



*Declining size - a general response to climate warming in Arctic fauna? (DWARF)
Contract number: Pol-Nor/201992/93/2014*

Kick-off Meeting Report

Institute of Oceanology Polish Academy of Sciences, Sopot 4th April 2014

Project Title: Declining size - a general response to climate warming in Arctic fauna? (DWARF)

Project Acronym: DWARF

Funding body: Polish-Norwegian Research Programme – ‘Norway Grants’

Duration: February 2014 – January 2017

Partner Organizations: Institute of Oceanology of Polish Academy of Sciences, Sopot, Poland;
University of Oslo, Oslo, Norway;
Norwegian Institute for Nature Research, Tromsø, Norway;
Akvaplan-Niva, Tromsø, Norway

Purpose of this document

The DWARF project has been developed as an initiative of Polish and Norwegian researchers interested in conducting scientific investigations in the field of climate warming effects on the size of the biota in the Arctic. One of the first initiative after project has been accepted for funding was the kick-off meeting held in the Institute of Oceanology, Polish Academy of Science, Sopot on 4th April 2014. The meeting was initially scheduled for second months of the project duration, but it has to be postponed to the third month to secure the possibility of all researchers involved to participate in the meeting. The purpose of the meeting was to establish personal links between project partners investigators, present the partner research organizations, discuss project structure and research strategy. This documents summarises the discussion held during the meeting.

Kick-off Meeting Agenda

Date: April 4th 2014
Place: Instytut Oceanologii Polskiej Akademii Nauk, Powstańców Warszawy 55, Sopot, Poland
Participants: As per the attached attendance list

09.00 – 09.10 - Maria Włodarska-Kowalczyk: Opening, Welcome and Practical Information
09.10 – 09:30 - Partners / members of the Project introduction
 09.10-09.15 - Maria Włodarska-Kowalczyk – IO PAN
 09.15-09.20 - Hans Peter Leinaas – UiO
 09.20-09.25 – Martin A. Svenning – NINA
 09.25-09.30 – Paul Renaud - APN
09.30 – 09.40 - Maria Włodarska-Kowalczyk: Brief project introduction
09.40 – 10:35 - Presentation of DWARF work packages
 09.40 – 10.00 - Hans Peter Leinaas: WP1 - Terrestrial fauna and
 10.00 – 10.20 - Martin A. Svenning: WP2 - Limnetic Fauna
 10.20 – 10.40 - Sławomir Kwaśniewski: WP3 - Marine Pelagic Fauna
 10.40 –11.00 - Maria Włodarska-Kowalczyk: WP4 – Marine Benthic Fauna (soft bottom)
11.00-11.30 - Coffee break
11.30 – 12.30 - Presentation of DWARF work packages
 11.30-11.50 - Piotr Kukliński: WP4 – Marine Benthic Fauna (Bryozoa)
 11.50-12.10 - Joanna Pawłowska: WP5 – Paleontological Record of Size Spectra in
Holocene
 12.10-12.30 - Jan Marcin Węsławski: WP7 – Synthesis of the Results, Transfer of Knowledge
and Public Outreach
12.30-13.00 – Dissemination of Knowledge and Public Outreach - Discussion
13.00 – 14:30 - Lunch
14.30 – 14.45 - Joanna Piwowarczyk – Management, financial and administrative issues
14.45 -16.30 - Discussion – schedules, links among working packages, synthesis of the
results
18.00 - Dinner

17 persons have participated in the kick-off meeting: 14 from the Institute of Oceanology Polish Academy of Science, Sopot; 1 person from the University of Oslo, 1 person from Norwegian Institute for Nature Research and 1 person from Akvaplan Niva. The attendance list has been attached to the report.



Photo 1. The DWARF project research team during kickoff meeting in Sopot, 4th April 2014 (photo by Robert Gogacz).

Minutes from the Kick-off Meeting

Opening, Welcome and Practical Information

Dr Maria Włodarska-Kowalczyk (IO PAN, DWARF project coordinator) welcomed the participants. A short introduction about the meeting agenda was given.

Round table presentation

All participants introduced themselves.

Partner institutions presentations

The four partner institutions were introduced during the presentations given by Dr Maria Włodarska-Kowalczyk (IO PAN), Dr Martin Svenning (NINA), prof. Hans Peter Leinaas (UiO) and Dr Paul Renaud (APN). The mission, organization structure, main research directions, and logistical platforms of the respective institutions were reviewed in the presentations.

