Figures

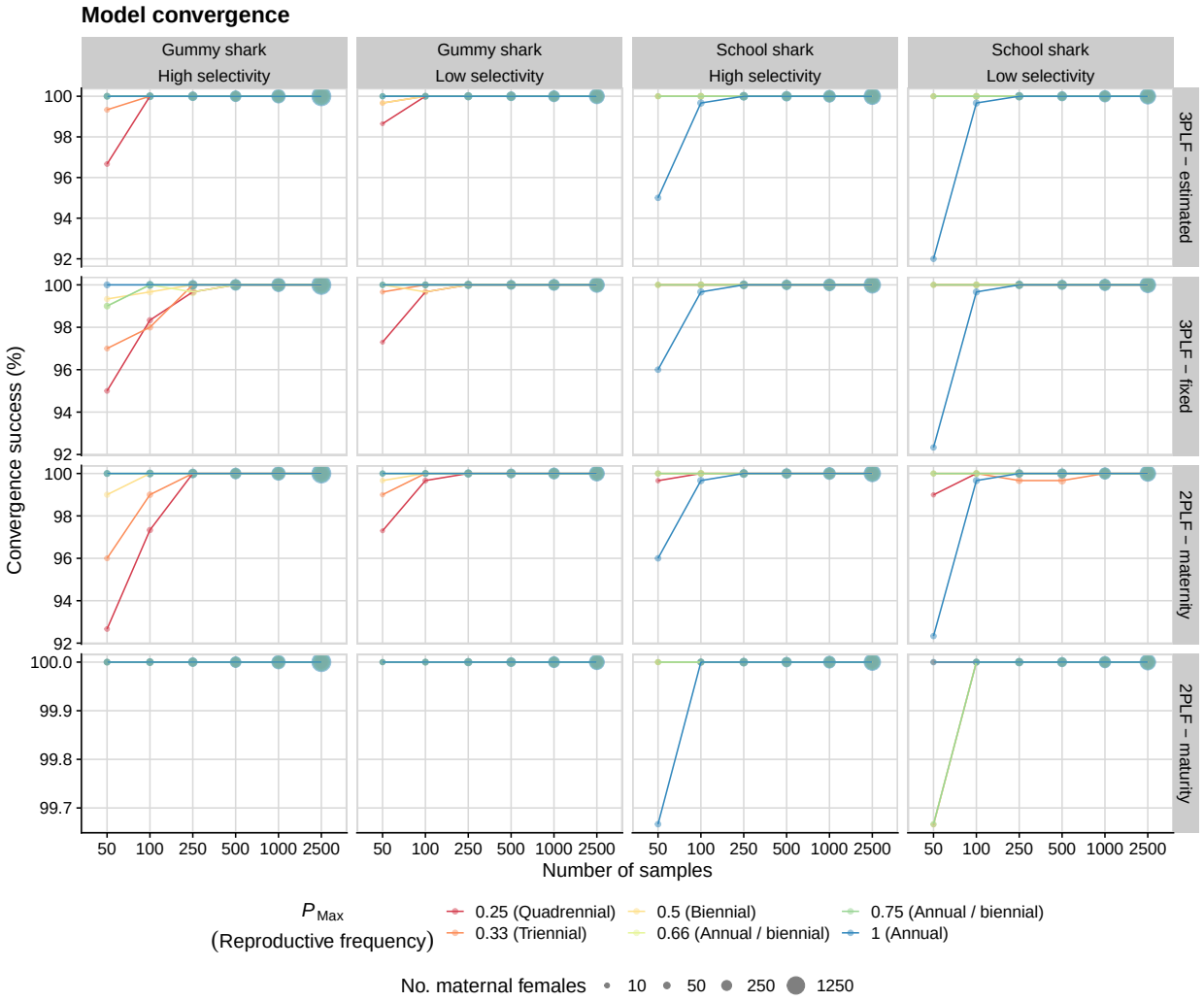

Figure S1. Convergance success of alternative logistic regression models fit (n = 300) for school shark and gummy shark. Point size denotes mean number of females in maternal condition at a given sample size.

