

Russia2019_03

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

MID-TERM 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.

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Executive summary

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

Our project supports biodiversity data mobilization of the Chronicles of Nature materials stored in archives of Russian protected areas. During mid-term project implementation period 10 Nature Reserves from European Russia were registered as new GBIF publishers, 7 checklist datasets (total of 3 160 records from European Russia and 6 933 from Far East

of Russia) as well as 9 occurrence and sampling event datasets (total of 20 734 occ.) were published through GBIF.org.

The study guide for Protected Areas staff was developed and available on-line. The guide book contains detailed instructions for digitization of different biodiversity data types such as checklist data for species diversity materials, occurrence data for natural history collections and phenological data, as well as sampling event for berry yield data and surveys on (permanent) sampling plots. Guide book will have used during onsite part of the capacity enchantment course and post-course activities.

The course will hold October 1-4 in Vozdvizhenskoe hotel (near the Prioksko-Terrasnyi Biosphere Reserve). The final program of the Course is completed and shared with students. 24 participants from 18 institutions under the Ministry of Natural Resources and Environment of the Russian Federation, managing Federal protected areas will be trained in data mobilization skills. Especially for the course we created training materials with exercises based on different data types presented in Chronicles of Nature. These materials and other educational tools for teaching will be available for students during the course as well as after the event.

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, Serpukhovskiy rayon, Moskovskaya oblast, Russian Federation, 142200

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Phone:

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 data 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 mid-term results of the project are presented in this report. Many activities were carried out in this step: registration of new GBIF publishers, data publishing through GBIF.org, preparing of Guide book and training materials for the course, as well as organization of the course. Lists of new GBIF publishers, and published datasets are presented in *Mid-term evaluation...* section. Training materials and the Guide book now available online (see section *Sources of verification*).

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 September 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 Protected Areas (20,000+ occurrences and 3000 checklist records) will be published through GBIF.org.

Project activities completed by mid-term

This section should summarize the project activities completed by the mid-term, 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 mid-term 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 expected milestones for the mid-term progress reporting as defined in the contract.

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 mid-term 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	20 000	The Chronicles of Nature monitoring program*	1-5 km on routes or permanent plots inside NR's	Digitized and verified	All data published
Species checklists from Nature Reserves (separately for each Reserve)	vascular plants and mammals/NR of the Russian Federation/ present	3 000**	Inventory work part of The Chronicles of Nature programme	inside of the borders of the NR	Digitized, not verified	All data published The change from the original plans. Data was published before the workshop.

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

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

b. Other deliverables

Description	State by mid-term report
<p>Guide book (in electronic publishing only before September, 30)</p>	<p>The preview version is completed and available on-lain. The final version based on lessons learned during the course will be ready before the final report and will published on GBIF.ru and pt-zapovednik.ru</p>
<p>Data mobilization workshop (before November, 30)</p> <p>Place: Moscow oblast, Serpukhovsky rayon, Prioksko-Terrasny Biosphere Reserve</p> <p>Time: 4 days in October or November 2019</p> <p>Target Audience: staff of Russian Protected Areas.</p> <p>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).</p>	<p>The final program of the Course is completed and shared with participants.</p> <p>Training materials and other educational tools for teaching are developed and will be available for students during the course as well as after the event (via google drive).</p> <p>The final list of participants included 25 people from 20 institutions of Minprirody of Russia engaged in the management of natural reserves of Russia.</p> <p>The workshop will be held from 1 to 4 October in the Park hotel Vozdvizhenskaye, Moscow region, Serpukhov city district.</p> <p>Hotel and classroom were booked</p>

Expected milestones by midterm report

Milestone	Status by mid-term report
All mobilized data has been published to GBIF.org (All published data meet the minimum requirements outlined in the Data Quality Requirements available at http://bid.gbif.org/en/community/data-quality/)	10 new GBIF publishers from European Russia 3 160 published checklist records 20 734 published occurrences

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.

The results of our project will be posted in Social networks (Facebook and Russian popular network VK) and shared through GBIF in Russia mailing list. Training materials, including slides, and the guide book will be available via GBIF.ru and pt-zapovednik.ru.

Mid-term 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 mid-term 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 mid-term 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 mid-term 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.

