Table A. EEE virus positive mosquito pools in Chester, Killingworth, Madison and North Stonington, CT, 1996-2014

Mosquito Species	No. of Positive Mosquito Pools				Total (%)
	Chester	Killingworth	Madison	North Stonington	
Culiseta melanura	26	9	11	28	74 (64.3)
Ochlerotatus canadensis	10	2		1	13 (11.3)
Ochlerotatus trivittatus				6	6 (5.2)
Aedes cinereus	1	2		2	5 (4.3)
Uranotaenia sapphirina	2		1	2	5 (4.3)
Aedes vexans	1			3	3 (2.6)
Anopheles punctipennis	2			1	3 (2.6)
Culex pipiens				2	2 (1.7)
Anopheles quadrimaculatus				1	1 (0.9)
Anopheles walkeri				1	1 (0.9)
Culex restuans			1		1 (0.9)
Ochlerotatus triseriatus				1	1 (0.9)
Total	42 (36.5)	13 (11.3)	13 (11.3)	47 (40.9)	115

From 1996 to 2014, a total of 115 mosquito pools of 12 mosquito species have been tested positive for EEE virus by cell culture and RT-PCR. *Cs. melanura* comprised the majority of positive pools (N = 74, 64.3%), followed by *Ochlerotatus canadensis* (N = 13, 11.3%), *Ochlerotatus trivittatus* (N = 6, 5.2%), *Aedes cinereus* (N = 5, 4.3%), *Uranotaenia sapphirina* (N = 5, 4.3%), and 7 other species. North Stonington had the greatest number of positive pools (N = 47, 40.9%), followed by Chester (N = 42, 36.5%), Killingworth (N = 13, 11.3%), and Madison (N = 13, 11.3%). Majority of the positive pools were identified during 2009 (N = 56, 48.7%), which contributed to the rationales behind the initiation of the present study during 2010 - 2011. In 2010, four mosquito pools tested positive in mosquitoes from North Stonington but none from the other sites. Interestingly, positive mosquito pools were identified in North Stonington in 8 years of the nearly two decades during which active mosquito surveillance has been conducted for EEEV in Connecticut.

Table B. Number of other engorged mosquitoes collected form Chester, Killingworth, Madison, and North Stonington, CT, May through October, 2010 – 2011

Mosquito Species	No.
Ochlerotatus thibaulti	202
Culiseta morsitans	54
Anopheles punctipennis	48
Anopheles quadrimaculatus	25
Culex territans	19
Aedes cinereus	6
Coquillettidia perturbans	6
Culex restuans	4
Ochlerotatus abserratus	3
Culex pipiens	2
Ochlerotatus canadensis	2
Ochlerotatus Stimulans	1

In addition to *Cs. melanura*, 372 engorged specimens of 12 species in the genera of *Aedes, Anopheles, Coquillettidia, Culex, Culiseta,* and *Ochlerotatus* were collected and blood meal analyses conducted. However, because of the focus of the present study on *Cs. melanura*, the principal mosquito vector of EEE virus, results of these analyses are not presented.

Table C. Number and percentage of avian- and mammalian-derived blood meals identified from *Culiseta melanura* in Chester, CT, May through October, 2010 – 2011. *R.C. = Residency codes: P, permanent resident (found year round in the state); S, summer resident [present in the state during the nesting season]; T, transient.

Vertebrate Host	Scientific Name	R. C.*	May	June	July	Aug	Sept	Oct	Total
			No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
Avian									
Tufted Titmouse	*Baeolophus bicolor*	P	1 (100)	7 (6.5)	11(14.3)	29 (29.6)	26 (44.1)	4 (66.7)	78
American Robin	*Turdus migratorius*	P, T		15 (14.0)	10 (13.0)	10 (10.2)	3 (5.1)		38
Common Grackle	*Quiscalus quiscula*	P, T		22 (20.6)	1 (1.3)	4 (4.1)	1 (1.7)		28
Warbling Vireo	*Vireo gilvus*	S		7 (6.5)	16 (20.8)				23
Red-eyed Vireo	*Vireo olivaceus*	S		5 (4.7)		10 (10.2)	8 (13.6)		23
Black-capped Chickadee	*Poecile atricapillus*	P		6 (5.6)	7 (9.1)	8 (8.2)			21
Wood Thrush	*Hylocichla mustelina*	S		2 (1.9)	4 (5.2)	3 (3.1)	5 (8.5)	2 (33.3)	16
Chipping Sparrow	*Spizella passerina*	S		4 (3.7)	3 (3.9)	5 (5.1)	2 (3.4)		14
Yellow-throated Vireo	*Vireo flavifrons*	S		4 (3.7)		2 (2.0)	6 (10.2)		12
Northern Cardinal	*Cardinalis cardinalis*	P		4 (3.7)		4 (4.1)	1 (1.7)		9
Scarlet Tanager	*Piranga olivacea*	S		3 (2.8)	5 (6.5)		1 (1.7)		9
Ovenbird	*Seiurus aurocapilla*	S		4 (3.7)	3 (3.9)	1 (1.0)			8
Blue-gray Gnatcatcher	*Polioptila caerulea*	S		2 (1.9)	1 (1.3)	3 (3.1)			6
Gray Catbird	*Dumetella carolinensis*	S		4 (3.7)	2 (2.6)				6
American Goldfinch	*Spinus tristis*	P				5 (5.1)			5
Brown-headed Cowbird	*Molothrus ater*	P, T		3 (2.8)	1 (1.3)	1 (1.0)			5
Mourning Dove	*Zenaida macroura*	P			1 (1.3)	4 (4.1)			5
Baltimore Oriole	*Icterus galbula*	S		1 (0.9)	3 (3.9)				4
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	S		1 (0.9)	1(1.3)		2 (3.4)		4
Common Yellowthroat	*Geothlypis trichas*	S		1 (0.9)		1 (1.0)	1 (1.7)		3
European Starling	*Sturnus vulgaris*	P		1 (0.9)	1 (1.3)		1 (1.7)		3
Red-winged Blackbird	*Agelaius phoeniceus*	P, T		1 (0.9)	2 (2.6)				3
American Redstart	*Setophaga ruticilla*	S			1 (1.3)	1 (1.0)			2
Great Horned Owl	*Bubo virginianus*	P				2 (2.0)			2
Yellow-billed Cuckoo	*Coccyzus americanus*	S			1 (1.3)	1 (1.0)			2

American Crow	*Corvus brachyrhynchos*	P		1 (0.9)					1
American Woodcock	*Scolopax minor*	S		1 (0.9)					1
Barn Swallow	*Hirundo rustica*	S			1 (1.3)				1
Black-and-white Warbler	*Mniotilta varia*	S			1 (1.3)				1
Cedar Waxwing	*Bombycilla cedrorum*	P		1 (0.9)					1
Eastern Towhee	*Pipilo erythrophthalmus*	S			1 (1.3)				1
Eastern Wood-Pewee	*Contopus virens*	S				1 (1.0)			1
Great Crested Flycatcher	*Myiarchus crinitus*	S				1 (1.0)			1
House Wren	*Troglodytes aedon*	S					1 (1.7)		1
Indigo Bunting	*Passerina cyanea*	S		1 (0.9)					1
Swamp Sparrow	*Melospiza georgiana*	S					1 (1.7)		1
Veery	*Catharus fuscescens*	S		1 (0.9)					1
Wood Duck	*Aix sponsa*	S				1 (1.0)			1
Worm-eating Warbler	*Helmitheros vermivorum*	S				1 (1.0)			1
Yellow-rumped Warbler	*Setophaga coronata*	P, T		1 (0.9)					1
Mammalian									
White-tailed Deer	*Odocoileus virginianus*	P		4 (3.7)					4
Total			1	107	77	98	59	6	348

Table D. Number and percentage of avian- and mammalian-derived blood meals identified from *Culiseta melanura* in Killingworth, CT, May through October, 2010 – 2011. *R.C. = Residency codes: P, permanent resident (found year round in the state); S, summer resident [present in the state during the nesting season]; T, transient.

Vertebrate Host	Scientific Name	R. C.*	May No. (%)	June No. (%)	July No. (%)	Aug No. (%)	Sept No. (%)	Oct No. (%)	Total
Avian									
Wood Thrush	*Hylocichla mustelina*	S	1 (6.3)	3 (8.1)	6 (9.7)	45 (46.9)	12 (42.9)		67
American Robin	*Turdus migratorius*	P, T	6 (37.5)	15 (40.5)	13 (21.0)	8 (8.3)	2 (7.1)	2 (20.0)	46
Tufted Titmouse	*Baeolophus bicolor*	P	1 (6.3)	7 (18.9)	19 (30.6)	8 (8.3)	4 (14.3)		39
Black-capped Chickadee	*Poecile atricapillus*	P	1 (6.3)	4 (10.8)	7 (11.3)	3 (3.1)		1 (10.0)	16
Northern Cardinal	*Cardinalis cardinalis*	P		1 (2.7)	3 (4.8)	5 (5.2)	1 (3.6)	2 (20.0)	12
Common Grackle	*Quiscalus quiscula*	P, T		2 (5.4)	3 (4.8)	4 (4.2)	1 (3.6)	1 (10.0)	11
Scarlet Tanager	*Piranga olivacea*	S	3 (18.8)	1 (2.7)	1 (1.6)	5 (5.2)			10
Chipping Sparrow	*Spizella passerina*	S	1 (6.3)		2 (3.2)	4 (4.2)	1 (3.6)	1 (10.0)	9
Gray Catbird	*Dumetella carolinensis*	S			2 (3.2)	1 (1.0)	1 (3.6)		4
Ovenbird	*Seiurus aurocapilla*	S	1 (6.3)			2 (2.1)	1 (3.6)		4
House Sparrow	*Passer domesticus*	P		1 (2.7)	1 (1.6)	1 (1.0)			3
Blue-gray Gnatcatcher	*Polioptila caerulea*	S				2 (2.1)			2
Pine Warbler	*Setophaga pinus*	S				2 (2.1)			2
Swamp Sparrow	*Melospiza georgiana*	S	1 (6.3)	1 (2.7)					2
Acadian Flycatcher	*Empidonax virescens*	S				1 (100)			1
Red-bellied Woodpecker	*Melanerpes carolinus*	P					1 (3.6)		1
American Goldfinch	*Spinus tristis*	P						1 (10.0)	1
Baltimore Oriole	*Icterus galbula*	S			1 (1.6)				1
Black-and-white Warbler	*Mniotilta varia*	S					1 (3.6)		1
Blue-headed Vireo	*Vireo solitarius*	S					1 (3.6)		1
Brown-headed Cowbird	*Molothrus ater*	P, T			1 (1.6)				1
Common Yellowthroat	*Geothlypis trichas*	S				1 (1.0)			1
Eastern Bluebird	*Sialia sialis*	P, T		1 (2.7)					1
Green Heron	*Butorides virescens*	S				1 (1.0)			1
Hermit Thrush	*Catharus guttatus*	S	1 (6.3)						1
House Wren	*Troglodytes aedon*	S			1 (1.6)				1
Mourning Dove	*Zenaida macroura*	P		1 (2.7)					1
Red-winged Blackbird	*Agelaius phoeniceus*	P, T				1 (1.0)			1
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	S				1 (1.0)			1
Savannah Sparrow	*Passerculus sandwichensis*	S					1 (3.6)		1
Veery	*Catharus fuscescens*	S				1 (1.0)			1
Warbling Vireo	*Vireo gilvus*	S			1 (1.6)				1
White-throated Sparrow	*Zonotrichia albicollis*	W, T						1 (10.0)	1
Yellow-billed Cuckoo	*Coccyzus americanus*	S					1 (3.6)		1
Yellow-throated Vireo	*Vireo flavifrons*	S			1 (1.6)				1

