

# Jungle Times

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Katie has started her PTY project! Allow her to explain more.

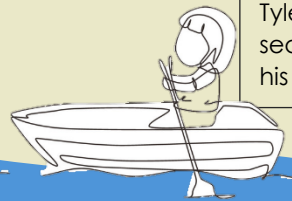
### From Palm to Predator

Tyler had arrived for his final field season and will tell you all about his PhD research!



## Flooding Update

By Ben Cunningham, PTY



January brought heavy rainfall to the Field Centre as the monsoon season intensified. What began as brief daily showers quickly escalated into days of relentless, torrential rain, especially during the second half of the month. As a result, fieldwork had to be postponed on several occasions. However, our dedicated team remained flexible, seizing every opportunity to continue research whenever possible.

Despite the challenging weather, the team worked tirelessly to ensure the Field Centre remained operational. At times, the rain was so intense that boats were filling up with water faster than we could bail them out! A joint effort from everyone was required to prepare for the rising floodwaters.

Though the Kinabatangan region typically experiences heavy rain during the monsoon season, this year's downpour was unusual in its intensity and volume. This was especially surprising as this year is a La Niña year in Southeast Asia which usually means drier conditions.

The floodwaters rose gradually but steadily, eventually submerging the main path and reaching some buildings. Almost all of our fieldwork sites, both in the jungle and in plantations, were completely flooded, making it impossible to continue work there.

As the water level reached a critical point, the decision was made to evacuate Danau Girang Field Centre. Staff members were either evacuated to Sandakan or returned home if possible. A skeleton team of five stayed behind to oversee maintenance, monitor the situation, and mitigate any further damage.

By February 14th, the water had receded to a manageable level, allowing us to return to the Field Centre. We have since resumed operations and are gradually restarting our projects. We're on track to be fully operational again very soon!

## New Year's Eve at DG

By Jemma Barrett, PTY

While many were away for the New Year, those of us who stayed at the field centre came together to ring in 2025 with a celebration full of good music and tasty food. Our talented chefs worked hard to prepare an amazing barbecue, offering an incredible spread that included everything from sausages and buttery potatoes to corn on the cob. As the evening continued, we gathered around the barbecue once more, this time to toast marshmallows on sticks, and trade stories of the year gone by.

When the clock struck midnight, the group came together for a new year's countdown, a perfect way to close out the year and welcome the fresh start that 2025 promises. For many of us, this was a completely new way to celebrate the New Year - a unique and memorable experience that will not be forgotten any time soon. The warmth of the fire, the great food, and the sense of togetherness made it a night to remember and set the tone for a happy and joyful 2025.



## Elephants at DGFC

by Amy Little, PTY

At the beginning of January, Danau Girang Field Centre was treated to a rare visit from a herd of Bornean elephants. The Bornean elephant, a subspecies of the Asian elephant, is a smaller, gentler variety native to Borneo. They are distinguished by their smaller stature, larger ears and unique social structure. Unfortunately, due to habitat loss and poaching, these elephants are now considered endangered, making their appearance near the centre even more special.

On the 9<sup>th</sup> of January, Lee, Katie and I spotted a herd of nearly 30 individuals on the south bank, just round the corner from DG. Researchers, PTYs and staff watched as the elephants fed, socialized and playfully interacted with each other. One of the herd's matriarchs, Tini, is fitted with a GPS tracking collar, allowing researchers to monitor their movements. Whether this gathering was a single herd or multiple groups coming together remains uncertain.

Then, just two days later, the centre woke up to the unmistakable sound of trumpeting. To everyone's surprise, 15 elephants were strolling down the main path! The herd explored their surroundings with curiosity, using their trunks to investigate objects, play with debris, and tug at branches. For roughly eight hours, staff and researchers sat in amazement as the herd wandered the area. During this time, staff had to deter elephants from weaker structures such as the water tower to prevent toppling/damage to structures. They only retreated when it began to rain.

The following day, the elephants returned- this time with more males joining the group. Their playful nature left its mark on the field centre; after two days of elephant visits, there was very little grass remaining and a lot of cleaning to do.

While these encounters provide an unforgettable experience, they also serve as a reminder of the delicate balance between human activity and wildlife conservation. With their habitat under constant threat, such visits highlight the importance of protecting this species and ensuring their survival.

AMY LITTLE @A\_LITTLEPHOTOGRAPHY

*Elephas maximus borneensis*

Katie Mizuro

*Favolus* sp.



