

Islandzki Instytut Historii Naturalnej partnerem Kolegium ISM – start nowego projektu!

Zapraszamy do udziału w wydarzeniach przygotowanych w ramach współpracy naukowo-dydaktycznej z Islandzkim Instytutem Historii Naturalnej (<https://www.ni.is/is>), realizowanych w ramach projektu UŚ „Wyspy wiedzy” („Islands of knowledge”), którego Kolegium ISM jest współtwórcą. Celem projektu jest zwiększenie świadomości problemów środowiskowych i ich relacji do zagadnień społecznych, kulturowych i ekonomicznych w ujęciu porównawczym (Polska-Islandia). Oferta dydaktyczna kładzie nacisk na praktyczny wymiar badań i rozwiązywanie realnych problemów (indywidualnie i zespołowo), pracę ze specjalistycznymi materiałami źródłowymi, rozwijanie umiejętności argumentowania i formułowania tez badawczych. Projekt potrwa przez cały rok akademicki 2022/2023 i obejmować będzie seminaria online, moduły dydaktyczne, tutoringi i działania projektowe.

Start projektu odbędzie się 27 października o godz. 9:00. Na platformie Teams będzie można dołączyć do zespołu, w którym opublikujemy 3 seminaria otwarte (w języku angielskim). O godz. 15:00 na tym samym kanale będzie można również połączyć się z naszymi prelegentami na godzinną sesję live Q&A. Materiały będą dostępne na kanale także po zakończeniu transmisji. Zachęcamy do śledzenia kolejnych wydarzeń na naszej stronie: <https://us.edu.pl/kolegium/ism/>

Link do platformy online:

<https://teams.microsoft.com/l/channel/19%3az8TupH83cRDqhYMNpb5yKZBOgkfUaRKhAesq1GOCHO41%40thread.tacv2/Og%25C3%25B3lmy?groupId=ab89c337-e2e5-4b6c-be00-92a20cbcd136&tenantId=50c76291-0c80-4444-a2fb-4f8ab168c311>

Szczegółowy program seminariów online w dniu 27.10.2022:

Pawel Wasowicz / Plant invasions in Iceland and in the Arctic – the impact of climate change and humans.

The Arctic has been often associated with endless areas of snow and wildlife that, due to harsh climatic conditions, enjoy almost no human interference. Such a picture, although largely correct in past centuries, is now rapidly changing. With the amelioration of climate, more and more humans start to focus on the area for different reasons, e.g. exploitation of natural resources, tourism etc. All these activities increase the number of inhabitants in these areas and cause an increase in volumes of trade exchange between the Arctic and the rest of the world. Increased trade means also an increased volume of goods reaching the Arctic. The increased number of inhabitants brings new settlements and expansion of existing ones as well as all the activities that humans love to engage in horticulture, agriculture, forestry, pet husbandry etc. These activities increase the number of species (that we call alien or non-native species – human-introduced) that are reaching the Arctic and, due to milder climatic conditions, are increasingly able to form self-sustaining populations. A small subset of these organisms is able to spread in an uncontrolled way and inflict environmental damage. The seminar aims to show the migration patterns of alien species to

the Arctic in general and to Iceland in particular and present their effects on the natural environment.

Guðný Vala Þorsteinsdóttir / Environmental microbiology and geomicrobiology in extreme environments

Environmental microbiology is a concept that covers the study of all microbial interactions to the environment, their communities and their processes in all kinds of different habitats. It is commonly known that microbes play a significant role in biogeochemical cycles, but even so, the understanding of microbial biodiversity and microbial functions in natural environments is often limited.

The Arctic harbours vast amount of places that can be described as extreme environments. In extreme environments we can find far more biological diversity than is commonly believed, due to microorganisms that dominate these harsh environments. In extremely low temperatures like in the polar regions, cold desert soils and glaciers are a habitat to diverse microbes that contribute to biogeochemical cycles in the region. Same can be said about geothermal hot springs where the temperature is often extremely high, and in aphotic environments like the deep sea sediment where life is based on chemolithotrophy. Understanding the processes in natural environments is crucial for detecting changes in microbial community functions or monitor their responses to climate change.

This seminar will cover the basics of geomicrobiology, microbial interactions in natural environment and their role in biogeochemical cycling, focusing mainly on life in extreme environments, microbial diversity in the arctic and future challenges regarding environmental microbiology in the arctic.

Sunna Björk Ragnarsdóttir and Snorri Sigurðsson / Role of long-term monitoring in nature protection

Long-term monitoring is a broad concept that refers to collection of data over extended period of time. The main aim of long-term monitoring is to detect changes over time and identify influencing parameters.

Monitoring of environmental factors has the role of documenting changes and assess the impact on nature. The impact can either be from natural causes or anthropogenic activities and all monitoring programs should aim to detect temporal changes and identify trends.

The information provided by long-term monitoring is essential for decision-making at various levels as it provides a basis for interpretation of the various challenges and processes we need to understand and adapt to.

This decision-making can be at high-level regarding policy-making, legislation and regulations – locally and globally. Also regarding, specific projects such as conservation actions, land-use and development decisions, regulation of pollution and climate-impact etc. It also provides important information for people in general, which can impact their personal decisions, as well as providing fundamental content for education, research and innovation.

In this seminar we will explore the opportunities that long-term monitoring offers for understanding changes in biodiversity and investigate the different ways to execute and incorporate results into decision making.