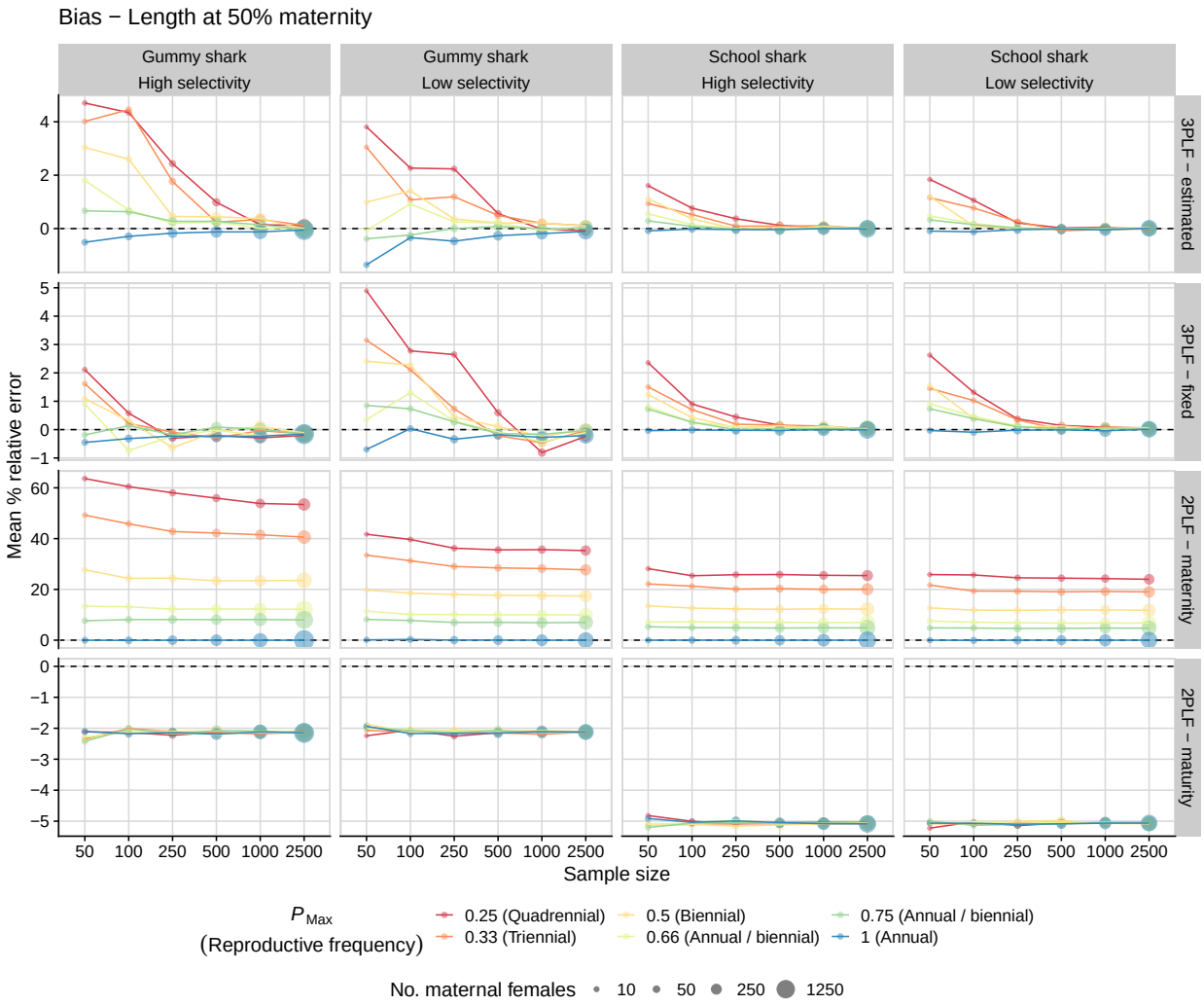

Figure S2. Bias (per cent relative error) in parameter estimates of $\hat{L}_{50}^{\prime}$ using alternative logistic regression models. Each point reflects a mean value from 300 simulated data sets. Point size denotes mean number of females in maternal condition at a given sample size.

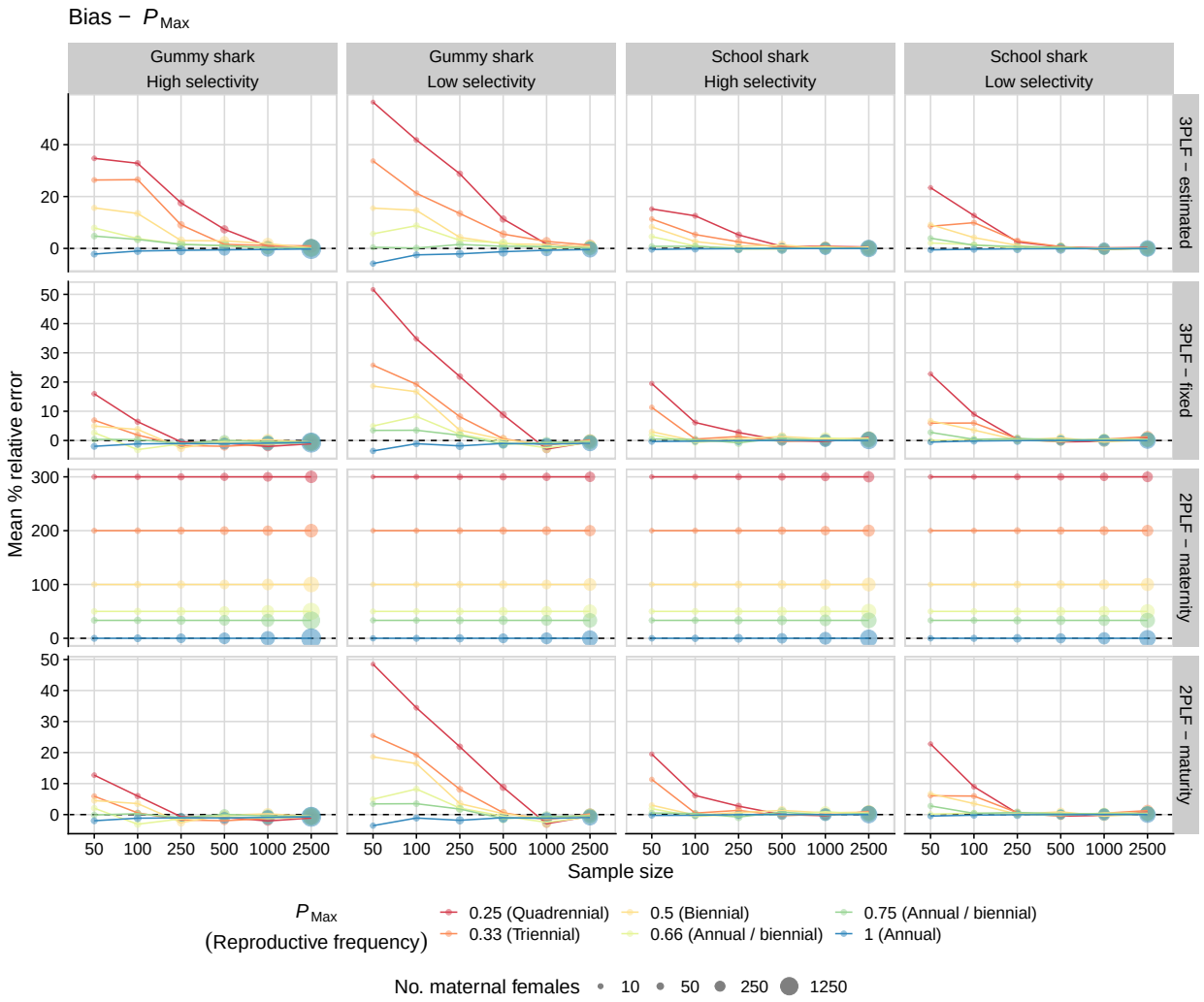

Figure S3. Bias (per cent relative error) in parameter estimates of $\hat{P_{Max}}$ using alternative logistic regression models. Each point reflects a mean value from 300 simulated data sets. Note 2PLF-maturity and 3PLF-fixed methods both used pre-specified values for P_{Max} and are identical. Point size denotes mean number of females in maternal condition at a given sample size.

