# The Jungle Times

Independent newsletter of: Danau Girang Field Centre Est. 2008 Issue: 61

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# Visitors

**Sarah Close and Alex Mozley**

We had two visitors from the UK join us for a week in March. Both Sarah and Alex are veterinary nurses working in a practice and wild animal hospital. They have spent the last 8 months travelling the world together, with Malaysia being their final destination before returning home after the adventure of a lifetime. Sarah's younger sister Madeleine also came to DG, on the Cardiff University field course in July 2009, and inspired Sarah to also take a visit! They spent the week getting involved in research and walking the trails around DG, taking a keen interest in all they saw. They left with a very extensive list of all they had seen and photographed!

They said: 'We had an amazing time at DG and can't thank you enough for making us feel so welcome! We only wish we had arranged to stay longer!'

# Visitors

**Arturo Juarez** and **Esmeralda Heredia**
For two weeks we were visited by Arturo Juarez and Esmeralda Heredia from Mexico. They are both very enthusiastic biologists who were actively involved in many of the projects here at DGFC. They experienced work on bearded pig tracking, following primates, catching monitor lizards and trapping sun bears and clouded leopards! They will be travelling south east Asia for the next coming months and we wish them both safe travels.

**Tony and Syrene**
Two rangers from the Shangri-La's Rasa Ria Resort, KK joined us for a few days this month. Tony and Syrene came to enhance their skills in the forest by gaining valuable experience whilst following some of the on-going projects. They actively participated in projects involving the bearded pig, slow loris, sun bear and crocodiles!

# Visitors

## Plantation owners

We had a brief visit from the plantation owners in the area. They came for an afternoon to hear a presentation by PhD student Meaghan Harris to be informed on the work that goes on in DG, including all of the ongoing projects and successes we have had. They were also told a bit more about the wildlife of the area and how it might be utilising their plantations. This visit was to further our good relations with the plantations and to encourage them to be involved with conservation efforts. Several of the projects here require access to the plantations in order to develop a comparison between plantation and forest habitats. The plantation owners and workers support is necessary to facilitate this.

# New Arrivals

**Clemence Alloin** and **Elise Brilloux**

This month the DGFC team gained two new members from the Agroparistech engineering school of agronomy and environment, France! **Clemence Alloin** and **Elise Brilloux** will be here for 5 months carrying out projects on the Bornean orang-utan. They will focus on orang-utan foraging behaviour by following individuals in the forest from dawn to dusk. We wish them all the best of luck and look forward to their exciting results!

# Goodbye

## Katie Grassle

Regrettably, we had to say goodbye to Katie Grassle this month. Katie was a key member of the DGFC team and stayed here for 6 months, after graduating from Bryn Mawr University, USA.

Katie's research focussed on the movement patterns and behaviour of orang-utans in the Kinabatangan. She would follow orang-utans all day from the moment they woke to late afternoons when they would nest, whilst recording their behaviour every 2 minutes! This hard work meant that Katie would regularly be in the field for over 12-13 hours a day, where she would endure swarms of mosquitos, bad weather and painful neck aches from continuous observations!!

We would like to thank Katie for all her hard work these last few months and for making DGFC such a great atmosphere! We wish you all the best in the future Katie and look forward to seeing you again!!

## Peggy Kohler

Peggy unfortunately left DGFC this month as well. Peggy was a volunteer who helped the team for the last 3 months. She particularly aided the bearded pig project and orang-utan follows. She'll be spending the next few months travelling the rest of Asia.

# Visit from ex-PTY Rachel Henson

This month we had a brief visit from Rachel Henson, a previous PTY student who was here between 2008-2009. Both herself and Chloe Parker were the original PTY's at the centre and were thrown in at the deep end as DG had only just opened its doors for the first time. Rachel also came here on the first Cardiff University field course in July 2008 so was able to experience DG before starting her placement. Her project here had the title of: 'Seasonal variations in the dietary composition and diversity of the Bornean orangutan.'

This study invoked her love of primates, which she has now continued into her career. Read her interview on the next page to find out more!


