

Kensington, NH- Mosquito Surveillance Summary 2013

SWAMP, Inc.

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The NH State testing criteria for 2013:

The mosquito season was separated into two phases for mosquito submissions; phase I (early season) and phase II (mid to end season). Note that these criteria have been updated for 2013 (species added are underlined).

Phase I – July 1 through July 31, 2013 (dates pertain to date of collection):

Cs. morsitans, *Cs. melanura*, *Cx. pipiens*, *Cx. restuans*, *Cx. pipiens/restuans*,
Oc. canadensis, and *Ae. vexans*.

Only these species will be tested. Any batch (group of mosquitoes) size may be submitted, but cannot exceed 50 mosquitoes.

Phase II – August 1 or first NH EEE or WNV detection (whichever comes first) through September 30, 2013:

In addition to the above species, *Ae. cinereus*, *An. punctipennis*, *An. walkeri*, *Cq. perturbans*, *Cx. salinarius*, *Oc. japonicus*, *Oc. triseriatus*, *Oc. sollicitans*, and *Ps. ferox*

will be tested if batch size > 10 mosquitoes (but cannot exceed 50 mosquitoes).

2013 Kensington Adult Mosquito Summary:

Adult mosquito surveillance was conducted from 06/6/2013 to 10/10/2013 (**NH State Health Lab extended trapping and testing until October 15, 2013**).

Although the NH State lab did not accept specimens until July 1st, we started trapping in June to track/assess annual mosquito populations for *Cq. perturbans* (cattail swamp mosquito) treatments as well as early trapping for *Cs. melanura* (primary EEE mosquito)...

10,794 total individuals collected
25 different species identified

2013 Species	# Collected	% of Total
<i>perturbans</i>	7499	69.47%
<i>cinerus</i>	584	5.41%
<i>walkeri</i>	496	4.60%
<i>vexans</i>	448	4.15%
<i>canadensis</i>	355	3.29%
<i>salinarius</i>	276	2.56%
<i>sapphirina</i>	238	2.20%
<i>punctipennis</i>	170	1.57%
<i>melanura</i>	146	1.35%
<i>triseriatus</i>	141	1.31%
<i>excrucians</i>	83	0.77%
<i>quadrimaculatus</i>	72	0.67%
<i>cantator</i>	62	0.57%
<i>ferox</i>	58	0.54%
<i>pipiens/restuans</i>	44	0.41%
<i>trivittatus</i>	42	0.39%
<i>abserratus</i>	27	0.25%
<i>japonicus</i>	18	0.17%
<i>punctor</i>	11	0.10%
<i>restuans</i>	11	0.10%
<i>provocans</i>	4	0.04%
<i>stimulans</i>	4	0.04%
<i>territans</i>	2	0.02%
<i>minnesotae</i>	1	0.01%
<i>morsitans</i>	1	0.01%
<i>pipiens</i>	1	0.01%
	<hr/>	
	10794	

2012 Species	# Collected	% of Total
<i>perturbans</i>	8904	78.63%
<i>cinerus</i>	461	4.07%
<i>vexans</i>	445	3.93%
<i>punctipennis</i>	320	2.83%
<i>canadensis</i>	285	2.52%
<i>walkeri</i>	258	2.28%
<i>sapphirina</i>	256	2.26%
<i>melanura</i>	95	0.84%
<i>salinarius</i>	74	0.65%
<i>triseriatus</i>	72	0.64%
<i>quadrimaculatus</i>	35	0.31%
<i>stimulans</i>	25	0.22%
<i>cantator</i>	22	0.19%
<i>japonicus</i>	22	0.19%
<i>pipiens/restuans</i>	19	0.17%
<i>pipiens</i>	11	0.10%
<i>ferox</i>	5	0.04%
<i>trivittatus</i>	5	0.04%
<i>restuans</i>	4	0.04%
<i>territans</i>	4	0.04%
<i>abserratus</i>	2	0.02%
	<hr/>	
	11322	

2011 Species	# Collected	% of Total
<i>perturbans</i>	1037	46.59%
<i>cinerus</i>	238	10.69%
<i>canadensis</i>	203	9.12%
<i>melanura</i>	156	7.01%
<i>vexans</i>	156	7.01%
<i>sapphirina</i>	124	5.57%
<i>punctipennis</i>	56	2.52%
<i>walkeri</i>	50	2.25%
<i>stimulans</i>	44	1.98%
<i>punctor</i>	37	1.66%
<i>pipiens</i>	23	1.03%

