

**June 16-25, 2009**

Thank you for your interest in the Palomar College Field Program. This course, The Greater Yellowstone Ecosystem, will introduce you to one of the few places in the continental United States that is still nearly as it was when the first European explorers found it. This document will provide you with some general information about the course, and define instructor expectations for participants.

### **Instructors**

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### **Fees, Travel, and Enrolling in the Class**

Participants have two options—tent camping or staying in cabins. The course fee for tent camping is \$160.00. The cabins have two beds (double and single at Colter Bay Cabins in Grand Teton National Park, and two single beds at Canyon Village in Yellowstone National Park); a private bath; and linens and towels are provided. The course fee based on two students per cabin is \$640.00 per person. If more than two students wish to share a cabin, the per-student cost decreases, but someone may be sleeping on the floor. The course fee based on three students per cabin is \$480.00 per person, and for four students per cabin the fee is \$390.00 per person. The fees cover accommodations, and costs related to rafting, canoeing, and instructor expenses. The course fee does not cover transportation costs or meals. Students must also pay the per unit registration fee.

To reserve a place in the class, contact Dan Sourbeer at (760) 744-1150, extension 2775, or email dsourbeer@palomar.edu and enroll in the class when normal summer enrollment begins. Dan will verify that space is available. The course fee must be paid to the Palomar College Cashier, or you may mail or leave a check with Dan Sourbeer and he will take it to the cashier for you. The fee may be paid by cash, check (payable to Palomar College), or credit card. Be sure to get a receipt! **Course fees may not be refunded in full, unless a replacement student can be found.** In addition to the course fee, a fee of \$20 per unit, a \$2 accident insurance fee must be paid to actually register in the class.

The course will take place in Grand Teton and Yellowstone National Parks in Northwestern Wyoming. The fees described above do not include transportation and meals. **You will need to find your own transportation to and from the class.** You may wish to carpool or caravan with others taking the course, and arrangements can be made at the preliminary meetings (discussed below). If you decide to carpool with others, be sure you are in agreement before you leave, about who is paying for what expenses, who is bringing what equipment, safety, etc. Courtesy, cooperation, and tolerance are keys to successful carpools, and by extension, a successful field course.

There are several classes for which you may register and they will be offered concurrently. Students for all classes will be doing largely the same activities. Regardless of the course taken, biology and ecology are at the core of all activities and discussions. As a participant in a Palomar College Field Course, you are a member of a class that is conducted in the field. **I can almost guarantee that you will have the time of your life over these ten days, but it is imperative that everyone embraces the concept that it is a learning experience, and that everyone involved is both student and teacher.** You may enroll in any one of the courses listed below, depending on what subject areas you wish to emphasize during our time in Wyoming. You enroll in the course as you would for any summer course.

### **Biology 195 or Zoology 195 (3 units)**

These courses are transferable elective credit courses, but they will not satisfy the Natural Science laboratory requirement for UC/CSU.

### **Biology 45 (three units)**

This course is designed for children under 15 years of age. Children must be accompanied by a parent, and the parent must be enrolled in Biology 195, Zoology 195, Biology 295, Zoology 295, or Biology 114L.

### **Biology 114L (2 units)**

This course will satisfy the Natural Science laboratory requirement for UC/CSU. To take this course you must have completed Biology 114 or Biology 101 (etv and telenet Biology 101 are being offered this summer, Biology 114 is not), and the requirements for this course are more stringent than for Biology 195.

### **Biology 295 or Zoology 295 (2 units)**

These courses will satisfy the Natural Science laboratory requirement for UC/CSU. To enroll in Biology 295 you must have completed a relevant course in the natural sciences and will need the permission of one of the instructors. The requirements for this course are more stringent than for Biology 195.

### **Class Meeting**

Our first class meeting, a general information meeting for anyone enrolled or interested in the class, is tentatively scheduled for Saturday, **April 18** at 9:30AM, in room NS-137. This meeting will address such topics as the itinerary, activities, safety, general features of the ecosystem, and answering questions. More academic topics will be pursued as time allows. Our second meeting is tentatively scheduled for Saturday, **May16**, at 9:30AM in NS-137. These meetings are very important, so please plan to attend.

