WEST NILE VIRUS AND OTHER MOSQUITO-BORNE DISEASE NATIONAL SURVEILLANCE REPORT

AUG 9 TO AUG 15, 2015 – REPORT WEEK 32

CANADA

HUMANS

During surveillance week 32 (Aug 9 to Aug 15, 2015), no human cases have been reported to the Public Health Agency of Canada.

As of surveillance week 32, a total of four human cases of West Nile virus have been reported: Ontario (2), Quebec (2). One of the cases from Quebec was related to travel outside the province.

MOSQUITOES

As of surveillance week 32, 64 mosquito pools have tested positive for West Nile virus in Canada: Ontario (32) , Manitoba (19) , Saskatchewan (12) and Quebec (1).

DEAD BIRDS

As of surveillance week 32, the Canadian Wildlife Health Cooperative has reported 21 dead birds that tested positive for West Nile virus. Ontario (14) and Quebec (7).

DOMESTIC ANIMALS

As of surveillance week 32, the Canadian Food Inspection Agency reported two horses, that tested positive for West Nile virus in Canada: one from Saskatchewan and one from Ontario

UNITED STATES

As of Aug 11, 2015, the Centers for Disease Control and Prevention (CDC) reported 141 human cases of West Nile virus:

Alabama (1), Arizona (25), Arkansas (2), California (18), Colorado (5), Delaware (1), Florida (4),Georgia (1), Idaho (4), Kansas (4), Louisiana (5), Maryland (1), Mississippi (7), Montana (1), Nebraska (6),New Jersey (2), New Mexico (1), North Dakota (2), Ohio (3), Oklahoma (10), Pennsylvania (1), South Dakota(9), Tennessee (2), Texas (15), Virginia (1), Washington(9) and Wyoming (1).

Of these, 82 (58.1%) were diagnosed as neuroinvasive disease cases, 59 (41.8%) as non-neuroinvasive disease cases. 3 fatal cases were reported. 55 presumptive viremic blood donors have been identified.

EUROPEAN UNION, EUROPEAN ECONOMIC AREA AND NEIGHBOURING COUNTRIES

As of Surveillance week 32, the European Centre for Disease Prevention and Control (ECDC) has reported seven cases of West Nile fever in humans in the EU Member States and eight cases in the neighboring countries. During the past week, Austria reported its first case of West Nile fever, detected in an asymptomatic blood donor from Vienna. Serbia reported also its first case of the season in humans. Israel reported four new cases diagnosed beginning of August. West Nile virus has also been detected in birds in Lodi and Pavia provinces, both in Lombardy region, Italy.

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Public Health Agency of Canada
Agence de la santé publique du Canada

Canada

FIGURE 1: West Nile Virus human clinical cases and asymptomatic infections, by Province/Territory and by report week, 2015 season