Mammalian									
White-tailed Deer	*Odocoileus virginianus*	P						1 (10.0)	1
Total			16	37	62	96	28	10	249

Table E. Number and percentage of avian- and mammalian-derived blood meals identified from *Culiseta melanura* in Madison, CT, May through October, 2010 – 2011. *R.C. = Residency codes: P, permanent resident (found year round in the state); S, summer resident [present in the state during the nesting season]; T, transient.

Vertebrate Host	Scientific Name	R. C.*	May	June	July	Aug	Sept	Oct	Total
			No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
Avian									
Wood Thrush	*Hylocichla mustelina*	S		11 (11.7)	9 (13.8)	56 (40.3)	27 (52.9)		103
American Robin	*Turdus migratorius*	P, T	2 (28.6)	17 (18.1)	20 (30.8)	10 (7.2)	2 (3.9)		51
Common Grackle	*Quiscalus quiscula*	P, T		9 (9.6)	3 (4.6)	17 (12.2)	2 (3.9)		31
Tufted Titmouse	*Baeolophus bicolor*	P	1 (14.3)	6 (6.4)	4 (6.2)	9 (6.5)	1 (2.0)		21
Black-capped Chickadee	*Poecile atricapillus*	P		8 (8.5)	3 (4.6)	5 (3.6)	2 (3.9)		18
Northern Cardinal	*Cardinalis cardinalis*	P		7 (7.4)	3 (4.6)	3 (2.2)	3 (5.9)	1 (20.0)	17
Scarlet Tanager	*Piranga olivacea*	S	1 (14.3)	7 (7.4)		8 (5.8)	1 (2.0)		17
Chipping Sparrow	*Spizella passerina*	S		7 (7.4)	4 (6.2)	4 (2.9)		1 (20.0)	16
Red-eyed Vireo	*Vireo olivaceus*	S	1 (14.3)	3 (3.2)	5 (7.7)	4 (2.9)			13
Gray Catbird	*Dumetella carolinensis*	S		4 (4.3)	2 (3.1)			1 (20.0)	7
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	S	1 (14.3)	1 (1.1)		3 (2.2)	1 (2.0)		6
European Starling	*Sturnus vulgaris*	P	1 (14.3)		1 (1.5)	1 (0.7)	1 (2.0)	1 (20.0)	5
Ovenbird	*Seiurus aurocapilla*	S		2 (2.1)		2 (1.4)	1 (2.0)		5
Baltimore Oriole	*Icterus galbula*	S		1 (1.1)		3 (2.2)			4
Brown-headed Cowbird	*Molothrus ater*	P, T		4 (4.3)					4
House Wren	*Troglodytes aedon*	S				3 (2.2)			3
Yellow-throated Vireo	*Vireo flavifrons*	S			1 (1.5)		2 (3.9)		3
American Redstart	*Setophaga ruticilla*	S					2 (3.9)		2
Black-and-white Warbler	*Mniotilta varia*	S		2 (2.1)					2
Eastern Towhee	*Pipilo erythrophthalmus*	S		1 (1.1)		1 (0.7)			2
Hermit Thrush	*Catharus guttatus*	S		1 (1.1)			1 (2.0)		2
House Finch	*Haemorhous mexicanus*	P				2 (1.4)			2
Indigo Bunting	*Passerina cyanea*	S		1 (1.1)	1 (1.5)				2
Magnolia Warbler	*Setophaga magnolia*	S				1 (0.7)	1 (2.0)		2
Red-tailed Hawk	*Buteo jamaicensis*	P				2 (1.4)			2

Red-winged Blackbird	*Agelaius phoeniceus*	P, T			1 (1.5)	1 (0.7)			2
Veery	*Catharus fuscescens*	S					2 (3.9)		2
Warbling Vireo	*Vireo gilvus*	S			2 (3.1)				2
Acadian Flycatcher	*Empidonax virescens*	S				1 (0.7)			1
Barn Swallow	*Hirundo rustica*	S			1 (1.5)				1
Blackburnian Warbler	*Setophaga fusca*	S					1 (2.0)		1
Blue-winged Warbler	*Vermivora cyanoptera*	S			1 (1.5)				1
Cedar Waxwing	*Bombycilla cedrorum*	P		1 (1.1)					1
Common Yellowthroat	*Geothlypis trichas*	S				1 (0.7)			1
Northern Waterthrush	*Parkesia noveboracensis*	S		1 (1.1)					1
Pine Warbler	*Setophaga pinus*	S				1 (0.7)			1
Song Sparrow	*Melospiza melodia*	P				1 (0.7)			1
Swainson's Thrush	*Catharus ustulatus*	T						1 (20.0)	1
Wild Turkey	*Meleagris gallopavo*	P			1 (1.5)				1
Worm-eating Warbler	*Helmitheros vermivorum*	S			1 (1.5)				1
Yellow-billed Cuckoo	*Coccyzus americanus*	S			1 (1.5)				1
Yellow-rumped Warbler	*Setophaga coronata*	P, T			1 (1.5)				1
Mammalian									
Sheep	*Ovis aries*						1 (2.0)		1
Total			7	94	65	139	51	5	361

Table F. Number and percentage of avian- and mammalian-derived blood meals identified from *Culiseta melanura* in North Stonington, CT, May through October, 2010 – 2011.
*R.C. = Residency codes: P, permanent resident (found year round in the state); S, summer resident [present in the state during the nesting season]; T, transient.

Vertebrate Host	Scientific Name	R. C.*	May	June	July	Aug	Sept	Oct	Total
			No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
Avian									
Chipping Sparrow	*Spizella passerina*	S		7 (22.6)	6 (13.0)	7 (12.7)	2 (6.9)		22
Northern Cardinal	*Cardinalis cardinalis*	P		1 (3.2)	4 (8.7)	11 (20.0)	5 (17.2)		21
American Robin	*Turdus migratorius*	P, T		5 (16.1)	5 (10.9)	7 (12.7)	3 (10.3)		20
Wood Thrush	*Hylocichla mustelina*	S			4 (8.7)	8 (14.5)	8 (27.6)		20
Tufted Titmouse	*Baeolophus bicolor*	P		4 (12.9)	5 (10.9)		1 (3.4)		10
Common Grackle	*Quiscalus quiscula*	P, T		2 (6.5)	1 (2.2)	4 (7.3)			7
Red-eyed Vireo	*Vireo olivaceus*	S		2 (6.5)	3 (6.5)	1 (1.8)			6
Yellow-billed Cuckoo	*Coccyzus americanus*	S	2 (40.0)		3 (6.5)	1 (1.8)			6
Black-capped Chickadee	*Poecile atricapillus*	P		1 (3.2)	2 (4.3)	1 (1.8)		1 (33.3)	5
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	S			2 (4.3)	3 (5.5)			5
Scarlet Tanager	*Piranga olivacea*	S		2 (6.5)	2 (4.3)		1 (3.4)		5
Gray Catbird	*Dumetella carolinensis*	S	1 (20.0)	1 (3.2)		2 (3.6)			4
Pine Warbler	*Setophaga pinus*	S				3 (5.5)	1 (3.4)		4
Veery	*Catharus fuscescens*	S		1 (3.2)	2 (4.3)		1 (3.4)		4
Warbling Vireo	*Vireo gilvus*	S			3 (6.5)	1 (1.8)			4
House Wren	*Troglodytes aedon*	S			1 (2.2)	1 (1.8)	1 (3.4)		3
Indigo Bunting	*Passerina cyanea*	S				2 (3.6)	1 (3.4)		3
Ovenbird	*Seiurus aurocapilla*	S		2 (6.5)	1 (2.2)				3
Brown-headed Cowbird	*Molothrus ater*	P, T		1 (3.2)	1 (2.2)				2
Cooper's Hawk	*Accipiter cooperii*	P, T			1 (2.2)		1 (3.4)		2
American Redstart	*Setophaga ruticilla*	S					1 (3.4)		1
Baltimore Oriole	*Icterus galbula*	S		1 (3.2)					1
Black-billed Cuckoo	*Coccyzus erythropthalmus*	S	1 (20.0)						1
Common Yellowthroat	*Geothlypis trichas*	S				1 (1.8)			1
Dark-eyed Junco	*Junco hyemalis*	W						1 (33.3)	1