### **Presentation and Paper**

Everyone is required to research a topic of their choosing, and complete a short paper (approximately 1000 words—four pages) on that topic. The paper is used to do a short presentation (no more than 10 minutes long), a “fireside chat” if you will, during the ten days we are in the national parks. The topic of the presentation should be “biological” in scope, and relate to the Yellowstone Ecosystem and the course in which you enrolled. Topics typically range from the life history of area animals and plants, to balanced discussions of more controversial topics (grizzly management, bison management, fire management, wolf reintroduction, etc.). Decide on a few potential topics and contact Dan Sourbeer for approval. Topics are approved on a “first come, first served” basis. I would like everyone doing a different topic. Children may be allowed to work with a parent or sibling if they are too shy to do a presentation alone.

## Naturalist's Journal

Everyone will keep a journal of his or her activities, observations, etc. during the course. The journal will be turned in at a "reunion" meeting sometime after our return. The journal is explained below. The degree of expectation or rigor required varies with the course taken.

As a naturalist, you will be studying organisms in their natural habitats focusing on characteristics of identification, life histories, animal behaviors, adaptations to their environment, geographical distribution, and economic importance. It is important to be as precise as possible in recording this observational data. When going into the field each day you should carry a small **field notebook**. The field notebook may receive considerable abuse, and should be small enough to carry conveniently **wherever you go**. Field notes should be taken in pencil or waterproof ink. Inside the front cover write your name, address, phone number, and the dates you begin and end the notebook. Date each page, and note the time and location of each entry. Notes should be brief and accurate. Make drawings as needed. If possible, transfer the information from the field notebook to the Naturalist's Journal (discussed below) the same day. During this information transfer you may want to consult references and classmates to verify identifications, information, and improve your understanding of concepts.

The **naturalist's journal** should not be carried into the field. It is a large notebook or binder that should be maintained in relatively good condition. Entries should be made with waterproof ink. **It is both a personal and scientific record of your experiences.** Use the following guidelines for your journal.

- ◆ On the front cover print the title of the journal:

Naturalist's Journal

Greater Yellowstone Field Course

Department of Life Sciences, Palomar College

Inclusive Dates

by

Your Name

- ◆ On the back of the front cover write your name, address, phone number, and inclusive dates of the journal.
- ◆ Number all pages consecutively in the upper right corner.
- ◆ The journal should be organized by days. Each day's entries begin with the day of the week and the date placed on the left side of the page (e.g. Wednesday, August 3). Locations should be described from most specific to most general (e.g. Pelican Valley Trailhead, Yellowstone Park, Wy). At the end of the journal you will list a summary of the organisms encountered (see below).
- ◆ The journal should include the following information: species encountered that day, the time observed, and notations about particular traits important in their identification; behaviors observed; habitat identification and characteristics; geological formations observed and comments about how they relate to the ecosystem; weather conditions and how they affect the organisms/ecosystem; names of people and information from lectures and conversations; your personal reactions to what you hear, see, and experience; and photographic information, e.g. location, film type, film speed, shutter speed, F stop, etc. to improve your pictures.

- ◆ Other comments: specify location and numbers of organisms described; try to identify all species observed indicated by its common name followed by its scientific name whenever possible; discuss what animals and plants are related and what features suggest relatedness; leave space in your journal for later insertion of pictures or additional information; and write in complete sentences, do not use abbreviations or shorthand.
- ◆ The journal should be a neat, accurate, scientific document of which you can be proud. It can be of value to you and others studying the same area in the future, and your instructors will read it with great interest.
- ◆ For those taking Biology 114L, laboratory exercises, quizzes and other assignments should be included on the days in which they were done.

### **Grading (Biology 195, Biology 45, and Zoology 195)**

In determining your course grade assignments will be weighted as follows:

Paper and Presentation	33%
Participation (in all activities, discussion groups, reviewing day's activities, keeping field notes, etc.)	34%
Naturalist's Journal	33%

### **Grading (Biology 114L, and Biology 295)**

In determining your course grade assignments will be weighted as follows:

Paper and Presentation	30%
Participation	25%
Naturalist's Journal and all other assignments	45%

### **Conduct**

Remember you are a member of a Palomar class that is conducted in the field. Your conduct can endanger your own health and safety, the health and safety of others, your instructors' careers, and the future of the Palomar College Field Program. In order to make this an enjoyable and safe learning experience for everyone, please adhere to the following rules.

1. Be on time. If you are not at an appointed location at a departure time, **you will be left behind.**
2. Obey all speed limits, warning signs and other rules and regulations of the state and federal authorities in the areas in which you will be traveling.
3. Do not approach wild animals.
4. Do not place yourself or others in danger with unsafe behavior including alcohol intoxication.
5. Do not wander off or hike by yourself. Always travel with at least one partner, **preferably in groups of four or more.** Let others know where you are going and when you expect to return.
6. Stay on marked trails or paths.
7. Think clearly about the **potential** consequences of your actions.

