



The Jungle Times

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Visitors

Will Helenbrook and Jessica Suarez

Will, a friend of Milena, and Jess visited DGFC earlier this month. Having predominantly worked in Central and South America, they are looking to work in Southeast Asia and have been travelling around several countries learning about the wildlife that lives there. Jess has a background in biology but is also a keen photographer and was able to explore the many habitats and diverse wildlife. Jess got excellent sightings of a barred eagle-owl, civets and with her camera trap, up close pictures of the normally shy Bornean bearded pig. Will has worked extensively on night monkeys, the only nocturnal monkey, and in particular how they can thrive in habitat that is viewed as low quality.



Bobby Lin Wei Ting, Anson Chen and Wu Pengyu Wyam

Film students from Hong Kong Academy of Performing Arts came to DGFC to film Elisa's work on the endangered pangolin. This was for a documentary they're producing in collaboration with Ocean Park Hong Kong about pangolins and the threat of Chinese medicine. During their stay, they worked alongside Elisa, learning about the lifestyle and behaviours of pangolins and what makes them valuable and vulnerable. We wish them all the best with their documentary promoting pangolins!



Visitors continued

Alexia and Max

This month we were joined by DGFC Director's niece Alexia and her boyfriend Max. The two came to Borneo during their travels in Southeast Asia to see the field centre. During their stay here they were able to see many different species such as crocodiles, langurs, proboscis monkeys, hornbills and much more! After leaving DG, the pair continued their travels in Southeast Asia. We wish them all the best!



Departures

Leila Spicer

This month we were sad to say goodbye to Leila, a volunteer who has been with us for three months. In her time here Leila has got involved in many projects, as well as carrying out one of her own, using cardboard boxes as bait for wild cats. She is now going to Bali to volunteer at an animal sanctuary before returning home to the UK in July ready to start her degree at Chester University in September. Her enthusiasm and positive attitude will be greatly missed!



Photograph
by Miriam
Kunde

Departures continued

Sophie van der Hart

We were also sad to see Sophie, a masters student from Holland, leave this month. Sophie carried out some interesting work on ants and termites while at DG, and made us all appreciate invertebrates a little more! She also got stuck in with PhD and PTY projects during her time here. She is now returning to Amsterdam to finish her Masters, before visiting her parents in France and enjoying a relaxing summer! We wish her the best of luck for the future!



Photograph
by Miriam
Kunde

Cornwall College Field Course



Cornwall College Newquay came to visit DG from the 1st to the 10th April, bringing along a group of 7 students and 2 tutors. The students were studying a range of courses including: Applied zoology and conservation, zoological conservation and conservation ecology.

This was their 8th year visiting DG and each time they have been collecting data for many of their own projects. They had projects on fish, crustaceans, primates, frogs, birds and river profiling.

As well as their own projects, they also took in as much of the local fauna and flora as possible on activities like night walks and primate surveys.

Interview with Bobby Lin Wei Ting, Anson Chen and Wu Pengyu Wyam

What is your association with Ocean Park?

We are from our university Hong Kong Academy for Performing Arts and we are film school students. This project is a collaboration between our school and Ocean Park Hong Kong who have funded us to do a series of documentaries about any animal we would like to talk about. The video will be used for promotion purposes for Ocean Park and we are volunteers for this project. For our roles, I (Anson) am mainly the production manager so in charge of any of the logistics, Bobby is in charge of the directing of the documentaries and Wyam is the main photographer.

Can you tell us about Ocean Park Hong Kong?

Ocean Park is a zoo combined with a theme park in Hong Kong. The department that funded us is Ocean Park Conservation Foundation (OPCF) and this department funds lots of conservation projects around the world with funding mainly coming from the entrance fees of the park. Here at DGFC, they sponsor the pangolin and bearded pig projects and elsewhere they have projects such as pandas in China and dolphins.

What is your favourite thing at DGFC so far?

