

Preliminary Observations on the Ovipositing of Container Breeding Mosquitoes in West Central Georgia

Purpose of Project

- ▶ 1. Look for hold out or returning populations of *Aedes aegypti*.
- ▶ 2. Establish seasonal onset/termination dates of ovipositing

Methods

- ▶ Microbiology students at Gordon State College, Barnesville, Georgia placed ovitraps on properties.
- ▶ Directed to place in shady locations protected from rain
- ▶ Sampling conducted in Spring 2013 (February – April)
- ▶ Fall 2013 (August-October)
- ▶ Fall 2014 (August – present)
- ▶ Sites were located in 12 counties in 2013 - Butts, Clayton, Coweta, Henry, Jones, Lamar, Monroe, Pike, Rockdale, Spalding, Twiggs, Upson counties
- ▶ Sites in 10 Counties in 2014 - Carroll, Clayton, Coweta, Henry, Jones, Lamar, Meriwether, Muscogee, Spalding, Upson (2014)

EGG COLLECTION

- ▶ Seed Germination paper substrate



Field Collection



Black plastic container with over fill drain hole
Filled with distilled water

Substrate collected after 7 days; water dumped
from trap, and refilled and new substrate added

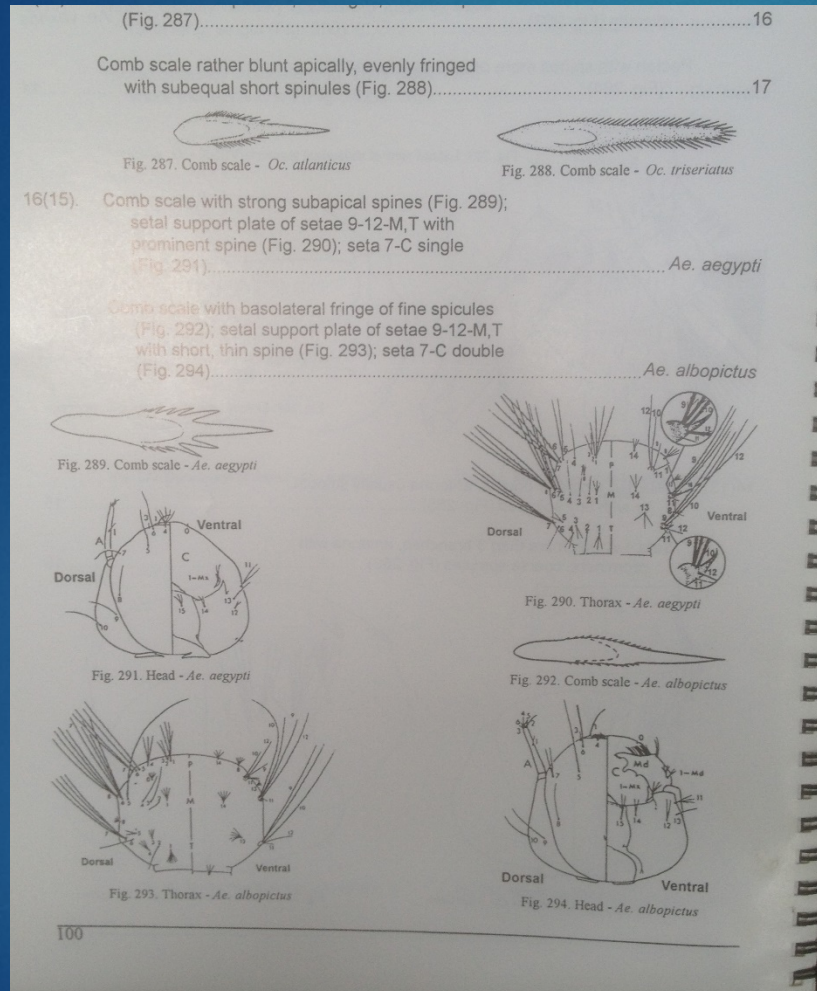
Cycle repeated from August until first frost in
October



Egg Hatching

- ▶ Germination papers placed in deionized water and larvae reared to 4th instar for identification.
- ▶ Egg diapause was terminated by exposing egg sheets to 4-5 hours of additional light for 7 days

Larval Identification



Darsie, Richard and Charlie Morris
Key to Adult Female and 4th Instar
Larvae of the Mosquitoes of Florida,
Vol 1

