Elephants, Culture and Ecology in Thailand:
History, Care and Conservation of the Asian Elephant
(Biology/Sociology)

Summer Term, 2017 — June 5 to July 7 — 6 credits
Instructors: Ajaan Jeff Rutherford, Peter Duker, Anochao Potjanathamrongpong

Course overview

This course studies elephants and their biology, veterinary care requirements, conservation and the historical and cultural context of Asian elephants in Thailand and Southeast Asia.

This in an intensive course with a combination of classroom based seminars and experiential field studies learning about the biology, ecology and cultural context of elephants. The course is challenging, covering a broad range of topics and issues related to elephants in five weeks.

Understanding the biology of elephants and their veterinary care is a core part of this course. Building on this, the course will also look at the history of Asian elephants, including the 3,000+ years of history of the domestication of Asian elephants. We will learn about the ecology of elephants, and how they fit in the ecosystems of Thailand and Southeast Asia. The cultural context and meaning of “domestication” will also be studied, from the origins of “war elephants” in the ancient armies of India and Southeast Asia to the use of elephants in logging and the contemporary tourism industry, including the unique challenges of elephant veterinary care. Urban myths and contemporary issues around “elephant tourism” will be critically examined, especially in the context of representation and struggles over the control of the future of elephants in Thailand, both domestic and wild.

A highlight of the course will be interacting with elephants in a variety of settings, both wild and domestic. Students need to be willing to learn to be comfortable around elephants, and how to act safely and appropriately with elephants in different settings and with a variety of different management techniques.

This course will also have the opportunity to visit two UNESCO World Heritage sites:
- The Thung Yai-Huai Kha Kaeng Wildlife Sanctuary is part of the Western Forest Complex and represents a part of the largest remaining wild areas in mainland Southeast Asia. It is the home to wild elephants as well as a significant population of wild tigers, bears, deer and other animals.
- The second UNESCO World Heritage site is the ancient Thai capital of Ayutthaya. This is a complex of ancient ruins of temples and palaces surrounded by the contemporary city of Ayutthaya, including the Royal Elephant Kraal where ancient Thai kings would review and select elephants used in war.

The course consists of four modules:

**MODULE 1:**
Context: Evolution, biology, veterinary care and historical overview, including Thai history and language

**MODULE 2:**
Wild: Ecological role, behavior, human/wild elephant conflict

**MODULE 3:**
Domestic: History, cultural role, contemporary issues, veterinary care

**MODULE 4:**
Final: Service learning, presentations and wrap-up
Learning Outcomes

Students on the course will demonstrate competency in the following topics:

- Understanding of the evolutionary history of elephants and related species
- Know the key points of the biology and reproduction of elephants, social organization of wild elephants and elephant communication
- Understand the key issues in veterinary care of elephants, including feeding, health care and reproduction in captivity
- Historical and cultural role of elephants in South and Southeast Asian cultures, as well as the specific roles of elephants in the Thai historical context
- Understand contemporary issues and debates around the survival of Asian elephants, different approaches to tourism and conservation, and the future of the Asian elephant in Thailand, both domestic and wild

