

Supplementary Figures for “Power analysis for generalized linear mixed models in ecology and evolution”

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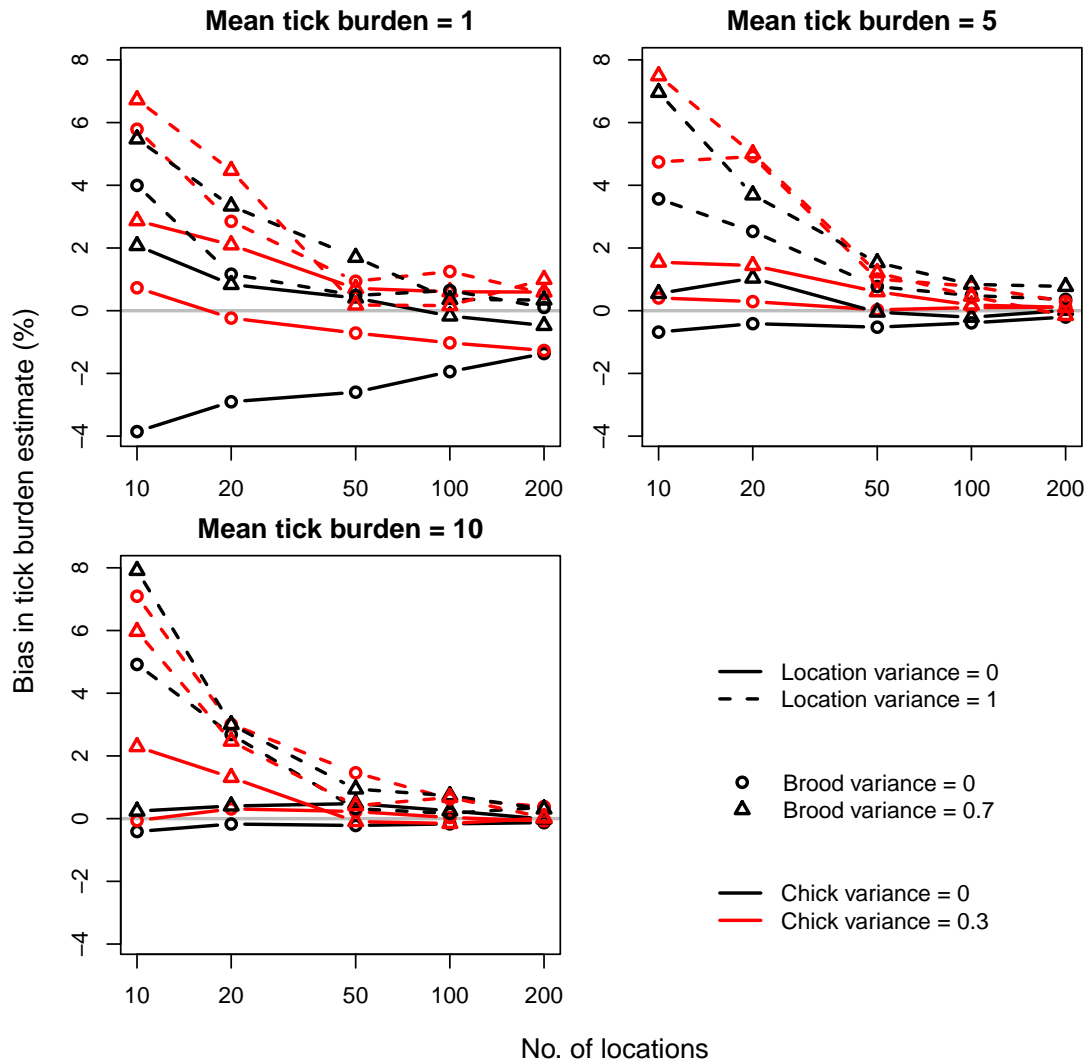


Figure 1: The relationship between bias in estimating tick abundance and number of locations sampled. Each bias estimate was derived from 1000 data sets simulated under scenarios that varied in mean tick burden and the degree of variation in mean tick burden at the location, brood and individual chick levels.

