



MEME

Updates

Management & Ecology of Malaysian Elephants

Issue 5

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Because we can only manage what we measure — working towards an evidence-based conservation of Malaysian elephants.



TESTING CONSERVATION DRONES — can we use cost-effective UAVs to study and conserve Malaysian elephants?



MOU PERHILITAN-UNMC FOR WILDLIFE RESEARCH AND CONSERVATION — MEME has officially become a joint project with Perhilitan.



ELEPHANT HEROES: NASHARUDDIN — new series of interviews with people that make elephant conservation possible in Malaysia.



MINDING THE COMMUNICATION GAP

It is no secret that much of conservation science fails to have a significant impact on real-life conservation. Conservation scientists such as ourselves will always claim that research and scientifically-sound practices are necessary for effective conservation. Conservation practitioners, on the other hand, will often claim that scientists live in our ivory towers and much of our work is of little help for them to make conservation decisions and policies. How can we fill this gap?

As highlighted in a recent paper by Bill Laurance and colleagues (Laurance et al. 2012), the gulf between what conservation scientist aim to do — real conservation — and what we often do — publishing papers in peer-reviewed journals without relevant effects on conservation — stems from reasons such as that the majority of conservation scientists hold academic positions and have limited contact with conservation practitioners and managers; and that most of national-level research funds are granted on the basis of academic virtues such as ‘scientific novelty’ rather than ‘conservation relevance’.

From its onset, the Management and Ecology of Malaysian Elephants (MEME) was conceived as a way to link high-quality conservation science produced by academics with real-life management and conservation practice conducted by the government for the long-term conservation of Malaysian elephants. Since our first discussions in June 2009 and our first elephant collaring in March 2011 to date, we are proud to say that MEME and the Department of Wildlife and National Parks (Perhilitan) have worked shoulder to shoulder in all our field activities.

This relationship reached a new height on 22 May 2012, when the Ministry of Natural Resources and the Environment (NRE) and the University of Nottingham Malaysia Campus (UNMC) signed a **Memorandum of Understanding for Cooperation in the Field of Wildlife Research and Conservation**. According to this MOU, MEME becomes a **joint venture between Perhilitan and the University of Nottingham**, and hopefully a much-needed tool to bridge the communication gap between university scientist and government practitioners for the conservation of Malaysian elephants and other biodiversity.

In Bukit Rengit, 1 July 2012



Ahimsa Campos-Arceiz
MEME's Principal Investigator
School of Geography
University of Nottingham Malaysia Campus



Testing the

Last month, we had an exciting field test with the Conservation Drones! With the passion and expertise of **Serge Wich** (Universität Zurich), **Koh Lian Pin** (ETH Zurich), and not to mention, **Juanita Choo**, we had our very first experience with the UAV -Unmanned-Aerial-Vehicle- as the commercial world calls it.

The drone was cleverly modified to suit the needs to capturing images and videos of habitats from a birds-eye view; furthermore it is cost-effective compared to its commercial counterparts; and is relatively friendly to manipulate with the help of open-source software available online, which lays out a platform for hobbyist and conservationist alike to have access to operating programs.

At MEME, it can provide valuable information on land cover of our study areas. Knowing this, will further strengthen our research objective of providing scientifically sound knowledge. What's more is that it will facilitate us with the ability to track our collared elephants and their habitats through remote sensing techniques, thus, reducing invasive monitoring and minimizing risky operations in the forests.

Our deployments were rather successful... until we lost one of the drones to the hills of Broga! Luckily it was retrieved after frantic searches. As Lian Pin puts it, 'Every one of these drones have their own personality', we need to work flexibly to accommodate each of the intangible factors such as those of wind direction, weight stability, and most importantly the programming of every flight. Every variable is a sentimental experiment; however with every challenge found, there will be a silver lining in the end as failure allows us to make better attempt in future trials.

Ning



www.conservationdrones.org



WE ARE RECRUITING STAFF AND STUDENTS!!

With the arrival of the autumn semester we are again recruiting students and staff for the project. These are the available posts:

- **1. PhD candidate:** 1 fully-funded PhD scholarship at the University of Nottingham Malaysia Campus (UNMC) to study ecological, social, or economic aspects of human-elephant conflict in Peninsular Malaysia;
- **2. Research Assistant:** 1 full-time position as 'Elephant Tracker Officer'. To be based largely in the field (i.e. Gerik and Kg Basung) chasing elephants with a VHF receiver and yagi antenna; and
- **3. Admin staff:** 1 full- or part-time position to help us deal with the finances of the project and other admin tasks to be based at UNMC.

