|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **final models** | **coefficients** | **estimate** | **SE** | **Likelihood ratio test** |
|  **χ2(df)** | ***P*** |
| **1. aggression ~ habitat + year** |  |  |  |  |  |
| dispersion parameter =33.43 | **intercept** (habitat: shelf, year: 2013) | -2.644 | 0.311 | -882.47(2) | <0.0005 |
| df =62 | **habitat**: slope | 1.434 | 0.310 | -845.9 (1) | <0.0005 |
| res.deviance = 2082 | **year**: 2014 | 0.355 | 0.274 | -56.84 (1) | 0.196 |
|  |  |  |  |  |  |
| **2. courtship ~ habitat + year** |  |  |  |  |  |
| dispersion parameter =37.63 | **intercept** (habitat: shelf, year: 2013) | -2.460 | 0.355 | -38.882(2) | 0.596 |
| df =62 | **habitat**: slope | -0.415 | 0.424 | -36.51(1) | 0.324 |
| res.deviance = 1926.6 | **year**: 2014 | 0.087 | 0.419 | -1.61(1) | 0.836 |
|  |  |  |  |  |  |
| **3. rest ~ habitat + year** |  |  |  |  |  |
| dispersion parameter =52.438 | **intercept** (habitat: shelf, year: 2013) | -0.281 | 0.232 | -596.92(2) | <0.0005 |
| df =62 | **habitat**: slope | -0.729 | 0.286 | -347.97(1) | <0.0005 |
| res.deviance = 3526.1 | **year**: 2014 | -0.658 | 0.287 | -282.32(1) | 0.020 |
|  |  |  |  |  |  |
| **4. rove ~ habitat + year** |  |  |  |  |  |
| dispersion parameter =54.489 | **intercept** (habitat: shelf, year: 2013) | -0.216 | 0.226 | -81.09(2) | 0.475 |
| df =62 | **habitat**: slope | -0.062 | 0.255 | -76.301(1) | 0.236 |
| res.deviance = 3857 | **year**: 2014 | 0.302 | 0.255 | -3.234(1) | 0.807 |

S3 Male activity

Quasibinomial GLMs modelling the effect of habitat (slope, shelf), year (2013,2014) and their interaction on the total time spent by males (n=65) in an activity (aggression, courtship, rest, rove) versus time not spent in that activity. Maximum model with only the non-significant interaction are terms removed to improve parameter interpretation. Statistical hypothesis testing of coefficients carried out with likelihood ratio tests.