

UArctic Thematic Network on Herbivory Annual report

The UArctic Thematic Network on Herbivory was endorsed by UArctic in February 2020, at the last meeting of the Assembly, for an initial one-year period. Full endorsement requires that the new thematic network has planned and/or initiated activities during the first year. This annual report provides an overview of the activities carried out by the UArctic Thematic Network on Herbivory since February 2020 and the planned activities for 2021, in order to be considered for full endorsement.

Summary of activities during 2020

Meetings: during the [Nordic Oikos 2020](#) conference in Reykjavík (March 3-5, 2020) we organized a scientific session ("*Herbivores in the Anthropocene*") and had an informal get-together. In November 2020 we had the annual meeting and progress report with the UArctic Director of TN, and we also had a brainstorming session with all the contact persons of the UArctic TN on Herbivory to discuss potential activities for the next year. For example, we discussed the possibilities of joint teaching (through online guest lectures) and producing short online teaching material (videos).

Presentations and scientific talks: UArctic TN lead Isabel C Barrio gave an invited talk at the Biology Seminars at University of Western Ontario, Canada, on October 2020, presenting some of the work of the network (BARRIO, I.C. *Herbivores in the tundra: from caribou and caterpillars, to Icelandic sheep*). The network was also presented in February 2021 at the [Scotland-Arctic Network Series: Environmental Pollution and Biodiversity](#), a webinar series organized by the UArctic TN on Climate Justice in the Arctic.

Publications: two scientific articles have been published as a result of joint, network activities. We have also submitted an article for consideration in the upcoming issue of the Shared Voices magazine, co-authored by all UArctic TN contact persons.

- TUOMI, M., VÄISÄNEN, M., YLÄNNE, H., BREARLEY, F.Q., BARRIO, I.C., BRÅTHEN, K.A., EISCHEID, I., FORBES, B.C., JÓNSDÓTTIR, I.S., KOLSTAD, A.L., MACEK, P., PETTIT BON, M., SPEED, J.D.M., STARK, S., SVAVARSDÓTTIR, K., THÓRSSON, J., BUENO, C.G. (2020) Stomping in silence: Conceptualizing trampling effects on soils in polar tundra. *Functional Ecology* 35(2):306-317
- BARRIO, I.C., EHRICH, D., SOININEN, E.M., RAVOLAINEN, V.T., BUENO, C.G., GILG, O., KOLTZ, A.M., SPEED, J.D.M., HIK, D.S., MÖRSDORF, M., ALATALO, J.M., ANGERBJÖRN, A., BÉTY, J., BOLLACHE, L., BOULANGER-LAPOINTE, N., BROWN, G.S., EISCHEID, I., GIROUX, M.A., HÁJEK, T., HANSEN, B.B., HOFHUIS, S.P., LAMARRE, J.-F., LANG, J., LATTY, C., LECOMTE, N., MACEK, P., MCKINNON, L., MYERS-SMITH, I.H., PEDERSEN, Å.Ø., PREVÉY, J.S., ROTH, J.D., SAALFELD, S.T., SCHMIDT, N.M., SMITH, P., SOKOLOV, A., SOKOLOVA, N., STOLZ, C., VAN BEMMELEN, R., VARPE, Ø., WOODARD, P.F., JÓNSDÓTTIR, I.S. (2021) Developing common protocols to measure tundra herbivory across spatial scales. *Arctic Science* [in press]
- BARRIO, I.C., HIK, D.S., FORBES, B.C., JÓNSDÓTTIR, I.S., KAARLEJÄRVI, E., KOZLOV, M.V., SOININEN, E.M., YLÄNNE, H., VÄISÄNEN, M. Eating plants to mitigate the impacts of climate change on tundra? submitted to Shared Voices

New funding: (1) in October 2021, the H2020 funded project Drivers and Feedbacks of Changes in Arctic Terrestrial Biodiversity ([CHARTER](#)), where the TN on Herbivory participates, was officially

launched. In addition, (2) we have secured funding from the Icelandic Research Fund for a three-year project called *Herbivores in the tundra: linking diversity and function* (TUNDRAsalad; lead Isabel C Barrio), and (3) Maria Väisänen received funding for the project *Impacts of grazers on litter decay rates across northern hemisphere revealed using peer-sourced research network and standardized protocols* from the UniOulu Arctic Researchers' Network Call for proposals for Early stage researchers.

Reporting of activities: In October 2020, Maria Väisänen submitted a short report of activities during the last year, as requested by the University of Oulu, emphasizing how being part of a UArctic TN has contributed to her work. In November 2020 we had the annual meeting with the UArctic Director of TN, where a short progress report was presented and discussed.

Confirmation of new TN university members: during 2020 five new members were confirmed as institutional points of contact for the TN on Herbivory (Bruce Forbes at the University of Lapland, David Hik at Simon Fraser University, Ingibjörg Svala Jónsdóttir at the University of Iceland, Elina Kaarlejärvi at the University of Helsinki and Mikhail Kozlov at the University of Turku). The full list of institutional points of contact for the TN on Herbivory includes:

- Isabel C. Barrio (Lead), Agricultural University of Iceland
- Bruce Forbes (Member), University of Lapland
- David Hik (Member), Simon Fraser University
- Ingibjörg Svala Jónsdóttir (Member), University of Iceland
- Elina Kaarlejärvi (Member), University of Helsinki
- Mikhail Kozlov (Member), University of Turku
- Eeva Soininen (Member), UiT The Arctic University of Norway
- Maria Väisänen (Member), University of Oulu
- Henni Yläne (Member), Lund University

Activities planned for 2021

Meetings: we will plan a TN meeting as part of the Assembly of UArctic in May 2021 (online)

Presentations and scientific talks: Isabel C Barrio has been invited to participate in the NORDBiGs seminar series organized by researchers at Danish universities, to present the work of the network. Research results from network activities will be also presented at several conferences, such as the annual meeting of the Icelandic Ecological Society.

Publications: in 2021 we aim at submitting for publication the results of a systematic map of studies on herbivory in the Arctic, led by Eeva Soininen.

Funding: we are planning on submitting an application to the Norwegian UArctic Call for Cooperation Activities for 2021-2023 (led by Eeva Soininen) to fund networking activities.

Fieldwork: in summer 2021 we plan on conducting coordinated fieldwork on the effects of grazing on microclimate and decomposition (funded project led by Maria Väisänen).

Education and training: in 2021 we will recruit one PhD student and one MSc student to the TUNDRAsalad project at the Agricultural University of Iceland. As a result of this collaboration the Agricultural University of Iceland has signed Erasmus agreements with other Nordic universities,

including UArctic members (UiT The Arctic University of Norway) and non-members (Norwegian University of Science and Technology).

UArctic Chair nomination: a UArctic Chair nomination was submitted by Simon Fraser University for Prof. David Hik. Part of this proposal includes strengthening links between UArctic member institutions (in particular between Simon Fraser University and the Agricultural University of Iceland) and to support further activities of the Thematic Network on Herbivory.