

Liffræðifélag Íslands - [biologia.is](https://biologia.is)  
[Liffræðiráðstefnan 2023](#)

## A trophic network of Iceland centred around the American mink (*Neogale vison*)

**Höfundar / Authors:** Jana Leethaus, Fiona S. Rickowski, Jonathan M. Jeschke, Menja von Schmalensee, Róbert A. Stefánsson, Florian Ruland

**Starfsvettvangur / Affiliations:** 1. IGB Berlin, 2. Freie Universität Berlin, 3. Náttúrustofa Vesturlands

**Kynnir / Presenter:** Florian Ruland

The invasive American mink (*Neogale vison*) is one of the worst invasive mammals in Europe and has had substantial negative effects on the Icelandic native wildlife since its introduction in the 1930s. In Iceland, it has been associated with declines in local abundance and distribution of several bird species along with behavioural changes. The mink also seems to negatively affect freshwater fish species, however its effects on coastal marine fish have not yet been studied. The indirect impacts of the mink on the Icelandic food web are largely unknown, therefore we created a mink-centric trophic network of the main Icelandic animal species or species groups that are directly and most likely indirectly linked to the mink. We developed and applied a ten-step process consisting of extensive literature searches and systematic categorisation and selection based on their ecological, economic and cultural importance. Combining 324 sources, we present this trophic network, encompassing 63 species or taxonomic groups and 580 trophic interactions. The analysis of this food web confirms the generalist diet of the mink and the absence of significant predators. Focusing on different measures like in-degree centrality, gulls and the Arctic fox (*Vulpes lagopus*) assume a central position with the mink. These results may help to better identify the mink's position in the food web and its direct and indirect impacts on native fauna.