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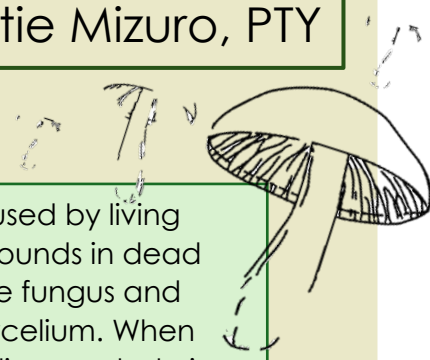
## PTY PROJECT: Macrofungi of Kinabatangan

by Katie Mizuro, PTY

When plants and animals die, fungi recycle their nutrients to be used by living organisms. Fungi secrete enzymes, which break down the compounds in dead matter. This creates new compounds, which are absorbed by the fungus and stored in an underground network of fungal fibres, called the mycelium. When the fungus reaches the end of its life cycle, the cells of the mycelium explode in a process called 'hyphal lysis', which releases the stored resources into the surrounding soil and make it available to plant roots. Alternatively, the fruiting body of a fungus (mushroom) is eaten by an animal and compounds from the fungus can re-enter the food chain. This is the process by which fungi make resources from dead matter available to the living ecosystem and intrinsically links the recovery of fungal communities to the recovery of vegetation. This regeneration is important to forest restoration initiatives, such as Regrow Borneo.

My project aims to assess the macrofungal communities in our Regrow sites Kaboi Lake and Kaboi Stumping. I will sample macrofungi along transects in our Restored Forest and Active Sites, and this data will be compared to splits that I will sample in the Natural Forest around the field centre and in Oil Palm Plantation. This allows for a comparison of macrofungal communities between restored forest, natural forest and agricultural land, including comparison between restored forest of different ages. This could help us to understand how long it takes for fungi to recolonise land during reforestation. Additionally, I have tagged logs in a variety of decay states at each study site to collect data about wood decay fungi in Kinabatangan. Similar land use comparisons will be made between the logs, and these data will provide information about the succession of fungi that is occurring in Kinabatangan as wood breaks down.

This project is one of the first studies on fungi in Kinabatangan. This data is hugely significant to expand our understanding of tropical mycology in Sabah, and I hope that it will provide insight into the current success of our Regrow Borneo reforestation methods and how these methods could be improved to support fungal communities.



Katie Mizuro

*Microporus xanthopus*

# From Palm to Predator

by Tyler Cuddy, PhD candidate



Tyler Cuddy

*Varanus salvator*

Hi! My name is Tyler, and I am a returning PhD student at Cardiff University in partnership with DGFC, UK Centre for Ecology and Hydrology (UKCEH), and the Joint Nature Conservation Committee (JNCC). Two years ago, I was here for 7 months on my first PhD field season, and 3 years prior to that I was also a PTY at DGFC. Now I am back for my final 4-month PhD field season, where I aim to fill some data gaps.

My field of study is a combination of ecotoxicology, ecology, and genetics. I work with predators in the middle of the food chain (mesopredators), looking to use them as potential indicator species for heavy metal pollution surrounding the oil palm plantations. This potential issue was first highlighted by a former PhD student at DGFC called Meaghan Evans, who analysed the heavy metal burden of civets that used the plantation, finding elevated levels of Aluminium, Cadmium, and Lead. This is presumably due to contact with agricultural products such as fertilisers, herbicides, and pesticides.

Many of the species that inhabit the Lower Kinabatangan Wildlife Sanctuary (LKWS) have adapted to the large-scale land use change, exploiting the plantations for new resources. Amongst these animals are generalist mesopredators such as Malay civets, common palm civets, leopard cats, and monitor lizards – all of which are focus species of this project.

Heavy metals are extremely persistent in the environment. Whereas most heavy metals are crucial to biological processes, some such as mercury and arsenic are toxic in small doses. Even those that are crucial have an ideal "Goldilocks" zone, where an excess or deficiency can be harmful to an individual. By assessing the heavy metal burden of mesopredators we can get an understanding of which metals are being accumulated up food chains across different habitats. This may allow the determination of pollution sources allowing better management of chemical release therefore reducing environmental impact.

By further assessing the diets of the study animals and measuring the heavy metal burden of possible prey species, we can get a deeper understanding of how these pollutants are moving through the food chain and identify key vectors and environmental pathways.

So, there is plenty to keep me busy with here! Now that the floods are receding, I hope to start my field work again very soon. Between live predator and small mammal trapping, fishing, and hopefully many hours processing samples (all assisted by the fantastic team here), I'm confident that these next few months will be successful!

If you want to know more about the project, feel free to contact me at [CuddyTJ@cardiff.ac.uk](mailto:CuddyTJ@cardiff.ac.uk)



Tyler Cuddy

*Paradoxurus hermaphroditus*



Amaziasizamoria Jumail



Amy Little



Katie Mizuro



Katie Mizuro  
*Bombyx mori*

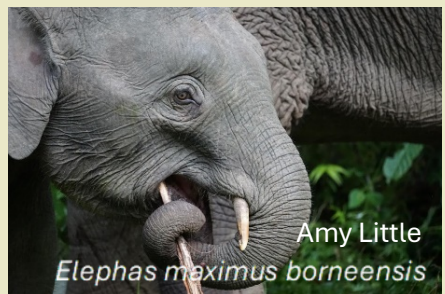


Amy Little  
*Elephas maximus borneensis*

**Photo highlights**



Amy Little  
*Elephas maximus borneensis*



Amy Little  
*Elephas maximus borneensis*



Amy Little  
*Elephas maximus borneensis*



*Proagoderus wantanebei*  
Katie Mizuro



*Elephas maximus borneensis*  
Katie Mizuro

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