Grasshopper Sparrow	*Ammodramus savannarum*	S		1 (3.2)					1
Mourning Dove	*Zenaida macroura*	P	1 (20.0)						1
Red-winged Blackbird	*Agelaius phoeniceus*	P, T				1 (1.8)			1
Sora	*Porzana carolina*	S					1 (3.4)		1
Swamp Sparrow	*Melospiza georgiana*	P, T						1 (33.3)	1
Tree Swallow	*Tachycineta bicolor*	S					1 (3.4)		1
Yellow-rumped Warbler	*Setophaga coronata*	P, T				1 (1.8)			1
Mammalian									
Eastern Gray Squirrel	*Sciurus carolinensis*						1 (3.4)		1
Total			5	31	46	55	29	3	169

Table G. Number and percentage of avian families (N=37) based on point count data in Chester, Killingworth, Madison, and North Stonington, CT, May through October, 2010 – 2011

Order/Family	Chester	Killingworth	Madison	North Stonington	Total	%
Passeriformes						
Paridae (Chickadees and Titmice)	566	306	248	199	1319	17.69
Icteridae (Blackbirds)	341	65	223	93	722	9.68
Turdidae (Thrushes)	199	161	73	226	659	8.84
Parulidae (Wood-Warblers)	306	47	152	96	601	8.06
Emberizidae (New World Sparrow)	277	107	24	89	497	6.67
Corvidae (Jays and Crows)	206	105	100	83	494	6.63
Fringillidae (Finches and Allies)	169	105	31	51	356	4.77
Cardinalidae (Cardinals and Tanagers)	63	97	51	85	296	3.97
Sittidae (Nuthatches)	119	67	57	15	258	3.46
Mimidae (Mockingbirds and Thrashers)	62	73	27	64	226	3.03
Hirundinidae (Swallows)	146	7	6	50	209	2.80
Tyrannidae (Tyrant Flycatchers)	107	43	30	16	196	2.63
Vireonidae (Vireos)	59	25	45	14	143	1.92
Passeridae (Old World Sparrow)		52		67	119	1.60
Sturnidae (Starlings)	5		2	83	90	1.21
Troglodytidae (Wrens)	16	21	4	39	80	1.07
Bombycillidae (Waxwings)	14	8		53	75	1.01
Regulidae (Kinglets)	30	8	12		50	0.67
Polioptilidae (Gnatcatchers)	10	11	4	2	27	0.36
Certhiidae (Creepers)	8		2		10	0.13
Piciformes						
Picidae (Woodpeckers)	147	130	72	38	387	5.19
Anseriformes						
Anatidae (Ducks, Geese, and Swans)	222	4	5	11	242	3.25
Columbiformes						

Order/Family	Chester	Killingworth	Madison	North Stonington	Total	%
Columbidae (Pigeons and Doves)	65	25	7	24	121	1.62
Accipitriformes						
Accipitridae (Hawks and Eagles)	29	24	23	6	82	1.10
Cathartidae (Vultures)	6	8	6	4	24	0.32
Pandionidae (Ospreys)	2			2	4	0.05
Suliformes						
Phalacrocoracidae (Cormorants)	2			50	52	0.70
Pelecaniformes						
Ardeidae (Herons, Bitterns, and Allies)	26	1		3	30	0.40
Apodiformes						
Trochilidae (Hummingbirds)	7	1	2	15	25	0.34
Apodidae (Swifts)	2	5		1	8	0.11
Galliformes						
Phasianidae (Turkeys, Grouse, and Quail)	10	3		9	22	0.30
Cuculiformes						
Cuculidae (Cuckoos)	9	2	2	4	17	0.23
Charadriiformes						
Laridae (Gulls, Terns, and Skimmers)	1			4	5	0.07
Scolopacidae (Sandpipers and Allies)	3				3	0.04
Strigiformes						
Strigidae (Typical Owls)	3			1	4	0.05
Coraciiformes						
Alcedinidae (Kingfishers)				2	2	0.03
Falconiformes						
Falconidae (Falcons)	1				1	0.01
Total	3238	1511	1208	1499	7456	

Table H. Frequencies of 99 avian species (in descending order from most to least frequently observed) based on point count data in Chester, CT, April through October, 2010 – 2011 (No. of sites = 7, No. of site visits = 43, comprising 301 point counts.)

Avian (common name)	Scientific Name	April	May	June	July	August	Sept	Oct	Avg. Frequency
Tufted Titmouse	*Baeolophus bicolor*	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Black-capped Chickadee	*Poecile atricapillus*	1.000	1.000	0.857	1.000	1.000	0.833	1.000	0.953
American Goldfinch	*Spinus tristis*	0.833	0.833	1.000	1.000	1.000	0.833	0.600	0.884
American Robin	*Turdus migratorius*	1.000	1.000	1.000	1.000	1.000	0.500	0.600	0.884
Blue Jay	*Cyanocitta cristata*	1.000	0.667	0.571	1.000	1.000	1.000	1.000	0.884
White-breasted Nuthatch	*Sitta carolinensis*	1.000	0.500	0.714	1.000	1.000	1.000	1.000	0.884
Downy Woodpecker	*Picoides pubescens*	0.667	0.167	0.571	1.000	1.000	1.000	0.800	0.744
Eastern Towhee	*Pipilo erythrophthalmus*	0.333	0.833	1.000	1.000	0.667	0.500	0.200	0.674
Northern Cardinal	*Cardinalis cardinalis*	0.833	0.667	0.857	0.857	1.000	0.167	0.200	0.674
Mourning Dove	*Zenaida macroura*	0.500	1.000	1.000	1.000	0.667	0.167	0.000	0.651
Black-and-white Warbler	*Mniotilta varia*	0.333	1.000	0.857	0.571	1.000	0.500	0.000	0.628
Gray Catbird	*Dumetella carolinensis*	0.000	1.000	1.000	1.000	0.833	0.333	0.000	0.628
Red-bellied Woodpecker	*Melanerpes carolinus*	0.500	0.833	0.286	0.429	0.667	1.000	0.800	0.628
Eastern Phoebe	*Sayornis phoebe*	0.500	0.167	0.571	0.857	0.667	0.333	0.800	0.558
Eastern Wood-Pewee	*Contopus virens*	0.000	0.333	1.000	0.857	1.000	0.500	0.000	0.558
Barn Swallow	*Hirundo rustica*	0.167	1.000	1.000	0.857	0.500	0.000	0.000	0.535
Chipping Sparrow	*Spizella passerina*	0.667	0.333	0.857	0.857	0.167	0.500	0.200	0.535
Black-throated Green Warbler	*Setophaga virens*	0.000	1.000	0.857	0.857	0.500	0.167	0.000	0.512
Common Grackle	*Quiscalus quiscula*	0.667	0.667	0.714	0.429	0.667	0.000	0.400	0.512
Red-winged Blackbird	*Agelaius phoeniceus*	1.000	0.500	1.000	0.714	0.167	0.000	0.000	0.512
Brown-headed Cowbird	*Molothrus ater*	0.833	0.667	0.857	0.571	0.000	0.000	0.200	0.465
Eastern Kingbird	*Tyrannus tyrannus*	0.000	0.667	0.714	0.857	0.500	0.000	0.000	0.419
Hooded Warbler	*Setophaga citrina*	0.000	0.833	1.000	0.429	0.500	0.000	0.000	0.419
Tree Swallow	*Tachycineta bicolor*	0.833	0.833	0.429	0.286	0.500	0.000	0.000	0.419
American Crow	*Corvus brachyrhynchos*	0.167	0.167	0.429	0.286	0.500	0.667	0.600	0.395
Canada Goose	*Branta canadensis*	0.500	0.167	0.714	0.571	0.000	0.167	0.600	0.395

Avian (common name)	Scientific Name	April	May	June	July	August	Sept	Oct	Avg. Frequency
Wood Duck	*Aix sponsa*	0.500	0.667	0.429	0.429	0.333	0.000	0.400	0.395
Northern Flicker	*Colaptes auratus*	0.500	0.333	0.429	0.571	0.000	0.333	0.400	0.372
Great Blue Heron	*Ardea herodias*	0.667	0.333	0.571	0.429	0.000	0.333	0.000	0.349
Ovenbird	*Seiurus aurocapilla*	0.000	1.000	1.000	0.286	0.000	0.000	0.000	0.349
Warbling Vireo	*Vireo gilvus*	0.000	1.000	1.000	0.286	0.000	0.000	0.000	0.349
Baltimore Oriole	*Icterus galbula*	0.000	1.000	0.714	0.143	0.167	0.167	0.000	0.326
Mallard	*Anas platyrhynchos*	0.167	0.333	0.286	0.286	0.167	0.500	0.600	0.326
Northern Waterthrush	*Parkesia noveboracensis*	0.333	1.000	0.857	0.000	0.000	0.000	0.000	0.326
Red-eyed Vireo	*Vireo olivaceus*	0.000	0.000	0.857	0.429	0.333	0.333	0.200	0.326
Red-shouldered Hawk	*Buteo lineatus*	0.333	0.333	0.429	0.000	0.500	0.500	0.200	0.326
Great Crested Flycatcher	*Myiarchus crinitus*	0.000	0.500	0.857	0.143	0.500	0.000	0.000	0.302
Pine Warbler	*Setophaga pinus*	0.667	0.667	0.143	0.571	0.000	0.000	0.000	0.302
Pileated Woodpecker	*Dryocopus pileatus*	0.667	0.333	0.286	0.286	0.000	0.167	0.200	0.279
Song Sparrow	*Melospiza melodia*	0.000	0.167	0.429	0.286	0.333	0.167	0.600	0.279
Scarlet Tanager	*Piranga olivacea*	0.000	0.333	0.857	0.286	0.167	0.000	0.000	0.256
Eastern Bluebird	*Sialia sialis*	0.333	0.167	0.286	0.000	0.000	0.333	0.600	0.233
Yellow-throated Vireo	*Vireo flavifrons*	0.000	0.667	0.286	0.429	0.000	0.167	0.000	0.233
Carolina Wren	*Thryothorus ludovicianus*	0.167	0.167	0.000	0.429	0.167	0.167	0.400	0.209
Hairy Woodpecker	*Picoides villosus*	0.333	0.167	0.429	0.286	0.000	0.000	0.200	0.209
Louisiana Waterthrush	*Parkesia motacilla*	0.333	0.667	0.429	0.000	0.000	0.000	0.000	0.209
Wood Thrush	*Hylocichla mustelina*	0.000	0.333	0.429	0.429	0.000	0.167	0.000	0.209
Worm-eating Warbler	*Helmitheros vermivorum*	0.000	0.333	0.571	0.286	0.167	0.000	0.000	0.209
Blue-gray Gnatcatcher	*Polioptila caerulea*	0.167	0.833	0.286	0.000	0.000	0.000	0.000	0.186
Dark-eyed Junco	*Junco hyemalis*	0.167	0.000	0.000	0.000	0.000	0.333	1.000	0.186
Yellow-rumped Warbler	*Setophaga coronata*	0.667	0.167	0.000	0.000	0.000	0.000	0.600	0.186
American Redstart	*Setophaga ruticilla*	0.000	0.167	0.000	0.000	0.500	0.500	0.000	0.163
Brown Creeper	*Certhia americana*	0.333	0.167	0.143	0.286	0.167	0.000	0.000	0.163
Cedar Waxwing	*Bombycilla cedrorum*	0.000	0.667	0.429	0.000	0.000	0.000	0.000	0.163
Golden-crowned Kinglet	*Regulus satrapa*	0.000	0.000	0.000	0.000	0.000	0.333	1.000	0.163

