

# NEW JERSEY STATE SURVEILLANCE

## Weekly Report for Week 23, 1 June – 7 June, 2003

Submitted by Wayne Crans and Lisa Reed  
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**Preface:** Data from 84 New Jersey light traps from all 21 counties are used to calculate trends in mosquito populations for species of nuisance or health concerns. Calculations are based on regional distributions, with emphasis on mosquito habitat and land use. Trends will allow a statewide evaluation of changing mosquito populations, in response to control and/or changes in habitat.

Figure 1a: Map of ten regions selected for the New Jersey Surveillance Program overlaid with county borders.

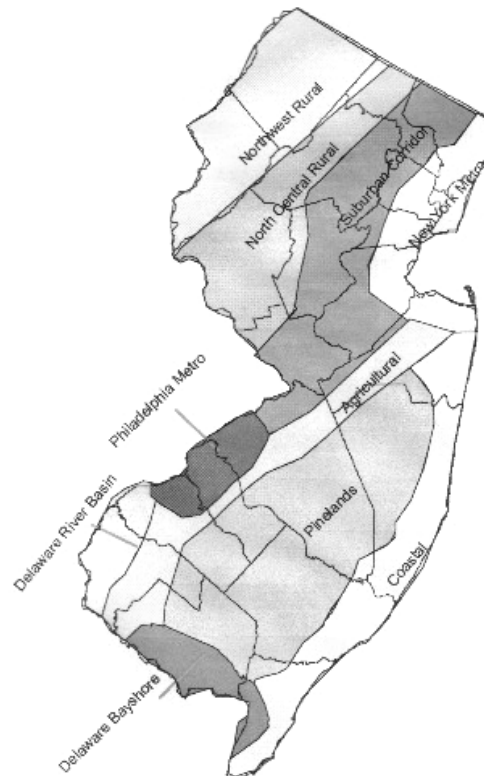
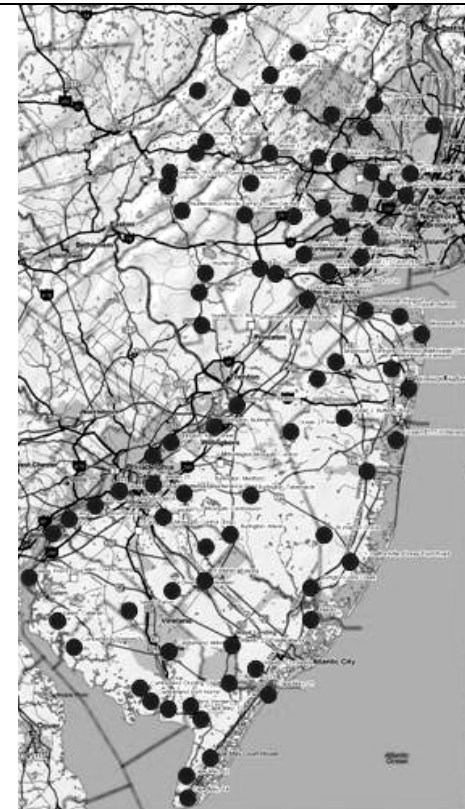


Figure 1b. Trap lat-long locations.



## Summary table

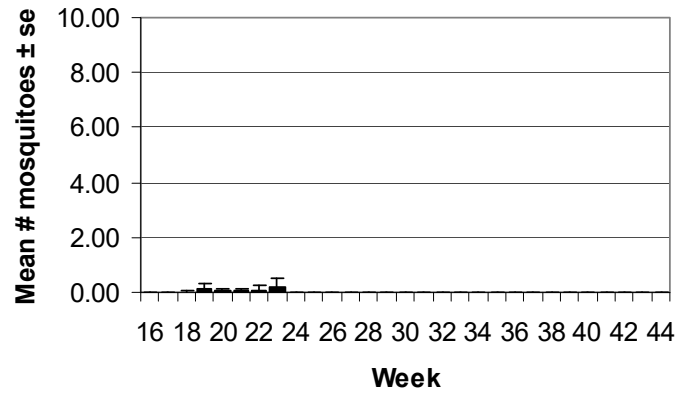
|                      | <i>Aedes vexans</i> |          | <i>Culex complex</i> |          | <i>Ochlerotatus canadensis</i> |          | <i>Ochlerotatus sollicitans</i> |          |
|----------------------|---------------------|----------|----------------------|----------|--------------------------------|----------|---------------------------------|----------|
| Region               | This Week           | Average* | This Week            | Average* | This Week                      | Average* | This Week                       | Average* |
| Agricultural         | 0.17                |          | 2.80                 |          | 0.00                           |          | 0.00                            |          |
| Coastal              | 0.02                |          | 0.46                 |          | 0.13                           |          | 0.11                            |          |
| Delaware Bayshore    | 0.17                |          | 7.98                 |          | 0.00                           |          | 0.79                            |          |
| Delaware River Basin | 0.00                |          | 1.96                 |          | 0.00                           |          | 0.04                            |          |
| New York Metro       | 0.05                |          | 1.84                 |          | 0.00                           |          | 0.03                            |          |
| North Central Rural  | 0.00                |          | 0.02                 |          | 0.00                           |          | 0.00                            |          |
| Northwest Rural      | 0.00                |          | 0.19                 |          | 0.00                           |          | 0.00                            |          |
| Philadelphia Metro   | 0.00                |          | 0.00                 |          | 0.00                           |          | 0.00                            |          |
| Pinelands            | 0.01                |          | 0.92                 |          | 0.08                           |          | 0.00                            |          |
| Suburban Corridor    | 0.01                |          | 0.14                 |          | 0.01                           |          | 0.00                            |          |

\* Complete data not yet available.

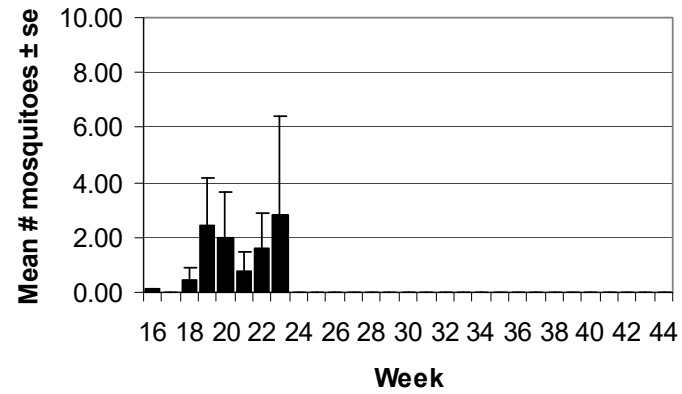
This is Jersey Agricultural Experiment Station publication No. PT-40500-23-03, supported by Hatch funds and funding from the NJ State Mosquito Control Commission. Summary prepared by: Lisa Reed and Wayne Crans.

