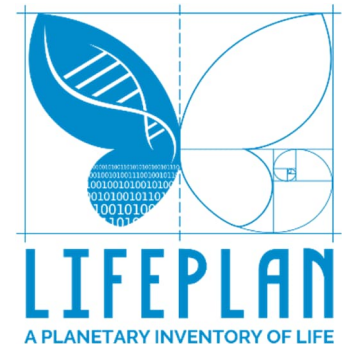


LIFEPLAN Newsletter July 2023



What's going on with Lifeplan?

All teams should now have reduced their sampling design from four corners and the middle to two corners and the middle, leaving a three-point transect. We are collating your GPS metadata to determine which points are still active, and contacting teams to confirm in the cases where we cannot tell from the GPS data.

Please note that we keep trap codes in the same place even when equipment is replaced, so if e.g. your audiomoth NAB123 breaks, tell us the code and we will send you a new NAB123 sticker to put on the replacement. Trap codes should only change when you are switching between Natural and Urban plots.

Some new places have been added to Bird Sounds Global, and the website is now available in French and Spanish also. Please do keep annotating and advertising the site to bird sound experts in your region. We still need more annotations especially in Asia, Africa and South America.

Nextcloud has been quite full recently, and we have been deleting old untransferred data. Please do continue to check in with us about any untransferred data. If Nextcloud fills up, we will start deleting data from teams who have the most data on Nextcloud. Nextcloud is temporary storage only, and a backup should be kept on external hard drives.

Some of you have reported Malaise traps breaking after long use in challenging environments. In particular, there are problems with the plastic collection head getting brittle from the sun, but also more extensive problems with rips in the cloth etc. To our disappointment, the global supplier of the model we use has changed to a new model, with which we are very unhappy. We (and many others) have asked them to revert to the old model, but with no success. You can rest assured that we are doing everything that we can to come up with replacements for you. We are now working on several parallel solutions, including self-crafted modifications of the new model to the old one. In the meantime, please do as follows:

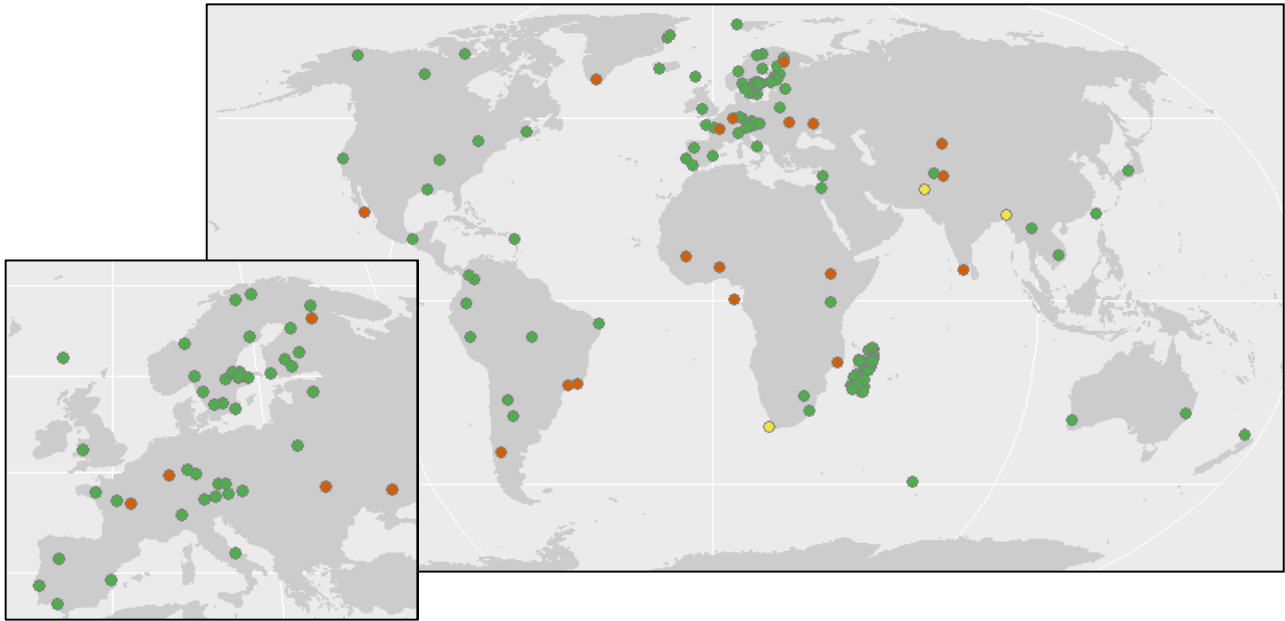
- 1) If the problems concern the plastic part of the trap, please email us for advice
- 2) If the problems concern the cloth part of the trap, please send pictures of the exact damage by email. (Duct tape will not work in a sunny environment, whereas white tape used for mending sails is a great option.)