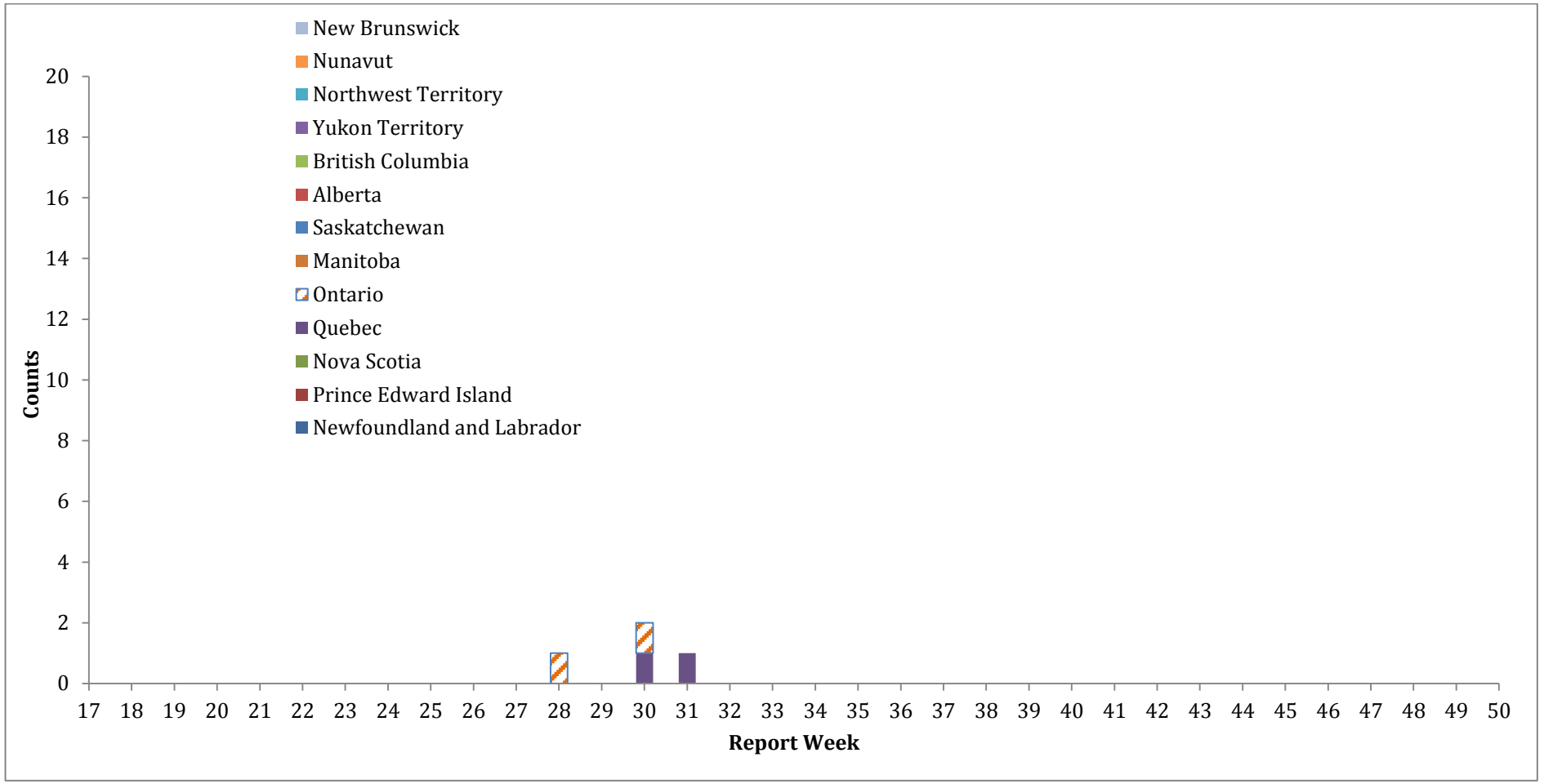


TABLE 1: West Nile Virus human clinical cases and asymptomatic infections, by Province/Territory and by report week, 2015 season

	Report Weeks of 2015																																		
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Newfoundland and Labrador	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																		
Prince Edward Island	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																		
New Brunswick	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																		
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																		
Quebec	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0																		
Ontario	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0																		
Manitoba	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																		
Saskatchewan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																		
Alberta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																		
British Columbia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																		
Yukon Territory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																		
Northwest Territory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																		
Nunavut	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																		
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	2	1	0																		

TABLE 2: West Nile Virus human clinical cases and asymptomatic infections by Province/Territory for the current report week and year to date, 2015 season

	Week 32: Aug 9 to Aug 15, 2015					
	West Nile virus neurological syndrome	West Nile virus non-neurological syndrome	Unclassified/unspecified	Total clinical cases[1]	Number of travel-related cases[2]	West Nile virus asymptomatic infection[3]
Newfoundland and Labrador	0	0	0	0	0	0
Prince Edward Island	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0
Quebec	0	0	0	0	0	0
Ontario	0	0	0	0	0	0
Manitoba	0	0	0	0	0	0
Saskatchewan	0	0	0	0	0	0
Alberta	0	0	0	0	0	0
British Columbia	0	0	0	0	0	0
Yukon Territory	0	0	0	0	0	0
Northwest Territory	0	0	0	0	0	0
Nunavut	0	0	0	0	0	0
Total	0	0	0	0	0	0

