

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

AUG 16 TO AUG 22, 2015 – REPORT WEEK 33

CANADA

HUMANS

During surveillance week 33, ending on Aug 22, 2015, two (2) human cases of West Nile virus were reported to the Public Health Agency of Canada (the Agency). Of them, one case was reported in Ontario (Toronto) and one in Quebec (Lanaudière).

As of surveillance week 33, a total of 6 human cases have been reported to the Agency: Ontario (3) and Quebec (3). Of them, one (16.7%) was classified as West Nile virus Neurological syndrome, five (83.3%) as West Nile virus Non-neurological syndrome. One of the three cases from Quebec was related to travel outside the province.

MOSQUITOES

As of surveillance week 33, 94 mosquito pools have tested positive for West Nile virus in Canada: Ontario (48), Manitoba (28), Saskatchewan (15) and Quebec (3).

DEAD BIRDS

As of surveillance week 33, the [Canadian Wildlife Health Cooperative](#) has reported 22 dead birds that tested positive for West Nile virus. Ontario (14) and Quebec (8).

DOMESTIC ANIMALS

As of surveillance week 33, the [Canadian Food Inspection Agency](#) reported 5 horses that tested positive for West Nile virus in Canada: Ontario (2), Manitoba (1), Saskatchewan (1) and Alberta (1).

One horse tested positive for Eastern equine encephalitis virus, from Ontario.

UNITED STATES

As of Aug 18, 2015, the [Centers for Disease Control and Prevention \(CDC\)](#) reported 210 human cases of West Nile virus:

Alabama (3), Arizona (26), Arkansas (5), California (36), Colorado (8), Delaware (1), District of Columbia (1), Florida (4), Georgia (1), Idaho (4), Iowa (1), Kansas (6), Louisiana (8), Maryland (2), Mississippi (11), Montana (1), Nebraska (11), New Jersey (3), New Mexico (2), New York (1), North Dakota (4), Ohio (6), Oklahoma (10), Pennsylvania (3), South Dakota (10), Tennessee (2), Texas (26), Virginia (1), Washington (12) and Wyoming (1).

Of these, 126 (60%) were diagnosed as neuroinvasive disease cases, 84 (40%) as non-neuroinvasive disease cases. 5 fatal cases were reported. 75 presumptive viremic blood donors have been identified.

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EUROPEAN UNION, EUROPEAN ECONOMIC AREA AND NEIGHBOURING COUNTRIES

As of Surveillance week 33, the [European Centre for Disease Prevention and Control \(ECDC\)](#) has reported thirteen cases of West Nile fever in humans in the EU Member States and ten cases in the neighboring countries. During the past week, Italy reported four new cases (including one asymptomatic), from Cremona,

Parma and Reggio nell'Emilia (2 cases), three provinces already affected this year. Romania reported one case from the newly affected Sibiu County, an area also affected last year.

Hungary reported its first case of West Nile fever from Fejer County. Israel reported two new cases from already affected districts, Tel Aviv and Central district. West Nile virus has been detected in mosquitoes in Lipetskaya and Voronezhskaya oblasts, Russia