Grading and assessment

<table>
<thead>
<tr>
<th>Component</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Participation:</strong> Participation means being an active member of the class, asking questions during seminars as well as in the field, actively learning during field activities, and taking initiative in contributing to the learning for the entire team.</td>
<td>10</td>
</tr>
<tr>
<td><strong>Module 1 exam:</strong> This exam will cover key issues learned during the first module focusing on the context, biology, and history of Asian elephants. Short answer essay questions.</td>
<td>10</td>
</tr>
<tr>
<td><strong>Module 2 exam:</strong> This exam will cover key issues learned during the second module with specific emphasis on wild elephants, the ecological role of elephants and human/wild elephant conflict. Short answer essay questions.</td>
<td>10</td>
</tr>
<tr>
<td><strong>Module 3 exam:</strong> This exam will cover key issues learned during the third module on domestic elephants, including their historical role as well as contemporary issues in tourism, veterinary care and conservation. Short answer essay questions.</td>
<td>10</td>
</tr>
<tr>
<td><strong>Field assignments:</strong> Assignments in the field will be written in provided course journals, and will cover experiential learning activities and critical field studies during the course. Assignments will be made during the course while in the field and will be graded on quality, completeness and stated objectives of the field study. The field assignments will be assessed as a whole.</td>
<td>20</td>
</tr>
<tr>
<td><strong>Field essays:</strong> 5 short essays will be assigned during the course focusing on reflecting on and critically assessing the material being studied, as well as the direct experiential learning activities. The focus is on a succinct academic analysis/assessment of the topics.</td>
<td>10</td>
</tr>
<tr>
<td><strong>Final exam:</strong> This exam is a review of the material covered both in seminars and in the field. Short answer essay questions on a broad variety of topics. This is not limited to the reading, but will include material covered during the field studies.</td>
<td>15</td>
</tr>
<tr>
<td><strong>Final project:</strong> Each student will prepare a final project based on a topic they are interested in related to the course. The final project will consist of a poster composed of materials collected during the course, independent research, etc. Students will have time set aside for final preparations for their poster, but need to be thinking about and preparing for this throughout the course (don’t wait until the last week!). Each student will be given time to present their poster and topic to the group, followed by a round-table discussion.</td>
<td>15</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>100</td>
</tr>
</tbody>
</table>
Course expectations

In order for a course like this to be a success, it requires the full participation of all members of the course. While it is true in any context, given what we are studying, the phrase "you get out what you put in" is especially relevant – learning about Asian elephants in this context will be an interactive on-going learning process. Please show your fellow students the courtesy of only contributing to discussions if you have read the material.

During class and in the field, students are expected to ask questions during guest lectures, field activities and other learning opportunities. Active learning—asking questions, taking notes, exploring new ideas and concepts, talking with local people—are all required to do well in this course. During the course, students are also expected to follow these guidelines:

- Attendance and active participation in the course and field activities are required.
- Students are expected to demonstrate leadership and teamwork.
- Students are expected to manage their time well. You should have completed the reading assignments before class meetings and turn in assignments on their due dates. You will be traveling in the hot and humid environment of Thailand, moving to different field study sites throughout the course. It will be impossible to complete the required assignments if you do not pay attention and manage your time wisely. For all your field projects, you should start early. Do not wait till the last night!
- You need to take legible, well organized field notes. Please make sure that you take particularly good care of your field journal in the wet and humid environment.

PLEASE NOTE:

1. Since we are working with local communities and organizations throughout the course, specific details and dates may change to accommodate their schedule.
2. We have indicated on the syllabus days where we will be working directly with elephants with a "\( \phantom{\text{elephant}} \)" symbol for that date. This may change due to availability and access.

MODULE 1: CONTEXT: Evolution, biology, veterinary care introduction and historical overview

Monday, June 5

8:00 - 10:00    Thai language and culture
10:15 - 12:00    Program orientation
12:00 - 1:00    Lunch
1:00 - 4:00    Course introduction: General issues and topics

The goal of this first day is to understand the overall structure of the course, what the goals and challenges will be both in terms of culture and experiential learning, as well as to answer any questions students may have about expectations and assignments. You should start thinking about and reading about topics related to the course that you want to focus on for your final presentation. The final presentation will be a poster with print outs, photos, found object and other materials you collect or create during the course. An initial proposal is due on Friday and will be shared with the class.

READING:


Tuesday, June 6

FIELD STUDY    The animal: Introduction to elephant biology, physiology and behavior

This field study will focus on learning about the elephant itself — how to interact with them, basic anatomy and biology, as well as behavior. We will be working with a number of elephants throughout the day, taking
special note of individual differences and commonalities, as well as differences based on sex as well as age cohort. Take careful notes! This introduction will allow you to make better observations later in the course so that you can better learn to assess the overall condition and health of the elephants you come into contact with.

