



Vector Borne Disease 2020 Surveillance Report

Summit County Public Health



Report Weeks 11 and 12 (August 2 to August 15, 2020)
MMWR Weeks 32 and 33

Public Health
Prevent. Promote. Protect.

This report will be issued from June through October of each year (or later if West Nile Virus disease is still a concern). Surveillance will include human and veterinary cases and testing of mosquito pools in Summit County. It will also include updates from Ohio and around the nation. It will include vector-borne diseases besides West Nile Virus.

SUMMIT COUNTY SURVEILLANCE

Table 1: West Nile virus (WNV) tests ordered in Summit County hospitals

Week(s)	# of WNV tests ordered this period	# of positive WNV tests this period	Cumulative # of tests ordered this season	Cumulative # of positive tests this season	Percentage of positive tests
Weeks 1 & 2: 5/24 to 6/6	3	0	3	0	0.0%
Weeks 3 & 4: 6/7 to 6/20	9	1	12	1	8.3%
Weeks 5 & 6: 6/21 to 7/4	6	0	18	1	5.6%
Weeks 7 & 8: 7/5 to 7/18	7	0	25	1	4.0%
Weeks 9 & 10: 7/19 to 8/1	8	1	33	2	6.1%
Weeks 11 & 12: 8/2 to 8/15	7	1	40	3	7.5%
Weeks 13 & 14: 8/16 to 8/29					
Weeks 15 & 16: 8/30 to 9/12					
Weeks 17 & 18: 9/13 to 9/26					
Weeks 19 & 20: 9/27 to 10/10					
Weeks 21 & 22: 10/11 to 10/24					

Note: Reporting may not be completed each week. Numbers will be updated when reports are received

West Nile virus testing (Table 1): During surveillance period Weeks 11 and 12, there were 7 tests for West Nile virus ordered by Summit County hospitals. So far this season, there have been 3 positive results for IgG antibody only for the West Nile virus, which is an indication of immunity due to a past exposure and were not active infections.

Lyme disease testing (Table 2): There were 57 diagnostic test series performed for Lyme disease during Weeks 11 and 12, with 5 positive or indeterminate test results. The CDC currently recommends a two-step process when testing blood for evidence of antibodies against the Lyme disease bacteria (*Borrelia burgdorferi*). Both steps can be done using the same blood sample. The first step uses a testing procedure called "EIA" (enzyme immunoassay) or rarely, an "IFA" (indirect immunofluorescence assay). If this first step is negative, no further testing of the specimen is recommended. If the first step is positive or indeterminate (sometimes called "equivocal"), then the second step should be performed. The second step uses a test called an immunoblot test, commonly, a "Western blot" test. Results are considered positive and the case is confirmed only if the EIA/IFA and the immunoblot are both positive.

Week(s)	# of Lyme tests ordered this period	# of positive or indeterminate Lyme tests this period	Cumulative # of tests ordered this season	Cumulative # of positive or indeterminate tests this season	Percentage of positive or indeterminate tests
Weeks 1 & 2: 5/24 to 6/6	41	5	41	5	12.2%
Weeks 3 & 4: 6/7 to 6/20	48	11	89	16	18.0%
Weeks 5 & 6: 6/21 to 7/4	76	13	165	29	17.6%
Weeks 7 & 8: 7/5 to 7/18	81	21	246	50	20.3%
Weeks 9 & 10: 7/19 to 8/1	57	14	303	64	21.1%
Weeks 11 & 12: 8/2 to 8/15	57	5	360	69	19.2%
Weeks 13 & 14: 8/16 to 8/29					
Weeks 15 & 16: 8/30 to 9/12					
Weeks 17 & 18: 9/13 to 9/26					
Weeks 19 & 20: 9/27 to 10/10					
Weeks 21 & 22: 10/11 to 10/24					

Note: Reporting may not be completed each week. Numbers will be updated when reports are received

Reported Vector-borne diseases in 2020 for Summit County residents (Table 3): As of August 15, there were 25 reported cases of Lyme disease; all were suspected. Also reported were one confirmed case of LaCrosse virus disease, one suspected case of Ehrlichiosis and one suspected case of babesiosis.

