Insecticide Resistance in Mosquitoes – Stephanie Richards

a. Routine monitoring is an important part of mosquito control
b. Study
    i. Why
        1. Determine susceptibility/resistance of several US population
        2. Different technical grade active ingredients
        3. Done over several years
    ii. Design
        1. Ship eggs in mail
        2. Reared in lab
    iii. Active ingredients
        1. Malathion
        2. Etofenprox
        3. Several pyrethroids
    iv. Mosquitoes
        1. *Culex quinquefasciatus*
        2. *Aedes albopictus*
    v. Bottle bioassay
    vi. Analysis
        1. Ordinal logistic regression
        2. WHO guidelines
        3. Odds ratio
c. Results
    i. South
        1. Dallas, TX
            a. Aedes generally more susceptible than Culex
            b. Resistance seen in Aedes to several active ingredients
        2. Greenville, NC
            a. No mosquito control
            b. Collected from detention pond
            c. Resistance changed over time
    ii. Lots of variation
    iii. Lots of resistance
        1. Resistance higher in Culex than Aedes
        2. Some populations are highly resistant to everything
d. Why the differences
    i. Different pesticide applications
        1. Different products
        2. Different times
        3. Different methods of application (ULV vs Barrier)
    ii. Mosquito control is only a small part of the pesticide pressure