New GBIF publishers

1. [State Nature Reserve "Belogorye"](#)
2. [Federal state budgetary institution "Visimskiy state reserve"](#)
3. [FGBU GPZ Kologrivskij Les name after M.G. Sinicin](#)
4. [Pinezhsky State Nature Reserve](#)
5. [Yugyd Va National Park](#)
6. [Bryansk Forest Nature Reserve](#)

7. [Pinezhsky State Nature Reserve](#)
8. [Central Forest State Nature Biosphere Reserve](#)
9. [National Park Bashkirija](#)
10. [Federal state budgetary institution "Visimskiy state reserve"](#)

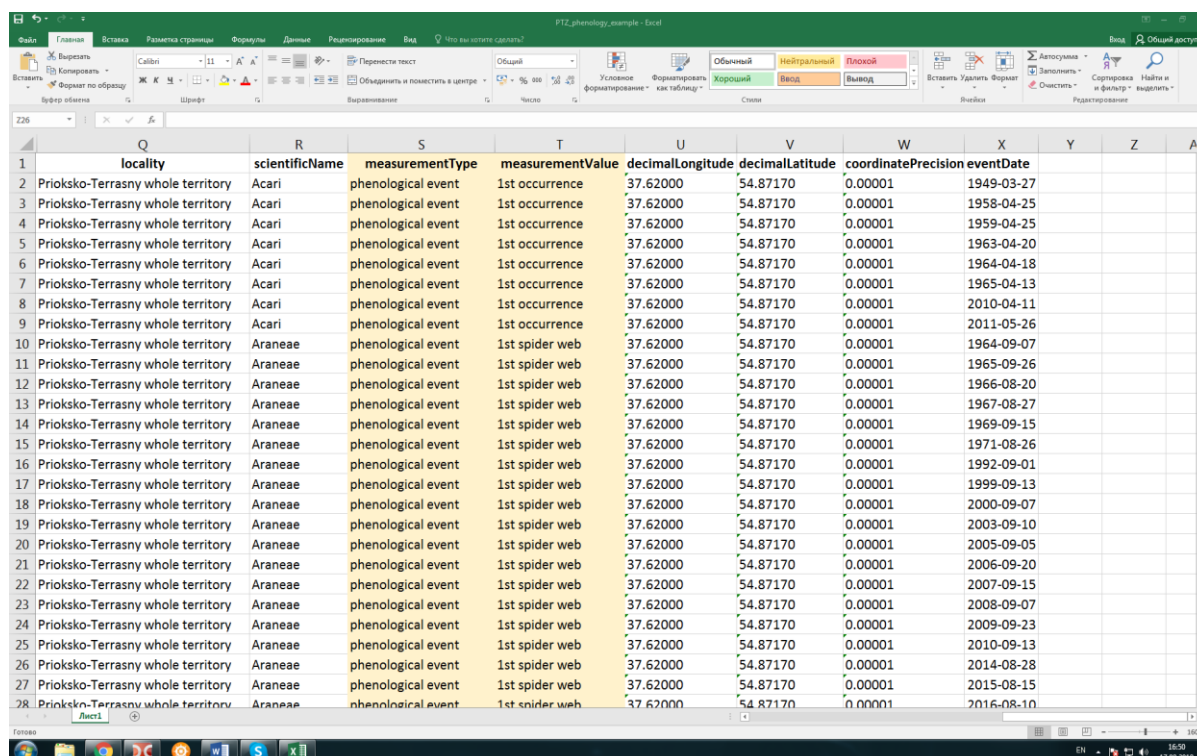
Phenological data standartiozation

In collaboration with Evgeniy Meyke (Eurasian Chronicle of Nature project <http://chronicleofnature.com/>) we developed the scheme for phenological data standartization according Darwin Core. There are not special DwC terms for phenological data. We have consulted with GBIF data specialists (via GBIF helpdesk) and agreed to use the *dynamicProperties* term and folowing terms of *MeasurementOrFact* extension:

measurementType is «phenological event» (the constant)

measurementValue for type of phenological event (quality variable)

Data example see in Fig. 1.



