Final Report

2013-2014

The Little Fireface Project: Conservation Java's Slow Lorises via Ecology, Education and Empowerment









Photos clockwise from above left: Alomah – the young son of loris One Eye; Children's education session in Tasik Malaya; Dispersing male Cabe wearing an activity logger; slow loris trade may be diminishing but the same cannot be said for civets or macaques

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Project Information

Principle Investigator: Prof Anna Nekaris on behalf of Little Fireface Project Team **Award Program** People's Trust for Endangered Species **Date Awarded** August 2013 **Amount Awarded** £14905 for Year 1 To receive: £6030 August 2014 **Expenditure** On target – spent £14935.91 **Project Location** Cipaganti, West Java **Species Habitat** Agroforest, montane rain forest **Species** Javan slow loris, Nycticebus javanicus **Threat status** Critically Endangered, CITES Appendix 1 **Main Project Address** Rumah Hijau, Projek Muka Geni Rt01 / Rw04, Jalan Cipaganti, Cipaganti, Cisurupan, Garut, West Java, Indonesia **Phone:** 00447717821411 **Email:** littlefireface@gmail.com admin@littlefireface.com Project web page/ blog/ newsletters www.nocturama.org www.littlefireface.org

> https://www.facebook.com/LittleFirefaceProject http://www.youtube.com/user/littlefireface http://instagram.com/queenfireface

Twitter: @queenfireface, @littlefireface

1. 200 word summary: The Javan slow loris is one of the world's top 25 most Endangered primates not only due to critical habitat loss in its limited habitat on Indonesia's island of Java, but mainly due to an incessant demand for pets. Despite improved international laws, local trade has not diminished and the trade continues openly in all Java's major cities. Cruel practices such as cutting the teeth of these primates mean that even those rescued from trade cannot be reintroduced to the wild. Surveys in protected areas have found no lorises or encountered them at extremely low densities. Recently, however, a high density population has been discovered in Central Java's unprotected agricultural zone. Subject to high hunting pressure, this is the only currently known good population of the species, literally clinging to cabbage and tea plantations. In this project we have sought to survey to find further healthy populations of Javan slow loris and other nocturnal species of Java, empower local people to stop trading and keeping lorises as pets through education, and to initiate the first long-term study of this unique primate with radio-tracking. Our passionate team of local and international scientists are using these data to implement the first ever IUCN action plan for Asian lorises.

2. Project Goals

- Designing education events in local communities to promote the development of community-based conservation projects
- Continue Village Pride Days
- Studying the ecology of Javan slow lorises in a heavily populated but disturbed habitat with a focus on infant dispersal to aid rescue centres
- Assessing the extent of trade in slow lorises and other nocturnal mammals, its characteristics and routes by conducting market surveys

3. Planned Outputs

- Write the first IUCN/SSC Conservation Action Plan for Asian Iorises
- Aid rescue centres in their reintroduction efforts
- Help to mitigate illegal wildlife trade
- Support capacity building by training and employment of local guides and students
- Disseminate results to the international scientific conservation community, the public and practitioners like rescue and education centres and authorities

1. Education

To EMPOWER children in our area to cherish their local wildlife including slow lorises, we designed and printed a children's book with teacher's pack and children's activity pack. Many children in our area have never owned a book before and thus we hope that the book will be something they cherish. As a mode for teaching these materials, we launched a Connecting Classrooms with associated Junior Reporters scheme. To engage children and potential viewers through multi-sensory materials, we are filming each taught class. Until December 2013, the video and associated education materials of that session from the exercise book are uploaded to the online site Education Through Expeditions (ETE - http://www.educationthroughexpeditions.org/). With hundreds of school classes in the UK subscribing to this forum (also available to the EU), UK children were able to share their experience of nature with Javanese children.

We also run once per week Klub Alam – Nature Club – that regularly has 60 students in attendance. Each child is given a passport and each month they need to journey through one topic (e.g. plants, culture, mammals, insects) and they receive a stamp when they have shown knowledge based on a set of tasks. During the session, using FlipCams, the students take photographs. Our current intern Jess Wise is uploading photographs whenever internet allows to Instagram, easily accessible in Java.

