*The following supplements accompany the article*

# Factors influencing heterogeneity in female reproductive success in a Critically Endangered population of bottlenose dolphins

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## Supplement 1

Table S1. Number of days spent on the water searching for dolphins across the study period (1995–2012) during the months in the calving season. Number of calves born per month is also provided.

| | On effort days | Number of calves born |
|---|---|---|
| Jan | 96 | 14 |
| Feb | 130 | 17 |
| Mar | 75 | 6 |
| Apr | 119 | 3 |
| Oct | 79 | 3 |
| Nov | 83 | 1 |
| Dec | 89 | 5 |

**Supplement 2.** Diagnostic plots for the S.1 analysis

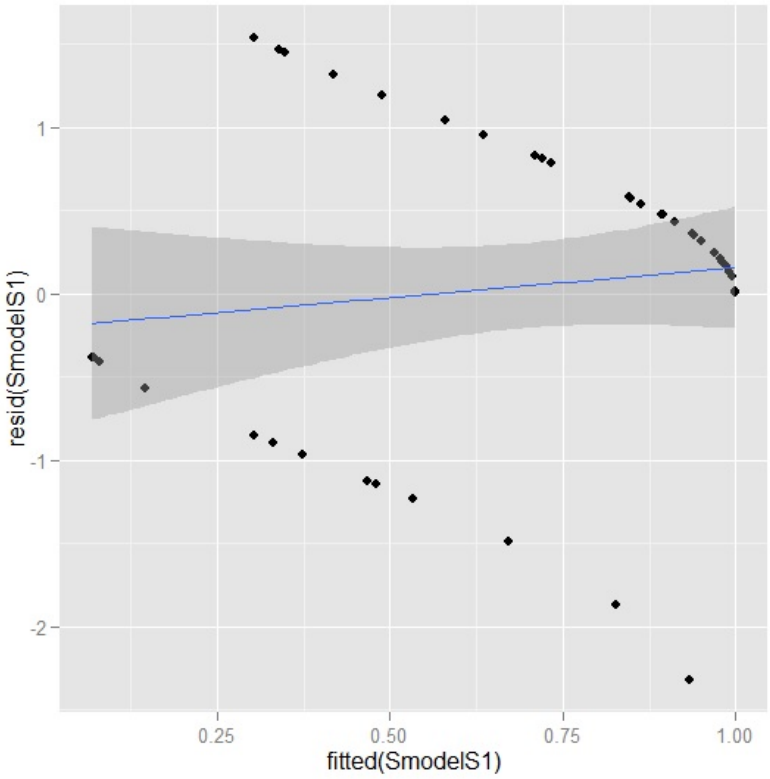


Fig. S1. Fitted vs. residual (Pearson) for the S.1 analysis. The blue line is a fitted regression line from the stat.smooth function. The shaded area indicates a 95% confidence interval. Whilst overall, there looks like a trend of decreasing residuals with increasing fitted values, the fact that the regression line and CI overlap 0 indicate this effect is not significant.

