

West Virginia Biweekly Vector-Borne Surveillance Report

January 1, 2022 – August 24, 2022

Introduction

The purpose of this report is to share descriptive surveillance data related to vector-borne disease activity with public health partners in West Virginia. All information in this report is considered provisional. For questions or comments, visit oeps.wv.gov/arboviral/pages/default.aspx or contact Eric Dotseth, State Public Health Entomologist, or Kimberly Dailey, Vector-Borne Epidemiologist @ (304) 558-5358, extension 2.

Tick Surveillance

The following areas were West Virginia Tick Surveillance Program sites as of **August 24, 2022**. Below shows the density/1000 m² of *Ixodes scapularis* (Blacklegged deer tick) and *Amblyomma americanum* (Lone Star tick). *Ixodes scapularis* is the species responsible for the majority of tickborne disease (TBD) in West Virginia, including Lyme disease, anaplasmosis, and babesiosis. Lone star tick is the vector for Spotted Fever Group Rickettsioses (SFGR), ehrlichiosis, Southern Tick Associate Rash Illness (STARI), tularemia, and alpha-gal syndrome.

Ixodes scapularis nymphs

Amblyomma americanum nymphs

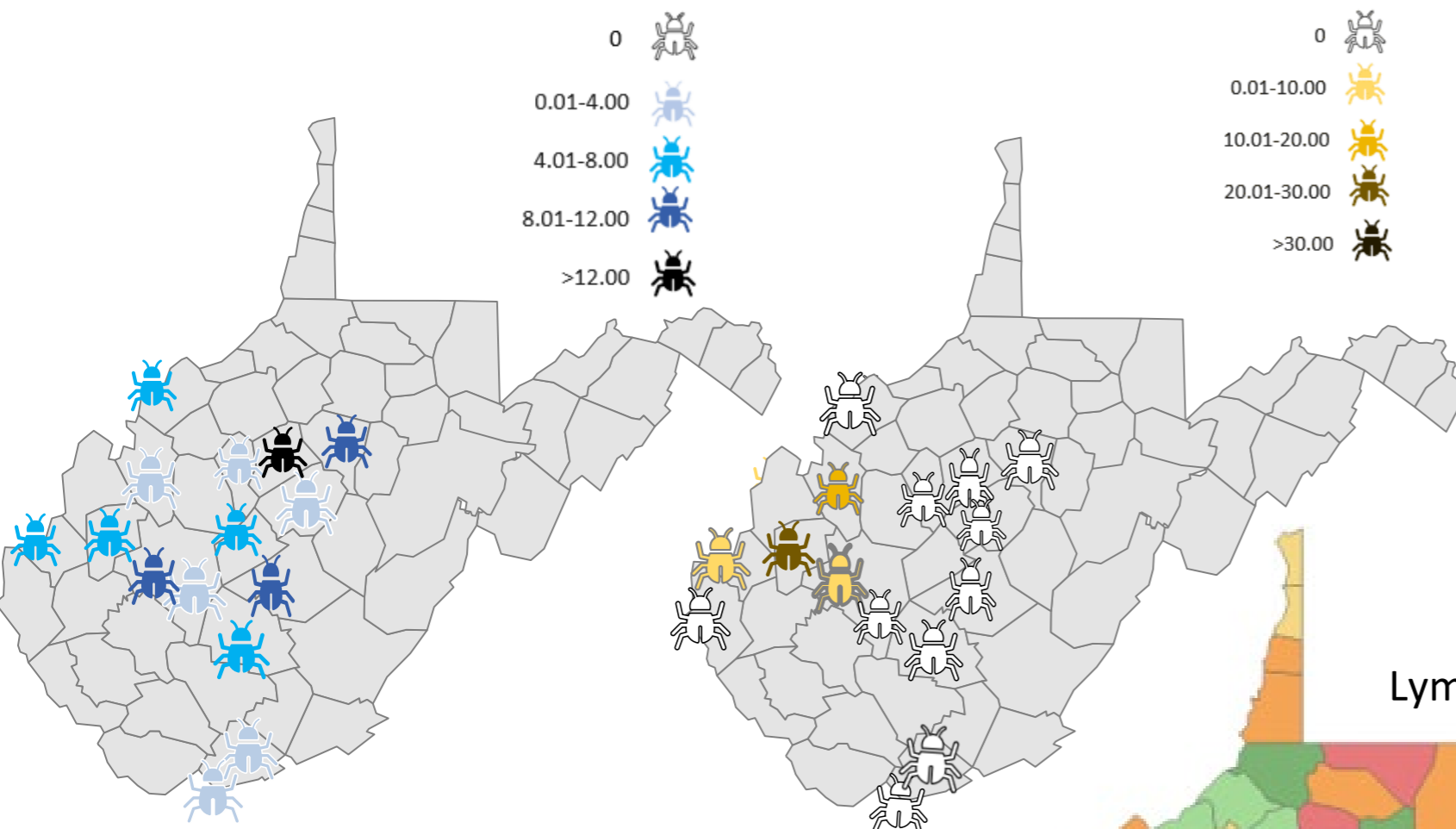


Figure 1. Density of *Ixodes scapularis* and *Amblyomma americanum* per 1000 m²

Tickborne Disease

Human Surveillance

Through **August 24, 2022**, **598** confirmed and probable cases of TBDs were reported in West Virginia. The majority of cases were **Lyme disease** cases. Spotted fever group rickettsioses (SFGRs) and Ehrlichiosis cases were also reported.

Table 1. Summary of human cases of tickborne diseases through August 24, 2022.

Tickborne Disease	Cases through 8-24- 2022
Lyme Disease	590
Ehrlichiosis	3
Spotted Fever Rickettsiosis	4
Anaplasmosis	1
Total	598

Table includes only confirmed or probable cases that have been reviewed and closed by the Vector-borne Disease Epidemiologist.

