



THE HABITAT FOUNDATION

# MOBILIZATION OF BIODIVERSITY DATA FROM UKRAINE TO GBIF

## Final report

SEPTEMBER 26, 2021

NLBIF PROJECT NO NLBIF 2018.2019.004

THE HABITAT FOUNDATION PROJECT NO 19-03

PROJECT PERIOD JANUARY 2020 – JUNE 2021

PREPARED BY: SVETLANA MITEVA, MIKHAIL RUSIN, OLEXII VASYLIUK, OLEH PRYLUTSKYI, DENNIS WANSINK



The project “Mobilization of biodiversity data from Ukraine to GBIF” was possible thanks to the financial support of Foundation NLBIF. NLBIF supports Dutch organisations and researchers to mobilise and publish biodiversity data.

Dit project/product is tot stand gekomen met een financiële bijdrage van Stichting NLBIF. NLBIF ondersteunt Nederlandse organisaties en onderzoekers bij het open en internationaal gestandaardiseerd online zetten van biodiversiteitsdata.



# CONTENT

Summary.....	3
Coordinating Organisation .....	4
Collaboration .....	5
Project team .....	7
Project collaborators .....	7
Background. Project goals, products and objectives.....	8
Project Deliverables, Results and Knock-on effect .....	10
Improve the biodiversity data collection tools .....	10
training in digitization of biodiversity collections to researchers and volunteers .....	12
Digitize and publish museum and private biodiversity collections.....	13
campaign to promote collecting and publishing biodiversity data.....	15
Sustainability and After project plan .....	17
Project time realisation and amendments .....	18

## SUMMARY

The project aimed at mainstreaming data digitization, standardization and publishing in GBIF, with the main goal to make more data on the biodiversity of Ukraine available for science and nature conservation.

With this project The Habitat Foundation assisted numerous Ukrainian researchers and amateur biologists to digitize and share with the world about 400 000 new records on the Ukrainian biodiversity.

The project also helped the localization on iNaturalist website to Ukrainian, and translated the common names of around 6 thousand taxa, now integrated in the iNaturalist software.

It was realised in close collaboration with Ukrainian Nature Conservation Group (UNCG), Schmalhausen Institute of Zoology, and V.N. Karazin Kharkiv National University. The work in Ukraine was coordinated by Mikhail Rusin, Researcher at Schmalhausen Institute of Zoology, Kyiv, Ukraine.

This report presents the work done and the results achieved. Also, the report presents briefly, the process, the lessons learned and the developments the project realisation went through pursuing the achievement of the most needed for the moment outputs, considering their long-term sustainability and widest use – national and international. The overall knock-on effect of the project is the mobilisation of a huge amount of biodiversity data (more than initially thought would have been possible) and mainstreaming of data digitalisation, standardisation, and publication.

We are proud and content with the results of the project.



*Photo: Lecture of Oleksii Vasyliuk, providing training for citizen scientists in biodiversity data registration in iNaturalist © Mikhail Rusin*

## COORDINATING ORGANISATION



**The Habitat Foundation (THF), The Netherlands** was established in 2010. Its main focus is on facilitating targeted cooperation with and supporting organizations and people who are involved in research, management, and conservation of plants and animals and their habitats. The Foundation has had multiple projects mostly in South-Eastern and Eastern Europe, but also in Benin. The projects have covered topics on different species groups, such as birds and mammals, road infrastructure, field research, conservation, capacity building via training and providing equipment. The Foundation has few overarching goals: to build capacity, biodiversity data mobilization, and species/habitats conservation. Human resources and reliable information are vital for effective nature conservation.

THF works in close collaboration with many NGOs and research organizations in Europe and the Netherlands, mobilizing exchange of knowledge in addressing urgent conservation needs. Currently, we are involved in initiatives of European importance such as Research and conservation and the preparation of the Mouse-tailed Dormouse Species Action Plan in Bulgaria (ongoing), the Mammal Mapping Conference Ukraine (2019), the Biodiversity\_Next Conference (2019), the Balkan Mammal Network, Mammal Conservation Europe (ongoing), the International Dormice Conference (2022), the next European Mammal Atlas (2024), the European Mammal Conservation Conference (in preparation).

This project aligns and complements the mission of The Habitat Foundation: capacity building, biodiversity information optimization, and fostering efficient international cooperation.



***Photo: Ukraine has rich but understudied biodiversity and its timely registration and use to identify and protect the important biodiversity areas is of importance not only for Ukraine, but for Europe as well. © Mikhail Rusin***

## COLLABORATION



This project is part of the communication and conservation campaign Discover the mammals of Europe, an initiative of The Habitat Foundation, supported by the Dutch Mammal Society, The European Mammal Foundation and many other NGOs with focus on mammal research and conservation.