Avian (common name)	Scientific Name	April	May	June	July	August	Sept	Oct	Avg. Frequency
Red-tailed Hawk	*Buteo jamaicensis*	0.333	0.333	0.000	0.000	0.000	0.167	0.400	0.163
Ruby-throated Hummingbird	*Archilochus colubris*	0.000	0.000	0.143	0.286	0.333	0.333	0.000	0.163
White-throated Sparrow	*Zonotrichia albicollis*	0.333	0.167	0.000	0.000	0.000	0.000	0.800	0.163
Yellow-billed Cuckoo	*Coccyzus americanus*	0.000	0.333	0.286	0.286	0.000	0.167	0.000	0.163
Turkey Vulture	*Cathartes aura*	0.167	0.000	0.286	0.000	0.000	0.167	0.200	0.116
Veery	*Catharus fuscescens*	0.000	0.500	0.143	0.000	0.167	0.000	0.000	0.116
European Starling	*Sturnus vulgaris*	0.333	0.167	0.000	0.000	0.000	0.000	0.200	0.093
Ruby-crowned Kinglet	*Regulus calendula*	0.167	0.000	0.000	0.000	0.000	0.167	0.400	0.093
Blue-headed Vireo	*Vireo solitarius*	0.000	0.000	0.000	0.000	0.000	0.000	0.600	0.070
House Wren	*Troglodytes aedon*	0.000	0.000	0.000	0.143	0.333	0.000	0.000	0.070
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	0.000	0.167	0.143	0.143	0.000	0.000	0.000	0.070
Black-billed Cuckoo	*Coccyzus erythropthalmus*	0.000	0.000	0.143	0.143	0.000	0.000	0.000	0.047
Black-throated Blue Warbler	*Setophaga caerulescens*	0.000	0.167	0.000	0.000	0.000	0.000	0.200	0.047
Chimney Swift	*Chaetura pelagica*	0.000	0.000	0.000	0.143	0.167	0.000	0.000	0.047
Double-crested Cormorant	*Phalacrocorax auritus*	0.000	0.000	0.000	0.000	0.167	0.167	0.000	0.047
House Finch	*Haemorhous mexicanus*	0.000	0.000	0.000	0.143	0.000	0.000	0.200	0.047
Magnolia Warbler	*Setophaga magnolia*	0.000	0.000	0.000	0.000	0.000	0.167	0.200	0.047
Nashville Warbler	*Oreothlypis ruficapilla*	0.000	0.000	0.000	0.000	0.333	0.000	0.000	0.047
Northern Parula	*Setophaga americana*	0.000	0.167	0.000	0.000	0.000	0.167	0.000	0.047
Osprey	*Pandion haliaetus*	0.000	0.167	0.000	0.000	0.000	0.000	0.200	0.047
Palm Warbler	*Setophaga palmarum*	0.167	0.000	0.000	0.000	0.000	0.000	0.200	0.047
Ring-necked Duck	*Aythya collaris*	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.047
Sharp-shinned Hawk	*Accipiter striatus*	0.000	0.000	0.000	0.000	0.167	0.000	0.200	0.047
Wild Turkey	*Meleagris gallopavo*	0.167	0.000	0.000	0.000	0.167	0.000	0.000	0.047
Yellow Warbler	*Setophaga petechia*	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.047
Yellow-bellied Sapsucker	*Sphyrapicus varius*	0.000	0.000	0.000	0.000	0.000	0.000	0.400	0.047
American Black Duck	*Anas rubripes*	0.167	0.000	0.000	0.000	0.000	0.000	0.000	0.023
Barred Owl	*Strix varia*	0.000	0.000	0.143	0.000	0.000	0.000	0.000	0.023
Blackburnian Warbler	*Setophaga fusca*	0.000	0.167	0.000	0.000	0.000	0.000	0.000	0.023

Avian (common name)	Scientific Name	April	May	June	July	August	Sept	Oct	Avg. Frequency
Chestnut-sided Warbler	*Setophaga pensylvanica*	0.000	0.000	0.000	0.000	0.000	0.167	0.000	0.023
Chicken	*Gallus gallus domesticus*	0.000	0.000	0.000	0.000	0.000	0.167	0.000	0.023
Common Raven	*Corvus corax*	0.000	0.000	0.000	0.000	0.000	0.000	0.200	0.023
Common Yellowthroat	*Geothlypis trichas*	0.000	0.000	0.000	0.000	0.000	0.000	0.200	0.023
Cooper's Hawk	*Accipiter cooperii*	0.000	0.000	0.000	0.000	0.167	0.000	0.000	0.023
Fish Crow	*Corvus ossifragus*	0.000	0.167	0.000	0.000	0.000	0.000	0.000	0.023
Great Horned Owl	*Bubo virginianus*	0.000	0.000	0.000	0.000	0.000	0.167	0.000	0.023
Hermit Thrush	*Catharus guttatus*	0.000	0.000	0.000	0.000	0.000	0.000	0.200	0.023
Herring Gull	*Larus argentatus*	0.167	0.000	0.000	0.000	0.000	0.000	0.000	0.023
Merlin	*Falco columbarius*	0.000	0.000	0.000	0.000	0.000	0.000	0.200	0.023
Orchard Oriole	*Icterus spurius*	0.000	0.167	0.000	0.000	0.000	0.000	0.000	0.023
Prairie Warbler	*Setophaga discolor*	0.000	0.000	0.143	0.000	0.000	0.000	0.000	0.023
Red-breasted Nuthatch	*Sitta canadensis*	0.000	0.000	0.000	0.000	0.000	0.000	0.200	0.023
Rusty Blackbird	*Euphagus carolinus*	0.000	0.000	0.000	0.000	0.000	0.000	0.200	0.023
Solitary Sandpiper	*Tringa solitaria*	0.000	0.000	0.000	0.000	0.000	0.167	0.000	0.023

Cells highlighted in gray indicate bird species that served as the source of blood meals for *Culiseta melanura*.

Table I. Frequencies of 66 avian species (in descending order from most to least frequently observed) based on point count data in Killingworth, CT, April through October, 2010 – 2011 (No. of sites = 3, No of site visits = 44, comprising 132 point counts.)