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

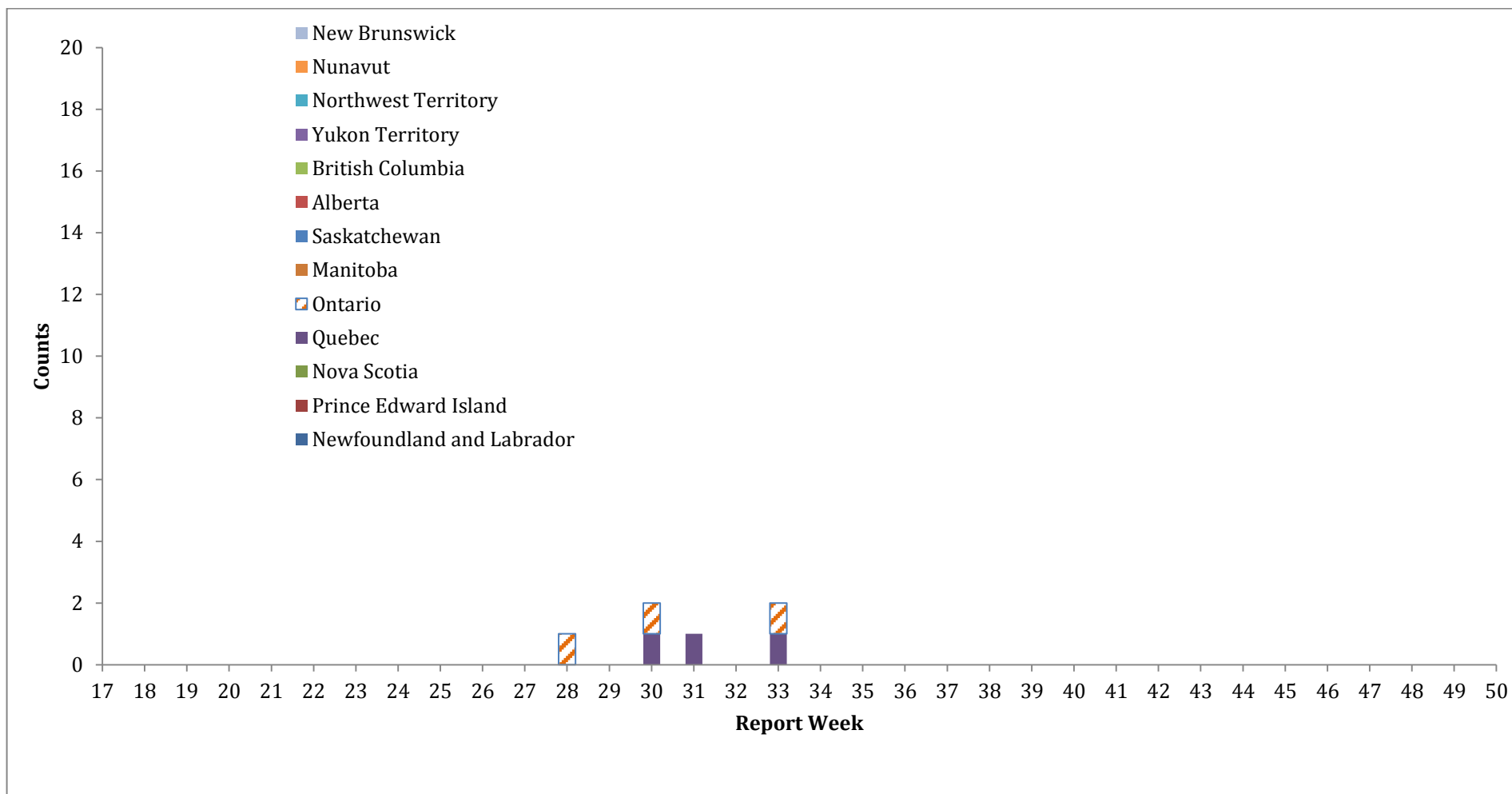


TABLE 1: West Nile Virus human clinical cases and asymptomatic infections, by Province/Territory and by report week, 2015 season

[illegible]

