HABITAT CONSERVATION AND MOUNTAIN ECOSYSTEMS:
THE NEPAL PROJECT

April 11 – May 24, 2017 (Spring 2017)
September 22 – November 4, 2017 (Fall 2017)

Meeting Place: Kathmandu, Nepal
15 quarter credits/10 semester credits

FULL PROJECT DESCRIPTION

Thank you for your interest in our Wildlands Studies program in Nepal. We have taught field ecology courses in the Himalayan region for many years now and are very proud of our continuing work in Nepal. We plan to return to eastern Nepal where large tracts of forest and alpine habitat intermingle with some of the highest mountains in the world. Our program will explore mountain areas that are only accessible on foot and are of significant importance to conservation. We'll be trekking and camping for most of the time at a variety of elevations, that range from near sea level to 15,000 feet or more. Details of our route will be finalized a few weeks before the program start date.

The broad focus of our Nepal program is the Himalayan ecology: environmental processes that shape Earth's highest and most dynamic mountains and the diverse communities of organisms that inhabit this magnificent landscape. Mountain building, erosion, and climate are linked in many ways that affect the Himalayan biota, and our ecological studies will examine and research these types of physical processes. We will also investigate the human cultural landscape of the Nepal Himalaya, and the conservation strategies of its many habitats, especially at the community level.

Our Nepal program is primarily a study in mountain ecosystems, but we will also study and investigate the Himalayan wildlife. A few species, like the red panda, snow leopard, or fire-tailed Myzornis, are so charismatic that people will conserve habitat for their sake alone. But there are untallied legions of other species as well. Some are fascinating but obscure (ostracods, bioluminescent fungi), disagreeable but capable (land leeches), or just plain problematical (invasive plants). Steep slopes and dense forests make it easy for shy, alert mammals to hide from pungent, vocal, stick-crunching humans, therefore, seeing a wild mammal will be very special experience for us, often possible, never assured. Much of what we learn about Himalayan wildlife comes to us indirectly: footprints in the sand or snow, poop shot through with fur and bones, the insights and observations of villagers whose daily routine takes them deep into the forests and alpine meadows.

Currently, people who live in the foothills and high valleys of eastern Nepal face rapid cultural change. The older generation relied on timber, tree fodder, and wild game – subsistence lifestyles rich in tradition but poor in material wealth. Younger generations are more worldly, relying on Nepal's growing road network and information technology to seek wage labor. If they farm, it's more often about the market than getting by until the next harvest. These kinds of transitions are happening worldwide, but there is no better place to discover all the realities and nuances of being a mountain-dweller in the Twenty-first Century than in eastern Nepal.

Contents of the Full Project Description:

I. Background Information

The Nepal Himalaya, with densely forested slopes and vast alpine landscapes, is a global hotspot for mountain biodiversity. One spectacular, ecologically rich zone is the region of eastern Nepal that lies between Mt. Everest and Kangchenjunga, two of Earth's three highest mountains. The topography here is remarkable: valley bottoms are warm and near-tropical; higher up, dense forests of aromatic laurel, hard-wooded oak and maple, as well as needle-bearing trees like hemlock and silver fir, receive abundant monsoon rain in the summer, snow in winter, and afternoon thunderstorms during spring. Forests here extend upward to more than 13,000 feet elevation.

Low elevations in our study area are settled and farmed with spectacular rice terraces constructed by the local residents over many generations. Middle elevation forests, too cool and wet to farm, support dense forests with large needle-bearing trees and a lower canopy of bamboo and rhododendron. Places like these offer habitat to rare mammals including black bear, musk deer, and red panda, each threatened by human activity. Currently, there is a particularly high level of concern about the survival of red pandas in Eastern Nepal because they are vulnerable both to local dogs and disturbance by tourists who want to view and photograph them.

Above tree line lie alpine habitats: meadows, stunted woodlands and a near-glacier zone where plants and animals are highly specialized to survive in a cold, unpredictable habitat. Large mammals include domestic yak, wild blue sheep, and a small population of the extremely rare and elusive snow leopard. At elevations of 16-18,000 feet, there is a transition to the exposed rock and permanent ice of the high Himalaya, where summit ridges extend upward to over 26,000 feet and where massive glaciers and energetic rivers are found. This region includes mountain slopes that are rising fast, even by Himalayan standards. The interplay of rapid uplift and rapid erosion creates some of the steepest topography on our planet.

Our study area supports people of diverse ethnicity, including Kirat who practice Hindu and Buddhist religions with many folk traditions. People on the south slope of the range tend to farm, while those in drier areas north of the high peaks rely more on trade and livestock herding. In eastern Nepal, people of diverse ethnicity occupy remote valleys far from the nearest road. On the outer slopes (facing India), Kirat people – the Rai and Limbu – inhabit villages to an elevation of about 7,000 feet; above this elevation, it is too cloudy to farm. In the drier, 'inner' valleys, Sherpa and other people of Tibetan ancestry cultivate grain and potatoes, and graze their yak to high elevation. During our program, we will engage with and learn from the different people who identify with each of these cultural groups.