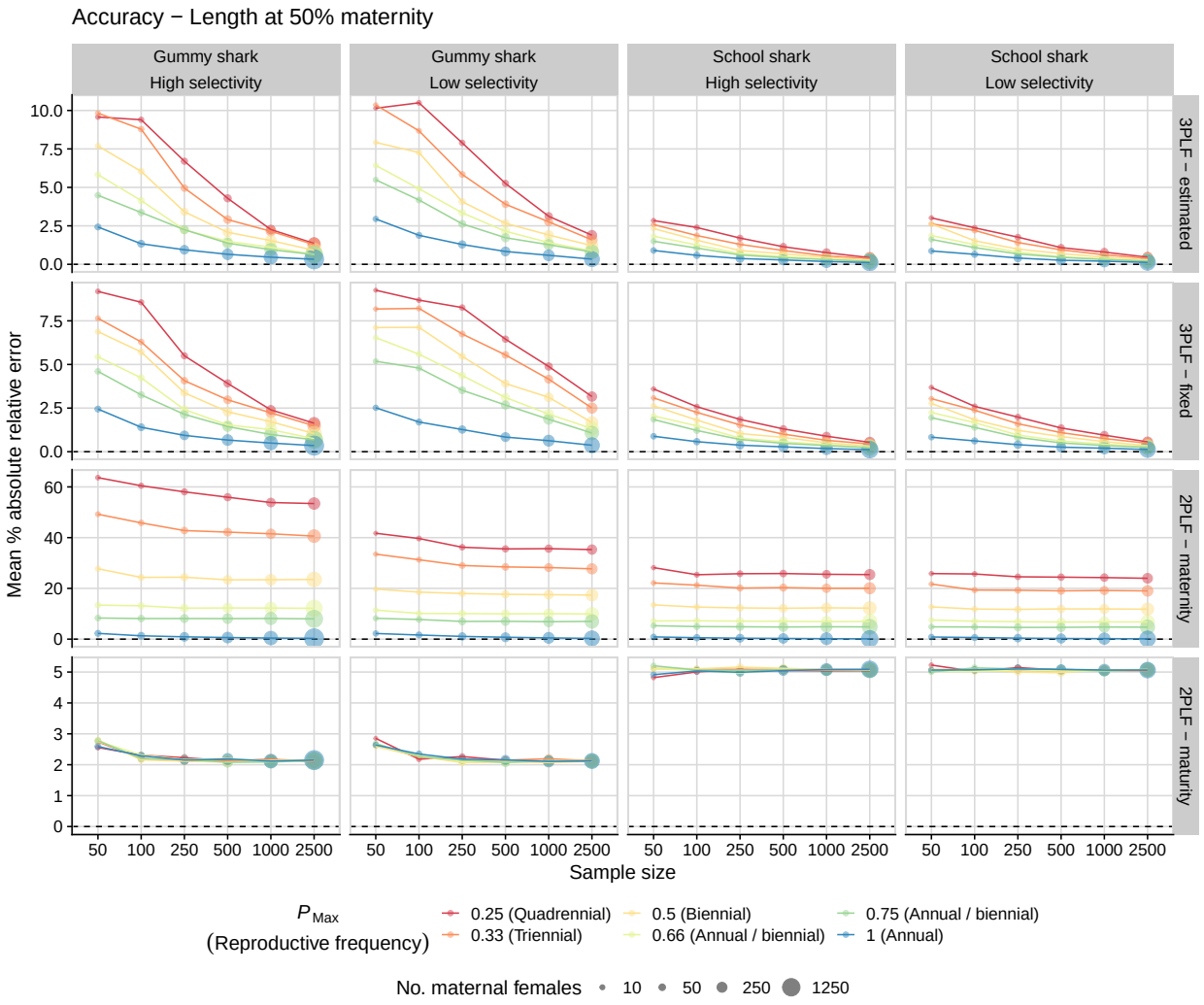

Figure S4. Accuracy (per cent absolute error) in parameter estimates of $\hat{L}_{50}^{\prime}$ using alternative logistic regression models. Each point reflects a mean value from 300 simulated data sets. Point size denotes mean number of females in maternal condition at a given sample size.