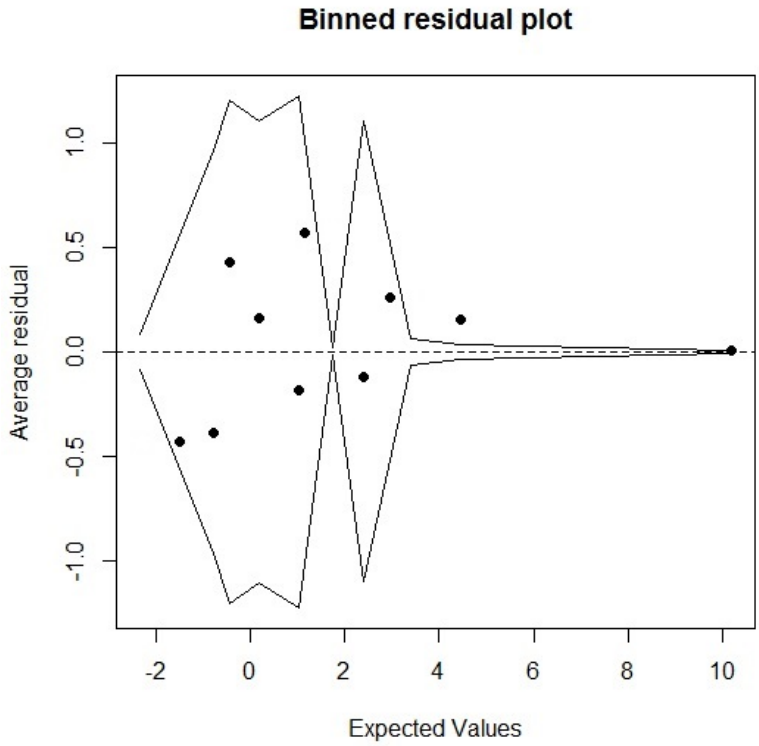


Fig. S2. Binned residual plot for the S.1 analysis. Averaged residual bins are plotted against expected values with 95% CI. The majority of points being contained within the CI indicate homogeneity of variance.

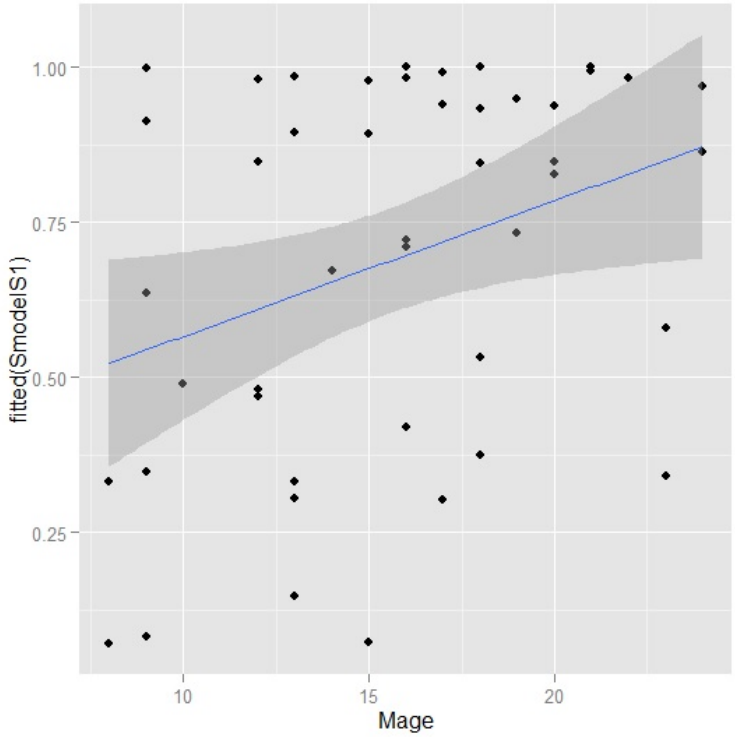


Fig. S3. Assessing whether transformed data is linear with respect to the continuous predictor variable mother age (Mage). As indicated by the smoother curve and 95% CI, the relationship is generally linear.

