MORGAN HORNSBY and MARK FLOOD, Dept of Biology, Chemistry and Geoscience, Fairmont State University, Fairmont, WV, 26554. Effect of temperature on stridulation.

The objective of this study was to observe the impact temperature has on stridulation (chirping) of *Gryllus pennsylvanicus* (field cricket) and *Gryllodes sigillatus* (banded cricket). Dolbear's Law states that the number of cricket stridulations can be converted to degrees Celsius by counting the number of stridulations in 8 seconds and then adding 5 to get the environmental temperature using the tree cricket *Oecanthus fultoni*. The belief is based on an increase in environmental temperature causing an increase in the activity levels of crickets, which will increase the rate of stridulation. The hypothesis is that both cricket species (field and banded) will increase stridulation rate as increases occur in environmental temperature and that the observed number of stridulations will be used to predict temperature using the previously mentioned formula. Crickets were incubated at four different temperatures (20, 22, 24 and 26^{o}C) with a constant light to dark cycle. Measurements of sound pressure were recorded during the dark cycle using a Vernier Microphone and compared to digital audio recordings. Preliminary data indicates that stridulation rate increases at higher environmental temperatures and that the use of the audio recordings is preferred over use of the Vernier microphone. Future research should involve incorporating more species of crickets and a wider variety of environmental temperatures.