Can I say food? I enjoyed the canopy platform however when you are standing at the top, you get a bit scared but going up and down was fun! It was very nice going into the forest because in Hong Kong, we do have some forest-like areas but it's not a real forest. It is similar to Singapore where they have urban and wild combinations, so we haven't had the experience of going into a real forest before. The first time we went in there it was a new experience and even got bit by a leech, twice. To get so close to the wildlife has been great, for example the monkeys that live around the field centre and an orangutan that allowed us to get great shots for our video. In addition to this, the sunrise and sunsets here are beautiful.

What are your plans for when you leave here?

After DGFC, we are going to continue our documentary. We have other contents to film back in Hong Kong as our documentary is trying to connect pangolin, this dying species, to the Hong Kong people because China is the largest consumer of pangolin products in the world. We would like people to know about pangolins and increase the awareness of protecting this animal. We will also be carrying out interviews with doctors of Chinese medicine and see what they say about the products as reports have suggested that they don't have a medical use in the medicine.

Science Corner

Protected area management priorities crucial for the future of Bornean elephants - Biological Conservation

Luke J. Evans, Gregory P. Asner, Benoit Goossens.

Distributions of Bornean elephants in Sabah, Malaysia, were modelled via GPS telemetry, and three-dimensional forest mapping to assess the importance of different forest qualities for these animals. Flat and low lying forests, 13 m in stature were found to be most suitable for the elephants. Forests of this stature are consistent with degraded areas, and are often regarded as suitable for conversion to oil palm. Additionally, less than a quarter of fully-protected, intact forest were suitable for elephants. Conversely, disturbed commercial forest reserves were seen as highly suitable. The paper proposes that the importance of degraded forest for the conservation of these animals is underestimated, and further conversion to oil palm may prove detrimental to the Bornean elephant.

Fecal parasite risk in the endangered proboscis monkey is higher in an anthropogenically managed forest environment compared to a riparian rain forest in Sabah, Borneo - PLoS ONE

Annette Klaus *et al.*

Fecal samples were collected from groups of proboscis monkeys in varying size, and number of juveniles, to assess the socioecological and anthropogenic influence on intestinal helminth infections. Parasite risk was quantified by intestinal helminth prevalence, host parasite species richness (PSR), and eggs per gram feces (epg). Samples were collected from the Lower Kinabatangan Wildlife Sanctuary and Labuk Bay Proboscis Monkey Sanctuary, in the latter the monkeys are fed from a feeding platform. The study tested to see if study site, group type, group size, the number of juveniles per group, and sampling month can predict parasite risk. At Labuk Bay Proboscis Monkey Sanctuary egg and adult prevalence of *Trichuris* spp., strongylids, and *Strongyloides* spp. but not *Ascaris* spp., as well as host PSR were significantly elevated. *Strongyloides* spp. prevalence was higher at the start of the rainy season, suggesting the external life cycle benefits from humidity. Labuk Bay Proboscis Monkey Sanctuary likely saw elevated risk due to anthropogenic factors rather than socioecological, most likely due to re-infection rates and chronic stress.

Science Corner continued

Evaluating scenarios of landscape change for Sunda clouded leopard connectivity in a human dominated landscape - Biological Conservation

Andrew J. Hearn *et al.*

Rapid forest loss and the associated fragmentation reduces suitable habitats and creates dispersion barriers within human dominated landscapes in the Lower Kinabatangan Wildlife Sanctuary. Path selection function, with conditional logistic regression was used to create a resistance surface for a population of Sunda clouded leopards. Cumulative resistant kernel and factorial least-cost path analysis were used to predict how connectivity may change in four different future scenarios including: conversion of unproductive forest to palm oil plantations, conversion of unproductive palm oil to forest, restoration of the riparian buffer zone and a combination of the two forest restoration scenarios. The study showed that forest with high canopy cover facilitated the movement of the Sunda clouded leopard and the presence of recently cleared/planted or unproductive plantations resisted their movement. Core areas and the main linkages amongst them were mapped and key pinch points that may limit regional connectivity were identified. The paper proposes that the protection of privately owned forest and the conversion of unproductive plantation back to forest, with the creation of a buffer zone along the river, will greatly enhance Sunda clouded leopard connectivity.