Avian (common name)	Scientific Name	April	May	June	July	August	Sept	Oct	Avg. Frequency
Tufted Titmouse	*Baeolophus bicolor*	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Northern Cardinal	*Cardinalis cardinalis*	1.000	1.000	1.000	1.000	1.000	1.000	0.250	0.932
American Robin	*Turdus migratorius*	1.000	1.000	1.000	1.000	0.750	0.500	0.750	0.864
Red-bellied Woodpecker	*Melanerpes carolinus*	1.000	1.000	0.750	1.000	0.500	1.000	1.000	0.864
Black-capped Chickadee	*Poecile atricapillus*	0.833	0.857	0.625	0.800	1.000	1.000	0.750	0.841
Gray Catbird	*Dumetella carolinensis*	0.000	1.000	1.000	1.000	0.875	1.000	0.250	0.773
American Goldfinch	*Spinus tristis*	0.833	0.857	0.875	1.000	0.875	0.333	0.250	0.750
Downy Woodpecker	*Picoides pubescens*	0.333	0.714	0.875	0.800	0.750	1.000	0.750	0.750
Blue Jay	*Cyanocitta cristata*	0.667	0.429	0.500	0.600	0.875	1.000	1.000	0.705
White-breasted Nuthatch	*Sitta carolinensis*	0.167	0.714	0.500	0.800	0.875	1.000	0.750	0.682
Chipping Sparrow	*Spizella passerina*	0.667	1.000	1.000	0.800	0.500	0.167	0.000	0.636
Brown-headed Cowbird	*Molothrus ater*	0.833	0.714	0.875	0.600	0.125	0.000	0.000	0.477
Carolina Wren	*Thryothorus ludovicianus*	0.333	0.714	0.375	0.600	0.500	0.167	0.500	0.455
Mourning Dove	*Zenaida macroura*	0.500	0.571	0.750	0.600	0.125	0.500	0.000	0.455
House Sparrow	*Passer domesticus*	0.000	0.286	0.750	1.000	0.375	0.167	0.000	0.386
Red-shouldered Hawk	*Buteo lineatus*	0.167	0.286	0.125	0.200	0.625	0.667	0.750	0.386
House Finch	*Haemorhous mexicanus*	1.000	0.714	0.375	0.200	0.000	0.000	0.000	0.341
American Crow	*Corvus brachyrhynchos*	0.000	0.571	0.000	0.800	0.500	0.000	0.500	0.318
Red-eyed Vireo	*Vireo olivaceus*	0.000	0.429	0.875	0.000	0.125	0.500	0.000	0.318
Great Crested Flycatcher	*Myiarchus crinitus*	0.000	0.857	0.500	0.400	0.125	0.000	0.000	0.296
Common Grackle	*Quiscalus quiscula*	0.000	0.143	0.375	0.200	0.625	0.333	0.000	0.273
Northern Flicker	*Colaptes auratus*	0.333	0.143	0.500	0.600	0.125	0.167	0.000	0.273
Eastern Phoebe	*Sayornis phoebe*	0.500	0.571	0.375	0.000	0.125	0.000	0.000	0.250
Eastern Wood-Pewee	*Contopus virens*	0.000	0.000	0.375	0.800	0.250	0.333	0.000	0.250
Wood Thrush	*Hylocichla mustelina*	0.000	0.429	0.625	0.000	0.125	0.167	0.000	0.227
Blue-gray Gnatcatcher	*Polioptila caerulea*	0.000	0.429	0.500	0.400	0.000	0.000	0.000	0.205
Northern Waterthrush	*Parkesia noveboracensis*	0.000	0.714	0.125	0.000	0.000	0.000	0.000	0.136
Tree Swallow	*Tachycineta bicolor*	0.000	0.000	0.125	0.400	0.250	0.167	0.000	0.136
Veery	*Catharus fuscescens*	0.000	0.143	0.500	0.200	0.000	0.000	0.000	0.136
Black-and-white Warbler	*Mniotilta varia*	0.000	0.286	0.000	0.000	0.125	0.333	0.000	0.114
Fish Crow	*Corvus ossifragus*	0.500	0.000	0.125	0.000	0.000	0.167	0.000	0.114
Northern Parula	*Setophaga americana*	0.000	0.571	0.000	0.000	0.000	0.167	0.000	0.114
Turkey Vulture	*Cathartes aura*	0.167	0.286	0.125	0.000	0.000	0.167	0.000	0.114
White-throated Sparrow	*Zonotrichia albicollis*	0.333	0.000	0.000	0.000	0.000	0.167	0.500	0.114
American Redstart	*Setophaga ruticilla*	0.000	0.143	0.000	0.000	0.250	0.167	0.000	0.091
Baltimore Oriole	*Icterus galbula*	0.000	0.429	0.000	0.000	0.125	0.000	0.000	0.091
Common Yellowthroat	*Geothlypis trichas*	0.000	0.429	0.125	0.000	0.000	0.000	0.000	0.091
Ovenbird	*Seiurus aurocapilla*	0.000	0.143	0.125	0.000	0.000	0.333	0.000	0.091
Black-throated Green Warbler	*Setophaga virens*	0.000	0.286	0.000	0.000	0.125	0.000	0.000	0.068
Blue-headed Vireo	*Vireo solitarius*	0.000	0.000	0.000	0.000	0.000	0.333	0.250	0.068
Blue-winged Warbler	*Vermivora cyanoptera*	0.000	0.143	0.125	0.000	0.000	0.167	0.000	0.068
Cedar Waxwing	*Bombycilla cedrorum*	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.068
Chicken	*Gallus gallus domesticus*	0.167	0.000	0.000	0.000	0.000	0.000	0.500	0.068

Avian (common name)	Scientific Name	April	May	June	July	August	Sept	Oct	Avg. Frequency
Chimney Swift	*Chaetura pelagica*	0.000	0.143	0.250	0.000	0.000	0.000	0.000	0.068
Pine Warbler	*Setophaga pinus*	0.167	0.000	0.125	0.000	0.000	0.167	0.000	0.068
Scarlet Tanager	*Piranga olivacea*	0.000	0.286	0.125	0.000	0.000	0.000	0.000	0.068
Black-throated Blue Warbler	*Setophaga caerulescens*	0.000	0.286	0.000	0.000	0.000	0.000	0.000	0.046
Canada Goose	*Branta canadensis*	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.046
Cooper's Hawk	*Accipiter cooperii*	0.000	0.000	0.000	0.200	0.000	0.167	0.000	0.046
Golden-crowned Kinglet	*Regulus satrapa*	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.046
Pileated Woodpecker	*Dryocopus pileatus*	0.000	0.000	0.000	0.000	0.125	0.167	0.000	0.046
Red-tailed Hawk	*Buteo jamaicensis*	0.000	0.143	0.000	0.000	0.125	0.000	0.000	0.046
Dark-eyed Junco	*Junco hyemalis*	0.167	0.000	0.000	0.000	0.000	0.000	0.250	0.046
Yellow-billed Cuckoo	*Coccyzus americanus*	0.000	0.000	0.125	0.200	0.000	0.000	0.000	0.046
Yellow-rumped Warbler	*Setophaga coronata*	0.167	0.000	0.000	0.000	0.000	0.000	0.250	0.046
Broad-winged Hawk	*Buteo platypterus*	0.000	0.143	0.000	0.000	0.000	0.000	0.000	0.023
Eastern Bluebird	*Sialia sialis*	0.000	0.000	0.000	0.000	0.125	0.000	0.000	0.023
Great Blue Heron	*Ardea herodias*	0.000	0.143	0.000	0.000	0.000	0.000	0.000	0.023
Hairy Woodpecker	*Picoides villosus*	0.000	0.000	0.000	0.000	0.000	0.167	0.000	0.023
Magnolia Warbler	*Setophaga magnolia*	0.000	0.143	0.000	0.000	0.000	0.000	0.000	0.023
Red-breasted Nuthatch	*Sitta canadensis*	0.000	0.000	0.000	0.000	0.000	0.167	0.000	0.023
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	0.000	0.143	0.000	0.000	0.000	0.000	0.000	0.023
Ruby-crowned Kinglet	*Regulus calendula*	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.023
Ruby-throated Hummingbird	*Archilochus colubris*	0.000	0.000	0.125	0.000	0.000	0.000	0.000	0.023
Worm-eating Warbler	*Helmitheros vermivorum*	0.000	0.000	0.125	0.000	0.000	0.000	0.000	0.023
Yellow-throated Vireo	*Vireo flavifrons*	0.000	0.000	0.000	0.000	0.125	0.000	0.000	0.023

Cells highlighted in gray indicate bird species that served as the source of blood meals for *Culiseta melanura*.

Table J. Frequencies of 66 avian species (in descending order from most to least frequently observed) based on point count data in Madison, CT, April through October, 2010 – 2011 (No. of sites = 4, No. of site visits = 43, comprising 172 point counts.)

Avian (common name)	Scientific Name	April	May	June	July	August	Sept	Oct	Avg. Frequency
Tufted Titmouse	*Baeolophus bicolor*	0.833	0.857	1.000	0.800	1.000	1.000	1.000	0.930
Black-capped Chickadee	*Poecile atricapillus*	1.000	0.571	0.625	0.800	0.857	0.833	1.000	0.791
White-breasted Nuthatch	*Sitta carolinensis*	0.500	0.286	0.625	0.800	1.000	1.000	1.000	0.721
Blue Jay	*Cyanocitta cristata*	0.500	0.714	0.500	0.600	0.714	1.000	1.000	0.698
Downy Woodpecker	*Picoides pubescens*	0.333	0.143	1.000	0.600	0.857	0.500	1.000	0.628
American Robin	*Turdus migratorius*	0.500	0.571	0.750	0.800	0.714	0.167	0.750	0.605
Northern Cardinal	*Cardinalis cardinalis*	0.833	0.714	0.875	0.800	0.429	0.000	0.000	0.558
Red-eyed Vireo	*Vireo olivaceus*	0.000	0.857	0.875	0.800	0.714	0.333	0.000	0.558
Gray Catbird	*Dumetella carolinensis*	0.000	0.571	0.500	0.600	0.857	0.333	0.000	0.442
Red-bellied Woodpecker	*Melanerpes carolinus*	0.500	0.000	0.000	0.400	0.429	0.833	1.000	0.395
American Goldfinch	*Spinus tristis*	0.500	0.143	0.250	0.800	0.714	0.000	0.250	0.372
Ovenbird	*Seiurus aurocapilla*	0.000	1.000	1.000	0.200	0.000	0.000	0.000	0.372
Chipping Sparrow	*Spizella passerina*	0.333	0.429	0.750	0.800	0.000	0.000	0.000	0.349
Great Crested Flycatcher	*Myiarchus crinitus*	0.000	0.714	0.750	0.400	0.286	0.000	0.000	0.349
Wood Thrush	*Hylocichla mustelina*	0.000	0.286	0.750	0.800	0.286	0.167	0.000	0.349
Black-and-white Warbler	*Mniotilta varia*	0.167	1.000	0.125	0.200	0.143	0.167	0.000	0.279
Scarlet Tanager	*Piranga olivacea*	0.000	0.429	0.625	0.400	0.143	0.000	0.000	0.256
Worm-eating Warbler	*Helmitheros vermivorum*	0.000	0.714	0.625	0.200	0.000	0.000	0.000	0.256
Black-throated Green Warbler	*Setophaga virens*	0.000	0.429	0.500	0.000	0.143	0.167	0.250	0.233
Blue-winged Warbler	*Vermivora cyanoptera*	0.000	0.714	0.375	0.200	0.143	0.000	0.000	0.233
Red-shouldered Hawk	*Buteo lineatus*	0.333	0.143	0.250	0.000	0.000	0.500	0.500	0.233
Eastern Phoebe	*Sayornis phoebe*	0.167	0.000	0.250	0.400	0.000	0.333	0.250	0.186
American Crow	*Corvus brachyrhynchos*	0.167	0.000	0.375	0.000	0.143	0.167	0.250	0.163
Common Yellowthroat	*Geothlypis trichas*	0.000	0.143	0.375	0.200	0.000	0.167	0.000	0.140
Mourning Dove	*Zenaida macroura*	0.167	0.000	0.250	0.400	0.143	0.000	0.000	0.140
Pileated Woodpecker	*Dryocopus pileatus*	0.000	0.143	0.250	0.000	0.286	0.167	0.000	0.140
Common Grackle	*Quiscalus quiscula*	0.000	0.000	0.000	0.400	0.143	0.333	0.000	0.116

