

Course Title:	Tropical Forest Ecology & Conservation in Northern Thailand
Instructor(s):	Dr. Pierre Echaubard, Laurentian University pierre.echaubard@globalhealthasia.com Dr. Frank F. Mallory, Laurentian University fmallory@laurentian.ca
Dates:	2 weeks in May 2020 (i.e. May 5-20, dates may shift slightly to take advantage of better airfare prices)
Location:	Northern Thailand (Chiang Mai & Mae Hong Song province)
Cost:	2800 CAD (Deposit 350\$ at the time of application, balance due 2 months prior to departure). Includes: accommodation, meals, ground transportation to field sites. Does not include: tuition at home university, international flights (approx.1500CAD), travel medical insurances, visa (if needed), required immunizations.
Prerequisites:	University course in one of these areas: Biology, Botany, Ecology, Geography. Additional course(s): Interdisciplinary studies, quantitative ecology and statistics
Enrolment:	20 students (7 students minimum)
Description:	<p>This course provides students with an introduction to Tropical Forest Ecology and conservation in Northern Thailand. Dedicatedly experiential, this course offers field-based seminars, class discussions, guest lectures, hands-on research activities, and service learning opportunities (tree planting, community outreach) to enable first-hand exposure to field research methodologies, highlight tropical forest conservation challenges and provide overviews of the biogeography, geology, natural history and cultural diversity of the mountainous Northern Thailand with its mixed deciduous forest and hill tribes. We will spend 2 weeks in Chiang Mai and Mae Hong song provinces in remote field study sites to learn about different tropical forest types, understand forest regeneration, perform Rapid Site Assessments (RSAs), plan and implement forest restoration using Assisted Natural Regeneration and Framework Species methods, participate in tree nursery maintenance and tree planting sessions with local communities. Wildlife observations (mostly birds, but also elephant, etc.) will be frequently performed to provide data on wildlife-forest functional interactions and further inform reforestation strategies.</p> <p>Several independent research topics will be proposed prior to the start of the course including research focusing on specific tree species biology and ecology to inform restoration methods and strategies, techniques of maintenance and monitoring for tree performance optimization, research on biodiversity recovery, carbon offsetting & financing programs, and more. Using these research topics as guides (a list will be provided), students will submit a short research proposal that will be evaluated by the instructor for feasibility and relevance prior to the start of the course. The research projects can be problem driven and/or with taxonomic focus. We also will provide an introduction to Thai with a handout of useful words and phrases as well as high exposure to local communities for regular informal exchanges.</p>
Evaluation:	<ul style="list-style-type: none"> • 20 minutes seminar describing research proposals (20%) • Field book including habitat and species descriptions, people and natural resource management profiles & all field data (20%) • Written research report (10-15 pages; written as a journal article) (50%) • Participation in class discussions & field activities (10%) • Blog entries

An Average Day – What to Expect

(a) Daily timeline	<ul style="list-style-type: none"> • We will cover a lot of topics and methods and explore a diversity of habitats and communities. Consequently, our daily schedule will be relatively dense though time for self-reflection and personal work will be available. • An average work day looks like the following 7:30 breakfast, 8:30 field work rain or shine, 12:00 lunch break, 1:00 continuing field work, 6:00pm dinner, 8:00-11pm class lectures, log books updates, student presentations, brainstorming and next day planning. • There will be longer resting periods at about midway through the course to offer more self reflection time and physical regeneration
(b) Work habitat & Physical exertion	<ul style="list-style-type: none"> • We will be working in mountainous and forested terrain, accessing remote locations through 4x4 and moderate hiking (2-3h per day). We will sample soil (involve digging) and vegetation as well as perform wildlife observations in sometimes moist conditions. • Most days there will be lunch breaks and dinners back at the field station or nearby natural recreational resting areas for participant to have the opportunity to rest (bring your hammock), discover local landmarks and interact with local communities.
(c) Common activities	<ul style="list-style-type: none"> • Common activities will include hiking through wet/muddy rainforest, day/night driving on secluded trails/roads, digging, planting, observing quietly. • Common associated risks are blisters from poor footwear, bug bites, motionsickness, twisted ankles, fatigue, and heat exhaustion. All these risks can be easily avoided and mitigated through good planning and preparation, appropriate equipment (long sleeves, pants, hat, personal water bottle with electrolytes), good rest at night and good nutrition (including healthy snack (e.g. nuts and fruits) that we will provide)
(d) Weather, dehydration, & biting insects	<ul style="list-style-type: none"> • Weather conditions likely to be encountered: The course will take place in May at the onset of the rainy season in continental Southeast Asia. Regular short periods of rain in the evening are to be expected but it will not rain all day long. Strong sun and high UV index are to be expected during the day. Northern Thailand has a tropical/sub-tropical climate with high temperature during the day reaching 30-35C and lows at night in the 22-25C and moderate to high humidity index. • Exposure to mosquitoes during the day will be reasonably low except in the moister groves, which will be only occasionally investigated. Evenings are when most mosquito bites will occur. From our experience, the mosquito harassment index (sort of speak) is much less in Thailand than what you could have in Canadian forests and wetland areas. So we believe that this annoyance won't be too hard to deal with for ecologists and outdoor enthusiast generally. Wearing long sleeves and pant as well as sleeping under mosquito nets will provide the necessary protection and relief.
(e) Toxic/poisonous, wildlife/ plants	<ul style="list-style-type: none"> • The areas we will be working in are Malaria free. Therefore we do not recommend using prophylactic antimalarial pills, which can have severe side effects. • Dengue is an unlikely issue that mostly arise in urban and peri-urban environments. We will mostly be working in forested or near forested areas with low people densities so Dengue risk will be reduced to the minimum especially because we will be working outside Dengue peak season which occurs in August-September. Wear long sleeves and pants to prevent mosquito bite. <u>In the very unlikely case of Dengue</u>, there is an extensive, modern health care system with health centers and district hospitals less than 45min away that will provide the necessary assistance. Enhanced hydration and rest is enough to cope with most Dengue cases. • There are few venomous snakes in Thailand, including cobras and pit vipers. With the proper behaviour and equipment it is highly unlikely that they will pose a problem. Wearing proper hiking shoes, wearing long sleeves and pant as well as being aware of their potential presence (as well as using a probing stick to clear the way) in dense undisturbed forest before exploring is the best way to stay away from snakes. In the very unlikely occurrence of a bite, all district hospitals (less than 45min away) have anti venom at hand and are trained to efficiently handle the problem.
(f) Sleeping, washroom & laundry facilities	<ul style="list-style-type: none"> • Accommodations will be basic but comfortable. Students will be sleeping in gendered dormitories or bungalows. AC will be only occasional but fan are generally more than enough or not even required for the cooler nights of Northern Thailand. Students are encouraged to bring their own sleeping bags, inflatable pillows and mosquito nets but in the case this is not possible we will provide them. • Washroom facilities are shared. There is access to flush toilet with toilet paper provided as well as hot showers. • Student can request local maintenance to deal with laundry against a small fee (in the order of 40-50THB , i.e. 1-2CAD).
(g) Meal plans & food allergies	<ul style="list-style-type: none"> • Food will be provided, including breakfast, lunch and dinner. • Snack including nuts will be also provided throughout the day in reasonable volumes. • Extra snacks and additional needs are on the students. Vegetarian requirements as well as allergy-proof dishes can be planned in advance.
(h) Non-academic responsibilities	<ul style="list-style-type: none"> • It is strongly encouraged and expected that student take part on the daily non-academic life by sharing roles and responsibilities with regards to assistance with food provisioning (visiting the local markets and buying food with the coordinators), meal preparations (though a chef will be available most times), dishes, common areas cleaning and tidiness, material storage, etc.

