

From bathroom daydreams to the Genome Atlas of Faroese Ecology

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The Faroe Islands are an archipelago in the North Atlantic, with a growing biodiversity genomics field. The first steps in this field were taken when a silverfish (*Lepisma saccharina*) was observed wandering on a bathroom floor. Silverfish are among the most primitive insects; they are wingless and never metamorphose. This uninvited guest inspired a project, aiming to sequence and assemble the silverfish genome. Although this project ran alongside a herring genome project, it proved more difficult than expected, due to large genome size and limited local resources. However, with the start of the European Reference Genome Atlas (ERGA) new collaborations were established and a draft assembly of the silverfish genome is now ongoing.

The ERGA initiative has made it easier for small countries like the Faroes to participate in biodiversity genomics research. We have started the Genome Atlas of Faroese Ecology (GenAtFarE) project, where we aim to establish high-quality genome assemblies for species in Faroese ecology. Both the Faroese economy and ecology are heavily dependent on marine resources. Therefore, the first stage of GenAtFarE is focused on marine species and their intraspecies genetic diversity. Genetic diversity is important for adaptation in a changing world, especially in times of climate change. The first species to be sequenced are the ecologically important lesser sandeel (*Ammodytes marinus*) and greater silver smelt (*Argentina silus*). There is limited population structure information available for these two species, yet they are both commercially exploited in the Northeast Atlantic. Knowledge on population structure is vital for management purposes.