model name: sfit1\_D1.rds

description: demographic stochasticity (oviposition), sex-ratio stochasticity

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit1\_D2.rds

description: demographic stochasticity (oviposition), sex-ratio stochasticity

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit1\_D3.rds

description: demographic stochasticity (oviposition), sex-ratio stochasticity

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit10\_D1.rds

description: demographic stochasticity (oviposition), sex-ratio stochasticity

[1] "n\_eff / iter for parameter m is 0.000250062515628907!"

[1] "n\_eff / iter for parameter beta0 is 0.000250062515628907!"

[1] "n\_eff / iter for parameter gamma\_alpha is 0.000250062515628907!"

[1] " n\_eff / iter below 0.001 indicates that the effective sample size has likely been overestimated"

[1] "Rhat for parameter m is 2308907384084.2!"

[1] "Rhat for parameter beta0 is 2351636506617.66!"

[1] "Rhat for parameter gamma\_alpha is 45706337029511.8!"

[1] " Rhat above 1.1 indicates that the chains very likely have not mixed"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "4000 of 4000 iterations saturated the maximum tree depth of 10 (100%)"

[1] " Run again with max\_depth set to a larger value to avoid saturation"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit10\_D2.rds

description: demographic stochasticity (oviposition), sex-ratio stochasticity

[1] "n\_eff / iter for parameter m is 0.000250062515628907!"

[1] "n\_eff / iter for parameter beta0 is 0.000250062515628907!"

[1] "n\_eff / iter for parameter beta1 is 0.000250062515628907!"

[1] "n\_eff / iter for parameter gamma\_alpha is 0.000250062515628907!"

[1] " n\_eff / iter below 0.001 indicates that the effective sample size has likely been overestimated"

[1] "Rhat for parameter m is 1725579564429.87!"

[1] "Rhat for parameter beta0 is 5189786546829.88!"

[1] "Rhat for parameter beta1 is 11497239220238.9!"

[1] "Rhat for parameter gamma\_alpha is 25139773947398.1!"

[1] " Rhat above 1.1 indicates that the chains very likely have not mixed"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "4000 of 4000 iterations saturated the maximum tree depth of 10 (100%)"

[1] " Run again with max\_depth set to a larger value to avoid saturation"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit10\_D3.rds

description: demographic stochasticity (oviposition), sex-ratio stochasticity

[1] "n\_eff / iter for parameter m is 0.000250062515680237!"

[1] "n\_eff / iter for parameter beta0 is 0.000250062515628907!"

[1] "n\_eff / iter for parameter gamma\_alpha is 0.000250062515629704!"

[1] " n\_eff / iter below 0.001 indicates that the effective sample size has likely been overestimated"

[1] "Rhat for parameter m is 75146.850595881!"

[1] "Rhat for parameter beta0 is 89654024336218.1!"

[1] "Rhat for parameter gamma\_alpha is 521931.642879906!"

[1] " Rhat above 1.1 indicates that the chains very likely have not mixed"

[1] "1881 of 4000 iterations ended with a divergence (47.025%)"

[1] " Try running with larger adapt\_delta to remove the divergences"

[1] "2119 of 4000 iterations saturated the maximum tree depth of 10 (52.975%)"

[1] " Run again with max\_depth set to a larger value to avoid saturation"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit11\_D1.rds

description: demographic stochasticity (oviposition), sex-ratio stochasticity

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit11\_D2.rds

description: demographic stochasticity (oviposition), sex-ratio stochasticity

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit11\_D3.rds

description: demographic stochasticity (oviposition), sex-ratio stochasticity

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit2\_D1.rds

description: demographic stochasticity (oviposition), sex-ratio stochasticity, and demographic heterogeneity (oviposition)

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "1 of 4000 iterations ended with a divergence (0.025%)"

[1] " Try running with larger adapt\_delta to remove the divergences"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit2\_D2.rds

description: demographic stochasticity (oviposition), sex-ratio stochasticity, and demographic heterogeneity (oviposition)

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "3 of 4000 iterations ended with a divergence (0.075%)"