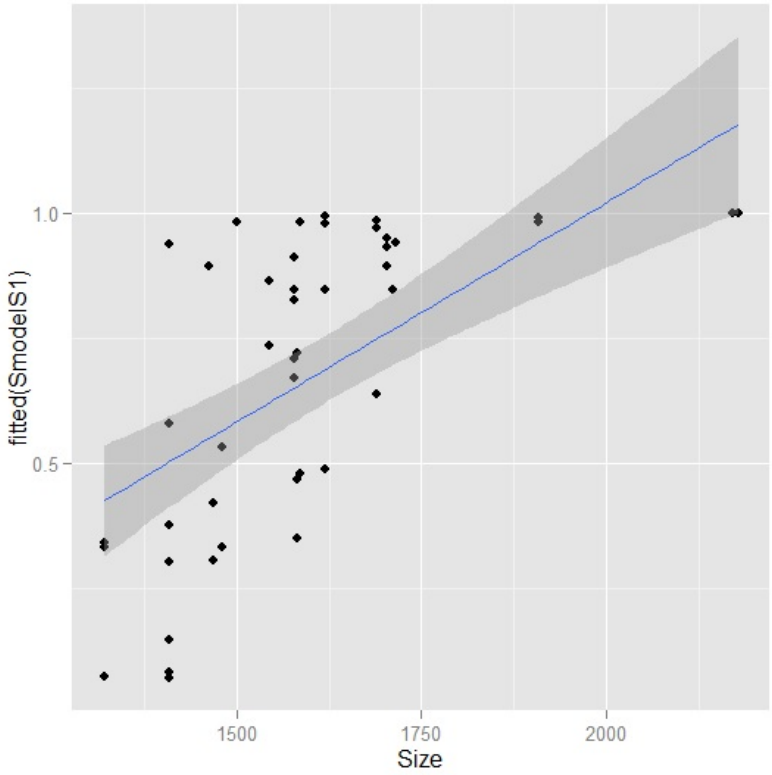


Fig. S4. Assessing whether transformed data is linear with respect to the continuous predictor variable mother size (Size). As indicated by the smoother curve and 95% CI, the relationship is generally linear.

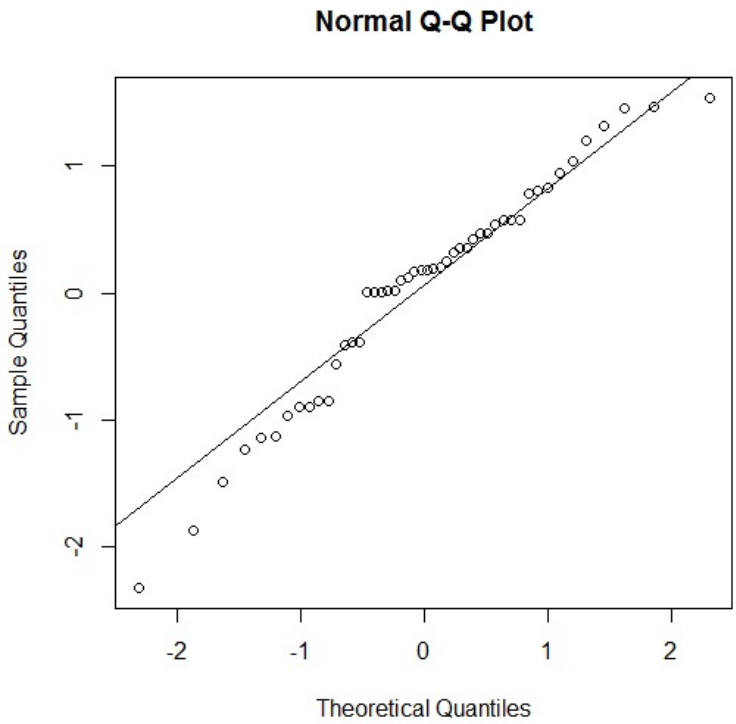


Fig. S5. QQplot for assessing the normality of model residuals for the S.1 analysis. If residuals are approximately normal, the points align with the straight line on the figure. The normality of residuals for the S.1 analysis is further indicated by a Shapiro-Wilk test of 0.14.