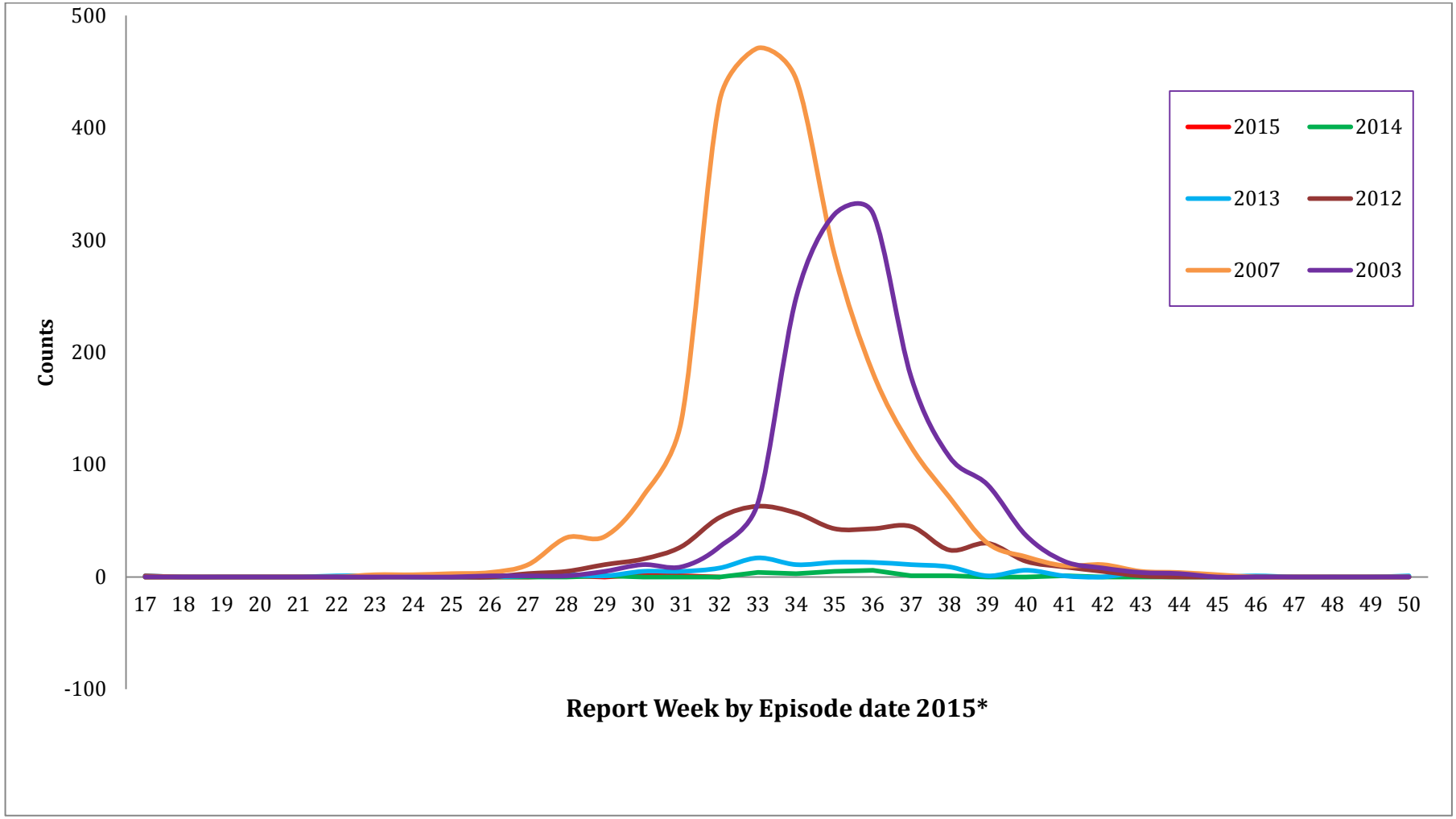
	Year to date: January 1 to Aug 15, 2015					
	West Nile virus neurological syndrome	West Nile virus non-neurological syndrome	Unclassified/unspecified	Total clinical cases[1]	Number of travel-related cases[2]	West Nile virus asymptomatic infection[3]
Newfoundland and Labrador	0	0	0	0	0	0
Prince Edward Island	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0
Quebec	0	2	0	2	1	0
Ontario	0	0	2	2	0	0
Manitoba	0	0	0	0	0	0
Saskatchewan	0	0	0	0	0	0
Alberta	0	0	0	0	0	0
British Columbia	0	0	0	0	0	0
Yukon Territory	0	0	0	0	0	0
Northwest Territory	0	0	0	0	0	0
Nunavut	0	0	0	0	0	0
Total	0	2	2	4	1	0

1 Total clinical cases is the sum of both probable and confirmed: West Nile virus neurological and non-neurological syndromes, along with any unclassified or unspecified cases.

2 Likely related to travel outside the Province/Territory. These cases are included in either the total clinical cases or West Nile virus asymptomatic infections.