2010 Species	# Collected	% of Total
<i>Cq. perturbans</i>	1191	56.74%
<i>Ae. cinerus</i>	295	14.05%
<i>Cs. melanura</i>	141	6.72%
<i>Ae. vexans</i>	138	6.57%
<i>Oc. canadensis</i>	94	4.48%
<i>Ur. sapphirina</i>	59	2.81%
<i>Oc. excrucians</i>	47	2.24%
<i>An. quadrimaculatus</i>	25	1.19%
<i>An. walkeri</i>	25	1.19%
<i>An. punctipennis</i>	23	1.10%
<i>Cx. restuans</i>	22	1.05%

<i>cantator</i>	20	0.90%	<i>Oc. cantator</i>	11	0.52%
<i>quadrimaculatus</i>	16	0.72%	<i>Cx. salinarius</i>	5	0.24%
<i>restuans</i>	14	0.63%	<i>Cx. pipiens</i>	4	0.19%
<i>salinarius</i>	14	0.63%	<i>Oc. stimulans</i>	4	0.19%
<i>morsitans</i>	11	0.49%	<i>Oc. punctor</i>	3	0.14%
<i>provocans</i>	8	0.36%	<i>Cx. territans</i>	3	0.14%
<i>triseriatus</i>	8	0.36%	<i>Ae. abserratus</i>	3	0.14%
<i>trivittatus</i>	4	0.18%	<i>Oc. triseriatus</i>	2	0.10%
<i>ferox</i>	2	0.09%	<i>Oc. aurifer</i>	1	0.05%
<i>japonicus</i>	2	0.09%	<i>Cs. minnesotae</i>	1	0.05%
<i>territans</i>	2	0.09%	<i>Cs. morsitans</i>	1	0.05%
<i>abserratus</i>	1	0.04%	<i>Oc. taeniorynchus</i>	1	0.05%
	2226			2099	

4 batches consisting of 44 adult *Cs. melanura* specimens collected in June 2013 were sent, as a separate company project, to Connecticut Agricultural Experimental Station for gut content analysis and EEE testing, results are pending. All batches sent from June 2012 tested negative for EEE.

43	6/18/2013	Cemetery, Kensington	L = Light	<i>Cs melanura</i>	6	CONN
43	6/18/2013	Charles Hodges Conservation Area, Kensington	L = Light	<i>Cs melanura</i>	24	CONN
60	6/25/2013	Cemetery, Kensington	L = Light	<i>Cs melanura</i>	12	CONN
60	6/25/2013	Charles Hodges Conservation Area, Kensington	L = Light	<i>Cs melanura</i>	2	CONN

2 CDC carbon dioxide/light traps were placed weekly at 2 locations which our surveillance team, in conjunction with the Centers for Disease Control recommendations, determined produced sufficient numbers of *Cs. melanura* to send for testing.

Cemetery, Kensington
Charles Hodges Conservation Area, Kensington

80 total mosquito batches* (1,564 adults) were sent to Concord Lab. One batch tested POSITIVE for WNV, none tested positive for EEE. There were no mammalian/human WNV/EEE cases identified in Kensington in 2013.

KS8131336	8/13/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cx restuans/pipiens	30	WNV
KS72131	7/2/2013	Charles Hodges Conservation Area, Kensington	L = Light	<i>Ae vexans</i>	34	NEG
KS72132	7/2/2013	Charles Hodges Conservation Area, Kensington	L = Light	<i>Cs melanura</i>	7	NEG

