

Rapid Mosquito & Mosquito-Borne Virus Surveillance After Floods in Kansas, 2007 – Dr. Bruce Harrison (NC DENR)

- a) Request for emergency management – July 2007
- b) Background info:
 - i) Kansas eliminated most of the state's mosquito control in early 2007 due to loss of funding
 - ii) Heavy rains (18+) inches caused flooding
 - iii) Mosquitoes were very bad
 - iv) Disaster relief was requested
- c) Mission Statement:
 - i) Survey, collect, ID & test
 - ii) Work with locals
 - iii) Provide control info
 - iv) Talk to media
- d) Methods:
 - i) Survey 4 counties
 - ii) Select productive sites
 - iii) Rapid assessment (10 days)
 - iv) Several trap types used
 - v) Needed to bring all equipment used
 - vi) Focus on sites where *Cx pipiens* were likely to be found
- e) Logistics:
 - i) 10 nights of trapping
 - ii) 2 people
 - iii) Total – 16 days, 405 hours work time total
 - iv) Set-up in EOC
- f) FEMA was not well-informed about mosquitoes and mosquito control
- g) Results
 - i) 17 traps set each night
 - ii) 27 trap sites in 4 counties
 - iii) 151 trap nights
 - (1) 41% CDC traps
 - (2) 58% gravid traps
 - iv) 10,375 female mosquitoes collected
 - (1) *Ae vexans* primary species collected
 - (2) *Cx pipiens* next most common
 - v) Also did landing counts
 - vi) 91% of total made up of 7 species
- h) Virus
 - i) 235 pools submitted
 - ii) 30 pools WNV+
 - iii) 37% of sites were WNV+
 - iv) WNV+ pools collected on 9 of 10 collection days
 - v) MLEs ranged from 1.94 to 22.57
 - vi) Collected WNV+ mosquito at EOC site
 - vii) No SLE or WEE positive pools
- i) Recommended spraying of hot spots - did get a WNV case close by one of the hot spots
- j) Collected/saw some new/interesting species
- k) Conclusions:

- i) *Psorophora* spp major complaint driver
- ii) *Ae albopictus* another major complaint driver
- iii) Flooding not the cause of mosquito problems
- iv) Rain in ditches and containers was a big problem
- v) REAL LEARNING EXPERIENCE