## Agricultural

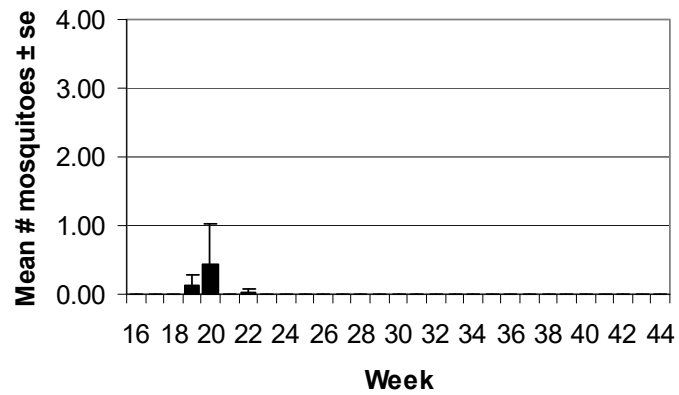
***Aedes vexans***



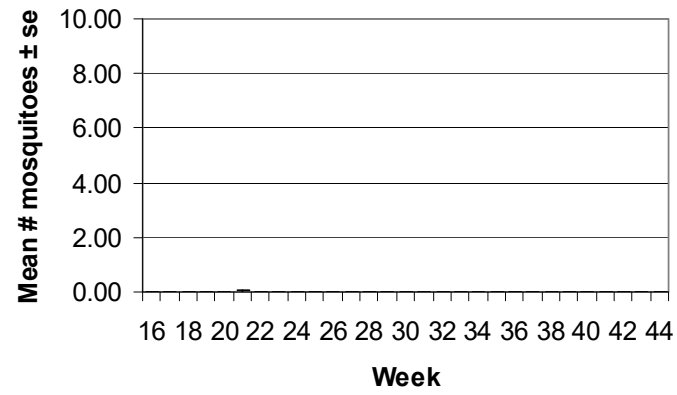
***Culex Mix***



***Ochlerotatus canadensis***

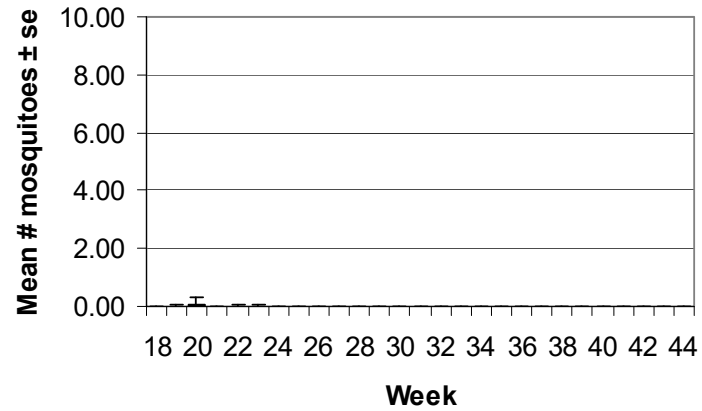


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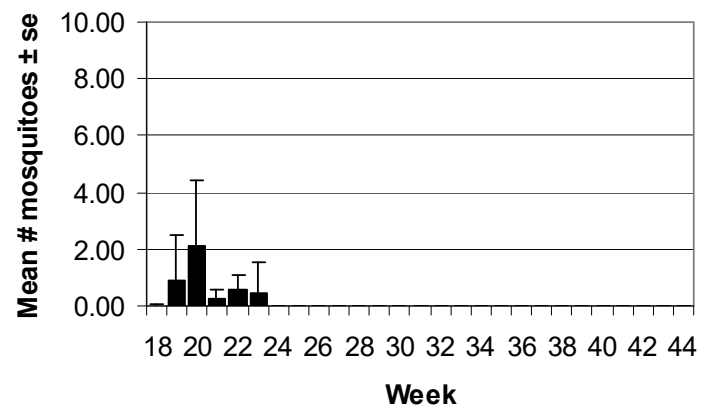


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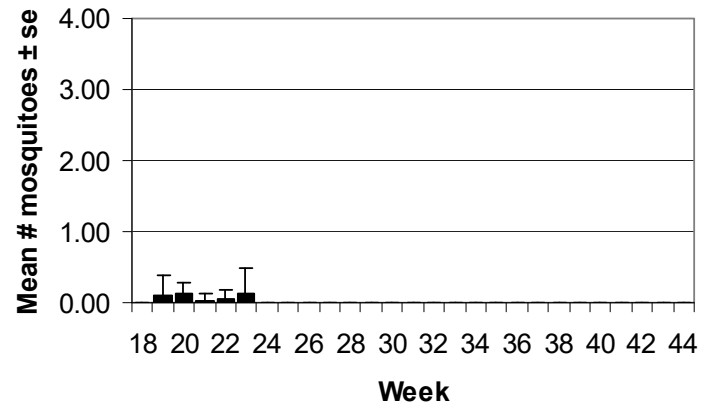
***Aedes vexans***



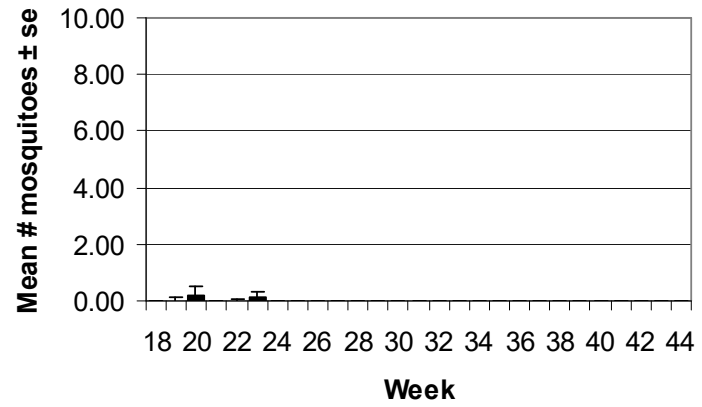
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***Ochlerotatus canadensis***

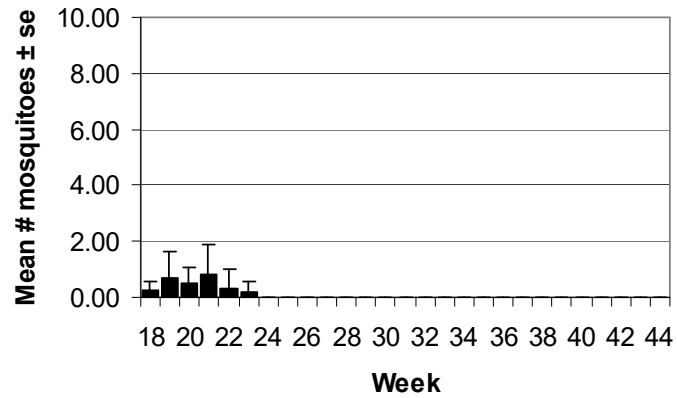


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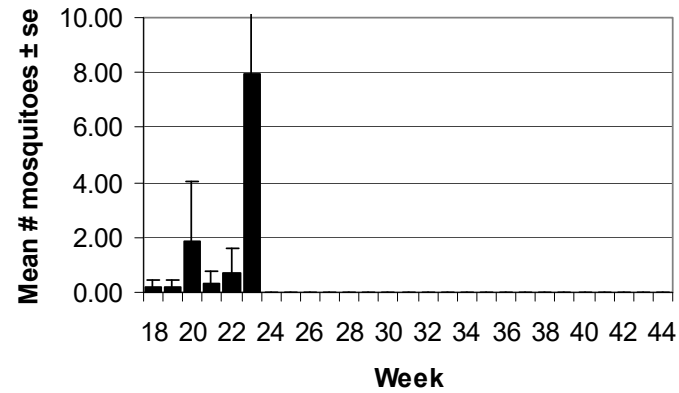


