

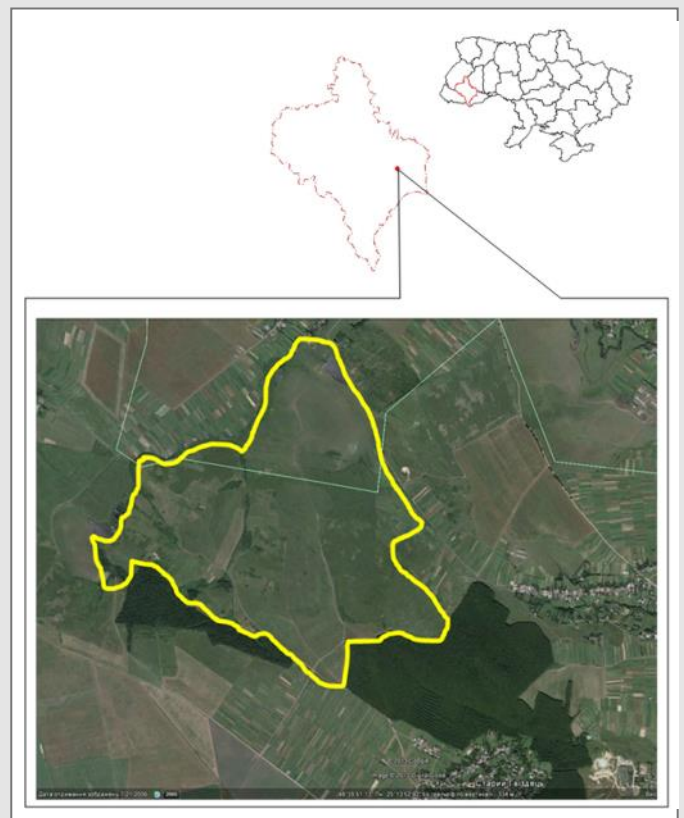
“Sinozhati” – the sacred place of Pokuttya (Western Ukraine) as a center of meadow-steppe diversity preservation

Photos and text by Vasyl Budzhak¹, Illia Chorney¹, Alla Tokariuk¹ & Anna Kuzemko²

¹Yuriy Fedkovych Chernivtsi National University, Yuriy Fedkovych str., 11, 58022, Chernivtsi, Ukraine; e-mails: V. Budzhak: budzhakv@gmail.com, I. Chorney: iichorney@ukr.net, Alla Tokariuk: a.tokaryuk@chnu.edu.ua

²M.G. Kholodny Institute of Botany of the National Academy of Sciences of Ukraine, Tereshchenkivska str., 2, 01601, Kyiv, Ukraine; e-mail: anymeadow.ak@gmail.com

Between the rivers Prut and Cheremosh lie the lands of Pokuttya, a historical region of Western Ukraine with a unique landscape and natural conditions. Not far (20 km to the east) from Kolomyia (cultural center of Pokuttya, distric center of the Ivano-Frankivsk oblast), hides the small village Stry Hvizdets, surrounded by oak and hornbeam forest. The first settlements in this area appeared in the Bronze Age, as evidenced by two mounds on its northern outskirts. The first written mention of Hvizdets dates us back to 15 December, 1373. Stry Hvizdets is located on the north-eastern macroslope of the Hvizdets-Turkivska ridge between the sources of the unnamed right tributary of the Chornyava River (left tributary of the Prut River). The relief of this territory is ridge-ravine of erosion-tectonic genesis. Height range from 295 m a. s. l. at the bottom of the valley of the nameless stream, up to 335 m a. s. l. on the tops of erosive remains. The soil spectrum includes varieties of dark gray, podzolic chernozems, meadow chernozems, in some areas and meadow-swamp soils in the bottoms of valleys. The climate is moderately cold with significant average annual precipitation (728 mm). Human economic activity significantly changed the surrounding landscape, most of which were plowed, and centuries-old oaks were cut down. But on the northern outskirts of the village there is a unique place, shrouded in legends and beliefs of local people - Manychivsky Forest and Sinozhati.



Location of the Sinozhati site.



General view of the Sinozhati site. Photo: V. Budzhak.

