



The Jungle Times

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Arrivals and Visitors



Deva Darshini Thinakaran and Jessie Ho Si Wai - Recently two UPM veterinary students visited DGFC for three days to follow our resident vet Dr. Sergio Guerrero Sanchez, and learn about wildlife veterinary practice. Both assisted with the monitor lizard project and also followed PhD student, Jenny Brunke, small mammal trapping, in which parasite samples were collected to study in the DGFC laboratory.

Suzanne Tomassi and Mike Kaputa – Suzanne, an ornithologist from America, recently visited the field centre to carry out mist netting and bird ringing as part of the Cardiff field course. Suzanne returned for a few more days with her husband Mike following the field course to catch birds on various trails around DGFC.

Jimli Perijin – Kinabatangan's new Wildlife Department District Officer visited the field centre to meet all the students and find out about all the research projects being conducted within the area.

Jordan Goodwin – Jordan, a Cardiff University undergraduate, will be at DGFC for the next 3 months. She will be collecting leech samples from the forest corridor in the hope of extracting blood when she returns to Cardiff. This will enable her to identify animals the leeches have been feeding on within the forest corridor and see if this correlates with camera trap data.

Selamat Jalan Grace and Helen...

The 15th July was a sad day for the DGFC family when Professional Training Year (PTY) students Helen Cadwallader (left) and Grace Dibden (right) came to the end of their 12 month placements here at DGFC. Helen's project while at the centre focussed on hornbill nesting, and Graces' comparing sun bear signs between forest block and forest corridor. Here's what the girls had to say about their placements:



Grace – “Amazing, incredible and so much more. I really can't believe its been 12 months. Thanks to everyone here its been the best year of my life. I'll miss everything about DG; the people, the river and the wildlife.”

Helen - “This place is incredible, always surprising and challenging. I've experienced things I never thought I would and changed more than I can say. Thanks so much to all of the amazing, crazy friends who have made this place so special.”

DGFC would like to thank you both for all your help over the year and wish you all the very best with your future studies!

Cardiff field course

On the 28th June DGFC welcomed 22 students from Cardiff university for a two week field course. During the first week the students learnt a range of field skills and assisted with projects at DG including:

- ❖ Nocturnal primate tracking
- ❖ Bird mist netting
- ❖ Crocodile surveying
- ❖ Primate surveying
- ❖ Entomology
- ❖ Botanic plots



During the second week the students split into small groups and carried out their own 5 day research projects including:

- ❖ A comparison of the parasitic fauna between monitor lizards located within forest block and forest corridor
- ❖ Does eye size in birds correlate with the time of day that they sing



Quotes from Cardiff



Alex Moore - "Thank you all for an incredible two weeks I have enjoyed every minute. Seeing an Orang-utan on the first day was definitely the highlight".

Jack Rogers – "This was the first time that I have been to a rain forest. I thought I knew what to expect but it was so much better. I hope that I have the opportunity to do something like this again".



