DeKalb County
Arbovirus Control Program
2011 Summary

Juanette Willis
Arbovirus Coordinator
Georgia Mosquito Control
Association
Annual Meeting
October 17, 2012
Setting the Scene
July 23, 2011

First Positive West Nile Virus Bird Death
DeKalb County, GA

First Seen 06/19/01
Date Collected 06/23/01
Date Reported Positive 07/23/01

Source: Environmental Health, DeKalb County Board of Health
Projection: GA State Plane West, 1983
West Nile Virus in DeKalb County:
10 Years in Review
Bird Data

Dead Bird Test Results

- WNV Positive 36%
- Negative 64%

- 8,486 Dead birds reported
- 867 Dead birds submitted for testing
- 312 Dead birds tested positive for WNV

Yearly Submitted Dead Birds

- 2001: 250
- 2002: 250
- 2003: 150
- 2004: 75
- 2005: 30
- 2006: 10
- 2007: 5
- 2008: 0
- 2009: 0
- 2010: 5

- Percent Positive:
  - 2001: 64%
  - 2002: 64%
  - 2003: 64%
  - 2004: 64%
  - 2005: 64%
  - 2006: 64%
  - 2007: 64%
  - 2008: 64%
  - 2009: 64%
  - 2010: 64%

Legend:
- Yellow: Submitted Dead Birds
- Blue: WNV Positive Birds
- Red Triangle: Percent WNV Positive
**Bird Data**

**WNV Positive Bird Species**

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</tr>
</thead>
<tbody>
<tr>
<td>Blue Jay</td>
<td>47</td>
<td>88</td>
<td>31</td>
<td>18</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>194</td>
</tr>
<tr>
<td>Crow</td>
<td>41</td>
<td>35</td>
<td>12</td>
<td>7</td>
<td>3</td>
<td></td>
<td></td>
<td>1</td>
<td>99</td>
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<tr>
<td>Raptor</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
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<tr>
<td>Other</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>7</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>16</td>
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<tr>
<td><strong>Total</strong></td>
<td>93</td>
<td>124</td>
<td>47</td>
<td>32</td>
<td>8</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>312</td>
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</table>
West Nile Virus Positive Birds
DeKalb County, GA
2001 - 2010

Density of WNV Positive Birds per Square Mile

0.045 - 0.69
0.64 - 1.4
1.5 - 2.2
2.3 - 3.2
3.3 - 4.2
4.3 - 5.4
5.5 - 7.1
7.2 - 9.1
9.2 - 12

Created: March 2011
Source: Division of Environmental Health
Projection: GA State Plane Wrd
Density Classification: Natural Breaks (Jenks), Nine Classes, One Mile Fixed Search Radius
Mosquito Data

- 4,424 Mosquito trap nights
- 93,100 Mosquitoes examined and sorted by species and gender
- 5,055 Mosquito collections submitted for arbovirus testing
- 191 Mosquito collections tested positive for WNV
- 26 Mosquito species collected
Mosquito Data

Species of Mosquitoes Collected in DeKalb County, GA 2002-2010

- **Cx. quinquefasciatus**: 55.9%
- **Ae. albopictus**: 8.1%
- **Ae. vexans**: 4.3%
- **Cx. restuans**: 15.1%
- **Other Culex**: 13.5%
- **An. punctipennis**: 0.5%
- **Oc. japonicus**: 0.5%
- **Oc. triseriatus**: 1.7%
- **Other**: 0.4%
- **Ae. vexans**: 4.3%
- **Ae. albopictus**: 8.1%
DeKalb 2001 - 2011

- 21 residents WNV +
  - 2 blood donors
- Age range: 15 – 87
- Median age: 49 years
- 58% male
- 63% hospitalized
- 89% onset August or September
West Nile Virus Human Case Suspected Exposure Areas
DeKalb County, GA
2001 - 2010

Density of WNV Suspected Exposure Areas per Square Mile

- 0 - 0.05
- 0.06 - 0.12
- 0.13 - 0.18
- 0.19 - 0.25
- 0.26 - 0.32
- 0.33 - 0.39
- 0.4 - 0.47
- 0.48 - 0.54
- 0.55 - 0.64