Distribution of TBD

At County Level

Number of Cases

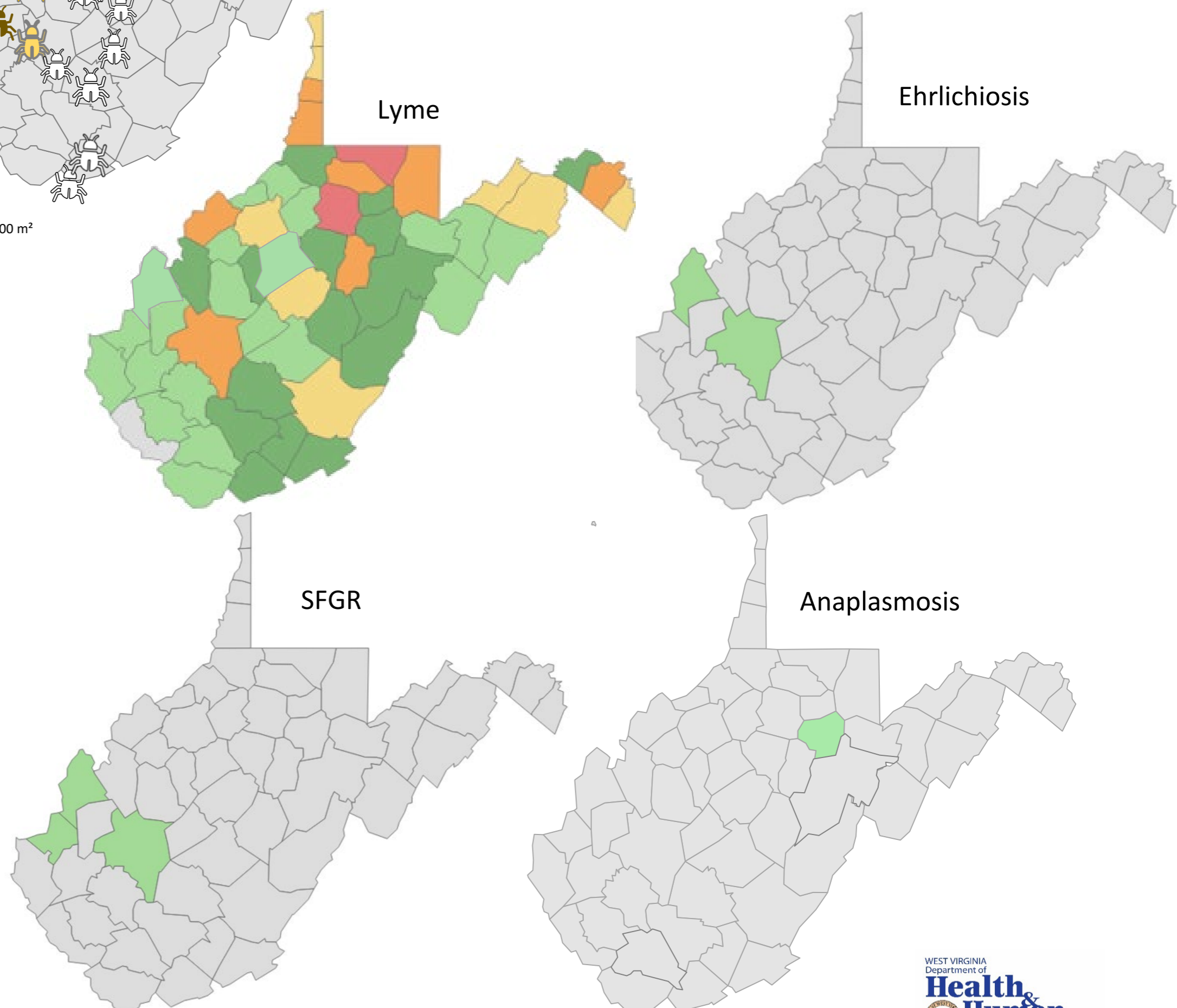
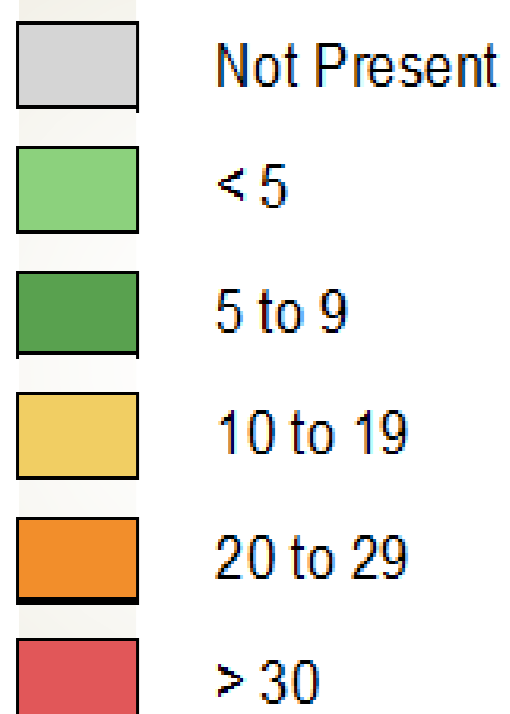


Figure 2. County-level distribution of Lyme disease, anaplasmosis, ehrlichiosis, and SFGR cases



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Mosquito Borne Disease

Human Surveillance

Surveillance for these diseases in West Virginia focuses on four endemic mosquito transmitted diseases—La Crosse virus (LAC), West Nile virus (WNV), St. Louis encephalitis virus (SLE), and eastern equine encephalitis virus (EEE) and travel-associated, or imported diseases, such as chikungunya, dengue fever, malaria, and Zika virus (ZIK).

Table 2. Summary of human cases of mosquito borne diseases through August 24, 2022.

Mosquito Borne Disease	Cases through 8-24-2022
La Crosse encephalitis	0
West Nile Virus infection	0
Malaria	3
Total	3

Table includes only confirmed or probable cases that have been reviewed and closed by the Vector-borne Disease Epidemiologist.

Mosquito Surveillance

During the period of **January 1 to August 24, 2022**, locations in the following 3 counties have served as mosquito surveillance sites and provided sample testing for mosquito borne diseases.

