Russia2019_03

Chronicles of Nature of Russian Protected Areas: Digitization and Data Mobilization

EARLY PROGRESS ACTIVITY REPORT

Guidelines on how to complete the activity report are included in italics. You are welcome to remove the guideline text from the document before you submit the report.

Please note that once the activity report has been approved, it will be added to your project page. Therefore, we kindly ask you not to add any contact details of persons in the report unless you have permission from the person to do so.

Contents

Executive summary

Provide a brief explanation of the context and the approach taken for the early progress evaluation, and a summary of the main conclusions, lessons learned and recommendations for the remaining project period.

The project aim is to support biodiversity Nature Reserves Chronicles data mobilization. The main activity in early project implementation period was the preparing of the biodiversity data mobilization training course. We received application forms from 21 Russian protected areas (including 16 from European Russia) and approved 26 students for participation in the course). Among these protected areas, 8 already have GBIF registration and 6 – IPT account. 2 sampling event datasets were published through GBIF.org.

Chronicles of Nature materials were analyzed, preliminary mapping of different data types according Darwin Core was performed. The content of course learning book was composed. The guide book will include 6 topics with "Chronicles of Nature data in Darwin Core" as a central point. This part will contain detailed instructions on digitization of different biodiversity data types such as checklist data for species diversity materials, occurrence data for collections and phenological data, as well as sampling event for berry productivity data and snow track count surveys of mammals.

Contact information

Provide the name, institutional affiliation, role in the project and contact details of the author(s) of the report.

"Prioksko-Terrasnyi Biosphere Reserve"

Zapovednik, Danki, Serpukhovsky rayon, Moskovskaya oblast, Russian Federation, 142200

Represented by: **Yury Buyvolov** - project manager

Introduction

This section should explain to readers what they will find in this report. It should include:

- *A description of how the evaluation has been carried out (e.g. consultation or surveys with project partners and participants).*
- *A description of how the project partners will use the evaluation results.*

Chronicles of Nature are unique archives of annual scientific reports, which collected data of the observations of natural objects in strictly protected areas. The data were collected by professional researchers with standardized methodology and represent long-term data sets on phenological phenomena in the wild nature, abundance and diversity of animals and plants. Thus, the data stored in the archives of Nature Reserves are an important source for assessing the ongoing changes in biodiversity, including consequences of global climate change. In many Reserves Chronicles so far remain not-digitized. This project is aimed at mobilizing Nature Reserves Chronicles data through sharing the experience of the "Prioksko-Terrasny Biosphere Reserve" with staff of other Russian protected areas, training of employees of scientific departments of other institutions under the Ministry of Natural Resources and Environment of the Russian Federation (Minprirody of Russia), as well as the preparation of Russian language guides for Chronicle of Nature data digitization.

The first results of the project are presented in this report. The main activity was the preparing of Data mobilization workshop at this step of the project. List of participants

presents in *Early progress evaluation*… section. We composed content of course guide book and preliminary mapping of different data types from Chronicles of Nature according Darwin Core was performed (see the same section). 2 datasets were published through GBIF.org.

The results of our project will contribute to filling a gap in the Russian data at the international GBIF biodiversity map. New occurrence data from Russia available through GBIF.org will allow doing some more accurate assessments in species distribution modelling, and contribute to development of international cooperation in the field of biodiversity study. It is also important for the national GBIF node establishment.

The project and its objectives

A brief summary of the project to help readers understand its objectives, including, for example:

- *The project's start date and expected duration*
- *A list of project participants and description of the main stakeholders*
- *The targeted capacity needs as outlined in the project proposal*
- *The project objectives and expected deliverables as included in the project proposal*

This short-term project (1 February 2019 – 30 November 2019) is aimed at mobilizing Nature Reserves Chronicles data through sharing the experience of the "Prioksko-Terrasny Biosphere Reserve" with staff of other Russian protected areas, training of employees of scientific departments of other institutions under the Minprirody of Russia, as well as the preparation of Russian language guides for Chronicle of Nature data digitization. New biodiversity and phenological data from European Russia Reserves (20,000+ occurrences) will be published through GBIF.org.

Project activities completed by early progress

This section should summarize the project activities completed by the early progress, with a description of the associated outputs and deliverables. Please highlight any changes from the original plans provided in the full project proposal by filling in the column 'State by early progress report'. If no result has been achieved on a specific point, please indicate it as a "no result achieved yet".

