

2016 Mosquito Surveillance Season Statistics

Table 1. 2016 Mosquito Species Collected and Tested for West Nile Virus and Eastern Equine Encephalitis Virus

Species	Collected (No.)	Collected (% of total)	Tested for WNV* (No.)	Tested for WNV (% of total)	Tested for EEE* (No.)	Tested for EEE (% of total)
<i>Culex pipiens/restuans</i>	31,790	34.48%	29,968	43.89%	29,968	43.89%
<i>Coquillettidia perturbans</i>	30,625	33.22%	21,335	31.25%	21,335	31.25%
<i>Anopheles quadrimaculatus</i>	5,230	5.67%	4,418	6.47%	4,418	6.47%
<i>Anopheles punctipennis</i>	3,854	4.18%	2,313	3.39%	2,313	3.39%
<i>Ochlerotatus sticticus</i>	3,634	3.94%		0.00%		0.00%
<i>Ochlerotatus trivittatus</i>	3,482	3.78%	1,989	2.91%	1,989	2.91%
<i>Culiseta melanura</i>	2,684	2.91%	2,568	3.76%	2,568	3.76%
<i>Ochlerotatus japonicus</i>	2,409	2.61%	2,071	3.03%	2,071	3.03%
<i>Ochlerotatus canadensis</i>	1,576	1.71%	1,266	1.85%	1,266	1.85%
<i>Ochlerotatus stimulans</i>	1,559	1.69%		0.00%		0.00%
<i>Anopheles walkeri</i>	1,141	1.24%	49	0.07%	49	0.07%
<i>Aedes vexans</i>	1,042	1.13%	865	1.27%	865	1.27%
<i>Culex territans</i>	933	1.01%	324	0.47%	324	0.47%
<i>Aedes cinereus</i>	790	0.86%	436	0.64%	436	0.64%
<i>Culiseta morsitans</i>	673	0.73%	595	0.87%	595	0.87%
<i>Ochlerotatus provocans</i>	175	0.19%		0.00%		0.00%
<i>Ochlerotatus triseriatus</i>	161	0.17%		0.00%		0.00%
<i>Anopheles earlei</i>	139	0.15%		0.00%		0.00%
<i>Culex salinarius</i>	131	0.14%	80	0.12%	80	0.12%
<i>Psorophora ferox</i>	98	0.11%		0.00%		0.00%
<i>Uranotaenia sapphirina</i>	62	0.07%		0.00%		0.00%
<i>Ochlerotatus atropalpus</i>	3	0.00%		0.00%		0.00%
<i>Psorophora ciliata</i>	2	0.00%		0.00%		0.00%
Totals	92,193	100.00%	68,277	100.00%	68,277	100.00%

* EEE, Eastern Equine Encephalitis; WNV, West Nile Virus

2016 At-A-Glance Species Stats

- Number of mosquitoes collected: 92,193
- Number of mosquitoes tested for arbovirus: 68,277 (74% of total collected)
- Number of species collected: 23 (out of 45 on state list)
- Number of species tested for arbovirus: 14

2016 At-A-Glance Mosquito Surveillance Data

- Trapping season began June 1, 2016 and ended October 14, 2016
- Number of trap locations: 105
- All 14 counties in Vermont were surveyed (statewide coverage)
- Total towns trapped = 82
- CDC, resting box, and gravid trap sites were surveyed for 20 weeks (CDC weeks 22 through 41)
- For the first time, 2 [BG Sentinel Trap](#) sites were set up in southern Vermont to survey for *Aedes albopictus*, the mosquito known to transmit the Zika virus; no *Ae albopictus* was found in Vermont
- Also for the first time, 2 [oviposition-cup trap](#) sites were set up in southern Vermont to survey for *Ae albopictus*; again, no *Ae albopictus* was found

Table 2. 2016 Towns* Trapped

(n = 82)

Town	County
Addison	Addison
Alburgh	Grand Isle
Bakersfield	Franklin
Barton	Orleans
Belvidere	Lamoille
Bennington	Bennington
Benson	Rutland
Berkshire	Franklin
Brandon	Rutland
Brattleboro	Windham
Brighton	Essex
Brookfield	Orange
Burke	Caledonia
Burlington	Chittenden
Cambridge	Lamoille
Castleton	Rutland
Charlotte	Chittenden
Colchester	Chittenden
Concord	Essex
Cornwall	Addison
Craftsbury	Orleans
Danby	Rutland
Danville	Caledonia
Derby	Orleans
Eden	Lamoille
Enosburg	Franklin
Essex	Chittenden
Fair Haven	Rutland
Fairfax	Franklin
Fairfield	Franklin
Ferdinand	Essex
Ferrisburgh	Addison
Grand Isle	Grand Isle
Groton	Caledonia
Guilford	Bennington
Hardwick	Caledonia
Hartford	Windsor
Highgate	Franklin
Hyde Park	Lamoille