READING:

Fowler, Murray E., and Susan K. Mikota. Biology, Medicine, and Surgery of Elephants. Ames, IA: Blackwell Pub., 2006. (Behavior and Social Life; Husbandry; Nutrition; Musculoskeletal System; Digestive System; Reproductive System)


Wednesday, June 7

8:00 - 10:00 Thai language and culture
10:15 - 12:00 Thai history
12:00 - 1:00 Lunch

FIELD STUDY The context: Elephant evolution, biology and ecological role

This is a very large topic to cover in a single day, and aspects of it will be picked up and expanded on throughout the course. The key focus for this seminar is to understand elephants as an animal within a specific ecological context, a particular evolutionary heritage, and a specific biology. All of these factor into the current state of elephants in Thailand and Southeast Asia, and the particular challenges that elephant conservation faces.

READING:


Thursday, June 8

8:00 - 10:00 Thai language and culture
10:15 - 12:00 Thai society
12:00 - 1:00 Lunch

FIELD STUDY History and cultural role of elephants in Asia and Mahouts and visit to Wat Chiang Maan

The history of domestic elephants is intimately linked with that of their mahouts and handlers. With over 3,000 years of history of elephants being domesticated, the knowledge of the mahout has largely been based on the oral traditions and heritage of marginalized “forest” people (in both India and Thailand), rather than “elite” written traditions. Wat Chiang Maan is an excellent example of how elephants play a key role in Thai temple art and architecture and the larger cultural significance of elephants as linked to royalty and kingship.
**READING:**

Sukumar, R. *The Story of Asia's Elephants*. Marg Foundation, 2011. (The Asian Elephant in Prehistory and Proto-History; Elephants in Vedic and Epic Literature; Elephant Armies and the Rise of Empire; The Elephant in the Buddhist and Jain World; The Elephant in Colonial Asia; The Elephant in Independent Asia)


---

**Friday, June 9**

8:00 - 10:00  Thai language and culture
10:15 - 12:00 Study session
12:00 - 1:00  Lunch
1:00 - 4:00  **Exam #1** / Orientation to field studies in Module 2 / Final Presentation topics

Each student will need to share their proposed project focus with the class, with particular emphasis on questions you are trying to answer during the course. Please be concrete and specific, including both goals for your proposed project and challenges you anticipate in studying your topic.

**Saturday, June 10: FREE**

**MODULE 2: WILD: Ecological role, behavior, human/wild elephant conflict**

**Sunday, June 11**

**TRAVEL:** Chiang Mai —> Huay Kha Kaeng Wildlife Sanctuary (HKK)

On days where we are in wild elephant habitat we are not, of course, guaranteed to see wild elephants. Signs (tracks, tusk marks) and sounds (vocalizations, feeding sounds, etc.) will be common however.

For the first part of this module we will be studying in the Thung Yai-Huai Kha Kaeng Wildlife Sanctuary. This is part of the Western Forest Complex and represents a part of the largest remaining wild areas in mainland Southeast Asia. We will be working with the rangers from the sanctuary as well as local representative of an international NGO, the World Conservation Society.

The focus of this first part of this module is the entire ecosystem of which elephants are one part. Predators, such as the Indochinese tiger, are present in this ecosystem, as well as a wide variety of mammals (wild pigs, several variety of deer, civets, gibbons, etc.) as well as a large number of different species of birds. Elephants play an interesting role in this ecosystem, and impact both the flora and fauna in specific ways. Without elephants this ecosystem would not function in the same way that it does with elephants. So our focus is not only on understanding wild elephants themselves, but more importantly the entire ecological system of which they are one part.

**READING:**

FIELD STUDY: Wild elephant habitat and the Western Forest Complex @ HKK

- Introduction to HKK and the history of the establishment of the UNESCO World Heritage site
- SMART Patrol training with the World Conservation Society (WCS)
- SMART Patrol with HKK rangers and data collection
- Ongoing wildlife observation (salt licks, tracking, habitat)

During this field study we will be working directly with the sanctuary rangers to learn about the animals in HKK. Students will be trained in the SMART patrol methods of data gathering, and will go on patrol with rangers recording animal signs (tracks, scat, etc.) as well as impacts and other observations. We will also be doing several activities to observe wildlife directly and indirectly, including using established blinds and attraction points (salt licks, water, etc.) for animals.

