

West Virginia Vectorborne Disease Surveillance Report

JANUARY 1 – JULY 18, 2024

The purpose of this report is to share descriptive surveillance data related to vectorborne disease activity with public health partners in West Virginia. All information in this report is considered provisional. For questions or comments, contact the Zoonotic Disease Program in the Division of Infectious Disease Epidemiology at 304-558-5358.



HUMAN SURVEILLANCE – MOSQUITOBORNE DISEASE

During the period of January 1 to July 18, 2024, there has been one human case of mosquito-borne disease reported (Table 1).

Table 1. Summary of human cases of mosquito-borne diseases for the current reporting period in West Virginia.

Mosquito-borne Disease	# Confirmed and Probable Human Cases ^a (Total through July 18, 2024)	Comments
Dengue	1	Travel-associated from India
Total		

^aTable includes confirmed and probable cases meeting case definition, reviewed and closed by the Vectorborne Disease Epidemiologist

BIRD AND HORSE SURVEILLANCE – MOSQUITOBORNE DISEASE

During the period of January 1 to July 18, 2024, there have been no animal specimens tested for arboviral infection (Table 2).

Table 2. Summary of surveillance specimens submitted for dead birds and horses (serum) through July 18, 2024.

Type of Specimen	Total through July 7 th , 2017				Comments
	# specimens submitted	Arbovirus-positive ^a			
		WNV	SLE	EEE	
-	-	-	-	-	

^aNote: Horse specimens are tested for WNV and EEE only.

HUMAN SURVEILLANCE – TICKBORNE DISEASE

Through July 18, 2024, 1,797 confirmed and probable cases of tickborne diseases (TBDs) were reported in West Virginia (Table 3). Most cases (99%) were Lyme disease cases (n=1,784) (Figure 1). Several other tickborne diseases (TBD) were also reported (Figure 2). 55 (100%) of West Virginia’s 55 counties have reported human TBD activity.

Table 3. Summary of human cases of tickborne diseases through July 18, 2024

Tickborne Disease	# Confirmed and Probable Cases through July 18, 2024	# of Counties Where Disease Reported
Anaplasmosis	6	6
Babesiosis	1	1
Ehrlichiosis	3	2
Lyme disease	1,784	55
Spotted fever group rickettsiosis ^b	3	3
Total	1,797	--

^aTable includes only confirmed or probable cases that have been reviewed and closed by the Vectorborne Disease Epidemiologist.

^bIncludes Rocky Mountain spotted fever.

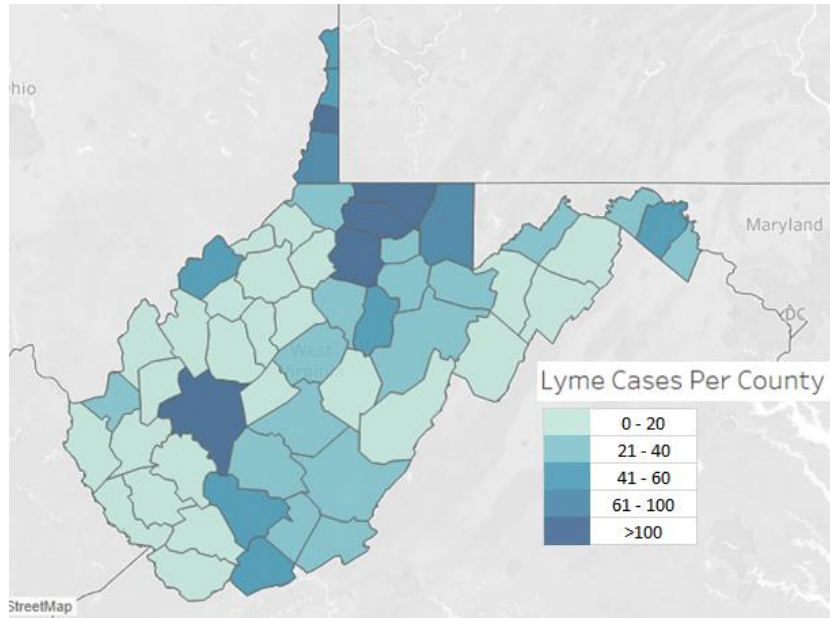


Figure 1. County distribution of probable Lyme disease cases (N=1,784) through July 18, 2024, West Virginia.

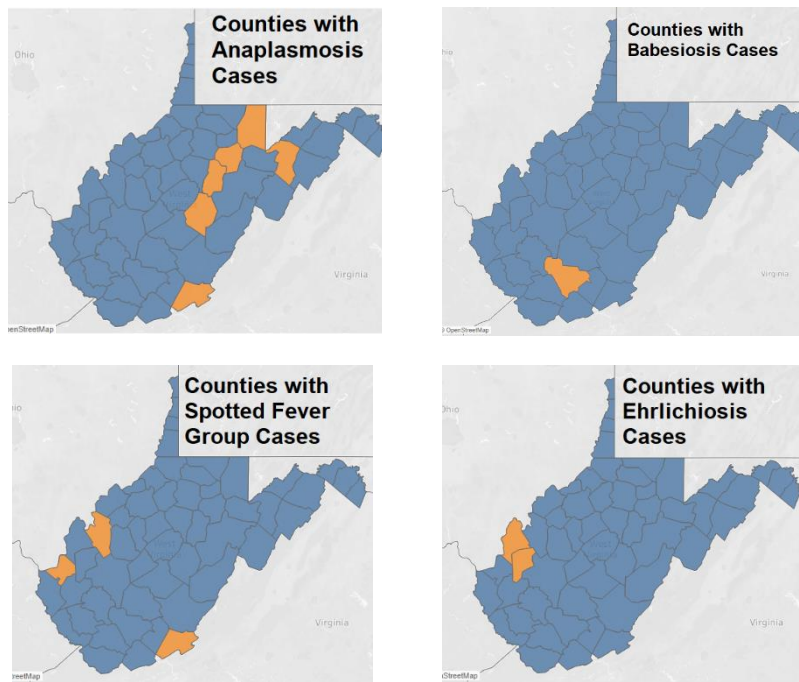


Figure 2. Clockwise, counties with the following disease cases in orange as of July 18, 2024: anaplasmosis, babesiosis, ehrlichiosis, and spotted fever group.

