



Project acronym: PISA

Project title: Genomic basis of Pink SALmon invasions in northern regions (project acronym: PISA)

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Discipline: Earth Sciences & Environment: Ecosystems & Biodiversity

Station(s): Kevo Subarctic Research Station (Finland)

Invasive species pose serious threats to native biodiversity worldwide and it is anticipated that, with continuously increasing temperatures due to climate change and other anthropogenic activities, the number of invasive species will surge particularly in Arctic environments. Impacts on native species are manifold and include resource competition, herbivory, predation, disease transmission, hybridisation, and ecosystem alterations, leading to lower reproduction and survival rates of native species. An improved understanding of biological invasions in Arctic regions is needed to develop and implement mitigation strategies. Pink salmon (*Oncorhynchus gorbuscha*) is an invasive fish species that has recently invaded northern European rivers in Norway, UK, Iceland, Denmark/Greenland, Finland, and the eastern coast of Canada. It is suggested that it could threaten other, socio-economically important, salmonid species like Atlantic salmon due to similar life cycles and resource requirements. However, not much is known about this species and its impacts of native salmonid species and therefore, we propose investigating the species using genomic tools to understand the geographical origin and structure of this species and whether certain lineages are better adapted to specific environmental conditions. Further, we are interested in estimating effective population sizes for two selected rivers to get a better understanding of population numbers in this species. We are asking to gain TA/RA access to several INTERACT stations in Finland, Russia, Iceland, and Denmark/Greenland to complement our existing sampling material. Sample collection includes fin clips or other tissue material from (deceased) specimens that will be placed in ethanol tubes for transport.