JULIE A. SINK and RUTH A. CONLEY, Dept of Biology, Shepherd Univ, Shepherdstown, WV 25443. Effects of diet on growth rates in *Aleuropoda insignis.*

Aleuropoda insignis are a species of Madagascar Hissing Cockroach that typically live in colonies with males generating courtship calls (whistles or 'hisses', Comer & Conley 2016). Variability in individual courtship songs may be a factor in sexual selection within and between species of hissing cockroaches. Diet may influence effects of sexual selection since individuals in sparse populations may have to travel longer distances to find mates and may grow to a larger size (Kasumovic & Andrade 2006). To observe effects of diet on growth rates, *Aleuropoda insignis* were isolated from birth and put on one of three distinct diets. Ten individuals were fed a grain-based commercial cricket food, ten individuals were fed a corn-based commercial dog food and ten individuals were fed certified organic grain/corn/soybean-based human-grade food. Since social isolation may affect growth rate (simulating a sparse population), some animals were maintained in a colony and the growth rate of a representative sample individuals from the colony was calculated. Growth rate was calculated as the change in the area of the animals' body over the number of days, measured from photographs. The data suggest a growth spurt at about 12 weeks of age across all diets. The average growth rate was lower for the corn-based dog food diet, but not significant ($p<0.17$); however a larger sample size may provide a significant difference. Differences in growth rates (or size) between colonial versus isolated animals may be insignificant since colonial species should not have to travel far to find mates.

This work was funded in part by the Research Challenge Fund through a Summer Undergraduate Research Experience Grant from the West Virginia Higher Education Policy Commission Division of Science and Research