KS72133	7/2/2013	Charles Hodges Conservation Area, Kensington	L = Light	Oc	<i>canadensis</i>	26	NEG
KS72134	7/2/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cx	<i>restuans</i>	2	NEG
KS72135	7/2/2013	Cemetery, Kensington	L = Light	Ae	<i>vexans</i>	26	NEG
KS72136	7/2/2013	Cemetery, Kensington	L = Light	Oc	<i>canadensis</i>	18	NEG
KS72137	7/2/2013	Cemetery, Kensington	L = Light	Cs	<i>melanura</i>	4	NEG
KS72138	7/2/2013	Cemetery, Kensington	L = Light	Cx	<i>pipiens/restuans</i>	14	NEG
KS79139	7/9/2013	Cemetery, Kensington	L = Light	Oc	<i>canadensis</i>	42	NEG
KS791310	7/9/2013	Cemetery, Kensington	L = Light	Ae	<i>vexans</i>	19	NEG
KS791311	7/9/2013	Charles Hodges Conservation Area, Kensington	L = Light	Ae	<i>vexans</i>	24	NEG
KS791312	7/9/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cs	<i>melanura</i>	4	NEG
KS791313	7/9/2013	Charles Hodges Conservation Area, Kensington	L = Light	Oc	<i>canadensis</i>	9	NEG
KS7161314	7/16/2013	Cemetery, Kensington	L = Light	Cs	<i>melanura</i>	13	NEG
KS7161315	7/16/2013	Cemetery, Kensington	L = Light	Oc	<i>canadensis</i>	33	NEG
KS7161316	7/16/2013	Cemetery, Kensington	L = Light	Ae	<i>vexans</i>	50	NEG
KS7161317	7/16/2013	Charles Hodges Conservation Area, Kensington	L = Light	Ae	<i>vexans</i>	48	NEG
KS7161318	7/16/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cs	<i>melanura</i>	2	NEG
KS7241319	7/24/2013	Cemetery, Kensington	L = Light	Cs	<i>melanura</i>	14	NEG
KS7241320	7/24/2013	Cemetery, Kensington	L = Light	Ae	<i>vexans</i>	5	NEG
KS7241321	7/24/2013	Cemetery, Kensington	L = Light	Oc	<i>canadensis</i>	6	NEG
KS7241322	7/24/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cs	<i>melanura</i>	22	NEG
KS7241323	7/24/2013	Charles Hodges Conservation Area, Kensington	L = Light	Ae	<i>vexans</i>	24	NEG
KS7241324	7/24/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cx	<i>restuans</i>	1	NEG
KS7301325	7/30/2013	Cemetery, Kensington	L = Light	Cs	<i>morsitans</i>	1	NEG
KS7301326	7/30/2013	Cemetery, Kensington	L = Light	Ae	<i>vexans</i>	8	NEG
KS7301327	7/30/2013	Cemetery, Kensington	L = Light	Cs	<i>melanura</i>	4	NEG
KS7301328	7/30/2013	Cemetery, Kensington	L = Light	Oc	<i>canadensis</i>	17	NEG
KS861329	8/6/2013	Cemetery, Kensington	L = Light	Cq	<i>perturbans</i>	50	NEG
KS861330	8/6/2013	Cemetery, Kensington	L = Light	Cq	<i>perturbans</i>	21	NEG
KS861331	8/6/2013	Cemetery, Kensington	L = Light	Ae	<i>cinerus</i>	13	NEG
KS8131332	8/13/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cq	<i>perturbans</i>	50	NEG
KS8131333	8/13/2013	Charles Hodges Conservation Area, Kensington	L = Light	Ae	<i>vexans</i>	20	NEG
KS8131334	8/13/2013	Charles Hodges Conservation Area, Kensington	L = Light	An	<i>walkeri</i>	50	NEG
KS8131335	8/13/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cs	<i>melanura</i>	4	NEG
KS8131336	8/13/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cx	<i>restuans/pipiens</i>	30	WNV
KS8131337	8/13/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cx	<i>salinarius</i>	50	NEG
KS8131338	8/13/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cq	<i>perturbans</i>	50	NEG
KS8131339	8/13/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cx	<i>salinarius</i>	50	NEG
KS8131340	8/13/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cq	<i>perturbans</i>	42	NEG
KS8131341	8/13/2013	Charles Hodges Conservation Area, Kensington	L = Light	An	<i>walkeri</i>	18	NEG
KS8131342	8/13/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cx	<i>salinarius</i>	36	NEG
KS8131343	8/13/2013	Cemetery, Kensington	L = Light	Cq	<i>perturbans</i>	50	NEG
KS8131344	8/13/2013	Cemetery, Kensington	L = Light	Oc	<i>triseriatus</i>	30	NEG
KS8131345	8/13/2013	Cemetery, Kensington	L = Light	Ae	<i>vexans</i>	14	NEG
KS8131346	8/13/2013	Cemetery, Kensington	L = Light	Cq	<i>perturbans</i>	47	NEG
KS8201347	8/20/2013	Cemetery, Kensington	L = Light	Cq	<i>perturbans</i>	50	NEG