**The Kyiv Zoo** is the central zoo of Ukraine. It was founded in 1908, has survived through revolutions and WWII, and now has one of the largest animal collections in Eastern Europe. It receives up to 1 million visitors annually. The Zoo is now becoming a modern research organization which aims not to entertain people, but to research and conserve wildlife. It participates in and leads multiple breeding projects of endangered animals. It is an associate member of EAZA and a participant in Species360. Its main goals are to enhance knowledge on protected wildlife species, raise public awareness on wildlife conservation, and educate the general public about ethical behaviour with animals.



**The I.I. Schmalhausen Institute of Zoology of the National Academy of Sciences of Ukraine** is the oldest institution in Ukraine specialized in general zoology. The Institute is a worldwide known zoological institution with strong scientific potential. It consists of 14 scientific departments, the Department of Scientific Information, the Ukrainian Bird Ringing Centre, the CITES Coordination Centre, an ornithological station, and an experimental apiary. The Department of Scientific Information includes a library with over 153,000 scientific publications and the editorial office of the "Vestnik Zoologii" journal. Three scientific societies work within the Institute: The Ukrainian Scientific Society of Parasitologists, The Ukrainian Entomological Society, and The Ukrainian Theriological Society.



**The Ukrainian Nature Conservation Group (UNCG)** is a Ukrainian NGO aimed to consolidate efforts of experts and scientists to protect biodiversity and establish efficient functioning of the Nature Reserve Fund. UNCG was created in 2018 and since then became one of the most influential national NGOs in the area of nature conservation. One of the UNCG's main targets is the establishment of new protected areas and the development of the Emerald Network (eq. for Natura2000 in non-EU countries) in Ukraine. About 1/3 of the Ukrainian protected areas and 1/3 of the Emerald sites were proposed by UNCG. Another important activity is observing for misleading Environmental Impact Assessment (EIA) reports in forestry, mining, infrastructure development, etc., resulting in blocking about 1/4 of poor-quality EIA reports. To inform properly the identification of new protected areas and limit the negative impact of industrial

activities, UNCG gathers lots of biodiversity data. At the moment UNCG is the most significant biodiversity data publisher from Ukraine in GBIF<sup>1</sup>. UNCG has its own project within INaturalist.<sup>2</sup>



**V.N. Karazin Kharkiv National University** is one of the leading Ukrainian educational institutions with a 216-year history. According to the annual QS World University Rankings 2020, Karazin University is included in the Top 500 universities in the world, which is the highest position compared to other Ukrainian universities. Currently, the University consists of 22 Schools and educational and research institutes. There are more than 20,700 students, 438 full professors, more than 1,274 PhDs, associate professors. Since 2019, Karazin University has hosted major and the most actively supported GBIF data publishing server (IPT), which provide access to 77 datasets with 461,301 occurrences.



*Ukraine © Vyacheslav Skorokhod*

<sup>1</sup> <https://www.gbif.org/uk/publisher/ca2fd897-6108-4361-91f8-b39dc8d12d13>

<sup>2</sup> <https://www.inaturalist.org/projects/meetings-of-uncg-members-with-biological-species>

## PROJECT TEAM

Mikhail Rusin – Concept development, Data digitization, Taxa & Software translation, Schmalhausen Institute of Zoology and Kyiv Zoo, Kyiv, project coordination in Ukraine

Oleh Prylutskyi - Data digitization, data management, Taxa & Software translation, IPT manager, training of personnel, V.N. Karazin Kharkiv National University, Kharkiv, Ukraine

Irina Yatsiuk - Data digitization, Taxa & Software translation coordinator, University of Tartu, Estonia

Oleksiy Vasyliuk – project coordination, data digitization, workshop organization, Ukrainian Nature Conservation Group, Ukraine

Oleksiy Marushchak – data digitization, data management, Schmalhausen Institute of Zoology and Ukrainian Nature Conservation Group, Kyiv, Ukraine

Svetlana Miteva – The Habitat Foundation (project manager), NL

## PROJECT COLLABORATORS

The project met the support and build on broad cooperation involving many Ukrainian researchers (professionals and amateurs). Here the list of the people responsible for the main data sets digitized, standardised and published. The work was very well assisted by the people from UNCG and in particular by Oleksiy Vasyliuk, chairman of the UNCG, Ukraine.

