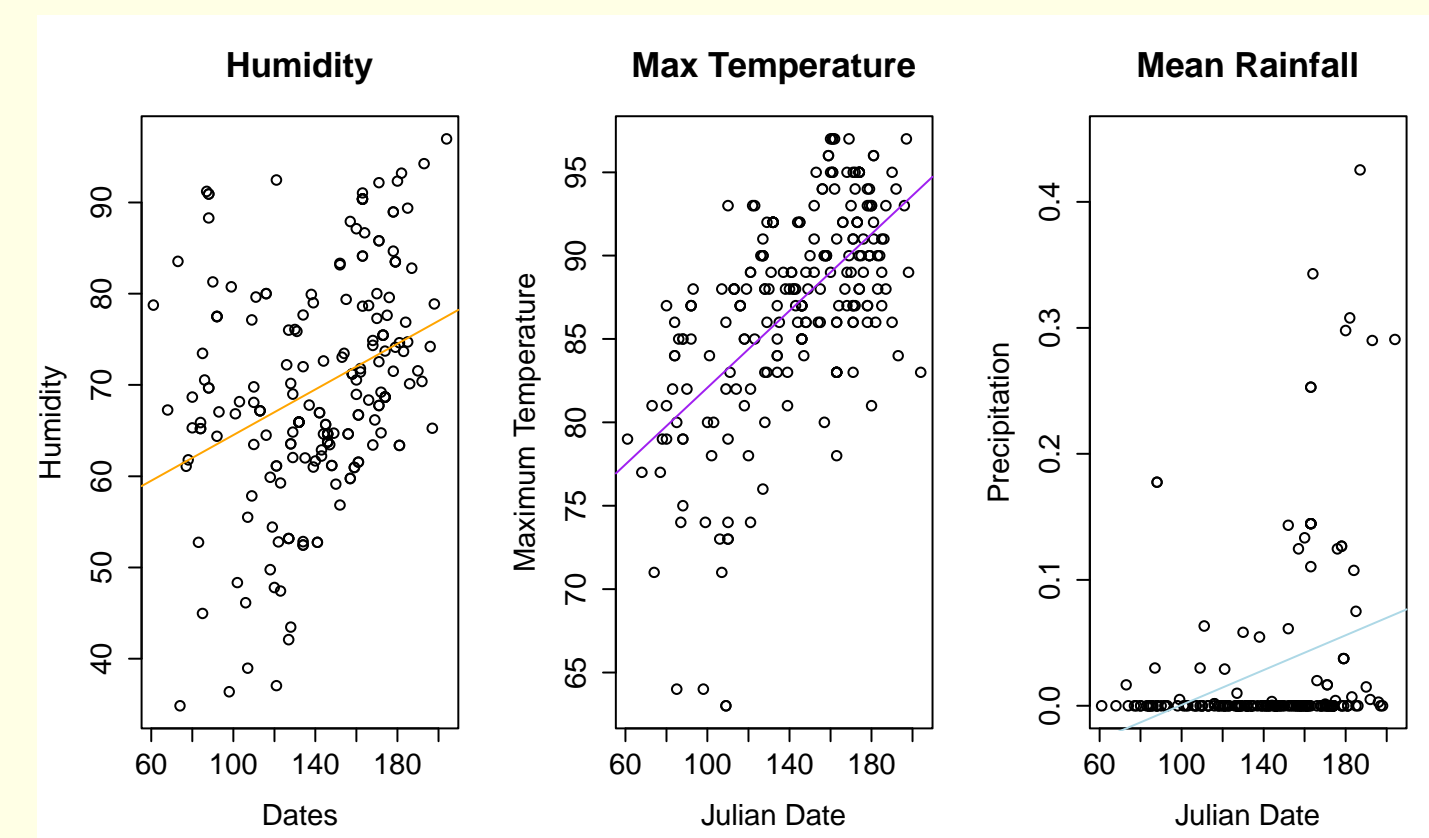


Introduction & Hypothesis

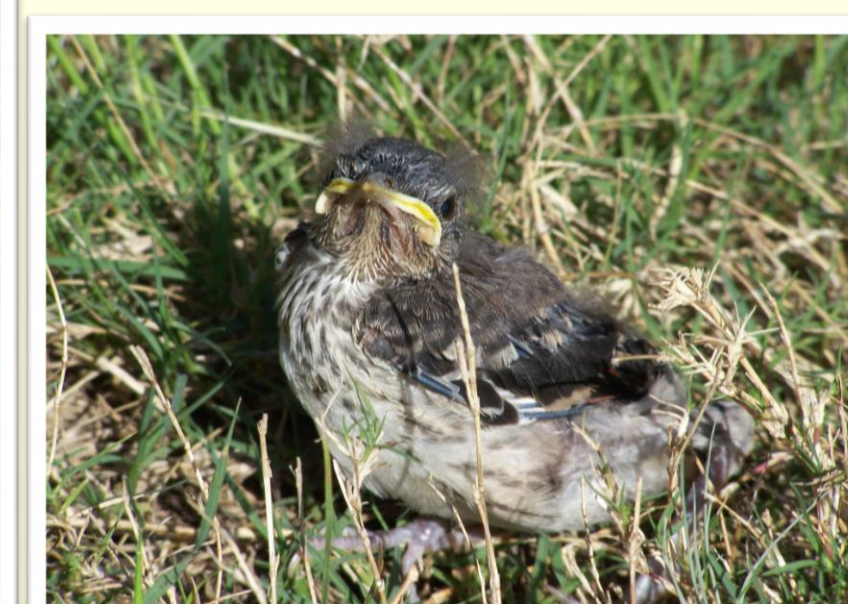
The Northern Mockingbird is abundant in Florida, nests throughout campus from late February until early August, a very long breeding season during which weather conditions change (Farnsworth 2011).



