

Biodiversity portal of the Northern part of West Siberia, Russia

Nina Filippova¹, Ilya Filippov¹, Natalya Ivanova²

¹ Yugra State University, Khanty-Mansiysk, Russian Federation, filippova.courlee.nina@gmail.com

² Institute of Mathematical Problems of Biology, Russian Academy of Sciences, Pushchino, Russian Federation

Biodiversity-related studies in the northern part of West Siberia are relatively recent and have been conducted in line with the ongoing intensive industrial development of the region. Biological collections in the relatively recently established universities and older nature reserves are still few and often inaccessible. Still, the Department of Natural Resources pays considerable attention to the sustainable use of natural resources.

Previous experience with biodiversity information systems has been very scarce. In 2010, the Department of Natural Resources of Yugra facilitated a program on digitization of observations of species from the Regional and Federal Red Lists; the information system for redlisted species records was developed through this project and currently contains about 3000 observations.

Another biodiversity data digitization project was developed for the biological collection of Yugra State University. Its database uses **Specify**, a biodiversity data management system, and is available online (<http://bioportal.ugrasu.ru>). Some of the region's nature reserves have also started to digitize their collections.

The need of biodiversity data mobilization is urgent and has been discussed at conferences (2015, 2017, 2019) on biological collections management held in Khanty-Mansiysk. In 2019, the conference included a workshop organized by the **Russian GBIF ambassadors** community, with presentations about the Global Biodiversity Information Facility and the national initiatives of biodiversity data mobilization. The practical part of the course included workshops on data cleaning, Darwin Core format, and practice on preparation of the dataset to publish different types of biodiversity data in GBIF.

Recently, the biologists curating several biological collections in the region started a project on a regional biodiversity portal development (<https://nwsbios.org>).

The portal has three major components:

- database of collections based on Specify software (<http://bioportal.ugrasu.ru>),
- metadata of different sources of biodiversity information in the region,
- educational platform for learning biodiversity informatics, using data published via GBIF and Dwc standards.



the seminar on Biological collections in Yugra, 2019 (by Sergei Shipshely)

This initiative of biodiversity data mobilization in the region includes the organization of workshops, discussions and newsletters helping to reach potential data holders and coordinate work. In 2019, six major organizations in Yugra began uploading data to GBIF:

1. Yugra State University
2. Yuganskiy Nature Reserve
3. Malaya Sosva Nature Reserve
4. Kondinskies Oзера Nature Park
5. Museum of Nature and Man (Khanty-Mansiysk)
6. Regional Ecocenter (Megion)

At present there are about 46.000 occurrences mobilized in GBIF from the Khanty-Mansi and Yamalo-Nenets regions. From these occurrences, two thirds are published by the Yugra State University, about a third – by the Moscow State University, with some fractions of observations from iNaturalist and other organizations.

This represents only 2% of all published occurrences in Russia; however, for West Siberia alone, with its 10 administrative regions, this constitutes a third (33%) of the mobilized biodiversity data.

We hope that the program of biodiversity data mobilization will have development and significant results in the future. The integrated massive publishing of data in the portal will provide new opportunities for biodiversity research and sustainable management of nature resources in the northern part of West Siberia.

The project is partially supported by the INTERACT Virtual Access under EU-H2020 Grant Agreement No.730938 and by the Yugra State University grant number 13-01-20/39.

The authors are deeply grateful to Eugene Zarov for his help with preparing this poster.



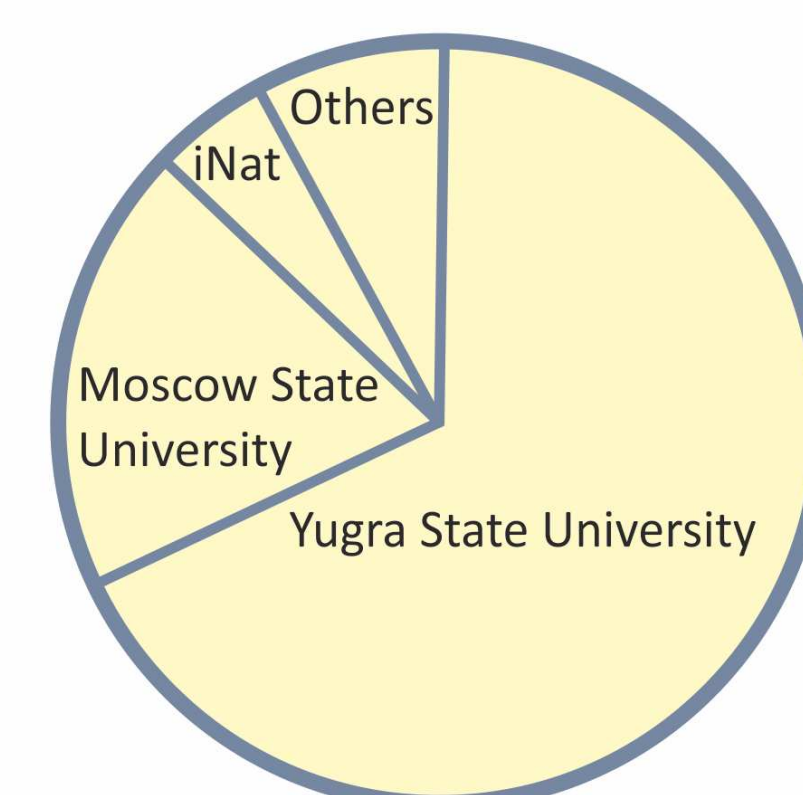
“Biological collections of Yugra” and data mobilization workshop materials



Northern West Siberia Biodiversity Portal

- The Yugra State University initiated a biodiversity data digitization project to mobilize records from Khanty-Mansi and Yamalo-Nenets Autonomous Regions
- Biological collections are integrated into global nodes using **Specify** software
- Six major organizations have joined the effort and are publishing their collections in **GBIF**:

Yugra State University
Yuganskiy Nature Reserve
Malaya Sosva Nature Reserve
Kondinskies Oзера Nature Park
Museum of Nature and Man
Regional Ecocenter



The sources of published occurrences for Northern West Siberia (two administrative regions) in GBIF

- YSU is holding seminars on data digitization and mobilizations for biologists in the region
- Number of records contributed to GBIF is approaching 50 000
- Data is available online at <http://bioportal.ugrasu.ru>



Pensoft publication page of the abstract