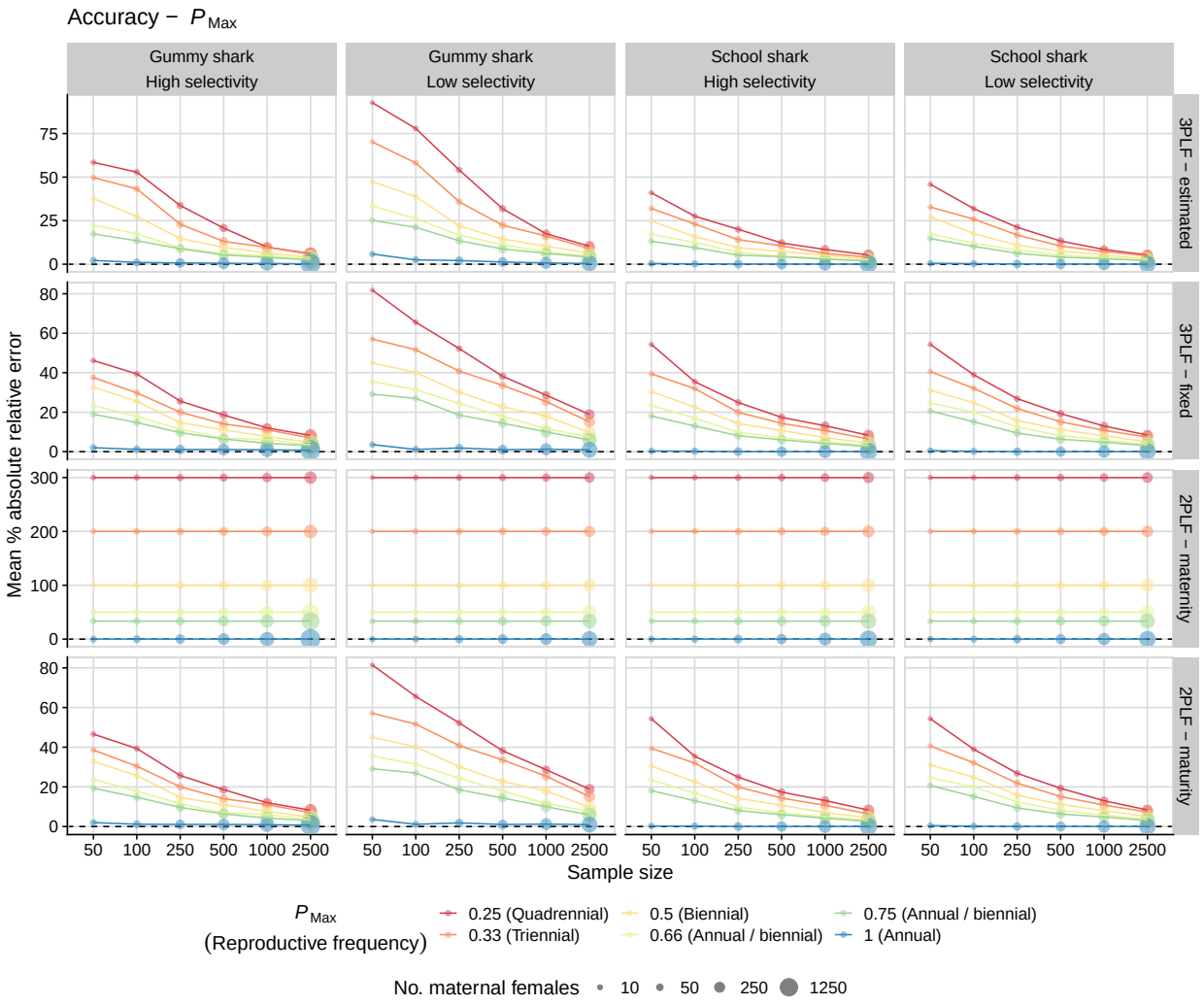

Figure S5. Accuracy (per cent absolute error) in parameter estimates of $\hat{P_{Max}}$ using alternative logistic regression models. Each point reflects a mean value from 300 simulated data sets. Note 2PLF-maturity and 3PLF-fixed methods both used pre-specified values for P_{Max} and are identical. Point size denotes mean number of females in maternal condition at a given sample size.

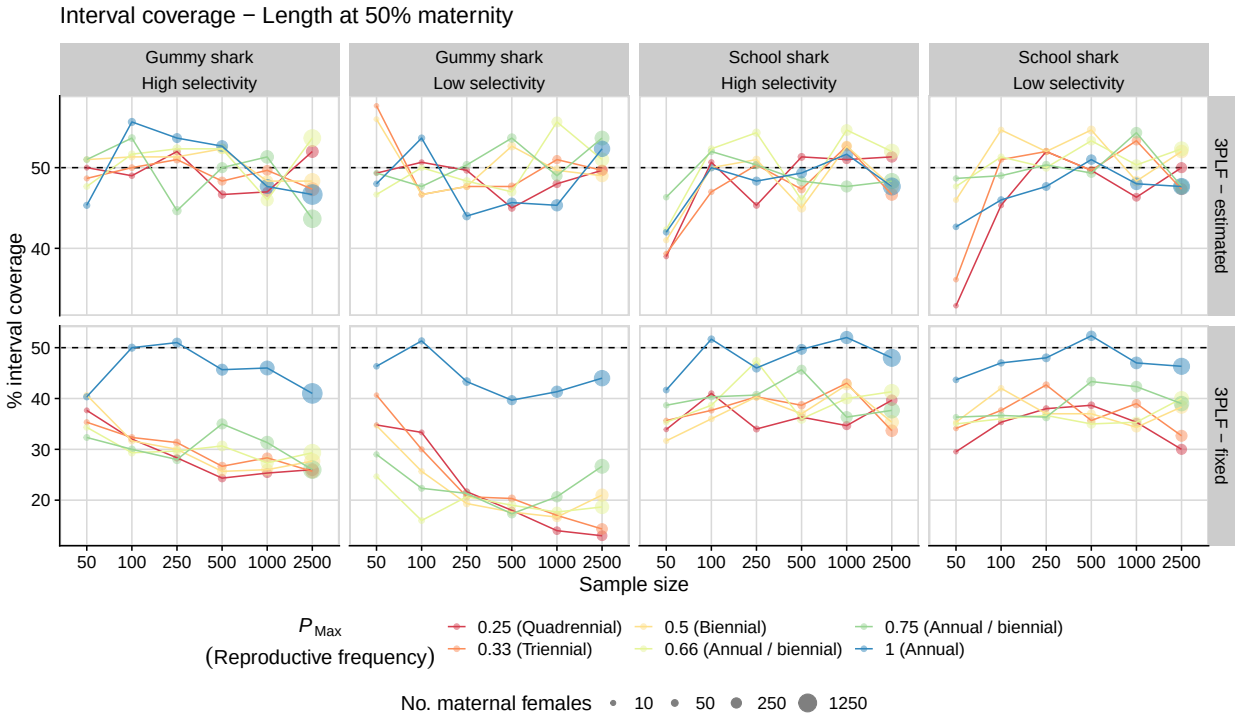

Figure S6. Confidence interval coverage for L'_{50} for 3PLF methods. Figure shows the percentage of simulations (n = 300) where the true parameter value fell within the 50% bootstrap confidence interval. Point size denotes mean number of females in maternal condition at a given sample size.

