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

Professors: Brent Mishler (IB, lead organizer), Jonathon Stillman (IB), Chelsea Specht (IB), Stephanie Carlson (ESPM), Vince Resh (ESPM), George Roderick (ESPM, class finances)  
GSIs: Julie Hopper, ESPM, Jean Alupay (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)

**Important dates** (please note; dates may change so check the class website and watch for emails)  
(9:00 am in 3059 VLSB except where noted; each meeting is important, so we expect full attendance):  

**April 29:** Non-refundable deposit of $500 due; check made out to "UC Regents" and given to George Roderick—you will get a receipt.  

**May 15:** Passport information due: we need a scan of your passport page with picture and info, birthdate, and permanent address; This is needed for processing our protocole d'accueil. It should be sent as a PDF to Brent Mishler by email.  

**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). 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. Project review from previous years, discuss what makes a good project, and suggestions for potential topics.  

**Sept 4-16:** We will meet each morning at 9:00 plus some afternoon workshops. Schedule will include these topics and others:  
Geology of tropical oceanic islands: tectonics, structural geology geophysics, geomorphology, paleoceanography, climatology, reef structure, and reef evolution  
Island biology, with emphasis on plants; insects; fish, marine invertebrates; Phylogenetics  
Peopling of the Pacific; Human impacts on island ecosystems; Ethnobotany of Polynesia  
Tours of herbarium and museums (curators of collections)  
Discussion of possible projects with current and past GSIs  
Introduction to library and information resources; How to take scientific notes  
Terrestrial arthropod diversity on islands, Invasive organisms on islands  
Freshwater ecology on Moorea  
Field exercises on plant and arthropod ecology, stream ecology  
Methods for characterizing and studying behavior; Dangerous marine animals  
Introduction to scientific thinking and communication in science  
Introduction to statistical thinking; Statistics workshop  
Islands and popular culture  
Required water safety and snorkeling instruction; swimming test  

**Sept. 17:** Exam on lecture & workshop material  

**Sept. 18-21:** Free days to pack, get ready, and travel -- arrive in Tahiti by 9/21.  

**Sept. 22:** **Arrive at Gump Station on Moorea on Sunday, 22 Sept.** (morning pick-up at ferry). Settle into your room.  

**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 (tentative date - subject to change). 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.

Money matters

Anticipated costs of the course (class materials fee) will not be more than $4,800 for housing, food, lab/field materials, and in-country travel (after you reach the Gump Station up until the end of the Moorea part of the course in November). We will give you an update on fees in mid-summer. The $500 deposit is part of this $4,800, so you will need to pay the remaining $4,300 through CARS approximately on October 1. You will also be responsible for the round trip airfare from the Bay Area to Tahiti (airfares may vary significantly depending on time of purchase and itinerary -- start looking now!). See the Gump Station website for travel information and/or talk to your own travel agent and/or classmates. Financial assistance is available for qualified students through the Financial Aid Office, 211 Sproul Hall. Students currently on financial aid can have their fall budgets and allocations adjusted to reflect these additional costs; please see your financial aid counselors about this and/or talk to us.

Items that are not covered in these fees include your entertainment, special dietary needs or wants, alcoholic beverages, trinkets and gifts, private travel, recreation, personal toiletries, soap, and other personal items.

Visa and protocole d'accueil

For this course, US citizens now need only a passport and protocole d'accueil to enter French Polynesia and stay at the Gump Station for this time period. A visa is not needed for stays up to 3 months. If you do not have a US or EU passport, you will responsible for getting your own visa, if needed, The Gump Station maintains a web page with current rules: http://moorea.berkeley.edu/travel/visa-requirements/. We will email details if there are changes.

You must have a passport valid for six months beyond the last day in French Polynesia. If yours is about to expire, renew immediately! You may need it ahead of time to get your protocole d'accueil.