This document tells about Nepal programs happening in both spring and fall, two of the most interesting and pleasant times to visit the Nepal Himalaya.

Spring is the warm, "pre-monsoon" season in the Nepal Himalaya. River valleys can be quite warm at this time (afternoon highs in the upper 80s to low 90s^{o} F), and the higher elevations are only moderately cold (nighttime temperatures near freezing). Late season snow squalls are possible at the highest elevations, but the snow tends to melt quickly when the sun reappears. Our highest elevations may still hold the remains of the winter snow pack. At the lower elevations, spring can be a time of spectacular afternoon thunderstorms, sometimes accompanied by hard wind, hail and other wild products of a dynamic atmosphere. Nights and mornings are usually clear. In the high alpine zone, sunshine is abundant and brings the sound of distant avalanches. Resident birds are especially active in the spring – more than a hundred species breed in the region we will visit. Rhododendron, primrose, and many other forest plants are coming into flower during the spring.

Fall is "post-monsoon" season in the Himalaya. Typical weather is a warm, sunny mornings and a cloudy, cool afternoon as rising moisture condenses. Mornings may offer spectacular views of the high peaks. Indeed, most iconic photographs of the Nepal Himalaya are taken in that period right after the seasonal rains have ended and the air is crystal clear. Stable, drier conditions are accompanied by cooler weather: when the sun is shining, it feels very warm, but nighttime temperatures can drop well below freezing at the higher elevations. Days are shorter in the fall, which means we might sometimes need to walk fast in the afternoon in order to reach camp by dusk. Finally, the fall is a wonderful season for local produce. According to elevation, we can get freshly sourced squash, exquisite miniature potatoes, radishes, tangerines, pomello, guava, ghost chili, and funny little green Nepali pumpkins. Fall is festival season in the Himalaya, with significant cultural activities throughout the region.

II. Project Goals and Activities

The Wildlands Studies Nepal program follows a trekking format. We are a mobile, nomadic group, traveling on foot through the backcountry. Many days we move our camp, but we also spend extended periods in places that provide especially interesting field study opportunities.

Our route will take us into valleys of the Septa Koshi drainage, which includes wild rivers like the Arun and the Tamur, and the high peaks that surround them. Despite a long history of human activity, this region still retains good habitat and, due to many steep inaccessible areas, viable populations of many wild vertebrate species. But remember, Himalayan birds and mammals are quick to hide from humans, so their signs are what we'll most often see. During the program, we'll record bird sightings and evidence of wild mammals, useful information for conservation scientists. Forest vegetation is another focus of the Nepal program. There are many rare plant species and the character of the forest changes continuously with elevation. Human activity is a critical component of the Himalayan ecology, not only as it affects wildlife and habitat, but also because Himalayan residents tend to be well-adapted to the environment where they live and extremely knowledgeable about it.

If time and weather permit, we may walk to high alpine elevations of 16-17,000 feet, although we will not sleep that high. We will be breathtakingly close to some very high peaks, but this is an environmental field study not a mountaineering program, so we will not venture onto glaciers or into terrain that requires mountaineering skills.

We begin our project at Chitwan National Park, an area of dense forest amidst the floodplains of southern Nepal. Chitwan supports viable populations of several endangered mammal species, including Asian one-horned rhinoceros, gharial crocodile, sloth bear, Asiatic bison, and Bengal tiger. There are also large

populations of several deer species, beautiful Hanuman langur monkeys, and numerous vultures and other birds of prey. It is here that we start our discussions about Nepal's conservation and wildlife management efforts and policies. After three days at Chitwan, we will continue eastward across the plains region of Nepal, then to our trailhead in the foothills.

Throughout the program, we will travel frequently on foot from one field study site to another, staying longer at places of academic interest. We will have with us a collection of articles in electronic and paper format, and a compact library of natural history references and field guides. In Chitwan we will stay in a lodge, in the mountains we will camp, although some of our campsites will be located in or near villages. We will use 3-person tents (for two people), and we will also have one tent that is big enough to accommodate the whole group for class activities in harsh weather.

In general, our days will begin early with fieldwork or trekking if we need to move camp. Most days are physically demanding but we try to pace the activities so there is enough time to study and observe as much as possible. In the course of a day, we may meet with local people, observe wildlife, or follow-up on the types of interesting and unexpected field observations that are frequent in the eastern Himalayan backcountry. Late in the day, we will recap and review our progress, and there will be a presentation or group discussions on aspect of Himalayan ecology. There will be regular assigned readings, and each student will be responsible for giving one presentation to the group on a topic of interest to them (and hopefully to the group).

Our field course in Himalayan environmental studies includes a range of topics on biological ecology, cultural ecology, and ecosystem management. Team members will also have the opportunity to pursue topics of special interest. A few examples might include traditional medicines, species conservation, agricultural ecology, climate change or social issues. During our program Wildlands Studies team members will gain practical experience in methods of ecological field research, and the information we collect will be useful to local conservation and sustainable development organizations within Nepal.