	Confirmed	Suspected	Notes
Tick-borne diseases:			
Babesiosis	0	1	
Ehrlichiosis / anaplasmosis	0	1	
Lyme disease	0	25	
Powassan virus disease	0	0	
Rocky Mountain spotted fever	0	0	
Mosquito-borne diseases:			
Chikungunya	0	0	
Dengue	0	0	
Eastern equine encephalitis	0	0	
LaCrosse virus disease	1	0	
Malaria	0	0	
St. Louis encephalitis virus disease	0	0	
Zika virus infection	0	0	
West Nile virus infection	0	0	

Source: Ohio Disease Reporting System (ODRS); only confirmed, probable, and suspected cases are included.

Species name	Diseases associated	# identified
Mosquito species		
<i>Aedes albopictus</i>	Chikungunya, dengue fever, yellow fever	0
<i>Aedes triseriatus</i>	La Crosse encephalitis	6
Tick species		
<i>Amblyomma americanum</i>	Ehrlichiosis, tularemia, red meat allergy	1
<i>Dermacentor variabilis</i>	Rocky Mountain spotted fever, tularemia	31
<i>Ixodes scapularis</i>	Lyme disease, babesiosis, anaplasmosis	12

Source: Ohio Department of Health (Identification via mailed specimens, emailed photos and iNaturalist observations)

Table 5. Reported Aseptic/viral meningitis cases in Summit County (confirmed & probable)

Week(s)	Cases reported this period	Cumulative cases for the season
Aseptic meningitis cases reported prior to season (1/1 to 5/23/2020)	5	-
Weeks 1 & 2: 5/24 to 6/6	1	1
Weeks 3 & 4: 6/7 to 6/20	0	1
Weeks 5 & 6: 6/21 to 7/4	1	2
Weeks 7 & 8: 7/5 to 7/18	0	2
Weeks 9 & 10: 7/19 to 8/1	2	4
Weeks 11 & 12: 8/2 to 8/15	0	4
Weeks 13 & 14: 8/16 to 8/29		
Weeks 15 & 16: 8/30 to 9/12		
Weeks 17 & 18: 9/13 to 9/26		
Weeks 19 & 20: 9/27 to 10/10		
Weeks 21 & 22: 10/11 to 10/24		

Source: Ohio Disease Reporting System (ODRS)

Reported aseptic/viral meningitis cases (Table 5): Prior to the reporting season, there were 5 reported cases of aseptic meningitis, and 0 cases were reported during Weeks 11 and 12, keeping the season total at 4.

Aseptic/viral meningitis is the most common type of meningitis and occurs predominately in the summer and fall. While most aseptic/viral meningitis cases are due to gastrointestinal or respiratory viruses, similar symptoms may be present with arthropod-borne diseases.

Mosquito testing (Table 6): Based on the ODH mosquito testing summary released on August 13, 4,384 mosquitoes were collected throughout Summit County, and 1,272 *Culex* spp. were combined as pooled samples. Thirty of the pooled samples were tested for West Nile virus, and none were positive for West Nile Virus. Fourteen additional pools are pending.

Table 6. Mosquito Testing in Summit County (samples processed by noon on 8/13/2020)

Mosquitoes identified	4,384
Pooled samples tested	30
Positive WNV pooled samples	0

Note: All mosquitoes pools tested were *Culex* spp.

BeTICK Smart!