3 Satisfies West Nile virus diagnostic test criteria in the absence of clinical criteria. This category could include asymptomatic blood donors whose blood is screened using a nucleic acid amplification test, by blood operators (i.e. Canadian Blood Services or Hema-Quebec) and is subsequently brought to the attention of public health officials. Blood operators in Canada perform a supplementary West Nile virus specific nucleic acid amplification test following any positive donor screen test result.

FIGURE 2: West Nile Virus clinic al cases and asymptomatic infections by report week for selected years



* West Nile virus clinical cases and asymptomatic infections are grouped by report week, based on episode date. Episode date could include one of the following: onset date, diagnosis date, lab sample date or reporting date.

TABLE 3: West Nile Virus clinical cases and asymptomatic infections by report week for selected years

	Report week																														
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
2015	0	0	0	0	0	0	0	0	0	0	0	1	0	2	1	0															
2014	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4*	3	5	6	1	1	0	0	1	0	0	0	0	0	0
2013	1	0	0	0	0	1	1	0	0	0	1	2	1	5	5	8	17	11	13	13	11	9	1	6	1	0	4	1	0	1	0
2012	1	0	0	0	0	0	0	0	0	0	3	5	11	16	27	53	63	57	43	43	45	24	30	14	9	5	1	0	0	0	0
2007	0	0	0	0	0	0	2	2	3	4	11	35	36	72	139	424	471	443	287	182	116	71	30	18	10	11	5	4	2	0	0
2005	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	11	28	28	38	45	27	15	7	12	3	3	1	0	0	0
2003	0	0	0	0	0	0	0	0	0	1	1	1	5	11	9	27	66	249	323	324	178	107	82	37	14	8	4	3	0	0	0

* One of these cases was likely exposed prior to the 2014 West Nile virus season.

TABLE 4.1: Number of West Nile Virus mosquito pools tested weekly by Province/Territory - 2015 season[1]

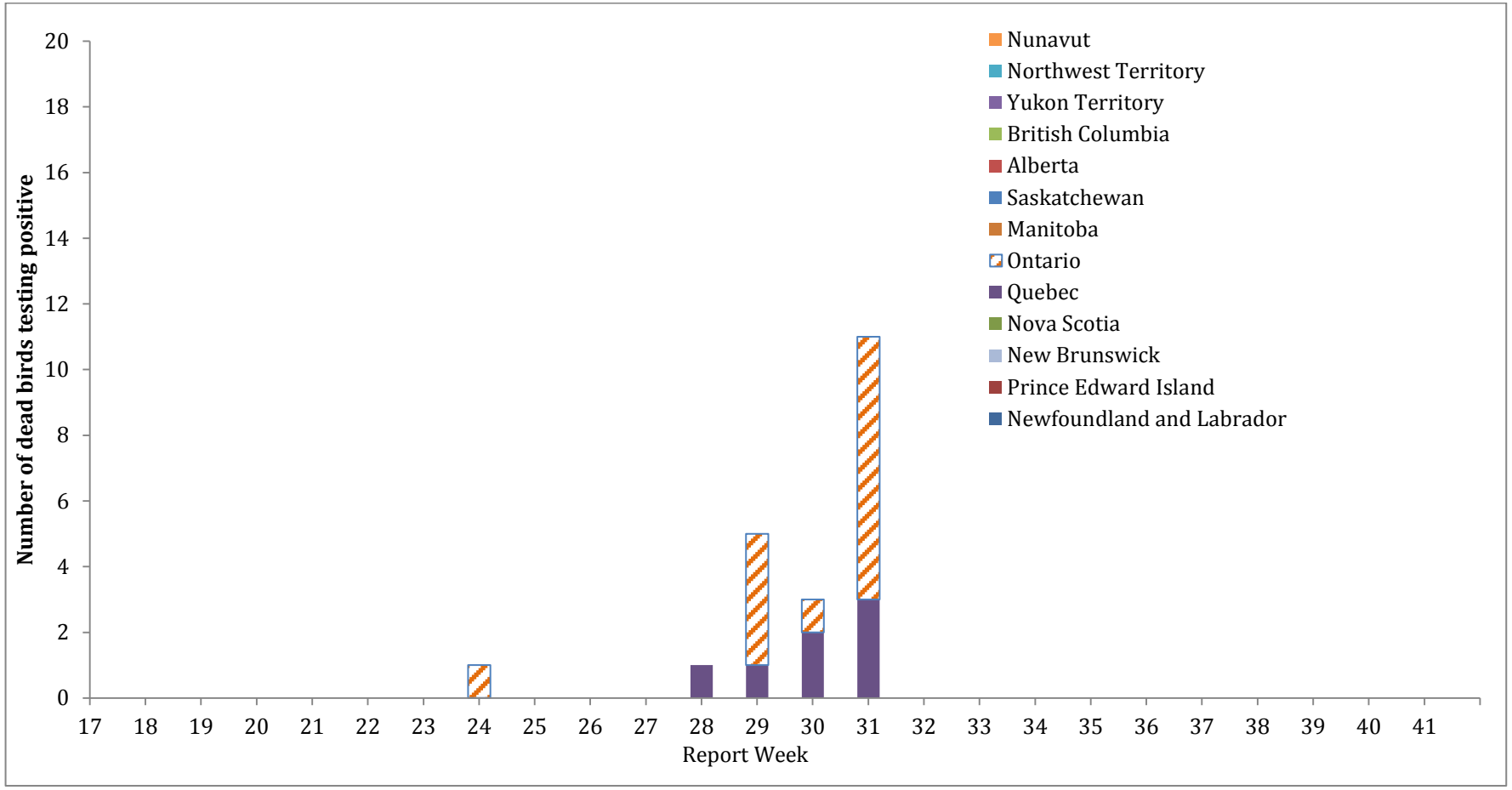
			Report week of 2015																										
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	Total
Newfoundland and Labrador	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													0
Prince Edward Island	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													0
Quebec	0	0	0	0	0	0	0	0	0	120	127	132	131	129	126	112													877
Ontario	0	0	0	0	0	180	356	852	886	954	1152	1216	1219	1222	1176	1168													10381
Manitoba	0	0	0	0	12	4	87	82	44	75	73	132	139	204	275	195													1322
Saskatchewan	0	0	0	0	2	0	3	3	10	13	16	40	47	69	67	80													350
Alberta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													0
British Columbia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													0
Yukon Territory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													0
Northwest Territory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													0
Nunavut	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													0
Total	0	0	0	0	14	184	446	937	940	1162	1368	1520	1536	1624	1644	1555													12930

