

Final Project Evaluation Report

Your Details	
Full Name	Jo Leen Yap
Project Title	Road Ecology and Canopy Bridges for Arboreal Wildlife to Cope with Habitat Fragmentation in Penang
Application ID	22181-2
Grant Amount	5,000
Email Address	langurprojectpenang@gmail.com
Date of this Report	27 th August 2018

1. Indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
To gain more insight regarding the foraging and activity behaviour of the dusky langurs by the road				We have gained a lot of understanding regarding the movement of the langurs especially in answering the questions such as: 1) What are the coastal plants that drive the movement of langurs to visit the beach?; 2) The other factors that contribute to the habitat edge effect on the langurs, such as deforestation and development at certain parts of Penang; 3) The estimated population estimation of the langurs living by the coastal forest edge, which we plan to extend this study into the full population assessment and distribution of the langurs in Penang.
To construct canopy bridges for arboreal wildlife in order to enhance habitat connectivity and conduct systematic monitoring of the bridges using camera traps				It is unfortunate to mention that the permit for the canopy bridges is still pending. More details are given below.
To establish the first comprehensive road ecology study for arboreal wildlife in Malaysia that does not only apply to roads, but also to urban areas in general				The media, environmental NGOs and governmental body are fully aware now that LPP is leading a road ecology study in Penang, and they are anticipating on the establishment of the first arboreal wildlife canopy bridge to be built in Peninsular Malaysia! Even though the permit is late, my team and I is doing our best to highlight the importance of road ecology project to the stakeholders through environmental education and round-table discussion.
To serve as an important platform in Penang to educate residents about wildlife at the island and				The momentum of LPP nature education effort is unstoppable! My team and I came out with the 'Wild Roads' Campaign to highlight the impact of habitat fragmentation (roads)

<p>protect its natural resources for human well-being, education and eco-tourism.</p>			<p>toward the movement of arboreal wildlife in Penang. So far, we have organised 10 events and eight langur-rainforest programmes so far, since the beginning of 2018: 'Wild Roads' education events: https://tinyurl.com/y7ja2dcc https://tinyurl.com/yassqbv5</p> <ul style="list-style-type: none"> • Han Chiang High School Green Day - 16 March 2018 • Earth Hour Penang- 24 March 2018 • Science Mamak talk with community - 31 March 2018 • Back to Nature by Biosociety USM -18 April 2018 • Jit Sin Independent High School talk - 7 May 2018 • BABA Organic Farm Outreach - 27 May 2018 • USM student Science Event - 11 July 2018 • Penang Hill Festival - 21 July 2018 • Wawasan Open University Outreach - 30 July 2018 • Language Art Festival - 26 August 2018 <p>Dates of Langur-rainforest programme: https://tinyurl.com/ya5qgvh2 21 Jan 2018 3 Feb 2018 8 April 2018 20 May 2018 10 June 2018 22 June 2018 5 August 2018 12 August 2018</p> <p>Our nature education aspect recently gained recognition from North American Association for Environmental Education – NAAEE as one of the 30 under 20 awardees for environmental education (https://naaee.org/our-work/programs/ee-30-under-30 & https://naaee.org/about-us/people/jo-leen-yap).</p>
<p>To provide useful data that translates to other vulnerable and endangered local</p>			<p>I was invited to be involved in an environmental impact assessment feedback working group to evaluate a proposed Penang Island Link 1 (PIL 1), a</p>

wildlife and plant species and help to raise awareness on a larger scale.			<p>dual three-lane purpose-built highway to alleviate the heavy traffic load on the Tun Dr Lim Chong Eu Expressway (LCE) and adjacent arterials such as Pengkalan Weld, Jalan Masjid Negeri, Jalan Jelutong and Jalan Sultan Azlan Shah.</p> <p>Besides, I was also invited by Tropical Spice Garden to provide training and education to the garden's nature guides to enhance their local species knowledge and guiding interpretation. Penang Green Council had also invited me to provide knowledge and insights of dusky langurs for their team to develop a Penang's nature interactive green-hub in Komtar, Penang.</p>
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2. Please explain any unforeseen difficulties that arose during the project and how these were tackled.

The research aspect of the project is going well. The only difficulty arose in this project is the permit for canopy bridge. I am unhappy to say that the bridges will only be constructed by end of 2018 due to the complications for the permit application.

