

GRADUATE THESIS DEFENSE AND LECTURE SERIES
The SJSU Environmental Studies Department
Presents KIRSTEN HILL
Environmental Studies Graduate Student

A Picky Palette?
Host Plant Selection of an Endangered June Beetle

When: Tuesday, December 6, 2005, 4:30pm to 6:00pm

Where: Boccardo Business Center (BBC) 103



About Kirsten Hill:

Kirsten became interested in insect conservation when she was an undergraduate English major at the University of Maine. While there, she had the opportunity to work as a field assistant studying pollinator ecology in coastal blueberry and cranberry fields. It was during this time that she realized that it was possible to study insects not just as pests but as beneficial and interesting creatures. Her work at San Jose State University studying the Mount Hermon June Beetle has proved to be both enlightening and rewarding.

Abstract: Scarab beetles, like many animals, have a difficult time adapting to anthropogenically disturbed habitats. Yet as a group, scarab beetles perform many important ecosystem processes that our world, as we know it, cannot live without. The Mount Hermon June Beetle (*Polyphylla barbata*) (MHJB), endangered since 1997, exists in a diminishing and fragile habitat within the Zayante soils region of Santa Cruz County, California. To date, very little is known about the basic biology, natural history, and food source of the MHJB. The primary aim of this investigation was to identify the MHJB host plant selection and habitat association by comparing the microsite flora surrounding female burrow sites to the flora found in surrounding areas of known and unknown MHJB occurrence. Data was collected from the Quail Hollow Quarry (Felton, CA) from June 2004 through September, 2005 through observations of mating behavior, vegetation analyses, excavation of female burrow sites, and evaluation of larval DNA and frass. Findings from this study demonstrate that the MHJB larvae are not specialist feeders as frass analyses revealed plant species from both angiosperm and pteridophyta divisions and also possibly fungi. The beetle would greatly benefit from future management and protection of areas in which identified host plants and other commonly associated plants are found.



Photograph by Jodi McGraw