**Life history questions and statistical plan**

1. Survival
   1. Visualize time to death of all, n=3430
      1. Kaplan meier survival curve
   2. Visualize time to death of males and females, n=2652
      1. Kaplan meier survival curve
   3. Does temperature or locality affect time to death?
      1. Cox regression- separate sexes (Males and Females
2. Rate of development
   1. Does temperature and sex of mosquitoes from the 3 biomes affect rate of larvae development?
      1. GLMM, lsmeans (post hoc)
      2. Distribution- Binomial
   2. Does temperature and sex of mosquitoes from the 3 biomes affect rate of pupae development?
      1. GLMM, lsmeans (post hoc)
      2. Distribution- Binomial
   3. Does temperature and sex of mosquitoes from the 3 biomes affect overall mosquito development?
      1. GLMM, lsmeans (post hoc)
      2. Distribution- Binomial
3. Body size
   1. How does temperature and sex of mosquitoes from the 3 biomes affect body size (wing lengths)?
      1. ANOVA
   2. Is there a body size (wing lengths) cline over increasing latitude or increasing temperature?
      1. Linear regression
   3. Does temperature and sex affect body size?
      1. GLMM, distribution- Gaussian (Nakagawa 2013)
4. Time to emergence
   1. Does sex or temperature affect the length of time (days-count)?
      1. ANOVA
   2. Does the average time to emerge for males differ from females?
      1. ANOVA
5. Length of adult life
   1. Does temperature or sex affect length of adult life?
      1. GLMM

Completed

1. Sex selection and proportion survived
   1. Does temperature select for a sex?
      1. Chi-squared
         1. No, it does not , p=.347
   2. Does locality select for a sex?
      1. Chi-squared
         1. No, it does not, p=.4634
   3. Does locality or temperature select for a sex of resulting adults?
      1. Cochran-Mantel Haenszel
         1. No, it does not, p=.4249