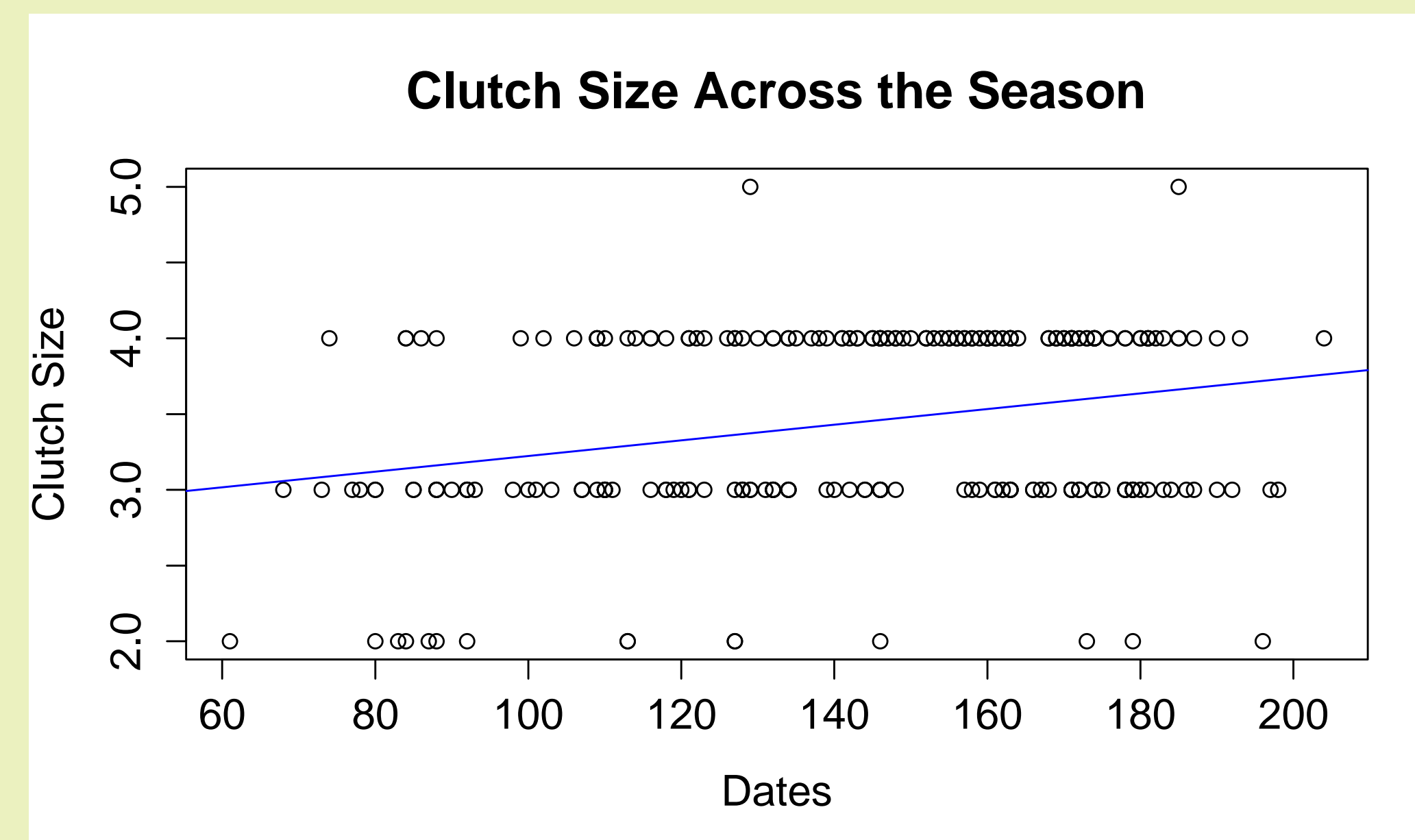
We wanted to determine whether egg weight, clutch size and nesting success changes throughout the breeding season. We predicted that during the early season we would see smaller clutches, lighter eggs, decreased hatchability, and lower nest survival due to lower resources.