This is the first canopy bridges initiative in Peninsular Malaysia, therefore the governmental bodies were having challenges in reviewing and approving this permit. During the beginning (February 2018), I firstly obtain the permit from the Department of Wildlife and National Parks (DWNP), and gathered the support letters from our project collaborators (Tropical Spice Garden, APE Malaysia), and supporters (Malaysian Primatological Society & Malaysian Nature Society), submitted to Malaysian Work Department (JKR) for permit.

However, after a 2-month review and phone calls follow-up, JKR requested me in for a meeting in May 2018, to discuss about the proposal in their office in Penang. It went well, but they requested us to wait a bit more as they would need to check with headquarters in Kuala Lumpur regarding their feedback, after gathering inputs from our meeting.

As time passes by, the JKR headquarter representatives called me in for another meeting in Penang in July 2018. It went great and gave us a verbal agreement but requested us to wait for the hard copy permit. Nevertheless, JKR demanded for the support letters from Forestry Department (PERHUTANAN) and Penang City Council (MBPP) to clarify on the ownership of the tress that we are planning to ridge on for the canopy bridges.

I submitted the additional documents in early August, and am still waiting for the final approval. I expect the permit will be given by mid-September 2018, and my team and I will be able to construct the bridges in late September 2018.

3. Briefly describe the three most important outcomes of your project.

- a) My team and I managed to establish a long-term citizen science road ecology project to collaborate with local community to gather dusky langur road crossing hotspot coordinates in Penang, Malaysia, and soon to construct canopy bridges.
- b) The Government is aware of our initiative and the media is paying attention to my project, thus successfully raised awareness to larger scale.
- c) I, representing Langur Project Penang (LPP), have been awarded as one of the 30 under 30 Environmental Education Awardees.

4. Briefly describe the involvement of local communities and how they have benefitted from the project.

The local communities have been amazing in contributing to my project. Besides having local citizens as volunteers (field assistants and educators), I work alongside local communities to design and plan for outreach programmes that benefit the people. One good example is the nature education programmes that my team and I currently working on. There is a lack of environmental education in Malaysia and there are many families looking for alternative of creative learning,

I am lucky to attended a science communication workshop, organised by WildCru, University of Oxford in August 2017, and this enhance my interactive teaching skills and able to design various environmental games and learning methods to local community. More information regarding the nature education effort by LPP can be found here:

Besides, we extended our fieldwork to various recreation sites in Penang, for example Penang Botanical Gardens and Cherok Tokun, where there are joggers and hikers in daily basis. They are always curious and fascinated by our work in the park, observing and following the langurs. This creates opportunities for us to interact with the locals, thus providing insights and knowledge which benefit the local communities.

5. Are there any plans to continue this work?

Yes, the long term aim for Langur Project Penang (LPP) is to establish this project as a NGO. For now, and until I have finished my PhD study it is under the umbrella of USM and the Malaysian Primatological Society (MPS).

For the road ecology and canopy bridges project, I am planning to extend this initiative to a citizen-based effort where the bridges will not only be constructed in fragmented landscape by roads, but also introduce this method to local

neighbourhood, where the bridges can be set up between houses to mitigate human-primate conflict. Long-tailed macaques and dusky langurs have been found roaming around neighbourhood areas (landed property and high-rise building) and we received a lot of complains regarding the wildlife crossing on their rooftops and destroy the cable wires. Therefore, this can be a great long-term project to benefit the wildlife and society.

6. How do you plan to share the results of your work with others?

I have been sharing project updates on the LPP Facebook page (<https://www.facebook.com/LangurProjectPenang/>) with now 2,194 likes and 2,227 followers (24th August 2018). We have started accounts in Instagram (<https://www.instagram.com/langurprojectpenang/>) and twitter (<https://twitter.com/langurpenang>) where we actively sharing our progress and updates, with a number of followers.

Also, i am pleased and happy to share with The School of Biological Sciences that i have been recognised by North American Association for Environmental Education - NAAEE and Global Environmental Education Partnership (GEEP) as one of 2018's #EE30Under30 (Environmental Educators 30 Under 30) awardees (<https://naaee.org/about-us/people/jo-leen-yap>).