Some key elements are:

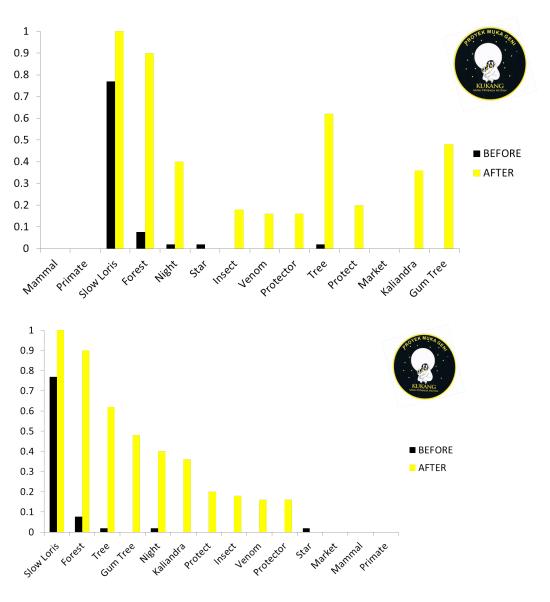
- a. We developed a children's education pack including: an illustrated story book, teacher's pack, activity pack, poster, buttons, stickers, memory card game, and mascot costume.
- b. The pack is now being implemented by our education officer (first Denise Spaan, now Sharon Williams), manager Pak Dendi, and local teacher Ibu Sri Rakim. We regularly have 100 students per session so we are working on methods of assessment to divide these students into groups.
- c. We have done 17 schools for the pretest and 9 schools have been revisted; we aim to complete the programme by December 2014.
- d. In the images below some results from two schools are shown we analyse drawings of children as well as stories that they write and we compare the images and terms used before and after. Many key terms significantly appeared after training please note that these are produced freely by the children and we feel are more appropriate than simple questionnaires where children may feel they need a right or a wrong answer.
- e. We have designed a mini version of our Nature Club sessions that can be used by zoos and other projects over a shorter period, downloadable from our Web Site.
- f. We have made connections with students from Brevard Zoo and Shaldon Wildlife Trust and are looking at ways to allow students to interact.
- g. Future outlooks: We are producing village newsletter that will be distributed to the village. It will include a children's section, written by members of our Cipaganti Nature Club (Klub Alama) (with already more than 60 members).
- h. We will expand the Forest Protector book to classrooms in the city for comparison.
- i. We are developing a dedicated Nature Club are on a plot of land donated to us by manager Dendi Rustandi.



Clockwise from top left: child cutting out Bunga mask; children trying on Tereh and Bunga masks; giant Tereh enacting scenes from the book Slow Loris: Forest Protector; one class of students showing loris pride; children entering drawing competition to 'name Ena's baby'; children reading books from the LFP library.



Above are good examples of children's drawings. They are not copied, and contain many images that come freely from the child's creativity.



Above are terms used in written stories by children at two separate schools. Children were asked to write about a slow loris. Before, some children knew they lived in trees or that they were in the forest or out at night – a remarkable number of new terms appeared after the sessions.

2. Pride Days

The concept of Pride Events was developed by the conservation group Rare Pride, whereby a focal species of the area would be used to foster a sense of consciousness about the environment. In our area, where virtually no forest is left, and agriculture is vital to the economy, slow lorises are one of the most charismatic species. They represent several other unique taxa in the area including leopard cats, three civet species, colugos and pangolins. Our main message about lorises is that they are vital to the forest by eating insects that would harm crops and pollinating important flowers. The fact that they do not eat much fruit, meaning they are not crop raiders, and that they are the subjects of many myths, leads to a fascination with this species, which many villagers never even knew occurred in their area. Pride Days thus gave 'the average' villager a chance to learn about our project. We have now held three separate events and they were a huge success!

