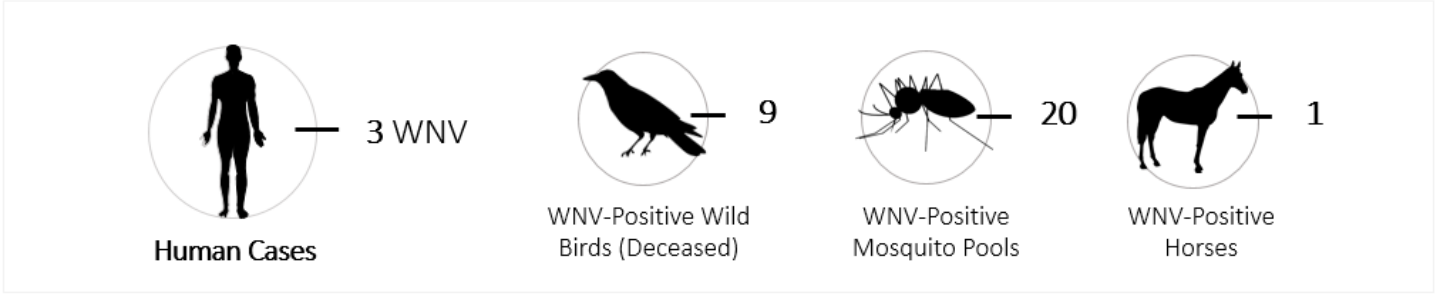
MOSQUITO-BORNE DISEASE SURVEILLANCE REPORT

AUGUST 11 to 17, 2019 (WEEK 33)

Year-to-Date Snapshot



West Nile

Human Epidemiology

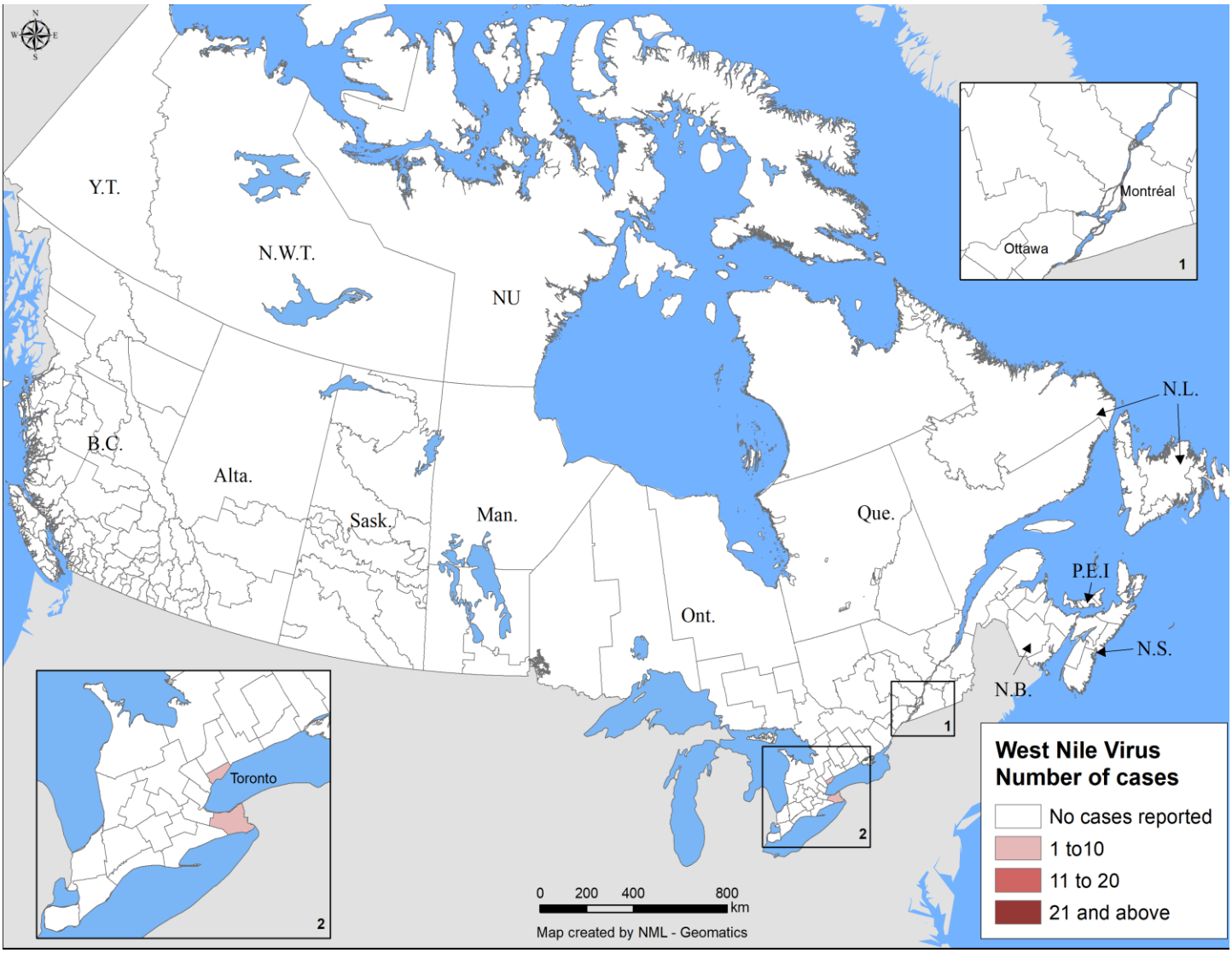
As of surveillance week 33, ending on August 17, 2019, three human cases of West Nile virus (WNV) have been reported to the Public Health Agency of Canada (PHAC) (**Table 1**). Of these, one case was acquired outside of Canada prior to the start of the 2019 transmission season.