Dispatch from the field II: the mystery of the red and blue *Opadometa* male (Araneae, Tetragnathidae, *Opadometa sarawakensis*) - Biodiversity Data Journal

Jeremy A. Miller *et al.*

Males belonging to *Opadometa* are difficult to match to conspecific females, sex-matching errors may persist in past taxonomic literature, the bulk of which focus on describing the larger, blue and red females, rather than the males. During the Leiden University field course at DG, students found a male on a frame line of the web of a female. Further surveying of orb web-building spiders around the centre found no other *Opadometa* species other than *Opadometa sarawakensis*. The students and staff worked to describe this male and give further data on the female, as well as providing ecological and behavioural data of the species. The paper describes the males as have a uniformly orange cephalothorax, having eight eyes in two rows. The femur of legs 1 and 4 being orange with distal segments being darker and legs 2 and 3 overall dark. The femur of leg 4 has long prolateral trichobothria along entire length.

Science Corner continued

Spatial and temporal behavioural responses of wild cattle to tropical forest degradation - PLoS ONE

Penny C. Gardner *et al.*

Camera traps were used to explore the relationships between diel activity, behavioural expression, habitat use and ambient temperatures to see how wild free-ranging Bornean banteng responds to logging and regeneration of the forest. Three secondary forests throughout Sabah, Malaysia with varying time since last logging were studied. A combination of generalised linear mixed models and generalised linear models showed that temperature had no significant effect on activity. Bantengs regulated activity, with reductions in wet season in the most degraded forest and at midday hours in forests with limited regeneration. However, in forests that hadn't been logged in 20 years, activity was seen to be more consistent throughout the day. In areas with limited regeneration, foraging and use of open canopy areas dominated activity. Great investment in traveling and use of closed canopy areas was seen in forests with greater levels of regeneration. The paper proposes that retention of a mosaic of mature forest patches within commercial forests could minimise the effects of increased ambient temperatures and risk of flooding seen in degraded forests, as well as providing refuge to the banteng.



Conservation Corner

Common name:
Leatherback Turtle
Scientific name:
Dermochelys coriacea
IUCN status: Vulnerable



Ecology and behaviour

The leatherback sea turtle (*Dermochelys coriacea*), is the largest of all living turtles, and is the fourth-heaviest modern reptile, behind three crocodilians. It can easily be differentiated from other modern sea turtles by its lack of a bony shell, hence the name. Instead, its carapace is covered by skin and oily flesh, having ridges run down the length of it. It has flattened fore limbs adapted for swimming in the open ocean, which are the largest in proportion to body size, amongst extant sea turtles. Leatherbacks are one of the most migratory of all the marine turtles and has the widest distribution, reaching as far north as Alaska and Norway, and as far south as the southernmost tip of New Zealand. The leatherback is found in all tropical and subtropical oceans, and its range extends well into the Arctic Circle.

Conservation

Despite having less human related deaths than other sea turtles due to their unpalatable meats, their nests are raided by humans for their eggs in Southeast Asia. Furthermore, leatherback turtles have been known to die from intestinal blockage from plastic consumption as it resembles jellyfish, their prey. The species is listed on CITES Appendix I which makes imports/exports of the species illegal.

Game

Can you match the animal with the correct fact?

Crocodile

Born with a blue face

Clouded leopard

The world's most trafficked mammal

Binturong

Has 5cm long canine teeth

Pangolin

This animal sweats through its mouth

Proboscis monkey

Females can delay implantation of an embryo

Crocodile- This animal sweats through its mouth
Clouded leopard- Has 5cm long canine teeth
Binturong- Females can delay implantation of an embryo
Pangolin- The worlds most trafficked mammal
Proboscis monkey- Born with a blue face

Danau Girang Field Centre

*Danau Girang Field Centre was opened in July 2008.
It is located in the Lower Kinabatangan Wildlife Sanctuary,
Sabah, Malaysia.*

*Danau Girang is owned by the Sabah Wildlife Department
and supported by Cardiff University. Its purpose is to further
scientific research with the aim of contributing to long-term
conservation projects in the area, and develop a better
understanding of our environment and the living things we
share it with.*

Danau Girang Field Centre

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