

## Project Update: December 2015



Since the beginning of funding of this project by The Rufford Foundation in February 2015 I have been investigating the visitation frequencies, activity patterns, feeding behaviour and rate of oil palm fruit consumption of a group of habituated pigtailed macaques (*Macaca nemestrina*).

This group has been followed by observers since December 2012 and is now fully habituated. Since the beginning of the habituation progress the macaques were

frequently observed in oil palm plantations adjacent to their rainforest habitat. However, the presence of observers in a newly followed group might have influenced their natural ranging pattern in the first years of habituation, since the group fled from open spaces, such as plantation land, back into the forest upon arrival of observers. With the ongoing habituation to the observers the group also spent more times and longer durations in the plantation, whereby the data presented below reflect the natural behaviour of this fully habituated group. We are currently habituating a second group nearby that can hopefully be sampled soon.

Since the plantation at the study site is managed by a government agency that employs foreign workers who take no interest in harvest losses, wildlife is mainly left undisturbed at the study site. However, at the surrounding plots that are owned by private smallholders (area not visited by our group), macaques are still frequently chased away with firecrackers, trapped, shot or babies are being caught to be kept as pets in the village. The potential of human-wildlife conflict in the area, and everywhere else in the country is thus still persisting.

Data collection for this study is still in progress and will be ongoing until the end of January 2016. Preliminary data was analysed for one student's internship report (Laura Morgan, Catholic University of Louvain Belgium, August 2015) and presented at the 4th Interantional Workshop on Biodiversity and Conservation, Kyoto University – Universiti Sains Malaysia, 8th-9th September 2015 at USM Penang) and is presented below.

So far, we found that 6.5%-8.5% of the group's home range area (1.49-1.81 sq km; 2013/14-2014/15) covered oil palm plantation and that the animals spent on average 2.1 hrs per day in the plantation. Main activities in the plantation are feeding (64%) and foraging (16%), whereas they spent almost no time on social behaviours such as grooming. The group spent 41.6% of their plantation foraging time on consuming ripe and unripe oil palm fruitlets reducing the



monthly harvest within their range by 0.6%. They also fed on fallen, dry oil palm seeds (29.8%), insects (15.4%), other plant materials and small vertebrates (1.9%) and others (10.7%). Furthermore, they actively hunted for rats (1.6% of plantation diet, i.e. 1.5 rats per hour).

My preliminary data suggests that pigtailed macaques can exploit oil palm plantations to a certain degree. However, due to the fact that they do not only prey on the fruits but forage for various food items, their impact on the harvest seems to be minor. Because rats are considered the major oil palm pest, *Macaca nemestrina* may even function as pest control in plantations adjacent to forests. This aspect is of very high interest for me since the argument of macaques as pest control is vital to work towards their conservation.