Table 1. Year-to-Date (YTD) WNV human cases, by disease classification and province (January 1-August 17, 2019)

Province	Clinical Cases			Total Clinical Cases[1]	Asymptomatic Infections[2]	YTD Grand Total	Rate[3] (per 100,000)
	Neurological	Non-neurological	Unclassified				
British Columbia	0	1	0	1	0	**1**	0
Alberta	0	0	0	0	0	**0**	0
Saskatchewan	0	-	-	0	0	**0**	0
Manitoba	0	0	0	0	0	**0**	0
Ontario	0	1	0	1	1	**2**	0
Québec	0	0	0	0	0	**0**	0
Maritime Provinces	0	0	0	0	0	**0**	0
Territories	0	0	0	0	0	**0**	0
Total	**0**	**2**	**0**	**2**	**1**	**3**	**0**

[1] Clinical cases are the sum of confirmed and probable: WNV neurological and non-neurological syndromes, along with any unclassified. [2] Satisfies WNV diagnostic test criteria in the absence of clinical criteria (i.e., asymptomatic blood donors whose blood is screened by blood operators, Canadian Blood Services or Héma-Québec. [3] Calculated with grand total of clinical and asymptomatic cases, using Statistics Canada 2018 population estimates.

Figure 1. Geographic distribution of WNV human clinical cases and asymptomatic infections in Canada, 2019



Mosquito, Wild Bird & Equine Epidemiology

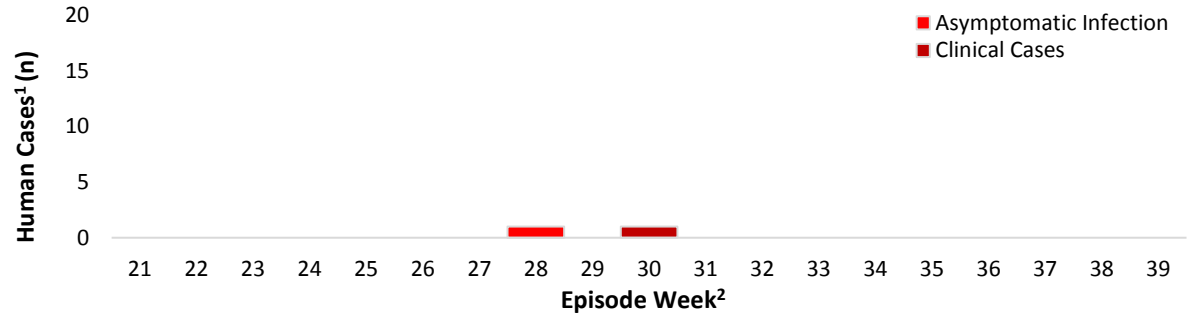
As of week 33, PHAC has been notified of 6,617 mosquito pools tested for WNV. Of these, 20 (0.30%) were positive in Quebec (3), Ontario (15) and Manitoba (2) (**Table 2**).

Nine of 33 dead wild birds have tested positive for WNV, by the Canadian Wildlife Health Cooperative (CWHC) in Ontario (6) and Quebec (3) (**Table 3**).

