

## **COASTAL AND MARINE ECOLOGY OF THE INDO-PACIFIC: THE THAILAND PROJECT**

**Meeting Place:**  
**Los Angeles, CA**  
(time and location to be determined)

**January 22 – March 4, 2010\***

(Course dates have changed slightly since the catalog was published)

**12 semester system units (equivalent to 18 quarter system units)**

**Program Fee \$ 2595 plus \$75 Application Fee**

Thank you for your interest in our Thailand program. This winter, our team will explore the coastal and marine ecosystems of the Indo-Pacific along the Andaman coast of Thailand, and the Pacific coast of both Thailand and Peninsular Malaysia. Team members will spend seven weeks engaged in an ecological survey of key habitats on the coastal mainland and several offshore island groups. An outgrowth of our previous Thailand programs, this project enables a focused investigation of an environmental realm that is one of the most enthralling for ecologists, and which has achieved special concern in a world of shifting climate and carbon-balance.

The Indo-Pacific region supports the highest diversity of tropical marine life on Earth. Hundreds of species of reef-building corals form the substrate for an ecosystem that is spatially complex, dynamic and accessible. The number of fish and other animals that are resident on the reef seem nearly uncountable, and many of these species are highly co-evolved with one another. Our time spent in the water and along the shoreline enable us to experience first hand lifecycles of predation, competition, and cooperation in these rich marine ecosystems.

We'll divide our time between marine national parks that lie on the mainland, protecting habitats including mangrove forest and sea-grass estuaries, and offshore islands that support spectacular fringing coral reefs. Accommodations range from national park bungalows to tent-camping on the beach.

### **BACKGROUND INFORMATION**

Maritime Southeast Asia, as this region is known, has long been a cultural crossroads; today it enjoys some of the Asia's richest ethnic diversity. Chinese sailed south as early as the 15th Century, bringing Buddhist traditions. Arab merchants came across the Indian Ocean to trade, bringing their Muslim faith which today remains an important aspect of Malay culture. This rich cultural context enables us to focus on human ecology as we conduct our environmental studies. Several of the places we'll visit support ethnically distinct local populations, including indigenous groups like the Moken and the Uraklawoi whose animistic traditions offer an opposing viewpoint from the cultural norms of the Thai and Malay people. Our field study will include visits to coastal communities who fish for a living where their gear ranges from small-scale cast nets to large commercial trawlers. The depth of indigenous knowledge about the sea is remarkable, and we will enrich our program by tapping into this knowledge.

As we travel overland through southern Thailand and the Malaysian Peninsula, we will experience a diverse use of the coastal ecosystem. In some places, appropriate, small-scale harvesting of marine resources offers a sustainable local lifestyle; in other places, the human enterprise seems disruptive and unsustainable. Often, tranquil coastal communities become vulnerable to exploitation. Even within the national parks, there are challenges to maintaining healthy marine biodiversity and ecosystem function. Shrimp farming and charcoal making threatens the mangrove forests, which are recognized for their value as a critical buffer between the land and the sea, protecting the land from storms and tsunamis, and filtering sediment eroded from the land. Fish

trapping for commercial purposes threatens the marine diversity and the economic base in some coral reef areas, as does sloppy tourism development. With all these environmental challenges, surrounding us, we will be able to include shoreline ecosystem management as another key focal area for the program.

### **PROGRAM GOALS AND ACTIVITIES**

Our team will meet in Bangkok, Thailand, then move gradually southward through Thailand to the northern part of Peninsular Malaysia. En route, we will make extended visits to ecologically significant habitat sites including mangrove forests, sea-grass estuaries, sandy beaches, and the fringing coral reefs that flourish in the crystal-clear waters of the Indo-Pacific. Three of our field sites are island groups that lie well offshore. Two of these -- Ko Surin and Ko Adang -- are managed by Thailand's Marine National Park System and are located in the Andaman Sea, a part of the Indian Ocean. The third, Pulau Perhentian, lies in the South China Sea off the west coast of Peninsular Malaysia. With abundant sea turtles and large bumphead parrotfish, the Perhentian Islands are geographically and biologically quite distinct from the other places we'll visit.

