

Table S4. Probability of lions being found feeding when first observed each day. Lions were less likely to be found feeding during the brightest phase of the moon and more likely to be found feeding in the Serengeti woodlands and on the Serengeti plains during the wet season.

PREVIOUSLY OBTAINED CARCASSES

Call: glm(formula = count ~ luminosity + habitat*season, family = Poisson)

Deviance Residuals:

| Min | 1Q | Median | 3Q | Max |
|---------|---------|---------|--------|--------|
| -2.8107 | -0.8725 | -0.2384 | 0.6873 | 2.6058 |

Coefficients:

| | Estimate | Std. Error | z value | Pr(> z) |
|------------------|----------|------------|---------|----------|
| (Intercept) | 2.84131 | 0.06950 | 40.884 | < 2e-16 |
| Luminosity | -0.14104 | 0.05382 | -2.620 | 0.00878 |
| PlainsHabitat | 0.13249 | 0.08841 | 1.499 | 0.13398 |
| WoodsHabitat | 1.10277 | 0.07450 | 14.803 | < 2e-16 |
| WetSeason | 0.02469 | 0.09073 | 0.272 | 0.78550 |
| Plains:WetSeason | 0.70430 | 0.11680 | 6.030 | 1.64E-09 |
| Woods:WetSeason | -0.01369 | 0.10480 | -0.131 | 0.89600 |

(Dispersion parameter for Poisson family taken to be 1)

Null deviance: 761.48 on 89 degrees of freedom

Residual deviance: 132.31 on 83 degrees of freedom

AIC: 607.51

Number of Fisher Scoring iterations: 4

Analysis of Deviance Table

Model 1: count ~ habitat * season

Model 2: count ~ luminosity + habitat * season

| | Resid. Df | Resid. Dev | Df | Deviance | P(> χ^2) |
|-----------------------|-----------|------------|----|----------|------------------|
| w/o luminosity | 84 | 139.178 | | | |
| w/ luminosity | 83 | 132.306 | 1 | 6.872 | 0.008754 |