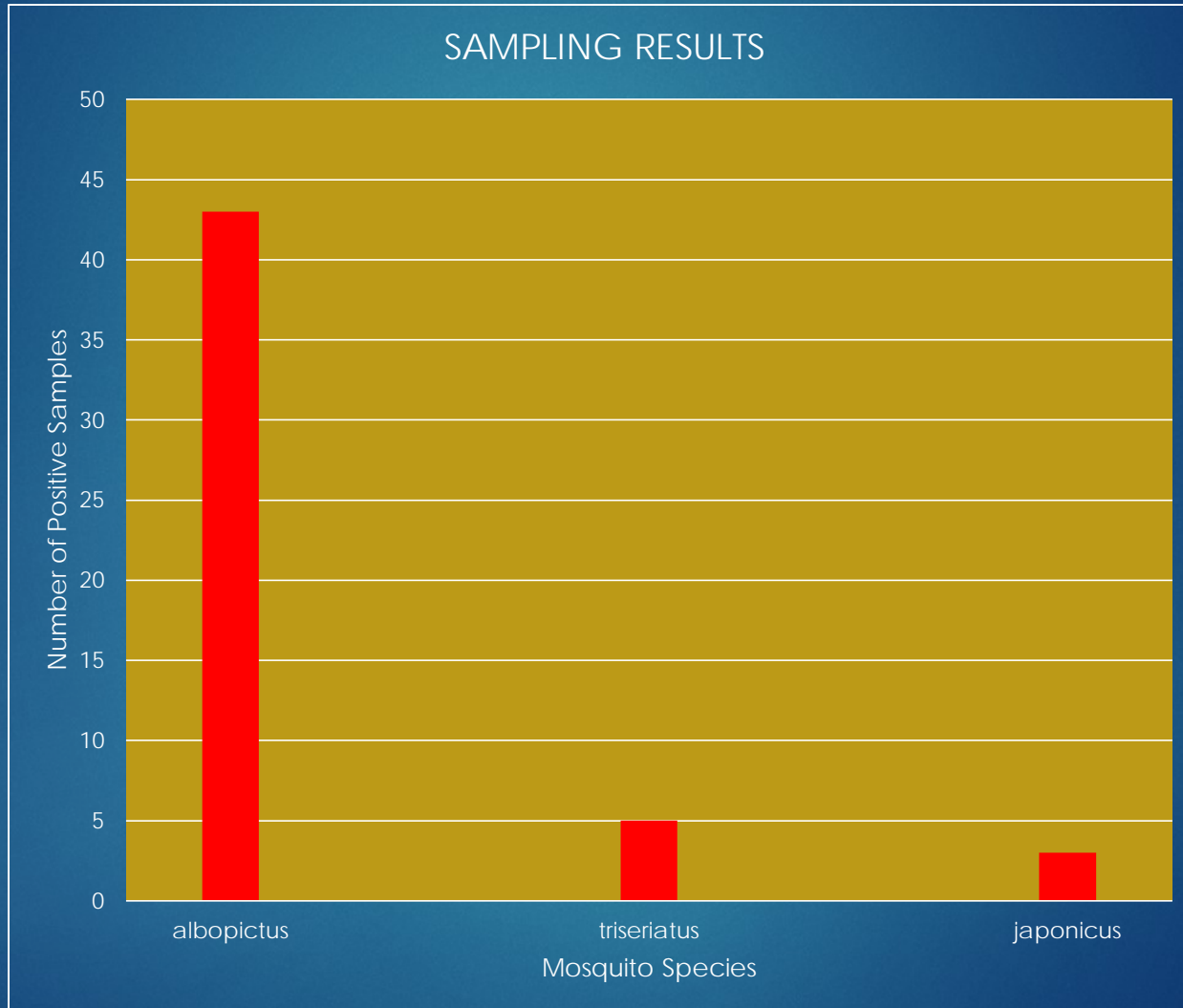
Spring FEB – APR, 2013

- ▶ Number of samples collected 94
- ▶ Number of negative samples (no ova) 92
- ▶ Number of positive samples 2 - mid April, 2013
- ▶ Number of samples positive for albopictus 2

