Supplementary material

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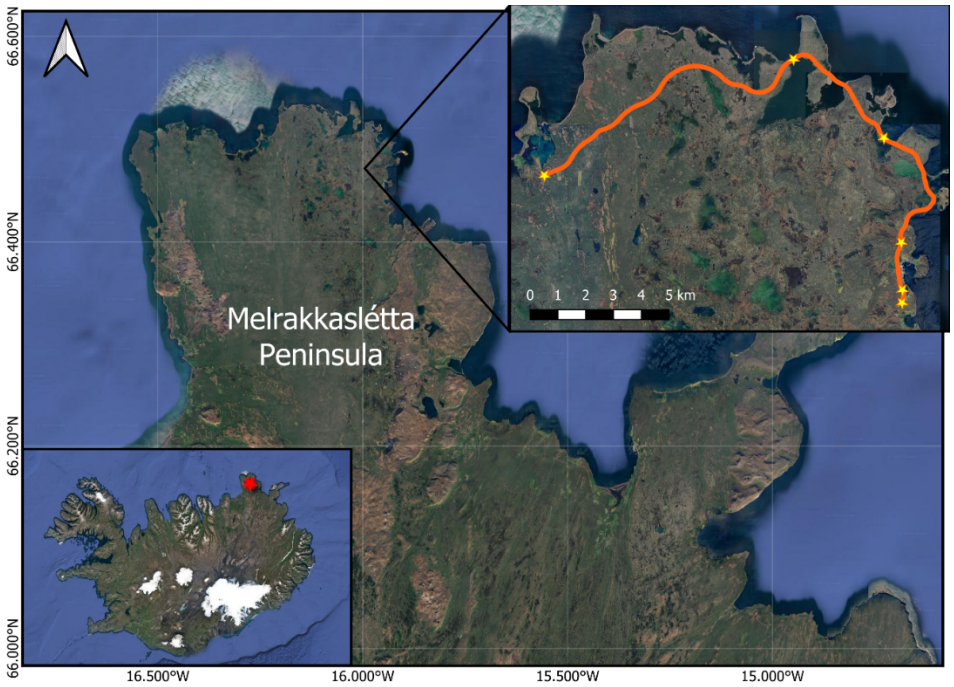

Fig. S1. Map of Red-Necked Phalarope (*Phalaropus lobatus*) census route, marked with stars at counting spots in key congregation areas. This region, the most bird-rich on Melrakkaslétta, is a lowland area in northeast Iceland between two fjords, Öxarfjörður to the west and Þistilfjörður to the east.

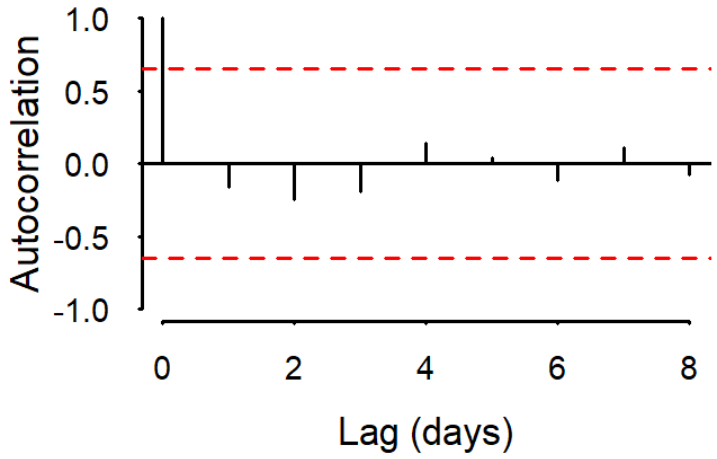

Fig. S2. Autocorrelation function plot of residuals from the binomial generalized linear model evaluating changes in the proportion of males over time. The absence of significant autocorrelation at all lags (bars fall within the red 95% confidence bounds) indicates that residuals are temporally independent,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