8. **The instructors reserve the right to drop any student from the course for inappropriate or dangerous behavior.** If this occurs, you must immediately dissociate yourself from the class; and find your own accommodations and transportation home. This could result in considerable expense to you.

### **Biology 114L and Biology 295 Students**

The course expectations are higher for these courses than Biology 45 or 195. The quality of the journal, paper, and presentation should reflect a student who has some previous background in the biological sciences. You will be expected to participate in all activities.

**General Questions**--Hopefully the following will answer many of your questions. If you have more, be sure to contact Dan Sourbeer or Carey Carpenter.

**1) When and where does the course begin?**

The class officially begins Tuesday, June 16, at Colter Bay Cabins, Grand Teton National Park (time to be determined).

**2) When and where does the course end?**

The class will end the evening of June 25 in Yellowstone National Park. Accommodations include the night of June 25.

- 3) Where are we staying, and what are the accommodations like?** We will be staying at the Colter Bay Village in Grand Teton National Park June 16 through June 20 (departing June 21). Depending on the option selected, students will be staying in cabins or at a campsite. The cabins are very nice, with private bathrooms and showers in the cabins. There are two beds per cabin and so there will be two students per cabin unless otherwise arranged with the instructors. Students who are camping will be staying in a group or individual campsites in Colter Bay Village. The campsites have toilets and sinks at the campsite, and showers are available at a nearby laundry facility for a fee. Colter Bay Village has a grocery store, laundry facility, showers, gift shops, restaurants, and a Visitor's Center.

All students will stay at Canyon Village in Yellowstone National Park June 21 through June 25 (departing June 26). Canyon Village also has the same facilities as mentioned above for Colter Bay: cabins, campground, restaurants, laundry, showers, gift shops, etc. All of the cabins have daily maid service including towels. Cabins lack phones and televisions. Cell phone reception will be spotty at best, and much better in Grand Teton NP than Yellowstone NP.

**4) What will we be doing?**

A tentative agenda is listed below. We will check with the rangers to see where bears, wolves, and other wildlife are active and adjust the itinerary as necessary. We will use our cabins as a base of operations, and choose from a variety of options daily. These activities include day hikes, as well as some rafting and canoeing in Grand Teton National Park. Hikes are typically between six and ten miles (round trip) at altitudes above 7,000 feet. We stop frequently, however, to observe, record, and discuss a variety of phenomena. We typically start very early in the morning and finish in the mid to late afternoon. You will need to assess your physical ability and health and decide if you want to participate in the scheduled activities. If you are not comfortable with an activity, then do not do it—you are not required to participate and may do an alternate activity. It is your decision. You will be required to sign a waiver of liability before enrolling in the course. Those in Biology 114L or Biology 295 may have specific activities to accomplish on some days, which differ from the rest of the students.

**5) What should I bring?**

We will discuss this at our face-to-face meetings. You definitely want to be prepared for the weather (see below). It is better to have too much warm weather clothing than too little. A quick list would include: binoculars, sunscreen, camera, and rain gear. Feet will get wet in canoes and rafts, so plan accordingly. Those students that are tent camping will need a tent that has a WATERPROOF rain fly and sealed seams.

**6) What about the weather?**

Anything and everything is possible. In the past we have seen temperatures range from 20<sup>0</sup> F (with snow) to over 90<sup>0</sup>F in the same day! Thunderstorms are a certainty, and prolonged rains are possible. It is crucial that you have quality rainwear. You must assume responsibility for your own comfort and safety. The weather can be an opportunity or an obstacle. Some of our fondest memories of this area occurred in the vilest weather. For weather conditions in the area call (307) 739-3611. The weather conditions are so fickle, however, the value of the information is questionable. All cabins have heaters, but no air conditioning.

**7) What about food and laundry (and showers for campers)?**

There are grocery stores, laundry facilities, coffee shops, cafeterias, and restaurants scattered throughout the National Parks. We will normally be starting early in the morning, before restaurants are open, and will be in field at lunchtime. We recommend having cereal or something “easy” in the morning, and packing sandwiches, etc. for lunchtime. Most students bring a few groceries and an ice chest and replenish supplies at area grocery stores. You will typically have late afternoons/early evenings to yourselves, and that is the best time to exploit restaurants, etc. Cooking is prohibited in the cabins, but we will gather at nearby picnic areas or the group campsite to do our cooking in the mornings and/or evenings. Laundry facilities are available in Colter Bay Village and Canyon Village. Showers are available at the laundry facilities (\$2 to take a shower as I recall, extra \$1 for towel).

