

Project Update August 2022

Project realization during January - August 2022:

Our Project in 2022 faced severe threat unlooked and unforeseen. On February 24th, 2022, the Russian army started a large-scale invasion to Ukraine. The invading army committed lots of atrocities. Russians not only committed crimes against civilians, but also many wildlife hotspots became an arena of military conflict thus putting many species under direct and indirect threat. Thousands of hectares are destroyed as a result of intense artillery barrages, tank battlefields, and digging of trenches. This impacts both crop fields and natural grasslands. The other terrible threat is heavy mining, with both conventional mines and with unexploded shells. Even after liberation of the area it becomes inaccessible for years to come. Surprisingly this puts a new value into our activity-documenting species occurrences with special emphasis on threatened ones. The data we collected prior to war becomes highly valuable and now it makes even more sense to make this data publicly available via GBIF.



Results of numerous heavy artillery barrages in Ukraine as a result of Russian aggression (Kharkiv oblast, Eastern Ukraine).

After the start of the war, lots of our participants were forced to flee either to western Ukraine or even abroad. Many lost their homes and jobs. Luckily all survived. Some went to military service to protect our homeland.

Despite these evil times, after the consultation with The Rufford Foundation, we decided to continue implementation of our project. Many areas of our initially planned activities became either occupied or frontlines, which make it impossible to do any wildlife research. This resulted in rearrangement of our field expeditions, in both dates and regions. We had to go to the areas not directly affected by war (though one has to remember that Russian rockets hit as far as the border between Ukraine and Poland and potentially they could hit anytime in any place).



Tranches in natural habitats as a result of Russian invasion of Ukraine (Aidar river, Luhansk oblast, Eastern Ukraine).

Another problem arose because of the price increase. Due to the destruction of almost every oil depot and refinery in Ukraine we faced a severe shortage of petrol and a big increase in prices (more than two times in May compared to pre-war prices; later in summer prices slightly decreased to 1.7 times compared to pre-war). Food also increased in prices. These factors strongly affected the amount of sampling efforts our experts could do in the field, we had to cut duration of the field trips, decrease length of expeditions, decrease amount of people involved.

Nevertheless, In Jan-Aug 2022 we did next activities:

- Field trips to various regions of Ukraine.
- Organised a common work of more than 240 researchers from different regions of Ukraine in collecting occurrences of rare species (many of occurrences from occupied area).
- Published open data to GBIF.
- Proposed new protected areas to the Ministry of environmental protection of Ukraine.
- Selected areas for new Emerald Network sites.
- Organised series of lectures and other events popularizing GBIF, iNaturalist for publishing biodiversity data.
- Published a large compilation of occurrences in a form of a printed monograph.

1. **Collection of field data during the expedition.**

We organised a series of expeditions to regions where it was relatively safe to travel and work in the field.

Chernivtsi Oblast - an expedition was organised in May 2022; the goal was to study grasslands along the southern bank of the Dniester River. A botanist, ornithologist,

mammologist and several entomologists participated.

Mykolaiv Oblast - In late June and early July 2022 we visited Yelanetskiy Steppe Nature Reserve. In March and April 2022 this area was occupied by Russians but later freed. The frontline was just about 90 km away when we were working in that place. We studied plants, insects and mammals during this expedition.

Additionally, our experts investigated steppe valleys in this region aiming to create new protected areas. Of course, all of these took place in the regions where there were no battles.

Zakarpatska Oblast - In July 2022 we visited Carpathian Mountains, visited western Gorgany ridge, Lake Synevyr, mountains Krasna, Negrovets, Pishkonja, Strymba. Our experts studied soil acari, insects, mammals, bats, birds, fungi, amphibians and reptilians.

Kyiv oblast - In June-July 2022 we conducted three expeditions within Kyiv oblast. During two of them we visited the territory of Rzhyschiv city amalgamated territorial community (near the town of Rzhyschiv and village of Hlyboki Balyky) for studying local biota (ornitho-, herpeto-, terio- and entomofauna and flora). During these expeditions lectures for students and volunteers on mobilisation of biodiversity data were organised. One expedition was conducted to the Irpin river valley between villages of Bobrytsia and Bilohorodka in order to study ornithofauna, herpetofauna and flora (by making geobotanical descriptions) for assessing nature conservation potential of this territory.

Rivne oblast - In addition to these planned expeditions, some of our experts and colleagues were forced to change their place of living, but we encouraged them to gather data on biodiversity and make it available via GBIF.



Left: A team of researchers before the Negrovets mountains in the Carpathians.
Right: Bat monitoring in the Carpathians.



Left: Small mammal trapping using Longworth live traps in Carpathian Mountains. Right: Negrovetz and Harb mountains in the Carpathians.



Left: Insects live trapping in Dniester region. Right: Grasslands in Dniester region.



