Supplementary material

Oscar G. Miranda, Pedro Rodrigues, Tamás Székely, Renáta Szarvas & José O. Valdebenito 2025: Migratory protogyny and condition-dependent arrival in Icelandic Red-necked Phalaropes. — Ornis Fennica 102: 00-00.

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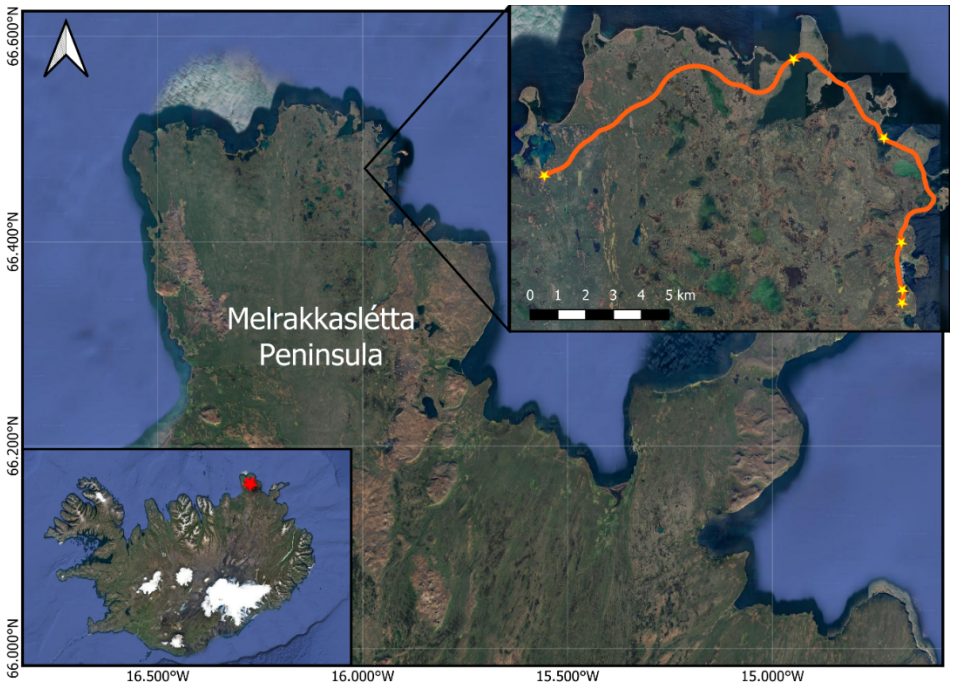

Fig. S1. Map of Red-Necked Phalarope (*Phalaropus lobatus*) census route, marked with stars at counting spots in key congregation areas. This region, the most bird-rich on Melrakkaslétta, is a lowland area in northeast Iceland between two fjords, Öxarfjörður to the west and Þistilfjörður to the east.

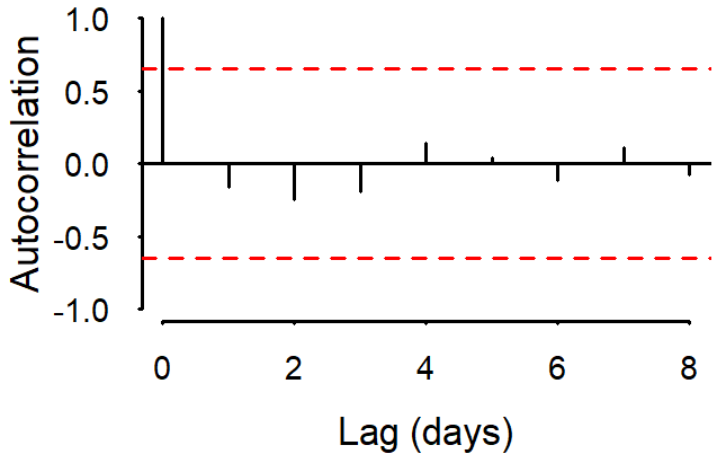

Fig. S2. Autocorrelation function plot of residuals from the binomial generalized linear model evaluating changes in the proportion of males over time. The absence of significant autocorrelation at all lags (bars fall within the red 95% confidence bounds) indicates that residuals are temporally independent, supporting the assumption of independent observations in the model.