If you want to apply for any of these positions, send your CV and a cover letter to Ahimsa Campos-Arceiz (ahimsa@camposarceiz.com) before July 20th. Remember to indicate the position you are applying for!

Brief job descriptions:

For PhD candidate:

Study topic: Characterization and mitigation of human-elephant conflict incidents in Peninsular Malaysia.

Conditions: three years of **fully funded PhD scholarship** (tuition fee, stipend, and research budget) at UNMC's School of Geography

Requirements: Malaysian nationality

The Human-Elephant Conflict (HEC) is a complex phenomenon that occurs whenever elephants and agricultural human societies meet. In Malaysia, HEC is, with habitat loss, the main threat for long-term conservation of elephants. One of our main objectives at MEME is to understand the characteristics and drivers of HEC in Malaysia and apply scientifically sound methods to mitigate it. Applicants should have a background in ecology, conservation, sociology or other relevant subject, some basic quantitative skills, and strong commitment with research and wildlife conservation. Contact ahimsa@camposarceiz.com for more details.

For Research Assistant:

Working responsibilities: Tracking GPS-collared elephants in the field, producing weekly reports of elephant movements, and assisting with other general tasks for the management and implementation of the project

Conditions: 1 year contract with possibility of extension

Requirements: degree in biology, ecology, environmental science, or similar major preferred but not mandatory; willingness to be based in the field (mainly Perak, Kelantan, and Selangor); basic knowledge or willingness to learn GIS.

For Admin Staff

Working responsibilities: Keeping project accounting and helping with other general tasks for the management and implementation of the project

Conditions: 1 year contract with possibility of extension

Requirements: good command of English, knowledge of excel and word or similar programs, and willingness to get involved in a number of project management activities.

ELEPHANT TRAILS AND TAILS...



This is a tale of an animal so powerful, yet so helpless in its own territory. If you ask me, the whole thing hasn't sunk in yet. The whole experience. It's overwhelming and surreal and humbling all at the same time once you step into the wild elephants' territory. You're definitely not invited to be there but you do, ironically for the sake of conservation.

Since I joined MEME I have witnessed Limau Kasturi, Cherang Hangus, Mek Jalong, Sauk and Awang Genor being translocated. All of them are elephants with strong presence and will to survive in the midst of rapid development. The four males as I recall, are big and muscular, all with beautiful tusks that they use in their daily life for digging, debarking trees and as levers for maneuvering fallen trees, amongst many others. And those long trunks with 60,000 muscles you may ask? Can pick up something as lightweight and delicate as a feather, or pull a whole tree out of its standing ground.

Elephants are megaherbivores and consume from 150 to 200 kgs of plant matter per day. Male elephants especially, carry significant ecological importance in our tropical rainforest. As they weigh from 4,500 to 5,400 kg as to 2,000 to 4,000 kg for their female counterparts, they roam in a wider ranging area to meet their requirements which makes them important seed dispersers over long distance. By falling trees along the way, elephants create natural trails as they move in the forest. By pulling taller and bigger food trees down to feed, small and ground-dwelling animals benefit from these leftovers. By feeding on leaves on trees, they also indirectly allow undergrowth to receive more sunlight.

When you wonder why conservation of elephants and all other wildlife is important, it's simply because they matter. To maintain a flourishing and intact ecosystem that is an irreplaceable heritage on its own. I realize people don't really look at this issue from a bigger perspective and even if they do, they don't think that these problems can cascade to a big loss eventually. How sad it is that often ignorance is deadly. **So talk about it, educate people, and spread the words, will you?**

Ami

ELEPHANT MOVERS & SHAKERS: En. NASHA

Starting from this issue, we want to introduce the *movers and shakers* of elephant conservation in Peninsular Malaysia. These are the people who play or have played significant roles in elephant conservation. With these interviews we aim to gain an insight into context of real-life wildlife management and learn from their many years of experience. In this first issue — it couldn't be other way — we interview to Encik Nasharuddin Bin Othman, surely one of the most influential people in elephant management in the last three decades. Ning met *Nasha* at Kuala Gandah elephant sanctuary and while sipping a *teh tarik* this is what *Nasha* had to share with her:



Q: At Kuala Gandah, your designation is:

N: Head of the Elephant Unit, National Elephant Conservation Centre (NECC).