Brief project introduction

Dr Maria Włodarska-Kowalczyk (IOPAN), the project coordinator, give and introduction to the project. She has summarized the basic information about the project. She presented the rational, objectives and scientific hypothesis of the project. She has presented briefly the structure of the project and the project work plan that is divided into the seven work packages. She has informed about the budget, the project time schedules and the deliverables. Then she asked the leaders of the work packages to present their work packages, including some introduction to the subjects of study, the aims and the work plan.

WP 1 – Terrestrial Fauna and WP 6 – Database and literature survey on relationships between genome-, cell- and body size and temperature (or habitat)

Prof. Hans Peter Leinaas (UiO) presented both work packages that will be led by University of Oslo (the WP1 that he is leading and the WP 6), as the leader of WP6- prof. Dag Hessen could not come to the meeting. He introduced the subject of temperature-size relations from the cellular-genomic perspective. He presented the possible approaches and methodologies based on an example of his previous some results on body and genome size comparisons of marine copepods sampled along the latitudinal/thermal gradient. Then he introduced the taxa that will be of interest for the WP1 - terrestrial Collembola and insects and summarized the tasks that will be performed during the DWARF project. He also presented some examples of the documented changes in genome size related to latitude/temperature gradient for selected species. And presented the plans for WP6 - including the collection of data on genome size, body size and temperature preferences (habitat) from existing data (bases) and search for the latitude/temperature related patterns in a wide spectrum of species.

WP 2 – Limnetic Fauna

Dr Martin Svenning (NINA) gave the presentation on the general structure and aims of this WP. First he introduced the environmental settings and fauna of freshwater ecosystems in Norwegian lakes (including Svalbard). He presented the species that will be of interest for this WP – the only freshwater fish that occurs in Svalbard lakes – Arctic char and 3 species of freshwater Crustacea *Lepidurus arcticus*, *Mysis relicta/segerstralei* and *Gammarachanthus loricatus*. He explained the basic facts of population biology of an anadromous Arctic charr in Arctic lakes, especially those aspects that can influence the size related studies. Then he reviewed the tasks that are planned for WP2. He talked about the sampling campaign that will be performed together with WP1. He discussed the logistics of transportation by the available ships and sampling in lakes located along the western and northern coasts of Svalbard islands. Prof. Jan Marcin Węśławski informed about the freshwater benthic crustaceans collection at IO PAN that could be used for the analyses planned by WP2 .

WP3 – Marine Pelagic Fauna

Dr Sławomir Kwasniewski (IO PAN) presented the goals and working plan of WP3. First he introduced the pelagic researchers involved in WP3 and their roles. He referred to the previous studies related to climate change impacts on size distributions in pelagic communities. He underlined the importance of size spectra in functioning of pelagic systems. He briefly presented some of the results of zooplankton communities' studies performed by IO PAN in west Spitsbergen fjords. Then he presents the goals, the methods and the working plan for the WP3 with the special focus on the activities that will be performed in 2014. He also listed and briefly commented on the deliverables that will be prepared based on the results obtained by WP3.

WP4 – Marine Benthic Fauna

This working package was presented by dr Maria Włodarska-Kowalczyk (the WP4 leader, IO PAN) and by dr Piotr Kukliński (who will lead the tasks related to hard bottom fauna). Dr Włodarska-Kowalczyk presented the tasks related to the assessment of benthic biomass size spectra (BBSS) in soft bottom communities and patterns in size distributions in populations of selected benthic species. She outlined the plans for the sampling campaigns in 2014 that will involve sampling in Ullsfjorden, two fjords off west Spitsbergen and Ripfjorden performed from board of r/v Oceania and r/v Helmer Hansen. She stated that the biomass size spectra studies in the benthic ecology were very rare and there were still a lot of methodological problems that needed to be overcome. She has presented the methodology of assessing the BBSS that will be employed in DWARF project. The problems connected with setting the size of subsample of nematodes that needs to be measures as well as with

assessing the biovolumes of polychaetes that are often destructed in the sample sieving process has been discussed with the participants of the meeting. Dr Włodarska-Kowalczyk then presented the working plan for the task related to assessment of size structure in populations of selected benthic species. The second part of WP4 was presented by Dr Piotr Kuklinski who will work with bryozoan zooid size as an indicator of environmental changes. He gave a brief introduction to the developmental biology of Bryozoa colonies and presented the tasks methods that will be employed in DWARF WP4. He also present the results of his comparative study of zooid size in genus *Microporella* in tropical, boreal and polar populations. While presenting the working plan he informed that he had got the possibility to work with an extensive collection of Bryozoa specimens collected in Iceland offshore waters throughout the XXth century. The possibilities of usage of other museum collections that include Bryozoa from Norwegian coastal waters sampled in XXth century, especially those from the beginning of the century (from time before the warming) was discussed by the meeting participants.