While wild elephants are common (and will likely be heard most nights in the forest) they are usually only seen a night. Students will be trained on appropriate observation of wild elephants, as well as how to appropriately manage the risk associated with observing a large and dangerous wild animal in its natural setting.

READING:


Caughley, Graeme. "COMMENTS ON ELEPHANTS IN BURMA."


TRAVEL: HKK —> Katchanaburi and the Salakpra Wildlife Sanctuary (SWS)

- Meet with the head of the SWS and overview of wild elephant/human conflict in SWS area

Unlike HKK, the Salakpra Wildlife Sanctuary (SWS) does not have a large buffer zone. Because of this, there are almost nightly conflicts between wild elephants and the local farming communities, with elephants invading sugar cane fields, corn and other crops. The focus of this part of the study will be in understating what mitigation techniques are available to manage this, as well as trying to understand why and how elephants are moving beyond the sanctuary boundaries.

READING:


Thursday, June 15 - Friday, June 16

FIELD STUDY: Wild elephant / human community conflict

- Meet with local community members and study elephant crop invasion avoidance techniques
- Work with Zoological Society of London (ZSL) on elephant monitoring

The ZSL works with local communities to help them deal with wild elephants and crop raiding, while at the same time conserving wild elephant populations. ZSL works through placing camera traps to photograph elephants (especially useful when identifying specific individuals), as well as conducting training with local community members on both colliding data on elephants and finding out successful ways to prevent elephants from damaging and destroying crops. We will be meeting with community members and learning directly from them about the impact of elephants in their farming, and observing areas where elephants have raided crops and/or damaged fields.

READING:


Emphandhu, Dachanee. HUMAN DIMENSIONS IN THAILAND WESTERN FOREST COMPLEX: CHALLENGES AND OPPORTUNITIES. Kasetsart University.


Saturday, June 17

Exam #2

MODULE 3: DOMESTIC: History, cultural role, contemporary issues

Sunday, June 18

TRAVEL: Katchanaburi —> Ayutthaya

Monday, June 19

Independent exploration of the UNESCO World Heritage site of Ayutthaya

The ancient Thai kingdom of Ayutthaya is a large complex of temples throughout the contemporary city of Ayutthaya. The area and sights are easily explored by bicycle so that students can better appreciate the architecture of this ancient city. Of special note is Wat Phra Si Sanphet (three large pagodas with several smaller ones in the complex). Be sure to visit the Thailand Authority of Thailand office, as they have an excellent and free museum and interpretive center on the second floor.

Tuesday, June 20 - Wednesday, June 21

FIELD STUDY: War elephants, Mahouts, mahout training, elephant tourism in Ayutthaya

This field study will visit the ancient Royal Elephant Kraal, where kings would pick their elephants as they were assembling their armies. We will also be learning about one style of keeping and managing elephants, the history of elephant tourism, and contemporary challenges with working with and managing elephants.
Be especially mindful of differences in both the management of these specific elephants, and appropriate behavior around and with this specific population of elephants.

READING:


Thursday, June 22

TRAVEL: Ayutthaya —> Chiang Mai

There is reading assigned for this day, and this is also a good opportunity to catch up on earlier reading!

Reading:


Friday, June 23: FREE

Saturday, June 24

FIELD STUDY: Tourism, elephants and marketing study

This field study will be focused on examining the marketing of elephants to individual travelers. While mass tourists on pre-arranged tours go to the larger elephant “camps” the independent traveler is marketed to in a different way. Student will spend time collecting brochures in some of the tourist areas, then will work together as a group to critically examine the representation of elephants, the language and discourse used around elephant tourism, and ways in which different elephant tourism operators seek to define themselves. Particular attention should be given not just to the words, but also to photos and who and how people are interacting with elephants. What is the story that is being told? What experience is being sold? What is not being told in the brochures? What questions are left unanswered?

