

Mosquito Surveillance Report: Week of August 9th

Highlights & Average Trap Counts

A total of 389 mosquitoes were caught throughout Western Manitoba during the week of August 9th with an overall average of 24 mosquitoes per trap per night. Trap counts have significantly decreased this week, likely in part due to the cool overnight lows observed this week. Additionally, one pool of *Aedes vexans* caught in Shoal Lake on July 27th tested positive for the presence of a California serogroup virus.

In 2020, an average of 184 mosquitoes were caught per trap per night for the same week (Table 1).

This week, Manitoba Health announced an additional 36 *Culex tarsalis* pools that tested positive for West Nile virus throughout the province in Altona, Boissevain, Brandon, Carman, Niverville, Portage la Prairie, Ste Anne, Stonewall, West St. Paul and Winnipeg. According to the province the risk of West Nile virus exposure remains **high**. So far in 2021, no human West Nile virus cases have been recorded. 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.

Table 1. The average number of mosquitoes trapped per trap per night in each community for the week of **August 9th, 2021**. The 2020 average trap counts for the same week have also been included.

Community	2021 Average Trap Count	2020 Average Trap Count
Boissevain	23	198
Brandon	36	122
Carberry	3	51
Cypress River	75	186
Killarney	3	189
Shoal Lake	18	219
Souris	15	208
Virden	23	88

Mosquito Species

A total of 341 mosquitoes representing 5 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 65% of mosquito species identified this week up from 51% last week. The overall average number of *Cx. tarsalis* per trap was 13.9, a significant decrease from an average of 104.8 last week. 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 15% 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 13% 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).

California Serogroup Virus Screening

60 pools of mosquitoes caught during the month of July were screened for the presence of a California serogroup virus by PCR. One pool of *Aedes vexans* mosquitoes caught on July 27th in Shoal Lake tested positive for a California serogroup virus.

Table 2. The numbers of 5 mosquito species caught throughout Manitoba during the week of **August 9th, 2021.**

Species	Boissevain	Brandon	Carberry	Cypress River	Killarney	Shoal Lake	Souris	Virден	Total
<i>Ae. dorsalis</i>	1	0	0	0	0	0	2	0	3
<i>Ae. vexans</i>	11	5	0	3	1	12	6	7	45
<i>An. earlei</i>	3	0	0	4	0	9	3	0	19
<i>Cq. perturbans</i>	0	0	0	45	0	0	0	7	52
<i>Cx. tarsalis</i>	26	65	4	76	5	9	15	22	222
Total	41	70	4	128	6	30	26	36	341

Table 3. The average number of *Culex tarsalis* identified per trap for each community during the week of **August 9th, 2021.**

Location	Average Number of <i>Cx. tarsalis</i>
Boissevain	13
Brandon	33
Carberry	2
Cypress River	38
Killarney	3
Shoal Lake	5
Souris	8
Virден	11