Football matches - 2013 and 2014

- a. From 4-16 June 2013, we held the first annual Slow Loris Pride Days in the village of Cipaganti. We had over 3000 participants in year 1 and 1700 in year two (due to nearness to Ramadan). This event was run again the 25th and 26th of June 2014, starting on the 2nd June for the tournament.
- b. In both years, we held: a multi-week junior and senior football tournament (Kukang Cup). This was extremely popular as the football field needed dramatic renovation, and by one year later it was again in a sorry state. Football is extremely popular in the area. It also meant that all kabupatans (small districts within the larger village) could participate with their own team for the chance to win a trophy, uniforms and a cash sum. In the first year, we distributed slow loris uniforms and in the second year we chose to distribute more nocturnal mammals on the uniforms colugos, common palm civets, Javan ferret badger, short-nosed fruit bat, Javan scops owl and loris.
- c. During the lead-up to both final matches, we had a series of children's events. Both mask making and kite making by children led to their bringing these to a parade on the final day of the games, singing traditional songs down the long main road of the village, accompanied by our mascot. Children's games included tug of war, pass the parcel, and trying to eat Indonesian snacks from a string!
- d. Our mascots have turned out to be cherished members of the community. Our tracker Pak Adin Nunur played the role of Tereh and a volunteer played Bungah, and riled up the crowd, dancing and making funny moves. Children followed them everywhere, and they gave huge cuddles, handed out stickers, etc. All the football teams wanted photos with the mascots.
- e. We had a 'village pride booth' where participants received a 'kukang kabangaan loris pride' pin. There were asked what made them proud about their village; we made a film shown on local television from their answers, which ranged from: the games; the gardens; the vegetables; the beautiful nature; and of course the slow loris.

- f. We organized a local football committee with one man from each kabupatan. Everyone was really involved, drinking tea together with our team, leading to our deep involvement in village events and even politics.
- g. For both matches, we organized on the final day traditional Sunda dancing and martial arts; a local popular comedian; traditional singing and music; final presentation of awards with slow loris trophies and all the 'foreigners' dancing on stage!
- h. Many local vendors came out and prepared food and were also pleased with the event as they made a large amount of extra money.

Cipaganti's Got Talent!

- i. January 14-16 2014 we held Cipaganti Memiliki Bakat or Cipaganti's Got Talent, with associated activities.
- j. 75 adult and children's acts participated for exciting prizes (dvd player, mobile phone, tablet), which were selected by a village committee, as well as trophies.
- k. LFP volunteer and photographer Michael Williams took a series of about 50 photographs of village life and displayed them professionally in the village hall; after one month, each person could keep their photograph
- I. We set up another pride photo booth with the mascots.
- m. We had children's games, including munch the prawn cracker; sack races; dive into flour for coins; and pass the parcel.
- n. We handed out 500 copies of our 2014 calendars throughout the village.
- o. More than 500 villagers participated.
 - i. Future Outlooks: We are continuing Pride Events on a monthly basis with film nights made by us, our guides and with the help of other villagers.
 - ii. We have already used information gained during our Pride Day interviews to develop further education and outreach materials.
 - iii. We will allow our village children to choose their favourite photos from our camera traps, and exchange these with camera trap photos from European gardens so they can compare the animals they see.
 - iv. Our next village pride event will be in December with a repeat of the talent show event.



Pictures clockwise from upper left: celebrating a victory; lined up and ready for the junior cup; children playing games at the event; holding the banner with local children before a parade; giant Tereh with children during the singing competition in January; excited at winning! Photos by Michael Williams

3. Empowerment through media

We have made several short films over the last year. We originally conceived to make these Bollywood style, but after holding a focus group, it was decided that showing how the loris featured in local life would hold more power over the Indonesian mindset, including to law enforcement officers if they could not only participate as 'themselves' in the film, but also could see how proud local people were of their wildlife. Our manager is able to show all films on local television from a mini station in his house, so all of our films have been widely seen in the project area. We advertise when films are shown with fliers in local shops.