Protect Yourself Against Lyme Disease*

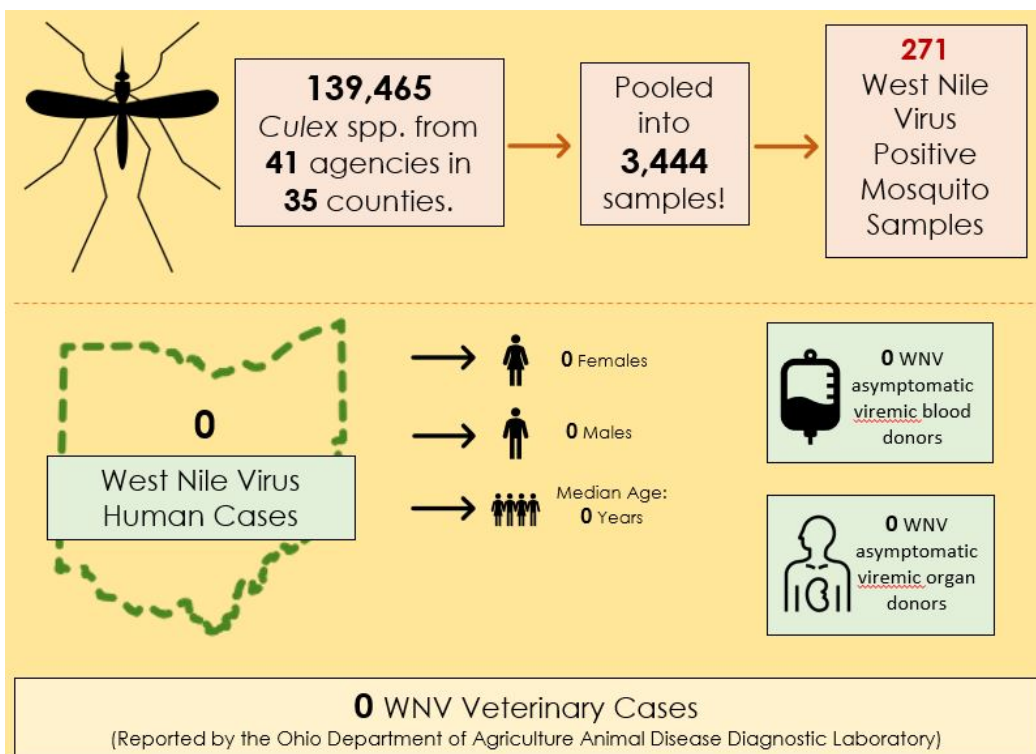
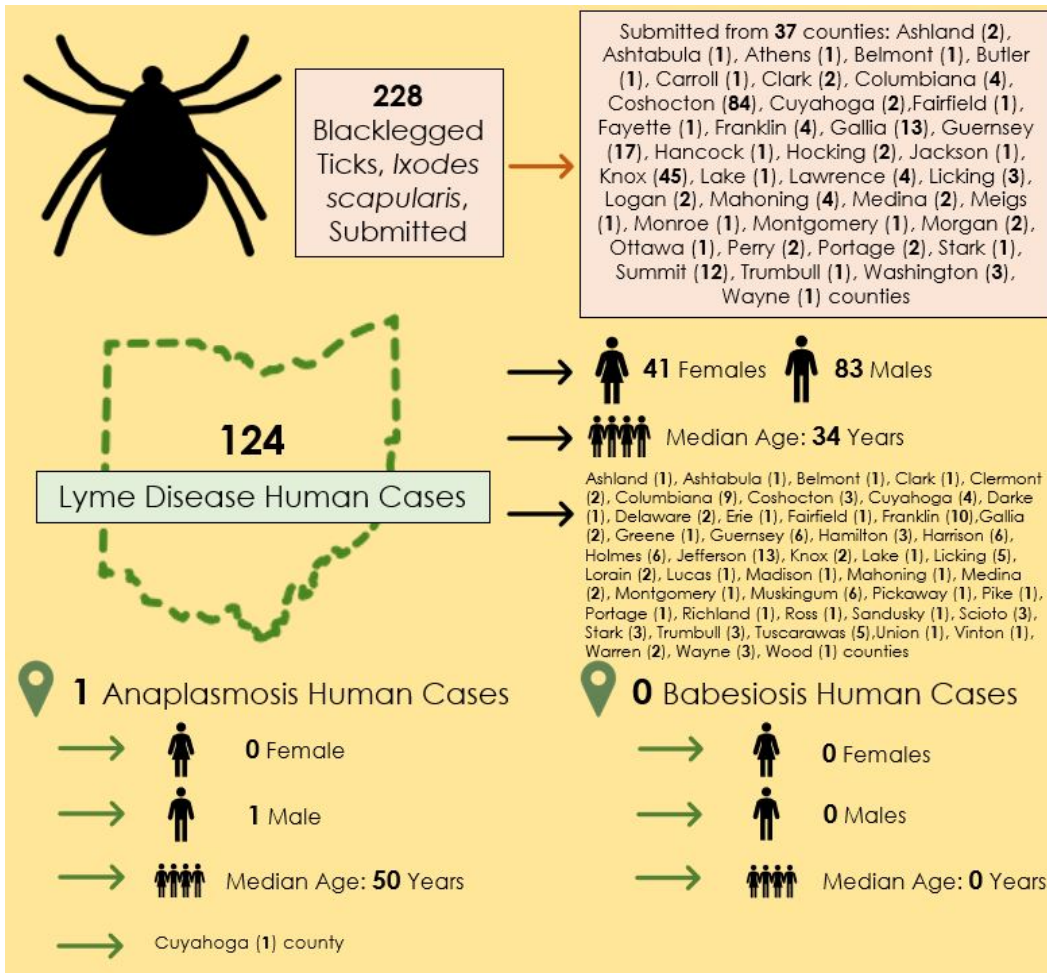
- 1** Walk in the middle of trails; avoid tall grass, brush and leaf litter.
- 2** Use EPA-registered repellents with DEET according to label instructions.
- 3** Use permethrin for clothing according to label instructions.
- 4** Wear long pants, long sleeves and long socks; tuck pant legs into socks.
- 5** Wear light colors to make it easier to see ticks.