Being the only Malaysian, i am excited to join a network of young environment champions. I am currently waiting for their scholarship notification to attend the NAAEE conference in Washington D.C. from 10-13 October 2018. This provides opportunity to not only myself, but Malaysia to be on board of international recognised environmental education platform, where I am given a chance to represent my country to talk about my project and the environmental issues in Malaysia.

I am actively involved in attending international conferences. This year, I have attended three conferences so far:

1. Rufford Foundation SEA Conference in Phnom Penh, Cambodia- 8 & 9 Jan 2018 (Oral presentation) <https://tinyurl.com/y8uqwqop>
2. 55th Annual Meeting of the Association for Tropical Biology and Conservation (ATBC) in Kuching- 1 to 5 July 2018 (Oral presentation) <https://tinyurl.com/ycxyev98>
3. 27th International Primatological Society Congress in Nairobi, Kenya- 19 to 25 August 2018 (Malaysian Bidding Team for IPS 2022 & oral presentation)
* We won the bid for IPS 2022 9 (<https://tinyurl.com/y9p5onun> & <https://tinyurl.com/y8v4r8xt>)

I am also attending the Rufford Foundation Conference in Hanoi, Vietnam in October 2018. Being in conferences allow me to share my work with international researchers and educators, therefore provide large exposure to network and collaborate for future projects.

7. Timescale: Over what period was the grant used? How does this compare to the anticipated or actual length of the project?

22 August 2017 to 20 August 2018. The grant was fully utilised by 20 August 2018. We fulfilled most of the objectives of this project with the help of the Second Rufford Small Grant. This project (Langur Project Penang, LPP) is still carrying on and planning to expand the research, conservation and outreach aspects.

8. Budget: Provide a breakdown of budgeted versus actual expenditure and the reasons for any differences. All figures should be in £ sterling, indicating the local exchange rate used. It is important that you retain the management accounts and all paid invoices relating to the project for at least 2 years as these may be required for inspection at our discretion.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Transportation (4 x field assistants, including myself, up to 12 months)	1000	1100	100	
Meals (4 x field assistants, including myself, up to 12 months)	850	800	-50	
Canopy Bridges x 4 (construction & maintenance, up to 12 months)	1600	0	1600	We successfully established a collaboration with APE Malaysia, where APE will be providing us the firehoses as the material for the canopy bridges.
Camera Traps x 3 (Browning Spec Ops Extreme)	450	450	0	
Eneloop Rechargeable Batteries x 9 sets (1 set= 4 batteries)	800	800	0	
"Wild Roads" Campaign - nature education	800	1000	200	Workshop materials include: <ol style="list-style-type: none"> 1. Pamphlet printing 2. Exhibition posters 3. Venue hire 4. Educational booklets 5. Project merchandise
Additional expenses:				
First Aid Kit		30		FA kit for sampling
5x Machetes		70		5 machetes for 4 field assistant teams and myself
2x Binoculars		120		

Sigma lens 150-600mm		1216		We faced difficulties in identifying the facial markings and food plants of the langurs at canopy layer. Thus we bought this second handed lens at a discounted price.
Rubber shoes x5		15		Best and affordable footwear for tropical rainforest fieldwork
Total		5,601		

9. Looking ahead, what do you feel are the important next steps?

The most important next step is to obtain the physical permit and start constructing the bridges!

In summary, the important steps for Langur Project Penang (LPP) can be discussed in three aspects:

1. Research. Expand the research to more study sites, and getting more local students and volunteers involved in road ecology, primate census and interview surveys in Penang. Based on the latest IUCN Red List update in year 2015, the status of dusky langurs is now data deficient, where I will be working alongside my supervisor and researchers to provide input to IUCN based on the criteria.
2. Nature Education. Provide more environmental education to local residents and also create more educational materials for individuals of all ages. Continue to collaborate with more NGOs and learning institutions for more engaging workshops.
3. Conservation. LPP is now a vital role in Penang as the main contact for any human-primate conflict and roadkill issues, which LPP directly reporting to DWNP (Department of Wildlife and National Park). The next important step is to establish long-term collaboration relationship with DWNP for making LPP not only being the centre contact, but a partner for awareness and education too.

10. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the Foundation receive any publicity during the course of your work?