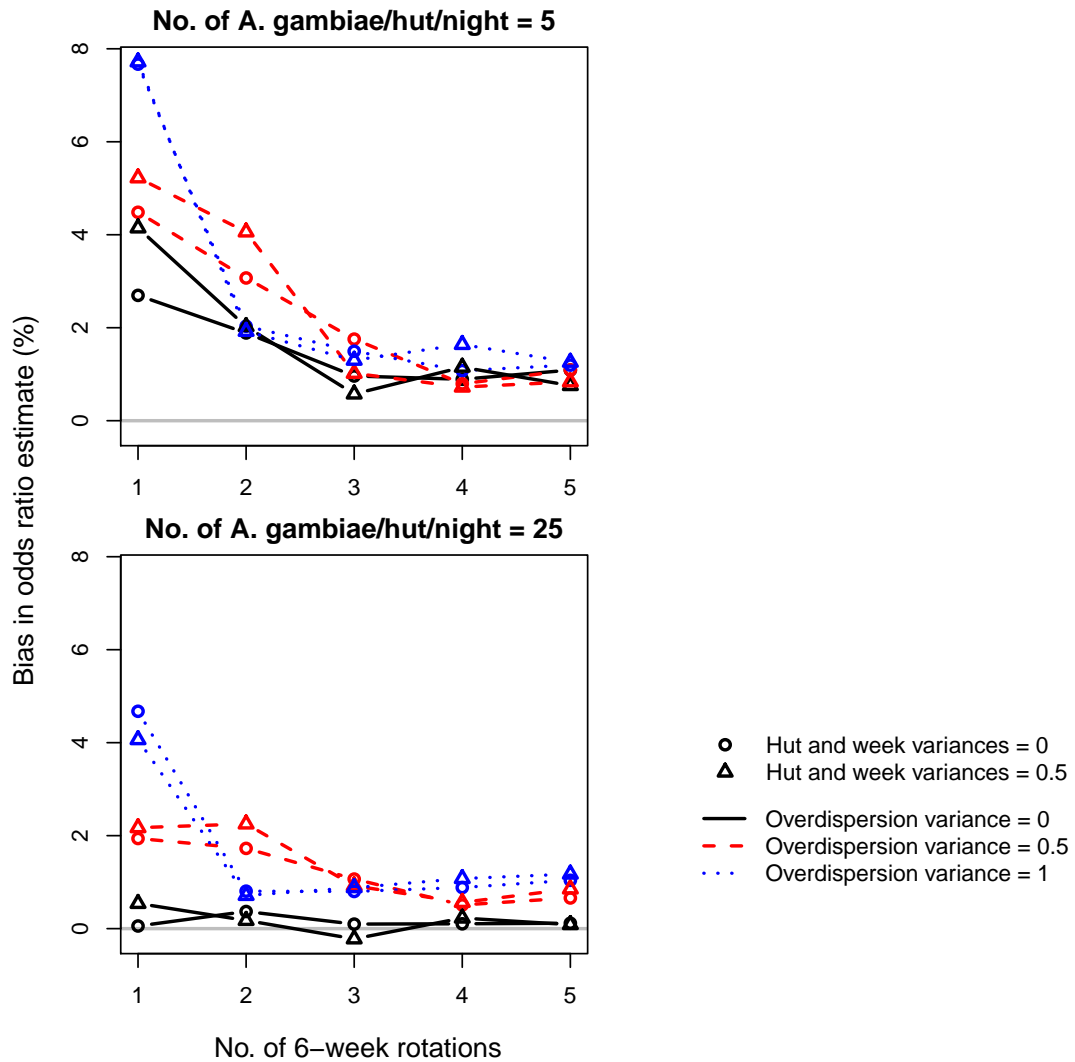


Figure 2: The relationship between bias in estimating the mortality odds ratio of 1.7 and trial duration in number of 6-week rotations of the Latin square. Each bias estimate was derived from 1000 simulated data sets, generated under scenarios that varied in *A. gambiae* abundance, degree of variation in mortality between huts and weeks, and strength of overdispersion.

