



# The Jungle Times

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**Happy New Year from everyone at DGFC!  
We are looking forward to all the exciting projects  
happening this year!**

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# Arrivals

## Long Ji Sean

Arriving this month, volunteer Sean will be at DGFC for eight months! Already during his three weeks at the centre he has been involved in many of the projects here including checking civet traps, tracking monitor lizards and checking clouded leopard traps where he was lucky enough to see maroon langur and a gibbon! We wish you all the best and hope you enjoy your time at DG Sean!



## Leila Spicer

Leila joined us on the 30th, after traveling around South-East Asia for the last four months. After her time at DG she is moving on to stay with some friends before going back to the UK and starting Animal Behaviour with Biology at Chester University in September. Leila has already been put to work helping the PTYs with their fieldwork for their own projects.



A big welcome to **Navaneetha Roopan** (aka Roopan), DGFC's new resident veterinarian, joining us from Kuala Lumpur. Graduating just last summer from Universiti Putra Malaysia, he has already sampled three wild civets and a bearded pig! We are glad to have him on board and hope he gets the opportunity to work on many more interesting animals during his time at the centre.



# Meet the PTYs



Left to right: Max, Jasmine, Alex, Aaron and Luke

## **Max, Welsh Valleys**

**Project title:** Evaluating survey strategies and assessing how population density and species diversity of millipedes (*Diplopoda*) change with environmental variables in Lot 6 of the Lower Kinabatangan Wildlife Sanctuary, Sabah

### **Favourite Bornean animal:**

Rhinoceros hornbill

**Pets:** Two dogs, named Honey and Luna

**Favourite food:** Pizza

**Favourite colour:** Blue



**Jasmine, Devon**

**Project Title:** Bearded pig (*Sus barbatus*) nesting site selection and influence on sapling structure in the degraded forest of the Lower Kinabatangan Wildlife Sanctuary

**Favourite Bornean Animal:** Elephant

**Pets:** Two cats called Frankie and Darwin

**Favourite Food:** Chocolate

**Favourite Colour:** Turquoise

**Alex, Cornwall**

**Project Title:** Habitat preferences of reticulated pythons along the river banks in the Kinabatangan.

**Favourite Bornean Animal:** Turtle

**Pets:** Two chihuahuas, Alfie and Poppy

**Favourite Food:** Pasty

**Favourite Colour:** Purple

**Luke, Cardiff**

**Project Title:** Habitat selection of raptors in Lots 6 and 7 of the Kinabatangan Wildlife Sanctuary

**Favourite Bornean Animal:** Binturong

**Pets:** Two guinea pigs, Fleur and Tamara

**Favourite Food:** Roast Dinner

**Favourite Colour:** Blue



**Aaron, Swansea**

**Project Title:** Assessing the relationship between forest edge effects and functional diversity of anuran species in the Lower Kinabatangan Wildlife Sanctuary

**Favourite Bornean Animal:**

Proboscis monkey

**Pets:** Cocker spaniel named Gus

**Favourite Food:** All

**Favourite Colour:** Green



# Origins of the Bornean Elephant

DG members Benoit and Farina were involved in becoming a step closer to revealing the origins of the Bornean elephant. This subspecies of the Asian elephant has a controversial history whereby there have been differing theories for how it ended up in Borneo and more specifically Sabah. Proposed theories include; elephants introduced by the Sultan of Sulu which were descendants of the now extinct Javan elephant or an ancient colonization approximately 300,000 years ago.

Based on genetic samples and reviewing previous information, a new theory has been proposed - a late Pleistocene colonization less than 18,000 years ago. The time period coincides with the Last Glacial Maximum when the sea levels were low enough for the formation of a land bridge between Borneo and mainland Asia. The low genetic diversity is caused by a population bottleneck and behavioural causes such as a strong maternal philopatry. Although genetic data suggest this new colonization, there are two unsolved mysteries that can have a major contribution on the elephants' origins; the limited geographic distribution and the absence of fossils. These two potential factors favour the recent introduction of elephants via the Sultan over an ancient colonization although the absence of fossils may be due to the poor preservation conditions in tropical regions. Whereas, the geographic distribution of the Bornean elephant is located away from the land bridges and so remains unsolved.

**Ref: Sharma R, Goossens B, Heller R, Rasteiro R, Othman N, Bruford MW, Chikhi L, 2018. Genetic analyses favour an ancient and natural origin of elephants in Borneo. *Scientific Reports* 8: 880. OPEN ACCESS**

# Conservation Corner:

**Common name: Hawksbill turtle**

**Scientific name:**

***Eretmochelys imbricata***

**IUCN status: Critically  
Endangered**



## **Description and Ecology:**

The hawksbill sea turtle is a critically endangered sea turtle belonging to the family Cheloniidae. The species has a worldwide distribution spending most of its time in shallow lagoons and coral reefs but also lives in the oceans.