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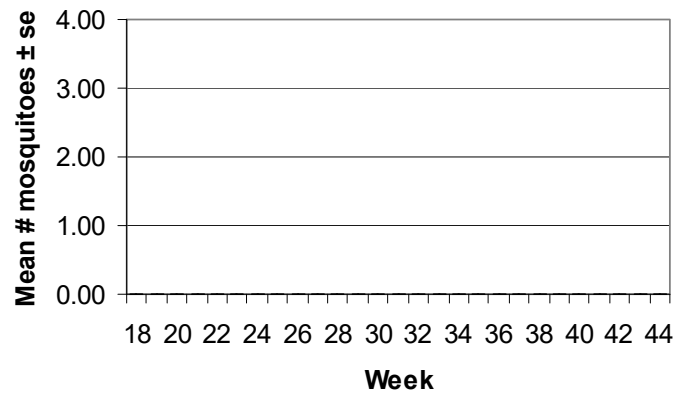
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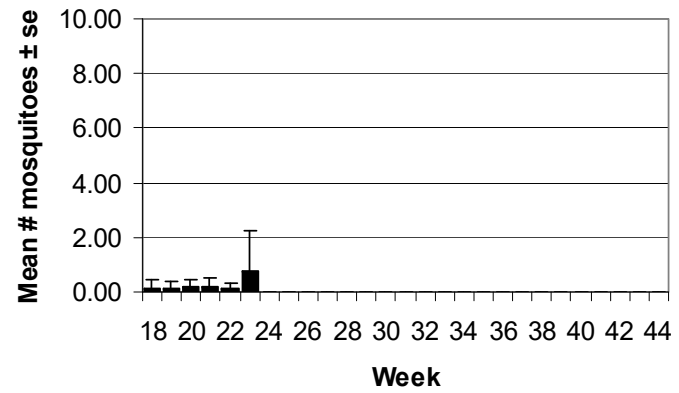
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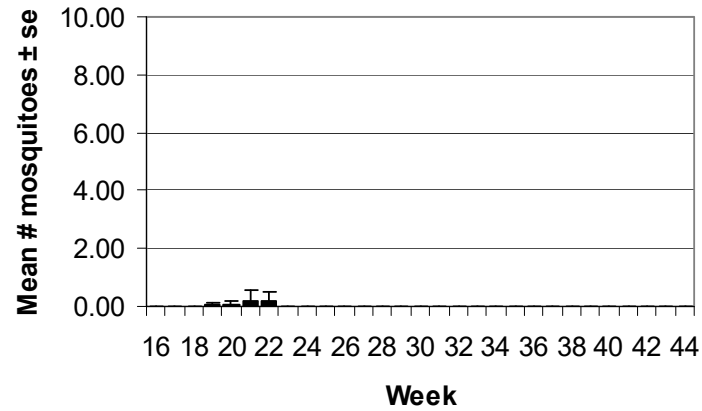


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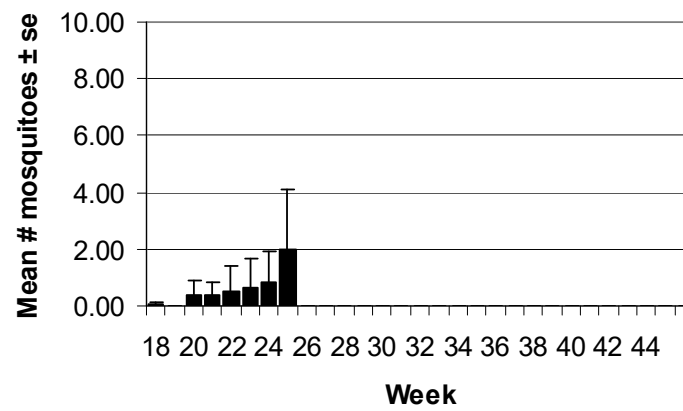


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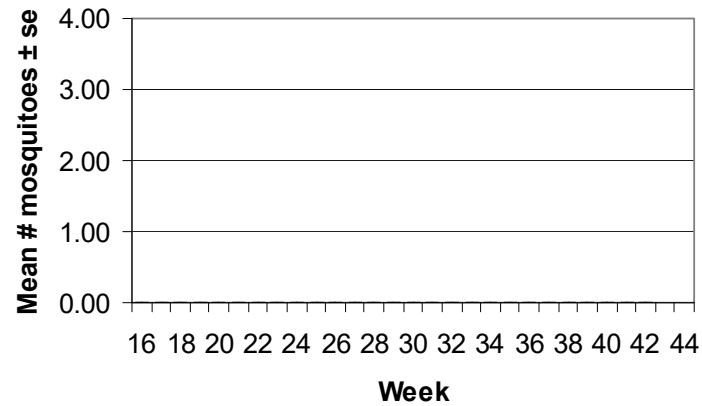
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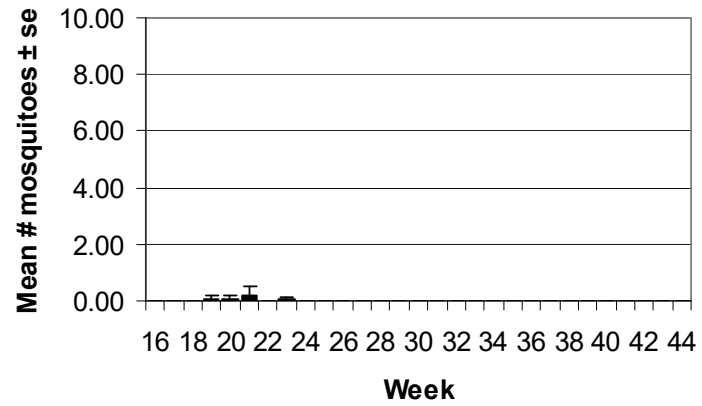
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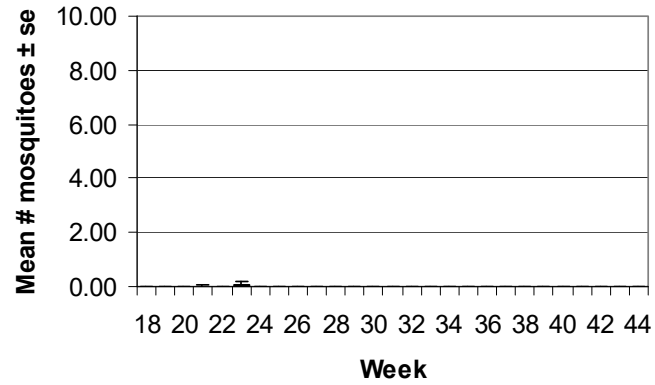


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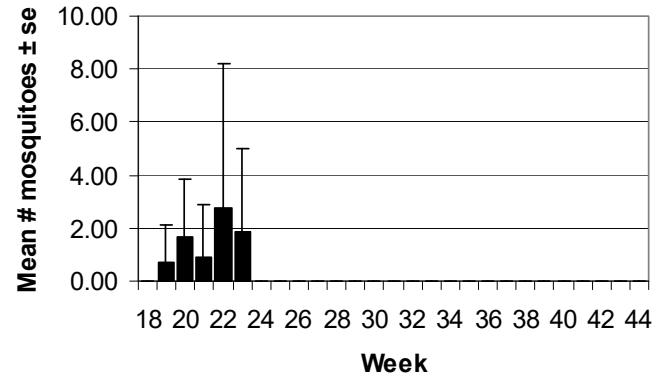


