

DAINA – Polish-Lithuanian Funding Initiative

**Project ADAMANT**

"Arctic benthic ecosystems under change: the impact of deglaciation and boreal species transportation by macroplastic".

**Joint project webinar, November 25, 2020.**

Marine Research Institute, Klaipėda University (Klaipėda) – Institute of Oceanology, Polish Academy of Sciences (Sopot)

<b>Author(s)</b>	<b>Title</b>	<b>Content</b>
Diana Vaiciute, Edvinas Tiškus, Katarzyna Dragańska-Deja, Martynas Bučas, Mariano Bresciani, Jacek Urbanski, Claudia Giardino	REMOTE SENSING OF TURBIDITY PLUMES IN GLACIATED AND ICE- FREE FJORDS OF SVALBARD (ARCTIC).	This work is aiming to map turbidity plumes in glaciated and ice-free fjords of Svalbard through the application of in situ surveys and optical satellite imagery. On 22-30 July 2019, several field campaigns have been organized over the fjords of Svalbard in order to measure remote sensing reflectance (Rrs) and water turbidity. For the mapping of turbidity plumes MultiSpectral Instrument onboard Sentinel-2 satellite data have been used. In addition, thermodynamic exchanges across ice-ocean boundary layer will be investigated using SST maps derived from Landsat 8 satellite images.
Saulė Medelytė	SEABED VIDEO-IMAGERY ANALYSIS: METHODS AND APPLICATION.	During two expeditions in 2018 (Hornsund) and 2019 (Isfjord), 312-minute video footage was collected. This material was used to create video mosaics of the seabed and to identify biological features. This study presents the methods and results of the work, as well as the possibility of creating a connection for the future automatic classification of the features of the seabed. In total, 205 video mosaics were created. Taxonomic identification of benthic species was done via digital catalogue with the help of specialists where over 40 biological seabed features were identified.
Tobia Politi	BENTHIC NITROGEN PROCESSES AND ECOSYSTEM FUNCTIONING ALONG ENVIRONMENTAL GRADIENTS IN THE ARCTIC MARINE SYSTEM (A SPITSBERGEN FIORD)	In this study we analysed the role of benthic macrofauna on the main nitrogen pathways at two sites in Kongsfjorden fjord (west Spistbergen, Svalbard).
Jonas Gintauskas,	TESTING OF SPACEBORNE RADAR	The paper presents the opportunity to use

Martynas Bučas, Diana Vaičiūtė	USE FOR MACROALGAE MAPPING IN THE INTERTIDAL ZONE OF SVALBARD (ARCTIC).	a spaceborne radar for mapping of macrophytes
Mantas Liutkus, Sergej Olenin	DIVERSITY AND DISTRIBUTION OF MACROPLASTICS IN THE INTERTIDAL ZONE OF CENTRAL SPITSBERGEN BASED ON THE ANALYSIS OF GEOREFERENCED IMAGES.	In July 2019, we surveyed nine tidal sites in the central eastern Svalbard, six in Isfjord and three in the adjacent Forlandsundet Strait. All visible objects (> 1 cm) were photographed, each photo included geolocation data. The paper presents the features of the micro-scale (hundreds of meters) and medium-scale (kilometers - tens of km) distribution of macroplastic depending on the distance from the ocean, the configuration of the coastline and the wave run.
Andrius Šiaulys, Saulė Medelytė	IDENTIFICATION AND CLASSIFICATION OF BENTHIC COMMUNITIES AND HABITATS IN HORNSUND AND ISTFJORDEN BASED ON ANALYSIS OF UNDERWATER IMAGES.	Underwater imagery was used to identify biological features and reveal the structure of upper sublittoral benthic communities near the retreating glaciers in comparison with ice-free areas: a case study from Adriabuka and Burgerbukta (Hornsund, 2018) and Gipsvika and Borebukta (Isfjorden, 2019). The imagery was also used for quantitative (formalized) classification of benthic habitats.
Aurelija Samiloviene, Andrius Šiaulys, Sergej Olenin	EPIGENETICS OF INVASIVE AND NATIVE POPULATIONS OF TARGET SPECIES	Epigenome analysis was performed for two target species, the invasive <i>Gammarus oceanicus</i> and local <i>Gammarus setosus</i> . Two populations of <i>G. oceanicus</i> (collected at Trygghamna and Eidembukta) and two populations of <i>G. setosus</i> (collected at Trygghamna and Borebukta) were analysed for the detection of polymorphism in DNA methylation patterns. The results showed that both species had significantly higher epigenetic diversity than genetic diversity. No global epigenetic differences, as well as differences in genetic variation, were found among the <i>G. oceanicus</i> populations. However, despite minor differences in epigenetic variability, the two populations of <i>G. setosus</i> did differ significantly in their genetic variability. The needs and possibilities for analyzing more populations of both species (eg more distant populations that live in more different

		environments and / or local populations of <i>G. oceanicus</i> ) will be discussed.
Tomas Ruginis	distribution of native and alien gammarus species in the western part of nordenskjöld land, central spitsbergen	Gammarids were collected in the nine places along the walking expedition route in the intertidal zone of the of Nordenskjöld Land, Central Spitsbergen (August 2019). The results will be presented briefly.
Zosia Legezynska & Maria Włodarska - Kowalczyk	Benthic fauna from Gipsvika and Yoldiabukta	
Kajetan Deja	Recent (2020) sampling in Isfjorden - river mouth bays	
Josef Wiktor, Agnieszka Tatarek	Long-term studies on macrophytes distribution	
Lech Kotwicki	Macro-plastic distribution on the beaches of Svalbard	
Jan Marcin Węśławski, Joanna Legeżyńska, Lech Kotwicki, Mikołaj Mazurkiewicz, Sergej Olenin	Species competitive exclusion or coexistence as a result of climate change in the Arctic?	The occurrence of boreal intertidal crustacean ( <i>Gammarus oceanicus</i> ) and its potential competitor, sibling, local arctic <i>G. setosus</i> , have been studied in the scale of a single Spitsbergen fjord in summer seasons 2017-2019, and compared with the large scale sampling of the whole archipelago summers 2000- 2015.
Mikołaj Mazurkiewicz	Online database for the coastal fauna of Svalbard with special reference to the intertidal zone	The database is created for coastal locations visited by scientist from IO PAS visited since 1983. Coastal units are presented as their midpoints, while their lengths are provided in the 'Station data' panel. The system allows to download the map, filter out only the locations that have photos, preview presence and absence data separately or simultaneously
Dzmitry A. Lukashanets (invited speaker. National Antarctic Program, SPCB, Academy of Sciences of Belarus)	Biological diversity in the area of the Belarusian Antarctic Station (Enderby Land, East Antarctica)	

24:15



omas Ruginis ...



Lechi (Guest)



Aurelija Samuloviene (Guest)



Dzmitry Lukashanets (rocr)



Diana (Guest)



Saulė Medelytė



an Marcin Węglowski



Mantas Liutkus (Svečias) (Guest)



Andrius Šiaulyš (Guest)