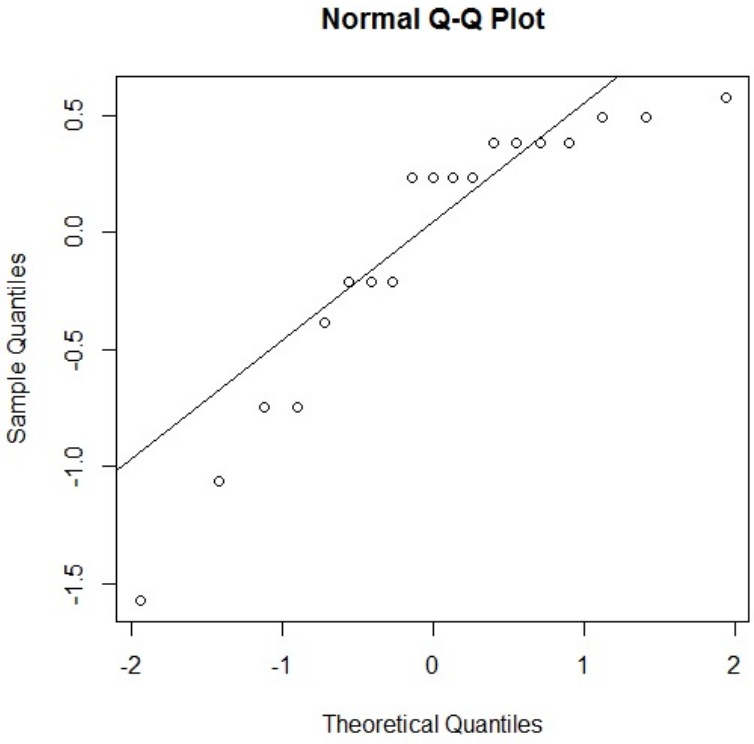


Fig. S6. QQplot for assessing the normality of the random effects for the S.1 analysis. If residuals are approximately normal, the points align with the straight line on the figure. This figure as well as a Shapiro-Wilk test of 0.04 indicate a slight departure from normality. See text for discussion.

**Supplement 3.** Diagnostic plots for the S.3 analysis

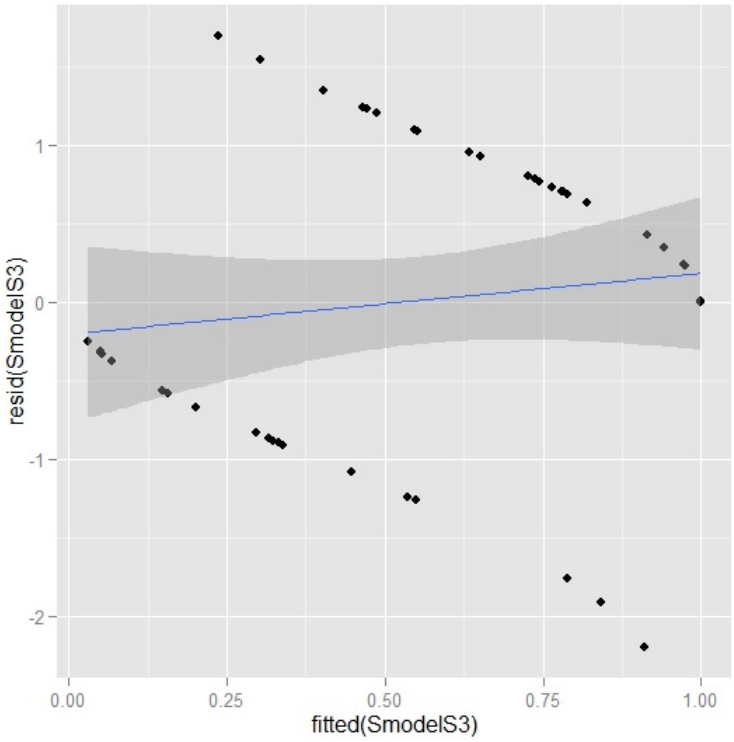


Fig. S7. Fitted vs residual (Pearson) for the S.3 analysis. The blue line is a fitted regression line from the stat.smooth function. The shaded area indicates a 95% confidence interval. Whilst overall, there looks like a trend of decreasing residuals with increasing fitted values, the fact that the regression line and CI overlap 0 indicate this effect is not significant.