Yes, I am using The Rufford Foundation logo in the below materials:

1. Social media. LPP Facebook, Instagram and twitter page is active with project updates. Rufford Foundation logo is featured as part of our cover photo:
<https://www.facebook.com/LangurProjectPenang/>

2. Pamphlets. I re-printed the educational A5 size 8-page pamphlets that highlighted on these following facts: a) Facts about dusky leaf monkeys, b) Importance of primates, c) Why we should not feed the monkeys. The Rufford Foundation logo is featured as funding agency in the acknowledgments.



front and back page

LANGUR PROJECT PENANG

Langur Project Penang (LPP) is a research project on the ecology and behaviour of Dusky Leaf Monkeys/Langurs (*Trachypithecus obscurus*) in Penang, Malaysia.

Initiated in Jan 2016, LPP is an outreach project of the Malaysian Primatological Society (MPS) in Penang. It serves as a platform for environmental research and education to local students and the community. LPP collaborates with governmental bodies, educational institutions and NGOs in Malaysia.

The outcome of the research will help us in gaining more understanding towards the relationship of these primates with the anthropogenic environment alongside their natural rainforest habitat. This knowledge can be used to effectively work toward a "Langur Conservation Plan", which takes into account of primate ecology, anthropogenic influences and ecotourism to create an awareness for primate conservation and nature education.

PHOTO: HUA HI

SUPPORTED BY




FUNDED BY





PHOTO: AN PEK

Page 2 & 7



Dusky
(noun)
A human primate that uses binoculars as eyes, 'parang', notebook & GPS as hands, and a passionate heart

DUSKIES & FOREST!

DUSKY LEAF MONKEYS

We are the Dusky Leaf Monkeys (*Trachypithecus obscurus*), or commonly known as Langur, Lotong or Spectacled langur. We can be found from Southern Burma to Peninsular Malaysia.

We are arboreal primates (live in trees), mostly folivorous (eat leaves) and also feed on fruits, flowers and young shoots.

Since we live in trees, we have great eyesight & quadrupedal movement control, so that we can move from tree to tree easily!

Did you know that our newborns are bright orange in colour?

Our groups can range up to 20 individuals. We are a gentle, loving and caring family.

In Penang, not many people know about us. Maybe it's because we are shy and live high up in the forest. Most people think that we live only in the Penang Botanical Gardens and Penang Hill, when we are actually living all around you!

The hilly forest in Penang are our home!

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Page 4 & 5

Information card design:



Front (above- two designs) and back (below)



LANGUR PROJECT PENANG

"VOICE OF THE WILDLIFE RESIDENTS OF PENANG"



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langurprojectpenang@gmail.com +6018-409 0180 [facebook.com/LangurProjectPenang](https://www.facebook.com/LangurProjectPenang)

11. Please provide a full list of all the members of your team and briefly what was their role in the project.

The turnover of my project volunteers is high. I have been accepting volunteer applications of internship students, gap-year students, working individuals, family and friends. Between 22 August 2017 and 22 August 2018, I had recruited around 20 short terms volunteers for LPP.

Below are the long term members of LPP (until present):

Dr Nadine Ruppert – My PhD supervisor and advisor to LPP

Amelia Catterick-Stoll – Project Assistant/Researcher

Teoh Huey Wen - Project Assistant

Syuhada – Field Assistant

Teo Hoon Cheng – Field Assistant

Tan Yan Qian – Education Assistant

Teoh Huey Erh – Education Assistant

Goh Min Yu – Education Assistant

Eric Thoo – Education Assistant

Chia Xinyi – Long-distance Project Assistant (still helping despite studying in Taiwan)

Most of the members of LPP above are working individuals (except Amelia) thus most of them help me for fieldwork and nature education during weekends or off days.

12. Any other comments?

It is a blessing for LPP to progress well between the period of 22 August 2017 to 22 August 2108. My team and I have been working really hard to establish our initiatives and objectives. Despite the challenges and difficulties regarding the canopy bridges permit, we do not give up in obtaining the final approval to kick start the next step!

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I am really thankful to Rufford Foundation, as the first and second RSG helped me establish LPP into a novel wildlife conservation project, provide me so much exposure to different opportunities. I sincerely hope to work alongside Rufford Foundation again as I believe my project, Langur Project Penang, has so much potential and will do better each time.