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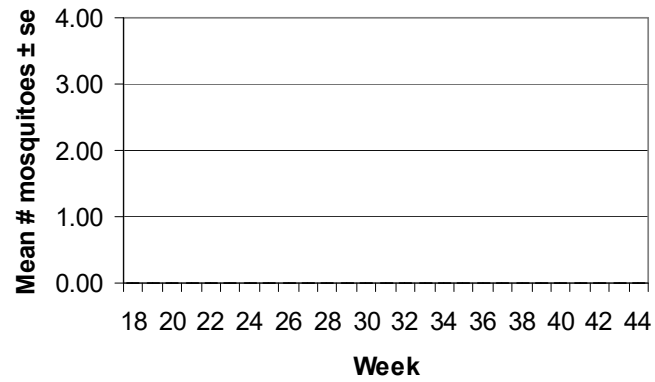
***Aedes vexans***



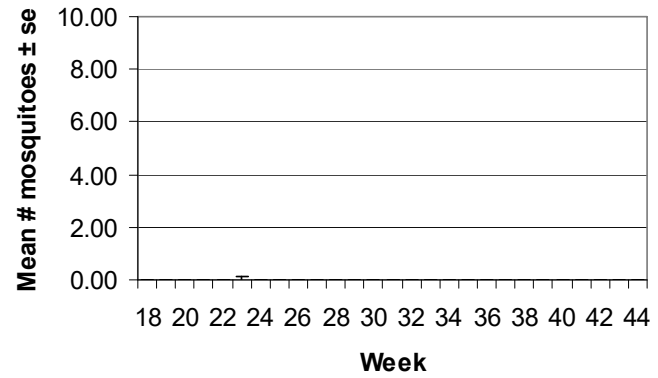
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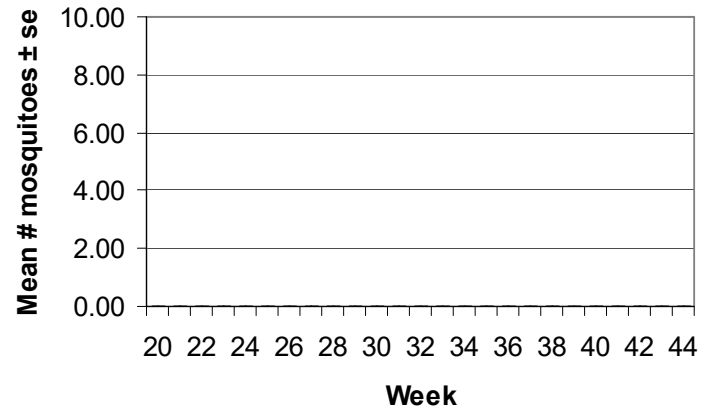


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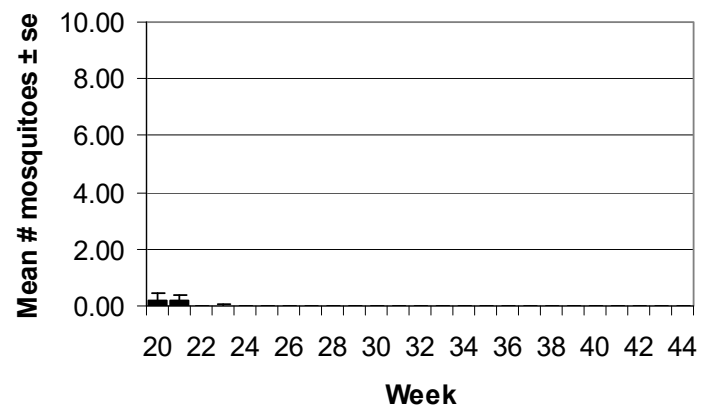


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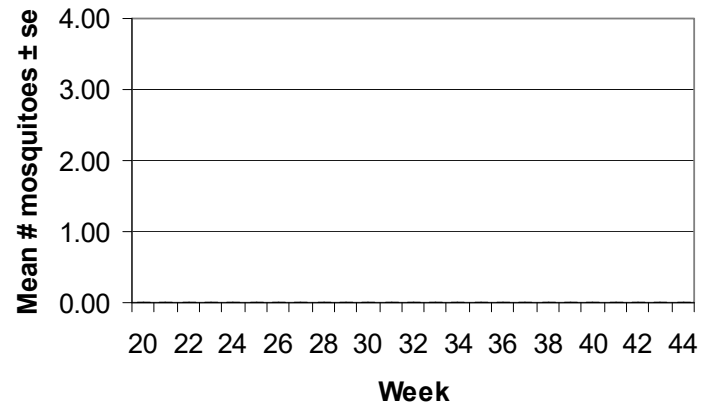
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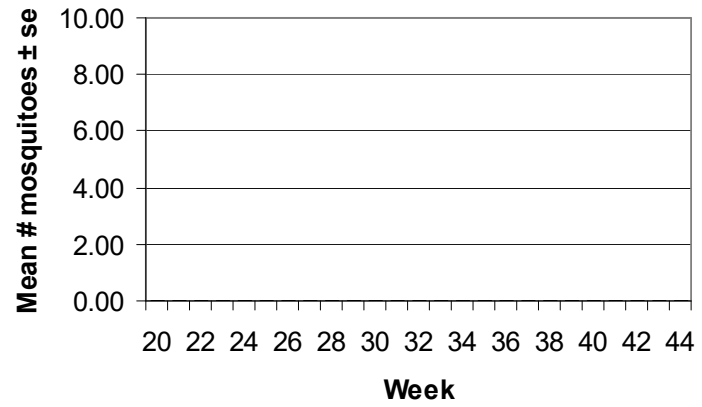
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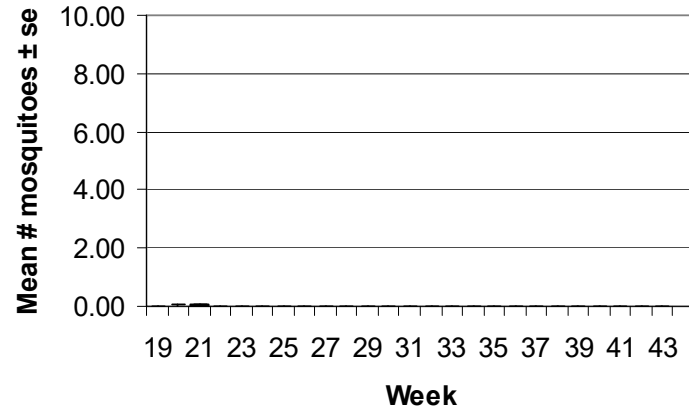


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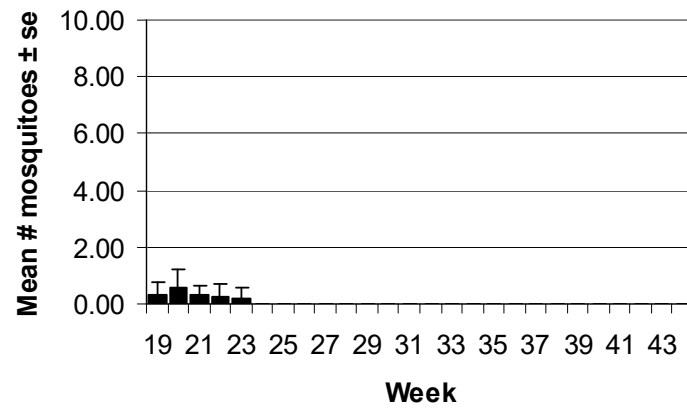