KS8201348	8/20/2013	Cemetery, Kensington	L = Light	Cs	<i>melanura</i>	9	NEG
KS8201349	8/20/2013	Cemetery, Kensington	L = Light	Ae	<i>vexans</i>	5	NEG
KS8201350	8/20/2013	Cemetery, Kensington	L = Light	Oc	<i>canadensis</i>	3	NEG
KS8201351	8/20/2013	Cemetery, Kensington	L = Light	Cq	<i>perturbans</i>	50	NEG
KS8201352	8/20/2013	Cemetery, Kensington	L = Light	Oc	<i>triseriatus</i>	12	NEG
KS8201353	8/20/2013	Cemetery, Kensington	L = Light	Ae	<i>cinerus</i>	23	NEG
KS8201354	8/20/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cq	<i>perturbans</i>	50	NEG
KS8201355	8/20/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cq	<i>perturbans</i>	48	NEG
KS8201356	8/20/2013	Charles Hodges Conservation Area, Kensington	L = Light	Ae	<i>vexans</i>	14	NEG
KS8201357	8/20/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cx	<i>salinarius</i>	26	NEG
KS8201358	8/20/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cs	<i>melanura</i>	1	NEG
KS8271359	8/27/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cs	<i>melanura</i>	3	NEG
KS8271360	8/27/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cq	<i>perturbans</i>	23	NEG
KS8271361	8/27/2013	Charles Hodges Conservation Area, Kensington	L = Light	Ae	<i>vexans</i>	9	NEG
KS8271362	8/27/2013	Charles Hodges Conservation Area, Kensington	L = Light	An	<i>walkeri</i>	25	NEG
KS8271363	8/27/2013	Cemetery, Kensington	L = Light	Cq	<i>perturbans</i>	37	NEG
KS8271364	8/27/2013	Cemetery, Kensington	L = Light	Cs	<i>melanura</i>	2	NEG
KS941365	9/4/2013	Cemetery, Kensington	L = Light	Oc	<i>triseriatus</i>	15	NEG
KS941366	9/4/2013	Cemetery, Kensington	L = Light	Cs	<i>melanura</i>	1	NEG
KS941367	9/4/2013	Cemetery, Kensington	L = Light	Cq	<i>perturbans</i>	10	NEG
KS941368	9/4/2013	Cemetery, Kensington	L = Light	Cx	<i>pipiens</i>	1	NEG
KS941369	9/4/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cq	<i>perturbans</i>	12	NEG
KS9101370	9/10/2013	Cemetery, Kensington	L = Light	Cq	<i>perturbans</i>	5	NEG
KS9101371	9/10/2013	Cemetery, Kensington	L = Light	Oc	<i>triseriatus</i>	8	NEG
KS9101372	9/10/2013	Charles Hodges Conservation Area, Kensington	L = Light	Oc	<i>canadensis</i>	3	NEG
KS9101373	9/10/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cs	<i>melanura</i>	2	NEG
KS9101374	9/10/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cq	<i>perturbans</i>	1	NEG
KS9171375	9/17/2013	Cemetery, Kensington	L = Light	Cq	<i>perturbans</i>	2	NEG
KS9171376	9/17/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cs	<i>melanura</i>	2	NEG
KS1011377	10/1/2013	Cemetery, Kensington	L = Light	Cq	<i>perturbans</i>	1	NEG
KS1011378	10/1/2013	Charles Hodges Conservation Area, Kensington	L = Light	Cs	<i>melanura</i>	7	NEG
KS1081379	10/8/2013	Cemetery, Kensington	L = Light	Cq	<i>perturbans</i>	1	NEG
KS1081380	10/8/2013	Charles Hodges Conservation Area, Kensington	L = Light	Oc	<i>canadensis</i>	1	NEG

*A batch consists of 50 or less individual adult female mosquitoes of the same genus and species.