- a. We produced several short films, including those regarding: education programmes; ecology of slow loris; pride of villagers living near slow loris; myths of the loris; wildlife trade; conservation of slow loris; village pride days; Halloween loris; empowering against wildlife trade.
- b. Two major productions of slow loris conservation for Indonesian Trans 7 network, starring our local guides were filmed and broadcast in October 2013 and February 2014.
- c. From June to December 2013, we ran a Connecting Classrooms programme via Education Through Expeditions (http://www.etelive.org/content/contentete.numo?id=224) We uploaded photos & videos that linked UK classrooms with our project.
- d. Two Indonesian film makers, Wawan Tarniwan and Mohammed Taufik, joined the project in August 2013 as interns for their MSc degrees. In April 2014, they completed a documentary of the slow lorises and all the project's activities.
- e. We have started a village film night once a month; loris films are shown along side popular films with a Q&A session.
- f. Please visit our YouTube Channel to see all of our films! http://www.youtube.com/user/littlefireface



Above left: Tracker Adin Nanur and Manager Head Tracker Dendi Rustandi starring in a film for National Television station Trans 7; Student interns Wawan Tarniwan and Muhammad Taufik with the Trans7 film crew.

4. BEHAVIOUR STUDY





Above. Our adult females continue to give birth to a baby every year! Left is Alomah, son of One Eye (and the third baby of One Eye since we started) and to the right is Dali, son of Tereh – her second baby since we started the study. Sadly Tereh's baby Tahini died this year during dispersal.

We have now followed our radio collared animals for more than 3000 hours between April 2012 and September 2014. We have submitted several papers regarding the behavioural data that are available if you would like to read them on the following topics.

- 1. Behaviour of Javan slow loris influence of climate & moonlight Contributions to Zoology
- 2. Ethogram and activity of Javan slow loris, including a detailed description of the field site Asian Primates.
- 3. Home range behaviour, including how venom may be used as a weapon against other slow lorises Behavioural Ecology and Sociobiology.
- 4. Ground use and substrate use of Javan slow lorises (along with a review of slow lorises in flooded habitats) for a book on flooded habitats.
- 5. Effects of environmental conditions on the abundance of arthropod prey of the venomous Javan slow loris. Systematics and Biodiversity.
- 6. Sleeping site selection among Javan slow lorises for an edited volume on sleeping sites.
- 7. Distribution of Javan slow lorises including ecological niche modelling for Endangered Species Research.
- 8. Impact of moonlight, researcher travel speed and habitat type on density of Javan slow lorises using distance sampling Endangered Species Research.
- 9. Impact of loris venom on Eagles Journal of Ornithology
- 10. Impact of loris venom on Parasites Proceedings of the National Academy of Sciences
- 11. Impact of loris venom on prey Toxicon.

Our main focuses now are on the feeding ecology of slow lorises, dispersal of infants, impact of habitat loss on slow lorises in our area. We hired a fourth tracker, Yiyi Nazmi, to help with the increased work of now following 24 animals!

Dispersal study specifics:

We have observed 8 females (Tahini, Lucu, Hesketh, Kiara, Maya, Galaksi, Utari, Api) and 4 males (Mo, Yogi, Cabe, Wingki) disperse from their natal ranges to some degree. We can already see some patterns.

- 1. Males disperse earlier than females (14-18 months vs 17-19 months)
- 2. As males grow older they form affiliative relations with neighbouring males
- 3. Females may be visited by neighbouring males but do not seek them out
- 4. Males move in and out of the range before moving 2-6 km away.
- 5. Females tend to be in the natal range and then 'take off' rapidly in just one week, also 2-6 km.
- 6. All of our new pairs are of young animals no young animal has paired with an animal that is already in a pair.
- 7. Females have been observed to spend time with new babies, as a loris mother has another baby when her elder offspring is still in the natal range. We have not yet observed young males playing with siblings, but the sample size for males is smaller.

We are also looking at infant development. Currently Tereh has a son (Dali), One Eye has a son (Alomah), Shirley has a new baby (sex unknown – to be named), Charlie has a daughter (Kacang), Sibau may have a youngster (although Galaksi has dispersed but another young one has been seen in the area), Lucu (already dispersed and settled) is pregnant. We also are observing an unmarked young baby – the sibling of Maya who is about to disperse.