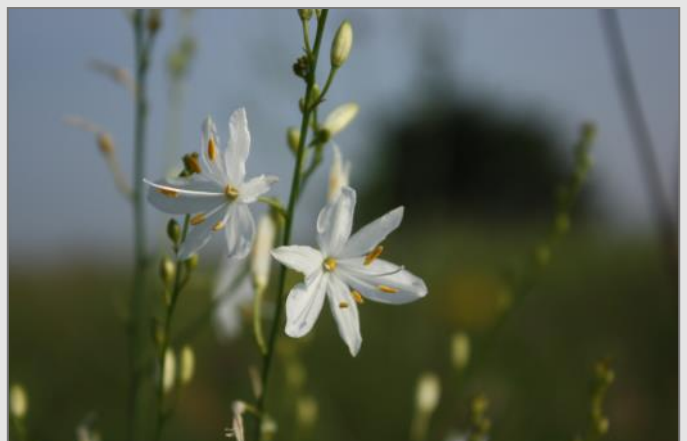


Bird's eye view of Sinozhati. Photo: V. Budzhak.



Adenophora lilifolia. Photo: V. Budzhak.

The forest really looks mysterious and unfriendly, as if enticing in its coolness, but as the ancients of these places say - "will absorb and will not let go back." The colorful, friendly grasslands filled with the aroma of honey look completely different. In the middle of this massif, on the highest site (most likely the remains of a former settlement), there is an old, half-decayed cross, and none of the locals remember why it was placed there. These places become especially mysterious in July, when locals celebrate the feast Ivana Kupala (John the Baptist) and local healers go there for healing herbs. It is these meadows, which have survived thanks to the locals and have long been used exclusively as hay-fields, and have attracted our attention because they have escaped the attention of Polish researchers of the 20th century. They were also not known by modern botanists until recently.



Anthericum ramosum. Photo: A. Kuzemko.

The first expedition of professional botanists to this area was in 2015 and caused a real "botanical" shock - 19 species from the Red Book of Ukraine were revealed in a small area (70.54 hectares): *Colchicum autumnale*, *Gladiolus imbricatus*, *Iris sibirica*, *Fritillaria meleagris*, *Lilium martagon*, *Cytisus albus*, *Adonis vernalis*, *Pulsatilla vulgaris* subsp. *grandis*, *P. patens*, *Anacamptis morio*, *Dactylorhiza incarnata*, *Gymnadenia conopsea*, *Neotinea ustulata*, *Neottia ovata*, *Platanthera bifolia*, *Traunsteinera globosa*, *Stipa capillata*, *S. pulcherrima*. *S. tirsia* as well as five species from Annex I of the Resolution 6 of the Bern Convention: *Echium russicum*, *Iris aphylla* subsp. *hungarica*, *Pulsatilla vulgaris* subsp. *grandis*, *P. patens*, *Adenophora lilifolia*, and *Klasea lycopifolia*.

On the territory of the "Sinozhati" site large areas are occupied by habitat type included in Annex I of the Habitat Directive: 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (*important orchid sites) and to Resolution 4 of the Bern



Echium russicum. Photo: A. Kuzemko.



Clones of *Iris sibirica* in relief depressions. Photo: V. Budzhak.



Fritillaria meleagris. Photo: V. Budzhak.

Convention: E1.2 Perennial calcareous grassland and basic steppes.

In 2019, the authors of this story prepared proposals for the inclusion of this area in the Emerald network and in 2020 the site was designated as UA0000361 - Sinozhati.

The meadow-steppe communities of the Sinozhati were studied within the project entitled "Carpathian grasslands – a genuine celebration of cultural and biological diversity" lead by Monika Janišová (National Geographic Grant NGS-288R-18). In 2021, a permanent monitoring plot was established at the site within the project entitled "Grassland habitats of Ukraine of pan-European importance: current status, losses and conservation strategy in the context of global climate change and anthropogenic transformation of the environment" (supported by National Research Foundation of Ukraine, project № 2020.01 / 0140).



Pulsatilla vulgaris subsp. *grandis*. Photo: V. Budzhak.



Population of *Serratula lycopifolia*. Photo: A. Tokariuk.