Q: What are the main functions of the Unit?

N: Taking care of Human-Elephant-Conflict through the capturing and relocating of wild elephants. We've started the identification of 150 conflict elephants in 2009 and had taken action since, in order to manage them from disturbed habitats in Peninsular Malaysia; which is estimated to reduce 60-70% of the tension caused from HEC. But, of course, in reality it is never as straight forward. With the increase in forest clearing and commercial plantation, this model is still being challenged. Other than translocation, we also erect electric fences, mainly focusing on traditional villages and trying to provide a balance between wildlife and humans.

Q: How did you start out at Kuala Gandah? And how did you find it?

N: In 1990, I was transferred from Taman Negara National Park to the Elephant Unit which had been established in 1974. It gave me a lot of opportunities to see places and work with people, especially those with 'Subject Matter Expertise', whose job are specific because there are different experts for different aspects of elephant issues. The Elephant Sanctuary initiated its activities rescuing baby elephants that were separated by new land developments. But with Kenyir Dam being built, the targeted animal was broaden to adult elephants that would be stranded on islands after the flooding of the dam. In the 1980s, we managed to evacuated 20 elephants from drowning. We also export and share our expertise where we help our neighboring countries, for instance, Sri Lanka and Vietnam capturing elephants.

ELEPHANT MOVERS & SHAKERS: En. NASHA

Q: How was elephant conflict like 30 years ago compared to the current situation?

N: HEC was much sectorised and scattered. But now, it is everywhere. This is the consequence of development with standards of living being much higher compared to decades ago. Nowadays, it is difficult to see more than 15-20 elephants in a herd outside of designated parks such as Taman Negara. However, in the early 90s, it was a common sight to have at least 25 elephants in a herd. Now most of the environment is pocketed which is not an ideal habitat for large herds of mammals to roam. Hence, incidents of calves being separated from the herd and Kuala Gandah's origin of helping these animals in surviving.

Q: What is the most important element in halting HEC?

N: Human perception. For example, in areas that have better income, people are much more tolerant towards conflicts with elephant; and vice versa. Therefore, it is a matter of dealing with people more than anything else. There must be a balance between conserving habitat for wildlife and safeguarding the livelihood of those that depend on them. As a wildlife manager this is the most important challenge and also an element that cannot be looked lightly upon.

Q: Has there been ways in dealing with the perception issue?

N: Dialogues have been carried out in the past. Visiting *kampungs* (villages) with the intention of developing alternative strategies to solve problems. However, there's always the media component that is a problem for us. Because their desire for unpleasant 'stories' has put us in difficult a situation and lessens our effort in providing services. There's no one-set solution in tackling the HEC issue, which makes it an important aspect to be emphasized on in the long run of conservation strategy because **local community involvement is the most essential component in overcoming HEC**.

Q: Personally, what do you think can be improved in terms of the future for elephant conservation?

N: Yet again, human perception is vital, not to mention our public delivery system. With these two factors anchored, we can hopefully reduce conflict between animals and humans and increase awareness through improving our skills in conveying the message to the wider public. That's why I think, Kuala Gandah centre being where it is situated is a strategic position for this improvement, a centre of change. This can be observed by the increase in visitors from year 2000 of 2000 visitors/year to 2011 with 180,000 visits. There is a growing desire in wildlife awareness. A positive sight for us.



DIARY FROM THE STRESS ZONE

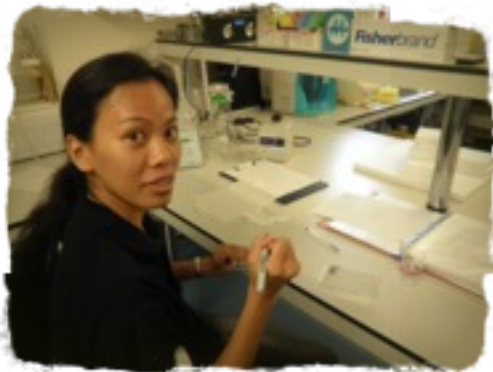
Ee Phin, MEME's first PhD research student, is playing detective at Chester Zoo as she puzzles out how Endocrinology can be used to monitor wild animals' health. She is finding out first hand that linking the presence of glucocorticoid metabolites found in elephant dung to stress levels requires a lot of laboratory skills, careful assumptions and verifications.