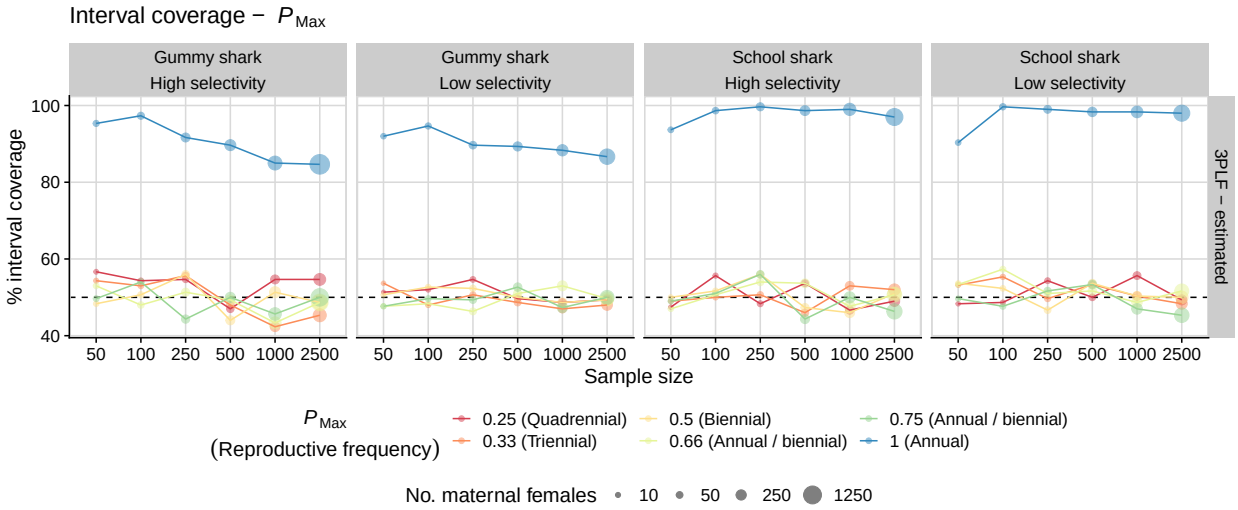

Figure S7. Confidence interval coverage for P_{Max} for the 3PLF-estimated method. Figure shows the percentage of simulations (n = 300) where the true parameter value fell within the 50% bootstrap confidence interval. Point size denotes mean number of females in maternal condition at a given sample size.

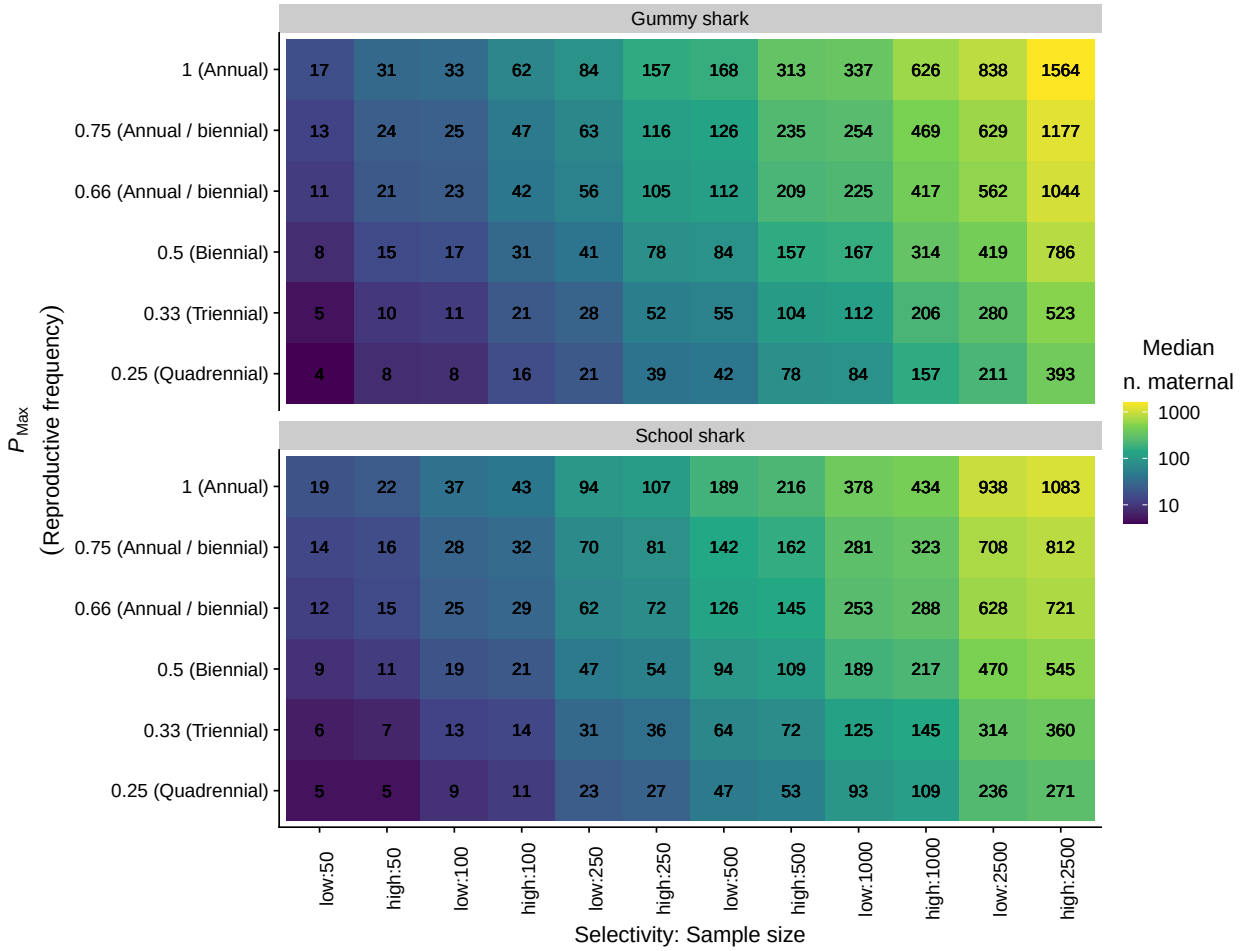

Figure S8. Median number of females in maternal condition in simulated data that were used to estimate maternity parameters subject to varying sample size, gear selectivity, reproductive frequency. 300 iterations were carried out for each simulation.