Methods

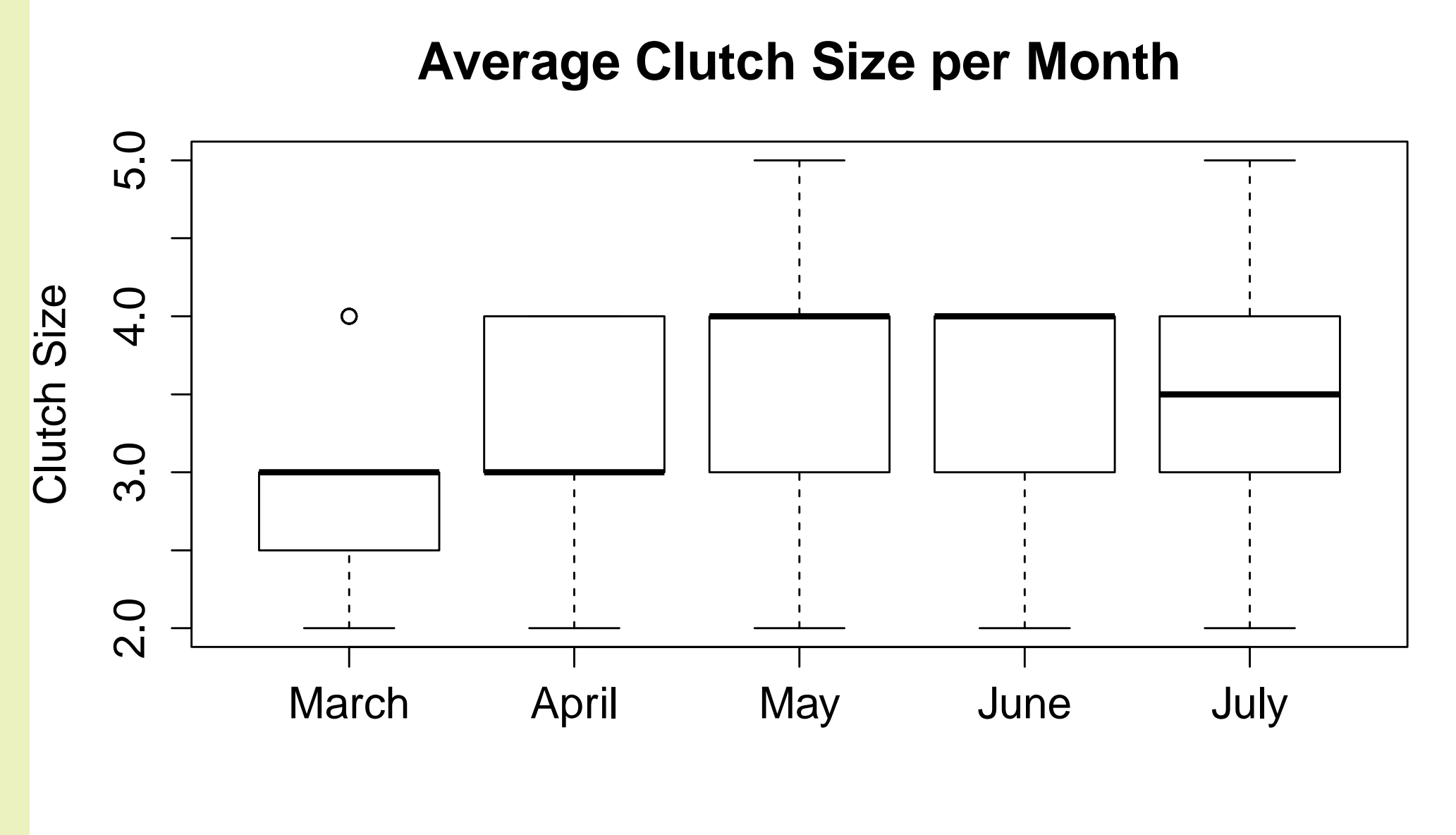
Campus was systematically searched for nests. Egg weights, clutch size, brood size were recorded during monitoring. Abiotic factors were quantified using the hourly data UF Physics department archives.