Oleksandr Zinenko – V.N. Karazin Kharkiv National University, Kharkiv, Ukraine

Denys Davydov – M.G. Kholodnyi Institute of Botany NAS of Ukraine, Kyiv, Ukraine

Valerii Darmostyuk - Kherson University, Ukraine

Iulia Kutsokon - Schmalhausen Institute of Zoology, Ukraine

Vitalii Kavurka - Schmalhausen Institute of Zoology, Ukraine

Igor Balashov - Schmalhausen Institute of Zoology, Ukraine

Alina Mishta - Schmalhausen Institute of Zoology, Ukraine

Sergii Glotov - State Museum of Natural History NAS of Ukraine, Lviv, Ukraine

Oksana Markovska - V.N. Karazin Kharkiv National University, Kharkiv, Ukraine

Maxsym Maruschak - UNCG, Ukraine

Sergej Kokodiy - Schmalhausen Institute of Zoology, Ukraine

Oleksandr Garbar- Zhytomyr University, Ukraine

Anna Kuzemko - M.G. Kholodnyi Institute of Botany NAS of Ukraine, Kyiv, Ukraine and UNCG

Lina Kobzar – Poliskyi Nature Reserve, Ukraine, Ukraine

Ivan Khomiak - Zhytomyr Ivan Franko State University, Ukraine

Iulia Leshchenko - V.N. Karazin Kharkiv National University, Kharkiv, Ukraine

## BACKGROUND. PROJECT GOALS, PRODUCTS AND OBJECTIVES

This project addressed the need in boosting Ukraine's capacity to mobilize biodiversity data to GBIF in order to inform biodiversity conservation work. Despite being one of the largest countries in Europe, Ukraine (603,628 km<sup>2</sup>), was poorly represented in the GBIF database and digital georeferenced biodiversity data from it remained scarce and hardly accessible. **GBIF** contained about 193,671 georeferenced occurrence records from Ukraine at the start of the project, and most of these records were provided by other countries. Publishing/sharing of biodiversity data in Ukraine was not a practice.

Addressing this, the project set up as a goal "to mobilize Ukrainian biodiversity data to GBIF through building capacities for digitizing and publishing biodiversity collections, with the help of Dutch specialists, and promoting citizen science in Ukraine."

The products needed to achieve that goal were:

- 1) An improved online biodiversity data portal and a new mobile application for handling biodiversity data, developed in collaboration with Dutch specialists and using the ALA software. The Ukrainian Biodiversity Information Network platform (UKrBIN) will be available in English, Russian and Ukrainian.
- 2) New biodiversity data mobilized to GBIF.

In order to realise these products and to assist Ukraine the project had to:

- (1) Provide user-friendly well-functioning Ukrainian citizen science biodiversity data platform, connected and publishing in GBIF. Translating in Ukrainian the already popular biodiversity data portal of **iNaturalist** (initially that platform had to be UkrBIN) and the vernacular names of most of the popular native taxa (about 6000 names) was the best approach to make data collection and sharing process easier for the Ukrainian specialists – professional and amateurs;
- (2) Assist the mobilization of more biodiversity data from Ukrainian museum collections, herbaria, and scientific literature by involving and training researchers to digitize and publish new data sets, making them open and publicly available through the GBIF. The initial target was to publish at least about 170 000 new Darwin Core standardized biodiversity data records in GBIF originating from the digitized UkrBIN data base and museum collections.
- (3) Further promote and mainstream citizen science and the publication of data in GBIF by installing Integrated Publishing Toolkits among Ukrainian research organisations, introducing Darwin Core as biodiversity data standard would help publication of more species occurrence records in GBIF also in the long-term, thus also after the end of the project, which would keep unlocking more data on the biodiversity for that region.

This project and its products had to substantially increase the amount of Ukrainian biodiversity data available in GBIF, boost data mobilization, promote biodiversity science (incl. citizen science), increase public awareness, help the identification of the Emerald Network nature areas (potentially future NATURA 2000 areas) and also build capacities to mobilise biodiversity



data and make it accessible for research, cooperation and nature conservation in Ukraine and abroad. As the project is realised with Ukrainian nature conservation and research organisations and people, publishing biodiversity data would make them part of the global community contributing to the knowledge on nature in Europe. In addition, the digitised Ukrainian biodiversity data will benefit of secured storage and the authors will be involved in international research, nature conservation work and publications on biodiversity.

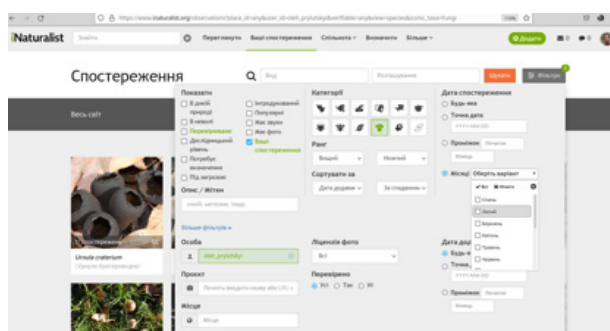
**The project formulated the following objectives:**

- **Improve the online biodiversity data collection tools targeting:**
  - easy-to-use interface of an online tool for data collection, storing and publishing digitized biodiversity data
  - Darwin Core as a data standard (DwC), to make data from Ukraine fully compatible with GBIF
  - Integrated Publishing Toolkit (IPT) to ensure smooth publication of data on GBIF
  - A user-friendly web-portal and mobile application for iOS and Android for recording biodiversity observations, using also the expertise of Dutch and international biodiversity software specialists.
- **Provide training in digitization of biodiversity collections to researchers and volunteers.**
- **Digitize and publish museum and private biodiversity collections.**
- **Organize citizens science campaign to promote collecting and publishing biodiversity data.**