The environmental history of each island group tells a unique story. All of the islands are remote, but Surin and Perhentian have historically been more isolated and better protected from encroachment. This is evident in the larger size of the fish, and the extensive and less disturbed coral gardens found in these places. As we will discover, for complex reasons the fishery at Adang has been more heavily exploited by local and outside interests. Today the national park is working to maintain biodiversity in the face of intense fish trapping for both subsistence and commercial purposes, and high levels of tourism on nearby islands which are difficult for the park to regulate. Both Surin and Adang support small populations of indigenous people whose ethnicity and subsistence lifestyles are different from the Thai, and Park managers in both places are working with these groups to help them maintain their traditional lifestyles and cultural values. The Perhentian Islands are settled by a small community of Malay fishermen who are also concerned with conservation of the local ecology and their cultural values.

Wildlands Studies teams have visited the Adang Island group annually from 1993 to 2008, and through these visits, we have acquired a solid perspective as to how the coral reefs and associated coastal habitats can change as a result of storms, shifting wind patterns and sea temperatures, seismic events, and human exploitation. This winter, our team will spend about a week on each of these three island groups conducting an academically structured exploration of the coral reef environment. We will perform snorkeling field studies while examining how the reef functions biologically, learning the names and the life histories of the regional fish and invertebrate species associated with the reef, and discussing the many ways the human enterprise is affecting the ecosystem. We also intend to carry out ecological fieldwork as part of an on-going coral monitoring effort. Our coral reef study involves using GPS to locate specific places on the reef to measure and photograph the coral. Here, as part of our monitoring effort, we will identify fish species that are sensitive to commercial exploitation or which serve as indicators of ecosystem health, and count the species along the reef edge for comparison among the island groups, and comparison over time. This information is interesting to us, but also useful to Thai marine scientists and the staff of the national parks who are responsible for managing this resource.

Mainland coastal sites are another focus of our program in Maritime Southeast Asia. We plan to visit three places along the coast that are distinctive and ecologically significant. These include Khao Samroi Yot National Park, the "mountain of three hundred pinnacles" located on the east coast of southern Thailand. Here rugged crags of limestone enclose an inter-tidal mangrove estuary that was damaged by shrimp farming in the 1980's. The mangrove habitat is currently recovering, and supports winter populations of shore birds, as well as



several species of langur (leaf-eating) monkeys that are rare in other parts of Thailand. Our visit to the Park provides us an opportunity to explore first hand ecosystem management and preservation. At Ranong, a second study site on Thailand's Andaman coast, we'll visit an old-growth mangrove forest, one of the largest and least disturbed in this part of Asia. The research facilities at Ranong provide good access to the mangrove ecosystem.

In the final segment of our field study, we will stay at a third study site Hat Chao Mai National Park in Trang Province, another spectacular place along the Andaman Coast where a system of river channels converges to form an estuary amidst towering pinnacles of weathered limestone. Here communities of artisanal fishermen practice ecologically sustainable methods for harvesting crabs and fish from the shallow waters of the bay. With its extensive sea-grass beds (essentially, meadows that flourish on the sandy bottom of calm tropical bays where waters are shallow and clear), the area around Trang supports Thailand's only population of dugongs, or sea-cows. These gentle, grazing marine-mammals are kin to the Caribbean manatee. In Trang, non-government organizations have been active in promoting coastal conservation and the rights of indigenous people to control the local fishery. Local people have in turn become ardent dugong conservationists. It is here in Trang that we will witness how local activism can establish wildlife protection initiatives.

Much of our time will be spent along Thailand and Malaysia's spectacular shoreline. **Please note that prior field research experience is not required. All necessary skills of data acquisition will be taught on-site.** Through our field studies we will have a unique opportunity to assess major issues affecting marine conservation and environmental sustainability in Indo-China today, and discover possible strategies to help meet the region's future challenges. Through this program you will have direct exposure to several of Indo-China's diverse shoreline and marine ecosystems while at the same time learning the ecology and conservation of those ecosystems. We look forward to meeting you in the winter.

### **TRANSPORTATION**

Arrangements will be made for team members to fly from Los Angeles, CA to Bangkok, Thailand. You can also arrange to join the group in Bangkok if that works out better for you. In this case, you will need to meet the group flight when it arrives. At the end of the program, you can decide whether you want to fly home on the scheduled date or remain on your own in Thailand before using the return portion of your ticket.

Within Southeast Asia, we will travel as a group on both public and privately chartered transport. Examples include train, minibus, and *songtaew* (a truck with benches in the back that is just the right size for our class). Travel to offshore islands involves scheduled boat service. Once we reach the islands, we may hire smaller, locally operated boats to get to the most interesting field sites for snorkeling and other marine field studies.

