been subjected to occupation or direct impacts of military actions during the Russo-Ukrainian war. Today, it is one of the significant centers of floristic and phytocenotic diversity in our country, making its monitoring extremely valuable in the context of preserving Ukraine's steppes under modern conditions.







*Allium sphaeropodum*



*Colchicum triphyllum*

By the beginning of our study, the flora inventory of the nature reserve included 615 vascular plant species. However, most research focused on the Yelanetsky Department, while the Mykhailivsky Department remained underexplored. As a result of the new inventory, more than 100 additional species and subspecies of vascular plants, previously unrecorded in the reserve, were added to the flora. Over the past five years, two new rare species from the Red Book of Ukraine have been discovered in the reserve's habitats: *Allium sphaeropodum* and *Colchicum triphyllum*

## Systematic and immigration structure of the "Yelanetsky Steppe" Nature Reserve flora

Higher taxa	Native plants	Alien plants		Total
		Xenophytes	Ergasiophygo phytes	
The Yelanetsky Department				
HORSETAILS	2	-	-	2
FERNS	1	-	-	1
GYMNOSPERMS	1	-	-	1
ANGIOSPERMS	521	104	31	656
MONOCOTS	97	12	3	112
EUDICOTS	424	92	28	544
Total (by department)	525	104	31	660
The Mykhailivsky Department				
HORSETAILS	1	-	-	1
GYMNOSPERMS	1	-	-	1
ANGIOSPERMS	329	77	29	435
MONOCOTS	56	11	1	68
EUDICOTS	273	66	28	367
Total (by department)	331	77	29	437
The Nature Reserve as a whole				
Total	541	110	40	691

The spontaneous flora of the "Yelanetsky Steppe" Nature Reserve combines two local floras – Yelanetsky Department and Mykhailivsky Department – and currently includes 691 species and subspecies from 73 families (Table 1). Native taxa number 541, representing 264 genera in 63 families, while alien taxa number 150, representing 111 genera in 38 families.

In the Yelanetsky Department, 660 species and subspecies were recorded, including 525 native and 135 alien species. This represents 96.9% of the reserve's total native plant diversity. In the Mykhailivsky Department, 437 species and subspecies were identified, including 331 native and 106 alien species, comprising 61.1% of the reserve's native plant diversity.



## Comparison of the species richness of the "Yelanetsky Steppe" Nature Reserve flora with the other steppe-protected areas of Ukraine

Protected Area	Area (ha)	Total Species Count
"Mykhailivska Tsilyna Nature Reserve (Sumy Oblast)	882.9	609 (Kolomiychuk et al., 2021)
"Askania-Nova" Biosphere Reserve (Kherson Oblast)	33,307	527 (Vedenkov & Drohobych, 2003; Shapoval et al., 2023)
"Buzky Gard" National Nature Park (Mykolaiv Oblast)	6,138	1,080 (Shyriaieva et al., 2022)
"Yelanetsky Steppe" Nature Reserve (Mykolaiv Oblast)	3010,75	691
"Streletsivsky Steppe" Section, Lugansk Nature Reserve (Luhansk Oblast)	1,036.5 1	735 (Onyshchenko & Andrienko, 2012)
"Provallia Steppe" Section, Lugansk Nature Reserve (Luhansk Oblast)	587.5	783 (Onyshchenko & Andrienko, 2012)
"Ukrainian Steppe" Nature Reserve, "Kalmiuskyy" Department (Donetsk Oblast)	579.6	226 (Onyshchenko & Andrienko, 2012)
"Ukrainian Steppe" Nature Reserve, "Stone Graves" Department (Donetsk Oblast)	389.2	470 (Onyshchenko & Andrienko, 2012)
"Ukrainian Steppe" Nature Reserve, "Chalk Flora" Department (Donetsk Oblast)	1,134	490 (Onyshchenko & Andrienko, 2012)
"Ukrainian Steppe" Nature Reserve, "Khomutov Steppe" Department (Donetsk Oblast)	1,030.4	604 (Onyshchenko & Andrienko, 2012)
Opuk Nature Reserve (Crimea)	1,592.3	452 (Onyshchenko & Andrienko, 2012)

The flora of the nature reserve includes 30 rare plant species listed in the Red Data Book of Ukraine (Order..., 2021), accounting for 34% of those growing within the Mykolaiv Oblast (Post-war Development..., 2023). 7 rare plant species are listed in the IUCN Red List, 12 in the European Red List, and two in the Annex to the Bern Convention (*Crambe tataria*, *Echium russicum*). 19 species are protected at the regional level. In total, the nature reserve hosts 38 plant species with national and international conservation statuses, which is a relatively high figure.



*Crambe tataria*



*Echium russicum*





*Astragalus odessanus*



*Chamaecytisus skrobiszewskii*



*Gymnospermium odessanum*



*Scutellaria verna*

Endemic taxa such as: *Allium sphaeropodium*, *Astragalus odessanus*, *Buglossoides czernjajevii*, *Caragana frutex* subsp. *mollis*, *Chamaecytisus skrobiszewskii*, *Dianthus carbonatus*, *Eremogone cephalotes*, *Euphorbia* × *goldei*, *Galium borysthenticum*, *Gymnospermium odessanum*, *Gypsophila collina*, *Jurinea longifolia*, *Limonium hypanicum*, *Linaria biebersteinii* subsp. *biebersteinii*, *Pulsatilla pratensis* subsp. *ucrianica*, *Scutellaria verna*, *Stipa asperella*, *Tanacetum odessanum*, *Thymus* × *dimorphus*, *Tragopogon dubius* subsp. *desertorum*, *Tulipa hypanica*, and *Veronica gryniana*. Additionally, the flora includes the East European endemic *Psephellus sumensis*, which belongs to the European geo-element.





## " Yelanetsky Steppe" Nature Reserve

Thus, the nature reserve safeguards a significant portion of the endemic core of Ukraine's flora, particularly the Black Sea endemics, emphasizing the uniqueness of the reserve's natural flora.



**Єланецький степ**  
природний заповідник



Міністерство  
захисту довкілля  
та природних ресурсів  
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фонд України

<http://steppe.mk.ua>  
E-mail: [zapovidnik96@gmail.com](mailto:zapovidnik96@gmail.com)