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

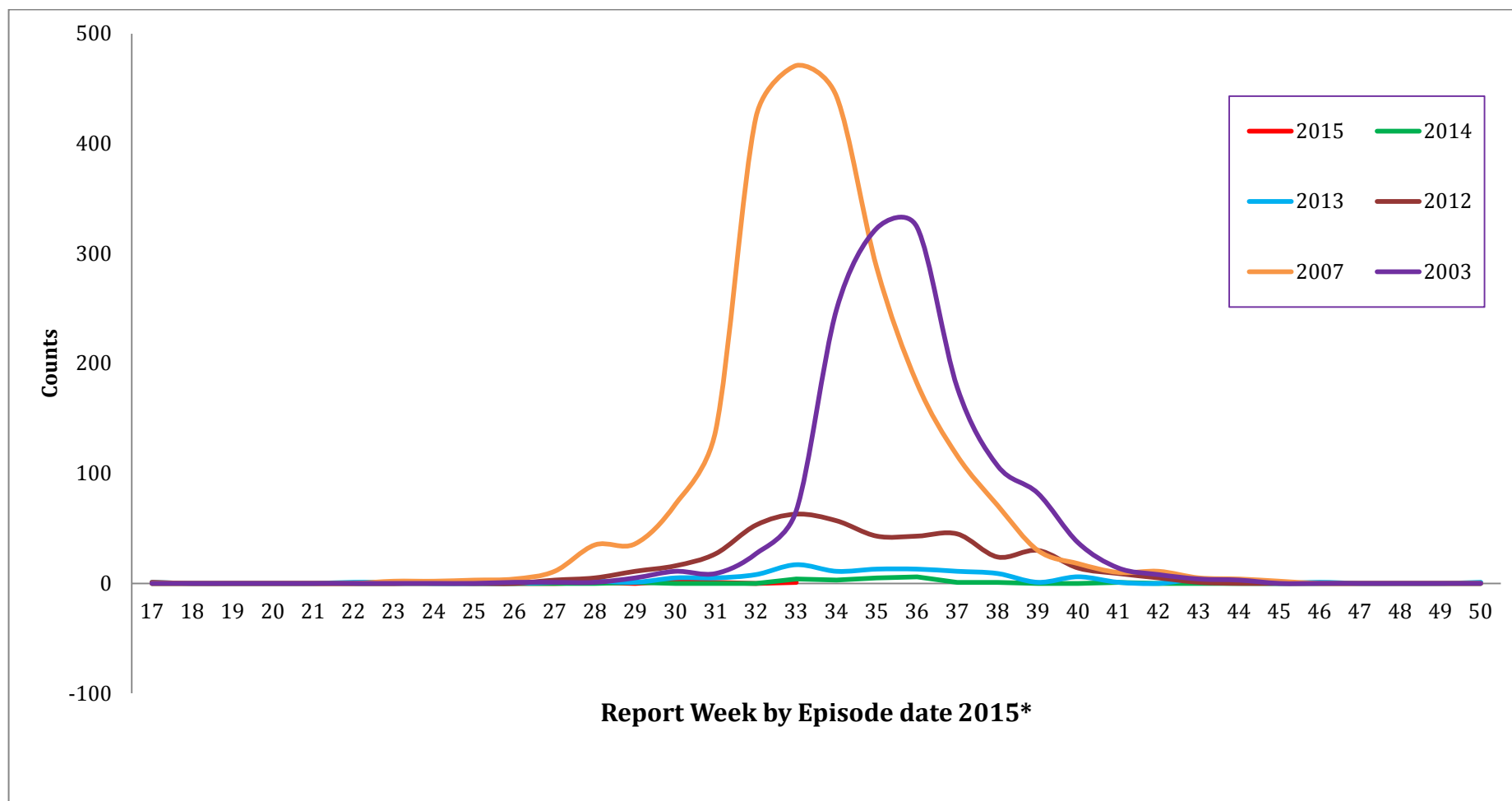
	Week 33: Aug 16 to Aug 22, 2015					
	West Nile virus neurological syndrome	West Nile virus non-neurological syndrome	Unclassified/unspecified	Total clinical cases ¹	Number of travel-related cases ²	West Nile virus asymptomatic infection ³
Newfoundland and Labrador	0	0	0	0	0	0
Prince Edward Island	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0
Quebec	1	0	0	1	0	0
Ontario	0	1	0	1	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	1	1	0	2	0	0

	Year to date: January 1 to Aug 22, 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	1	2	0	3	1	0
Ontario	0	3	0	3	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	1	5	0	6	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 clinical 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	2															
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	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	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	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	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	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	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 season¹

Province / Territory			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												0	
Prince Edward Island	0	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												0	
Nova Scotia	0	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	125												1002	
Ontario	0	0	0	0	0	180	356	852	886	954	1152	1216	1219	1222	1176	1168	1168												11549	
Manitoba	0	0	0	0	12	4	87	82	44	75	73	132	139	204	275	195	228												1550	
Saskatchewan	0	0	0	0	2	0	3	3	10	13	16	40	47	69	67	80	94												444	
Alberta	0	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												0	
Yukon Territory	0	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												0	
Nunavut	0	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	1615												14545	

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 22, 2015		
	Number of positive mosquito pools	Number of mosquito pools tested	Percentage of positive mosquito pools (%)
Quebec	3	1002	0.30
Ontario	48	11549	0.42
Manitoba	28	1550	1.81
Saskatchewan	15	444	3.38
Total	94	14545	0.65