Clutch size



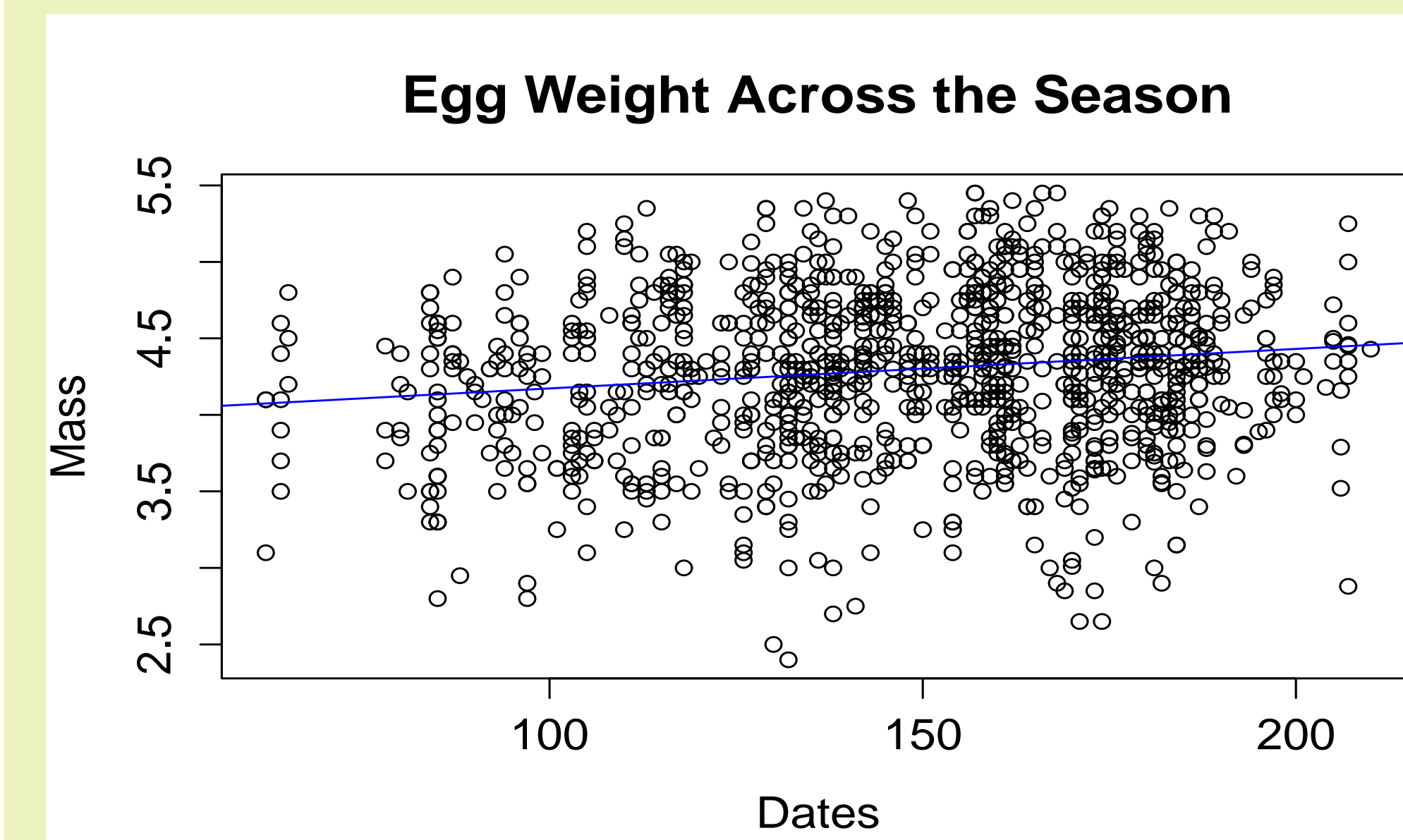
Number of eggs per clutch increased significantly with season – depicted in Julian dates (lm, N=230 clutches, $p < 0.001$).