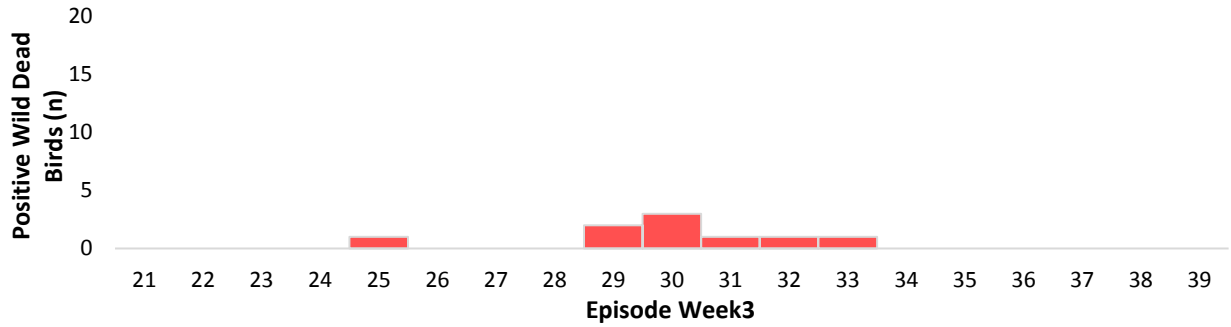
Since the start of this season, the Canadian Food Inspection Agency (CFIA) has reported one horse that tested positive for WNV in British Columbia (**Table 3**).

Figure 2. (A) WNV human clinical cases and asymptomatic infections, (B) positive WNV birds, and (C) percent positive mosquito pools by episode or report week, in Canada, 2019

(A)



(B)



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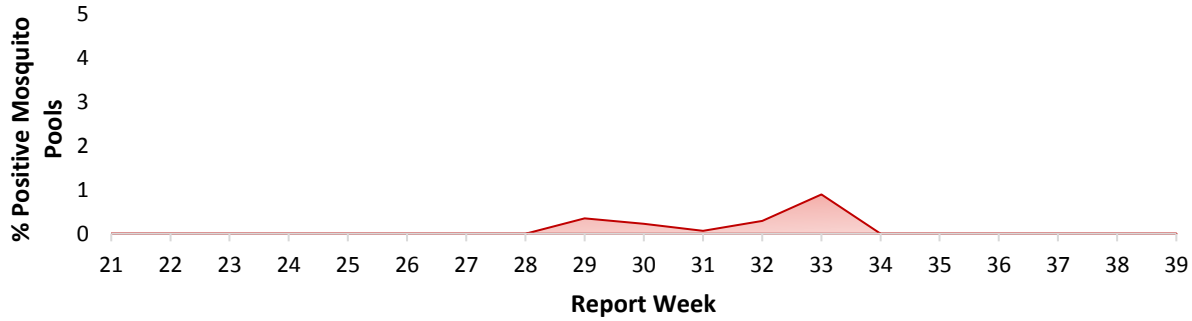

[1] Human cases includes clinical cases and asymptomatic infection.[2] Episode week is based on symptom onset or best available date including: diagnosis, lab sample or date reported. [3]Episode week is based off date of death or best available date including: date found, submitted, or received.

Table 2. Year-to-Date WNV positive pools and percent positive by province and nationally (January 1- August 17, 2019)

Province[1]	Positive Pools	Total Pools Tested	Percent Positive
Saskatchewan	0	116	0.00 %
Manitoba	2	1117	0.18 %
Ontario	15	4293	0.35 %
Québec	3	1091	0.28 %
Total	**20**	**6617**	**0.30 %**

[1] Mosquito surveillance data is reported by the following four provinces: Saskatchewan, Manitoba Ontario and Quebec.

Table 3. Number of WNV positive animal cases for current week and Year-to-Date (YTD) (January 1- August 17, 2019)

Province	Wild Birds[1]		Equine	
	Week 33	YTD Total	Week 33	YTD Total
British Columbia	0	0	0	1
Alberta	0	0	0	0
Saskatchewan	0	0	0	0
Manitoba	0	0	0	0
Ontario	1	6	0	0
Québec	0	3	0	0
Maritime Provinces	0	0	0	0
Territories	0	0	0	0
Total	**1**	**9**	**0**	**1**

[1] Not all provinces conduct dead wild bird surveillance as part of their respective WNV surveillance program. However, WNV positive dead wild birds may be identified through the National Wildlife Disease Surveillance Program, CWHC or by specific provinces.

California Serogroup

As of August 17, 2019, no human exposures or cases of California serogroup virus have been reported by the National Microbiology Laboratory.

Eastern Equine Encephalitis

No human cases of EEEV have been reported to PHAC since the beginning of the 2019 transmission season.

The CFIA has reported one horse testing positive for Eastern Equine Encephalitis virus (EEEV) in Ontario.

Provincial/Territorial & International Surveillance Links

Data reported to PHAC is subject to change and may differ from provincial webpages due to reporting timelines. To obtain the latest arbovirus surveillance data, please refer to the following jurisdictional/regional webpages:

Provincial

Alberta - West Nile virus
Saskatchewan - West Nile virus
Manitoba - West Nile virus
Ontario - West Nile virus
Québec - Virus du Nil occidental

International

U.S. Centers for Disease Control - West Nile virus
European Centre Disease Control - Mosquito-borne disease

Thank you to all our partners for participating in the National WNV/MBD surveillance program.

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