Q	R	S	T	U	V	W	X	Y	Z	A
1	locality	scientificName	measurementType	measurementValue	decimalLongitude	decimalLatitude	coordinatePrecision	eventDate		
2	Prioksko-Terrasny whole territory	Acari	phenological event	1st occurrence	37.62000	54.87170	0.00001	1949-03-27		
3	Prioksko-Terrasny whole territory	Acari	phenological event	1st occurrence	37.62000	54.87170	0.00001	1958-04-25		
4	Prioksko-Terrasny whole territory	Acari	phenological event	1st occurrence	37.62000	54.87170	0.00001	1959-04-25		
5	Prioksko-Terrasny whole territory	Acari	phenological event	1st occurrence	37.62000	54.87170	0.00001	1963-04-20		
6	Prioksko-Terrasny whole territory	Acari	phenological event	1st occurrence	37.62000	54.87170	0.00001	1964-04-18		
7	Prioksko-Terrasny whole territory	Acari	phenological event	1st occurrence	37.62000	54.87170	0.00001	1965-04-13		
8	Prioksko-Terrasny whole territory	Acari	phenological event	1st occurrence	37.62000	54.87170	0.00001	2010-04-11		
9	Prioksko-Terrasny whole territory	Acari	phenological event	1st occurrence	37.62000	54.87170	0.00001	2011-05-26		
10	Prioksko-Terrasny whole territory	Araneae	phenological event	1st spider web	37.62000	54.87170	0.00001	1964-09-07		
11	Prioksko-Terrasny whole territory	Araneae	phenological event	1st spider web	37.62000	54.87170	0.00001	1965-09-26		
12	Prioksko-Terrasny whole territory	Araneae	phenological event	1st spider web	37.62000	54.87170	0.00001	1966-08-20		
13	Prioksko-Terrasny whole territory	Araneae	phenological event	1st spider web	37.62000	54.87170	0.00001	1967-08-27		
14	Prioksko-Terrasny whole territory	Araneae	phenological event	1st spider web	37.62000	54.87170	0.00001	1969-09-15		
15	Prioksko-Terrasny whole territory	Araneae	phenological event	1st spider web	37.62000	54.87170	0.00001	1971-08-26		
16	Prioksko-Terrasny whole territory	Araneae	phenological event	1st spider web	37.62000	54.87170	0.00001	1992-09-01		
17	Prioksko-Terrasny whole territory	Araneae	phenological event	1st spider web	37.62000	54.87170	0.00001	1999-09-13		
18	Prioksko-Terrasny whole territory	Araneae	phenological event	1st spider web	37.62000	54.87170	0.00001	2000-09-07		
19	Prioksko-Terrasny whole territory	Araneae	phenological event	1st spider web	37.62000	54.87170	0.00001	2003-09-10		
20	Prioksko-Terrasny whole territory	Araneae	phenological event	1st spider web	37.62000	54.87170	0.00001	2005-09-05		
21	Prioksko-Terrasny whole territory	Araneae	phenological event	1st spider web	37.62000	54.87170	0.00001	2006-09-20		
22	Prioksko-Terrasny whole territory	Araneae	phenological event	1st spider web	37.62000	54.87170	0.00001	2007-09-15		
23	Prioksko-Terrasny whole territory	Araneae	phenological event	1st spider web	37.62000	54.87170	0.00001	2008-09-07		
24	Prioksko-Terrasny whole territory	Araneae	phenological event	1st spider web	37.62000	54.87170	0.00001	2009-09-23		
25	Prioksko-Terrasny whole territory	Araneae	phenological event	1st spider web	37.62000	54.87170	0.00001	2010-09-13		
26	Prioksko-Terrasny whole territory	Araneae	phenological event	1st spider web	37.62000	54.87170	0.00001	2014-08-28		
27	Prioksko-Terrasny whole territory	Araneae	phenological event	1st spider web	37.62000	54.87170	0.00001	2015-08-15		
28	Prioksko-Terrasny whole territory	Araneae	phenological event	1st spider web	37.62000	54.87170	0.00001	2016-08-10		

Figure 1. Table with fields from MeasurementOrFact extension for description of phenological data

Published Phenological Observations and Another Materials of the Chronicles of Nature Monitoring Program

