

# **Field Course in Biology, Ecology, Environmental Health and Conservation of Antillean Manatees and Bottlenose Dolphins; GIS mapping and boat surveys**

**Field Site: Hugh Parkey's Resort**

**June 19-26, 2012**



**Texas Woman's University**

**Health Studies**

**2012**

**Professors:** Dr. Jody Terrell, Health Studies Department, Texas Women's University

**Date:** June 19 – June 26, 2012 Hours: 8am – 10pm (6 days) – Total 7 days

**Location:** Hugh Parkey's Adventure Lodge, Belize, Central America

**Cost:** \$1500.00 plus air fare -12 per Dorm Room with shared bath

**Class Limit:** 25 Students

**Students:** This course is planned as an equivalent to a lower-to-upper division college course in biology and environmental health science. Participants must be 18 yrs of age and have educational or life experiences equivalent to at least a term of Freshman-level Biology and/or Health Science.

**Hours of Instruction:** 15 hours formal lectures, 24 hours interpreted field study and field methods, 11 hours laboratory demonstrations, and 20 hours guided field observation (data collection and snorkeling). Total instruction: 70 hours

Students will also have orientation meetings and group meetings at the Texas Woman's University Denton Campus for pre and post flight meetings and presentations.

**Course Description:** Students participate in hands-on field study. A combination of instruction in both general marine mammal ecology and specifics about bottlenose dolphins and Antillean manatee, Loggerhead turtles and the coral reefs in Belize will be discussed. We will also learn field assessment methods for dolphins, manatees, and turtles their habitat, including GPS use and basic GIS location mapping, and talk about conservation issues in an isolated tropical ecosystem. The class goal is to provide participants a focused, comprehensive knowledge of marine mammal ecology along with the environmental health issues facing our oceans and coral reefs today.

**Final Presentation:** The final presentation on Monday night, June 26<sup>th</sup>, will address a topic of particular interest to each student. Each student team will present their power point on the learning experiences and the topic they received at the beginning of the course (June 4<sup>th</sup>). After the trip, students will be responsible for posting a power point of their experiences on the blackboard that is set up for this course.

**Participation in the field:** Each student will be assigned various data collection activities in the field, which will rotate to give each student a chance to experience them all. This will include searching for animals, data recording, GPS recording, identifying corals, different species of fish, and various types of environmental data recordings.

**Participation in Discussions:** Students will be encouraged to engage in discussions about the issues raised in lectures, labs, and field activities during all activities.

**Text:** No text. Handouts will be provided. Recommended reading mailed prior to class.

**Air:** We are searching for the best price for group tickets through American Airlines and Continental Airlines.

**Luggage Restrictions:** For luggage restrictions, please check with the international airline you are traveling with. We will know more when the tickets are purchased as to how many bag can be checked at no cost. Currently, first checked bag is free, but there is a \$50.00 for the second bag. (Please check with American Airlines as this may change) You are allowed one carryon bag and one personal bag, which would consist of a purse, laptop or backpack. Please check with your airline for the luggage restrictions.

**Entry/Exit:** Passports are required for travel to Belize. Visas are not required for U.S. citizens. There is an airport departure tax of US \$39.50 which is not included in your trip fee (payable upon departure from Belize, in U.S. or Belizean currency).

**Health & Fitness:** Although group members must know how to swim and be in general good health, no other skills are required to participate. It is helpful to have prior snorkeling experience so as to be more comfortable in the water. You will need to bring your own Mask, fins and snorkel. Hugh Parkey's vessels have vertical swim ladders, and some agility is needed for getting in and out of the vessels and water.

**Health Precautions:** There are no endemic diseases in Belize, and no vaccinations are required. If traveling to the inland regions of Belize, anti-malaria pills (chloroquine for Central America) are advisable to take against malaria. Belize physicians and the Center for Disease Control have reported that there are no incidences of malaria on the Cayes near the Belize coastline, at this time. If you are concerned about whether to take precautions against malaria, please consult with your personal physician. In addition, Hepatitis A vaccine is recommended if you are to travel to on your own. For travel anywhere, a physician might remind you to get updated tetanus and diphtheria vaccinations as needed. Hepatitis and diphtheria are generally associated with poor sanitation. Risk of exposure is low in the areas we will be visiting.

**Travel/Vessels:** Crossing from Belize City to the Resort will usually be aboard a 43-foot motor vessel with covered top. The transfer takes approximately 30 – 45 minutes. Snorkeling and natural history excursions will be conducted from a 23 – foot open skiff or similar, with sturdy vertical swim ladder and canopy top.

**Climate:** Belize is subtropical. The Cayes are tempered by trade winds throughout the year. Air temperatures can range from 60\* to 90\*F. and water temperatures from 73\* to 88\*F—both generally average in the 80\*s. Rain is always a possibility and usually doesn't last very long.

**Electricity:** The standard electrical current in Belize is 110 volt AC, the same as in the U.S. At the resort generators powers electricity we use. They will keep the electricity on all night. A flashlight with extra batteries will be useful for walks at night and also if the generators go out, which is a possibly.

**Meals:** 3 great Belizean meals per day served buffet or family style and prepared by the Hugh Parkey's Staff.

**Time Zone:** The time zone in Belize is the same as U.S. Central Standard Time: Belize does not follow Daylight Savings Time.