Also, please comment on the extected milestones for the early progress reporting as defined in the contract.

a. Data

Title of dataset	Taxonomic/ geographic/ temporal scope	Approximate number of records	Sampling methodology/protocol used (if relevant)	Geographic accuracy for most records (in m or km, or province, country etc.)	Current state (e.g. undigitized, digitized)	State by early progress report
Phenological observations from Nature Reserves (NR) (separately for each institution)	vascular plants and mammals/NPA of the Russian Federation/ last 20 (and more) years	20000	The Chronicles of Nature monitoring program*	1-5 km on routes or permanent plots inside NR's	Digitized and verified	In work
Species checklists from Nature Reserves (separately for each Reserve)	vascular plants and mammals/NR of the Russian Federation/ present	3000**	Inventory work part of The Chronicles of Nature programme	inside of the borders of the NR	Digitized, not verified	In work

*Filonov, K. P. & Nukhimovskaya, Y. D. The Chronicles of Nature in Zapovedniks of the USSR. Methodological notes. (Nauka Press, Moscow. (Russian)., 1990).

** will be done on the seminar in October 2019 (after September 30)

b. Other deliverables

Description	State by early progress report
Guide book (in electronic publishing only before September, 30)	The Guide book will include 6 topics • Databases: foundations • GBIF data types • Darwin Core standard • Chronicles of Nature data in Darwin Core • Data cleaning • Data publishing using IPT

Data mobilization workshop (before November, 30)
 	
    Place: Moscow oblast, Serpukhovsky rayon, Priokско-Terrasny Biosphere Reserve
 	
    Time: 4 days in October or November 2019
 	
    Target Audience: staff of Russian Protected Areas.
 	
    Teachers: GBIF.ru team, including administrators of Russian IPT installations (Natalya Ivanova, Maxim Shashkov, Ivan Chadin, Nina Filippova) and foreign expert in data mobilization (Larissa Smirnova, Royal Museum for Central Africa, Botanic Garden Meise, Belgium).
	Registration is completed. We received forms from 21 Russian protected areas (26 students). See the List of participants below.
	
	Two information letters sent out. We review metadata and biodiversity data of participants and provide recommendations for preparing for the course.
	
	The course will be 1-4 October 2019 in Vozdvizhenskoye hotel. Accommodation and classroom already booked.

Expected milestones by early progress report

Milestone	Status by early progress report
At least one dataset has been published to GBIF.org	Lapshina E, Ganasevich G, Vasina A, Filippova N (2019). Vegetation releves of rich fens of Malaya Sosva Nature Reserve. Version 1.3. Malaya Sosva State Nature Reserve. Sampling event dataset https://doi.org/10.15468/hpjiw9 accessed via GBIF.org on 2019-05-21
	Shashkov M, Bobrovsky M, Smirnova O (2019). Earthworms population in old-growth taiga forests of Pechoro-Ilych State Nature Reserve. Pechora-Ilych state nature biosphere reserve. Sampling event dataset https://doi.org/10.15468/htk68l accessed via GBIF.org on 2019-05-27.

Project communications

Describe the plans to communicate and share the results of your project with the project stakeholders and broader GBIF community.

The project was presented by Yu. Buyvolov in presentation "International cooperation of Russian Biosphere Reserves in the researches and environmental monitoring on the example of the Prioksko-Terrasnyi BR" on the EuroMAB conference (2-5 April 2019, Dublin, Ireland) on workshop "Developing research forums/platforms & courses/qualifications to improve links between biospheres & research institutes: Developing platforms/forums for sharing research, showcasing Ecobroker. WikiMAB and the Biosphere Journal, and opportunities for Biosphere specific courses/ qualifications/ work placements."

Information about the school-seminar is available on the web site http://gbif.ru/conf

Early progress evaluation findings and recommendations for the remaining project implementation period

This should be the main section of the report, covering for example:

- *An evaluation of the project activities by the early progress and their outputs/deliverables*
- *Any feedback on the project's relevance from the partners and stakeholders*
- *Comments on the project implementation, its efficiency and effectiveness*
- *The management arrangements for the project, including support from the GBIF Secretariat*
- *Any reflection on the early progress evaluation itself that could help inform the project's final evaluation and final report*
- *Areas of success to build on during the remainder of the project implementation*

This section is also an opportunity to draw out the main lessons from the project experience that could be applied in other contexts, including any best practice that others in the GBIF community could apply.

Try to clearly document any changes to the project plans that will be made based on the findings of the early progress evaluation. Please discuss any substantial changes with the GBIF Secretariat dschigel@gbif.org). In addition, please outline any recommendations for the GBIF Secretariat or the community to reinforce the initial successes of the project.

Biodiversity data mobilization training course

The main activity in early project implementation period was the preparing of the biodiversity data mobilization training course. We have prepared and sent out among staff of Institutions under Minprirody of Russia two information letters. We received application forms from 21 Russian protected areas (16 from European Russia) and approved 26 students for participation in the course (see Table 1). Among these protected areas, 8 already have GBIF

registration and 6 – IPT account (in Russian GBIF IPT installation), but none had experience in GBIF data publishing. Besides application forms all participants sent metadata about their Chronicles of nature and another biodiversity data sources.