2013 Kensington Municipal Progress Report to Date:

Town of Kensington

Date	Activity
1/4/2013	MC Permits delivered to Concord for approval
4/2/2013	Bulletin Board MC notifications
4/4/2013	MC Newspaper ad public notices placed
5/1/2013	Mosquito larval surveillance and larvicide treatments
5/2/2013	E-mail municipalities with 2013 mosquito collection and testing information
6/3/2013	Mosquito Light traps out
6/4/2013	Mosquito light traps in
6/5/2013	Identify and log collected mosquitoes
6/10/2013	Mosquito Light traps out
6/10/2013	Larvicide perturbans/cattail areas
6/11/2013	Mosquito light traps in
6/12/2013	Identify and log collected mosquitoes
6/17/2013	Mosquito Light traps out
6/17/2013	E-mail semi-monthly Mosquito collection data to date
6/18/2013	Mosquito light traps in
6/19/2013	Identify and log collected mosquitoes
6/24/2013	Mosquito Light traps out
6/25/2013	Mosquito light traps in
6/26/2013	Identify and log collected mosquitoes
7/1/2013	Mosquito Light traps out
7/1/2013	E-mail semi-monthly Mosquito collection data to date
7/2/2013	Mosquito light traps in
7/3/2013	Identify and log collected mosquitoes
7/4/2013	E-mail Municipal Progress Reports to date
7/8/2013	Mosquito Light traps out
7/9/2013	Mosquito light traps in
7/10/2013	Identify and log collected mosquitoes
7/10/2013	E-mail semi-monthly Mosquito collection data to date
7/15/2013	Mosquito Light traps out
7/16/2013	Mosquito light traps in
7/17/2013	Identify and log collected mosquitoes
7/23/2013	Mosquito Light traps out
7/24/2013	Mosquito light traps in
7/25/2013	Identify and log collected mosquitoes
7/25/2013	E-mail semi-monthly Mosquito collection data to date
7/29/2013	Mosquito Light traps out
7/30/2013	Mosquito light traps in
7/31/2013	Identify and log collected mosquitoes
8/5/2013	Mosquito Light traps out
8/6/2013	Mosquito light traps in
8/7/2013	Identify and log collected mosquitoes
8/12/2013	Mosquito Light traps out
8/13/2013	Mosquito light traps in (collection of 1 WNV pool: see below)
8/13/2013	Identify and log collected mosquitoes

8/13/2013 E-mail semi-monthly Mosquito collection data to date
8/19/2013 Mosquito Light traps out
8/20/2013 Mosquito light traps in
8/21/2013 **State Notification** of 1 WNV positive pool (pipiens/restuans from conservation area trap 8/13 collections)
8/21/2013 Identify and log collected mosquitoes
8/21/2013 E-mail semi-monthly Mosquito collection data to date
8/21/2013 Emergency Adulicide/ Elementary
8/22/2013 Emergency Adulicide/ Sawyer Park and Field A
8/26/2013 Mosquito Light traps out
8/27/2013 Mosquito light traps in
8/28/2013 Identify and log collected mosquitoes
8/29/2013 E-mail notification of Kimberly foss (biologist) change of e-mail address to kfoss81@comcast.net
9/1/2013 E-mail Municipal Progress Reports to date
9/3/2013 Mosquito Light traps out
9/4/2013 Mosquito light traps in
9/4/2013 Identify and log collected mosquitoes
9/9/2013 Mosquito Light traps out
9/10/2013 Mosquito light traps in
9/10/2013 E-mail semi-monthly Mosquito collection data to date
9/10/2013 Identify and log collected mosquitoes
9/16/2013 Mosquito Light traps out
9/17/2013 Mosquito light traps in
9/17/2013 Identify and log collected mosquitoes
9/23/2013 E-mail semi-monthly Mosquito collection data to date
9/23/2013 E-mail notification of mosquito season collection extension date
9/30/2013 Mosquito Light traps out
10/1/2013 Mosquito light traps in
10/1/2013 Identify and log collected mosquitoes
10/7/2013 Mosquito Light traps out
10/8/2013 Mosquito light traps in
10/8/2013 Identify and log collected mosquitoes
10/17/2013 E-mail final semi-monthly Mosquito collection data to date
11/12/2013 Larvicide melanura sites for winter/spring
12/17/2013 E-mail 2013 Year end Surveillance Summary and Municipal Progress report to date



STATE OF NEW HAMPSHIRE
DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH SERVICES



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2013 NH ARBOVIRUS TESTING RESULTS

Eastern Equine Encephalitis & West Nile Virus

Testing results are updated on Fridays as new positives are identified so this report may not reflect the most recent results.

EEE Testing Results

July 1, 2013 – October 11, 2013

	Prior Year Totals					
	2013	2012	2011	2010	2009	2008
Mosquito Batches Positive*	24	9	0	0	73	8
Animals Positive	3	4	0	1	7	1
Humans Positive	0	0	0	0	1	0

*A mosquito batch is a collection of mosquitoes sorted by species, date of collection, and trap location.