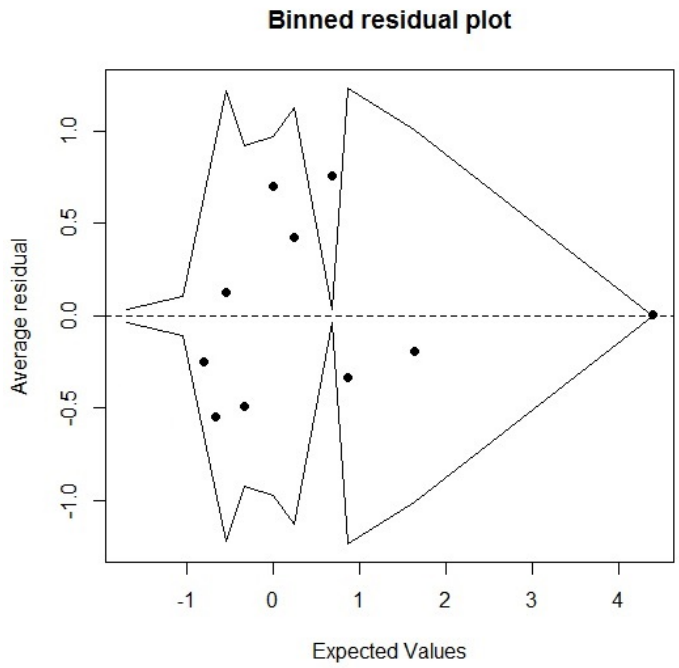


Fig. S8. Binned residual plot for the S.3 analysis. Averaged residual bins are plotted against expected values with 95% CI. The majority of points being contained within the CI indicate homogeneity of variance.

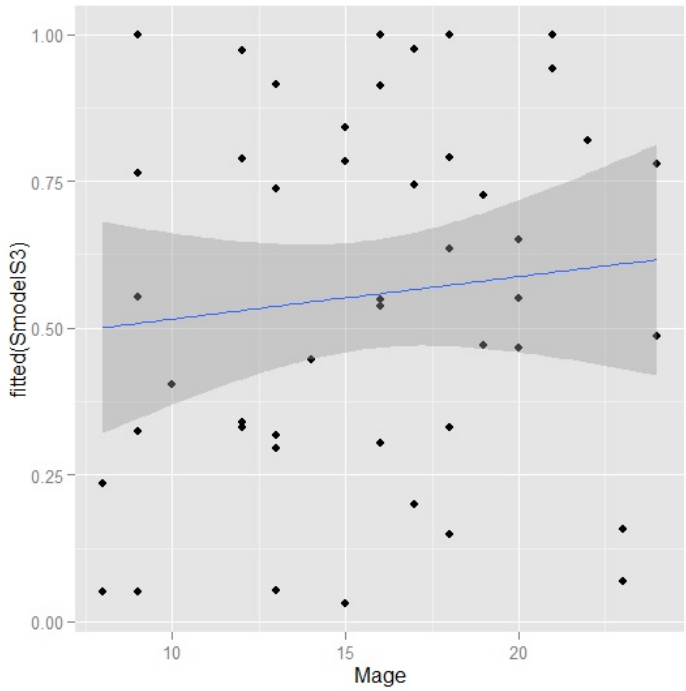


Fig. S9. Assessing whether transformed data is linear with respect to the continuous predictor variable mother age (Mage). As indicated by the smoother curve and 95% CI, the relationship is generally linear.

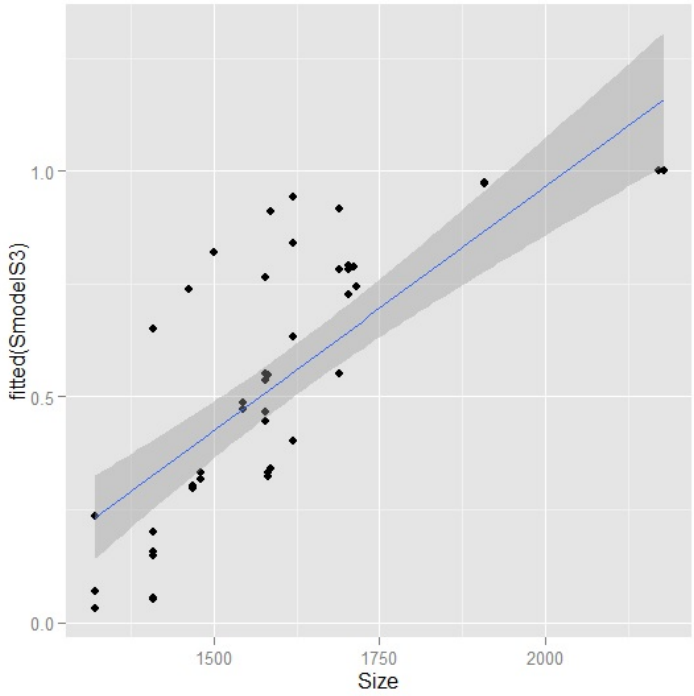


Fig. S10. Assessing whether transformed data is linear with respect to the continuous predictor variable mother size (Size). As indicated by the smoother curve and 95% CI, the relationship is generally linear.