Mosquito Surveillance Sites

- Active site
- WNV +
- EEEV +
- LACV +

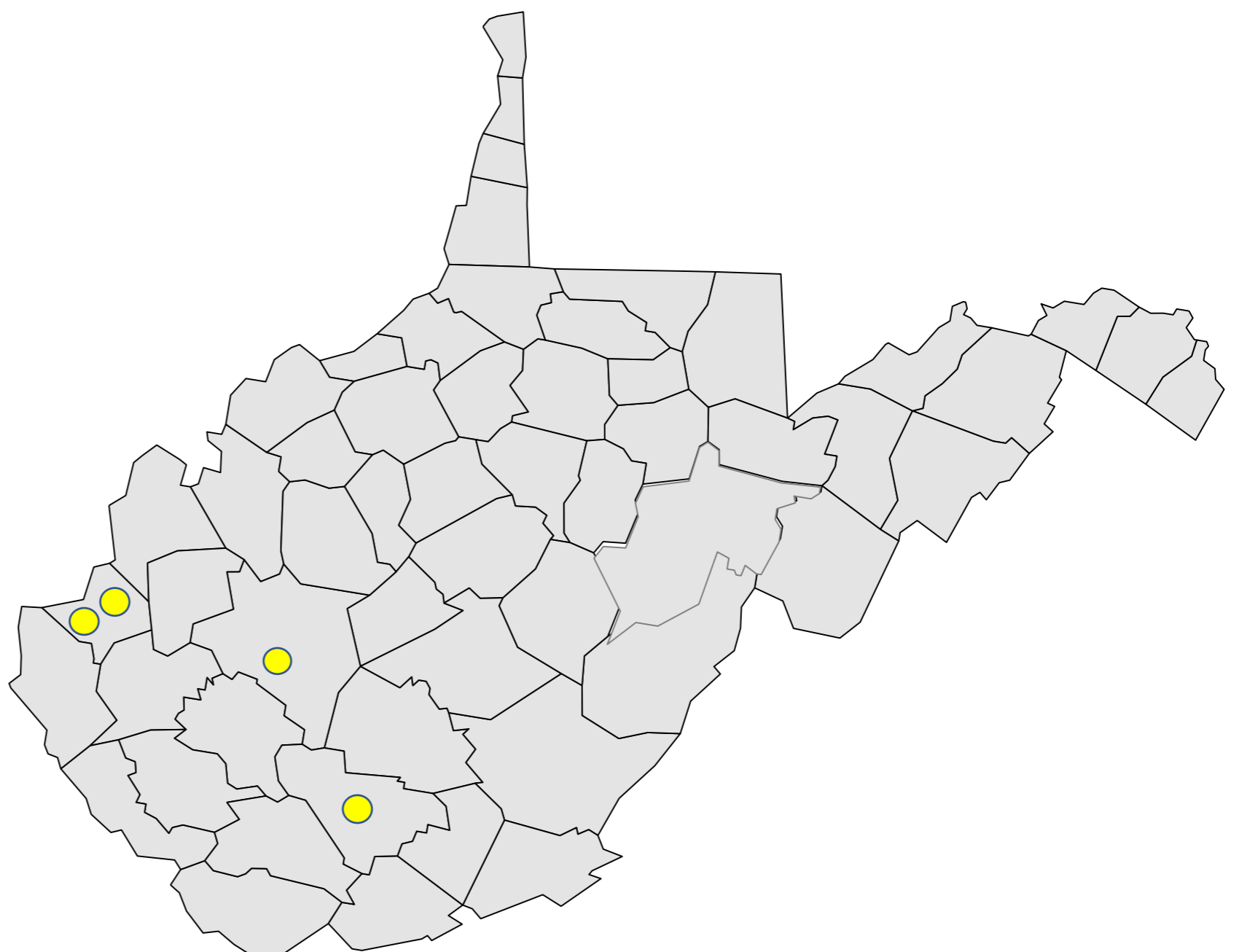


Figure 3. Active mosquito surveillance sites and sample testing results through August 24, 2022