Rachel (centre) with the current PTY's Kieran, Sarah, Hannah and Anya

# Interview with Rachel Henson

**Since finishing your undergraduate degree in Biology at Cardiff, where has your career taken you?**
I went to work at a primate rescue centre called Monkey World in Dorset and I have been there for the last 4 years working with the orang-utans, capuchin monkeys and spider monkeys as a keeper.

**Why have you returned to Sabah, 5 years after your 1st stay?**
I really wanted to come back and see how it had changed. I have been working in Indonesia for the last month and decided that it was far too close to not come back and have a look!

**What was the centre like when you were a PTY student here?**
There were a lot fewer people here and much less organised. It has really come on in terms of all the different projects that are happening. There are so many different things going on now. When I was here there was mainly just the 5 full time students and then a couple of field courses and visitors, but it seems to be quite hectic at the moment!

**What are your impressions now of DG?**
It is brilliant. It seems to be going really well. There are people doing something all the time. It's amazing! The forest hasn't changed though.

**You were the creator of the Jungle Times, along with Chloe Parker in 2008, how do you feel it has progressed and expanded?**
It looks much better now! It used to be quite simple. Somebody has obviously come along with more knowledge on Microsoft publisher! It is good to see it is still going. It has many more interesting stories in it as time has gone on and as more interesting people have come!

# Sun bear capture!

Sabah's biggest carnivore has been successfully captured! A wild Malayan sun bear was trapped and fitted with a satellite collar for the first time ever in the Kinabatangan. The large adult male weighed in at 53kg and had an excellent body condition. Project leader and master student, **Roshan Guharajan,** has seen this individual active in and around his trap for a few months now and amazingly has successfully captured the teasing bear!

Wildlife veterinarian Dr Laura Benedict, from the Wildlife Rescue Unit, led the one hour operation that included a health assessment, blood, saliva and faeces sampling, morphometric measurements and finally collaring. The bear was named "Meegar" after the Mee Ngar restaurant in Batu Putih that supplied the bait for the trapping.

The project's major long-term aim will be the production of a State Action Plan for the species. Roshan hopes to understand the sun bear ecology and habitat better to comprehend how habitat loss and fragmentation have impacted this beautiful animal. We also hope that with more accurate data collected on its home range, via satellite collars, we will be able to provide a better management of this animal in such a modified landscape.

This incredible project is a collaboration between the Sabah Wildlife Department and Danau Girang Field Centre, and is mainly funded by the Association of Zoos and Aquariums, Columbus Zoo, the International Association for Bear Research & Management and Danau Girang Field Centre.

# New species discovered!

A new spider species has been found in the Kinabatangan by members of the Leiden field course and DGFC! It has been named *Crassignatha danaugirangensis* after the nearby Danau Girang oxbow lake and the research facility. The new species is from the arachnid family Symphytognathidae, is 1mm-long and builds horizontal webs suspended between dead leaves on the forest floor.

The field centre's microscopes were used to produce images of the tiny spider's genitals, where arachnid specialist Jeremy Miller confirmed the new species. Corn flour was used to dust the spider's webs to make them stand out in order to be stored in alcohol .

All data and images were then compiled into a scientific paper, which, via the station's satellite link, was published by the *Biodiversity Data Journal*.

This is very exciting and shows just how important the Kinabatangan is to the native wildlife of Borneo. It's likely that there are many more species to be discovered, demonstrating just how vital this wildlife sanctuary is!

Picture taken by Tom Fayle

# Interview with Jeremy Miller

*Jeremy has worked with arthropods for many years and specialises in several genus of spider, including the Crassignatha of which a species was discovered here at DG!*