The project Initially aimed at repairing and rebuilding of an already existing and operating Ukrainian biodiversity portal (UkrBIN). However, during the project realization, the fast-developing biodiversity portal iNaturalist replaced the UkrBIN as number of users, and became the most popular and widely used biodiversity data portal for the country. The project team reassessed the situation and reformulated the project, redirecting the efforts to collaboration with the team of iNaturalist and focused on the adaptation of that software for Ukraine by assisting/speeding up its localization (translation) to Ukrainian (interface of the website and the mobile applications and the names of the most of the taxa present there) making it much more user-friendly (with interface and species names in the local language) for the growing community of Ukrainian (citizen) scientists.

The project worked with Ukrainian researchers who digitized and standardized data, and assisted them during this process with trainings on how to become GBIF publishers and to publish their data in GBIF. This work included more than 100 researchers – professional and amateurs.

***Photo: The translated in Ukrainian biodiversity data portal and mobile applications (IOS and Android) of iNaturalist and the vernacular names of most of the native taxa.***



## PROJECT DELIVERABLES, RESULTS AND KNOCK-ON EFFECT

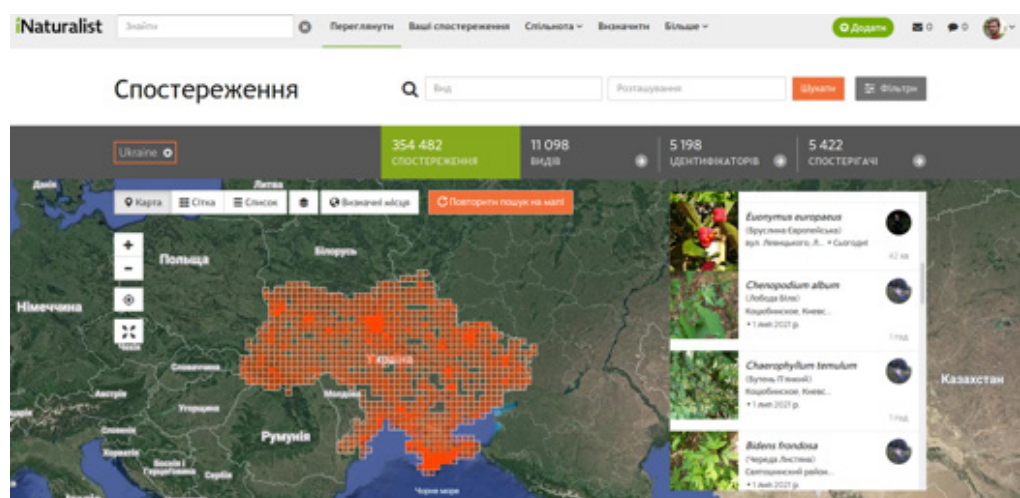
The project team realized the project in an opportunistic manner pursuing the best and most sustainable solutions, facing and learning from the challenges met in exploring different software options (UkrBIN, ALA, OBSERVADO, SMART BIRDS, iNaturalist), promoting data publishing, mobilizing volunteers and establishing new collaborations between scientists and non-scientists during the COVID-19 pandemic. It was an intensive work which yield convincing results.

### IMPROVE THE BIODIVERSITY DATA COLLECTION TOOLS

Initially the project envisaged to repair an existing online data platform (UkrBIN), created by a team of Ukrainian researchers and in use already for some time. The platform had some technical problems, which resulted in disabling part of the targeted functions. The team was planning to work with a Ukrainian IT specialist, who would repair the platform and also develop it further by extending the server hosting it and installing Integrated Publishing Toolkit (IPT), that would enable publishing the data from UkrBIN to GBIF. The project was planning also to build a mobile application connected to UkrBIN and have done some further promotion of these tools in order to mainstream data mobilization and publishing in the country.

However, during the realization of the project, the platform of iNaturalist gained popularity as the most advanced tool for biodiversity data registration in the country. iNaturalist has indeed a powerful self-learning algorithm integrated, and the updates and further development of the reliable software are ensured by its initiators - the California Academy of Sciences and the National Geographic Society.

After assessing all pros and cons of the situation, the project team has decided that it would be wiser to invest the efforts in assisting the faster localization of iNaturalist which would help make that tool more user-friendly for the Ukrainian researchers. Therefore, the team moved its focus and efforts on translating the software – website and mobile applications to Ukrainian, and to translate as much as possible of the local taxa in Ukrainian.