**Currency/Exchange:** The monetary unit in Belize is the Belize dollar. The fixed rate of exchange is BZE \$2 to US \$1. A supply of small bills, \$1, \$10s and \$20s are helpful for your purchases in Belize, and for beverages at the Resort. U.S. dollars are accepted at most places; change is in Belizean currency. (US coins are not accepted)

**Location...**This is everything when you "*make the connection*".

The Barrier Reef is minutes away, Turneffe Islands Atoll is under one hour away, Lighthouse Atoll is 2 hours away, and Manatees are now literally in our backyard. Hugh Parkey's Belize Dive Connection is perfectly situated to take care of your diving, water sports and inland needs. There are two classrooms to accommodate our class with a Manatee museum so hands on learning will be available.

### **Where to connect**

- The Hugh Parkey's Belize Adventure Lodge on our private island located 7 1/2; miles southeast of Belize City

- The Radisson Fort George Hotel & Marina in Belize City.
- TWU Students will be met by the staff of Hugh Parkey's Adventure lodge. It will be a short ride to the Radisson Fort George Hotel, where you will connect with the Hugh Parkey's Adventure lodge boat for a 30 minute boat ride to the resort.

These properties offer two very different experiences of Belize. Including accommodations, service, and cuisine that is truly special.

Hugh Parkey's Belize Adventure Lodge is located on Spanish Look-Out Caye just 1 ¼ miles inside Belize's Barrier Reef. We are a short (20-25 minutes) boat ride from the Radisson Marina and offer 12 over the water cabanas with ceiling fans, private baths and views that you can't believe.



#### **Dive Connection Services**

Hugh Parkey's Belize Dive Connection is a full-service dive and water sports facility with 2 locations at Spanish Look-Out Caye and on the dock at the Radisson Fort George Hotel and Marina. It is also a member of the PADI International Resort Association. All of our dive and snorkel excursions, whether they are to the Barrier Reef, Turneffe Islands Atoll, or Lighthouse Atoll, depart from one of these 2 locations. Additionally, we provide rental equipment, air fills,

retail sales, and instruction. Courses offered through Hugh Parkey's Belize Dive Connection include the following:

- Discover Scuba Diving
- Open Water Instruction & Certification
- Open Water Referrals
- Advanced Open Water Instruction & Certification
- Reef Fish Identification
- Numerous Specialty Certifications

There are 4 full-time instructors on staff and a thorough understanding of your concerns, needs, and safety for your particular course will certainly make your instructional experience one to look forward to with anticipation.

**BELIZE**  
**Student Group**  
**Suggested Clothing & Equipment List**

Clothing should be lightweight and informal. Pack lightly! Shorts and lightweight short-sleeved shirts are highly recommended; loose lightweight long pants and long-sleeved shirts can provide sun protection while snorkeling, and help protect against insects. Cotton or one of the new synthetics is probably the best material. For footwear, we recommend tennis shoes and sandals. You should also bring along a sweater or jacket for cooler evenings, and suggest bringing raingear (jacket with a hood or poncho). The sun's rays are more direct than in the northerly latitudes, so be prepared with head covering, lots of sun blocking agents, lip balm and sunglasses. A Lycra outfit is a good but not necessary idea year-round for sun protection. A Shorty-wet suit or Lycra also recommended for the cooler months. Insects are a fact of life in the tropics and can be annoying when the trade winds stop and sometimes during these times. Bathing towels are provided in your rooms, but you must bring you own boat/swim towel. There are no laundry services, though clothesline and clothespins are provided. There is purified water available to fill bottles brought from home.



**Clothing**

- Bathing Suits 1-2
- Long pants 1-2 for sun protection, bug protection & for nighttime warmth
- Long sleeved shirts (1-2) loose & lightweight
- Optional Lycra outfit
- Raingear – jacket or poncho with hood (water resistant & good for boat/beach)
- Sandals – Tevas or similar brand with strap (water resistant & good for boat/beach)
- Shorts – 4 pairs
- Socks – 3 pairs – to wear with fins, and for the warmth
- Sun hat with strap, or baseball cap to wear on the boat (one that will stay on in the wind)
- Light jacket for nighttime warmth & bug protection
- Sweatshirt, light jacket or windbreaker for boat excursions and nighttime warmth
- Tee – shirts – 4-5, 1 long-sleeve for snorkeling tennis shoes – to be worn boat/beach
- Underwear and under clothing( light cotton pants/ leggings for sleeping in or lycra/nylon leggings for warmth in the water)
- Optional wetsuit – 1 thin or short or 1 dive vest
- Bandana/ Cotton Scarf



**Other:**

- Batteries (for camera & flashlight)
- Binoculars (lightweight 78x35 or 8x30)
- Boat/ Swim Towel
- Camera (you may wish to bring plastic bags to protect your camera against moisture and sand, or bring disposable cameras, such as underwater disposable cameras if desired)
- Daypack (water resistant, is best for boat)
- Film – bring at least twice as much as you expect to use
- Flashlight – specific instructions for flashlight will be given
- Flash drive or computer disc
- Games, cards, walkman, activities as desired
- Insect repellent (with DEET for maximum protection) & Avon’s Skin-So-Soft or similar is helpful against “no-see-ums”
- Itching remedy (Cortaid, Sarna, After Bite, Alcohol) check with physician or pharmacist for recommendations
- pens, journal for writing. (directions on the journal to purchase will be given in the information sessions).
- Prescription medication (with dosage instructions)
- Seasickness medication ( if sensitive to boat rides: usually not too bumpy in the Caribbean)
- Snorkeling gear ( mask, snorkel, & fins)
- Sun screen & lip protection(SPF 15 or higher)
- Sunglasses (polarized are suggested yet optional)
- Swimmer’s Ear (optional)
- Toiletry articles – biodegradable shampoos & soaps
- Travel alarm clock
- Watch (water resistant if wearing on boat)
- Water bottle

Curriculum guide and handouts will be given at the first class meeting of Summer II. Information will be posted on the Blackboard Shell.