Fall Aug – Oct 2013

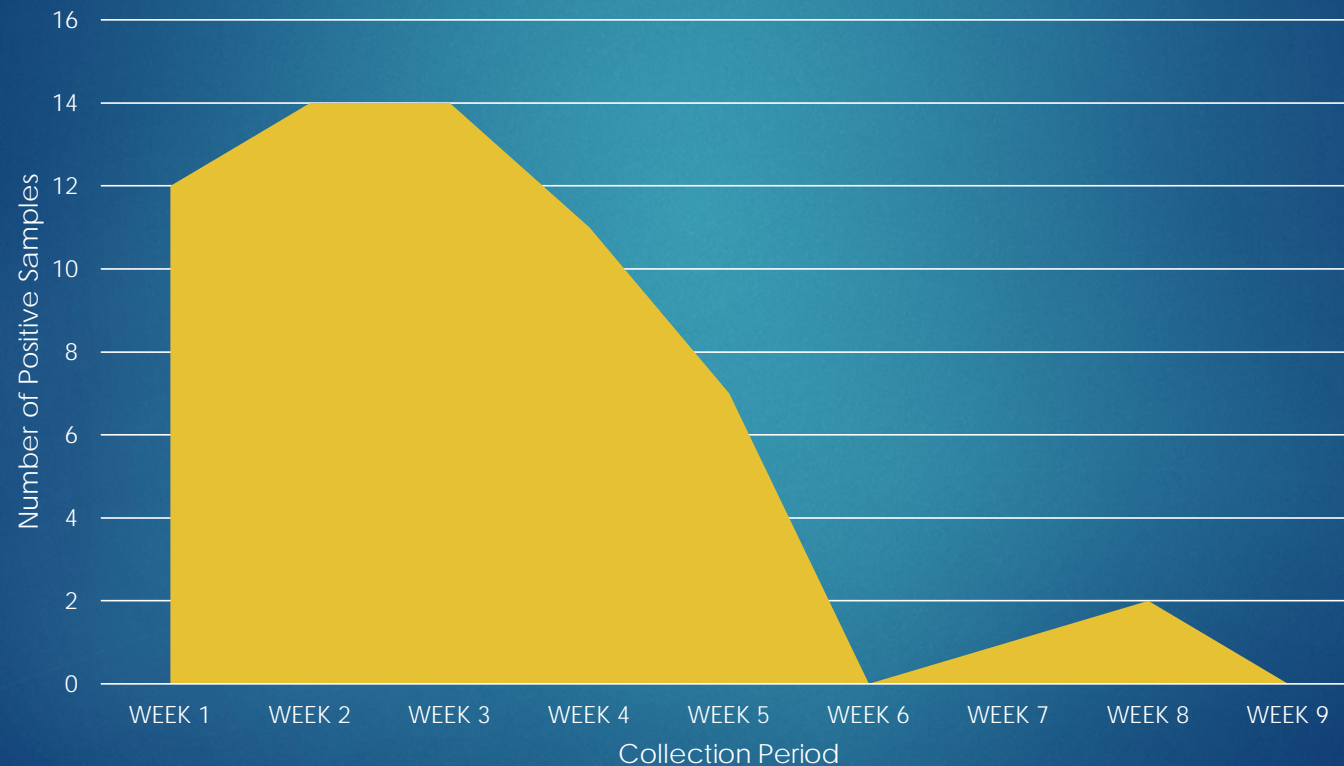
- ▶ Number of samples collected 89
- ▶ Number of positive samples 62 (69.6%)
- ▶ Number of negative samples 27 (30.4%)
- ▶ Number of samples producing larvae 43
- ▶ Number of samples positive for A. albopictus 43(69.3)
- ▶ Number of samples positive for Oc. triseriatus 5(8%)
- ▶ Number of samples positive for Oc. japonicus 3(6.9%)

Fall Aug – Oct 2013



WEEKLY OVIPOSITION RESULTS

SEP-NOV 2014 SAMPLING



Conclusions

- ▶ No Aedes aegypti collected in study
- ▶ Aedes albopictus is the predominant container breeding mosquito species; Oc. triseriatus and Oc. japonicus also use containers for ovipositing
- ▶ Ovipositing slowly begins in mid-April
- ▶ Ovipositing declines slowly throughout October and stops at the 1st frost
- ▶ A winter egg diapause occurs