**Photo: Image of the Ukrainian version of the website of iNaturalist.**

The project succeeded as intended to: **Improve the online biodiversity data collection tools for Ukraine** by translating the whole interface of the iNaturalist biodiversity data portal from English to Ukrainian. In fact, when we planned our activities the iNat apps translation was already going on through the Crowdin translation platform, where anyone can participate without external permission or coordination. Most of mobile translation had been done by Mykola Pukhalskyi (<https://crowdin.com/profile/Sensetivity>). It was a pure coincidence that our efforts overlapped with the efforts of some community members, which we could not predict, but confirms the importance of translating that software. At the moment, the interface of the iNaturalist website and its mobile applications (IOS and Android) are available in Ukrainian.

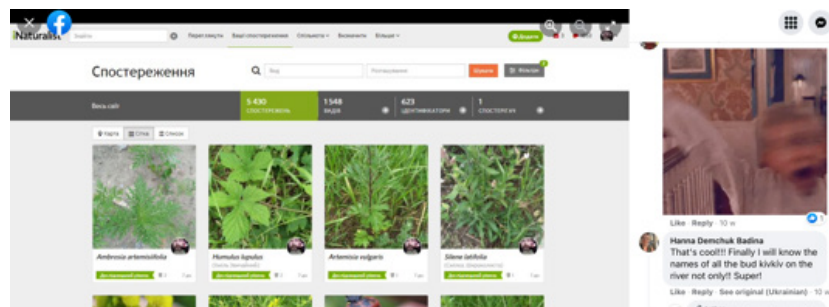
Thanks to this, the team could focus efforts on the translation of the iNaturalist web-portal and the Ukrainian taxa as these needed a lot of work and time. Now, app. 6000 taxa are translated, and the number continue to grow.

**Now, non-experts can use the local names (in Ukrainian) of the species to submit, verify and/or double check records.**

iNaturalist is an initiative of the California Academy of Sciences and the National Geographic Society, who built and developed a smart tool with a strong learning algorithm embedded, which makes this software package the best tool at the moment not only for collecting and storing biodiversity data, but also for species identification. iNaturalist also publishes the data in GBIF which makes it available for further scientific research and nature conservation. The California Academy of Sciences and the National Geographic Society will further maintain this software. Because the Ukrainian version is just a localization of the main software, the updates made by iNaturalist centrally will be automatically visible in the Ukrainian version. During these updates it is possible that new words/options/titles that might not have a translation yet appear. The current project collaborators Oleh Prylutskyi and Irina Yatsiuk have committed to follow these changes and keep the iNaturalist software translation up-to-date.

***A translated to Ukrainian versions of the iNaturalist website and mobile applications makes them an easy-to-use and a user-friendly tool for recording, storing and publishing biodiversity observations also for the wider community which contributes for the overall availability of biodiversity data.***

***iNaturalist uses Darwin Core (DwC) as a data standard, which makes the biodiversity data from Ukraine fully compatible with GBIF database and therefore available for further use for biodiversity research and conservation.***



***Photo: Image of the Ukrainian version of the iNaturalist website and a reaction of a user. Currently, the website and the mobile applications (Android and IOS) and 6000 taxa names in iNaturalist are translated.***

## TRAINING IN DIGITIZATION OF BIODIVERSITY COLLECTIONS TO RESEARCHERS AND VOLUNTEERS

The project team worked with more than 20 biologists (professional and amateurs) from Ukrainian nature NGOs and research organisations assisting them to digitize, standardize and publish data in GBIF. This work resulted, besides the 20 data sets published, in the publication of a data set with the largest list of data contributors in GBIF so far. (<https://www.gbif.org/dataset/08afaadf-34ba-4aeb-be23-027da1e38676>) It was indeed very rewarding to see biologists working and publishing together and building cooperation.

At the same time another project aiming at data publishing in GBIF was finishing its realization in Ukraine (BioData); that was a project funded by the Norwegian Agency for International Cooperation and Quality Enhancement in Higher Education (DIKU). In order to ensure cooperation, our project team established contact with the project officer of that project (Oleh Prylutskyi) and discussed on where and how the two projects can combine and join their efforts in order to enhance the impact. We have got in contact with Oleh, discussed and made a plan on how the two projects can co-develop and enhance the work and the results. We used the lessons learned from the realisation of that project and using them, developed the work on the further promotion of the installation of IPT at different Ukrainian research organisations and assisting their employees to digitize, standardise, become GBIF publishers and publish their biodiversity data.

***The results were convincing. By the end of our project: 40 people were trained, 3 new Ukrainian publishers were registered in GBIF and 20 data sets containing in total 397208 records of biodiversity data were published. This work seems to had inspiring effect on other researchers to publish data resulting in the total amount of biodiversity data from Ukraine by the end of the project of more than 1 mln records.***

<https://www.gbif.org/uk/country/UA/summary?fbclid=IwAR1ljpRjA-WTANUo1SsOoKn4f8aXTV4iMnRvC2XpmkMsZXYR4h7DSBtDyY>



**Photo: Field work training on species registration. © Maxim Gavrilyuk**

## DIGITIZE AND PUBLISH MUSEUM AND PRIVATE BIODIVERSITY COLLECTIONS.

The project's commitment was to publish in GBIF at least about 170000 new records on biodiversity originating from museum collections, private data, publications and recent field work and observations.

