Project Update: January 2018

Overhunting is considered the leading driver of Anthropocene defaunation. It can results in an "empty forest" syndrome that alters ecological interactions and downgrades critical forest ecosystem services. These ecological disruptions can promote dramatic impacts on wildlife populations, local livelihoods, tropical forest regeneration and carbon stocks. During the 20th century, there was a massive hunting pressure in western Amazonia mainly to sustain the global trade of skin and fur. Despite that fact, the local faunas do not exhibit any regional-scale extinctions. This situation provide an excellent model to understand the process of functional extinction of large-bodied vertebrates.

This study has been undertaken along the Central Juruá River, the second-largest whitewater tributary of the Amazon. Fieldwork has been conducted within and outside two extractive reserves containing a large-scale mosaic, ranging from severely hunted to completely non-hunted areas. Médio Juruá Extractive Reserve (RESEX Médio Juruá) is located on the left bank of the river and Uacari Sustainable Development Reserve (RDS Uacari) on the right side. The highest level of hunting pressure takes place near the town of Carauari (c. 24,000 people), the largest urban centre in the region.

Data collection from the first year of the project ran from August to December 2017. The activities proposed in the initial schedule experienced some amendments in order to facilitate data collection in year 2.

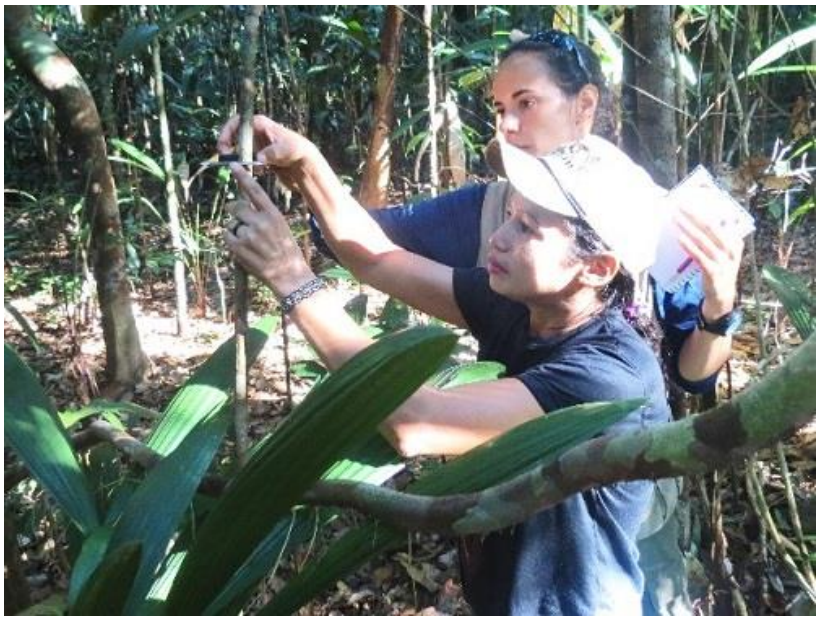
First adjustment: Instead of sampling half of the samples in each year we chose to focus the year 1 on visiting and opening the tracks and camera grids of all the sample units (30). That strategy was chosen to primarily confirm that the selected sites from the satellite imageries were both feasible and accessible for the installation of the sample units. Clearly, due to the size of our study area and the long distances that has to be covered, these activities consumed the most part of our efforts in the year 1.

Second adjustment: Aiming at facilitating the distribution of camera trapping design around the plots, tree plots were rearranged from 125 x 40 m to 100 X 50 m and saplings plots from 125 X 4 m to 100 x 5 m. Additionally, we excluded sampling of liana species, focused on the tree component of the forest. After start sampling, we realised that tree data will provide a large amount of data as well representing the main component of stocking carbon in the vegetation.

In addition to the establishment of sample units, we also number tagging and measured a total of 1,389 trees and 1,348 saplings in five plots. Moreover, we installed 20 camera traps (16 30 cm from the ground and four in the canopy) in 10 sample units over a period of 30 days, representing a total effort of 6,000 sampling days so far. Now we are processing photos and videos for identifying the fauna species.

Another component that we worked during the year 1 was the divulgation of the work to the local community with lectures at the local university. We also conducted training of undergraduate students. The course was performed in permanent plots established for forest inventory where the students learned techniques of opening trails, measuring and tagging trees and saplings and botanical and wood samples

collection. By using the collection of some vouchers for botanical identification, we also initiated the establishment of the local herbarium.



Measuring sampling in the first plot at riozinho site

Students preparing excicatas from the local herbarium during the trainee course

Pithecia irorrata in a canopy camera trapping survey