Problems encountered: When animals disperse they can go very far very fast and it can take days to find them even with the radio collars – partly because we have no idea where they will go. Continuing monitoring them after they disperse can be a problem because they are many miles from the main study site. We hoped that they activity loggers would help with this issue, but they are so costly and we would lose them too. So for now we put half the activity loggers on juveniles and the other half on subadults.

We have had difficulty mounting the activity loggers to the collars – they come with no instructions and there is no advice on their web site about how to mount them alongside the radio collars. One of our dispersing females Kiara lost her collar altogether and we went to analyse the activity logger but it did not record ANYTHING – so we are checking it in October by sending it back to the company to make sure that we can get some data from the loggers.







From Left to Right: Api dispered 5 km to the top of the volcano; Cabe, wearing his activity logger, was followed for weeks as he dispersed over 4 km, and fought for his place in Lorisland, receiving several severe wounds; PTES named Mo dispersed after a whole year – we thought he was settled with Shirley, but perhaps severe loss of bamboo in his area also sent him to the volcano!

We also have been recording the behaviour of small carnivores at first contact. We have seen several small carnivore species now including binturong, common palm civet, Malay civet, Javan ferret badger, and leopard cat.

We have submitted manuscripts on small carnivores:

- 1. To Small Carnivore Conservation two years of distribution data have just been published on all nocturnal mammals seen during our surveys.
- 2. To Small Carnivore Conservation use of water lines by common palm civets
- 3. To Biodiversity and Conservation impact of climate on small carnivore sightings and distribution in Cipaganti
- 4. To Traffic Bulletin report on illegal civet trade



Above: common palm civet makes use of a waterline in Cipaganti.

Future Directions:

- i. We are continuing to follow all our animals via radio tracking
- ii. We are examining dispersal of our young lorises; we hope this helps with reintroduction, which is essentially a forced form of dispersal.
- iii. We welcome PhD student Francis Cabana, who is going to analyse in detail the diet and nutritional needs of wild slow lorises to improve captive diet for zoos and for rescue centres; he currently works for Paignton Zoo and is in contact with the EAZA TAG to determine their needs for understanding loris nutrition.
- iv. We have installed activity and temperature loggers on the lorises and will attempt to understand the impact of heterothermy and torpor in this unusual genus.

5. Market Surveys

We are constantly assessing the extent of trade in slow lorises and other nocturnal primates, its characteristics and routes by conducting systematic market surveys. It has been easiest to do this when any team member needs to go to town (which is usually at least once a month – including to major hubs of Jakarta, Surabaya and Bandung).



Fig. 4: shows an adult Javan slow loris in dreadful condition offered for sale in Tasik Malaya (left), and numerous macaques for sale in Bali in a shop with large numbers of civets and bats (right).

We are still tabulating the total number of animals seen. We have reported some of our findings in Suiform Soundings and in the TRAFFIC newsletter, with an article on the civet trade nearly complete. Interestingly the number of slow lorises in trade has decreased over the last year with a rampant increase in the number of civets — usually common palm civets, but all species are available. Below shows some figures regarding civet trade

Total number of Asian Palm Civets (*Paradoxurus hermaphroditus*) observed in animal market surveys during 2013 and 2014 in Java and Bali, Indonesia.

	Young Civets	Juvenile Civets	Adult Civets	Total Numbers
Total 2013	26	29	13	109
Total 2014	4	40	5	141-161



Fig. 5: shows more than 20 dried slow lorises for sale for medicinal purposes in Bali, a trade before thought restricted to Indochina. Photo by Pramudya Harzani, JAAN.