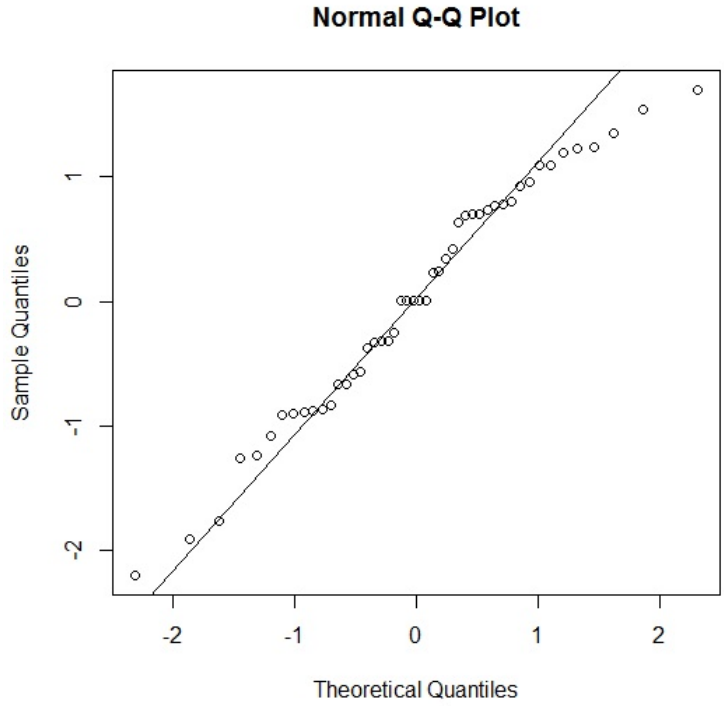


Fig. S11. QQplot for assessing the normality of model residuals for the S.3 analysis. If residuals are approximately normal, the points align with the straight line on the figure. The normality of residuals for the S.3 analysis is further indicated by a Shapiro-Wilk test of 0.28.

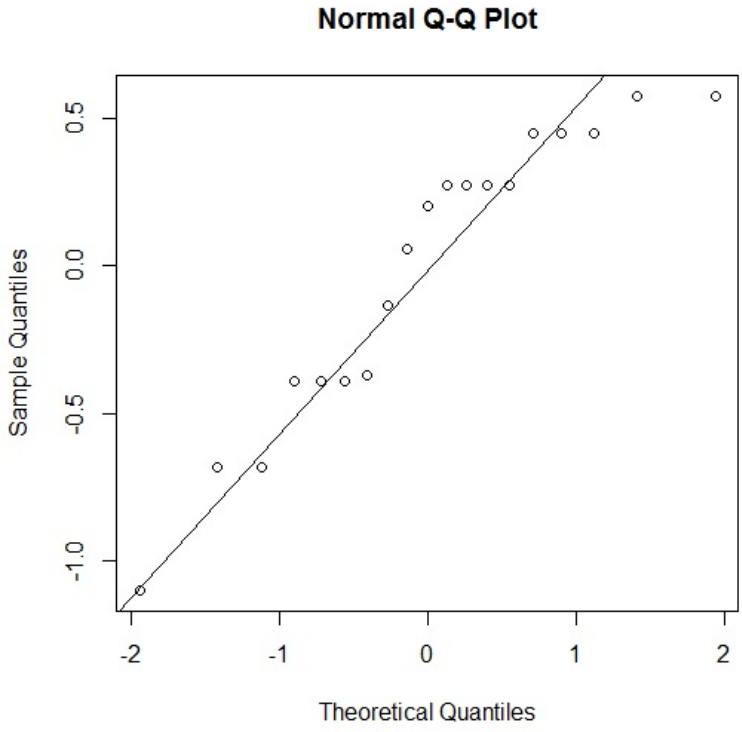


Fig. S12. QQplot for assessing the normality of the random effects for the S.3 analysis. If residuals are approximately normal, the points align with the straight line on the figure. The normality of the random effects for the S.3 analysis is further indicated by a Shapiro-Wilk test of 0.07.