To sum up, classroom learning gives the impression that different areas of knowledge are isolated from one another. In the field, the boundaries that separate 'subjects' like wildlife conservation, the earth sciences, and cultural ecology tend to melt away. With some guidance, this information forms a richly integrated text. Teaching team members to read this text critically, and well, is our academic objective. **Please note that prior field research experience is not required. All the necessary skills of data acquisition will be taught on-site.**

III. Academic Credit

Students will receive 15 quarter credits/10 semester credits from Western Washington University. Our staff will be happy to explain the program in further detail to the applicant's advisor, if necessary. This field studies program gives credit in three courses:

ESCI 497T, Environmental Wildlands Studies (5 quarter credits/3.35 semester credits)
ESCI 497U, Environmental Field Survey (5 quarter credits/3.35 semester credits)
ESCI 497V, Wildlands Environment and Culture (5 quarter credits/3.35 semester credits)

Students will be evaluated on the basis of: 1) active participation in all field activities; 2) examinations; 3) interviews with local people; and 4) participation in discussions and all class activities. Team members are expected to conduct themselves in a mature and responsible manner. Wildlands Studies reserves the right to require any student to withdraw from the program if their conduct is detrimental to or incompatible with the interests, safety, or welfare of any course participants. We ask all students to read the Student Program Manual before joining the project on-site.

IV. Team Logistics

Participants will fly into Kathmandu, Nepal, and the group will meet at the Tribhuvan International Airport in Kathmandu. Participants can decide whether to fly home on the scheduled date or remain in Asia to travel on their own. Participants are required to bring some of their own camping and backpacking equipment for the Nepal Project. Things you need to provide include a sleeping bag, backpack and duffel bag. You can choose to bring your own tent, or we can provide one for you. You will **not** need a stove or cooking equipment on this program. Students enrolled on the program will receive a detailed gear list.

In the Nepal Himalaya we will spend most of our time trekking and conducting ecological field activities in roadless areas. All reasonable efforts will be made to follow the activities outlined above. However, please understand that on our Himalayan program, travel arrangements can remain slightly uncertain until the traveling actually occurs. Weather conditions, road closures, political and bureaucratic considerations may affect our plans. Wildlands Studies has put together a unique and innovative program, so team members need to be flexible, patient and prepared to adapt to unexpected situations. Being flexible also allows us to take advantage of unique opportunities that inadvertently arise during our journeys, often producing some of the program's most memorable moments.

V. Accommodations

Primarily camping, occasional hotel or rural lodge.

VI. Official Documents/Visa

You will need a current passport that does not expire until six months or more after the end of the program. Nepal entry visas valid for the duration of our program are issued on arrival at Tribhuvan Airport in Kathmandu. Currently the fee is $100.

VII. Language

The course will be taught in English. Students who are interested will have the chance to learn some conversational Nepali from our field staff, who gain much pleasure from sharing their culture with students.

VIII. Pre-Program Mailings

Detailed information regarding travel and visa information, equipment requirements, food costs, meeting plans, group expenses payment, medical and vaccination recommendations, and academic preparations will be sent to all team members in a logistics letter emailed about 8-10 weeks before the project initiates**.**

IX. Project Leader

CHARLES CHRIS CARPENTER: Ph.D. in Biological Ecology, UC Davis, 1991. Chris is a conservation scientist who has conducted field studies and led natural history expeditions in Asia for over twenty years. His main academic focus is the ecology and geodynamics of mountain environments. He is also interested in the marine world, environmental control of species richness, and strategies for habitat conservation. He lives in Chiangmai, Thailand, and teaches part of the year at Payap University. Chris has been teaching with Wildlands Studies since 1990 and has taught in China, India, and Southeast Asia. He currently leads our Indian Himalaya, Thailand and Nepal Projects.

X. Project Costs

Program Fee:	SPRING 2017: $4000 plus $150 Application Fee. Program fee due February 1, 2017. FALL 2017: $4150 plus $150 Application Fee. Program fee due August 1, 2017. Enrollment on a space-available basis after the fee due date until the program is full.
Estimated In-country Expenses:	SPRING 2017: $2700 per person FALL 2017: $2800 per person Includes meals in the back-country, in-country land travel by jeep or charter bus, accommodations, National Park entrance fees, logistical support in the field.
Food Money:	$100-200 (varies according to taste, dietary restrictions and exchange rate)
Personal Spending Money:	$200 (varies, but don't get caught out)
Gratuity for Nepal Support Staff:	$150 (collected at the beginning of the program)
Nepal Entry Visa on Arrival	$100
Estimated Airfare:	$1500

Students should inquire at the financial aid office of their home campus regarding the use of their loans or grants for this course. Wildlands Studies is not responsible for non-refundable airline or other tickets or payments or any similar penalties that may be incurred as a result of any course cancellation or changes.

XI. Contact Information

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