[1] " Try running with larger adapt\_delta to remove the divergences"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit2\_D3.rds

description: demographic stochasticity (oviposition), sex-ratio stochasticity, and demographic heterogeneity (oviposition)

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "7 of 4000 iterations ended with a divergence (0.175%)"

[1] " Try running with larger adapt\_delta to remove the divergences"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit3\_D1.rds

description: demographic stochasticity (oviposition) with temporal autocorrelation, sex-ratio stochasticity

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit3\_D2.rds

description: demographic stochasticity (oviposition) with temporal autocorrelation, sex-ratio stochasticity

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "11 of 4000 iterations ended with a divergence (0.275%)"

[1] " Try running with larger adapt\_delta to remove the divergences"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit3\_D3.rds

description: demographic stochasticity (oviposition) with temporal autocorrelation, sex-ratio stochasticity

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "4 of 4000 iterations ended with a divergence (0.1%)"

[1] " Try running with larger adapt\_delta to remove the divergences"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit4\_D1.rds

description: demographic stochasticity (oviposition and cannibalism), sex-ratio stochasticity

[1] "n\_eff / iter for parameter beta0 is 0.00058716019049242!"

[1] "n\_eff / iter for parameter eta\_alpha is 0.000285155191193064!"

[1] " n\_eff / iter below 0.001 indicates that the effective sample size has likely been overestimated"

[1] "Rhat for parameter m is 1.12412373525451!"

[1] "Rhat for parameter beta0 is 1.27231117615365!"

[1] "Rhat for parameter eta\_alpha is 2.61270532120804!"

[1] " Rhat above 1.1 indicates that the chains very likely have not mixed"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "2000 of 4000 iterations saturated the maximum tree depth of 10 (50%)"

[1] " Run again with max\_depth set to a larger value to avoid saturation"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit4\_D2.rds

description: demographic stochasticity (oviposition and cannibalism), sex-ratio stochasticity

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit4\_D3.rds

description: demographic stochasticity (oviposition and cannibalism), sex-ratio stochasticity

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit5\_D1.rds

description: demographic stochasticity (oviposition), and demographic heterogeneity (oviposition)

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit5\_D2.rds

description: demographic stochasticity (oviposition), and demographic heterogeneity (oviposition)

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit5\_D3.rds

description: demographic stochasticity (oviposition), and demographic heterogeneity (oviposition)

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit6\_D1.rds

description: demographic stochasticity (oviposition)

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit6\_D2.rds

description: demographic stochasticity (oviposition)

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit6\_D3.rds

description: demographic stochasticity (oviposition)

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit7\_D1.rds

description: demographic heterogeneity (oviposition)

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit7\_D2.rds

description: demographic heterogeneity (oviposition)

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit7\_D3.rds

description: demographic heterogeneity (oviposition)

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit8\_D1.rds

description: demographic heterogeneity (oviposition), sex-ratio stochasticity

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "18 of 4000 iterations ended with a divergence (0.45%)"

[1] " Try running with larger adapt\_delta to remove the divergences"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit8\_D2.rds

description: demographic heterogeneity (oviposition), sex-ratio stochasticity

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit8\_D3.rds

description: demographic heterogeneity (oviposition), sex-ratio stochasticity

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "6 of 4000 iterations ended with a divergence (0.15%)"

[1] " Try running with larger adapt\_delta to remove the divergences"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit9\_D1.rds

description: demographic stochasticity (oviposition), sex-ratio stochasticity, and environmental stochasticity (oviposition)

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit9\_D2.rds

description: demographic stochasticity (oviposition), sex-ratio stochasticity, and environmental stochasticity (oviposition)

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"

model name: sfit9\_D3.rds

description: demographic stochasticity (oviposition), sex-ratio stochasticity, and environmental stochasticity (oviposition)

[1] "n\_eff / iter looks reasonable for all parameters"

[1] "Rhat looks reasonable for all parameters"

[1] "0 of 4000 iterations ended with a divergence (0%)"

[1] "0 of 4000 iterations saturated the maximum tree depth of 10 (0%)"

[1] "E-BFMI indicated no pathological behavior"