Created: March 2011
Source: Division of Environmental Health
Prepared: Environmental Health
Density Classification: Natural Breaks Labeled, Nine Classes, Two Mile Search Radius
Where to now?
West Nile Virus (WNV) Positive Activity
DeKalb County, Georgia
September 19, 2012

Legend
- WNV Positive Mosquito Trap Locations - 17
  (WNV Positive Mosquito Collections - 55)
- Mosquito Trap Locations - 38
- Incorporated Cities

Risk Analysis Areas

Area 1
Area 2
Area 3

DEKALB COUNTY
Board of Health

Created: September 19, 2012
Source: Division of Environmental Health
Projection: NAD 1983 State Plane GA West
And the latest data…

(*2012 data only through October 15, 2012)
Number of Mosquitoes Submitted for Testing

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Mosquitoes</th>
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<tbody>
<tr>
<td>2002</td>
<td>2,000</td>
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<tr>
<td>2003</td>
<td>6,000</td>
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<tr>
<td>2004</td>
<td>4,000</td>
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<td>2005</td>
<td>12,000</td>
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<tr>
<td>2006</td>
<td>5,000</td>
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<tr>
<td>2007</td>
<td>3,000</td>
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<td>2008</td>
<td>7,000</td>
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<td>2009</td>
<td>6,000</td>
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<tr>
<td>2010</td>
<td>8,000</td>
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<tr>
<td>2011</td>
<td>23,000</td>
</tr>
<tr>
<td>2012*</td>
<td>4,000</td>
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West Nile Virus Cases and Presumptive Viremic Blood Donors

![Bar graph showing cases of West Nile Virus and presumptive viremic blood donors from 2001 to 2012.](Image)
<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Doors</th>
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<tbody>
<tr>
<td>2001-2010</td>
<td>31,000+ doors</td>
</tr>
<tr>
<td>2011</td>
<td>9588 doors</td>
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<tr>
<td>2012</td>
<td>7287 doors</td>
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Door-to-door
West Nile Virus: One Decatur Man’s Story

Decatur resident Devin Lenz talks about his battle with West Nile virus.

By Kelly Mark George

The West Nile virus has already been detected in mosquitoes during routine collections in Dekalb County.

It’s important to take precautions, such as wearing bug repellent, to keep mosquitoes from spreading the virus to you.

According to the Centers for Disease Control, the majority of people who become infected won’t become ill. However, about one in 150 will develop severe illness, even paralysis.

Unfortunately, that’s what happened to Decatur resident, Devin Lenz.

“Thinking back it’s fuzzy,” the 40-year-old husband and father of two said about last August 23.

Lenz was sitting at an outdoor café when his back started to hurt. Things spiraled out of control from there. That night he woke up and couldn’t move his legs. His wife, six months pregnant at the time, called 9-1-1. He was rushed to Dekalb Medical and later transferred to Emory.

While doctors ran multiple tests and waited for results, Lenz suffered respiratory failure and was nockey up to a respirator. It wasn’t until a week after his first symptoms started, that doctors discovered Lenz was infected with West Nile Virus.

There’s no way of knowing exactly when or where Lenz was bitten. The development of symptoms starts between three and 14 days after infection.

The diagnosis was somewhat surprising, since Lenz was in good health and the virus typically is severe in the elderly, the young and others with weaker immune systems.

“We all know that life is full of surprises and unexpected things should be expected in a weird way,” Lenz said with a positive attitude now.

After recovering from the virus and learning he would be a paraplegic, Lenz went depressed. However, six weeks into his stay at the Shepherd Center, he started to look at life differently.

“I’m super fortunate that I have a great spouse, a huge support system and two great kids.” While Lenz lost the motor function of his lower body, he still has his sensory skills of which he says he is grateful.

“I got frustrated bumping into things in my wheelchair, but the hardest thing to deal with emotionally is as a dad, there are a lot of ‘dad things’ I can not able to do.”

Next month a year well have gone by since Lenz contracted West Nile Virus, changing his whole world.

“I’ve learned to be open to change. Change is difficult but if we embrace it we can do anything. We can make do with anything thrown at us.”

Questions?

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