WNV Testing Results

July 1, 2013 – October 11, 2013

	Prior Year Totals					
	2013	2012	2011	2010	2009	2008
Mosquito Batches Positive	14	41	9	1	0	1
Animals Positive	1	0	0	0	0	0
Humans Positive	1	1	0	1	0	0

New Hampshire Arbovirus Testing – Mosquito Batches

Town or City	Date Collected	Species	Virus Result
Raymond	10/8/2013	Cs. melanura	EEE
North Hampton	10/8/2013	Cs. melanura	EEE
Newton	10/8/2013	Cs. melanura	EEE
East Kingston	10/8/2013	Cs. melanura	EEE
Brentwood	10/1/2013	Cs. melanura	WNV
Hampstead	9/19/2013	Cs. melanura	EEE
Newton	9/17/2013	Cs. melanura	WNV
Raymond	9/17/2013	Cs. melanura	EEE
Keene	9/12/2013	Cx. pipiens	WNV
Londonderry	9/12/2013	Cs. melanura	EEE
Derry	9/12/2013	Cs. melanura	EEE
Newington	9/11/2013	Cs. melanura	EEE

Newton	9/10/2013	Cs. melanura	EEE
Raymond	9/10/2013	Cx. restuans	WNV
Exeter	9/10/2013	Cs. melanura	EEE
Sandown	9/5/2013	Cs. melanura	EEE
Hampstead	9/5/2013	Cs. melanura	WNV
Greenland	9/4/2013	Cs. melanura	EEE
New Castle	9/4/2013	Cx. salinarius	WNV
Brentwood	9/3/2013	Cs. melanura	EEE
Litchfield	8/29/2013	Cq. perturbans	EEE
Londonderry	8/29/2013	Cs. melanura	EEE
Nashua	8/29/2013	Cx. pipiens	WNV
Brentwood	8/27/2013	Cs. melanura	EEE
Newington	8/27/2013	Cq. perturbans	EEE
Newington	8/27/2013	Cs. melanura	EEE
Pelham	8/22/2013	Cq. perturbans	EEE
Auburn	8/20/2013	Cs. melanura	EEE
Kingston	8/13/2013	Cs. melanura	EEE
Kensington	8/13/2013	Cx. pipiens/restuans	WNV
Exeter	8/13/2013	Cs. melanura	EEE
Manchester	8/12/2013	Cs. morsitans	EEE
Nashua	8/8/2013	Cx. pipiens	WNV
Stratham	8/6/2013	Cx. pipiens	WNV
Stratham	8/6/2013	Cx. pipiens	WNV
Pelham	7/26/2013	Oc. canadensis	WNV
Pelham	7/26/2013	Cs. melanura	WNV
Sandown	7/25/2013	Cx. pipiens	WNV

New Hampshire Arbovirus Testing – Animals

Town or City	Onset Date	Species	Virus Result
Belmont	10/5/2013	Horse	WNV
Deerfield	10/3/2013	Horse	EEE
Ossipee	9/18/2013	Horse	EEE
Derry	9/7/2013	Horse	EEE

New Hampshire Arbovirus Testing – Humans

Town or City	Age Range	Onset Date	Virus Result
Chesterfield	Adult	8/19/2013	WNV

Anecdotal Description of Mosquito Species Occurring in Maine and New Hampshire:

Compiled by Richard Dearborn and Kimberly A. Foss: Maine Department of Conservation, Forest Health and Monitoring, Insect and Disease Lab 2003, from a variety of sources. Revised by Kimberly A. Foss, SWAMP, Inc/Municipal Pest Management Services, Inc. October 2013

GENUS species	Current Disease Associations (X)=primary vector	Estimated Flight Range	Bites Humans	Adult Host	Larval Habitat	No. Gen./ Yr.	Over- winter Stage	Common Names and Comments
AEDES								
<i>cinereus</i> (Meigen)	WNV EEE SLE	100 to 1000 feet	Yes Major pest in wooded or shaded areas	Mammals	Wooded snowmelt pools, semi-permanent bogs and swamps	2-3	Egg	Day and night biter
<i>vexans</i> (Meigen)	WNV EEE	5 to 10 miles	Yes Major pest	Mammals	Wooded temporary, permanent, semipermanent pools, open flooded areas	2-3	Egg	Day and night biter
OCHLEROTATUS								
<i>abserratus</i> (Felt & Young)			Yes Common spring pest	Mammals, birds	Snowmelt pools	1	Egg	Day and night biter
<i>atropalpus</i> (Coquillett)	WNV	100 to 1000 feet	Yes Around breeding areas	Mammals	Rock pools, some artificial containers	1	Egg	Day and night biter
<i>aurifer</i> (Coquillett)		½ mile	Yes Around breeding areas	Mammals	Snowmelt pools, swamps, bogs, open marshes	1	Egg	Day and night biter
<i>canadensis</i> (Theobald)	WNV EEE	½ mile	Yes Major late spring pest around breeding	Mammals, amphibians, reptiles, sometimes birds	Wooded snowmelt pools, flood waters	1-2	Egg	Day and night biter

