

Mosquito Surveillance Report: Week of August 2nd

Highlights & Average Trap Counts

A total of 4,367 mosquitoes were caught throughout Western Manitoba during the week of August 2nd with an overall average of 268 mosquitoes per trap per night. The highest number of mosquitoes collected in a single trap was 2,036 mosquitoes collected in Cypress River on August 3rd. In 2020, an average of 322 mosquitoes were caught per trap per night for the same week (Table 1). Trapping occurred on only one night this week in Cypress River due to a trap malfunction.

This week, Manitoba Health announced an additional 20 *Culex tarsalis* pools that tested positive for West Nile virus throughout the province in all health regions with 13 positive pools coming from Winnipeg and 3 from the Prairie Mountain Health region. The province has consequently raised the risk of West Nile virus exposure from **moderate to high**. The province recommends that Manitobans take precautions to reduce exposure risks by wearing repellents and long, light-colored loose-fitting clothing, reducing time spent outdoors between dusk and dawn and eliminating sources of standing water that *Culex tarsalis* can lay eggs in. More detailed information regarding the province's West Nile virus surveillance program can be found on their website: <https://www.gov.mb.ca/health/wnv/>.

Table 1. The average number of mosquitoes trapped per trap per night in each community for the week of **August 2nd, 2021**. The 2020 average trap counts for the same week have also been included. Trapping occurred on one night this week in Cypress River due to a trap malfunction.

Community	2021 Average Trap Count	2020 Average Trap Count
Boissevain	107	236
Brandon	215	139
Carberry	37	74
Cypress River	2,036	1,158
Killarney	3	177
Shoal Lake	374	236
Souris	79	240
Virden	190	318

Mosquito Species

A total of 3,711 mosquitoes representing 8 mosquito species that are capable of transmitting pathogens to humans were identified from the mosquitoes collected this week (Table 2).

The most numerous mosquito species caught was *Culex tarsalis*, representing 51% of mosquito species identified this week up from 22% last week. The overall average number of *Cx. tarsalis* per trap was 104.8 this week up from an average of 88.0 last week. The highest number of *Cx. tarsalis* collected from a single trap was in Cypress River where 744 *Cx. tarsalis* mosquitoes were collected on August 3rd. *Cx. tarsalis* was present in all communities. The average number of *Cx. tarsalis* collected from each community can be found in table 3. *Culex tarsalis* is the primary vector for West Nile virus in Manitoba and is also involved in the transmission of Western equine encephalitis and California serogroup viruses.

Followed behind *Culex tarsalis* was *Coquillettidia perturbans*, representing 27% of identified mosquitoes. The majority of these were trapped in Cypress River. This mosquito plays a minor role in the transmission of California serogroup, West Nile, and Eastern Equine encephalitis viruses.

Aedes vexans, the inland floodwater mosquito, represented 19% of identified mosquitoes. This mosquito plays a role in the transmission of California serogroup viruses to humans and is a major nuisance mosquito in Manitoba.

The other mosquito species caught includes a variety of *Aedes*, *Culex* and *Anopheles* mosquitoes, all of which can act as vectors for California serogroup viruses and/or West Nile virus (Table 2).

Table 2. The numbers of 7 mosquito species caught throughout Manitoba during the week of August 2nd, 2021.

Species	Boissevain	Brandon	Carberry	Cypress River	Killarney	Newdale	Shoal Lake	Souris	Virден	Total
<i>Ae. canadensis</i>	0	1	0	0	0	0	0	0	0	1
<i>Ae. dorsalis</i>	0	1	0	8	0	0	10	2	3	24
<i>Ae. flavescens</i>	0	0	0	0	0	0	0	0	1	1
<i>Ae. trivittatus</i>	0	0	0	0	0	1	0	0	0	1
<i>Ae. vexans</i>	40	75	0	0	0	40	290	66	207	718
<i>An. earlei</i>	1	1	0	20	1	2	60	2	5	92
<i>Cq. perturbans</i>	0	1	0	936	0	8	0	0	43	988
<i>Cx. tarsalis</i>	59	691	70	744	4	39	168	66	45	1886
Total	100	770	70	1708	5	90	528	136	304	3711

Table 3. The average number of *Culex tarsalis* identified per trap for each community during the week of August 2nd, 2021.

Location	Average Number of <i>Cx. tarsalis</i>
Boissevain	59
Brandon	173
Carberry	35
Cypress River	744
Killarney	2
Shoal Lake	84
Souris	33
Virден	23