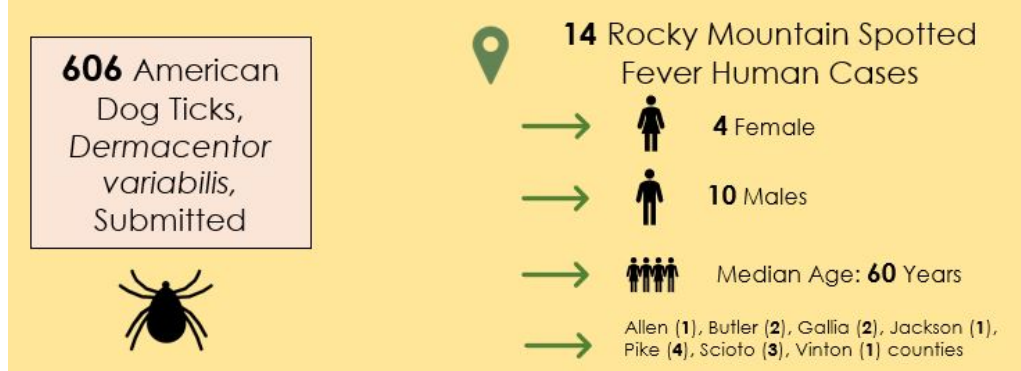
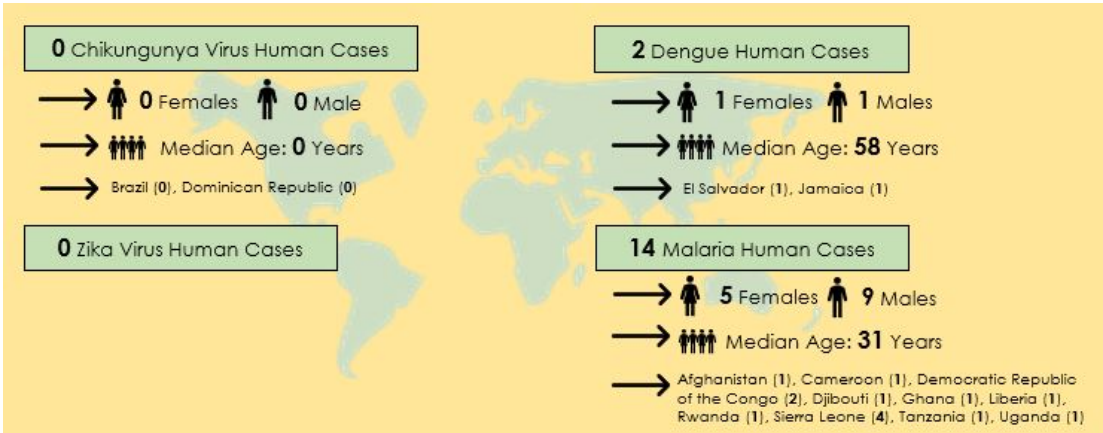
- 6** Check your whole body for ticks and promptly remove any you find; shower soon after being outside where ticks might be.
- 7** Continue doing tick checks 2 to 3 days after outdoor activities in tick infested areas.
- 8** Watch for symptoms which may include fever, headache, joint pain, muscle aches, fatigue or rash.
- 9** Tell your health care provider if you do get symptoms.
- 10** Ask your veterinarian about protection for your furry friends.



This poster can be downloaded from the ODH website: <https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/zoonotic-disease-program/resources/tick-poster>

OHIO (GRAPHICS AS OF 8/13/2020) AND UNITED STATES SURVEILLANCE





Source: <https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/zoonotic-disease-program/news-and-events/vectorborne-disease-update>

Special note for travelers:

Ohioans traveling to areas where local transmission is occurring should be aware of the ongoing situation and make every effort to avoid mosquito bites. Additional information can be found from the [Centers for Disease Control and Prevention \(CDC\)'s Travelers' Health](#) and [Pan-American Health Organization](#) websites.