			areas					
<i>cantator</i> (Coquillett)	WNV EEE		Yes	Mammals, birds	Salt marshes, fresh or brackish water	1+	Egg	Day and night biter
<i>communis</i> (DeGeer)			Yes	Mammals, birds	Wooded snowmelt pools	1	Egg	Day and evening biter
<i>decticus</i> (Howard, Dyar and Knab)			Yes	Mammals, birds	Sphagnum, acid bogs	1	Egg	Day and night biter
<i>diantaeus</i> (Howard, Dyar and Knab)			Yes Wooded areas	Mammals, birds	Wooded snowmelt pools	1	Egg	Morning and evening biter
<i>dorsalis</i> (Meigen)	WNV SLE	10 to 20 miles	Yes	Large mammals, sometimes large birds	Temporary freshwater and brackish pools marshes and ditches	1+	Egg	“Pale marsh mosquito” New record for 2003 (M. Holman)
<i>excrucians</i> (Walker)		½ mile	Yes Common spring- summer pest	Mammals, sometimes birds	Wooded snowmelt pools, marshes	1-2	Egg	Day and evening biter
<i>fitchii</i> (Felt & Young)	WNV	About 1 mile	Yes Common spring- summer pest in wooded areas	Mammals, birds	Snowmelt pools, bogs, grassy roadside ditches	1	Egg	Day and night biter
<i>hendersoni</i> (Cockerell)		About 1 mile	Yes	Mammals	Tree holes, occasionally tires	1-2	Egg	
<i>implicatus</i> (Vockeroth)			Yes Spring pest	Mammals	Wooded snowmelt pools	1	Egg	Day and night biter
<i>intrudens</i> (Dyar)			Yes Common spring pest	Mammals	Wooded snowmelt pools	1	Egg	Day and night biter

<i>japonicus</i> (Theobald)	WNV SLE		Yes	Mammals, birds	Tires, artificial containers, tree holes, rock pools	2+	Egg	Day biter New Record Portland, Maine: June 26, 2001 (K.Foss)
<i>pionips</i> (Dyar)			Rarely		Snowmelt pools	1	Egg	
<i>provocans</i> (Walker)	WNV		Yes Early spring	Mammals	Semipermanent marshes, wooded snowmelt pools	1	Egg	Evening biter
<i>punctor</i> (Kirby)			Yes Spring	Mammals	Wooded snowmelt pools	1	Egg	Day and night biter
<i>riparius</i> (Dyar and Knab)								New record for 2003 (M. Holman)
<i>sollicitans</i> (Walker)	WNV EEE	100 miles or more	Yes Major coastal summer pest	Mammals, birds, reptiles, amphibians	Salt marshes	4+	Egg	“Eastern salt marsh mosquito”, Day and night biter
<i>sticticus</i> (Meigen)	WNV	4 miles	Yes Major pest around breeding areas	Mammals, birds, reptiles	Flood waters, wooded snowmelt pools	1-2	Egg	Day and evening biter
<i>stimulans</i> (Walker)	WNV	2 miles	Yes Major spring pest	Mammals, birds	Snowmelt pools	1	Egg	Long lived
<i>taeniorhynchus</i> (Wiedemann)	WNV EEE		Yes Major pest around breeding areas	Birds, mammals	Salt marshes	2+	Egg	“Black salt marsh mosquito”, Day and evening biter New record for 2002(M. Holman)
<i>triseriatus</i> (Say)	WNV LAC (X)	½ to 1	Yes Common	Mammals, birds,	Tires, artificial containers, tree	1	Egg	“Tree hole mosquito”