(i) Degree of isolation	<ul style="list-style-type: none"> • While study sites will be remote, field stations where accommodation will be are reasonably connected. It will be possible to recharge cameras, laptops and other electronic devices everyday. • Communication, including the use of wifi and phone signal access is possible but will be sporadic. The purchase of a Thai sim card can be arranged (with 4G access). • Local convenience stores, with limited supplies (including first aid supplies) are within reach by foot or short driving distance • Community health centers are less than 15min driving at any time. Convenience store with basic first aid supplies are less than 10 min driving away. District hospitals are within 30-45min driving at all time.
(j) Alcohol & drugs	<ul style="list-style-type: none"> • Alcohol consumption is not encouraged. Alcohol abuse (excessive amounts) will be sanctioned if it impacts on the group dynamics and/or impedes the performance of work. • Considering the legal status of marijuana in Thailand and the severe consequences that any type of misbehaviour may incur, we do not permit consumption at all time.
(k) Vaccinations/ Insurances	<ul style="list-style-type: none"> • Students should consult with the relevant authorities in Canada to be informed of the standard recommendations for travel in Thailand. • Among others, vaccination for all type of Hepatitis and tuberculosis are recommended. • Thailand has a relatively efficient and modern healthcare system and effective treatment of most conditions related to infectious diseases is available throughout the country. However the costs related to treatment can be high and it is highly recommended to subscribe a health insurance that covers hospitalization in case of emergency.
(l) Social Situations	<ul style="list-style-type: none"> • We will spend 2 weeks almost constantly interacting with each other for both work and extra curricular activities. Strong social and collaborative skills are therefore required. However time for individual self-reflection will be available and if a break from the group work is needed for personal reasons there will be no problem to accommodate this need. • Thailand and its people are very welcoming and smiling. It is extremely rare that foreigners are treated with disrespect and in almost all situations local people will be here to help when necessary. It is important to note however that any kind of unreasonable emotional demonstration including anger and inappropriately loud behaviour are to be avoided. Because of Buddhism and its underlying principles, confronting people to their mistakes or misunderstandings is a big no. When frustration arises the best attitude is to be compassionate and detached. Thai people do not show their body, even when swimming. Although foreigners are not expected to systematically do so, it is culturally respectful to cover shoulders and legs, particularly for girls, especially near religious sites (Buddhist temples).
(m) Final comments	<ul style="list-style-type: none"> • The above requirements/recommendations/code of conducts, etc, are easily met/applied/achieved. In fact most of what is described above fall under common sense and are the expression of a respectful attitude. • The Thai cultural and religious specificities require you to be a little more vigilant about certain behaviour (overly criticizing, arguing and confronting, nudity, etc.) but your instructors will brief you on the matter and will gently remind you when necessary if your behaviour needs to be adjusted. • This course is a great educational adventure which is intended to provide unique opportunities to discover a new socio-cultural and environmental context, to greatly contribute to self-development and open-mindedness, provide the medium for learning through experience and will help you developing an international network of like minded individuals that will likely open up for future opportunities.

Deadline to apply is Jan 12, 2020. If interested please contact instructor directly and complete and submit application to home university coordinator. Deposit of \$350 is due at the time of registration. Tuition at your home institution is *in addition* to any field module costs. Students who drop field courses should not expect a refund of any field course costs. Students are encouraged to purchase cancellation insurance if airline tickets are required. Students are responsible for all fees incurred by the home or host university due to any bounced checks.