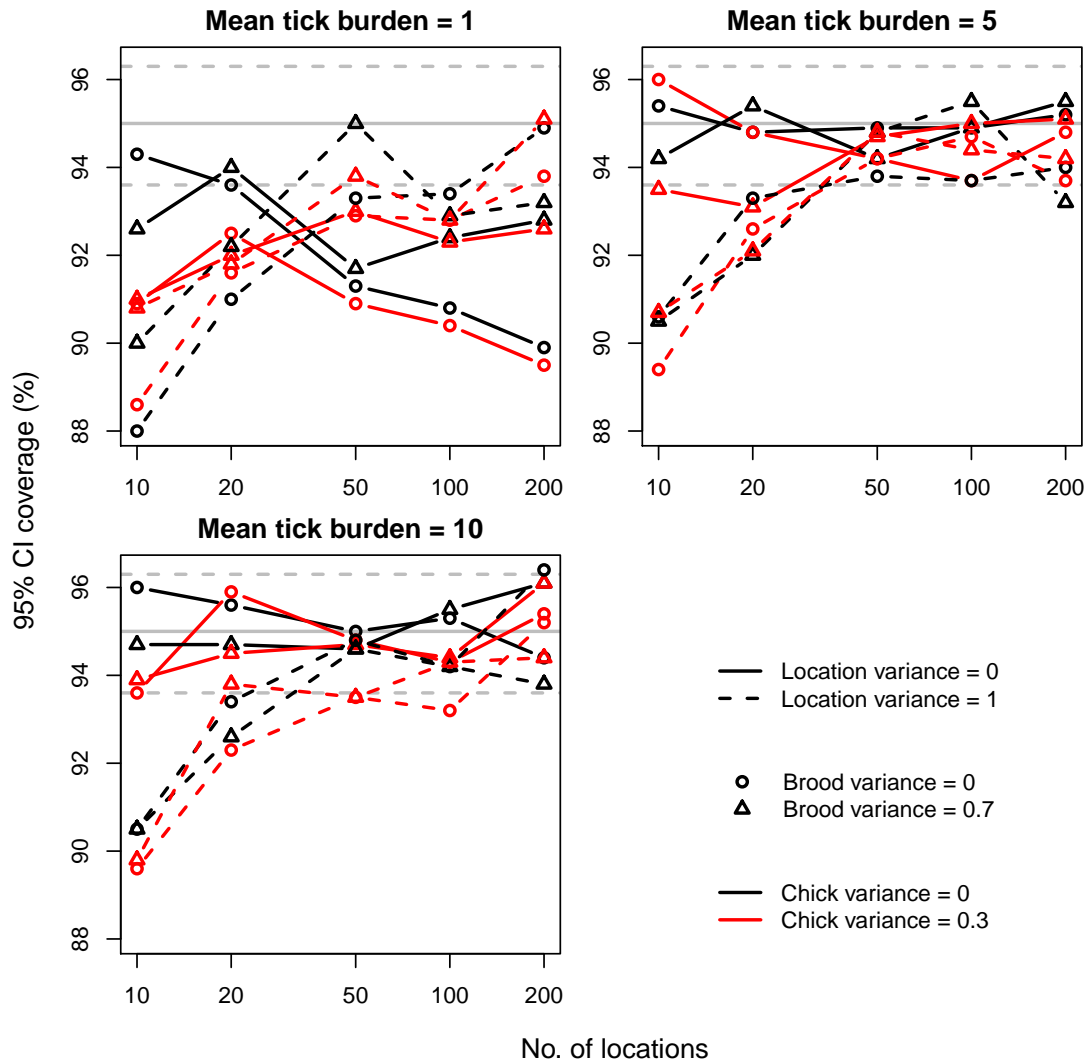


Figure 3: Variation in 95% confidence interval (CI) coverage for estimation of tick abundance by number of locations sampled. Coverage was estimated from 1000 data sets simulated under scenarios that varied in mean tick burden and the degree of variation in mean tick burden at the location, brood and individual chick levels. Correct coverage is shown by a solid grey line. Dashed grey lines show the bounds within which coverage is expected to fall with 95% confidence, assuming that the true coverage is 95%.

