**Table S1.Cormack-Jolly-Seber bootstrap goodness-of-fit results.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Model | AICc | δAIC*c* | *w*AIC*c* | *k* | P | $$\hat{c}$$ |
| $\hat{θ}$(*s*\**t*)*p*(*s*\**t*) | 1267.954 | 0 | 0.38933 | 43 | 0.18 | 1.142 |
| $\hat{θ}$(*t*)*p*(*s*\**t*) | 1268.706 | 0.752 | 0.26731 | 40 | 0.03 | 1.254 |
| $\hat{θ}$(*.*)*p*(*s*\**t*) | 1269.23 | 1.2759 | 0.20571 | 31 | 0.10 | 1.151 |
| $\hat{θ}$(*s*)*p*(*s*\**t*) | 1270.783 | 2.8295 | 0.0946 | 32 | 0.05 | 1.210 |
| $\hat{θ}$(*.*)*p*(*s*) | 1273.831 | 5.8776 | 0.02061 | 3 | 0.14 | 1.144 |
| $\hat{θ}$(*s*)*p*(*s*) | 1275.281 | 7.3268 | 0.00998 | 4 | 0.06 | 1.157 |
| $\hat{θ}$(*t*)*p*(*s*) | 1275.982 | 8.0285 | 0.00703 | 18 | 0.08 | 1.195 |
| $\hat{θ}$(*t*)*p*(*t*) | 1279.551 | 11.5974 | 0.00118 | 32 | 0.32 | 1.048 |
| $\hat{θ}$(*s*\**t*)*p*(*s*) | 1279.615 | 11.6615 | 0.00114 | 25 | 0.21 | 1.079 |
| $\hat{θ}$(*s*)*p*(*t*) | 1279.819 | 11.8648 | 0.00103 | 25 | 0.08 | 1.197 |
| $\hat{θ}$(*s*)*p*(*,*) | 1280.24 | 12.2862 | 0.00084 | 3 | 0.10 | 1.151 |
| $\hat{θ}$(*.*)*p*(*t*) | 1281.397 | 13.4436 | 0.00047 | 24 | 0.51 | 0.991 |
| $\hat{θ}$(*t*)*p*(*.*) | 1281.441 | 13.4868 | 0.00046 | 16 | 0.34 | 1.040 |
| $\hat{θ}$(*.*)*p*(*.*) | 1282.354 | 14.4005 | 0.00029 | 2 | 0.43 | 1.012 |
| $\hat{θ}$(*s*\**t*)*p*(*.*) | 1287.748 | 19.7942 | 0.00002 | 27 | 0.00 | 1.281 |
| $\hat{θ}$(*s*\**t*)*p*(*t*) | 1296.404 | 28.4499 | 0 | 46 | 0.01 | 1.363 |

The16 top-ranked models from the capture matrix with only individuals having sex determined (1360 individuals) are shown. Models include probability of survival ($\hat{θ}$) and capture (*p*) with all combinations of sex (*s*) and time (*t*). Shown are Akaike’s information criterion corrected for small samples (AIC*c*) difference between the top-ranked model AIC*c* and the current model (δAIC*c*), AIC*c*weights (*w*AIC*c*) and the number of estimable parameters (*k*). From bootstrap goodness-of-fit tests the probability of a deviance less than or equal to the observed deviance from 100 bootstrap goodness-of-fit simulations of the model (*P*), and the quasi likelihood over (or under) dispersion factor ($\hat{c})$ area also presented.