Avian (common name)	Scientific Name	April	May	June	July	August	Sept	Oct	Avg. Frequency
Eastern Towhee	*Pipilo erythrophthalmus*	0.000	0.286	0.250	0.200	0.000	0.000	0.000	0.116
House Finch	*Haemorhous mexicanus*	0.167	0.286	0.125	0.000	0.143	0.000	0.000	0.116
Yellow-rumped Warbler	*Setophaga coronata*	0.000	0.143	0.000	0.000	0.000	0.000	1.000	0.116
Yellow-throated Vireo	*Vireo flavifrons*	0.000	0.286	0.250	0.000	0.143	0.000	0.000	0.116
Baltimore Oriole	*Icterus galbula*	0.000	0.286	0.125	0.000	0.143	0.000	0.000	0.093
Blue-headed Vireo	*Vireo solitarius*	0.000	0.000	0.000	0.000	0.143	0.000	0.750	0.093
Broad-winged Hawk	*Buteo platypterus*	0.000	0.286	0.000	0.200	0.143	0.000	0.000	0.093
Brown-headed Cowbird	*Molothrus ater*	0.167	0.286	0.125	0.000	0.000	0.000	0.000	0.093
Northern Flicker	*Colaptes auratus*	0.000	0.000	0.125	0.000	0.143	0.167	0.250	0.093
Northern Parula	*Setophaga americana*	0.000	0.429	0.000	0.000	0.143	0.000	0.000	0.093
Northern Waterthrush	*Parkesia noveboracensis*	0.000	0.571	0.000	0.000	0.000	0.000	0.000	0.093
Red-tailed Hawk	*Buteo jamaicensis*	0.000	0.143	0.125	0.000	0.143	0.000	0.250	0.093
Turkey Vulture	*Cathartes aura*	0.333	0.000	0.000	0.000	0.143	0.167	0.000	0.093
American Redstart	*Setophaga ruticilla*	0.000	0.286	0.000	0.000	0.143	0.000	0.000	0.070
Blue-gray Gnatcatcher	*Polioptila caerulea*	0.167	0.000	0.250	0.000	0.000	0.000	0.000	0.070
Carolina Wren	*Thryothorus ludovicianus*	0.000	0.000	0.000	0.000	0.143	0.167	0.250	0.070
Golden-crowned Kinglet	*Regulus satrapa*	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.070
Ruby-crowned Kinglet	*Regulus calendula*	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.070
Veery	*Catharus fuscescens*	0.000	0.143	0.250	0.000	0.000	0.000	0.000	0.070
Blackburnian Warbler	*Setophaga fusca*	0.000	0.143	0.000	0.000	0.143	0.000	0.000	0.047
Brown Creeper	*Certhia americana*	0.167	0.000	0.000	0.000	0.000	0.000	0.250	0.047
Canada Goose	*Branta canadensis*	0.000	0.000	0.000	0.000	0.000	0.167	0.250	0.047
Eastern Wood-Pewee	*Contopus virens*	0.000	0.000	0.000	0.200	0.000	0.167	0.000	0.047
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	0.000	0.143	0.125	0.000	0.000	0.000	0.000	0.047
Ruby-throated Hummingbird	*Archilochus colubris*	0.000	0.000	0.000	0.200	0.143	0.000	0.000	0.047
Sharp-shinned Hawk	*Accipiter striatus*	0.167	0.000	0.000	0.000	0.000	0.167	0.000	0.047
Tree Swallow	*Tachycineta bicolor*	0.000	0.000	0.000	0.200	0.143	0.000	0.000	0.047
Yellow-billed Cuckoo	*Coccyzus americanus*	0.000	0.000	0.000	0.200	0.143	0.000	0.000	0.047

Avian (common name)	Scientific Name	April	May	June	July	August	Sept	Oct	Avg. Frequency
Blackpoll Warbler	*Setophaga striata*	0.000	0.143	0.000	0.000	0.000	0.000	0.000	0.023
Black-throated Blue Warbler	*Setophaga caerulescens*	0.000	0.143	0.000	0.000	0.000	0.000	0.000	0.023
Eastern Bluebird	*Sialia sialis*	0.000	0.000	0.000	0.000	0.143	0.000	0.000	0.023
European Starling	*Sturnus vulgaris*	0.000	0.000	0.125	0.000	0.000	0.000	0.000	0.023
Hairy Woodpecker	*Picoides villosus*	0.000	0.000	0.000	0.000	0.143	0.000	0.000	0.023
Hermit Thrush	*Catharus guttatus*	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.023
Nashville Warbler	*Oreothlypis ruficapilla*	0.000	0.000	0.000	0.000	0.000	0.167	0.000	0.023
Palm Warbler	*Setophaga palmarum*	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.023
Pine Warbler	*Setophaga pinus*	0.000	0.000	0.000	0.000	0.000	0.167	0.000	0.023
Red-breasted Nuthatch	*Sitta canadensis*	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.023
Dark-eyed Junco	*Junco hyemalis*	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.023

Cells highlighted in gray indicate bird species that served as the source of blood meals for *Culiseta melanura*.

Table K. Frequencies of 68 avian species (in descending order from most to least frequently observed) based on point count data in North Stonington CT, April through October 2011 (No. of sites = 3, No. of site visits = 28, comprising 84 point counts.)

Avian (common name)	Scientific Name	April	May	June	July	August	Sept	Oct	Avg. Frequency
Black-capped Chickadee	*Poecile atricapillus*	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Northern Cardinal	*Cardinalis cardinalis*	1.000	1.000	1.000	1.000	1.000	0.500	0.750	0.893
American Robin	*Turdus migratorius*	0.667	1.000	1.000	0.750	1.000	0.500	1.000	0.857
Tufted Titmouse	*Baeolophus bicolor*	1.000	0.750	1.000	0.750	1.000	0.750	0.750	0.857
Gray Catbird	*Dumetella carolinensis*	0.000	1.000	1.000	1.000	1.000	1.000	0.500	0.821
American Goldfinch	*Spinus tristis*	0.667	0.750	1.000	1.000	1.000	0.500	0.000	0.714
House Sparrow	*Passer domesticus*	0.667	0.750	1.000	0.750	0.500	0.000	1.000	0.679
Chipping Sparrow	*Spizella passerina*	0.667	1.000	1.000	1.000	0.500	0.000	0.250	0.643
Blue Jay	*Cyanocitta cristata*	0.667	0.750	0.200	0.750	0.500	0.500	1.000	0.607
House Wren	*Troglodytes aedon*	0.000	1.000	1.000	1.000	0.500	0.000	0.000	0.536
Mourning Dove	*Zenaida macroura*	0.000	0.500	0.600	1.000	1.000	0.250	0.250	0.536
Brown-headed Cowbird	*Molothrus ater*	1.000	1.000	0.800	0.500	0.250	0.000	0.000	0.500
Downy Woodpecker	*Picoides pubescens*	0.667	0.000	0.200	0.750	0.750	0.750	0.500	0.500
Fish Crow	*Corvus ossifragus*	1.000	0.500	1.000	0.750	0.250	0.000	0.000	0.500
White-breasted Nuthatch	*Sitta carolinensis*	0.667	0.000	0.200	0.750	0.500	1.000	0.500	0.500
American Crow	*Corvus brachyrhynchos*	0.333	0.250	0.800	0.500	0.750	0.500	0.000	0.464
Cedar Waxwing	*Bombycilla cedrorum*	0.000	0.000	0.800	1.000	0.750	0.000	0.500	0.464
Eastern Bluebird	*Sialia sialis*	0.333	0.750	0.800	0.750	0.000	0.000	0.250	0.429
Prairie Warbler	*Setophaga discolor*	0.000	1.000	1.000	0.250	0.500	0.000	0.000	0.429
Eastern Phoebe	*Sayornis phoebe*	0.667	0.750	0.400	0.250	0.250	0.000	0.500	0.393
Ruby-throated Hummingbird	*Archilochus colubris*	0.000	0.750	0.600	0.500	0.750	0.000	0.000	0.393
Tree Swallow	*Tachycineta bicolor*	0.333	0.750	0.600	0.500	0.500	0.000	0.000	0.393
Common Grackle	*Quiscalus quiscula*	0.667	0.500	0.600	0.250	0.500	0.000	0.000	0.357
Chicken	*Gallus gallus domesticus*	1.000	0.250	0.800	0.250	0.000	0.000	0.000	0.321
Ovenbird	*Seiurus aurocapilla*	0.000	0.750	0.800	0.500	0.000	0.000	0.000	0.321
Red-eyed Vireo	*Vireo olivaceus*	0.000	0.500	1.000	0.250	0.000	0.000	0.250	0.321