**8) How long does it take to get there?**

About 18 hours to Jackson, Wy. (from Valley Center), and 22 hours to Canyon Village in Yellowstone.

**9) What is the best way to get there and what are some things to see along the way?**

We will discuss this at our preliminary meetings, or contact Dan or Carey if you want to plan ahead.

**10) What about safety?**

We are going to be in a wild place and our primary concern is safety. We cannot, however, guarantee anyone’s safety. Bears, for example, are a very real danger, as are bison, elk, and moose. Everyone should carry a canister of “bear quality” pepper spray into the field, and keep it handy at all times. You will likewise need to assess your physical ability to do hikes, canoeing, etc. If you are not comfortable with an activity, then do not do it--there are always alternate activities. Hikes will typically be between six and ten miles (round trip) at altitudes above 7,000 feet. We stop frequently, however, to observe, record, and discuss a variety of phenomena. We typically start early in the morning and finish in the mid to late afternoon. We will also be canoeing one or two days, and rafting one day. If you are uncomfortable with any activity you may choose to do something another activity. You will be required to sign a waiver of liability before enrolling in the course.

**11) What about extra money?**

Be sure you have adequate funds for transportation, and food. Anticipate what you will do if you have car problems, etc. ATM’s are available in the National Parks.

**12) The following directions will be needed for some of our activities.**

**a) Directions to String Lake canoe launch from Colter Bay Village.**

Take Hwy 89 (main road) south past Jackson Lake Lodge. You will see a sign that says “Approaching Jackson Lake Junction.” Turn right at the junction, and you will see a sign that says, “Signal Mt., Jenny Lake, Moose.” Drive 9.7 miles passing over the dam, traveling generally south until you see another sign on the right that says, “String Lake (?), Scenic Drive, North Jenny Lake, and turn right as directed by the sign. Proceed 1.4 miles, and look for a sign that says, “String Lake Picnic Area, Trailheads, ” and turn right as directed by the sign. Look for a sign, “Canoe Launch,” and find the canoe launch off a parking lot to the left.

**b) Directions to Jackson Dam launch area from Colter Bay Village.**

Take Hwy 89 (main road) south past Jackson Lake Lodge. You will see a sign that says “Approaching Jackson Lake Junction.” Turn right at the junction, and you will see a sign that says, “Signal Mt., Jenny Lake, Moose,” and one that says, “Approaching Jackson Lake Dam.” Make a left at the first road past that sign (about 100 yards). If you take the road over the dam, you’ve gone too far. Unload gear at the river and park near the restrooms.

**c) Directions to University of Wyoming Research Station (AMK Ranch)**

Take Hwy 89 (main road) north to Leek’s Marina. Turn left onto the road that leads to Leek’s Marina. Then look for a sign on the right marking a road to the University of Wyoming-NPS Research Center (AMK Ranch). Turn right where indicated and follow the road to its end, find a place to park, and make your way to the main lodge for a barbeque and “talk” by one of the researchers.

**13) Some useful phone numbers are listed below.**

Colter Bay Visitor Center	(307) 739-3516
Moose Visitor Center (primary information center)	(307) 739-3300
Grand Teton Lodge Co. (to access Colter Bay Cabins)	(307) 543-2811
Xanterra (Yellowstone Res center, can refer to campgrounds)	(307) 344-7311
Yellowstone Road Conditions, etc.	(307) 344-7381
Wyoming Road Conditions	(307) 733-9966
Teton Road Conditions	(307) 739-3601
Wyoming Weather Conditions	(307) 739-3611

**Abbreviated Tentative Agenda—June 2009**

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
		<b>16</b> Meet in Colter Bay at 4PM	<b>17</b> Hike, Granite Canyon	<b>18</b> Dawn float Snake River, Canoe String Lake, U. Wyo Res. Station	<b>19</b> Canoe Ox Bow or Leigh Lake/ Slide Lake	<b>20</b> Hike Cascade Canyon, Laundry Day?
<b>21</b> Move to Canyon , wildlife spotting	<b>22</b> Lamar Valley , Slough Creek, Barronette Peak	<b>23</b> Pelican Valley	<b>24</b> Mount Washburn,	<b>25</b> Canyon Hikes, Trout Lake	<b>26</b> Go home or on to the next adventure	

If you decide to withdraw from the course, let Dan know **IMMEDIATELY**. Also please do not hesitate to call if you have **any** questions or concerns.