

Internship at „Kawsay Biological Station“ in Madre de Dios, Peru

from 31.10 – 15.12.2021

by Laura Böttges

Kawsay Biological Station was founded by Peruvian biologist Raul Bello Santa Cruz in 2017. It is located in the Madre de Dios region in southeastern Peru and consists of approximately 170 hectares of protected forest, which lie within a conservation concession in the buffer zone of the Tambopata National Reserve. Although logging and hunting were carried out in this area in the past, since the designation of the concession the forest around the station has been used only for conservation projects and wildlife monitoring. The forest consists of primary and secondary lowland rainforest and harbors a great diversity of animal and plant species, which makes the biological station an optimal location for conducting ecological studies.

The main mission of the Kawsay team is to protect the Amazon wildlife through research and environmental education, and their most important project is the monitoring of the local population of Peruvian spider monkeys (*Ateles chamek*). This species was extinct in this area before a group of several monkeys was reintroduced in 2011. To monitor the status of the group and to study their behavior, we regularly searched for the monkeys in the forest and followed them for as long as possible, registering their movement patterns with GPS. We also took notice of where the monkeys slept and foraged, to learn more about how they use their habitat and what tree species are the most important for them. Additionally, we collected fecal samples for genetic studies. These efforts assure the preservation of the group and will be crucial for future reintroductions, which are necessary to maintain a stable population of spider monkeys in the area.

Another activity linked to this project was the study of the life stages and cycles of trees in the forest, which allows the analysis of seasonal changes in the vegetation and helps define what plant species the spider monkeys (and other frugivorous animals) might feed on according to the season. For this activity, called plant phenology, we covered defined trails looking for all the seeds, fruits and flowers we could find. We identified the plant species either in the field or when we returned to the station, taking samples with us. Similarly, we regularly visited certain plots in the forest that are destined for the analysis of the vegetation composition. We measured the thickness and height of the trees within the plots to know how fast they grow and learn more about the structure of the forest.

Aside from these vegetation studies, we also monitored the biodiversity of the area through wildlife surveys and the use of camera traps. Wildlife surveys were carried out with a specific methodology for each animal group: mammals, birds, amphibians and reptiles. The surveys were conducted both during the day and at night, and all species that we observed were identified and registered. This provides a general overview of the faunal diversity of the concession, and enables the assessment of population densities of different target species. In addition, we placed camera traps at activity hotspots in the forest, and collected them every two weeks to replace batteries and extract the data. The pictures and videos were analyzed at the station, which results in a growing dataset of the presence and activity of the different animal species.

During my stay at the station I worked with other scientists, interns and volunteers from different parts of Peru, as well as from other countries. Aside from the biological activities, we also helped in the general maintenance of the station and the forest trails. I learned a lot about the biodiversity of this part of the Amazon and the methodologies used to study plant and animal species in this ecosystem. Every day was full of new experiences and I greatly enjoyed sharing all this time with other biologists and students. I would highly recommend an internship at Kawsay to anyone who is interested in tropical ecology and wanting to improve their fieldwork and data analysis skills. Thanks to the work of the Kawsay team, it is possible to better understand the impact of anthropogenic activities on biodiversity and to protect the rainforests of Madre de Dios.