The hawksbill's appearance is similar to that of other marine turtles. In general, it has a flattened body shape, a protective carapace, and flipper-like limbs, adapted for swimming in the open ocean.

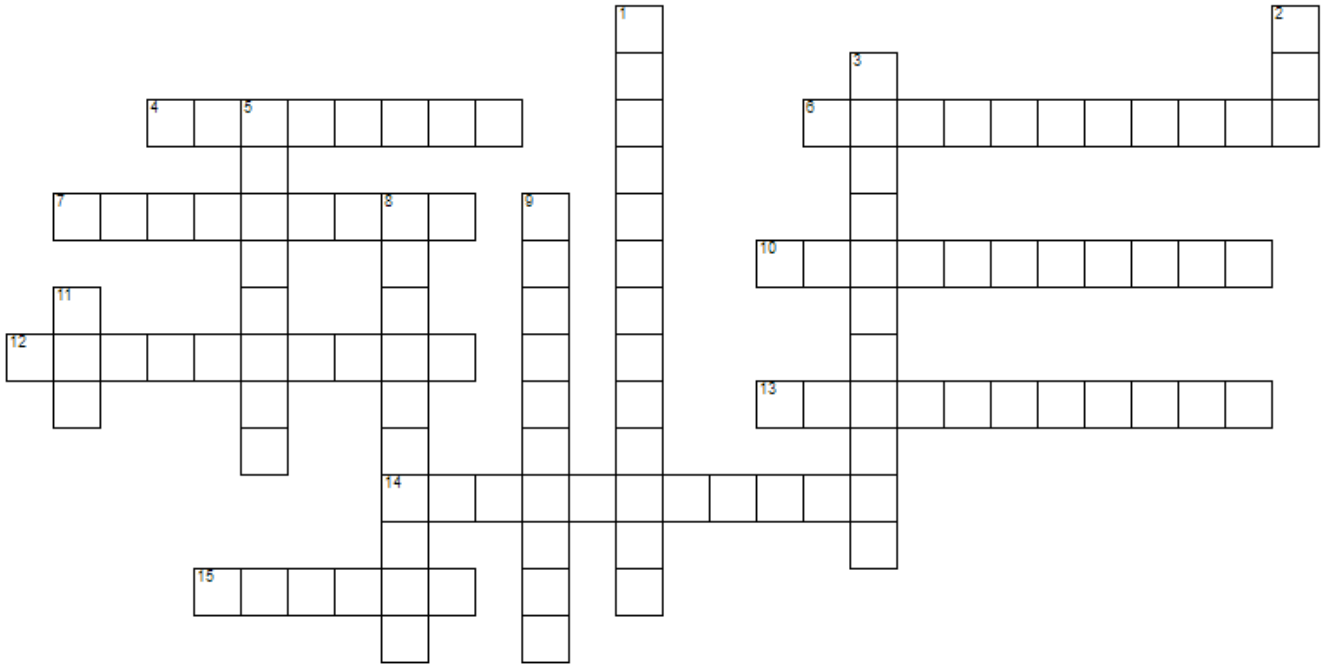
*E. imbricata* is easily distinguished from other sea turtles by its sharp, curving beak with prominent tomium, and the saw-like appearance of its shell margins. Hawksbill shells slightly change colours depending on water temperature.

The World Conservation Union classifies *E. imbricata* as critically endangered primarily as a result of human fishing practices.

Hawksbill shells were the main source of tortoiseshell material used for decorative purposes. The Convention on International Trade in Endangered Species outlaws the capture and trade of hawksbill sea turtles and products derived from them. The species is also on Schedule 1 (Totally Protected Species) of the Sabah Wildlife Enactment 1997.



# Field work crossword!



**Across**

- 4** Substance applied to skin to protect it from the sun
- 6** A waterproof item of clothing often made from rubber
- 7** Used to see things at night
- 10** Used as bait for monitor lizard and crocodile traps
- 12** Electronic device that records data over time with a built in sensor
- 13** Device which measures temperature
- 14** A flexible ruler used to measure distance
- 15** Item attached to animal, usually around the neck, for wildlife monitoring

**Down**

- 1** Device that forms an image using infrared radiation
- 2** A global navigation satellite system that provides geolocation and time information
- 3** The item in this image
- 5** Used for recording data in the field
- 8** Method of catching wild animals on film when researchers are not present
- 9** An instrument for measuring angles of slope, elevation or depression of an object with respect to gravity
- 11** Item of clothing which keeps the sun off the head



1- Thermal camera, 2- GPS, 3- densiometer, 4- suncream, 5- notebook, 6- wellingtons, 7- headtorch, 8- camera trap, 9- clinometer, 10- chicken guts, 11- hat, 12- data logger, 13- thermometer, 14- tape measure, 15- collar

## 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  
Lower Kinabatangan Wildlife Sanctuary  
Sabah

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