Aiming at sharing more of the information on the Ukrainian biodiversity, the project team worked with specialists who digitized and shared information on different taxa from the museum collections, personal records and data from publications.

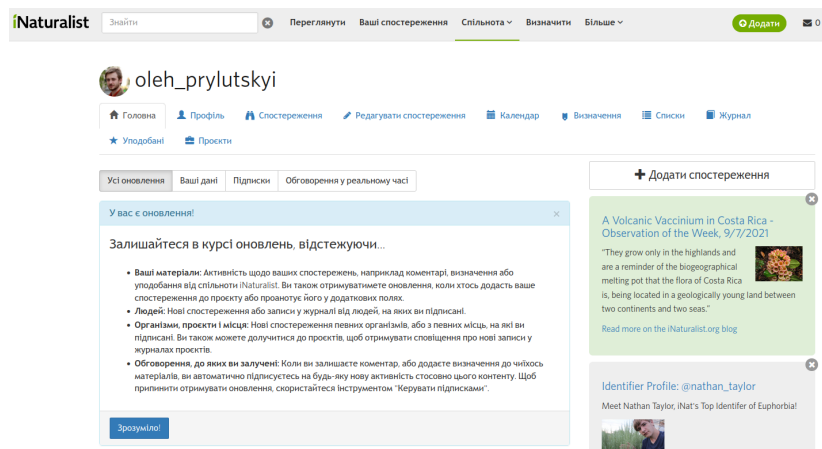
The project worked with many people of which 20 experts digitized, standardized and published biodiversity data in GBIF.

***By the end of the project, there were in total about 397208 new records on biodiversity published as a direct result of our project and earmarked with the project number.***

**Table 1: The list of the data sets published by Ukrainian experts as part of the project work.**  
(The name of the data set is with a hyperlink to the data set in GBIF)

Dataset	N of records	Ukrainian publisher in GBIF
An Extended dataset of registration points of species listed in Resolution 6 and 4 of the Bern Convention	30014	UNCG
Information on the findings of staphylinid beetles (Coleoptera, Staphylinidae) in Ukraine	13705	UNCG
Records of protected animal, plant and fungi species in Ukraine	12473	UNCG
Ichthyofauna of main rivers and floodplain lakes in Ukraine	12017	UNCG
Records of protected plant and fungi species in Ukraine	8345	UNCG
Materials to the mammal atlas of Ukraine	6317	UNCG
Mammals in the collection of Zoological Museum of the National Science and Natural History Museum at the National Academy of Sciences of Ukraine, Kyiv: Muridae.	5986	UNCG
Mammals on map of Ukraine. Materials of the First Ukrainian Mammal Mapping Conference	3614	UNCG
The own findings of fish of Ukraine during 2001 - 2021	3004	UNCG
Animals of Polissya Nature Reserve	2085	UNCG

Small mammals in owl pellets	826	UNCG
Mammals in the collection of Zoological Museum of the National Science and Natural History Museum at the National Academy of Sciences of Ukraine, Kyiv: Erinaceidae, Talpidae, Soricidae, Myoxidae, Sminthidae	1520	UNCG
Records of protected animals species in Ukraine	27729	I.I. Schmalhausen Institute of Zoology
Mammals of Ukrainian Polissia region	994	I.I. Schmalhausen Institute of Zoology
Phytocenoteka of the laboratory of ecosystem theory (Plants)	18003	Zhytomyr Ivan Franko University
Database of animal species of the laboratory of analysis and expertise of biotic resources	1426	Zhytomyr Ivan Franko University
Database of animal species of the laboratory of ecosystem theory	24	Zhytomyr Ivan Franko University
Records of vascular plants, bryophytes and lichens from Ukrainian Grassland Database	247402	M.G. Kholodnyi Institute of Botany
Samples of small mammals in the collections of the Museum of Nature at V.N. Karazin Kharkiv National University	1155	V.N. Karazin Kharkiv National University
Amphibians in the Museum of Nature at V. N. Karazin Kharkiv National University	569	V.N. Karazin Kharkiv National University



**Photo: The project partner in Ukraine – the Ukrainian Nature Conservation Group (UNCG), also has created pages in iNaturalist for specific research projects where biodiversity data is gathered.**

## CAMPAIGN TO PROMOTE COLLECTING AND PUBLISHING BIODIVERSITY DATA

The project's life time overlapped well with the COVID-19 pandemic, which had a crucial impact on the activities with the public and the travels, as gatherings and travels were forbidden or limited to nearly impossible. Nevertheless, using all other available communication forms and tools a lot was communicated resulting in a good number of people that were informed on the importance of data gathering, digitization, registering species and sharing/publishing records. As the list of the project collaborators grew, at the end of the project, when the COVID-19 related rules allowed it, field trips, workshops and meetings were carefully organized, where about 30 people took part.

