**Food Preference as a Behavioral Reproductive Trait of the**

**Madagascar Hissing Cockroach Handout**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Class Period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Adult male and female MHCs possess behavioral reproductive traits such as courting hisses and mating hisses (Nelson and Fraser 1980). One of the behavioral reproductive traits of MHCs is food preference. Adult female MHCs have a preference for high-protein foods because they produce a large egg case (ootheca) for reproduction (Carrel and Tanner 2002). Adult male cockroaches have a preference for high carbohydrate foods because it increases their reproductive fitness and makes them more attractive to adult female cockroaches (Carrel and Tanner 2002; South et al. 2011).

References

Carrel, J.E., and E.M. Tanner. 2002. Sex-specific food preferences in the Madagascar hissing cockroach *Gromphadorhina portentosa* (Dictyoptera: Blaberidae). *Journal of Insect Behavior* 15(5): 707–714.

Nelson, M.C., and J. Fraser. 1980. Sound production in the cockroach, *Gromphadorhina portentosa*: Evidence for communication by hissing. *Behavioral Ecology and Sociobiology* 6: 305–314.

South, S.H., C.M. House, A.J. Moore, S. J. Simpson, and J. Hunt. 2011. Male cockroaches prefer a high carbohydrate diet that makes them more attractive to females: implications for the study of condition dependence. *Evolution* 65(6): 1594–1606.