Table 1

Data mobilization training course
(in Russian «Оцифровка и публикация данных Летописи природы и биологических коллекций заповедников и национальных парков России»)

List of participants

Protected area	GBIF registration	IPT account	Number of participants
Altayskiy Nature Biosphere Reserve	No	No	1
Bashkirskiy Nature Reserve	No	No	1
Belogor'ye Nature Reserve	No	No	2
Bol'shaya Kokshaga Nature Biosphere Reserve	No	No	2
Visherskiy Nature Reserve	No	No	1
Visimsky Nature Biosphere Reserve	No	No	2
Voronezhsky State Nature Biosphere Reservenamed after V. Peskov	Link	Yes	2
Denezhkin Kamen Federal Nature Preserve	Link	Yes	1
I.I. Sprygin Zhiguli State Nature Biosphere Reserve	Link	Yes	1
"Kologrivskiy les" Nature Reserve	No	No	1
Kronotsky Nature Biosphere Reserve	No	No	1
Kuril'skiy Nature Reserve	No	No	1
Malaya Sosva State Nature Reserve	Link	Yes	1
Oka State Nature Biosphere Reserve	Link	No	2
Pechora-Ilych State Nature Biosphere Reserve	Link	Yes	1
Pinezhskiy Nature Reserve	No	No	1
Rostovskiy Nature Reserve	No	No	1
Tigirek State Nature Reserve	Link	No	1
National park "Ugra"	Link	Yes	1
Tsentral'no-Lesnoy Nature Reserve	No	No	1
"Yugyd va" National park	No	No	1

The course will be held 1-4 October 2019 in Vozdvizhenskoye hotel. Accommodation and classroom preliminary booked.

Guide book preparing

Before the approve of our project, we carried out the extensive preparatory work for analysis of Chronicles of Nature materials. Together with Nina Filippova (Yugra State University, Khanty-Mansiysk) we transformed according Darwin Core herbarium and route bird census materials of «Kondinskie lakes» National Park (East Siberia), and vegetation relevés from Malaya Sosva Nature Reserve. All data were published through GBIF (DOI10.15468/qdeet9,

10.15468/wd2fkg, 10.15468/hpjiw9). Based on this experience, preliminary mapping of these data types according Darwin Core has been compiled.

Also we composed the guide book content. The materials will be focused on the features of different types of Chronicles data and based on modern data digitization methods and Darwin Core standard. The guide book will include 6 topics with "Chronicles of Nature data in Darwin Core" as a central point.

- **Databases: foundations.** Short theoretical introduction in basic concepts of informatics.

- **GBIF data types.** Contents will correspond to the BioData courses, but with thematic examples.

- **Darwin Core standard.** Contents will correspond to the BioData courses, but with thematic examples.

- **Chronicles of Nature data in Darwin Core**. This part will contain detailed instructions on digitization of different biodiversity data types such as checklist data for species diversity materials, occurrence data for collections and phenological data, as well as sampling event for berry productivity data and snow track count surveys of mammals.

- **Data cleaning.** Contents will correspond to the BioData courses, but with thematic examples.

- **Data publishing using IPT.** Already existing instructions from GBIF.ru team will be updated in part of using different cores of Darwin Core.

Data publishing

At least one dataset must be published before this report according to the original project proposal. By now we have published following datasets:

Lapshina E, Ganasevich G, Vasina A, Filippova N (2019). Vegetation releves of rich fens of Malaya Sosva Nature Reserve. Malaya Sosva State Nature Reserve. Sampling event dataset https://doi.org/10.15468/hpjiw9 accessed via GBIF.org on 2019-05-20.

First version of the dataset was published in 2018 as a preparation activity of our project

Shashkov M, Bobrovsky M, Smirnova O (2019). Earthworms population in old-growth taiga forests of Pechoro-Ilych State Nature Reserve. Pechora-Ilych state nature biosphere reserve. Sampling event dataset https://doi.org/10.15468/htk68l accessed via GBIF.org on 2019-05-27.

All published datasets have project ID Russia2019_03

Annex – Sources of verification

Sources of verification are for example links to relevant digital documents, news/newsletters, brochures, copies of agreements with data holding institutions, workshop related documents, pictures, etc.

https://pt-zapovednik.ru/problemy-biosfernogo-rezervata-obshhie-dlya-vseh/

https://pt-zapovednik.ru/evromab-2019-s-gordostyu-delimsya-opytom-uchastiya/

http://gbif.ru/conf