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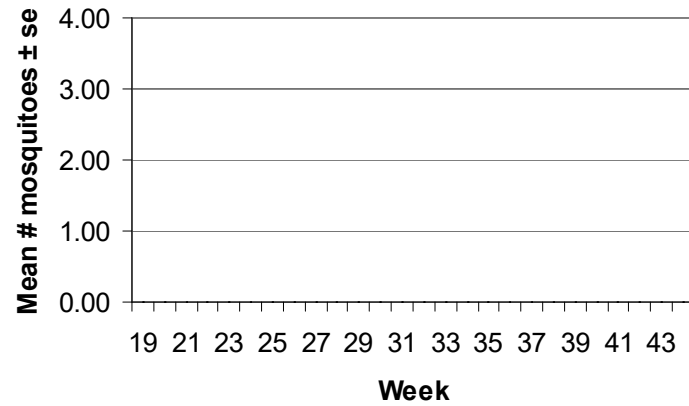
***Aedes vexans***



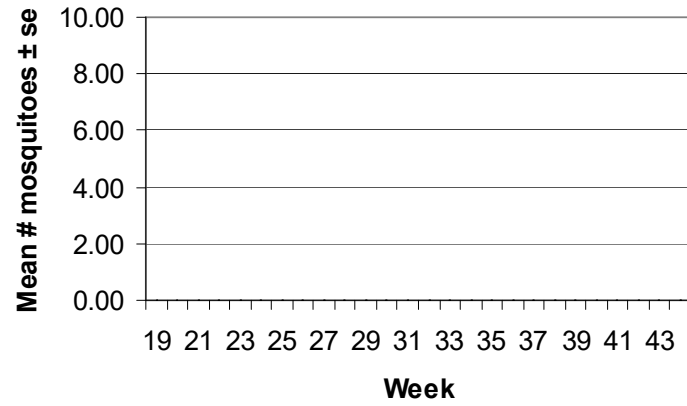
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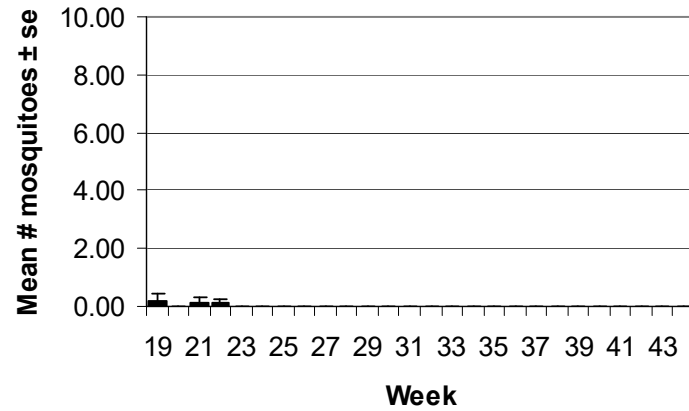


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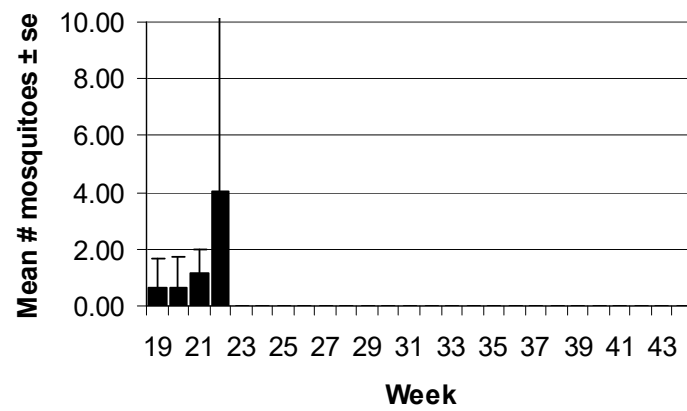


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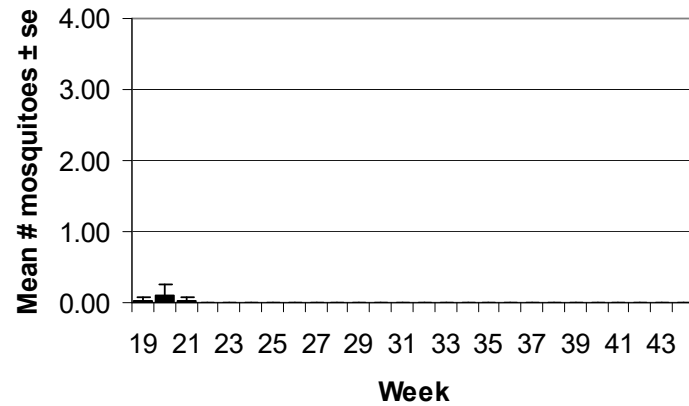
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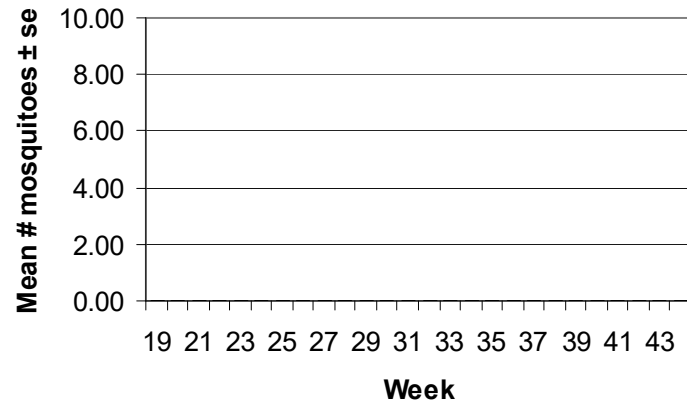
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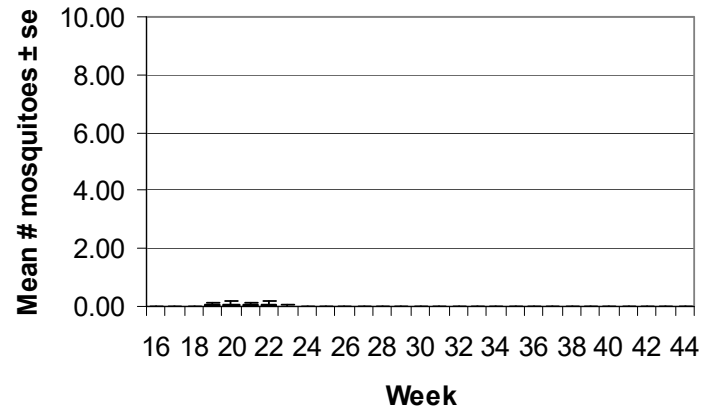