READING:

Sunday, June 25

FIELD STUDY: Mass tourism and elephant camps: Mae Saa Valley and Chiang Dao elephant camps

This field study will examine two very different elephant camps popular with group tours. Mae Saa Valley caters to group tours, with elephant shows and rides. The Chiang Dao Elephant Camp has a different approach, with a focus on showcasing the traditional use of elephants in logging and forest work.

Questions and observations should focus on: What specific activities do you observe? How are people interacting with the elephants and the mahouts? What behavior do you see among the elephants? What behavior do you see among the tourists? Who are the tourists? Where are they from? Etc.

READING:


Tipprasert, Prasob. Elephants and Ecotourism in Thailand. FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS REGIONAL OFFICE FOR ASIA AND THE PACIFIC.


Monday, June 26

Elephant veterinary care at Chiang Mai University: This will give us a chance to talk with some of the professors at the Faculty of Veterinary Medicine, looking at the key health care issues that elephants face, and common problems that vets working with elephants have to deal with.

READING:


Tuesday, June 27

FIELD STUDY: Elephant hospitals and health care 1: Lampang Elephant Hospital

Both Thursday and Friday students will be learning about and be involved in additional elephant veterinary care. The amount of direct interaction will depend on the specific patients that each of the hospitals is working with one the day we visit. Pay attention to differences, if any, between the two hospitals as well as their focus and types of patients they are working with.

READING:


**Wednesday, June 28**

FIELD STUDY: Elephant hospitals and health care 2: Friends of Asian Elephants 🐘

The Friends of Asian Elephants (FAE) is the first elephant hospital established in Thailand, and works with a wide variety of elephants and injuries and illnesses. Take notes and compare/contrast with the Lampang elephant hospital — what sorts of injuries and illnesses they see on a regular basis, what issues they are having to deal with, etc.

READING:


**Thursday, June 29**

FIELD STUDY: Elephant conservation 1: Elephant Home 🐘

FIELD STUDY: Meeting with community members in Mubaan Muengkuet and elephant tourism

We will be spending most of this day interacting with elephants in a small locally owned elephant camp/conservation center, as well as spending time with community members in a local village surrounded by elephant camps/conservation centers. We will be meeting with mahouts and business owners, as well as other members of the community who are impacted by elephant tourism. Particular attention should be paid to asking questions about the impact on the community, both in terms of economic as well as the ecological impact of elephants and elephant camps in this community.

READING:


**Friday, June 30**

FIELD STUDY: Elephant conservation 2: Day program 🐘

We will be spending the day with elephants, learning about how elephant tourism operates in Northern Thailand, as well as how to safely work with elephants.

READING:


Saturday, July 1

FIELD STUDY: Elephant conservation 3: Health care/Elephants

Health care is an increasing concern for the sustainability of elephant camps, and this day will be focused on working on the issues around elephant health care, as well as elephant reproduction.

READING

Sai San, Aik. Case Reports on Working Elephants: Illustrated. Yangon: Today House, 2004. (Structures and Functions of Elephant Body; The Digestive System; Reproduction in Elephants; Nutrition and Health; Musth; Oestrus in Elephants; Daily Food Requirement)

Sunday, July 2

FIELD STUDY: Elephant conservation 4: Service learning and mahout talk

The day will be spent in a variety of tasks working with elephants and mahouts. We will also be meeting with mahouts to learn about their own oral tradition of elephant care, how they have learned to manage elephants, and their own place in the wider ecotourism and social context.

READING:


Monday, July 3: FREE

Tuesday, July 4

Exam #3 / Seminar / Module 4 Introduction

MODULE 4: FINAL: Synthesis and Presentations

Wednesday, July 5

Study day / Independent research

Thursday, July 6

FINAL EXAM / Wrap up

Friday, July 7

Presentations: The presentations will be modeled after a professional conference “poster session” with each student given 10 minutes to present their poster, followed by questions. After the conclusion of the presentations, a round-table discussion will take place, drawing comparisons, contrasts and commonalities between the poster presentations and topics covered.