

**Department of Biological Sciences
COLLEGE OF ARTS & SCIENCES**

**SUMMER RESEARCH OPPORTUNITIES
FOR UNDERGRADUATE WOMEN**

APPLICATION DEADLINE: March 1, 2011

The Department of Biological Sciences is pleased to offer the following research project for the summer of 2011. Interested students are urged to contact the faculty member(s) directing the project that most interests them. By contacting the faculty member, you can discover more about the project, learn what your responsibilities will be and, if possible, develop a timetable for the twelve-week research period.

Mating Success of Female *Parnassius smintheus* butterflies

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Project Description

Mating is a central component of biological systems and plays a key role in the ecology and evolution of most species. Previous research has shown that a large percentage (~10%) of female *Parnassius smintheus* butterflies never mate. Modeling has indicated that female mating success declines as both male density and male age increase; however limited experimental data have shown that the effects of male age may be due to its correlation with the more important factor, female age. This research will experimentally investigate the effects of female age on mating success.

Field research will take place in the Rocky Mountains of Alberta, Canada. The participant will be part of a team of researchers investigating the population biology of this species. Researchers will stay at the University of Calgary's Biogeosciences Institute. Participants must be physically able to hike long distances at elevation, conduct research outside in potentially inclement weather, and interact well with other students in common living areas.