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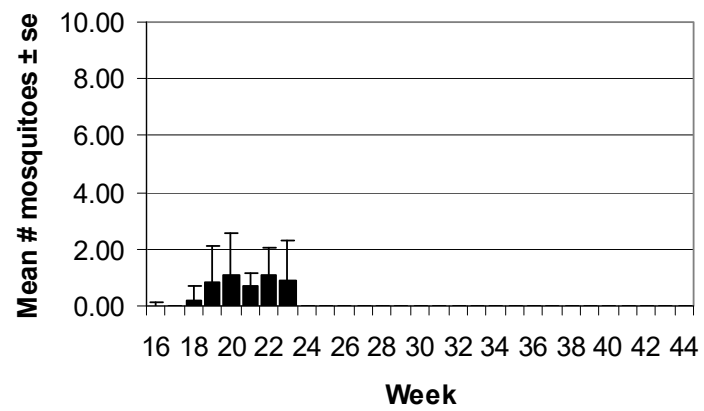


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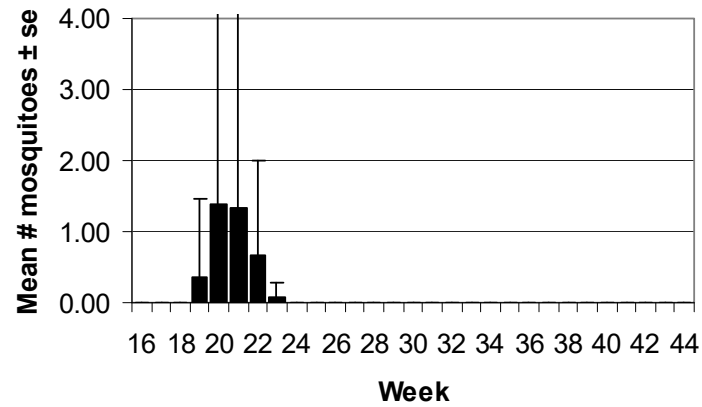
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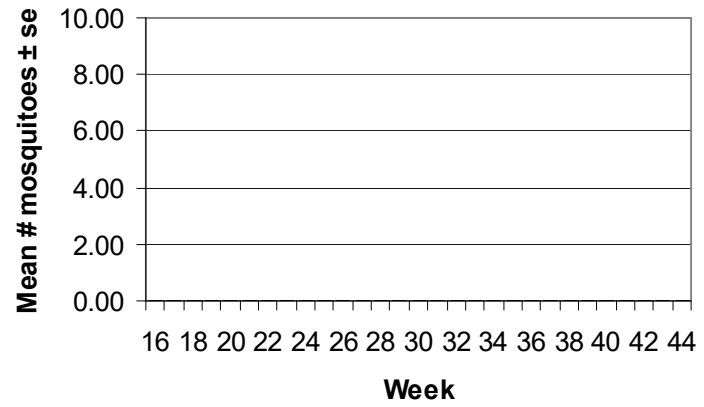
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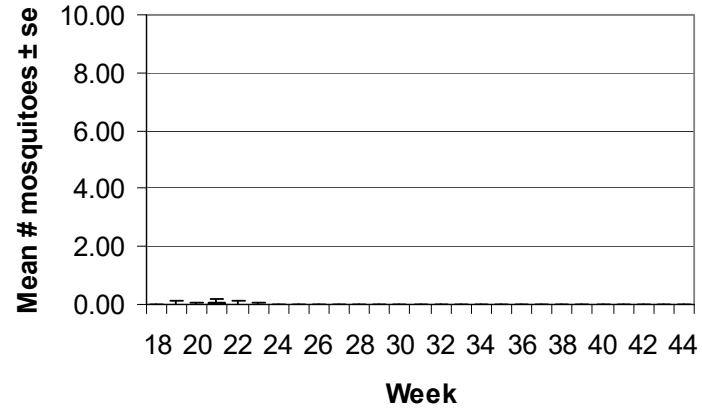


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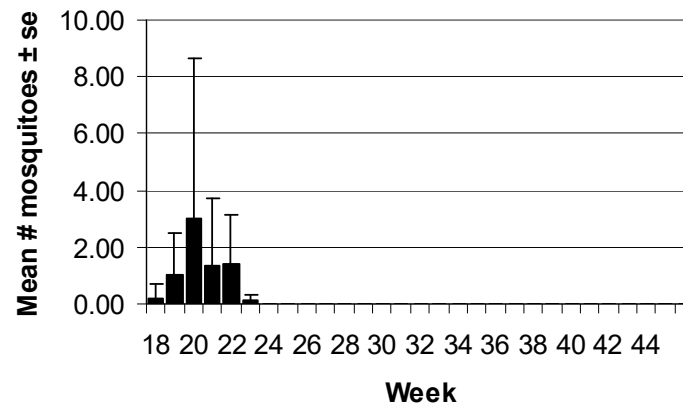