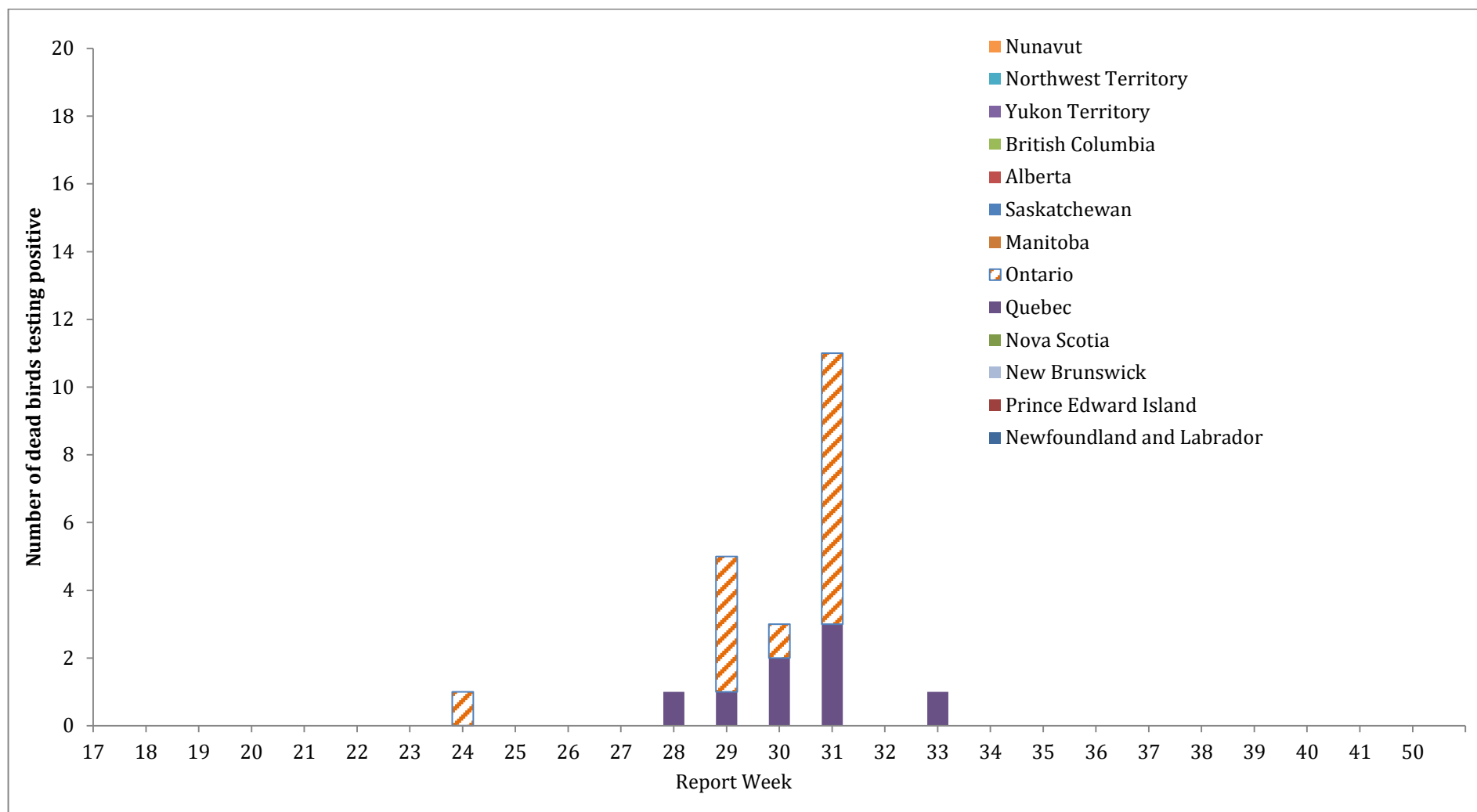
FIGURE 3: Reported number of dead birds testing positive for West Nile Virus by Province/Territory and by report week, 2015 season** Data from the [Canadian Wildlife Health Cooperative](#) and the [Quebec Ministry of Health and Social Services](#)

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															0
Prince Edward Island	0	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															0
Nova Scotia	0	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	1 ¹															8
Ontario	0	0	0	0	0	0	0	1	0	0	0	0	4	1	8	0	0															14
Manitoba	0	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															0
Alberta	0	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															0
Yukon Territory	0	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															0
Nunavut	0	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	1															22

* Data from the [Canadian Wildlife Health Cooperative](#).¹Data from the Quebec Ministry of Health and Social Services