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 2019-09-12.	34 occurrences
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/hpjw9 accessed via GBIF.org on 2019-09-12.	1427 occurrences
Zablotskaya M M, Shishkin V, Dem'yanetc S, Buyvolov Y (2019). Bird survey at the permanent sample plots in the Prioksko-Terrasnyi Biosphere Reserve recorded in Chronicles of Nature. Version 1.4. Prioksko-Terrasnyi Biosphere Reserve. Sampling event dataset https://doi.org/10.15468/jryqih accessed via GBIF.org on 2019-09-12.	3397 occurrences
Evstigneev O. Chronicle of Nature - Phenology of Plants of Bryansk Forest Nature Reserve (plot based). Bryansk Forest Nature Reserve. Occurrence dataset https://doi.org/10.15468/6y6wrg accessed via GBIF.org on 2019-09-12.	14084 occurrences
Kossenko S. Chronicle of Nature - Phenology of Birds of Bryansk Forest Nature Reserve. Bryansk Forest Nature Reserve. Occurrence dataset https://doi.org/10.15468/6n2h3u accessed via GBIF.org on 2019-09-12.	934 occurrences
Evstigneev O. Chronicle of Nature - Phenology of Plants of Bryansk Forest Nature Reserve. Bryansk Forest Nature Reserve. Occurrence dataset https://doi.org/10.15468/gyh2mw accessed via GBIF.org on 2019-09-12.	382 occurrences
Kruglikov S. Chronicle of Nature - Phenology of Insects of Bryansk Forest Nature Reserve. Bryansk Forest Nature Reserve. Occurrence dataset https://doi.org/10.15468/y6bdmw accessed via GBIF.org on 2019-09-12.	157 occurrences
Bryansk Forest Nature Reserve. Chronicle of Nature - Phenology of Mushrooms of Bryansk Forest Nature Reserve. Occurrence dataset	78 occurrences

https://doi.org/10.15468/rrtqtg accessed via GBIF.org on 2019-09-12.	
Kruglikov S. Chronicle of Nature - Phenology of Arachnids of Bryansk Forest Nature Reserve. Bryansk Forest Nature Reserve. Occurrence dataset https://doi.org/10.15468/qrotzy accessed via GBIF.org on 2019-09-12.	11 occurrences
Buyvolov Y, Sycheva T (2019). Data assessment of the annual berries yields in the Prioksko-Terrasnyi Biosphere Reserve recorded in Chronicles of Nature. Prioksko-Terrasnyi Biosphere Reserve. Sampling event dataset https://doi.org/10.15468/e4xgg9 accessed via GBIF.org on 2019-09-20.	230 occurrences
TOTAL OF	20 734 occurrences

Published Species Checklists from Nature Reserves

Alekseev Y, Sycheva T, Denisova L (2019). Vascular plants checklist of Prioksko-Terrasnyi Biosphere Reserve. Version 1.2. Prioksko-Terrasnyi Biosphere Reserve. Checklist dataset https://doi.org/10.15468/oihrei accessed via GBIF.org on 2019-09-12.	990 records
Ignatov M, Ignatova E, Sycheva T (2019). Moss checklist of Prioksko-Terrasnyi Biosphere Reserve, European Russia. Version 1.1. Prioksko-Terrasnyi Biosphere Reserve. Checklist dataset https://doi.org/10.15468/er5taj accessed via GBIF.org on 2019-09-12.	156 records
Lyubvina I V (2019). The list of short-horned flies (Diptera, Brachycera) of the Zhiguli Reserve. Version 1.3. I.I. Sprygin Zhiguli State Nature Biosphere Reserve. Checklist dataset https://doi.org/10.15468/skqldm accessed via GBIF.org on 2019-09-12.	653 records
Lebedeva G P (2019). The List of Bird Species of Samara Oblast. I.I. Sprygin Zhiguli State Nature Biosphere Reserve. Checklist dataset https://doi.org/10.15468/vcbgh3 accessed via GBIF.org on 2019-09-12.	310 records
Starodubtseva E (2019). Vascular plants of Voronezhsky Biosphere Reserve. Version 1.3. VORONEZHSKY STATE NATURE BIOSPHERE RESERVE NAMED AFTER V. PESKOV. Checklist dataset https://doi.org/10.15468/hronv7 accessed via GBIF.org on 2019-09-12.	1051 records
TOTAL OF	3160
extra datasets	

Linnik E, Pirtskhalava-Karpova N, Tikhonova V (2019). FLORA OF THE KURILSKIY NATURE RESERVE. Version 1.1. State Nature Reserve Kurilsky. Checklist dataset https://doi.org/10.15468/npmkha accessed via GBIF.org on 2019-09-12.	1916 records
Dataset Fauna of the Kurilskiy reserve	5017 records

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.

Training materials https://docs.google.com/spreadsheets/d/1MWMs_M3IKXssqU0wiDVvEkpS2BfwNFHT-hFigGYU/edit?usp=sharing

Guide book <https://docs.google.com/document/d/1zaJ7h4OfZ6WWQhXmtHvkvad32trMWEPqY2zn6CBfCM/edit?usp=sharing>

<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>