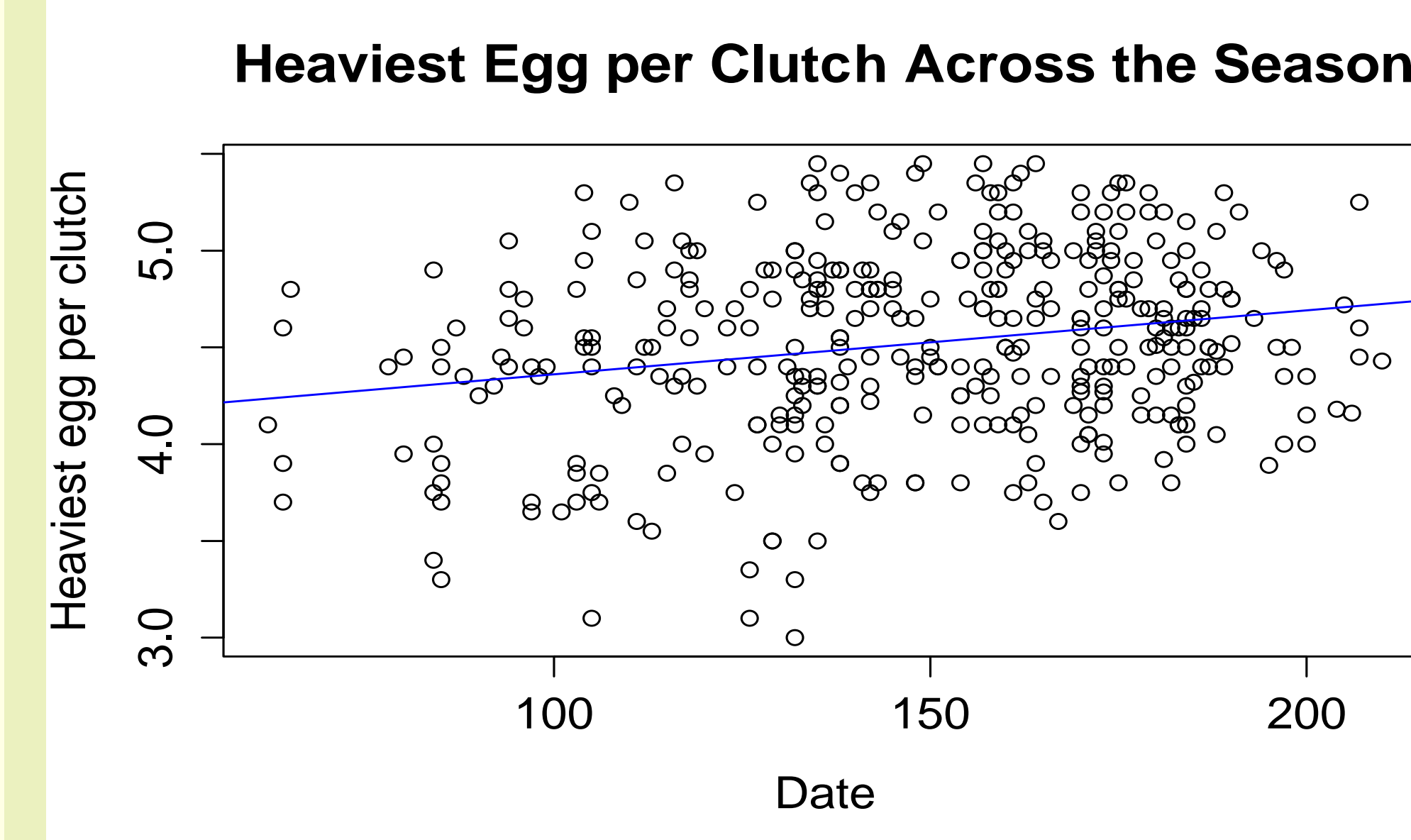
Clutch size per month increased from the beginning of the season, with higher averages at the peak of the season.