Please do NOT make modifications of the trap without consulting with us, as that may result in samples unusable for the project.

Bess will be on holiday for July, so the June activity summary will be sent out together with the July summary when she comes back to work.

Progress as of June 28 in numbers:

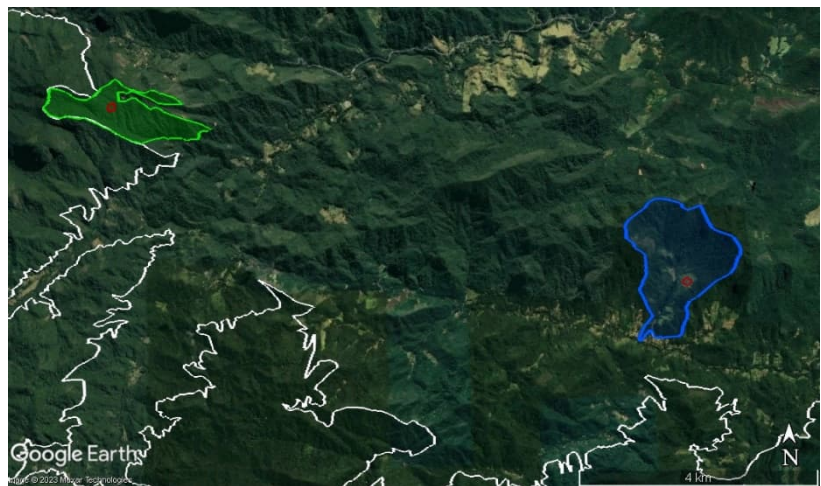
Of 162 global + Nordic + Madagascar sites or site pairs, 144 have all their equipment and contracts and are OK to start. 151 sites have now sent in some image/audio data. 17 still lack some contract or permit, and 6 still lack some equipment. From the 151 sites that have started some sampling, we have received 10 034 799 camera trap images and 238.27 TB of audio recording, which is equivalent to about 35 770 325 minutes (68 years) of recording.



Maps with teams colour coded: Red = lacking some equipment or contract, Yellow = has all equipment and contracts, OK to start sampling if local permits received, Green = has contracts and equipment, and has uploaded image or audio data

Sampling team of the month: RioDeJaneiro (Brazil)

The Atlantic Forest biome, located on the eastern part of the South American continent, is bound to the east by the Atlantic Ocean and to the west by the 'dry diagonal' composed of the Chaco, Cerrado and Caatinga ecoregions. This seasonally dry environment separates the Atlantic Forest from the other major rainforest of the continent, Amazonia. Encompassing a wide variety of environments, given its latitudinal (from 3° S to 30° S) and altitudinal (from sea level up to > 2,800 m) ranges, the Atlantic Forest is considered one of the world's Biodiversity Hotspots, with high degrees of species richness and endemism and severely threatened by human activity – currently only around 8% of its original cover remains.



Location of the natural (green) and urban (blue) Rio de Janeiro collection site

The LifePlan Rio de Janeiro sites, in Southeast Brazil, are situated in the heart of the Atlantic Forest in the mountainous region of the state, recognized for being an IBA (Important Bird and Biodiversity Area). Our plots are located in the rural area of the municipality of Nova Friburgo. The local climate is considered to be of tropical altitude, with average daily temperatures varying from 9 °C to 27 °C, humidity above 80% for

more than half of the year, and mean annual rainfall of around 1.300 mm. The region has rugged terrain, with moderate to strong erosion-prone soils, mountainous peaks and many rivers. Heavy summer rains often cause floods, landslides, and mud-blocked roads, and these challenges prevented data collection on a few occasions.



