

BIOL3112/2318 Biological Sciences Field Course (6 credits)

Sub-Class BIOL3112/2318 (D)

Animal Behaviour and Behavioural Ecology: Field Course

Short Title: Animal Behaviour Field Course

Course Status with related major/minor:

Capstone course: Major and Minor in Ecology & Biodiversity

Course Coordinator

Dr Leszek Karczmarski
School of Biological Sciences
The Swire Institute of Marine Science
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Teachers Involved

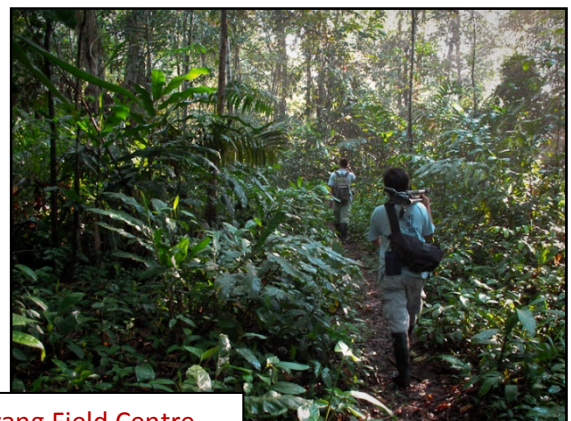
Dr Leszek Karczmarski (100%)

Demonstrators Involved

Post-Graduate students from the Cetacean Ecology Lab

Course Objectives

This course represents a unique experiential learning opportunity and a capstone requirement; it will introduce students to scientific reasoning and conceptual basis of understanding of animal behaviour and behavioural ecology. Conducted in a wildlife sanctuary in Sabah, Malaysia, this course will teach students how to think analytically about animal behaviour; how to build conceptual framework for investigating animal behaviour and how to put this framework into a practice of collecting and analysing data. It will expose students, as direct participants, to 'research-in-making' with hands-on participation in field behavioural studies, with all the excitement it generates and all the demanding challenges it brings along, and with the critically important 'day-to-day logistics' of designing, conducting, and successfully completing field studies of animal behaviour and behavioural ecology



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Course Contents and Topics

Conducted on site in a tropical rain forest, this course offers an exquisite opportunity to gather first-hand experience in field studies of animal behaviour and behavioural ecology of a diverse assemblage of species in their fragile tropical environment, from insects to birds, to large carnivores, mega-herbivores, and societal mammals. It will provide students with the knowledge and appreciation of the diversity of animal behaviour and diverse behavioural strategies on various levels of biological organisation; it will furnish a platform for experiential learning through (i) a direct participation in field-based studies of a wide range of species, (ii) hands-on experience in application of diverse research techniques, (iii) engagement in scientific debates with researchers and research teams directly in their field study location, and (iv) experiencing a multicultural and multilingual environment of a dynamic research field station and centre for conservation and environmental education.

Students will learn a suite of research techniques, and will exercise their skills in data gathering and interpretation. The emphasis will be placed on independent thinking and thoughtful application of the knowledge acquired previously on relevant classroom courses. Students will be guided through the scientific reasoning and methodology, and will develop an understanding how individual research projects contribute to a greater understanding of behavioural and/or evolutionary pattern and how individual focused research advances science at large. This course will include lectures, informal discussions, review of research techniques, and extensive field component with daily research activities in the tropical rain forest of Sabah. Following the field-based component, students will be required to write an independent Course Report and participate in a seminar given to Ecology and Biodiversity students and faculty, describing the learning outcome of the course.

Time and Duration

12-days, including travel, in mid-March (during the reading week). The exact dates will vary from year to year and will be confirmed at the beginning of 1st semester.

Location

Danau Girang Field Centre, Sabah, Malaysia

The Danau Girang Field Centre is a collaborative research and training facility managed by Cardiff University, UK and Sabah Wildlife Department, Malaysia. It is situated in the Lower Kinabatangan Wildlife Sanctuary in Sabah; the field centre is surrounded by a mixture of lowland forest types in a matrix landscape including human villages and small scale agriculture. The facilities in the Centre include a field laboratory, an internet-linked computer room, a lecture room and a library. The Centre's hostel can accommodate up to 30 persons (six separate timber units with two bunk beds and one single bed in each). Bathroom (4 individual showers) and toilet facilities are shared. The hostel has also a sitting area and washing machine facility. Four individual research-studio can accommodate two persons each and include two separate bedrooms, a shared sitting area and bathroom



Website: <http://www.cardiff.ac.uk/biosi/facilities/danaugirangfieldcentre/index.html>

Pre-requisites

BIOL4303/BIOL2625 (Animal Behaviour) or BIOL3303/BIOL2612 (Conservation Ecology). If oversubscribed, priority will be given to students that passed BIOL4303/2625. Exemption from course pre-requisite is possible, but will be considered on individual case-by-case bases; requests shall be addresses to Dr. Leszek Karczmarski via e-mail leszek@hku.hk

Course Learning Outcomes

On completion of this course, students will:

- Learn to appreciate the causes and functions of animal behaviour
- Learn the scientific reasoning and methodology used in field studies of animal behaviour and behavioural ecology, and appreciate the demanding logistics of behavioural field studies
- Appreciate the conceptual framework of the socio-ecological and evolutionary-behavioural paradigm, and develop an understanding how to put this framework into practice of collecting and analysing data
- Learn the value of hypothesis-driven research and the significance of formulating a well-defined scientific question; and appreciate the importance of designing field research to explicitly address the desired research questions
- Think analytically in terms of animal behaviour and behavioural ecology, and their broader implication is social and societal studies, from conservation to conflict resolution to the philosophy of nature

Teaching and Learning Activities

Lectures: 10 contact hours

Tutorials: 6 contact hours

Field work: 42 contact hours

Interactive classroom debates: 8 contact hours

Group work/project: 8 contact hours

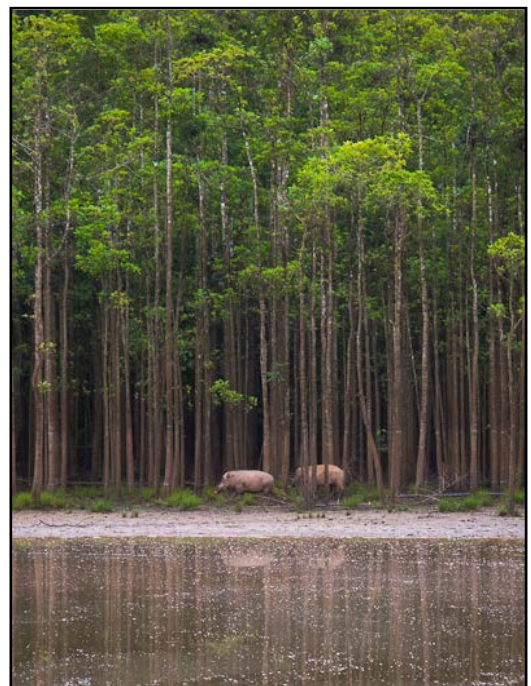
Assessment method and Weighting

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| - Active participation, enthusiasm, engagement in interactive debates, involvement in the field work (continuous assessment) | 35% |
| - Group investigation/presentation | 30% |
| - Final assessment (student's report) | 35% |

Quota: 15

Course costs:

The course received a generous support from the **Gallant Ho Experiential Learning Centre, HKU**, which will partially cover student expenses. The exact amount of the course fee will have to be confirmed at a later stage as it will depend on the airfare and local expenses at the time.



Additional Information:

Wildlife Observed at Danau Girang Field Centre

Bearded Pig or Wild Boar

Scientific Name: *Sus barbatus*

Distribution: Malaysia, Sumatra and the Philippines

Bornean Clouded Leopard

Scientific Name: *Neofelis diardi*

Distribution: Borneo and Sumatra

Bornean Elephant

Scientific Name: *Elephas maximus borneensis*

Distribution: East Sabah and extreme North Kalimantan

Bornean Orangutan

Scientific Name: *Pongo pygmaeus morio*

Distribution: Sabah and East Kalimantan

Bornean Slow Loris

Scientific Name: *Nycticebus menagensis*

Distribution: Borneo and possibly some surrounding islands

Buffy Fish Owl

Scientific Name: *Ketupa ketupu*

Distribution: Greater Sundas, South-east Asia, South-west, North-south Myanmar, Tenasserim, Thailand, Peninsular Malaysia, Singapore, Cambodia

Long-tailed Macaque

Scientific Name: *Macaca fascicularis*

Distribution: Found in many South-East Asian countries. Very common in the Lower Kinabatangan Wildlife Sanctuary.

Oriental Pied Hornbill

Scientific Name: *Anthracoceros albirostris*

Distribution: North India, South China, South-east Asia, Malay Peninsula and Greater Sundas

Proboscis monkey

Scientific Name: *Nasalis larvatus*

Distribution: Endemic to Borneo

Reticulated Python

Scientific Name: *Python reticulatus*

Distribution: Commonly found throughout South-east Asia

Saltwater Crocodile

Distribution: East India, Bangladesh, Sri Lanka, Myanmar, Thailand, Malay Peninsula, South Pacific Islands, Borneo and Australia.

Sambar deer

Scientific Name: *Cervus unicolor*

Distribution: Sri Lanka, India, southern China, South-east Asia, Philippines, Sumatra and Borneo as well as many larger adjacent islands

Sun Bear

Scientific Name: *Helarctos malayanus euryspilus*

Distribution: Borneo

Water Monitor Lizard

Scientific Name: *Varanus Salbatur*

Distribution: Recorded in both urban areas, such as Bandar Seri Begawan and Bangar, as well as riparian parts of Batu Apoi. Wide spread from eastern India and Sri Lanka, east through Bangladesh, Sri Lanka, east to the Malay Peninsula, Indo-China, Southern China and the Philippines.

Western Tarsier

Scientific Name: *Tarsius bancanus borneanus*

Distribution: Borneo

