NÁTTÚRUSTOFA VESTFJARÐA

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Progress Report: Year 2 of a Habitat Fragmentation Study on the Impacts of Road Development on Bird Communities in Teigsskógur

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This study is conducted by Náttúrustofa Vestfjarða under contract with Vegagerðin, to examine the effects of road infrastructure development on biodiversity, specifically the impact of a road transecting through the subarctic birch forest Teigsskógur on bird communities. This mini-report summarises the progress of the second year of a three-year study, with a focus on work conducted in 2025 and preliminary findings.

Research Objective: The primary objective of this research is to investigate whether building a road through Teigsskógur creates an edge effect—specifically, whether it increases nest predation pressure—and how it may affect the bird communities that breed within the forest.

Work Completed: Fieldwork was scheduled to coincide with the breeding period of common bird species in Teigsskógur. Transects from 2024 were optimised for both safety due to terrain and to focus on a finer scale (a 25 m level was added while the arbitrary "midpoint" level was omitted and transects were brought closer together). Between June 10-11, artificial nests and wildlife cameras were set up in Teigsskógur (Þorskafjörður) and the control site in Kvígindisfjörður. Artificial nests were created using purchased nest cups and quail eggs, fastened near or on the ground on birch trees at distances of 0 m, 25 m, and 50 m from both the road and natural forest edges (mountain and shoreside). The same methodology was applied at the control site, which had no road intrusion through the forest. A total of 162 nests were deployed (108 in Teigsskógur, 54 in Kvígindisfjörður). Fifteen wildlife cameras were placed near selected nests to monitor potential predator activity. Nests were revisited on July 14-15 to check for predation and to retrieve them. Any active bird nests encountered during the visits were also recorded. The fieldwork was carried out by Ingrid Bobeková, Merit L., and Paula U.

Results: In total, 75 predation events were detected across all nests:

- 50 nests were predated and 50 nests were intact in Teigsskógur. There were 8 unknown outcomes. Predations occurred at all distances from the road as well as all distances from the sea edge or the mountain edge of the forest.
- 25 nests were considered predated and 27 nests were intact at the control site. There were 2 unknown outcomes. Predations occurred at all distances from the sea edge and the mountain edge of the forest.

Based on the markings left on some eggs, many of the predation events were likely caused by mice. This will be investigated further to determine how this data should be handled, as mice are not typically a natural predator of active bird nests (where the incubating parent is present). The imagery from the wildlife cameras

will be reviewed for predator activity or evidence of passive predator presence as part of the ongoing study. The transects established this year will be repeated in 2026 for the third and final season of the project.

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