



# The Jungle Times

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# New PTYS!

DGFC is happy to welcome three new PTY students this month! Toby and Frankie arrived on the 2nd of July along with the Cardiff Field course and were thrown straight into jungle life. Last years PTY student Charlie and the volunteers were fantastic in showing them the ropes and helping them to settle in. Jack arrived on the 19th and was quickly brought up to speed by Frankie and Toby. He is now beginning to learn how to trap insects and expand his entomology knowledge in preparation for a potential project on stick insects, whilst Toby and Frankie continue to shadow the researches and decide which of the many weird and wonderful creatures of Borneo excite them most!



Left to  
Right:  
Francis Roy,  
Jack Devlin,  
Toby Stock

# Visitors

This month we have welcomed several new faces at DG. Donald Kendall from Houston, was the first to arrive early this month. During his 5 day visit he inspired both researchers and students alike with stories from his travels, and was lucky enough to see the first of the elephants return to DG!

*Donald Kendall, Houston - "Thanks! Great experience and great to meet all the dedicated people and to experience the work that is being done and how it will impact policy and the environment!"*

We also welcome Fynn Baring who frequently volunteers with conservation programs in Danum Valley and was eager to lend his hands to help out the researchers at DGFC! During his month long stay he hopes to gain valuable insight into how research is carried out in the field, before returning to the UK to embark on his next adventure studying Biosciences at Imperial College London!



## An interview with Jan and Ceri

### **So what brings you to Danau Girang Field Centre?**

**Jan:** I have always had a love of primates and completed a degree in Anthropology many years ago. However, I always worked in a lab! I learned of the centre whilst working at Cardiff uni, was put in touch with Benoit and before we knew it we were here!

**Ceri:** I worked as a science tech in a comprehensive school for 24 years so have always had a love of science, especially Biology. This trip allows us to see some amazing wildlife and is a tick off the bucket list! (laughs). But this stay is part of a holiday, and we will be travelling around the rest of Borneo soon.

### **Have you had a highlight of your stay so far?**

**Jan:** Seeing an orangutan was amazing, but arriving to a herd of elephants was something else!

**Ceri:** I really liked seeing the clouded leopard on the camera trap, such a beautiful animal.

### **Is there anything else you'd like to see?**

**Jan:** A proboscis monkey!

**Ceri:** I really want to see a crocodile, they're so ancient looking!

### **Thanks for your time ladies!**

**Jan and Ceri:** We just wanted to say thank you to everyone at DG, you have been so welcoming and friendly! We have felt so included in the activities of the centre. Great to meet so many different people, all passionate about wildlife. Looking forward to spreading the message of DG and encouraging more kids to take up science!

# Goodbye Charlie!

This month we said goodbye to our last PTY from 2015/16, Charlie Cooper. Charlie joined us in July 2015 and has completed a very interesting project, surveying snakes and lizard species around DG.

She worked hard, not only on her own project, but also helped all the PhD students on their field work from Sergio's monitor lizard programme to the NPP project with slow loris tracking at night. Charlie and her cakes will be sorely missed by everyone at DG, thanks for all of her hard work!



# Goodbye Sai!

We also give a fond farewell to Sai Narayanasami, who has been with us since April running a camera trap program to collect data on orangutan abundance, alongside contributing her wisdom to the all important task of training the next generation of PTY students! Her fun and friendly attitude will be missed by everyone at DG, and we wish her all the best as she returns to Imperial College London to continue her Msc. Good luck Sai!



# Cardiff Field Course

On the 2<sup>nd</sup> of July, DGFC hosted another Cardiff University field course, accompanied by Professor Mike Bruford, Pablo OTW of Cardiff University and Suzanne Tomassi, Senior Biologist at Avia Environmental. The two week field course comprised of a series of activities that gave the students an idea of the breadth of research that is carried out at DG and taught them some of the skills required to carry out their own projects in the final week.



Activities included primate surveys and using VHF radio collars to locate Loris & Tarsier sleeping sites. The students also joined other research projects, searching for Pythons, Pangolins, Frogs, Monitor Lizards and Crocodiles.

Suzanne demonstrated how to sample birds caught using mist nets and one group was lucky enough to catch a Sacred Kingfisher, an uncommon sight so far outside of its normal range.

The students also took part in an 8 year project sampling the growth of trees in two botanical plots, located in four different habitat types. Finally a day well spent with Pablo learning about the wide variety of insects to be found in Sabah and how to catch and mount butterflies.