Avian (common name)	Scientific Name	April	May	June	July	August	Sept	Oct	Avg. Frequency
Wood Thrush	*Hylocichla mustelina*	0.000	1.000	0.600	0.500	0.000	0.000	0.000	0.321
Common Yellowthroat	*Geothlypis trichas*	0.000	0.750	0.400	0.750	0.000	0.000	0.000	0.286
European Starling	*Sturnus vulgaris*	0.000	0.750	0.200	0.250	0.000	0.250	0.500	0.286
Northern Flicker	*Colaptes auratus*	0.667	0.000	0.000	0.250	0.250	0.500	0.500	0.286
Barn Swallow	*Hirundo rustica*	0.000	0.000	0.600	0.250	0.500	0.000	0.000	0.214
Northern Waterthrush	*Parkesia noveboracensis*	0.000	0.250	0.800	0.250	0.000	0.000	0.000	0.214
Red-bellied Woodpecker	*Melanerpes carolinus*	0.333	0.250	0.000	0.000	0.250	0.000	0.750	0.214
Blue-winged Warbler	*Vermivora cyanoptera*	0.000	0.750	0.000	0.500	0.000	0.000	0.000	0.179
Indigo Bunting	*Passerina cyanea*	0.000	0.000	0.600	0.500	0.000	0.000	0.000	0.179
Pine Warbler	*Setophaga pinus*	0.333	0.500	0.000	0.000	0.000	0.000	0.250	0.143
Broad-winged Hawk	*Buteo platypterus*	0.000	0.250	0.200	0.250	0.000	0.000	0.000	0.107
Canada Goose	*Branta canadensis*	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.107
Red-winged Blackbird	*Agelaius phoeniceus*	0.333	0.500	0.000	0.000	0.000	0.000	0.000	0.107
Turkey Vulture	*Cathartes aura*	0.333	0.250	0.000	0.000	0.000	0.000	0.250	0.107
Veery	*Catharus fuscescens*	0.000	0.000	0.400	0.250	0.000	0.000	0.000	0.107
White-throated Sparrow	*Zonotrichia albicollis*	0.667	0.000	0.000	0.000	0.000	0.000	0.250	0.107
Yellow-billed Cuckoo	*Coccyzus americanus*	0.000	0.000	0.200	0.250	0.250	0.000	0.000	0.107
Yellow-rumped Warbler	*Setophaga coronata*	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.107
American Redstart	*Setophaga ruticilla*	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.071
Belted Kingfisher	*Megaceryle alcyon*	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.071
Black-and-white Warbler	*Mniotilta varia*	0.000	0.000	0.200	0.000	0.000	0.250	0.000	0.071
Blue-gray Gnatcatcher	*Polioptila caerulea*	0.000	0.250	0.200	0.000	0.000	0.000	0.000	0.071
Eastern Wood-Pewee	*Contopus virens*	0.000	0.000	0.200	0.000	0.250	0.000	0.000	0.071
Great Blue Heron	*Ardea herodias*	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.071
Great Crested Flycatcher	*Myiarchus crinitus*	0.000	0.000	0.400	0.000	0.000	0.000	0.000	0.071
Northern Parula	*Setophaga americana*	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.071
Osprey	*Pandion haliaetus*	0.333	0.000	0.200	0.000	0.000	0.000	0.000	0.071
Pileated Woodpecker	*Dryocopus pileatus*	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.071
Song Sparrow	*Melospiza melodia*	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.071

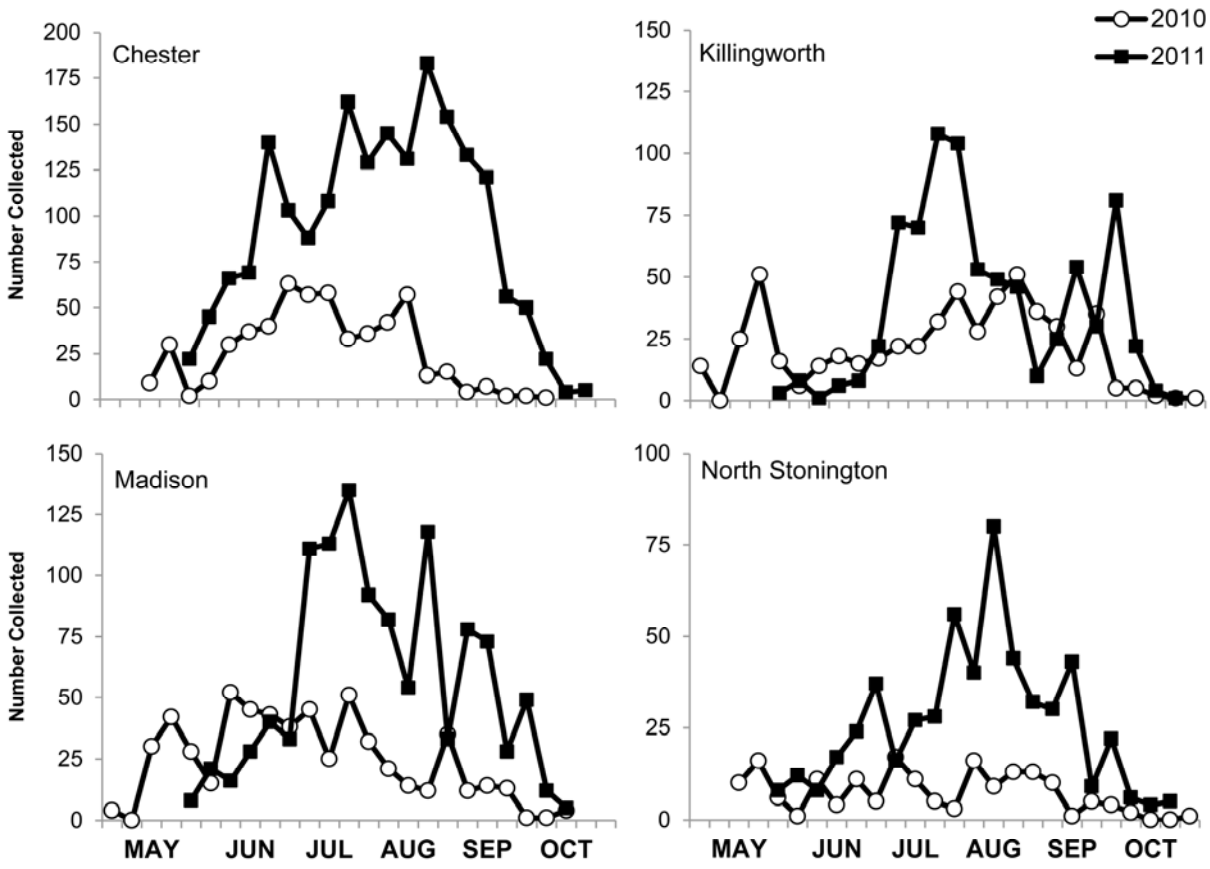
Avian (common name)	Scientific Name	April	May	June	July	August	Sept	Oct	Avg. Frequency
Barred Owl	*Strix varia*	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.036
Black-billed Cuckoo	*Coccyzus erythropthalmus*	0.000	0.000	0.200	0.000	0.000	0.000	0.000	0.036
Black-throated Blue Warbler	*Setophaga caerulescens*	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.036
Carolina Wren	*Thryothorus ludovicianus*	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.036
Chimney Swift	*Chaetura pelagica*	0.000	0.000	0.200	0.000	0.000	0.000	0.000	0.036
Common Raven	*Corvus corax*	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.036
Cooper's Hawk	*Accipiter cooperii*	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.036
Double-crested Cormorant	*Phalacrocorax auritus*	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.036
Eastern Towhee	*Pipilo erythrophthalmus*	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.036
Herring Gull	*Larus argentatus*	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.036
Red-shouldered Hawk	*Buteo lineatus*	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.036
Sharp-shinned Hawk	*Accipiter striatus*	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.036
Dark-eyed Junco	*Junco hyemalis*	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.036

Cells highlighted in gray indicate bird species that served as the source of blood meals for *Culiseta melanura*.

Table L. Feeding index for each host bird species. Feeding index is the relative likelihood of a blood meal on a given bird species per bird of that species, which indicates the preference of mosquitoes for feeding on different bird species. The feeding index for the named bird species are relative to the remaining, other birds, for which the feeding index was chosen to be 1.

Avian Species	Median Feeding Index	95% Confidence Interval
Wood Thrush	1044.13	(513.01 , 2300.98)
Warbling Vireo	632.40	(211.54 , 2116.52)
Chipping Sparrow	39.87	(24.08 , 66.84)
Northern Cardinal	24.31	(16.49 , 40.27)
American Robin	14.2	(10.18 , 20.22)
Common Grackle	7.37	(5.14 , 10.70)
Tufted Titmouse	6.19	(4.60 , 8.29)
Black-capped Chickadee	5.11	(3.35 , 7.63)
Other Birds	1	—

Fig A. Population abundance and peak seasonal activity of adult female *Culiseta melanura* in four study sites, Chester, Killingworth, Madison and North Stonington, CT, 2010-2011



A total of 6,234 *Cs. melanura* mosquitoes were collected from the four EEE virus foci in Connecticut, Chester (N = 2,484), Killingworth (N = 1,322), Madison (N = 1,706), and North Stonington (N = 722) by using 120 resting boxes placed at 8 locations. Greater numbers of *Cs. melanura* were collected during 2011 than in 2010 in all four trapping locations. Multiple collection peaks were observed during the trapping season, which suggested 2-3 generations of *Cs. melanura* each year (Fig. S1).

Fig B. Avian point count surveys form. Status and habitat codes, including observations of nestlings, fledglings, and juvenile birds, and individuals detected outside or flying over the point count circle.