Left: Velanetskiy Oblast. Right: Making geobotanical descriptions near the village of Bobrytsia, Irpin river valley, Kyiv Oblast.

In addition, we highlighted all of the fieldwork events on our website and social networks, including Facebook, Telegram, Twitter and Instagram

<https://uncg.org.ua/ukrainska-pryrodookhoronna-hrupa-v-ekspedytsii/>

<https://www.facebook.com/UkrainianNatureConservationGroup/posts/pfbid0gnigACpXLxBJw2ySuSi9gKN3YookyoRpQwmw8Gieca1aWkAbwdmxaj4tY6Wykb41>
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https://t.me/ngo_uncg/536

<https://uncg.org.ua/doslidzhennia-bioriznomanittia-ukrainy-tryvaiut/>

<https://www.facebook.com/UkrainianNatureConservationGroup/posts/pfbid033BuBzgifsQe6Gj2ogBM6H5zJ3SuC8YPZAg%20zNgBpVxbU3BG9opfQei4zHGFgUGfXzl>

<https://www.instagram.com/p/ChRaWpjtALc/>

https://t.me/ngo_uncg/568

https://twitter.com/_UNCG_/status/1559090129817505793

Some of the news already published in **MSM**:

<https://svit.kpi.ua/2022/05/02/>

2. Collecting data from researchers and conservationists for publishing in GBIF

The process of data mobilisation took place mainly during complex expeditions to available sites of wild nature. Such expeditions consisted of scientists (that were at the time of data collecting ready to work and some of which are the internally displaced persons) that represented different fields of biology: mycologists, botanists, herpetologists, ornithologists, ichthyologists, entomologists, teriologists etc. During the field trips the data was collected in the most comfortable way for particular scientists with relevant changes needed to fulfill the requirements of subsequent Darwin Core based data organising. In such a way more than 5000 records were

collected and at least the same amount of data is expected to be added soon, as some groups (micro-invertebrates) require more time for preparation of the material for species identification. Moreover, where and when possible, such expeditions are continuing to be held.

Additionally, more than 13000 records of rare species of plants, animals and fungi were collected from more than 230 researchers in terms of creating two books dedicated to collecting actual data on distribution of fauna and flora species listed in the Red Book of Ukraine. Such an opportunity provided benefits for both the project (actual collecting of valuable data, promotion of The Rufford Foundation and preserving/publishing of information on biodiversity of Ukraine connected to the 4th issue of Red Data Book of Ukraine) and the scientists in their local institution (giving them the way to publish all the data they collected in previous years, that can be now used for more appropriate assessment of status of rare species, creating of areas for their effective conservation and further development of management plans). Last, but not least, such publications allowed the scientists to maintain their work and include such publications in their annual reports, providing wider opportunities for promotion of The Rufford Foundation and one of the supporters of conducting scientific research and eco-education in Ukraine.

3. Publishing in GBIF:

Along the implementation of the project, so far, we already published in GBIF:

Finds of rare species of plants and fungi in Ukraine (2022) - 5920 occurrences

<https://www.gbif.org/uk/dataset/4b657a6e-21fc-4795-9204-b4165d8239d7>

Finds of rare species of animals in Ukraine (2022) - 7961 occurrences

<https://www.gbif.org/uk/dataset/b4f04ac9-5449-4dd8-90f9-f66fc942>

Materials of the project "Open biodiversity data: serving nature conservation in Ukraine

<https://www.gbif.org/ru/dataset/2d8d3cd4-da79-419b-9428-4820d44d30f>

Observations of waterbird species (non-Passerines) in the Pokrova spit on the Kinburn Peninsula