All reasonable efforts will be made to follow the activities outlined above. However, please understand that in Thailand and Malaysia travel arrangements can remain tentative until the traveling actually takes place. Weather conditions, road closures, and bureaucratic considerations may affect our plans. Wildlands Studies has put together an innovative, unique program in Indo-China; and team members need to be flexible, patient, and prepared to adapt to unexpected situations.

## **ACADEMIC CREDIT**

Students will receive 12 semester units (18 quarter units) awarded through California State University Monterey Bay Extended Education. While students usually encounter no difficulties in transferring credit to their home campus, applicants should check with their advisors prior to enrolling. Our staff will be happy to explain the program in further detail to the applicant's advisor, if necessary. The Thailand field studies program gives credit in three courses:

- ENVS 370, Environmental Wildlands Studies (4 semester system units)
- ENVS 371, Environmental Field Survey (4 units)
- ENVS 372, Wildlands Environment and Culture (4 units)

Letter grades are determined by the quality of assigned work, and by participation in field activities. Students will take two examinations during the program. Material covered on the exams includes field observations, class presentations, information gathered from interviews with local people, and assigned readings. Other assignments may include supervised ecological field research on an introductory level. Team members are also evaluated on participation in discussions and other class activities.

Team members are expected to conduct themselves in a mature and responsible manner. The Wildlands Studies Program 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.

## **PROJECT COSTS**

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|--------------------------------|---|
| Program Fee:                   | \$2595 plus \$75 Application Fee due November 1, 2009<br>Enrollment on a space-available basis after the fee due date until the program is full.  |
| Estimated in-country Expenses: | \$1850 per person includes most of your in-country expenses such as: all accommodations, in-country transport, payments to guest speakers, national park entrance fees, logistical support, instructor travel, class supplies, and about 80% of all the meals on the program. |
| Food Money:                    | \$300-400 (this varies according to taste - but don't be caught short)  |
| Personal Spending Money:       | \$300   |
| Airfare:                       | \$1300 (as of March 2009)   |

The In-Country Expense Fee *does not* include personal expenses like snacks and beverages, souvenirs, personal communication costs (internet and phone), or visa costs. Individual team members are also expected to pay individually for some meals in cities and towns where it is more convenient for us to eat in small groups on our own. This amounts to fewer than 20% of all the meals on the program, and inexpensive meal options are available in all of these places. For those of us on a limited budget, personal expenses can easily be contained within the US \$6-\$8/day range, about \$350-\$400 for the Program. However, we recommend that you bring (or have available by ATM) extra money to cover shopping binges and unexpected needs. We have found on past programs that there are big differences in how individual group members budget their personal expenses, so please plan accordingly.



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Students should inquire at the financial aid office of their home campus regarding the use of their loans or grants for this course. CSU Monterey Bay Extended Education/ Wildlands Studies are 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.

### **OFFICIAL DOCUMENTS**

You will need a passport to participate in this program; its expiration date should not be any earlier than September 2010. To enter Thailand, we recommend that you apply for a 60-day Tourist Visa from a Thai consulate in the United States. For Malaysia, we will request a free entry-permit on arrival at the border, which we'll crossing by bus. For our return to Thailand, a 15-day entry permit, available at the border, is sufficient. If your passport is from a country other than the US, Canada, EU, or British Commonwealth, please check with us or with the Thai Embassy to make sure that all of these visa policies apply to you.

### **PRE-PROGRAM MAILINGS**

We will send team members supplementary information including a clothing and equipment list later this fall. We will also tell you what travel preparations are necessary and how to get ready for the program academically.

### **PROGRAM LEADERS**

**CHRIS CARPENTER** works as an ecologist and conservation scientist for Wildlands Studies. Chris has conducted field studies and led natural history programs in Asia and North America for many years. Chris lives in Chiangmai, Thailand and currently teaches field courses in China, Southeast Asia and the Himalayan region.

**THANKIT KUNKHAJORNPHAN** (Ajan Thanit), has taught the Wildlands Studies courses in Southeast Asia since 1998. A Chiangmai resident, Ajan Thanit has worked as a faculty member with the Payap University Research and Development Institute, specializing in the environmental and social sciences. She has consulted for non-government organizations and for the United Nations and organizes cultural exchange programs for The Learning Path.