**Tell us how you came to specialise in research into spiders?**

I started off in my undergraduate years studying soviet environmental policy. I spent some time studying in the Soviet Union and the idea was that I wanted to do something positive in the world and make the world a better place. You know there is old camper's rule, to leave a place cleaner than you found it, and when I was that age that idea was very strong in my consciousness and this was the route that I decided to take. As I got into the reality of it I realised it was more difficult to actually effect positive change than I thought. I started to get a little disenchanted with that route but at that moment I came into contact with these biologists from Moscow state university who knew all of this amazing stuff about the ecology and diversity of these amazing and threatened habitats. The way that I thought about what they did was a kind of literacy that I didn't have. They could read the world in a way that I wanted to be able to read the world. So that is how I moved from the humanities and political economy into biology. Then what really fascinated me were the most diverse things, and I found that spiders were a way that I could read the world in a way that others couldn't. I had a great teacher, Jack Longeno, who was my undergraduate mentor. I met him around this time and said that I wanted to study spider diversity. He said ok, go away and come back at the end of the term with a list of the spiders in the college campus and that's what I did! Eventually he took me on my first trip to the tropics!

# Interview cont.

**Describe to us how you found the *danaugirangensis* spider?**
It was a workshop that we organised. I am interested in spider inventories, in how we survey spiders, so I had several workshops on the different methods we use. This one happened to be on the web architecture. I teach this by making the web more visible, by using a puffer to sprinkle powder over the web, so we can talk about the structure. I was sure we would find similar spiders to this species in the forest but then we brought them back to the lab and I took a look at them, it just happened to be in a group that I did a lot of work on as a post doctorate in San Francisco. In this case only 2 people have described a species in this genus, the man who described the first one in 1995 and then me! We decided it would be a great exercise to demonstrate how a species is described for the students, and have them participate in this.

**What is special about this particular spider?**
When we first found it we wanted to name it after the centre, as an honour to the centre. As time went on and as we got to learn more about it, it became more than honour. It became something that is biologically relevant to this place. When we arrived, the inundation from the risen river was slowly going down and what we discovered in the course of the student projects was that this spider is very rare, if not absent, in the inundated areas of the forest. That started to be a gateway into what is going in a whole community of biodiversity here at the centre that is available for courses like this to study, that is the diverse arthropod faunas. What are these inundation events? How are they affecting the arthropods? It also seems to actually be very common here. It is, in the riparian forest, the most common species in this category (the ground web building spiders).

# Interview cont.

**How have you enjoyed your time here with the Leiden field course?**
It has been really an outstanding course. I have been involved in several courses in this general category but this is the first time I have been as closely involved in the organisation and formation, and the first time it has come from my own institution. I think we have an incredible batch of students. Some of my colleagues here are from Leiden, some we have met on the way here and we have really made a great team and I am very grateful to Menno and Vincent for putting this team together! It has also been a great treat to see all of these researchers at DG, who generally study some of the most charismatic fauna on this earth, getting really excited about this tiny spider that no one can even pronounce!

# Interview with Menno Schilthuizen

*Menno is the Leiden field course leader along with Vincent. He is a good friend of our director Benoit Goossens and has visited the centre on a previous occasion.*

**Tell us more about yourself and your work as a professor at Leiden?**
I am a professor in character evolution and biodiversity, character evolution being a fancy word for the evolution of different body forms. I am actually working for Naturalis Biodiversity Centre, which is an extended version of our natural history museum. It has a collection as well as a very large research department which has links to the universities. The work I do is with the collection, mainly with snails and insects. I have a number of research projects, mainly on the evolution of shell shape, but also ecological projects. Fortunately because of that link with the university I get students to help me, and I also get the opportunity to organise courses like this, which was something I promised Benoit many years ago! I thought it was time to honour my word! I have also lived and worked in Sabah in the past so it was a nice way to continue my work in Sabah. We organised an expedition to Mt Kinabalu, together with Sabah Parks one and a half years ago in which we brought 20 people from the Netherlands, mostly from Naturalis, on a 2 week expedition to the Crocker range and Kinabalu park, together with 20 Malaysian scientists. We are now working on a joint publication, a DNA study on these endemic species that live on the high region of Mt Kinabalu. This was actually the second big project to bring students from the Netherlands and other countries in touch with some of the great scientists I have gotten to know here.