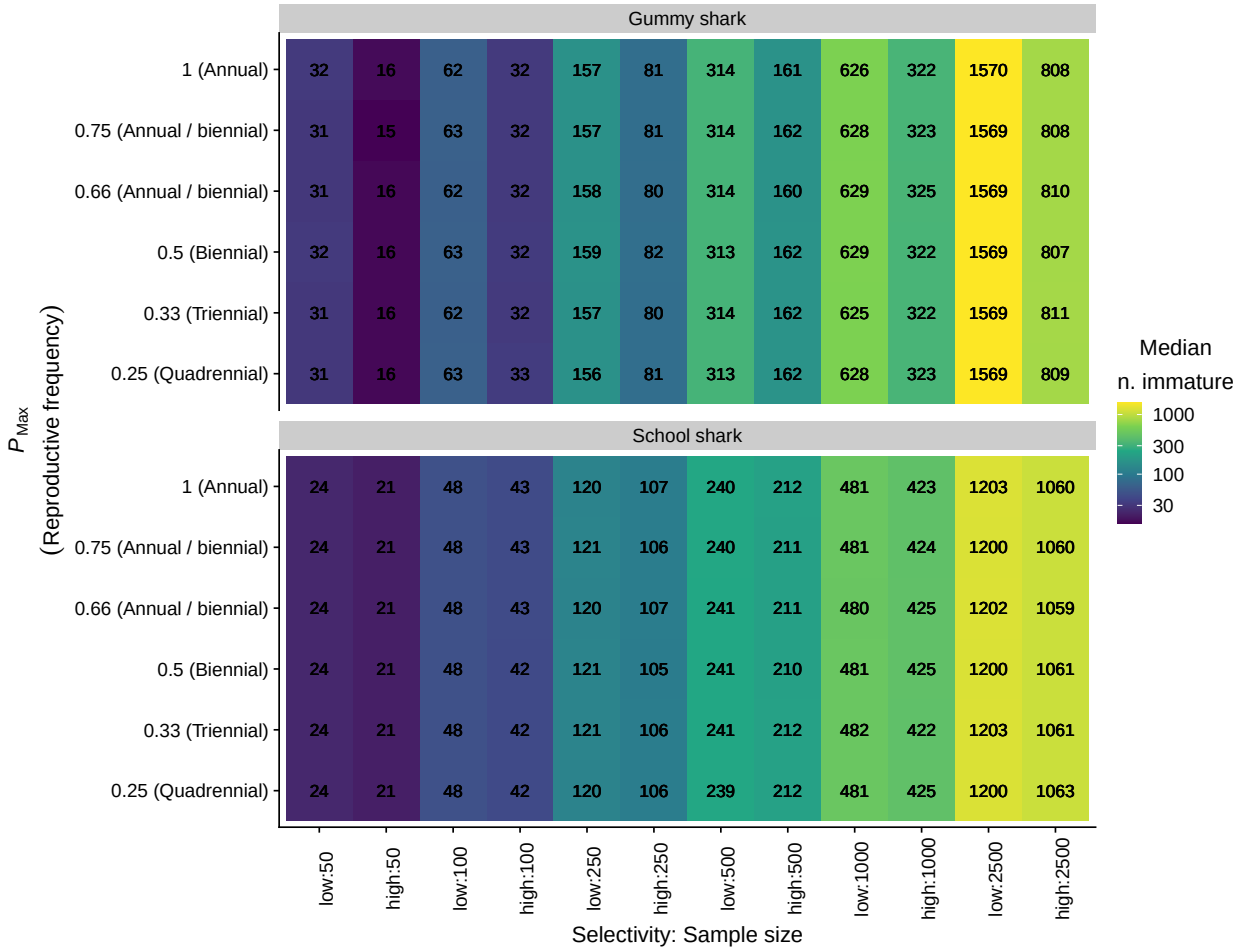

Figure S9. Median number of immature females in simulated data that were used to estimate maternity parameters subject to varying sample size, gear selectivity, reproductive frequency. 300 iterations were carried out for each simulation.