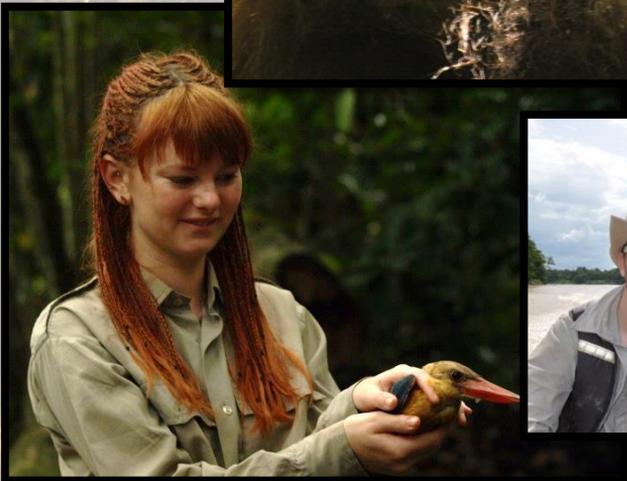
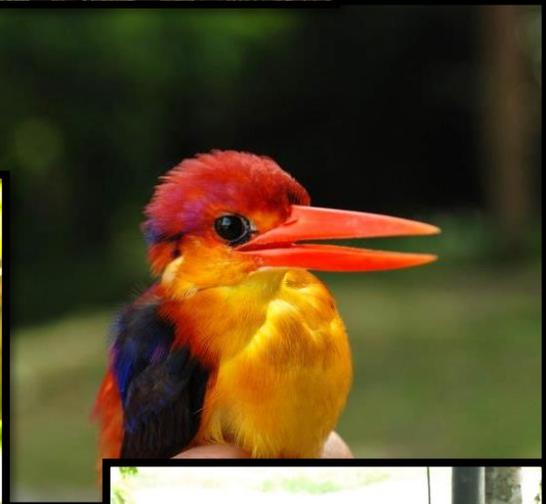
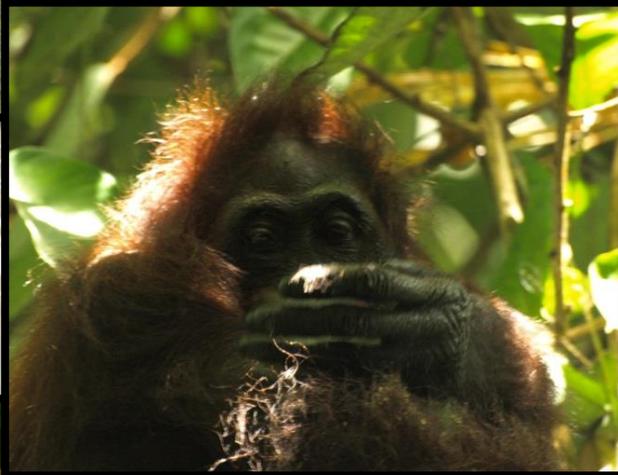
Ben Fayers – "An experience I will never forget and a real inspiration to do more of the same".



Kirsteen Colquhoun – "I feel incredibly lucky to have been involved and to have seen so much including the collaring of the slow loris and the tarsier".



Cardiff photo album:



New Monitor Lizard project

A new project on monitor lizard was recently launched by DFGC and Sabah Wildlife Department. The project will look at the landscape ecology of monitor lizard in a fragmented habitat in the Lower Kinabatangan Wildlife Sanctuary. The project is led by wildlife veterinarian, Dr Sergio Guerrero Sanchez.



Large monitors above 10 kg will be fitted with satellite collars and monitored over several months. This will enable the team to look at the variation of home range size and dispersal rate between disturbed and undisturbed areas in the Kinabatangan. Traps have been set in the forest and in the oil palm plantations and recently 2 males were collared in the forest.



Crocodile Tagging 4 and 5 For DGFC!



On 7 July 2013, the DGFC team and Wildlife Rescue Unit caught and tagged a 2.26 m female crocodile - the fourth croc to be tagged here at DGFC. Being the first female to be tagged within the region, she will provide important information on female crocodile movements and nesting sites within the highly disturbed landscape. The capture and tagging process was filmed by the Malaysian TV channel, RTM, and will be part of a special crocodile programme which will be aired soon.



After taking measurements, a tissue sample for genetic analysis and securing the satellite tracking device, we released the female that we called Mandi.

Top left: PhD student Luke Evans securing the satellite tag; Mid left: Luke being interviewed for RTM TV; Mid right: The DGFC and Wildlife Rescue Unit team. Photos by Meg Harris

Crocodile Tagging continued..



Following the successful tagging of our female crocodile Mandi, a few days later on the 11th July DGFC caught and tagged a large 4.66m male crocodile we named Garang. Garang is the fifth crocodile to be fitted with a satellite tracking device, our fourth male, and the second largest crocodile tagged in the area (after Siganas who measured in at 5.2m).



The croc was captured around 6pm, and due to its size and the risk of the trap sinking the tagging process had to be carried out as soon as possible, taking around three hours.

Garang was the second crocodile tagged within the DGFC vicinity in less than 7 days – a very successful month for crocodile research! Funding for our crocodile project is provided by Chester Zoo and DGFC.