- Additional activities
- 1. Joined Primate Education Network, an international network of primate conservation educators, to share ideas, with a visit from the regional coordinator, Thirza Loffield, to our site.
- 2. Tracker mobile education scheme: each month, our three trackers are given 50 stickers and 50 leaflets and hand these out to new people, explaining what the project is and what their role is in it. In this way, more and more people beyond the village learn about the project.
- 3. Village hall day: showed *the Jungle Gremlins of Java*, provided opportunity to ask questions about the project, provided t-shirts
- 4. Hosted five 'Research Fellows' two advanced BSc students (Putri & Toro), conducting an extended BSc thesis project; two media students producing a documentary about the project (Tarniwan & Taufik); one student working with education and community conservation (Hanney)
- 5. Developed the 'Matt Bush/IPPL Memorial Library' with bi-weekly English classes; books include Alexis Deacon's *Slow Loris*, children's books on nocturnal animals, and Alison Jolly's lemur series.
- 6. Developed a relationship with the 6 village kepala RW; these are sub-heads of the village. We distributed for example 50 head scarves and 50 calendars to each RW with a description of the project to these subgroups of people for more fair distribution of the materials, and wider distribution.
- 7. Sticker competitions with children; rather than just giving away stickers, we developed a set of fun questions about the loris, where children, in Javan style, got to shout out answers to win stickers.
- 8. Visiting student programme: 3 times, 3 students from the University of Indonesia visited the site for training in radio tracking and loris behaviour. Ours is one of the only projects in Indonesia using radio tracking so this has been a great opportunity for the students.
- 9. Presentations at Rescue Centres: We have made several presentations for Cikananga Wildlife RC and three presentations for International Animal RC as well as presenting our work at local and regional conferences and for LIPI.
- 10. We operate a very active and popular Facebook page, a YouTube page, a Twitter page, and two blogs, as well as send out a project newsletter every three months.
- 11. We run an annual international Slow Loris Outreach Week in September, with activities done via connecting classrooms in India, Java, Cambodia, Malaysia, UK, USA, Sumatra, and Thailand.
- 12. Last but not least, we have a tracker scheme and have fully trained four local men to be fully competent trackers.

Outputs

- Write the first IUCN/SSC Conservation Action Plan for Asian lorises
 - We just completed a major workshop at the International Primatological Society in Vietnam, have distributed over 200 questionnaires, and are planning on also including the results in a major edited volume for Cambridge University Press.
- Disseminate results to the international scientific conservation community, the public and practitioners like rescue and education centres and authorities
 - We have already presented our work at: EAZA conference x2, EAST conference, Primate Society of Great Britain x6, German Primate Society x2, American Association of Physical Anthropology x3, St Louis University, Cleveland Zoo, University of Madison Wisconsin, ZACC x 2; EFP x4; IPS x 14; Anna Nekaris also presented aspects of our work for a TEDx talk that is available on the internet via http://www.youtube.com/watch?v=DXvAv-Tacxw.

Publications mentioning PTES:

- 1. **Nekaris KAI**, Arisona Aji Pambudi J, Achmed D, Nijman V (2014) Densities, distribution and detectability of a small nocturnal primate (Javan slow loris *Nycticebus javanicus*) in a montane rainforest. Endangered Species Research. 24: 95-103.
- 2. Nijman V, **Nekaris KAI**. (2014) Traditions, taboos and trade in slow lorises in Sundanese communities in southern Java, Indonesia. Endangered Species Research.25: 79-88
- 3. Nijman V, **Nekaris KAI** (2014). Trade in Wildlife in Bali, Indonesia, for Medicinal and Decorative Purposes. *TRAFFIC Bulletin*, *26*(1): 31.
- 4. *Nijman V, **Nekaris KAI** (2014). Trade of barbirusa skulls in Bali. Suiform Soundings.
- 5. Rode-Margono EJ, Nijman V, Wirdateti, **Nekaris KAI**. (2014) Impact of moonlight and climate on a venomous mammal, the Javan slow loris (*Nycticebus javanicus* Geoffroy, 1812). Contributions to Zoology.
- 6. Rode-Margono EJ, Nijman V, Voskamp A, Lehtinen J, **Nekaris KAI.** (2014) Distribution and ecology of small carnivores and other nocturnal mammals on Java, Indonesia. Small Carnivore Conservation. 50:1-11.
- 7. Voskamp A, Rode EJ, Coudrat CNZ, Wirdateti, Nawanto A, Wilson R, **Nekaris KAI** (2014) Habitat preferences and distribution of the Critically Endangered Javan slow loris (*Nycticebus javanicus*). Endangered Species Research. 23:277-286
- 8. **Nekaris KAI,** Moore RS, Rode EJ, Fry BG (2013) Mad, bad, and dangerous to know: the only venomous primates, slow lorises. BMC Journal of Venomous Animals and Toxins Including Tropical Diseases. 19: online.
- 9. **Nekaris KAI**, Campbell N, Coggins TG, Rode EJ, Nijman V (2013) Tickled to Death: Analysing Public Perceptions of 'Cute' Videos of Threatened Species (Slow Lorises Nycticebus spp.) on Web 2.0 Sites. PLoS ONE: http://dx.doi.org/10.1371/annotation/7afd7924-ca2b-4b9c-ac1b-2cc656b3bf42