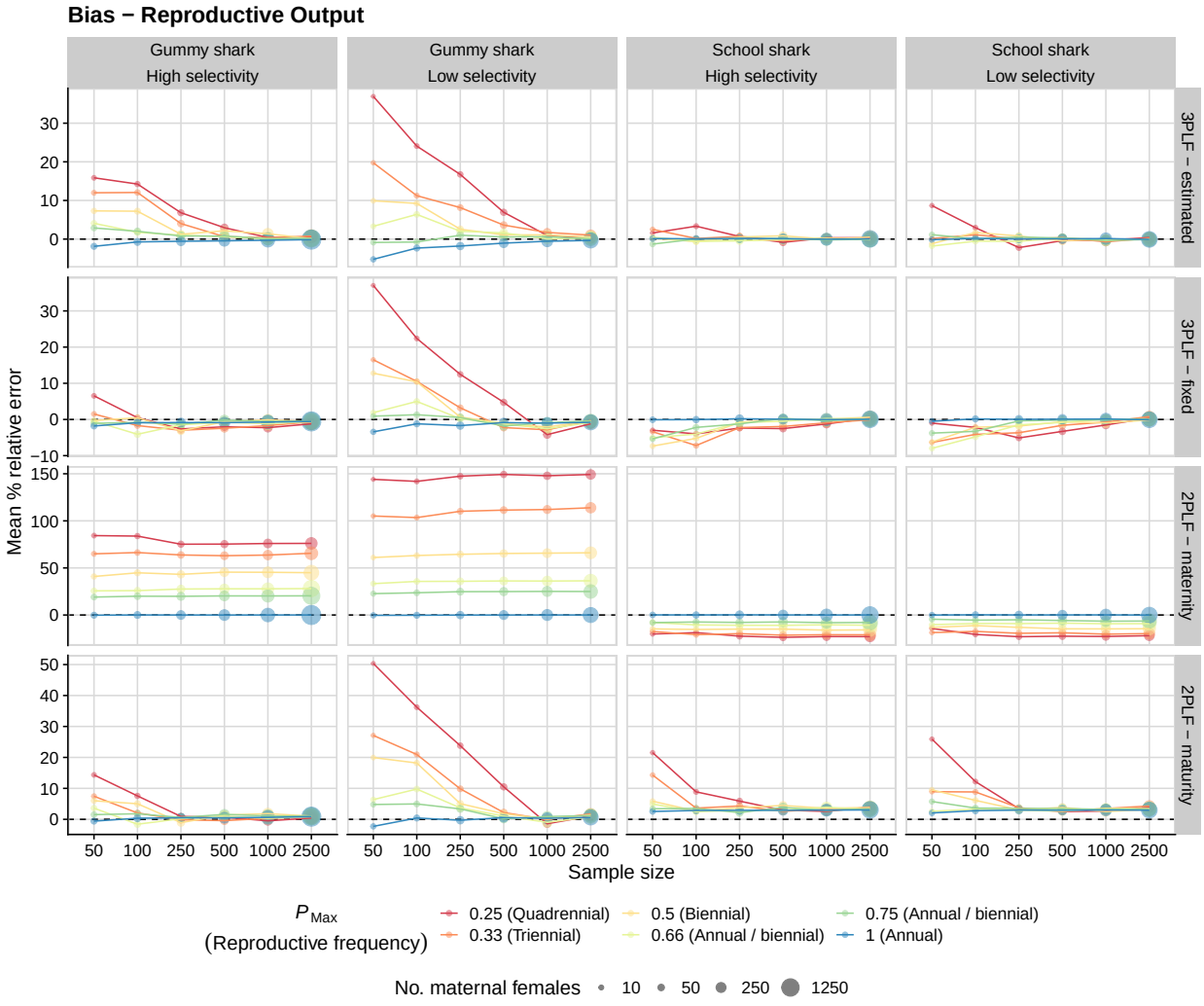

Figure S10. Bias (per cent relative error) in R_0 calculated using maternity parameters obtained from alternative logistic regression models. Each point reflects a mean value from 300 simulated data sets. Point size denotes mean number of females in maternal condition at a given sample size.

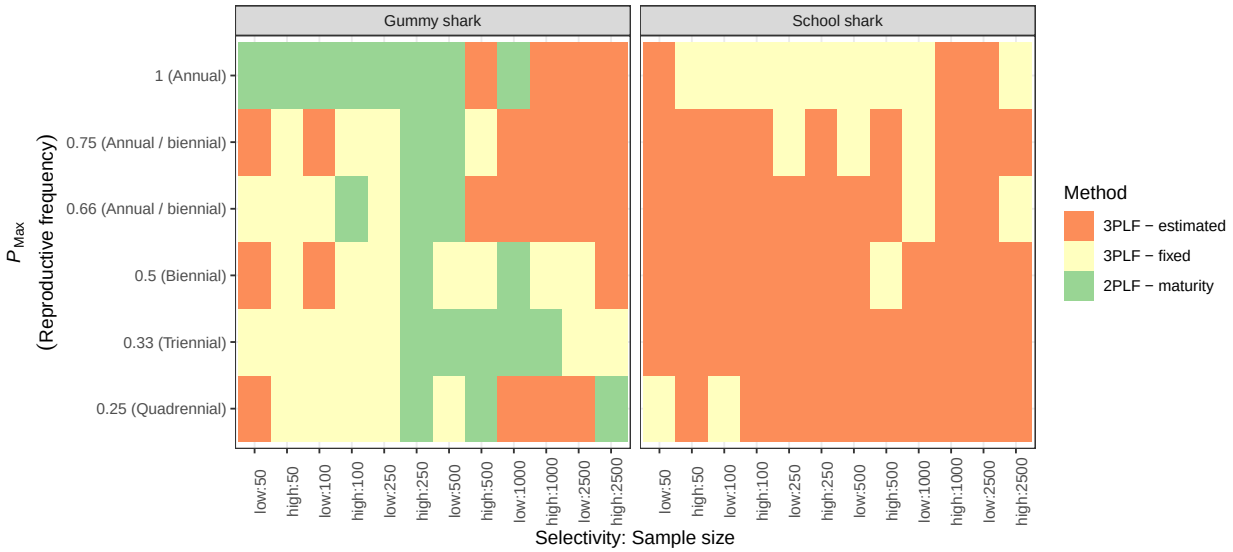

Figure S11. Performance of alternative maternity functions in minimising bias in calculations of R0. The preferred method was that which minimised bias, |relative error| across 300 simulated datasets. Note 2PLF-maternity (Annual) scenarios were excluded for this comparison.