## Suburban Corridor

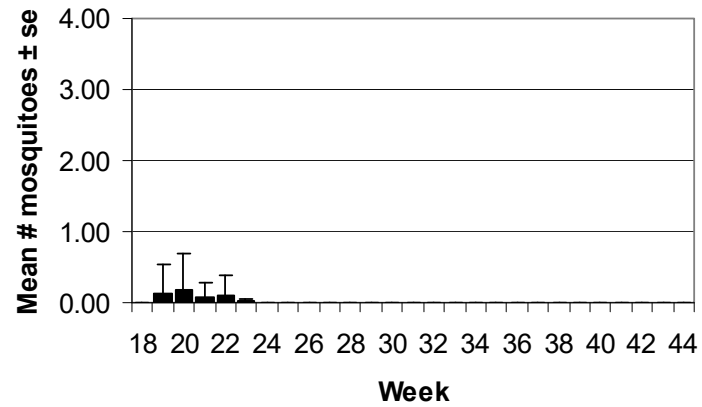
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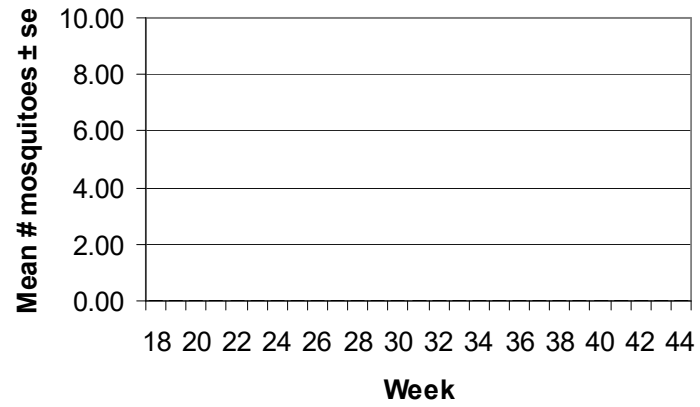
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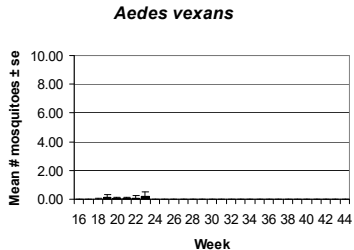
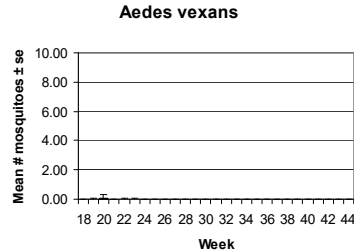
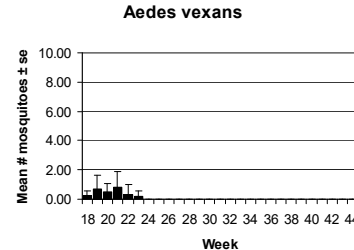
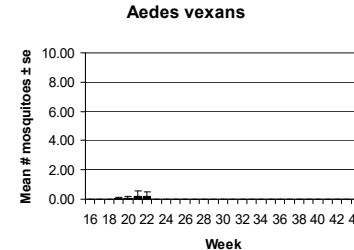
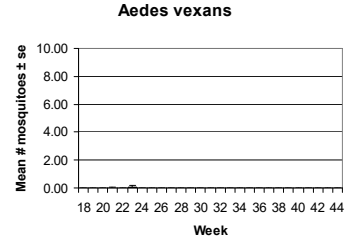
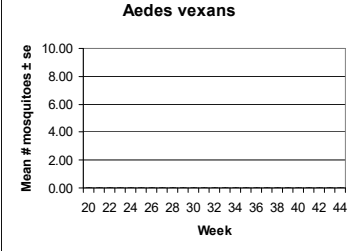
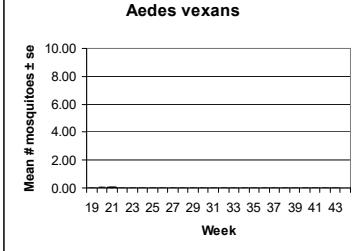
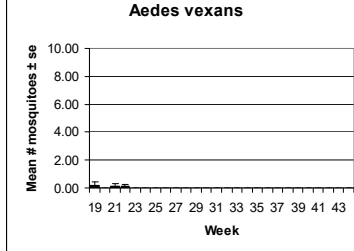
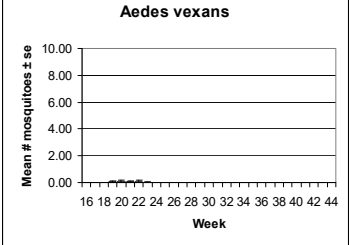
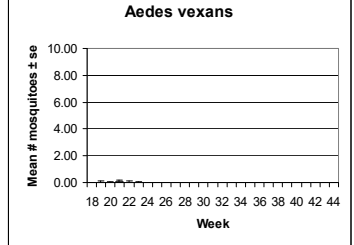
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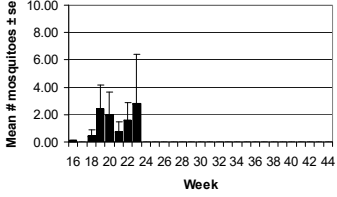
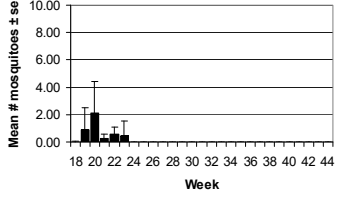
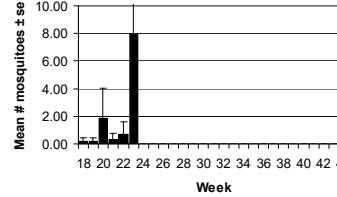
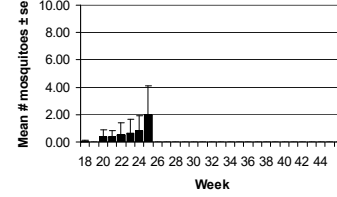
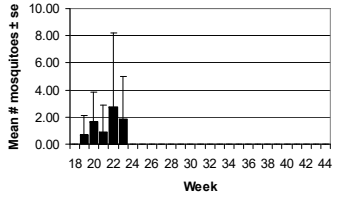
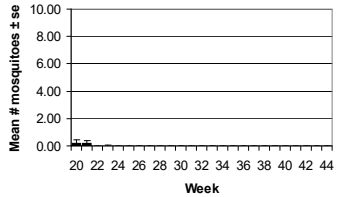
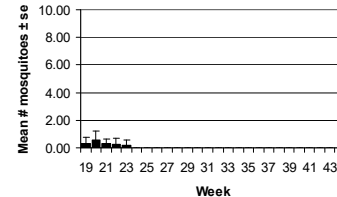
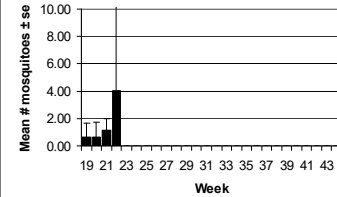
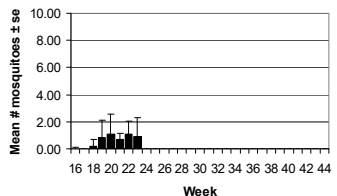
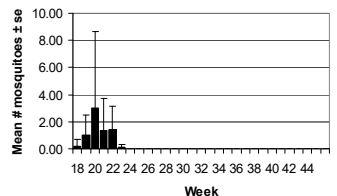
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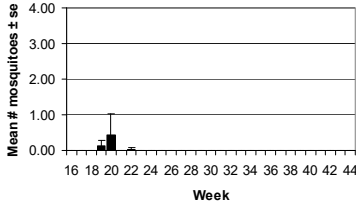
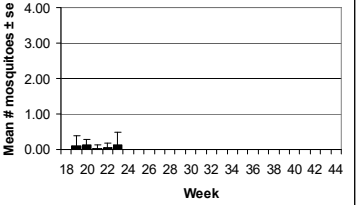
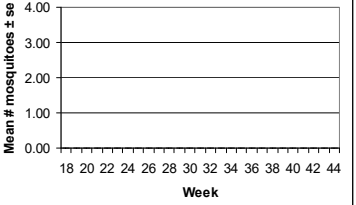
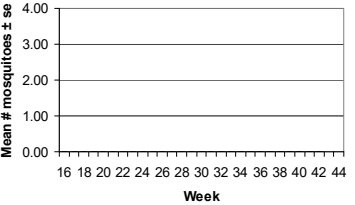
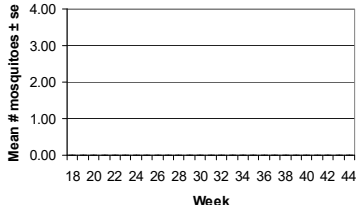
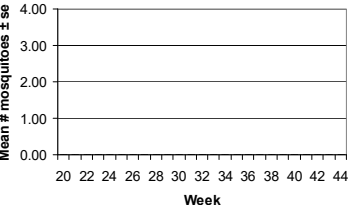
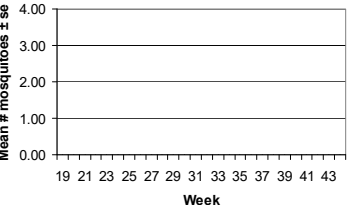
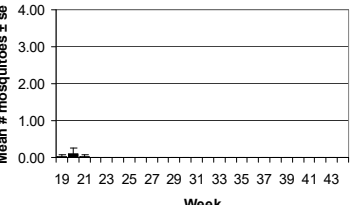
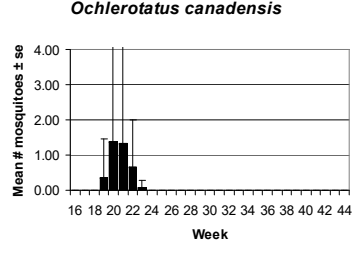
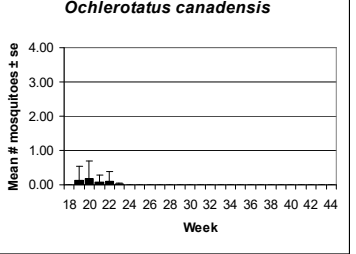
## Aedes vexans

| Agricultural                                                                       |  | Coastal                                                                            |  | Delaware Bayshore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | Delaware River Basin                                                                |  |
|------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|--|
|   |  |   |  |                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |
| New York Metro                                                                     |  | North Central Rural                                                                |  | Northwestern Rural                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  | Philadelphia Metro                                                                  |  |
|   |  |   |  |                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |
| Pinelands                                                                          |  | Suburban Corridor                                                                  |  | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                                                                                     |  |
|  |  |  |  | <p><i>Ae. vexans</i> populations do not normally reach nuisance levels until later in the season. The early-season data for 2003 clearly show that no major broods have emerged to date. The amount of rain New Jersey has been experiencing this year is probably not reflective for potential floodwater nuisance. Temperatures for the month of May were lower than normal and rainfall has been continuous, with little opportunity for dry down and egg conditioning for repeated hatches.</p> |  |                                                                                     |  |