Primate Field Course



Between 20th July – 3rd August 12 students representing Australia, New Zealand, United Kingdom, Ireland, Canada and the Philippines took part in a Primate Field Course here at DGFC, led by PhD student Danica Stark; DGFC's scientific officer. The two week programme saw students partake in primate related activities including dawn and dusk primate surveys, phenology and botanic plots, primate parasitology, nocturnal primates, day and night forest walks and primate behaviour.



Primate Field Course

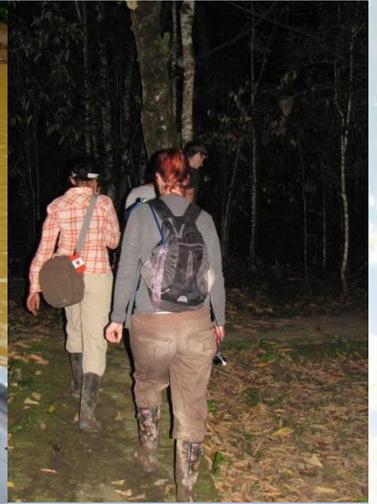
During the second week of the field course, students split into smaller groups to conduct their own field study, formulating hypotheses, discussing data collection methodology and analysing their data. A series of short presentations were given at the end of the field course to share their project findings!



Projects included:

- A comparison of the parasitic fauna between two primate species; the proboscis monkey and long-tailed macaque
- Different data collection methodology for the Monkey Bar Project team
- Projects focussing on play behaviour, grooming behaviour and aggression demonstrated by the long-tailed macaque

Primate Field Course Photo Gallery 1



Primate Field Course Photo Gallery 2



Other news...

Sabah Rhino Forum: Director of DGFC Benoit Goossens recently attended a rhino conference with members of the Government, NGOs and other stakeholders to discuss the plight of the Sumatran rhino.



Re-collaring of slow loris:

On the 5th July our female slow loris called Boss was collared for the third time. The re-collaring was carried out by Primatologist Danica Stark and Master student Priscillia Miard who is working on nocturnal primates. This enabled us to collect data on Boss's home range and behaviour.

New wildlife veterinarian:

The Wildlife Rescue Unit recently welcomed a new veterinarian to the team. Dr Laura Benedict from Sarawak is a newly graduated veterinarian who previously volunteered with wildlife conservation and rehabilitation.



Other News continued...



On 7th July an adult male tarsier weighing 130g was caught by DGFC's research assistant, Samsir. The male was fitted with a radio collar and released immediately after measurements and samples were taken. We hope to learn more about the ranging differences between males and females and the extent of home range overlap between the sexes.

DGFC researchers Fernando, Gillmoore and Andrew and Benoit recently had a paper published in CATnews, the Cat Specialist Group journal. The paper, about a Sunda clouded leopard road kill they found in March, discusses the observation in light of dispersal within a fragmented, oil palm dominated landscape.



short communication

FERNANDO NAJERA¹, GILMOORE BOLONGON², NICOLA A. ABRAM¹, BENOIT GOOSSSENS¹, AMBU L. N. MACDONALD¹ AND HEARN A. H. 2013
Observation of a road-killed Sunda clouded leopard in Malaysian Borneo

A Sunda clouded leopard (*Neofelis diardi*) recently killed by a vehicle, was discovered roadside on a main road which runs through an extensive landscape of predominantly oil palm. We discuss this observation in light of dispersal in a fragmented, oil palm dominated landscape.

The habitat associations and distribution of the elusive Sunda clouded leopard, a medium-sized felid, classified as Vulnerable by the IUCN (Iverson et al. 2008), remain poorly known. In Borneo this once widespread felid appears to be adaptable, co-existing various unwooded and highly degraded forest types (e.g. Iliou et al. 2010; Chong & Macdonald 2011). Despite their apparent robustness to disturbance, the evidence is that they are being extirpated and that they do not use oil palm (*Elaeis guineensis*) plantations, a rapidly expanding and widespread crop. A report to regional wildlife practitioners and scientists for clouded leopard location data to assist in the development of a viable distribution map for the species (Iverson et al. 2011) resulted in 200 occurrences records from across the island, some of which were from oil palm plantations. Additionally, numerous camera trapping surveys in two oil palm plantations in Sabah, Malaysian Borneo, yielded no evidence of these felids (Iliou et al. 2010; Iliou et al. 2011). Based on interviews with wildlife staff, Wilting et al. (2008), however, reported that clouded leopard had been seen in a plantation some 100 m from the edge of a remaining forest area in Sabah.

