Mating behavior of the primitive longhorned beetle, *Mallodon dasystomus* (Say)

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Goals:
1. Describe the reproductive behavior of *Mallodon dasystomus*
2. Determine whether this species uses a volatile pheromone to locate mates.
3. Determine whether mate recognition is mediated by a contact pheromone within the wax layer of the insect.

Statement of Problem:
Little is known of the reproductive behavior of cerambycids, commonly known as longhorned beetles, in the primitive subfamily Prioninae. *Mallodon dasystomus*, the hardwood stump borer, is a widely distributed prionine native to the US. By conducting a series of behavioral and chemical bioassays, Annie aims to describe its reproductive behavior and identify volatile and contact pheromones that may mediate mate location and recognition in this species.

An understanding of these behaviors in prionines may provide insight into the evolution of mating systems in this economically important family. Longhorned beetles damage standing trees, cut lumber, and even structures. Information gained through this project may be helpful in developing biorational control strategies.

Annie is interested in exploring the endocrine regulation of pheromone production in longhorned beetles of the more derived subfamily Cerambycinae.

Current Activities:
1. Collecting and rearing the longhorned beetle *Neoclytus acuminatus acuminatus* to study the effects of juvenile hormone on pheromone production.
2. Collecting the cerambycid *Xylotrechus colonus* to investigate the location of contact pheromone components within the stratified cuticular wax layer.