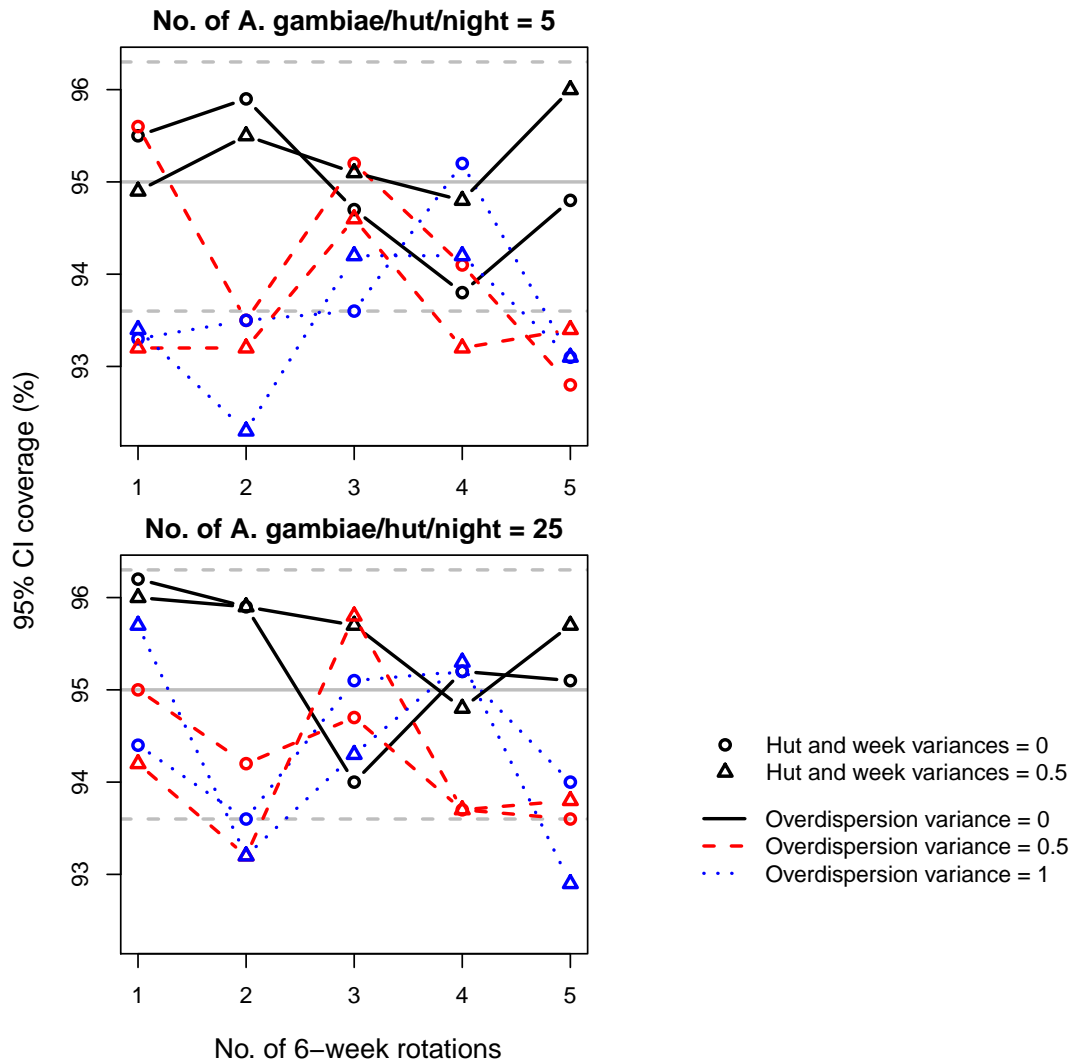


Figure 4: Variation in 95% confidence interval (CI) coverage for estimation of the mortality odds ratio of 1.7 by trial duration in number of 6-week rotations of the Latin square. Each coverage estimate was derived from 1000 simulated data sets, generated under scenarios that varied in *A. gambiae* abundance, degree of variation in mortality between huts and weeks, and strength of overdispersion. Correct coverage is shown by a solid grey line. Dashed grey lines show the bounds within which coverage is expected to fall with 95% probability, assuming that the true coverage is 95%.