[1] Detailed West Nile virus mosquito surveillance data can be accessed through Provincial/Territorial websites.

TABLE 4.2: Number of mosquito pools tested and number of positive mosquito pools by Province/Territory, 2015 season

Province	Year to date: January 1 to Aug 15, 2015		
	Number of positive mosquito pools	Number of mosquito pools tested	Percentage of positive mosquito pools (%)
Quebec	2	877	0.23
Ontario	32	10381	0.31
Manitoba	19	1322	1.44
Saskatchewan	12	350	3.43
Total	65	12930	0.50

FIGURE 3: Reported number of dead birds testing positive for West Nile Virus by Province/Territory and by report week, 2015 season*



* Data from the Canadian Wildlife Health Cooperative

TABLE 5: Reported number of dead birds testing positive for West Nile Virus by Province/Territory and by report week, 2015 season*

	Report week of 2015																																
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	Total
Newfoundland and Labrador	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																0
Prince Edward Island	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																0
Quebec	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	0																7
Ontario	0	0	0	0	0	0	0	1	0	0	0	0	4	1	8	0																14
Manitoba	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																0
Saskatchewan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																0
Alberta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																0
British Columbia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																0
Yukon Territory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																0
Northwest Territory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																0
Nunavut	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																0
Total	0	0	0	0	0	0	0	1	0	0	0	1	5	3	11	0																21

* Data from the Canadian Wildlife Health Cooperative.

FIGURE 4: Percentage of dead birds testing positive for West Nile Virus in the 2015 season by report week, as compared to the 2003, 2012 and 2014 seasons