	EEE	mile	summer pest around breeding areas	reptiles, amphibians	holes			Day and evening biter
<i>trivittatus</i> (Coquillett)	WNV EEE	½ mile	Yes Common summer pest around breeding areas	Mammals, birds	Wooded snowmelt pools, floodwaters	1	Egg	Day and evening biter
ANOPHELES								
<i>barberi</i> (Coquillett)	WNV		Yes	Mammals, sometimes birds	Tree holes, artificial containers	1-2	Larva	New record for 2004 (M. Holman)
<i>earlei</i> (Vargas)		1 to 2 miles	Yes Common spring pest	Mammals	Confined bodies of water	1-2	Adult	Day and night biter
<i>punctipennis</i> (Say)	WNV Malaria	1 to 2 miles	Yes Major summer pest	Mammals, birds	Confined and flowing bodies of water, artificial containers	2-3	Adult	“Spotted-winged Mosquito”, Day and night biter
<i>quadrifasciatus</i> (Say)	WNV Malaria (X)	1 mile	Yes Common summer pest	Mammals, sometimes birds and reptiles	Confined bodies of water	2-3	Adult	Common “Malaria Mosquito”, Day and night biter
<i>walkeri</i> (Theobald)	WNV Malaria	1 to 2 miles	Yes	Mammals	Confined bodies of water	2+	Egg	Day and night biter
COQUILLETIDIA								
<i>perturbans</i> (Walker)	WNV EEE	1 to 10 miles	Yes Major summer pest	Birds, mammals, amphibians, sometimes reptiles	Cattail marshes	1-2	Larva	Larvae attach to the base of aquatic plants Day and night biter

CULEX								
<i>pipiens</i> (Linnaeus)	WNV (X) SLE (X) EEE	1 mile or more	Rarely	Birds, rarely mammals	Artificial containers, grassy roadside ditches, catch basins	1-2	Adult	“Northern house mosquito”
<i>restuans</i> (Theobald)	WNV (X) SLE (X) EEE	1 mile	Yes	Birds, sometimes mammals	Tires, tree holes, artificial containers, puddles, grassy roadside ditches, catch basins	1-2	Adult	Day and night biter
<i>salinarius</i> (Coquillett)	WNV (X) SLE (X) EEE		Yes	Birds, mammals	Artificial containers, grassy roadside ditches, brackish water, catch basins	1-2	Adult	Night biter, enters homes
<i>territans</i> (Walker)	WNV EEE	1 mile	Rarely	Cold blooded vertebrates (e.g. frogs), rarely birds	Pond edges, pools, marshes, grassy roadside ditches, artificial containers	1-3	Adult	
CULISETA								
<i>impatiens</i> (Walker)	WNV		Yes Uncommon early spring species	Mammals	Semipermanent ponds, bogs, wooded ground pools	1	Adult	Long lived, rare, day and evening biter
<i>inornata</i> (Williston)	WNV EEE		Yes Uncommon early spring species	Mammals	Wooded snowmelt pools, marshes, bogs, swamps	2+	Adult	“Winter mosquito”
<i>melanura</i> (Coquillett)	WNV EEE (X)	100 to 1000 yards	Rarely	Birds	Within stumps in acidic swamps and bogs, snowmelt pools	2+	Larva	

<i>minnesotae</i> (Barr)			Rarely	Birds, small mammals, turtles	Snowmelt pools, marshes	1-2	Adult	New Record for 2001 (M. Holman)
<i>morsitans</i> (Coquillett)	WNV EEE		Rarely	Birds	Semipermanent swamps, wooded snowmelt pools, marshes, bogs	1	Egg	
PSOROPHORA								
<i>ciliata</i> (Fabricius)	WNV EEE	5 to 10 miles	Yes, day and night biter Uncommon	Mammals	Temporary open sunlit rain filled fields and flood-water areas	1+	Egg	“Gallinipper” New Record for 2006 S. Berwick (K. Foss)
<i>ferox</i> (Humboldt)	WNV EEE	Up to 1 mile	Yes Within wooded areas, Uncommon species	Mammals	Wooded temporary ground pools, flood-water areas	1	Egg	“White-footed woods mosquito”, day and evening biter New Record for 2001 (M. Holman)
URANOTAENIA								
<i>sapphirina</i> (Osten Sacken)	WNV	Up to 8 miles	Rarely Summer species	Birds	Permanent and semipermanent ponds, pools, swamps, marshes	1-2	Adult	New Record Portland, Maine: July 24, 2001 (K. Foss)
WYEOMYIA								
<i>smithii</i> (Coquillett)			Never	Feeds as larvae on other insects in pitcher plant fluid	Sphagnum bogs	1	Larva	“Pitcher plant mosquito” spends most of the year in larval stage
ORTHOPODOMYIA								
<i>signifera</i> (Coquillett)	WNV EEE	Less than 100 ft	Rarely, uncommon	Birds	Deep tree rot holes and	2+	Egg in north,	

			species slow to develop		wooden containers		larvae in south	
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