# Interview cont.

**What are your links with UMS?**
I worked there for 6 years as an associate professor in the Institute for Tropical Biology and Conservation. Benoit started working in Sabah around the same time and he initially had strong links with UMS and an office there as well so I got to know him quite well. During that time I built a DNA lab in UMS and a land snail collection and I taught and ran research projects. Right now I am still a research associate of UMS. A staff member of UMS is my PhD student at Leiden and I still help to supervise some of the students in UMS and whenever I'm here I drop by and give a lecture.

**Why did you choose DG as the site for the Leiden field course?**
Partly because the alternative would be Danum Valley, which I like but it is very large and almost industrial in the way they run field courses and research. Of course they have many more facilities than in DG but at the same time the permanent researchers and students there don't interact with the students off the field course except in the dining room and that is something I really like about this place. It is small, cosy, and fully integrated, which the alternative wasn't. The second reason is that I think this is a very good place to study 21st century tropical biology because you see all these conflicts between undisturbed habitat and human influenced habitat around you. Going to a place like Danum is exciting and of course it is traditional tropical diversity but there aren't going to be many places left like that in the future.

# Interview cont.

**Do you feel you achieved what you wanted here with the students?**
Yes I did! It has been a great success. Partly because we were very fortunate with the group of students but also because of the team of researchers and staff at DG who added an entire component and were involved so much with the course. That was a great bonus! We actually achieved more than we thought we would because we were able to show, with the ongoing research here, a much broader range of subjects than we were originally planning.

**What have you most enjoyed about being in DG this time around?**
2 years ago I was here for just a few days. Back then we were here for a small research project and at the same time Glamorgan University were here for a field course. I already knew I was going to give this course so I used the opportunity to see how they were running the course. Last time we were just 2 visitors seeing the centre, this time around everything has revolved around us for 2 weeks and it is really good to feel that you are part of a well integrated oiled machinery!

# Leiden Guest Speakers

**Dr Stephen Sutton, Dr Tom Fayle and Dr Kalsum Mohd Yusah:**

In association with the Leiden field course, which was here for 2 weeks over February and March, they arranged to have 3 guest speakers. Husband and wife Tom and Kalsum have worked in Danum Valley for several years on ants. Stephen Sutton has been an invertebrate ecologist for over 45 years and has also undergone research at Danum Valley.


Tom, Kalsum and Stephen at DG

# Leiden Guest Speakers

**Kalsum** works on sampling and studying ants in the high canopy, looking at how they are affected by climate change. She developed the 'Purse string' method of trapping ants in the upper canopy to facilitate this study. She is also a lecturer at UMS and is supervisor to 2 of the Malaysian students participating in the field course. A notable career highlight for her was to assist in putting Prince William and Katherine Middleton into the canopy at Danum Valley when they visited in 2012.

**Tom Fayle** also works on ants. His research is broadly focused on understanding interactions within communities of species in diverse tropical ecosystems. He spoke to the field course about ants in birds nest ferns and their mutualisms with them. These ferns are epiphytes living on trees and sustain themselves with falling leaf litter and debris. This provides a perfect habitat for arthropods, and ants often colonise them.

Finally, **Stephen Sutton** gave a very interesting talk on 'The high frontier. The rainforest canopy- mystery and reality.' This gave a broad outline of the rainforest canopy, the species found and how the forest is now being affected by selective logging. Stephen has recently developed a website, with the address of www.pyralidsofborneo.org which has images, descriptions of species and details of distribution and habitat of 295 described species or undescribed morphotypes of thyridid moths and 2,200+ named species or morphotypes of pyralids.

# Bom Babi

On the 2nd March a female bearded pig was found lying dead in a forest corridor of the Lower Kinabatangan Wildlife Sanctuary. The animal had clearly been killed by an explosive device which is known to be commonly used by poachers and is referred to as 'bom babi'. The belacan containing explosive would have been planted inside a food substance and hidden in the soil in order to target and kill a feeding bearded pig. This practise is not just a vicious way of killing an animal, but of course illegal since these animals should be protected.

The species is already threatened by habitat loss, and with the combination of overhunting a sharp decline in numbers has occurred across Borneo, with a huge shrinkage in distribution. As the populations continue to decrease, the impact of hunting becomes a very severe threat to the survival of this species.