Semi-dry grassland. Photo: V. Budzhak.



Wet grassland. Photo: A. Tokariuk.



Gymnadenia conopsea, *Traunsteinera globosa* and *Platanthera bifolia*. Photos: V. Budzhak.



Neotinea ustulata and *Dactylorhiza incarnata*. Photo: A. Tokariuk.



Alla Tokaryuk in search of markers from the permanent plot during 2018. Photo: I. Chorney.



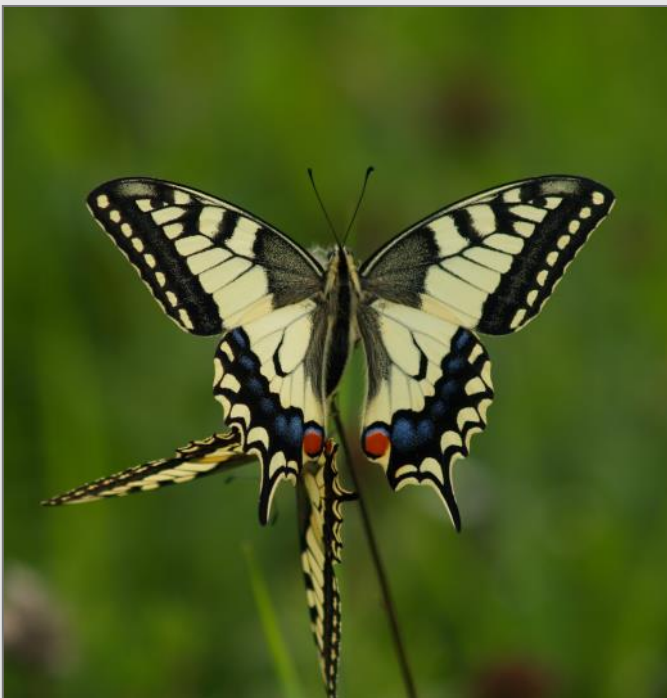
Vasyl Budzhak making a relevé in semi-dry grasslands. Photo: A. Tokariuk.



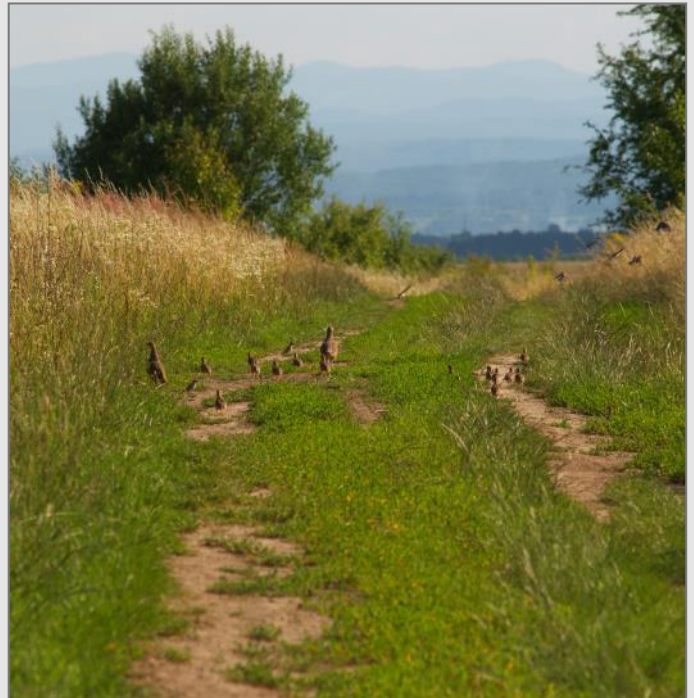
Vasyl Budzhak and Illia Chorney are establishing permanent monitoring plots in 2021. Photo: A. Tokariuk.



The first mowing. Photo: V. Budzhak.



Papilio machaon – the most famous butterfly of Ukraine, adornment of the “Sinozhati” site. Photo: V. Budzhak.



Perdix perdix – a typical inhabitant of forest-steppe lands. Photo: V. Budzhak.



Healing morning dew. Photo: A. Kuzemko.



Evening in Sinozhaty. Photo: V. Budzhak.