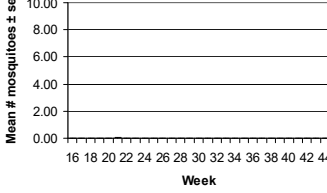
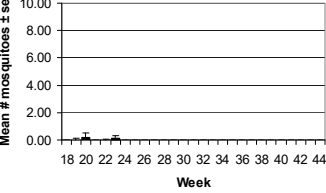
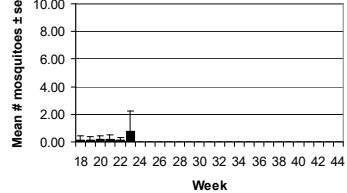
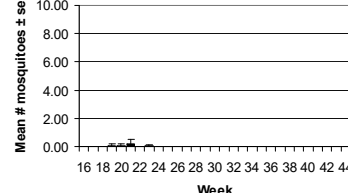
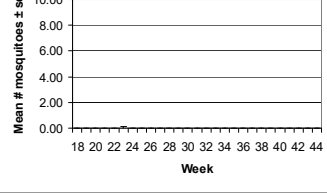
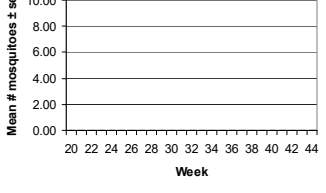
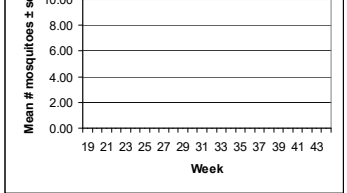
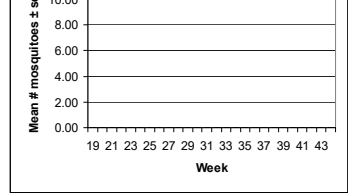
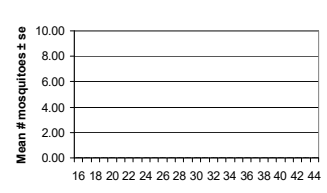
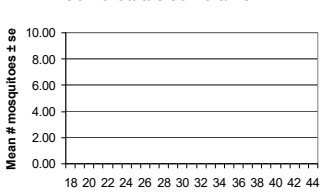
## Culex Complex

| Agricultural                                                                                               | Coastal                                                                                                    | Delaware Bayshore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Delaware River Basin                                                                                        |
|------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| <p><b>Culex Mix</b></p>   | <p><b>Culex Mix</b></p>   | <p><b>Culex Mix</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <p><b>Culex Mix</b></p>  |
| New York Metro                                                                                             | North Central Rural                                                                                        | Northwestern Rural                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Philadelphia Metro                                                                                          |
| <p><b>Culex Mix</b></p>   | <p><b>Culex Mix</b></p>   | <p><b>Culex Mix</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <p><b>Culex Mix</b></p>  |
| Pinelands                                                                                                  | Suburban Corridor                                                                                          | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                             |
| <p><b>Culex Mix</b></p>  | <p><b>Culex Mix</b></p>  | <p>Data for mosquitoes in the <i>Culex</i> Complex show real trends in most of the regions being monitored by this program. <i>Culex</i> populations normally build as the season progresses. Sharp depressions are often an indication of control intervention. <i>Culex</i> from the Delaware Bayshore, Delaware River Basin and Coastal Regions are probably <i>Culex salinarius</i>. <i>Culex</i> populations from the two metropolitan areas are primarily <i>Culex pipiens/restuans</i>. The <i>Culex</i> populations from rural areas are probably dominated by <i>Culex restuans</i>, considering this species' ability to utilize standing ground water left over from flooded woodland pools as facultative habitat.</p> |                                                                                                             |

## Ochlerotatus canadensis

| Agricultural                                                                                                             | Coastal                                                                                                                  | Delaware Bayshore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Delaware River Basin                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| <p><i>Ochlerotatus canadensis</i></p>   | <p><i>Ochlerotatus canadensis</i></p>   | <p><i>Ochlerotatus canadensis</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p><i>Ochlerotatus canadensis</i></p>  |
| New York Metro                                                                                                           | North Central Rural                                                                                                      | Northwestern Rural                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Philadelphia Metro                                                                                                        |
| <p><i>Ochlerotatus canadensis</i></p>   | <p><i>Ochlerotatus canadensis</i></p>   | <p><i>Ochlerotatus canadensis</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p><i>Ochlerotatus canadensis</i></p>  |
| Pinelands                                                                                                                | Suburban Corridor                                                                                                        | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                           |
| <p><i>Ochlerotatus canadensis</i></p>  | <p><i>Ochlerotatus canadensis</i></p>  | <p><i>Oc. canadensis</i> is an early-season mosquito that reaches highest numbers in early spring. This year's dataset shows exceptionally low population levels considering the amount of rain we've had this spring. This is probably due to missing data points from key counties, particularly those in the northern half of the state. Populations appear to have peaked mid-May in 2003. Highest numbers were reported from the Pinelands region where extensive woodland pool habitat is found. The most accurate indicators for this species have come from geographic areas where we have reliable data. A clearer picture of <i>Oc. canadensis</i> cannot be known until our dataset is complete.</p> |                                                                                                                           |

## Ochlerotatus sollicitans

| Agricultural                                                                                                              | Coastal                                                                                                                   | Delaware Bayshore                                                                                                                                                               | Delaware River Basin                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <p><i>Ochlerotatus sollicitans</i></p>   | <p><i>Ochlerotatus sollicitans</i></p>   | <p><i>Ochlerotatus sollicitans</i></p>                                                        | <p><i>Ochlerotatus sollicitans</i></p>  |
| New York Metro                                                                                                            | North Central Rural                                                                                                       | Northwestern Rural                                                                                                                                                              | Philadelphia Metro                                                                                                         |
| <p><i>Ochlerotatus sollicitans</i></p>   | <p><i>Ochlerotatus sollicitans</i></p>   | <p><i>Ochlerotatus sollicitans</i></p>                                                        | <p><i>Ochlerotatus sollicitans</i></p>  |
| Pinelands                                                                                                                 | Suburban Corridor                                                                                                         | Comments                                                                                                                                                                        |                                                                                                                            |
| <p><i>Ochlerotatus sollicitans</i></p>  | <p><i>Ochlerotatus sollicitans</i></p>  | <p><i>Oc. sollicitans</i> populations do not normally peak until later in the season. Minimal numbers are being reported from the three coastal areas that provide habitat.</p> |                                                                                                                            |