The extent to which oil palmations are suitable for clouded leopard is plantations as an habitat of varying oil palmations is a matter perhaps due to different prey abundance, resource availability, but an important question for conservation in a fragmented landscape is whether these plantations are permeable to dispersing leopards.

Observation, GIS analysis and recovery
 On the 07 March 2013 a female Sunda clouded leopard carcass was discovered along a 1.5 km road edge of a range (08° 21' N, 117° 28' E) (10° 10' 00" S, 117° 28' 00" E) in east Sabah (Fig. 1). The road traverses an extensive area dominated by oil palm

plantations, on the clouded leopard must have crossed through the habitat (Fig. 2). We reported the location report into a GIS with forest cover data (Fig. 3), which were assessed from Abram et al. (in prep), and were digitized from 21m resolution 2005 (3 band) satellite images (http://www.earthexplorer.com). The clouded leopard was found 150 m from, relatively straight fragment, along 275 m north east of the road (Fig. 4). The minimum distance to the nearest large forest block, the Lower Sandangan Wetland Sanctuary and the Ulu Segunt Forest Reserve, both of which support clouded leopard populations (Iliou, Hearn & Macdonald, unpublished data) was 10.8 km north.

A recovery revealed that the carcass was older than 72 hours. Examination of the skull and dentures revealed that the individual was a subadult female. Several bone fractures indicated that the animal had been involved in a high speed collision, likely with a motor vehicle. She was estimated with little to no back fat, and weighed 14 kg at the time of the recovery, significantly lower than that of other recorded weights (17.2 kg subadult female; Iliou et al., unpubl. data; 18 kg adult female; Iliou & Baskin 2012).

Discussion
 This is the first confirmed report of a Sunda clouded leopard in an oil palm plantation, and the first reported case of the species being road-killed. It is unlikely that the road nearby being built was not large to support the animal, as she may have been dispersing on an area of low vegetation forest blocks, a view perhaps supported by her age. While her carcass could not have come from distant, there is currently no evidence for this, although there are oil palms, and it seems more likely that she had travelled significant parts in the plantation. Nonetheless, her location suggests that fragmenting clouded leopard occurs in plantations.

The focus of our current research is to evaluate the effects of multiple landscape features, including oil palm, on clouded leopard movements and population density, and to explore the potential risk to clouded leopard of disease spread by fruit bats and dogs in Sabah.

CATnews 68 (July 2013)

Recently, our wildlife veterinarian, Dr Sergio Guerrero Sanchez rescued a white bellied sea eagle juvenile from a fishing line and retrieved a hook before releasing it successfully. He was assisted by DGFC's RA Mohd Ekram Doyo and veterinary student Charlotte Aggouni.

Conservation Corner: Rhinoceros Hornbill

Common name: Rhinoceros Hornbill

Scientific name: *Buceros rhinoceros*

ICUN status: Near Threatened



Found throughout the Sunda region including Thailand, Malaysia, Sumatra, Java and Borneo in both hilly and lowland forest. Rhinoceros hornbills have a broad frugivorous and omnivorous diet consisting of many jungle fruits, lizards, frogs, insects, small mammals and other birds' eggs.



Threats:

- Habitat loss
- Hunting for meat, feathers and casque which can be carved into ornaments

Conservation:

- Listed on CITES appendix II
- Monitor populations across the range to determine the magnitude of declines and rates of range contraction. Campaign for the protection of remaining extensive tracts of lowland forest in the Sundaic region.

Photos of the Month!



Photos left to right: Black and red broad bill (photo by Jenna James); Long tailed macaque; Bornean elephant; Orangutan; forest; Research assistant Doyo; Kinabatangan sunset (photos by Michael Reynolds) ; White lipped frog (photo by Jenny Brunke)

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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The opinions expressed in this newsletter do not necessarily reflect the views or policies of Cardiff University.