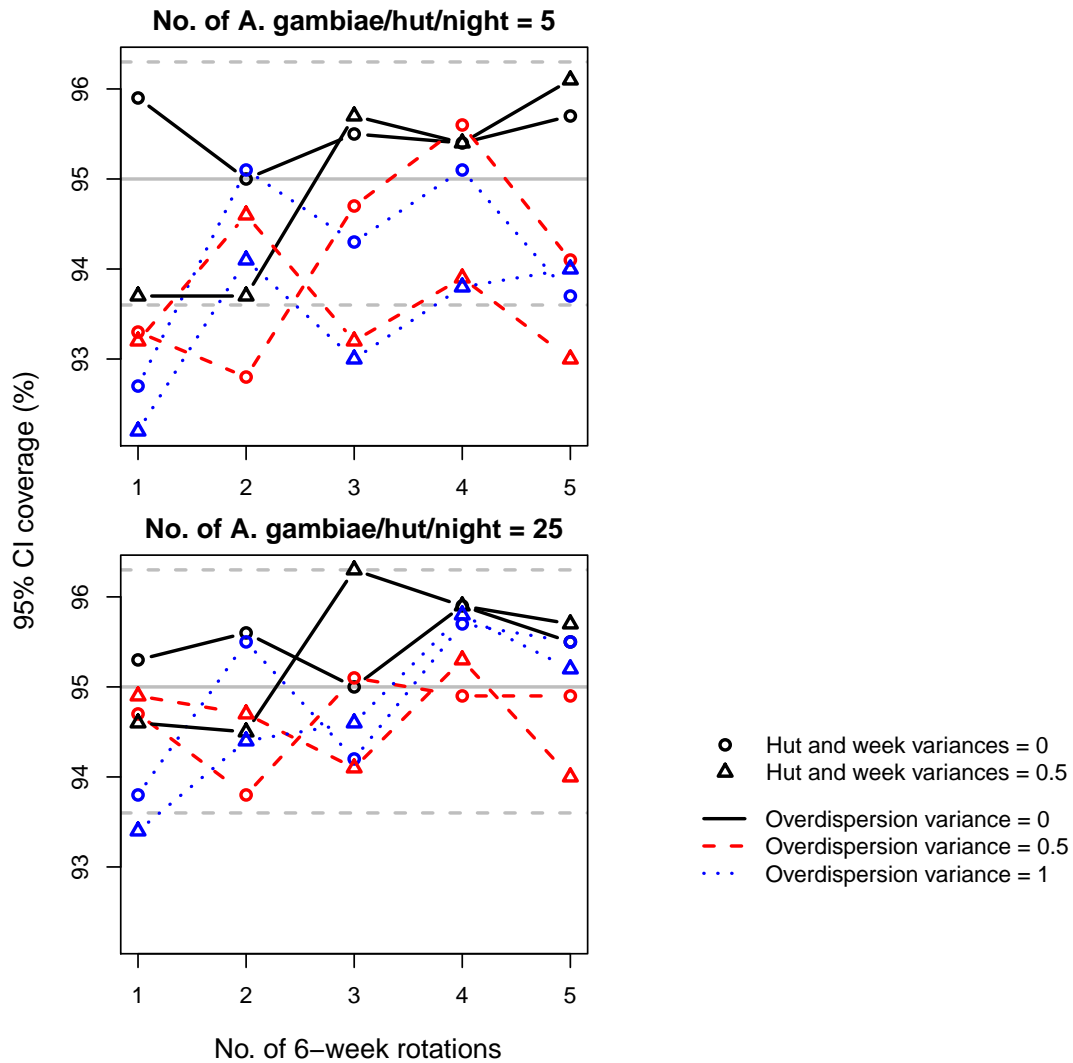


Figure 5: Variation in 95% confidence interval (CI) coverage for estimation of the mortality odds ratio of 1 (i.e. under the null hypothesis) by trial duration in number of 6-week rotations of the Latin square. Each coverage estimate was derived from 1000 simulated data sets, generated under scenarios that varied in *A. gambiae* abundance, degree of variation in mortality between huts and weeks, and strength of overdispersion. Correct coverage is shown by a solid grey line. Dashed grey lines show the bounds within which coverage is expected to fall with 95% confidence, assuming that the true coverage is 95%.