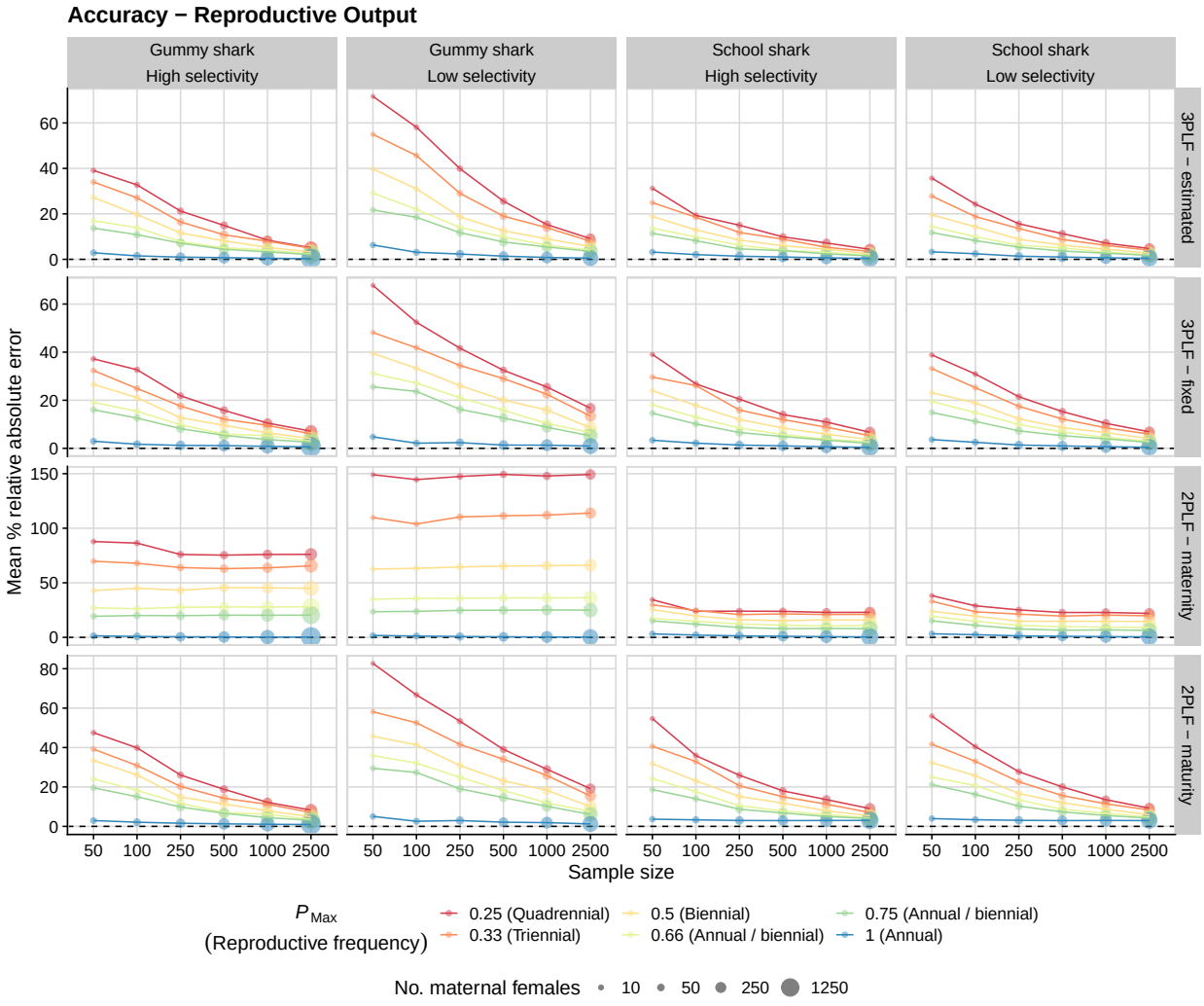

Figure S12. Accuracy (per cent absolute error) in R_0 calculated using maternity parameters obtained from alternative logistic regression models. Each point reflects a mean value from 300 simulated data sets. Point size denotes mean number of females in maternal condition at a given sample size.

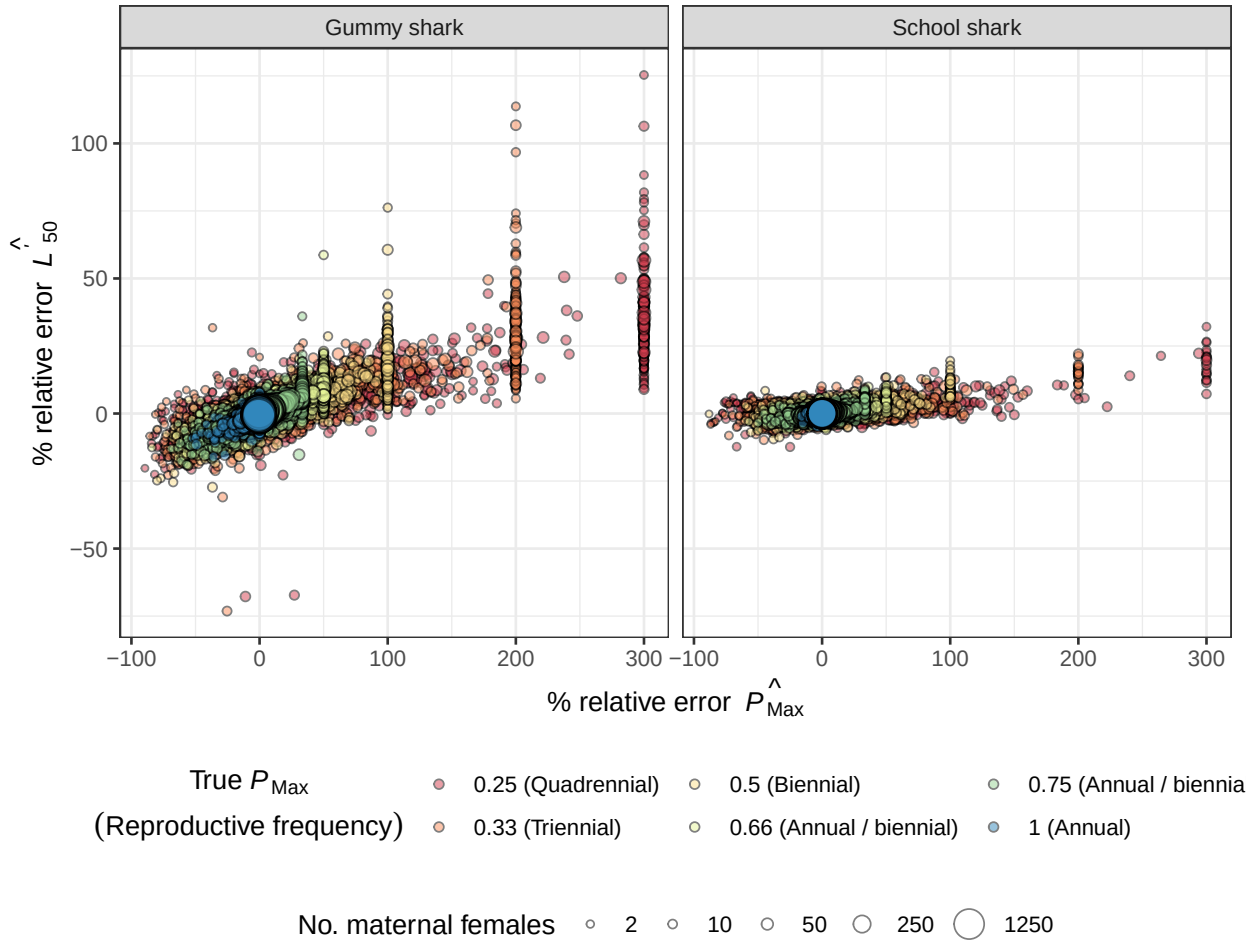

Figure S13. Uncropped version of Figure 2. Bias (per cent relative error) in parameter estimates for $L_{50}^{\hat{}}$ and $P_{\hat{Max}}$ for the 3PLF maternity function with P_{Max} estimated. Each point represents parameter estimates from one iteration of simulated data, including all combinations of variables. Simulations with longer reproductive cycles and fewer maternal females, were associated with higher bias in both parameters $L_{50}^{\hat{}}$ and $P_{\hat{Max}}$.