The death is currently being investigated by a dedicated team involving members from the Wildlife Department, DGFC, police and rangers of the Kinabatangan. We hope that the poachers responsible will be found and penalised!

# Hong Kong Field Course

On the 8th-17th of March we had a visit from Hong Kong University. Dr Leszek Karczmarski brought along 16 students and 4 post graduates to come and explore the centre and all we have to offer. The students, who come from a variety of biological and animal behavioural courses, all got involved with the ongoing projects we have here. They were very interested in the primates and so spent a lot of time with PTY Hannah Wilson to follow our collared slow loris, Boss. They also spent a great deal of time walking the trails we have around DG in order to find the orang-utans. They were being particularly elusive, however most caught a glimpse of 1 and several students were lucky enough to go on a half day follow with orang-utan researchers Morgane Allanic and Katie Grassle. For the last few days of their course, the students had to produce a presentation. They had to look at the projects here and write informative presentations on the research and also develop further ideas and discuss limitations there may be. There were three groups:


1. Reptiles
2. Primates
3. The Bornean wild cats

Many of the students were also avid photographers and managed to capture a wide range of wildlife. Have a look on the next few pages to see their best snaps!

# Photos of field course











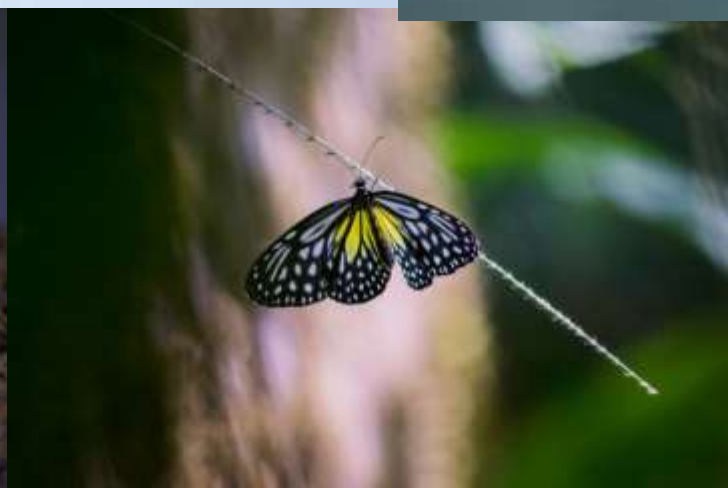

# Photos of field course









# Clouded Leopard Capture!

We've caught another one!!! March has been a fantastic month for our DGFC team as another clouded leopard has been caught and collared. Male 1, newly named Raja, who hasn't been seen since December has finally returned to the area. This male was first recorded on our camera traps in 2010, but suddenly left the area when male 4 first appeared. This would suggest he is not the dominant male in the area. He weighed 24kg and showed a very healthy body condition. He is estimated to be over 5 years old and to be one of the top predators of the Kinabatangan. Hopefully we can see where he goes using the newly fitted GPS collar and that he keeps returning to the area! The data will be used in PhD student Andy Hearn's work. The vet for this procedure was Laura Benedict, and we thank her for coming out to assist us!

# Monitor Lizard Collar

The monitor lizard team was lucky enough to re-capture “Lalat” this month. Lalat, which means fly in Malay, was previously captured and fitted with a GPS collar that recorded her position every 3 hours, for 8 months. We’ve now recovered all six of our collars from six individual lizards, which will hopefully give us a better understanding of the movement patterns of monitor lizards. We’re very excited to see the results and whether the forest fragmentation has affected their movement, activity and home range.

# Clouded Leopard Outreach Programme


**SK Paris I and Ladang Bode Kretam school groups**


The Clouded Leopard Outreach Programme has once again been busy educating the local children of the Kinabatangan. Two local school groups visited DGFC this month to learn about the importance of future conservation and how the forest needs protecting. The children discovered which amazing animals live on their doorstep by listening to talks from many of the current researchers and by getting actively involved in the forest. We hope all the children had a good time and that what they have learnt will stay with them in the future.

