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First matrilineal catalogue of killer whales in Icelandic waters

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Killer whales (*Orcinus orca*) are often seen in the waters surrounding the Snæfellsnes peninsula. Behavioural, locational, and photographic data of killer whales has been collected there since 2011 in an ongoing project. Data is collected from an opportunistic platform aboard whale-watching tours, as well as in dedicated surveys. A regularly updated killer whale photo-identification catalogue (currently comprising 987 individuals) maintained by Orca Guardians Iceland and Náttúrustofa Vesturlands has been made openly available.

Here, we present the first matrilineal catalogue for killer whales in Icelandic waters comprising matrilineal lines of the most-documented 180 individuals (≥ 15 encounters) spotted over several years (≥ 6 years; at least one encounter per year). A total of 38 matrilineal lines, spanning up to three generations, could be established from 737 encounters. Temporary dispersal from the matriline by subadult and adult males has been found in the course of the analysis, as well as splitting of pods into smaller units over time, though the frequency of these events (and whether pods are splitting up permanently) needs to be thoroughly investigated in future research.

Exploring the dynamics within orca matrilineal lines is crucial to better understanding the complex social behaviour of this highly empathetic and intelligent species. Such understanding can aid in both conservational efforts as well as contribute to our general knowledge on social behaviour in mammals.