

Project Update: July 2017

We have been running an extensive mark and recapture study of oil palm plantation rats within and outside the home range of our macaque focal group since March 2017 (Fig. 1). We chose three different trapping plots within the foraging area of the pigtailed macaques (30 wire mesh life traps spaced along three 100 m long parallel plantation transects, 30 m apart; plot areas ca. 0.6 ha) and three control plots. The whole trapping area in the plantation covered around 70 ha.

For each plot we baited the traps for 10 consecutive days with oil palm fruit during the late afternoon and checked the following morning. Captured rats were weighed, measured, identified and marked using a combination of nail polish and nail clipping according to predetermined sequences on all feet. For the duration of the 10 days this marking method proved to be successful. Until now we conducted one trapping round per plot that will be repeated for all plots starting next month.



Figure 1: Our volunteer field assistant Léo Guthmann trapping plantation rats.

We caught double the number of rats in each plot where there are no pigtailed macaques (mean=13.3, sd=7.0, N=3) compared to the plots within their home range (mean=6.0, sd=3.6, N=3); however the results are not at a significant level (unpaired t-test, $t=1.61$, $N=3$, $p>0.05$).

We identified 4 different species of plantation rats; i.e. *Rattus rattus*, *R. argentiventer*, *R. tiomanicus*, and *R. exulans* (Fig. 2). Currently, we are preparing statistical analyses of the mark and recapture results to calculate population sizes of rats and prepare for the second trapping round. In total we want to assess each plot three times.

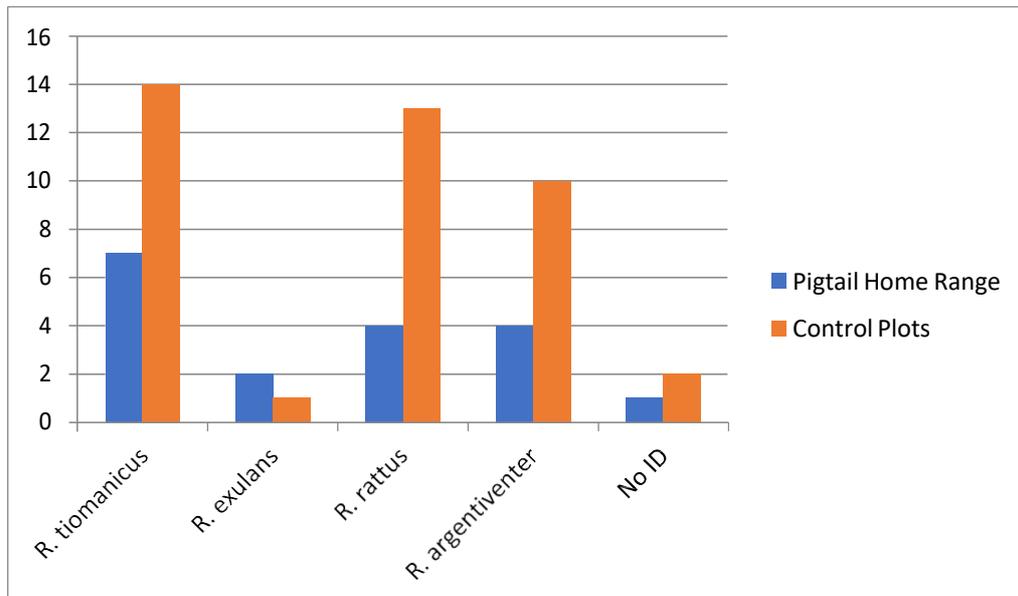


Figure 2: Total numbers of caught rats (per species).

Parallel to this trapping programme, we are still taking daily data on the behaviour of pigtailed macaques in oil palm and forest, also recording their food items and social interactions. This data collection is ongoing and will be completed by end of this year contributing to a PhD thesis by Ms Anna Holzner.

Apart from the research aspect, I have been promoting this project at several academic and public talks (2017 only):

- "Primates and their conservation status in Malaysia." Back to Nature by BioSociety USM. 20 April 2017. USM Pulau Pinang.
- "Our cousins in the canopies: snapshots on Malaysian primates." Initiating the Bio Blitz: 2nd Symposium on Canopy Science & Forest Conservation in Penang. 15 April 2017. The Habitat Penang Hill, Malaysia.

- “Studying our cousins: Updates on Malaysian primates research.” Malaysian Heritage & History Club (MHHC): Wild Wildlife with Kanchil and Friends. 18 March 2017. Badan Warisan Kuala Lumpur, Malaysia.
- “Pig-tailed macaques in oil palm – pest or pest control?” Annual Grand Meeting of the Malaysian Primatological Society. 13 March 2017. USM Pulau Pinang, Malaysia.
- “Studying our cousins: Updates on Malaysian primates research.” RISH Kyoto University & School of Biological Sciences Universiti Sains Malaysia: Asia Research Node Symposium on Humanosphere Science. 20-21 February 2017. USM Pulau Pinang, Malaysia.

I have also approached Sime Darby and target to hold a talk about this project there latest by end of this year, followed by a detailed discussion and long-term collaboration of how to further study and promote pigtailed macaques as possible pest control in oil palm on a larger scale.

A short film about the project, which I want to use to present this project to oil palm companies and during public talks, will be produced starting end of August 2017.

I have also been officially invited by the Jane Goodall Institute (Singapore) to present this project, tentatively at Singapore Botanical Gardens on 25th November 2017.