The project had the intention to print out information materials as, instructional material explaining how to use the UkrBIN platform as it seems that there were some difficulties for many users to use its functions (guidelines for data suppliers and digitizers) and a leaflet for the project and handouts from the workshop. Due to the changed platform printed instructions deemed unneeded, as many people already were using it. The workshop as it was designed, did not take place, instead, meetings with less people were organized, which allowed to provide all the information and to do nearly personal trainings on data digitization and upload in GBIF, which was also the only way due to the COVID19 limitations. In addition, many events in open air took place. Some of these are to be seen on the link below.

<https://www.facebook.com/UkrainianNatureConservationGroup/posts/772354813452683>



*Photos: Some of the workshops in the field, part of the citizens science campaign to promote and assist the involvement of more people in biodiversity data collection and publication. © Yalina Strokina and Mikhail Rusin.*

In conclusion, it can be stated that the project achieved completely and beyond the targets set for the aimed results in:

- Strengthening capacity of Ukraine to collect, standardize and provide data to GBIF;
- Improving awareness on publishing georeferenced biodiversity data;
- Involving more citizens in gathering georeferenced biodiversity data.
- Mobilizing (digitization, standardization and gathering) and publishing nearly 3 times more data than expected.

Some of the developments can be followed on the specific project pages in iNaturalist:

[https://www.iNaturalist.org/observations?d1=2021-06-19&d2=2021-06-20&place\\_id=any&project\\_id=biota-of-rzhyshchiv-commune&verifiable=any](https://www.iNaturalist.org/observations?d1=2021-06-19&d2=2021-06-20&place_id=any&project_id=biota-of-rzhyshchiv-commune&verifiable=any)



**Photo: In addition, the project capitalizes on the work by publishing also an Atlas of the Mammals of Ukraine.**

The project also booked some success in developing further the cooperation between Dutch and Ukrainian biodiversity data software developers and managers, but not as much as initially expected, as the project design was changed pursuing the highest efficiency regarding software tools to be used, where software development was less needed and therefore a support from the Dutch specialists was less needed. However, the project team, has learned a lot on project management, communication and cooperation that helped to achieve these results and certainly has an enormous positive impact on the further development of this cluster and the involved parties – biodiversity data mobilization. **The project team also succeeded greatly in uniting professional researchers and amateur citizen scientists in respecting and valuing each other's work, sharing results and working together to improve the conditions for taking informed decisions on protecting the nature of Ukraine.**



## SUSTAINABILITY AND AFTER PROJECT PLAN

The work on data mobilization in Ukraine continues by the people that were involved until now, who continue to publish data in GBIF,

(As for example: [https://www.gbif.org/uk/publisher/ca2fd897-6108-4361-91f8-b39dc8d12d13?fbclid=IwAR0fjYFxfpjlyX20yEeUklmJ2gXXOf7z2eXHUya2oT3pJd7OX\\_Vpgy4iIno](https://www.gbif.org/uk/publisher/ca2fd897-6108-4361-91f8-b39dc8d12d13?fbclid=IwAR0fjYFxfpjlyX20yEeUklmJ2gXXOf7z2eXHUya2oT3pJd7OX_Vpgy4iIno))

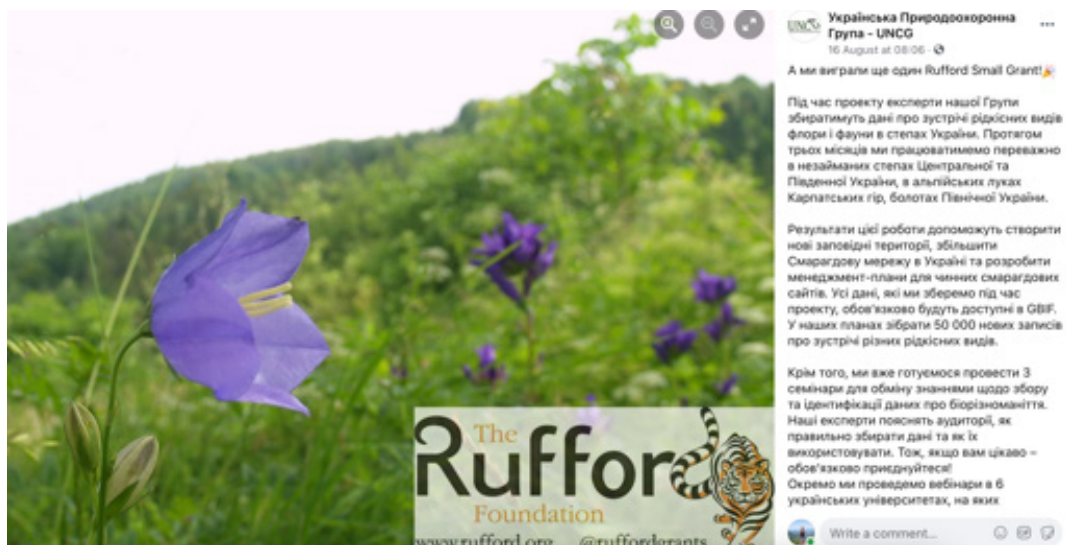
but also, with the new project of UNCG already funded by the Rufford Foundation (UK). This new project will collect data on flora and fauna in the steppes of Central and Southern Ukraine, in the alpine meadows of the Carpathian Mountains and the swamps of northern Ukraine. All data collected will be published also in GBIF. This new project intends also to organise 3 seminars and webinars in 6 Ukrainian universities presenting the methodology for collecting, standardization and publication of data on biodiversity. The results of this work will help gather more biodiversity data, create new protected areas, increase the Emerald network in Ukraine and develop management plans for protected areas.