# MonkeyBar macaque collarings

As reported on in the January edition of the Jungle Times, there has been an ongoing effort to collar macaques near Kudat on the Northern tip of Borneo in association with the MonkeyBar project. The team was successful in collaring a male in Paradason and so team leader Lauren Gilhooly has been able to follow his movements. Initial follows have shown him and his group spend time in a rubber plantation, which can be worrying as they are sometimes considered as pests to the locals and are shot. So far though this macaque, with a nickname of 'Lucky', has indeed so far been lucky!

The team have also been on the island of Banggi and they have been successful in collaring a further 2 males. This is certainly going to give team leader Angeline McIntyre a hard job with many long days ahead but we hope she will generate some interesting results from the follow of these 2 different groups on the island.

All procedures and collarings were led by DGFC's own veterinarian Sergio and primatologist and PhD student Danica Stark, who have been heavily involved in the project since its initiation. The Wildlife Rescue Unit and MESCOT have also been involved to make these collarings possible.

# Banteng Project- an update

Hi, we are Naomi and Steph and we are on placement with the Bornean Banteng Programme, helping with a state-wide survey in Sabah. As part of our placement we are carrying our individual projects looking at the foraging behaviour and forage eaten by banteng and the body conditions of banteng between different forests, Naomi is also generating profiles of all the banteng individuals we have encountered. The state-wide survey is using camera trap data to assess the remaining populations of banteng and it is these camera trap images that we are relying upon for our projects. Some pictures were collected in previous years and some have been collected by the team and us this year on expedition giving us a large data set to work with. Very little work has been previously done on banteng so any findings of ours may be used as baseline data for future research and protection of the species. Due to banteng's rare and elusive nature camera traps are the best method of observing the remaining populations, with very few sightings of banteng having been made by the team and even fewer first hand pictures, however whilst here we have been lucky enough to see and photograph banteng in the forest.

On the next page you can see some of the banteng that Naomi and Steph were lucky enough to witness in January. It is of a male on the left and 2 females on the right!

# Banteng Project- an update

# Other news...

**Sumatran Rhino Capture!**
On the 21st March, a female Sumatran rhino called Iman was successfully caught in Danum Valley and translocated to the Borneo Rhino Sanctuary (BRS) Facilities in Tabin Wildlife Reserve. The reserve already has two rhinos named Tam (male) and Puntung (female) and hopes that introduction of Iman will prevent the extinction of one of the world's most critically endangered species.

**Aerial surveys**
An aerial survey was made in central Sabah, Luasong, Tawau. The survey allowed for a rapid landscape assessment for wildlife conservation and connectivity within the central forests of Sabah. Benoit Goossens and Nurzhafarina Othman are part of the survey team.

# Conservation Corner: Storm's Stork

**Common name:** Storm's Stork

**Scientific name:** *Ciconia stormi*

**IUCN status:** Endangered

**Ecology:**

- Found on Borneo, in Sumatra and the Malay Peninsula
- Birds are often solitary but have also been recorded in groups as big as 12 individuals.
- Large (85cm) black and white stork with slightly upturned, red bill and a yellow eye ring.
- Live in lowland dipterocarp forest, floodplains of large rivers, riverine swamp forest, mangroves and secondary forest. Seen on prominent perches in high trees.
- Feeds on small invertebrates including earthworms, dragonfly larvae and grasshoppers. Also eat fish.

**Threats:**

- Shot for food
- Reduction of habitat

**Conservation:**

Classified as Endangered. Totally protected in Sarawak under the Wild Life Protection Ordinance The 250-500 individuals left are fully protected in Thailand, Malaysia and Indonesia where they are found in 13 different fragments .

# Match the Scales

1

2

3

A

**Monitor Lizard:** Biawak

B

**Crocodile:** Buaya

C

**Snake:** Ular

## Jungle Fact of the Month

Flying Draco lizards can glide up to 30 feet (9 meters!)

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

# Photos of the Month!

Photos were taken by François Ciavatti and Kieran Love

*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.*

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