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**Title: Re-analysis of a mosquito count data set: Comparison of Traditional (Frequentist) approach and Bayesian approach.**

**Data**: Is available (raw counts in Excel file; used in Reisen and Lothrop 1999).

**Narrative**: There is a need to implement Bayesian techniques for the analysis of mosquito counts from trap surveys (Peck et al 2018). Similarly, there is also a need to expand traditional thinking in the mosquito surveillance community and embrace the idea of incorporating occupancy analysis into control agency surveillance programs (Peck 2015). The analysis in Reisen and Lothrop (1999) is based on a frequentist approach, including the assumption of a normal distribution for mosquito count data. I propose a re-analysis of the data from Reisen and Lothrop (1999). I have permission from the publisher to use this raw data with proper acknowledgement if published. I leave it up to a team of graduate students to read the three key papers (Peck et al 2018, Peck 2015, and Reisen and Lothrop 1999) to gain an introduction to the problem, consider their familiarity with the secondary references (some listed below but especially all the statistical papers and textbooks mentioned in Peck et al 2018). I expect the team to reach out to me (the client) as they would in a real-world statistical consultancy gig for details/relevant facts from me to help guide the team’s analysis.

PRIMARY REFERENCES

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3. Reisen, W K and Lothrop, H D. 1999. Effects of Sampling Design on the Estimation of Adult Mosquito Abundance. Journal of the American Mosquito Control Association 15(2):105-14.

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