<https://www.rufford.org/projects/oleksii-vasyliuk/open-biodiversity-data-serving-nature-conservation-ukraine/>

<https://www.facebook.com/UkrainianNatureConservationGroup/photos/a.19783020423848/802317810456383/>

Further promotion of data mobilization and publishing also takes place, as part of the philosophy and attitude of the project partners.

<https://www.facebook.com/UkrainianNatureConservationGroup/photos/a.197830204238483/784586042229560/>



**Photo: The announcement of the new grant for UNCG from Rufford Foundation for biodiversity data mobilisation.**

## PROJECT TIME REALISATION AND AMENDMENTS

**The project realisation was completed within the preliminary agreed project period and with the targeted quality of the project results and products.**

**In order to achieve the project goals, some amendments in the project time planning, budget and team had to be done,** as e.g., repair of UkrBIN was replaced by localisation of iNaturalist, caused by the change in the overall situation in Ukraine, the establishment of the iNaturalist platform and the needed redesign of the project.

The meetings with wider public had to be rethought and redesigned for a COVID19 proved approach - mostly in open air and in smaller groups, in order to comply with the COVID19 recommendations and to ensure the safety of the participants.

The travels for experience exchange of Ukrainian specialists to the Netherlands are not realised yet, again due to the unpredictable COVID situation. (For more details see the project proposal and the time planning table).

However, the project team did its best to accomplish all envisaged on time and with the targeted quality and results and more.

### **Amendments in the time planning:**

The planned travels (*Item in the budget table below: Experience exchange*) for the Ukrainian team to the Netherlands, aiming to enhance the contacts and cooperation, did not take place yet as it was very difficult to plan properly any trip and to arrange meetings with the Dutch counterparts in the different organisations due to the unclear COVID19 situation. The remaining €1750 booked for this activity are not spent, but will be used in the nearest possible moment to realise these travels and meetings as there are many areas where the colleagues from Ukraine can learn from the developments in the Netherlands. These include meeting with Dutch NGOs and sharing knowledge and ideas on data mobilisation, contact with volunteers, data use for nature conservation and planning.

### **Amendments in the budget:**

Initially the project planned to repair the existing UkrBIN data platform, which appear not the best way to achieve the project goals.

After consultation with NLBIF and explaining the changes in the overall situation and the new direction the project team sees as a more sustainable and efficient approach, the proposed amendments in the budget were approved by NLBIF.

The main changes in the amendments were the redirection of part of the project budget from repairing the UkrBIN to translating (the localisation) of iNaturalist, which was the much better online data gathering and management platform, and the translation of the taxa names in Ukrainian language. The decision was taken also as result of considering the long-term sustainability of the platform; the updates of iNaturalist are done by the California Academy of Sciences and the National Geographic Society, which saves thousands of Euros for updates, which would have put in danger the future and the sustainability of the started work, as it was clear that the Ukrainian team will have difficulties ensuring funding for updates.

**Amendments in the team:**

The project had started with one team of people, part of which halfway appeared to have had different understanding for the project goals and the ways these were to be achieved, which created significant discrepancy in the work and jeopardized the targeted results. We had to part with some and identify new project partners, which resulted in a constructive, efficient and very successful collaboration and yield a high-quality results and larger quantities published biodiversity data.

Parting with team members was indeed a very challenging decision and a period, but the wish to realise the planned work prevailed among the remaining team members and new highly motivated people joined, which at the end helped to expand the community of collaborators in Ukraine more, to use better learned lessons, complement efforts and therefore to expand more the overall impact of the project.

**Finally, despite all the changes, the project was realised successfully and achieved more than initially envisaged.**



*Photo: Another Ukraine © Dmitry Sidoruk*