<https://www.gbif.org/uk/dataset/36ab9c7f-749b-4210-9f5e-926710f0bd82>

4. Creation of new protected areas

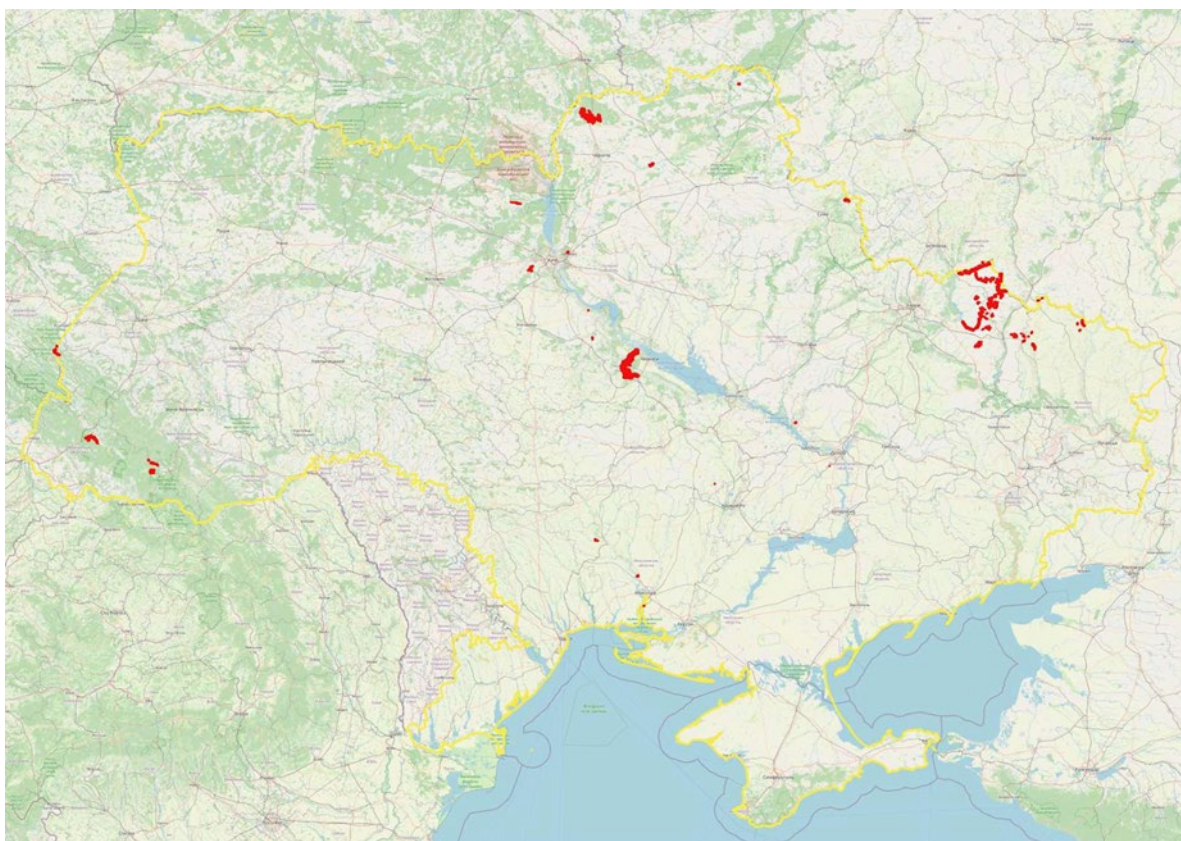
During our fieldwork we established areas with no protection status but rich in biodiversity. We started the scientific justifications for these areas, which is an important first step in creation of the protected areas due to the Ukrainian law. So far, we started such justification of 30 zakaznik (small reserves) and two national parks. Area of them all is 64 745 ha. Justifications on one national park and 14 zakaznik already approved by the Ministry of Environmental protection of Ukraine. One of zakazinks was already officially declared (created) in Luhansk oblast just prior to the start of the large-scale war. This event was covered by MSM:

<https://tribun.com.ua/87047>

Later in the year we will prepare more justification on other areas that were uncovered during our expeditions.



All proposed areas so far:



5. Further development of Emerald network

During our fieldwork we have chosen several new areas which are crucial for the conservation of species protected under Bern Convention (Resolution 6), therefore they should be included in the Emerald Network. We started the process of preparing justifications for this site.

6. Popularisation of GBIF and citizen science platforms (iNaturalist) as tools for publishing wildlife observations

1) In January-August 2022 we continued active promotion of GBIF as the main source of biodiversity data storage. As well we promoted iNaturalist as a citizen science platform, that regularly uploads research grade observations directly to GBIF. All these events were covered in our website and social networks:

<https://uncg.org.ua/riatuiemo-znannia-pro-pyrodu/>

<https://www.facebook.com/UkrainianNatureConservationGroup/posts/954045465283616/>

https://t.me/ngo_uncg/491

<https://www.facebook.com/UkrainianNatureConservationGroup/posts/pfbid025KJrbgq4XSV4oUfpXo6NrZLK8w3R6bzSFH8yYilidvArcCeETkxhxcR8q6fgFq3Vl>

https://t.me/ngo_uncg/549

<https://uncg.org.ua/publikuvannia-vidkrytykh-danykh-pro-bioriznomanittia-za-dopomohoiu-gbif/>

<https://www.facebook.com/UkrainianNatureConservationGroup/posts/pfbid02U158dRsmWvPrpMtodRsur5ghlf3rX2StvnsJ8xWoQ4Cyw4ZsVwHhDzHPsgjHFsaRI>



2) Presentation and mini-workshop for students of the 2nd year, Department of Ecology and Zoology, ESC "Institute of Biology and Medicine", Taras Shevchenko national university of Kyiv, 02-03.07.2022

7. Publishing materials

We published two books. First volume included data on occurrences of rare plants, fungi and protista: 115 researchers as authors, representing 50 research organisations from all over Ukraine, 5920 occurrences

Second volume on rare animals authored by 130 researchers, representing 63 research organisations from all over Ukraine, 7961 occurrences.