Having gained an understanding of the diversity of the rainforest and the questions that are still unanswered, the students came up their own short research project in the second week. They then presented to the rest of the group their experimental process and their preliminary conclusions.

Projects included work on skinks, primates, butterflies, fishing birds and the soundtrack of the jungle.



# Cardiff Field Course Quotes

- Val & Elysiah – “To everyone at DGFC, Thank you for giving us a wonderful experience and taking the time to teach us what projects here are like! You’ve given us a lot of memorable moments we’ll never forget! Thank you :)”

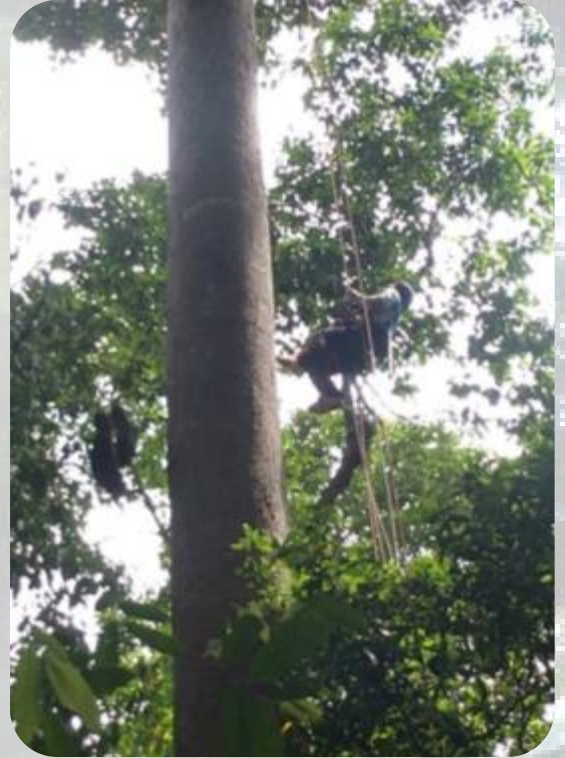
- Katie, Josie, Eve & Jess – “Well we survived two weeks in the jungle, much to everyone’s surprise. Thanks for all being lovely and helpful and thank you for the amazing food!”

- Natalia – “To all the amazing people at DGFC! Thanks for the incredible experience, we don’t want to leave!”



# Carnegie visit

This month we had the pleasure of hosting the Carnegie Airborne Observatory field team alongside collaborators from South East Asia Rainforest Research Partnership and Sabah Forestry Department. With their combined efforts, and some help from the DG team, they aim to complete the first canopy foliage campaign for mapping study of Sabah!



The crew of expert climbers from throughout Sabah braved the heights of the Bornean canopy in order to collect big bunches of foliage, that would eventually be sent off to the Carnegie researches to determine the chemical composition of the canopy leaves.

Many of the researchers and volunteers at DG got involved by helping process the leaf samples so that they would be suitable for analyses. This involved selecting mature leaves, cleaning them, cutting them into suitably sized fragments and separating out any samples containing algae, lichen, parasites, or insect eggs.

And in return for our hard work, the Carnegie crew arranged to let whoever on the DG team was brave enough have a go at climbing to the canopy themselves!



# Frog PhD update



Juan has been making great progress in his PhD, with diversity sampling concluding that Palm Oil plantations exhibit substantially less diversity when compared to the surrounding forest.

Sampling techniques for genetic analysis have also been updated, with the invasive toe-clipping being replaced with non-invasive buccal swabs. Buccal swabs are far less stressful for the frogs, and have no impact on survivability. Preliminary results for this new technique have been shown to be very successful.



Buccal swab sample being collected from *Polypedates macrotis*



*Rhacophorus pardalis* after buccal swab – much happier to have kept all its toes!

# Miami field course 2

On the 18<sup>th</sup> we welcomed the second Miami field course for their 5 day stay. As always, their infectious enthusiasm and broad range of professional backgrounds made for an interesting and exciting few days! Their projects included an investigation on the abundance of fungal species categorized by the conspicuousness of their color, an estimation of elephant and civet distribution using their dung, primate surveys along the river, and a comparison on the occurrence of “animal crossings” between the stone paths around the center and the forest trails.



# Eye to eye with a Bornean Banteng by Steven Bekker

In February I started volunteering for the Bornean banteng programme. This project studies the elusive wild bovids throughout Sabah and has been running for over 5 years. To get a glimpse of these mystical animals the remaining patches of jungle in Sabah are outfitted with camera traps. I say remaining because, unfortunately, logging and deforestation have decimated the availability and connectivity of suitable banteng habitat..