Each student in the class needs to send me a scan of the two main pages of your passport showing photo and your information, e.g. number and expiration date (this is a two-page spread, so give me one scan of your passport open to these pages). Also, I will email you an Excel file asking for some information. You need to return the information and passport scan to me May 17th at the latest, so I can send them all together to Gump Station, which will then make arrangements for us with the government. The information is required by the government before they will send us the class protocole d'accueil (research permit).
Gump Station Rules

The full Station rules are available on the web; the most important are being handed out today separately for you to sign. We want to emphasize the importance of these rules, which are based on common sense. The station has the authority to send disruptive students home at anytime. The local authorities are also quick to take action on legal matters, which at a minimum would be expulsion from French Polynesia. **We want to particularly underline the prohibition against illegal drugs.** You must not transport, purchase, sell, or use them; doing so would jeopardize more than just your future, it would endanger the future of this class and the station. The professors, GSIs, the station, and the local authorities, must be very strict on this issue. Also, remember that in a foreign country you are ambassadors for Berkeley and the US, and you must behave accordingly.

Water Skills

Everyone will be expected to participate in exercises in the lagoon. Swimming skills are essential and snorkeling is desirable. A swimming test and snorkeling lesson will be required as part of out activities in the fall. You should practice snorkeling in the ocean or pool so that you are comfortable with the gear. For this class and for Moorea everyone will be expected to have her/his own mask, fins and snorkel, as well as diving booties and gloves (gardening gloves do just fine). We recommend getting a good solid pair of booties for walking around on the reef, etc. These items can all be purchased around the Bay Area, but if you have them already don’t forget to bring them to Berkeley in the Fall. Again, more info about this will be discussed at the beginning of the semester.

Required Course Texts:

- *Handbook of Biological Investigation*, most recent is 7th ed. 2007 (Ambrose et al.); earlier eds ok.
- *Lonely Planet Guide to Tahiti and French Polynesia*, most recent is 8th ed. 2009 (Brash & Carillet)
- *Elements of Style* (Strunk and White)

Also see: [http://ib.berkeley.edu/moorea/](http://ib.berkeley.edu/moorea/). Things will be busy in the Fall; this summer would be a relaxed time to prepare yourself for paradise with general readings and watching 3 versions of *Mutiny on the Bounty*!

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](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%)

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Atitia Center
Moorea 2013—Proposed Packing List
List of supplies to take with you—we will discuss again and update this list in the Fall.

Required

- passport
- copy of Passport and important documents/cards
- nice clothes for travel, meetings in Papeete, and evenings out
- t-shirts/tops (many)
- loose fitting long-sleeved top
- shorts to wear hiking and around
- field pants (or zip-offs; jeans take a long time to dry)
- socks, underwear, etc.
- hat for sun
- raincoat (not insulated)
- jacket or fleece
- good trail shoes for hiking (can be sturdy running shoes)
- bathing suit(s)/board shorts
- sun shirt or rash guard to wear around water, intertidal work
- snorkeling equipment: mask, snorkel, fins
- surf shoes, booties, or old sneakers that can get wet and cover toes
- gloves for snorkeling (garden gloves will do fine)
- flip-flops, tevas, or equivalent
- sunblock/sunscreen, chapstick with sunscreen (also available in FP)
- sunglasses (UV protection can be found inexpensively)
- insect repellent (Skin-so-Soft from CA; Citronella available in FP)
- personal first aid supplies; any prescribed medications with prescription
- bathroom items (also available in FP)
- daypack or small summit pack (large enough for a day in the field)
- multipurpose “Swiss-army” knife (but do not carry it on the plane)
- water bottle (plastic bottled-water bottle from FP is fine)
- flashlight (preferably headlight)
- digital camera, extra memory card, rechargeable batteries, charger
- waterproof notebook (will discuss in class), pencils or waterproof pens
- lab notebook (will discuss in class)
- magnifying loupe (hand lens; will discuss in class)
- USB memory stick
- credit card or debit card (not all credit/debit cards work; Visa does; check the web)
- laptop computer with wifi, 110-240v, and continental Europe electrical plug adaptor (see below)
- earphones or headset for Skype
- voltage converter if you will need to plug any 110v appliance in (electricity there is 220v !!)

Recommended and/or will discuss in class

- light travel sleeping bag or fleece roll
- binoculars
- GPS (recreational)
- guitar, frisbee, ...
- music, DVDs, portable speakers (note voltage)
- zip-lock bags

Plan to pack light—you don’t want to have to carry a lot around before and after the class. Also, we will ask each student to help carry to Moorea some class supplies and small equipment. We will discuss this more. Many items on the list and all consumables can be found in FP, but are more expensive.