

MAREN WENTZEL and SARA SAWYER, Dept of Biology, Glenville State College, Glenville, WV 26531. The *Wolbachia* infection frequency of insects in central West Virginia

*Wolbachia* is a bacterial endosymbiont that infects the reproductive tissue of Arthropods, particularly insects. It is transmitted primarily through the ova cytoplasm, alters the reproductive success of its host and thus a suspected driver of evolution and speciation. The frequency of infection in insects around the world suggest an equilibrium has been reached with rates ranging from 20% to 65%. We are investigating the infection frequency with *Wolbachia* in arthropods in central West Virginia to compare to infection in other locations. Insects were from wooded and meadow areas of the Glenville State College Campus, and Lewis County in the Stonewall Jackson Lake area, fixed in 95% ethanol and identified to species. To determine if an insect was infected with *Wolbachia*, DNA was extracted and PCR performed using *Wolbachia*-specific primers. Species sampled to date represent 9 of 16 target orders of Class Insecta, as well as 4 orders from Phylum Arthropoda. To date, 58 of 102 insects tested have demonstrated *Wolbachia* infection. This puts the infection rate of tested samples at approximately 56%. To get a clearer understanding of the infection rate in this area, we intend to sample additional insects and add additional orders. Determining the infection frequency in this area is an important step in understanding the impact of *Wolbachia* on the insects of West Virginia.