Instructional Related Activities
Report Form

SPONSOR	DEPARTMENT
R. Cartwright / B. Gillespie	Biology / Chemistry

ACTIVITY TITLE	DATE (S) OF ACTIVITY
Habitat Choice in Hawaii's Humpback whales A field based research and service learning opportunity for Science Majors.	March 19th – 26th 2011

(1) DESCRIPTION OF ACTIVITY

In our third annual trip, 9 current undergraduate students and 2 instructors traveled to Maui, Hawaii, to work with a local non-profit research organization, the Keiki Kohola Project, and participate in a long term study of the behavioral ecology of humpback whales. The protected waters along the western coastline of Maui constitute critical breeding habitat for humpback whales; the Keiki Kohola Project aims to provide the information required to ensure adequate and appropriate management of this critical region.

Each year, a key specific issue is chosen as the focus for the trip. Having completed our initial study of patterns of habitat use in maternal females in the region, our attention has now turned to the connection between habitat and behavior in female-calf pairs in this region. As previously, students were engaged in all aspects of the research project, from background research, the development of testable hypotheses and design of data collection protocols prior to the trip, through the actual field work and subsequent data analysis. Additionally, one student, led by a communications major, took on the task of preparing outreach materials for the non-profit organization. On returning, students presented their findings at the Sage research forum. Additionally, their data contributes to the work of the Keiki Kohola Project; the outreach materials are in use and the research data is in final revision, pending publication in the scientific literature.

In response to previous feedback from students, along with their participation in the research, students also spend some time exploring the island and its culture, through a number of field excursions, group activities and attendance at local cultural events. Time is also allocated each evening for reflective writing and journaling.

(2) HOW DID THE ACTIVITY RELATE TO A COURSE(S);

The work covered in the course complements a range of biology and chemistry courses, including Behavioral Ecology (Biol 407), Marine Biology (312), Science and Public Policy (Biol 345) Quantitative Methods in Biology (Biol 203), Environmental Chemistry (Chem 301) and Quantitative Analysis (Chem 250/ 251).

(3) WHAT YOU LEARNED FROM THE PROCESS

Student participants from the communications department added to the diversity of our student group this year. The interactions between these students and the science majors were collaborative and productive. As noted above, outreach materials developed as a part of the course remain in current use by the local non-profit.

The inclusion of student activities beyond the actual research project remains popular, however we also increased the time spent actively involved in research on the water so that students had a little less “down time” and we felt this led to a more immersed experience for the students. Additionally, 3 previous trip participants travelled with the group – all are graduates from CI and their participation added to the consistency and accuracy in data collection and gave the current undergraduate group a chance to appreciate the more long term perspective of the project.

Again, students selected to participate in the trip this year included several who had little or no previous experience of field-based research, however we also included a contingent of more experienced students and this mix worked well, encouraging co-operative learning, student to student mentoring and positive group cohesion. Based on student feedback, we remain confident that the trip enriches the university experience of student participants.

Looking forward to our next trip, we do note that students mention that they would appreciate scheduled evening activities, so we plan to incorporate those into the program. Activities will include invited speakers and also some evening activities including a night snorkel and an evening outing to a local cultural presentation, Ula’lena.

List of attendees:

Instructors

Rachel Cartwright - Biology
Blake Gillespie – Chemistry

Students

Stacey Alexander
Rina Koenka
Katheryn Cowans
Jessica Turner
James Grundy
Amber Lessing
Brittany Lampman
Kimberly Valverde
Alex Starr