Results

Egg Mass

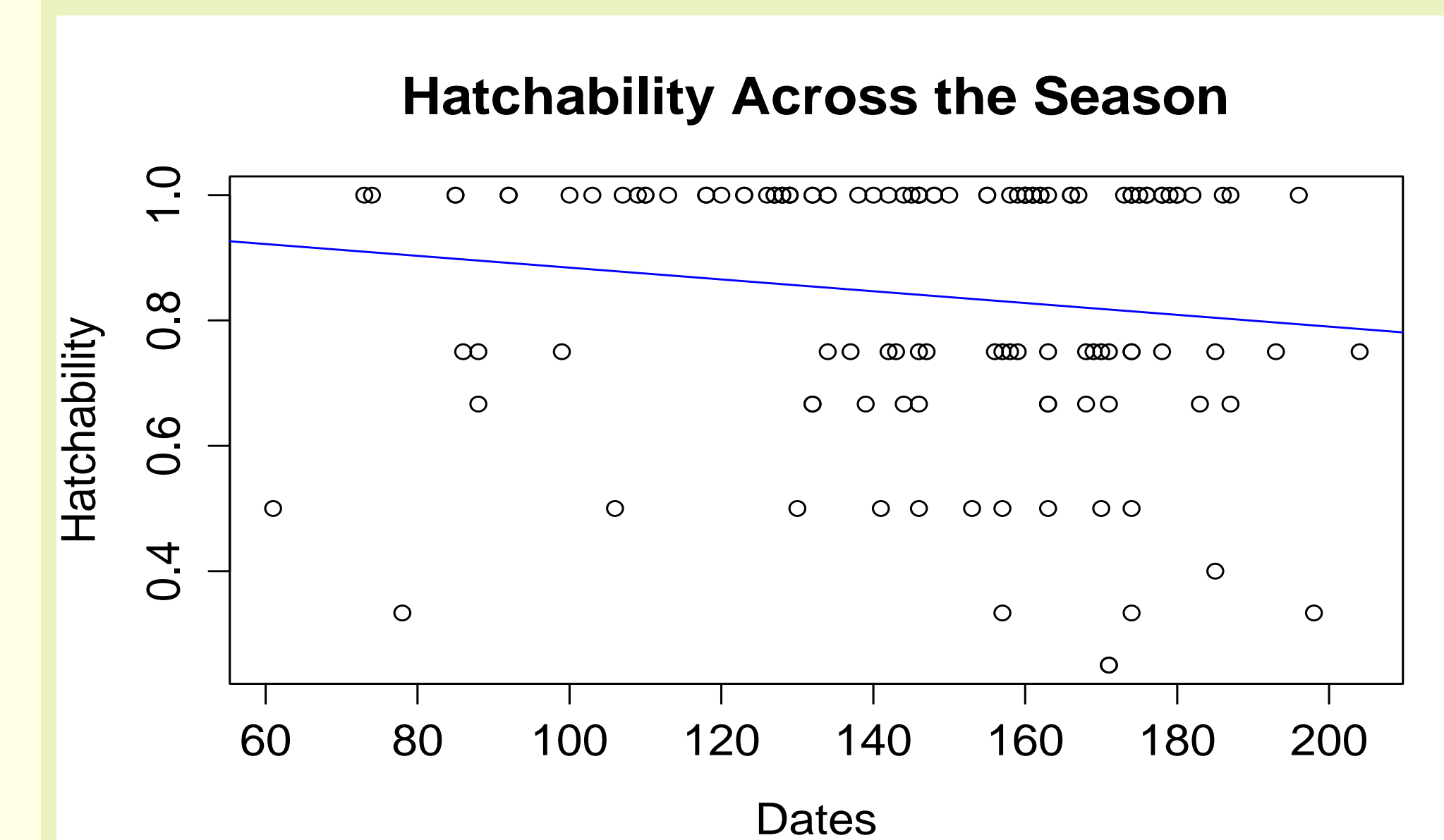


Egg weights at laying also significantly increased with season (lm, N=1128 eggs, $p < 0.001$).

