

NATHAN WHITE, KAELIN WITHROW, HALEY ZINN, MELANIE SAL, and KIM BJORGO-THORNE. West Virginia Wesleyan College, Department of Biology and Environmental Science, Buckhannon WV, 26201. Distribution of ixodid ticks in North-Central West Virginia.

ABSTRACT:

Determining the type and amount of different tick species in an area can allow for more area-specific precautions to be implemented to prevent transmission of disease. The objective of this study was to assess the occurrence rate of ixodid tick species in North-Central West Virginia, and to use this data to compile a record of how often each species is found in the area. Ticks were collected using flags and drags made from white denim and corduroy, respectively. (Newman et al., 2019). We also left collection vials at pet groomers and veterinary offices in the area. A total of 344 ticks were collected and identified. We detected six different species including *Ixodes scapularis*, *Dermacentor variabilis*, *Rhipicephalus sanguineus*, *Haemaphysalis leporispalustris*, and *Ixodes affinis*. The highest in-field success yielded thirty-eight ticks one day and the least being zero. The majority of ticks collected were *I. scapularis*, carriers of the bacteria that causes Lyme disease. *D. variabilis* ticks were the next highest density of Drags were the least effective collection method. Flagging was the most effective in the field, while veterinary partnerships yielded the most ticks overall. High success of field collection methods could be related to the time of year. Future research will continue developing a testing protocol for real-time PCR testing sampled ticks for *Borrelia burgdorferi*, the causative agent of Lyme disease. We plan to also address PCR testing on *D. variabilis* for spotted fever rickettsiosis, which is increasing throughout the Eastern USA.