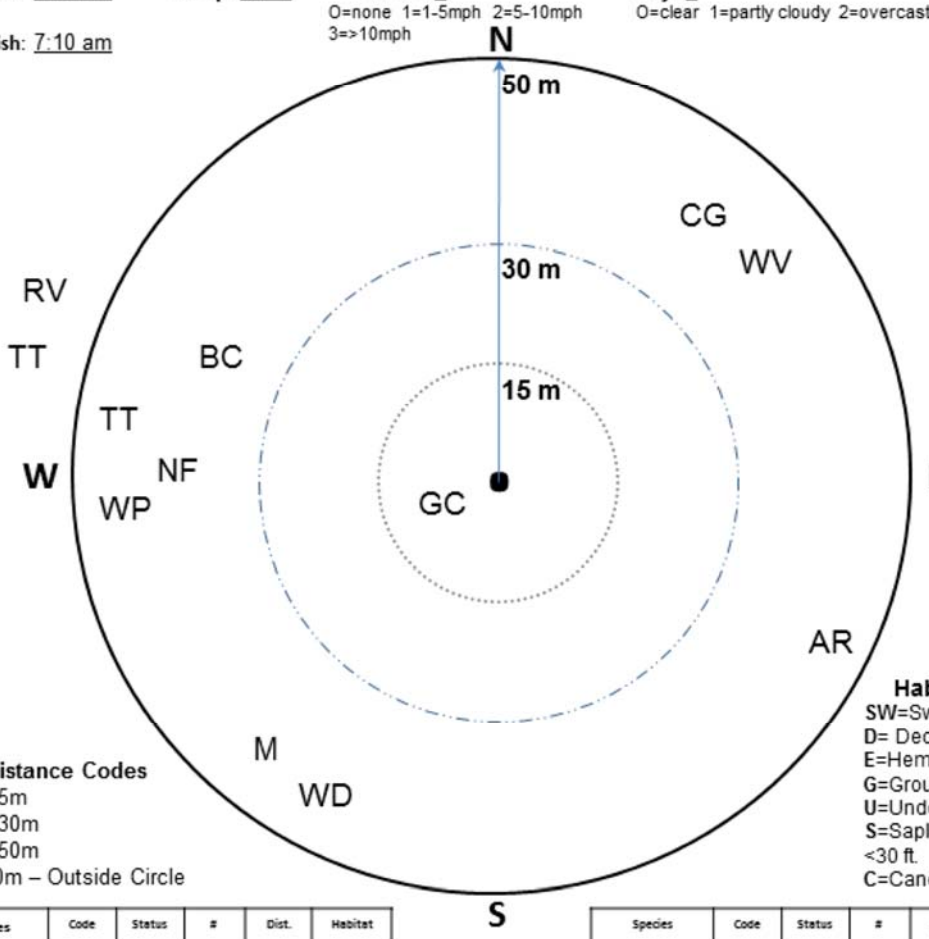
The Connecticut Agricultural Experiment Station
Center for Vector Biology & Zoonotic Diseases

Bird Point Count Survey Form

Site: CHESTER **Site Code**: C-1 **Date**: 7 June 2010 **Observer**: M. C. Thomas

Time: 6:55 am **Temp**: 64° F **Wind**: 0 (O=none 1=1-5mph 2=5-10mph 3=>10mph) **Sky**: 2 (O=clear 1=partly cloudy 2=overcast 3=raining)

Finish: 7:10 am



Distance Codes
1=0-15m
2=15-30m
3=30-50m
4=>50m – Outside Circle

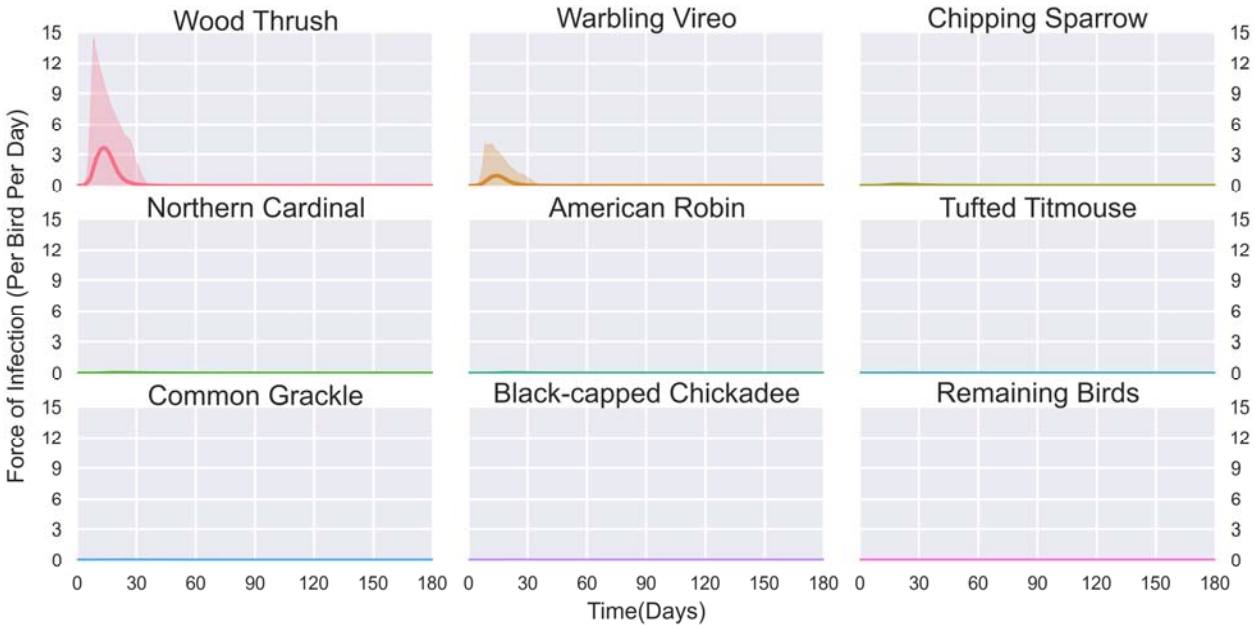
Habitat Codes
SW=Swamp
D= Decid. Hardwoods
E=Hemlock, Pine, Cedar
G=Ground
U=Understory/Shrubs
S=Saplings/small trees <30 ft.
C=Canopy >30ft.

Species	Code	Status	#	Dist.	Habitat
American Robin	AR	S	2	3	D, G
Common Grackle	CG	FO	1	4	SW
Tufted Titmouse	TT	C	2	3-4	D
B-C. Chickadee	BC	S	1	3	SW
Red-eyed Vireo	RV	C	1	4	D
Mallard	M	C	1	3	SW

Status Codes
S = Sight
SI = Singing
C = Calling
M = Male
F = Female
P = Pair
N = Nestling
F = Fledgling
J = Juvenile
FO = Fly Over
IC = In Circle
O = Outside Cir.

Species	Code	Status	#	Dist.	Habitat
E. Wood Pewee	WP	Si	1	3	D
Northern Flicker	NF	S, N	1	3	SW
Warbling Vireo	WV	Si	1	3	D
R. W. Blackbird	RWB	C	1	3	SW
Gray Catbird	GC	Si	1	1	SW
Wood Duck	WD	C	1	3	SW

Fig C. Force of infection due to each host species. The solid line is the median value over the 1000 samples produced, which the shaded region represents the 95% confidence interval.



Modeling Supporting Information

We choose 8 preferred host species (i = 1, 2, ..., 8), and a ninth consisting of all other birds (i = 9). To calculate the feeding index α_i, we note that the proportion of the blood meals that are on bird species is

$$f_i = \frac{\alpha_i N_i}{\sum_{j=1}^{n} \alpha_j N_j}$$

where N_i is the number of birds of species i in the population. The f_i are simply the proportion of blood meals on the different species from the samples. We assumed the N_i were the bird counts, which amounts to assuming that the bird species are equally likely to be observed given that they are present. Rearranging the equation gives

$$\alpha_i N_i - f_i \sum_{j=1}^{n} \alpha_j N_j = 0$$

which shows that α is an eigenvector of the 0 eigenvalue. We used a standard eigenvalue routine to numerically compute the α.

To generate statistics on the feeding index, first the host species were assumed to have arrived via a Poisson process. This assumption gives a gamma likelihood function for the Poisson rate given the data. From this we sampled to get a distribution for the Poisson parameter. Having sampled the parameter value, we sampled from the Poisson processes with these parameter values to get sample bird counts.

The total number of blood meals were assumed to arrive via a Poisson process. This assumption gives a gamma likelihood function for the Poisson rate given the data. From this we sampled to get a distribution for the Poisson parameter. Having sampled the parameter value, we sampled from the Poisson process with these parameter values to get sample total number of blood meals.

The proportion of blood meals on each host species was assumed to arrive via a multinomial process. This gives a likelihood function for the multinomial parameters given the blood meal data. Utilizing the Markov Chain Monte Carlo (MCMC) method with the Metropolis-Hastings algorithm we obtained samples of the multinomial parameters. Having sampled the multinomial parameter values and total number of blood meals, we get samples of the number of blood meals on each species from the multinomial process. With these samples of bird counts and blood meals, we calculated the feeding index for each sample, and thus produce a distribution of the feeding index.

Each host species' population was divided into susceptible, infected, and recovered populations. The susceptible populations decrease due to infection. The infected populations increase due to the infection of susceptible hosts, and decrease due to recovery and natural death. Finally the recovered populations increase due to recovery

of infectious hosts, and decrease due to natural death. The vector populations were split into susceptible and infectious populations. The susceptible vector populations also increase due to natural birth at rate, and decrease due to infection and natural death, while the infected vector population increases due to infection of susceptible hosts, and decrease due to natural death. Here it is assumed that the vector species do not recover from infection. Thus we have a system of 29 differential equations

$$\frac{dS_i}{dt} = -\lambda_{b_i} S_i$$
$$\frac{dI_i}{dt} = \lambda_{b_i} S_i - \gamma_b I_i$$
$$\frac{dR_i}{dt} = \gamma_b I_i - dR_i$$
$$\frac{dI_v}{dt} = \lambda_v S_v - d_v I_v$$
$$\frac{dS_v}{dt} = N_v - dI_v$$

with force of infection defined by

$$\lambda_{b_i} = \frac{v\beta_1 I_v \alpha_i}{\sum_{j=1}^{n} \alpha_j N_j}$$
$$\lambda_v = \frac{\beta_2 \sum_{i=1}^{n} \alpha_i I_i}{\sum_{j=1}^{n} \alpha_j N_j}$$

These equations were solved numerically using the LSODA routine from the ODEPACK library [1].

Parameter, definition	Baseline value	Source
d_v: Vector mortality rate	.10 per day	imposed
β_1: Vector- to host-transmission rate	1	7
β_2: Host- to vector-transmission rate	Calculated	N/A
v: biting rate of vectors on host	.14 per day	8,9
γ_b: Recovery rate of hosts	1.0 per day	7
α_i: Feeding index for host species i	Calculated	N/A

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