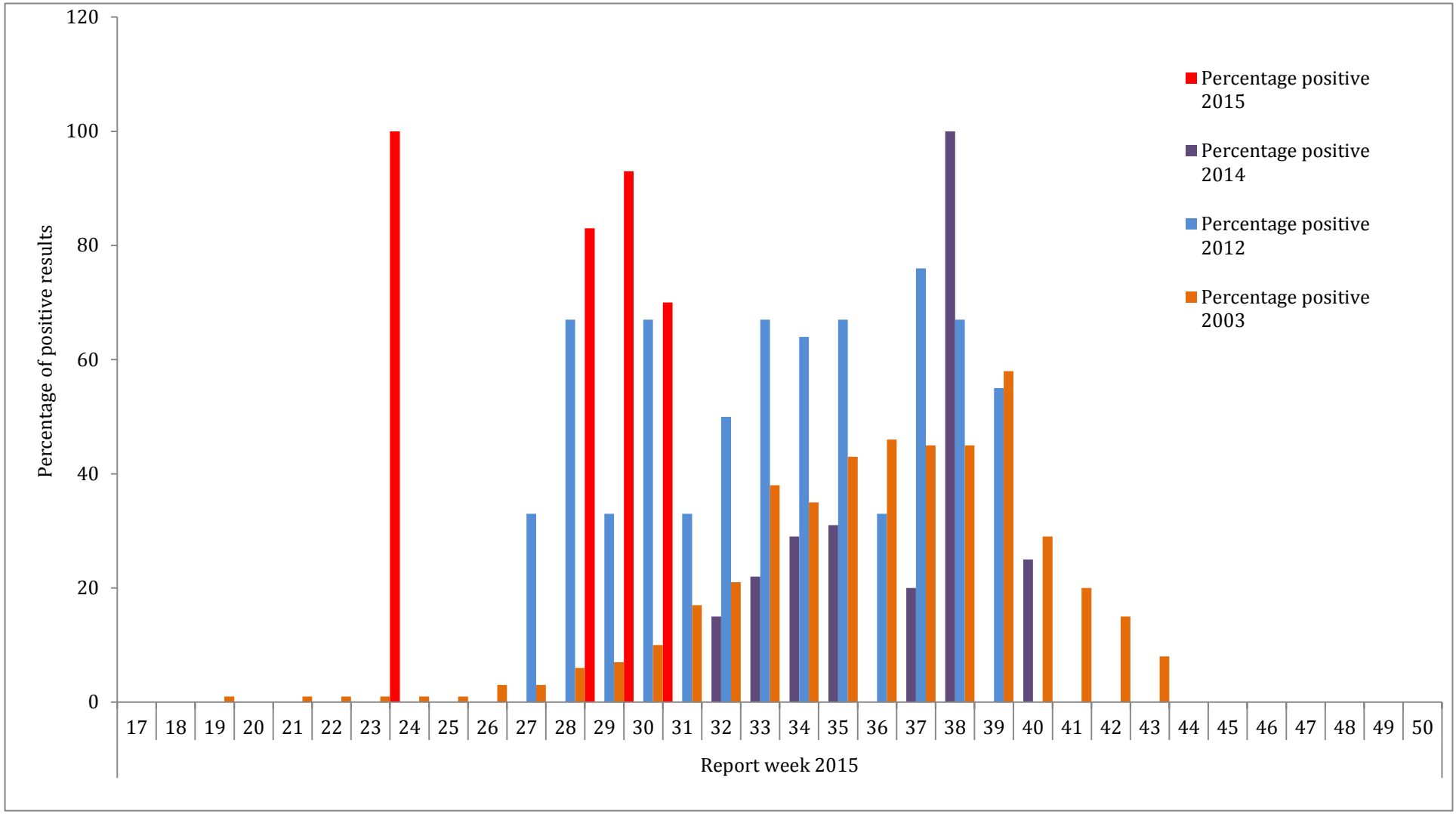


TABLE 6: Percentage of dead birds testing positive for West Nile Virus in the 2015 season by report week, as compared to the 2003, 2012 and 2014 seasons

		Report week																														
		17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
Numbers positive	2015	0	0	0	0	0	0	0	1	0	0	0	1	5	3	11	0															
Numbers tested	2015	0	0	0	0	0	0	0	1	0	0	1	1	6	5	15	7															
Percentage positive	2015	0	0	0	0	0	0	0	100	0	0	0	100	83	60	73	0															
Numbers positive	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	4	0	2	3	0	1	0	0	0	0	0	0	0
Numbers tested	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	41*	10	13	9	7	13	6	10	3	1	4	2	1	0	0	0	0	0
Percentage positive	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	22	29	31	0	20	100	0	25	0	0	0	0	0	0	0
Percentage positive	2012	0	0	0	0	0	0	0	0	0	0	33	67	33	67	33	50	67	64	67	33	67	67	55	0	0	0	0	0	0	0	0
Percentage positive	2003	0	0	1	0	1	1	1	1	1	3	3	6	7	10	17	21	38	35	43	46	45	45	58	29	20	15	8	0	0	0	0

* Data became available during Week 30; this is a cumulative number of dead birds tested from Week 1 to Week 30.