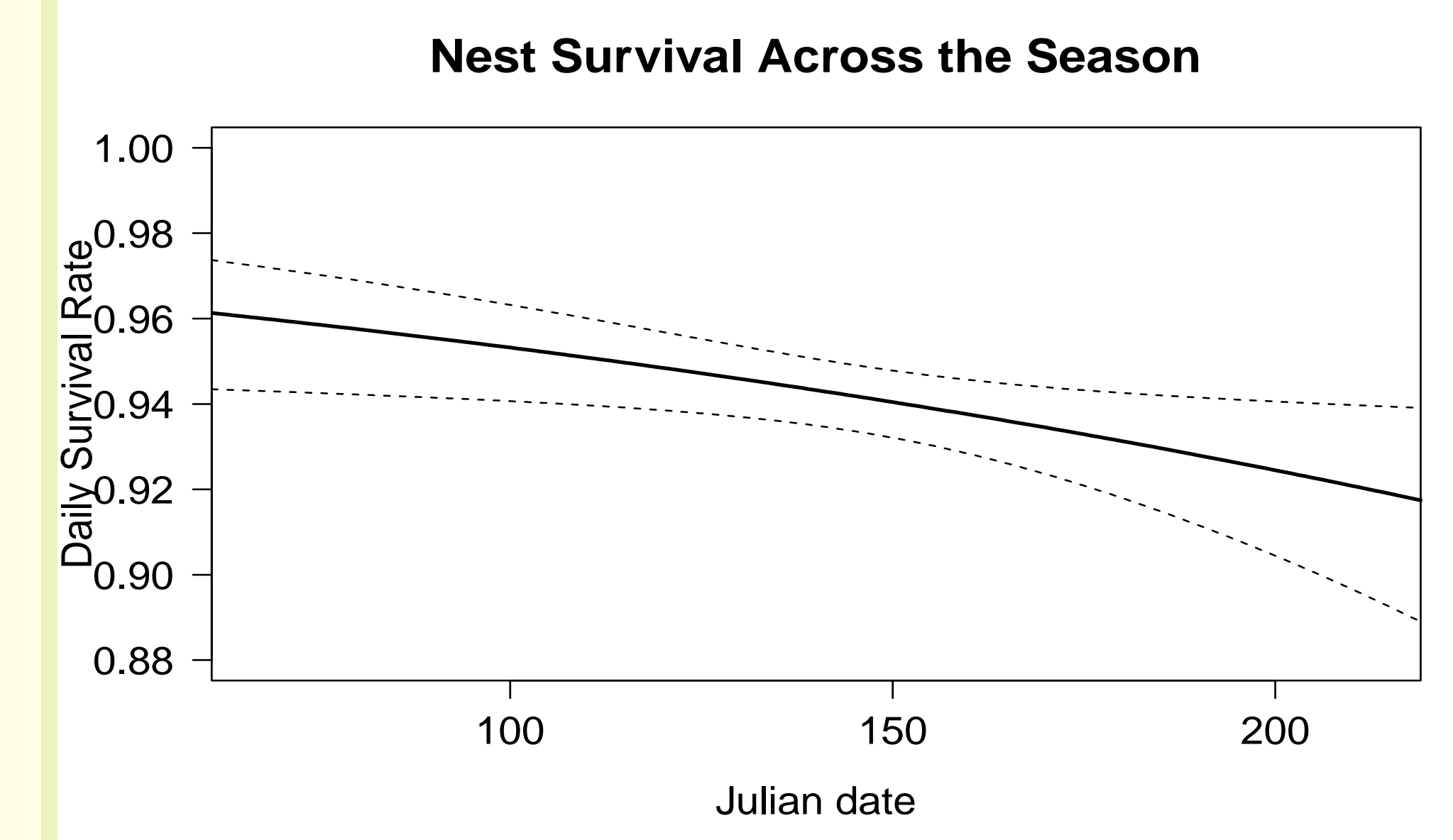


The maximum egg weight in each clutch also increased with season (lm, N=373 clutches, $p < 0.001$).

Success



The proportion of eggs hatching per clutch showed a decreasing trend, but was not significant (lm, N=124 clutches, $p = 0.131$).



The overall nest survival decreased with season, but this is confounded with predation (lm, N=416 nests, $p < 0.001$).

Discussion & Conclusions

The results support our predictions that egg mass and clutch size will increase as the season progresses, and more resources potentially become available. Average clutch size per month increased from March to April and then remained fairly consistent through July. Hatchability did not change significantly, the lack of power may be due to the sample size. Daily nest survival rates decreased as the season progresses. However, it is impossible to distinguish between predation effects and abiotic effects due to lack of experimental data. In order to make this distinction, we would have to observe nests to determine if it failed due to predation, starvation or abandonment.

Future directions

Maternal effects could influence clutch size, egg weights and nestling growth. Females in better condition may lay heavier eggs, larger clutches, and provide better parental care. We will explore nestling traits (weight, wing, tail and tarsus lengths), growth rate, using both abiotic conditions and female identity as factors.

References

Farnsworth, George, Gustavo Adolfo Londono, Judit Ungvari Martin, K. C. Derrickson and R. Breitwisch. 2011. Northern Mockingbird (*Mimus polyglottos*). The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu/bnaproxy.birds.cornell.edu/bna/species/007>
doi:10.2173/bna.7