

NOVA PhD-course series

"Climate Change Entomology in the North":

Arctic Entomology under Climate Change

Course dates and location: 20-24 August, 2018 in Gunnarsholt, the headquarters of the Soil Conservation Service of Iceland (<u>https://www.land.is/english/</u>), Hella (Southern Iceland)

Course description: The series "Climate Change Entomology in the North" focuses on the fundamental and drastic demands in agricultural entomology in the Nordic countries, caused primarily by climate change. The effects of climate change are occurring at a faster and stronger rate in the Arctic than elsewhere in the globe. We are already observing changes in phenology, species

distributions and ecological interactions in natural and agricultural systems in the North. Given the short growing seasons, agricultural production at high latitudes may benefit from a warmer Arctic, but so will insect pests from lower latitudes that will be able to expand northwards. In this course, we will explore the consequences of ongoing and predicted environmental changes on Arctic entomofauna, from individual to community responses, and the implications to agriculture and forestry.

For a full course description, please see NOVA University Network website: <u>https://www.nmbu.no/en/students/nova/students/phd-courses/phd-courses-2018/node/33556</u>

Learning outcomes:

- 1. Up-to date knowledge of the mechanisms through which ongoing environmental changes affect Arctic insects, agriculture and forestry
- 2. Appreciation of the complexity of the ecological mechanisms involved in the responses of Arctic insects to climate change
- 3. Insights into possible avoidance, mitigation, and remedy measures that can be applied, including the need for international collaboration and coordinated actions
- 4. Inspiration, techniques and tools for students to conduct research in the topic areas covered by the course series

Main teachers:

- Guðmundur Halldórsson, Agricultural University of Iceland, IS
- Bjarni Diðrik Sigurðsson, Agricultural University of Iceland, IS
- Isabel C Barrio, University of Iceland, IS
- Toke Thomas Høye, Aarhus University, DK
- Heikki Hokkanen, University of Helsinki, FI
- Leena Lindström, University of Jyväskylä, FI
- Ingeborg Menzler-Hokkanen, University of Helsinki, FI

Admission: Admission for NOVA courses is handled by the course organiser/ the NOVA member institution organising the course. Apply by sending an email to the course responsible, associate professor Guðmundur Halldórsson (gudmundurh[at]land.is).

Application deadline: May 31, 2018



- Lab and field work 15 h
- Lectures 15 h
- Independent work 45 h

Prerequisite knowledge:

Basic and advanced courses in applied entomology, environmental sciences, and ecology.

ECTS: 3