The training kindly provided by **Dr. Sue Walker** from **Chester Zoo's Research Center** team, is aimed to provide capacity building to MEME, to set up endocrinology work in Malaysia. Dr. Walker and her colleagues openly share their wealth of knowledge, garnered from years of monitoring and improving welfare of animals in zoos, as well as from field conservation programmes.



Chester Zoo's Research Center have the only zoo Nutritionist and Endocrinologist in the UK. Besides running over 30 research project within the zoo, the Research Center also collaborates with other zoos, universities and conservation programmes to improve captive breeding of wild animals and their welfare through research and training programmes.



Their projects include working with zoos throughout Europe to increase sustainability and improve reproductive health of the captive Black Rhino population. They also supervise research by Bidyut Das from Assam Agricultural University, to understand why elephants raid crops. The Assam Haathi Project is one of Chester Zoo's international conservation programmes that look into ways to mitigate human-elephant conflict and promote co-existences of human and elephants.

Within these 3 weeks of training, Ee Phin is 'bestowed upon' the mystery to track down as many missing pieces as she could to complete the puzzle, her PhD study design. Next stop, she will be learning about Parasitology from **Dr. David Modry** at **University of Veterinary and Pharmaceutical Sciences Brno, Czech Republic**.

Another piece of clue, and so the chase continues

Ee Phin



BECAUSE IT IS ALL ABOUT PEOPLE... VANITHA'S CORNER

TOLERANCE and HUMAN ELEPHANT CONFLICT

The increasing need for monetary pursuit imposes a fundamental question of tolerance amongst people who live in and at the edge of Malaysian forests. These people are indigenous communities and local farmers (of Malay, Chinese or Indian origin) who have cleared the edge of forest for farming activities. Traditionally these farmers have learned to live in a shared environment with the animals, an attitude deeply embedded in their way of life. However, this attitude seems to be rapidly changing with the ongoing land development policies and market demand for non-timber forest crops such as wildlife meat and parts for superstitious traditional medicine.

In this context, elephants are increasingly facing issues of survival due to a decreasing level of tolerance among the forest dwellers and rural farmers. As understood commonly, human elephant conflict occurs when the elephants whose habitat was encroached by people for farming destroy crops for feeding or otherwise. What was the reaction in the past towards HEC? Generally the farmers capitulate due to awareness of the elephant's lack of food source, and such view is shared by the indigenous people too. They were more compassionate and empathic to the elephants. An excruciating change on this attitude emerges when there are more rampant incidents of HEC in cash crop plantations or farms. The damage in the early stages of planting appears to be intense and frustrates the farmers to the point of taking angry actions. This is a strong swing of pendulum in terms of attitude and perception towards elephants.

Is this the fault of the elephants alone? **Of course is not.** If one decides to do open farming in the forest, it inevitably invites such phenomenon. And when this happens, people often rely on external parties to resolve this as part of rural community development initiatives. If this fails, then the blaming game starts via the media. Again tolerance seems to be hanging by the thread!

The way forward needs increased tolerance and community engagement for coexistence. Effective mitigation is possible with greater cooperation amongst people in managing the boundaries of their farms. As an old saying goes, "you have to take care of your own backyard". Examples of such initiatives may exist in Peninsula Malaysia, thus enabling a more optimistic future for **human-elephant coexistence**. Cash crop planting is irreversible in rural communities due to lack of self subsistence farming and the crucial role of 'money' in their daily lives. Simultaneously, preservation of biodiversity is pivotal for sustainability of future generation. Hence, tolerance and community engagement is important to maintain a sustainable ecology and development. The children may enjoy the benefit of the cash crop in future, yet also suffer the consequences of its damaging impact on the environment.

Increasing tolerance and community involvement are by no means an easy feat. It needs guidance and monitoring from diverse parties. It is not about individual parties working in isolation, but also as an alliance. This will be explored in the next issue... so keep on reading.

Vanitha





From top left clockwise: Sauk, largest bull ever collared by MEME coming down from the translocation vehicle; The iron ladies behind the scene: UNMC's Faculty of Science Admin team; Sad condition of the State land within Royal Belum Reserve; Drone demonstration by Lian Pin & Serge (check www.conservationdrones.org for more info); MEME team with new their new ride (the MEME-mobile?).



Contact Us

Ahimsa Campos-Arceiz, PhD
 Assistant Professor
 School of Geography
 University of Nottingham Malaysia
 Campus
ahimsa@camposarceiz.com
www.camposarceiz.com

Rimba
www.myrimba.org

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