Urban parcel, with equipments attached to a wooden pole

We chose two private conservation areas to install the plots in, taking into consideration the need for long-term commitment to the project, sufficient size to install the plot (1ha) without including buildings, roads and public pathways, and adequate distance from houses for recording images and sounds. The Rio Bonito Private Reserve (-22.400705°, -42.412087°), selected as the urban area, is located at Rio Bonito village, where 600 people reside. We installed the plot in an old pasture that has not been used for more than 5 years, at an altitude of approximately 950m. At every corner and middle of

the parcel we installed wooden poles to hold the cameras, the audio recorders, and to provide greater stability for the Malaise trap. We started sampling in August 2022 and, overall, the methodology was easy to apply.

The Bacchus Private Reserve (-22.376532°, -42.497565° - now renamed as Alto da Figueira), was selected to represent the natural area. It has been a formally designated conservation unit since 2009, but the area has been preserved since the 1970's and it has drawn the attention of many experts and lovers of orchids and birds over the years – including prominent figures such as Sir David Attenborough, who recorded *The Life of Birds* there in the late 1990s. The property was recently purchased privately by Alexandre Antonelli, a Brazilian-born scientist who is Director of Science at the Royal Botanic Gardens, Kew (U.K.) and Professor of Biodiversity at the University of Gothenburg (Sweden). He and his wife Anna have established the nonprofit Antonelli Foundations (www.antonelli-foundations.org) to set up and manage the Atlantic Forest Research and Conservation Alliance (www.araca-project.org). A research station for studies on biodiversity at the reserve is now being constructed, and Lifeplan is the first major study to be conducted there. The reserve ranges from 1,200 m to 1,600 m in altitude and is covered by dense rainforest. Despite the many trees in the area, we decided to also install the wooden poles for cameras and audio recorders there, since it facilitated installation and better positioning of the equipment.

Professor Antonelli leads the Rio de Janeiro team with Professor Alice Calvente, from Rio Grande do Norte University, and they have together also set up a Lifeplan site in Natal (Brazil). Calvente has shown strong leadership and has been sharing her invaluable experience in the Lifeplan data collection and equipment maintenance. Paula Leitman and Thiago Dorigo are the researchers responsible for field logistics, collection of data and samples, and project administration. We have started a preliminary analysis of the images and we have captured some very nice species, including the Southern tiger cat (*Leopardus guttulus*), an endangered species!



Southern tiger cat (Leopardus guttulus Hensel) from the Rio de Janeiro natural location

Researcher of the month: Bess Hardwick

I am a project planner at the University of Helsinki in Finland. I got my MSc in ecology and evolutionary biology here in 2014, and have been working at the University of Helsinki since 2011 as a research assistant, project coordinator, database manager and project planner.

I have mostly worked with projects in the research groups of Tomas Roslin, helping with studying insect community ecology and long-term ecological datasets. I have been involved in several citizen science and distributed science projects, where people have collected data or performed experiments on a much larger spatial scale than our research group could have covered by ourselves. LIFEPLAN is by far the most large-scale and complex such project that I have worked on.

Since the start of LIFEPLAN in 2020, I have been one of two LIFEPLAN coordinators, in charge of network building, overall budgeting, contracts, data management and various other things. I try to keep Nextcloud running smoothly and make sure that our data and metadata stay organised for the researchers to access and analyse, and take care that we comply with all our legal and contractual obligations.

The most challenging thing about my work in LIFEPLAN is the sheer variety of problems to be solved in places that I have never been to and don't really know enough about.

The best thing about my work on LIFEPLAN is that so many people find the project interesting and want to help us with their expertise. I also get to learn something new every single day.



Camera trap image of the month



Badger in the night at the urban site near Lago Maggiore, Italy. Photo by team LagoMaggiore.