TICK SURVEILLANCE

During the period of March 4, 2024, to July 18, 2024, 32 localities in the following 17 counties have served as active tick surveillance sites: Cabell, Clay, Doddridge, Fayette, Jackson, Kanawha, Mercer, Monongalia, Pocahontas, Preston, Putnam, Roane, Tucker, Tyler, Wayne, Wetzel, and Wood counties (Figure 3, Figure 4). Through active tick surveillance and public submission to the Zoonotic Disease Program, four species of tick have been collected from March 4, 2024, to July 18, 2024 (Table 4).

Table 4. Summary of tick surveillance through July 18, 2024

Tick Species	Total through July 18 th , 2024			
	# collected	Life Stage		
		Larva	Nymph	Adult
<i>Amblyomma americanum</i>	1,089	789	250	50
<i>Dermacentor variabilis</i>	74	1	0	73
<i>Ixodes scapularis</i>	1,182	796	372	14
<i>Haemaphysalis longicornis</i>	143	0	131	12
Total	2,488	1,586	753	149

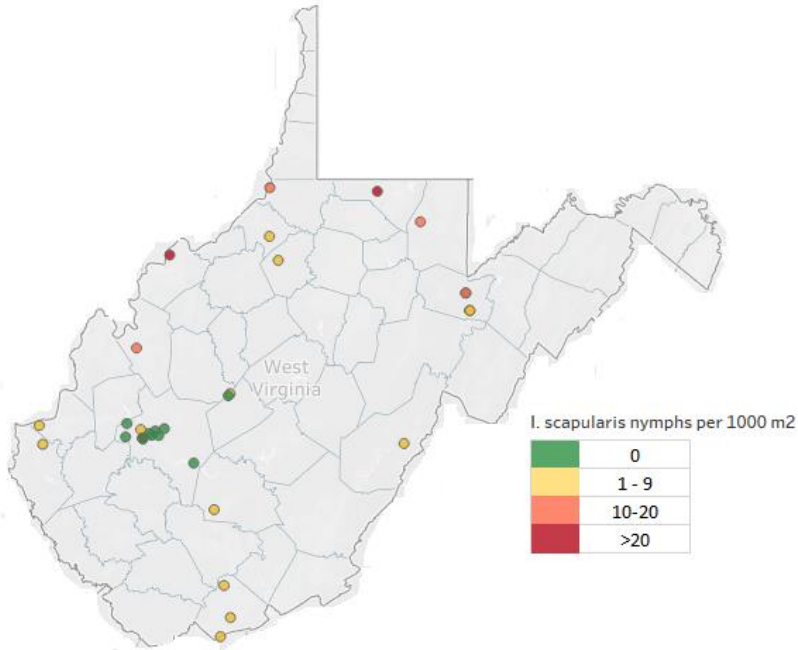


Figure 3. Tick collection sites (N = 32) in 17 counties, showcasing density of *Ixodes scapularis*, or blacklegged tick nymphs

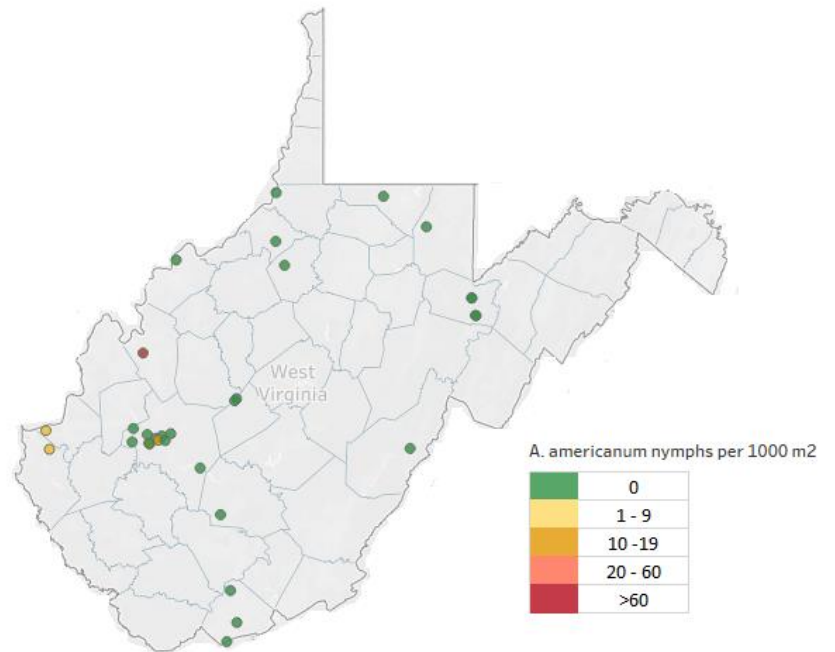


Figure 4. Tick collection sites (N = 32) in 17 counties, showcasing density of *Amblyomma americanum*, or lone star tick nymphs