In press or review

- 1. Rode EJ, Wirdateti, **Nekaris KAI** (In press 2014). Preliminary behaviour of the Endangered Javan slow loris (*Nycticebus javanicus*) in West Java. Asian Primates.
- Nekaris KAI. (In press) Extreme primates: ecology and evolution of Asian lorises. Evolutionary Anthropology.
- 3. Nijman V, Shepherd C, **Nekaris KAI**. (In review) Trade in Bengal Slow Lorises in Mong La, Myanmar on the China Border. Primate Conservation
- 4. Nijman V, **Nekaris KAI.** (accepted with revision) Large-scale trade in protected marine mollusc shells from Java and Bali, Indonesia. PlosOne
- 5. **Nekaris KAI**, Starr CR. (In review) Killer cuteness? the conservation crisis of Asia's slow lorises. Endangered Species Research (Special edited volume on the Conservation and Ecology of Slow Lorises)
- 6. Rode EJ, Rademaker M, Wirdateti, Strijkstra A, **Nekaris KAI**. In review. Effects of environmental conditions on the abundance of arthropod prey of the venomous Javan slow loris (*Nycticebus javanicus*) in a West- Javan volcanic agricultural system. Systematics and Biodiversity
- 7. Rode-Margono EJ, Nijman V, Voskamp A, Lehtinen J, **Nekaris KAI**. (In review) Factors influencing detection of medium-sized nocturnal mammals on Java. Biodiversity and Conservation
- 8. Grow N, Wirdateti, **Nekaris KAI**. (In review) Does the fatal impact of slow loris venom on arthropods relate to an ectoparasite defense function? Biology Letters.
- 9. Rode-Margono EJ, **Nekaris KAI**. (In review) Take up your arms! Inter- and intra-specific defense mechanisms of slow loris venom. Journal of Behavioural Ecology and Sociobiology. (*got funding for project, conducted field work, helped to write the MS*)
- 10. Spaan D, Wirdateti, Williams M, **Nekaris KAI** (in press). Use of waterlines by civets in Java. Small Carnivore Conservation.

Final expenditures from August 2013-August 2014

People's Trust for Endangered Species World Wide Continuation Grant

£14,905 to be received in August 2013 and £6,030 to be received in August 2014

Budget Categories	Pounds	Explanation and Justification	Funding Spent RP	Funding Spent £
Operating Costs				
staff - cook Ibu Lala and Pak Nana	£550.00		13200000	
Aconk Zaelany salary	£1,440.00		26400000	
Adin Nunur salary	£1,440.00		26400000	
Supplies				
11 GPS activity loggers, ActiWatchMini CamNTech Ltd	£7,700.00			7365
1 sika receiver Biotrack	£1,200.00			1200
Travel				
return flight	£675.00			636.75
travel to airport and back				114.1
Research permits (Kitas, Lahuka Fees)	£400.00		5300000	
RISET Research permit fee			1600000	
Visa Fee				100
Education	£1,500.00			
cds for teaching video and photo editing			185000	
loris stickers			2400000	
loris and civet pins			600000	
slow loris bags for schools			400000	
scarves for prizes			7500000	
total Pride Day costs (venue hire, music hire, salaries for Foot ball committee, new footballs and nets, security, prizes, trophies, children's games)			15376000	
			99361000	9415.85
TOTAL PROJECT BUDGET	£14,905.00		5520.055556	14935.91