The team's effort in quest of one of Sabah's rarest mammals is incredible. To quantify the distribution of the Bornean banteng every corner of Sabah has to be visited in order to cover all potential banteng habitat. This is not just a walk in the park. So far it has probably cost me my bodyweight in sweat and a decent amount of blood thanks to leeches, mosquitoes and all sorts of vines which are eager to catch me with their unfriendly thorns. The fieldwork consists of searching for signs of banteng. This requires cutting a network of trails to survey a forest using camera traps. Based on signs, such as dung and footprints, suitable sites for camera traps are selected. The recorded photos are the most convenient way to learn more about the study species, because actually encountering an individual or a herd and seeing it with my own eyes is highly unlikely. But hard work (usually) pays off and with a bit of luck (or a lot) I could be one of the few to meet one in person.

In my last week, when checking cameras and changing batteries in a forest in the north of Sabah, we found a record amount of 23 fresh patches of dung on one of the roads less travelled, but luckily this road was accessible by 4x4. Since banteng are mainly active between dusk and dawn this was the place to revisit in the evening. We had already discussed plans for a night drive and this seemed to be a night with high potential.

We got to the forest around 20.30h, with Lee, Matt (Malaysian research assistants) and me standing in the back of the truck with a spotlight on the lookout for our study species and everything else noteworthy. Penny (team leader) drives the car with Raymond (forestry) accompanying her. After about half an hour we haven't found anything apart from bats and moths. When we get close to the spot where we found the fresh dung in the morning we drive up a small hill and Penny stops. Approximately 25 meters ahead of us our headlights catch something. When it turns, we recognise its distinctive white buttocks and its horns. I hear Lee whispering next to me: "Tembadau, switch off your lights". After 3.5 months with the team I know Tembadau is Malay for banteng. I realize what I see and I feel my adrenaline levels rising. I am aware that I need to absorb every aspect of this moment. Penny has switched off the engine but leaves her lights on. We see the confusion in this male banteng. It does not move away but comes towards us in a straight line. Penny switches off her lights and it stops within a meter of the car. Not sure if it wants to bump our car or what his intentions are we wait. And wait. It feels like we've got hours to admire the beauty of this impressive mammal. Probably less than ten seconds, but it may have taken a thousand heartbeats.

It passes the car within Penny's reach. It runs for a few meters and stops again. Goes left and right, probably still confused by its unexpected encounter. We see and hear it disappear into the jungle. It's gone. We share our excitement with high fives and Penny, Lee and Matt say that this was the best sighting they have ever had. Well the same is true for me and I am happy to share this extraordinary moment with the team.

I had never dreamt to be so lucky to meet a banteng. And this was not just seeing it. This amazing encounter will be burnt on my retina for the rest of my life. I feel extremely fortunate that I was able to be part of this research team for almost four months.

**Steven Karel Bekker**





# Conservation Corner:

**Common name:** Jungle Nymph

**Scientific name:** *Heteropteryx dilatata*

**IUCN status:** Unknown



**Description and Ecology:** Reaching weights of 50g +, this impressive species is the worlds heaviest stick insect. Females (pictured) reach lengths of 15cm and are flightless. Males are smaller at only 12cm, and are capable of full flight. When threatened, females curl their abdomen to resemble a scorpion, and snap their spiny back legs together to injure the attacker. Eggs of this species can take 14 months to hatch and are up to 1cm long. Population number unknown due to lack of research, but this is not a common species.

## Threats:

- Deforestation and slash/burn practices.
- Collection for pet trade and for Chinese medicine.
- Habitat disturbance by humans

## Conservation:

No legal protection is currently given to this species, but is becoming increasingly harder to find in natural habitats.

# Guess the insect!

Pictured below are three close-ups of a variety of insect species found here at Danau Girang. Simply match the image to the name!

1



2



3



A

Hawk Moth  
(*Daphnusa*  
*ocellaris*)

B

Cicada (*Dundubia*  
*vaginata*)

C

Monkey  
Grasshopper  
(Eumastacidae)

## Fact of the month!

The organs and skeleton of the Jade Tree Frog, *Rhacophorus dulitensis*, are visible due to its translucent skin. This protective mechanism allows light to pass through the frog, making it more difficult to detect by predators. Endemic to Sabah.

Answers: 1) = B, 2) = C, 3) = A

# Photos of the Month!



Photos by Francis, Jack, Toby

## 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**

Lot 6  
The Jungle  
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Sabah

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