**BIOLOGY AND GEOMORPHOLOGY OF TROPICAL ISLANDS**  
Environmental Science, Policy and Management C107 = Integrative Biology 158LF

Professors: Brent Mishler (IB, lead organizer), Jonathon Stillman (IB), Stephanie Carlson (ESPM), Vince Resh (ESPM), George Roderick (ESPM, class finances)  
GSIs: Julie Hopper (ESPM), Lindsey Dougherty (IB), Chris DiVittorio (IB)

Websites: Class information: [http://ib.berkeley.edu/moorea/UC_Berkeley_Moorea_Class.html](http://ib.berkeley.edu/moorea/UC_Berkeley_Moorea_Class.html); bspace: [http://bspace.berkeley.edu](http://bspace.berkeley.edu); Gump Station: [http://moorea.berkeley.edu](http://moorea.berkeley.edu)

**Schedule for course**

Class meetings in 3059 VLSB except as noted; each meeting is important, so we expect full attendance.

**Aug 29 & 30:** Informal prep days on campus -- no formal class meetings -- instead read past class books on reserve at Bioscience Library in VLSB, buy your supplies and equipment, etc.

**Sept. 3. (Tuesday)**  
*9:00 Required first class meeting.* Introduction, questions and answers. Tahiti/Moorea, the Society Islands, the Pacific Ocean, Tahiti, and Moorea. Document check: passports, protocole update, tutorials, tickets, etc. Course and travel details. Introduction to Gump Station. What to bring to Moorea. Cooking groups.  

*13:00 Projects: an introduction.* Project review from previous years, discuss what makes a good project, and suggestions for potential topics. Good science doesn’t have to be expensive. Questions, approaches, habitats, animal use issues, etc.

**Sept. 4 (Wednesday)**  
*9:00 Oceanography* (Stillman)  

*13:00 Geology meets biology on tropical oceanic islands* (Guest: Carole Hickman, IB) (1) Geology and biology of islands (2) plate tectonics and place of Moorea in a spatial and temporal matrix (3) geobiology of tropical coral reefs

**Sept. 5. (Thursday)**  
*9:00 Adaptive radiations and terrestrial arthropod diversity* (Guest: Rosemary Gillespie, ESPM)  

*13:00 Note taking workshop* (Hopper, Dougherty, DiVittorio)

**Sept. 6 (Friday)**  
*9:00 Island Biology, with emphasis on plants* (Mishler)  

*10:30 Phylogenetics* (Mishler)  

*13:15 Natural history research collections. Meet at T-rex in VLSB. Tours of Museum of Vertebrate Zoology, Essig Museum of Entomology. UC Herbaria, and UC Museum of Paleontology*

**Sept. 9 (Monday)**  
*9:00 Freshwater ecology on Moorea* (Resh)  

*10:30 Human impacts on island ecosystems* (Resh);  

*13:00 Field exercise on stream ecology* (Resh)
Sept. 10 (Tuesday)

9:00 - 12:00 GIS/GPS Workshop, 124 Mulford Hall (Guests: Maggi Kelly and Kevin Koy, ESPM).

13:00 Invasive species (Guest: Peter Oboisky, Essig Museum)

Sept. 11 (Wednesday)

10:00 - 12:00 Peopling of the Pacific (Guest: Pat Kirch, IB)

13:00 French Polynesia today (Resh)

17:30-21:00 REQUIRED SNORKELING AND WATER SAFETY CLASS, PLUS SWIMMING TEST (Guest: Jim Hayward, UCB Scientific Diving Officer)
Hearst Gym, room 188, then Haas pool. Must bring swimming suit and snorkeling gear if you have it already.

Sept. 12 (Thursday)

9:00 Ecology and conservation of marine and terrestrial fish communities (Carlson)

11:00 Introduction to scientific thinking and communication in science (Mishler)

13:00 Introduction to statistical thinking; field exercise on plant sampling (Mishler & GSIs)

Sept. 13 (Friday)

9:00 Biology and ecology of marine invertebrates (Stillman)

13:00 Dangerous marine animals; Methods for characterizing and studying behavior; Opportunities for behavioral study on Moorea (Guest Roy Caldwell, IB)

Sept. 16 (Monday)

9:00-11:00 Polynesian ethnobotany (Guest: Tom Carlson MD, IB)

14:00-16:00 Introduction to library and information resources (Guest: TBA, UCB BioSciences Library). BioSci Lib.

Sept. 17 (Tuesday)

9:00-12:00 Mid-term exam (open book)

13:00 packing party in room 3059 to get our class gear together.


Sept. 22: Sunday evening, class meeting and first social function/dinner

Sept. 23: Bright and early Monday, begin class activities with around-island tour (activate food group system)

Oct. 1: Remainder of class fees due, $4,300, due through CARS

Nov. 23: Saturday, class finishes in Moorea with clean-up party; depart Gump Station on Nov 24.
Preliminary draft of complete paper due (draft sections will have been prepared and due earlier).
**Nov 24-Dec 1:** Week for independent travel and study -- you must leave Gump Station on **Nov. 24**, but many students like to stay in French Polynesia and tour other islands. A good time to have parents or significant others visit (which we strongly discourage during the class time). Otherwise, come back to California for Thanksgiving and get a head start on your project completion!

**Dec. 2:** Monday, required class meeting in Berkeley 3059 VLSB at 9 AM.

**Dec. 2:** Intensive work finishing up project: consult with faculty on campus, statistics, use labs and/or libraries, etc. as needed. Prepare presentation and improve your paper draft; format paper. Workshops will be given in these and other topics.

**Dec. 13:** **Friday.** Class mini-symposium--project presentations in 15-minute slots all day. 2063 VLSB; friend and parents welcome.

**Dec. 18** **Wednesday 5:00 pm.** Final draft paper due for format check. Your paper will not accepted for final submission until properly formatted for inclusion in the "class reports" book to be deposited in the UCB Library, Gump Station, sponsoring departments, offices of officials in French Polynesia, and posted on the web. It may take a couple of tries to pass the format check.

**Dec. 20:** **Friday 5:00 pm.** Final papers due, must be properly formatted. We are under a tight schedule to read these, so there will be a penalty for late papers.

**Course Texts**
3. *Elements of Style* (Strunk and White)

**Previous class books:**
You need to read these over before going to Moorea. All are on permanent reserve at the front desk of the bio library, under "Moorea", call number: QH198.M6B56. Many papers (but not all) since 2006 are online at: http://escholarship.org/uc/bnhm_UCB_moorea

**Grading**
- Exam on lecture material (20%),
- Field exercises/ field notes (10%)
- Project (60%): proposals/drafts on time (5%), symposium presentation (10%), final paper (45%)
- Participation (active buddy, good class citizen, station rules, positive force) (10%)

**Professors' tentative times on Moorea:**
- Brent Mishler: Sept 21 - Oct.19
- Stephanie Carlson: Sept 21 - Oct.15
- Jonathon Stillman: Sept 30 - Oct. 21
- George Roderick:
- Vince Resh: Nov. 4 - Nov. 24