Town	County
Jay	Orleans
Killington	Rutland
Leicester	Addison
Londonderry	Windham
Lowell	Orleans
Lunenburg	Essex
Manchester	Bennington
Marshfield	Washington
Milton	Chittenden
Montpelier	Washington
Morrisville	Lamoille
New Haven	Addison
Newbury	Orange
Newport City	Orleans
Pittsford	Rutland
Pownal	Bennington
Proctor	Rutland
Putney	Windham
Randolph	Orange
Richford	Franklin
Rockingham	Windham
Royalton	Windsor
Rutland	Rutland
Shaftsbury	Bennington
Shrewsbury	Rutland
So Burlington	Chittenden
Springfield	Windsor
St. Albans City	Franklin
Stowe	Lamoille
Stratton	Windham
Sudbury	Rutland
Sunderland	Bennington
Sutton	Caledonia
Swanton	Franklin
Thetford	Orange
Vergennes	Addison
Vernon	Windham
Victory	Essex
Weathersfield	Windsor
Westminster	Windham
Weston	Windsor
Whiting	Addison
Whitingham	Windham
Williston	Chittenden

* Vermont has 251 towns and 4 gores (33% of VT towns were surveyed)

Findings

Table 3. 2016 Arbovirus Testing Results by CDC Week Number*

CDC Week #	Beginning Sunday	Batches Tested	EEE+ Samples	WNV+ Samples	Cumulative Batches
23	5-Jun	0	-	-	0
24	12-Jun	33	-	-	33
25	19-Jun	122	-	-	155
26	26-Jun	220	-	-	375
27	3-Jul	175	-	-	550
28	10-Jul	240	-	-	790
29	17-Jul	207	-	-	997
30	24-Jul	289	-	-	1,286
31	31-Jul	248	-	1	1,534
32	7-Aug	356	-	1	1,890
33	14-Aug	110	-	8	2,000
34	21-Aug	236	-	2	2,236
35	28-Aug	230	-	1	2,466
36	4-Sep	93	-	4	2,559
37	11-Sep	182	-	-	2,741
38	18-Sep	167	-	2	2,908
39	25-Sep	147	-	-	3,055
40	2-Oct	91	-	-	3,146
41	9-Oct	98	-	-	3,244

* All data are expressed as quantities unless otherwise indicated.

Eastern Equine Encephalitis Virus

- Number of mosquitoes tested for EEE: 68,277
- Total number of mosquito pool samples tested: 3,244
- Number of species tested for EEE: 14
- No EEE-positive mosquito pools were identified in Vermont in 2016

West Nile Virus

- Number of mosquitoes tested for WNV: 68,277
- Total number of mosquito pool samples tested: 3,244
- Number of species tested for WNV: 14
- Number of WNV-positive mosquito pools: 19
- WNV-positive mosquito pools were found in 5 towns
- WNV was found only in pool samples consisting of a *Culex restuans/pipiens* mix
- The first WNV-positive mosquito pool sample was collected on August 4, 2016
- The last WNV-positive mosquito pool sample was collected on September 20, 2016

- No towns had sustained WNV activity for more than 2 consecutive weeks
- First-ever arbovirus-positive pool sample in Caledonia County (northeast Vermont)

Table 4. 2016 West Nile Virus-Positive Statistics

Date Collected	Genus species	County	Town
4-Aug	<i>Culex restuans-pipens</i> *	Chittenden	Burlington
11-Aug	Cx r/p	Chittenden	Burlington
16-Aug	Cx r/p	Windham	Brattleboro
16-Aug	Cx r/p	Windham	Brattleboro
16-Aug	Cx r/p	Windham	Brattleboro
16-Aug	Cx r/p	Windham	Brattleboro
16-Aug	Cx r/p	Windham	Brattleboro
16-Aug	Cx r/p	Windham	Brattleboro
16-Aug	Cx r/p	Windham	Brattleboro
18-Aug	Cx r/p	Addison	Vergennes
25-Aug	Cx r/p	Chittenden	Burlington
25-Aug	Cx r/p	Caledonia	Hardwick
1-Sep	Cx r/p	Addison	Vergennes
8-Sep	Cx r/p	Chittenden	Burlington
8-Sep	Cx r/p	Chittenden	Burlington
8-Sep	Cx r/p	Addison	Vergennes
8-Sep	Cx r/p	Addison	Vergennes
20-Sep	Cx r/p	Windham	Brattleboro
20-Sep	Cx r/p	Windsor	Springfield

* Cx r/p, *Culex restuans/pipiens* mixed pool