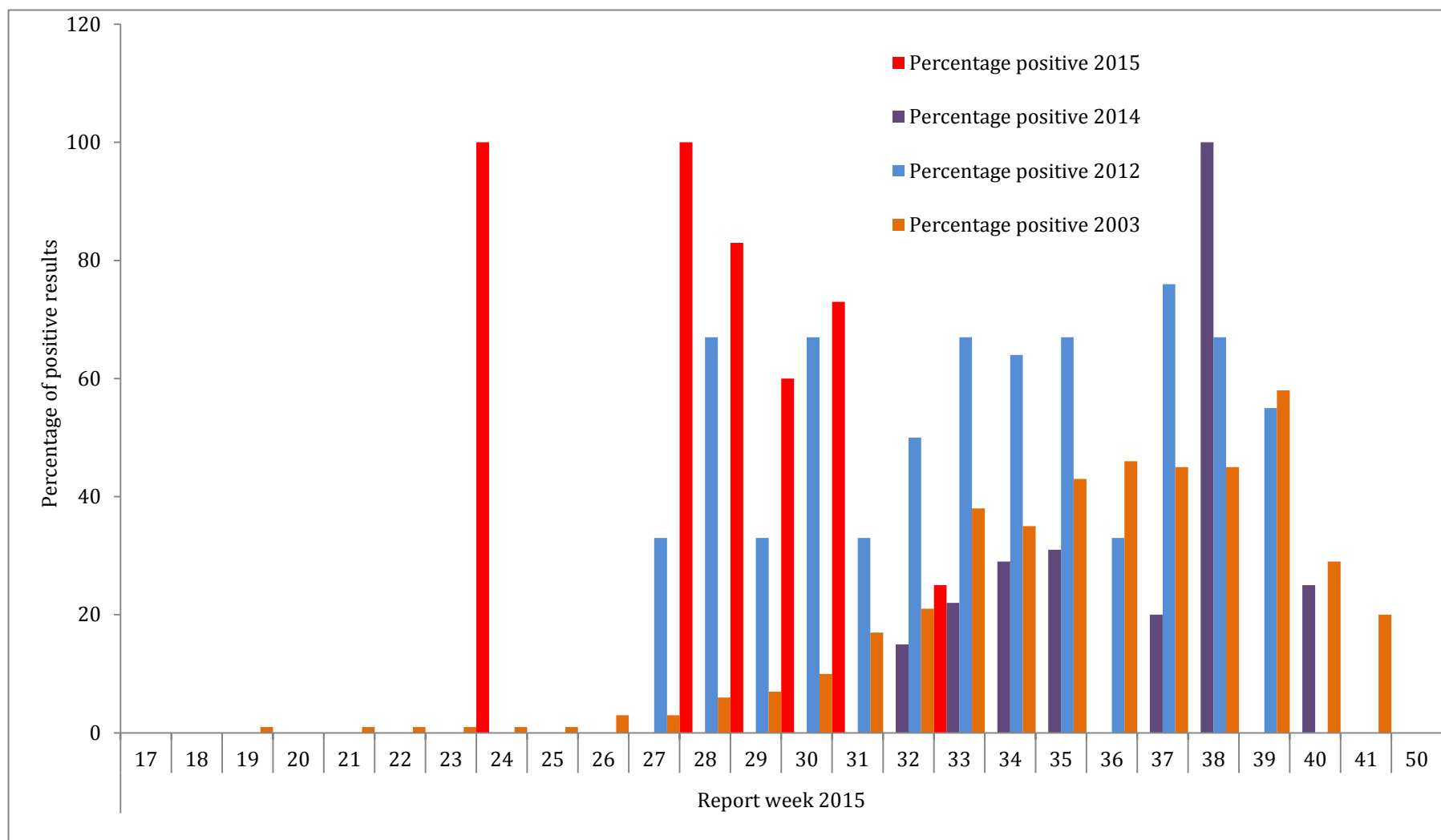
FIGURE 4: Percentage of dead birds testing positive for West Nile Virus in the 2015 season by report week, as compared to the 2003, 2012 and 2014 seasons

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	1															
Numbers tested	2015	0	0	0	0	0	0	0	1	0	0	1	1	6	5	15	7	4															
Percentage positive	2015	0	0	0	0	0	0	0	100	0	0	0	100	83	60	73	0	25															
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.