WP5 - Paleontological Record of Size Spectra in Holocene

Joanna Pawłowska (IO PAN) gave a brief introduction to the rational, tasks and working plan of WP5. She described the object of the study – Foraminifera as paleontological proxies of environmental changes in the past. She has presented a short overview of the studies of Foraminifera in Spitsbergen waters in Holocene performed at IO PAN. She presented some first reports on Foraminifera tests as indicators of environmental changes in the past. She also described the working plan and the methodology for the research planned in WP5.

WP7 - Synthesis of the Results, Transfer of Knowledge and Public Outreach

Prof Jan Marcin Węśławski (IO PAN) presented the working plan, tasks and deliverables of WP7. The synthesis of the project results will be presented in the scientific paper that will summarise and synthesise the main outcomes of all working packages. The transfer of knowledge will be conducted through publications of scientific papers in well-recognized scientific journals, conference presentations but also direct contacts with decision-makers and other stakeholders' representatives. Prof. Węśławski described all the activities that will involve the public outreach. He has presented the plan to publish a popular book (preliminary title "Size matters") presenting the importance of size as a multi-facial descriptor of ecosystem functioning in the context of climate change and to prepare a set of lessons scenarios downloadable from the project web-site. Then he presented a project of a web site. He listed the information that will be needed from all project participants to be downloaded to the web page. He also presented some examples of popular books and brochures that were produced for previous projects conducted at IO PAN. That has initiated the discussion on the similar products that will be developed for the DWARF project.

Management, financial and administrative issues

Joanna Piwowarczyk (IO PAN) on the administrative issues related to project execution such as audit obligation after spending at least of 60% of the planned budget. The audit will be required separately for Polish and Norwegian partners. She has introduced the basics of the promotion plan. The project is obliged to organized two major events in the promotion plan, is also obliged to set up a project web site and the project logo. She has underlined the obligation to include logos of the Polish-Norwegian Research Program, logo of the funder the Norway Grants and logo of the program operator: National Centre for Research and Development in all the presentations related to the project. All publications related to the DWARF Project, or resulted from project activities must have official acknowledgements form. All details of promotion will be summarised in the Project Promotion Plan. Document is scheduled as one of the deliverables of WP7 as will be distributed between project partners. Joanna Piwowarczyk has also introduced Mr Radek Małolepszy as the administrative officer responsible for DWARF project at IO PAN, informed on the contact details to persons responsible for

DWARF at IO PAN and asked for the information of the respective contacts at the partner institutions to be sent to IO PAN just after the meeting.

The open discussion followed the presentations. During discussion there was a brain storming on project logo design, based on the proposals developed at IO PAN and presented by Maria Włodarska-Kowalczyk. Also the web page structure was discussed. The issue of the developing of closer interlinks among the working packages was raised. Some possible points to increase the collaborations between the WPs were proposed – as the need to coordinate the selection of benthic invertebrate crustacean taxa for studies in WP2 and WP4, or the possibility of genome- and cell- size analyses to be extended to marine species. Dr Paul Renaud has raised the question on the need to standardise the methods and units used for size assessment in various WPs. The subject was discussed by the representatives of different WPs and the conclusion of usage of biomass related units at the community level and dimensions of organisms as the size descriptor for population level assessment was agreed. There was also discussion on the major promotion events. The possibility of proposing a special thematic session for DWARF project at Arctic Frontiers Conference in January 2017 was discussed. The possibility of coordinating of the promotional activities with the other two ecologically focused projects funded by the Polish-Norwegian Research Programme that are led by IO PAN (GLAERE and POLNOR) was indicated by prof. Jan Marcin Węśławski. That could, for example involve proposing the three respective thematic sessions (related to the three projects) at an international conference in the field of climate change impacts on the Arctic ecosystems. The ‘coffee table’ book presenting the three projects could also be prepared in cooperation with researchers involved in GLAERE and PONOR projects.

The meeting was closed by dr Włodarska-Kowalczyk who expressed her gratitude to all meeting participants for their presentations and contributions to the discussion.