LIFEPLAN Newsletter March 2023

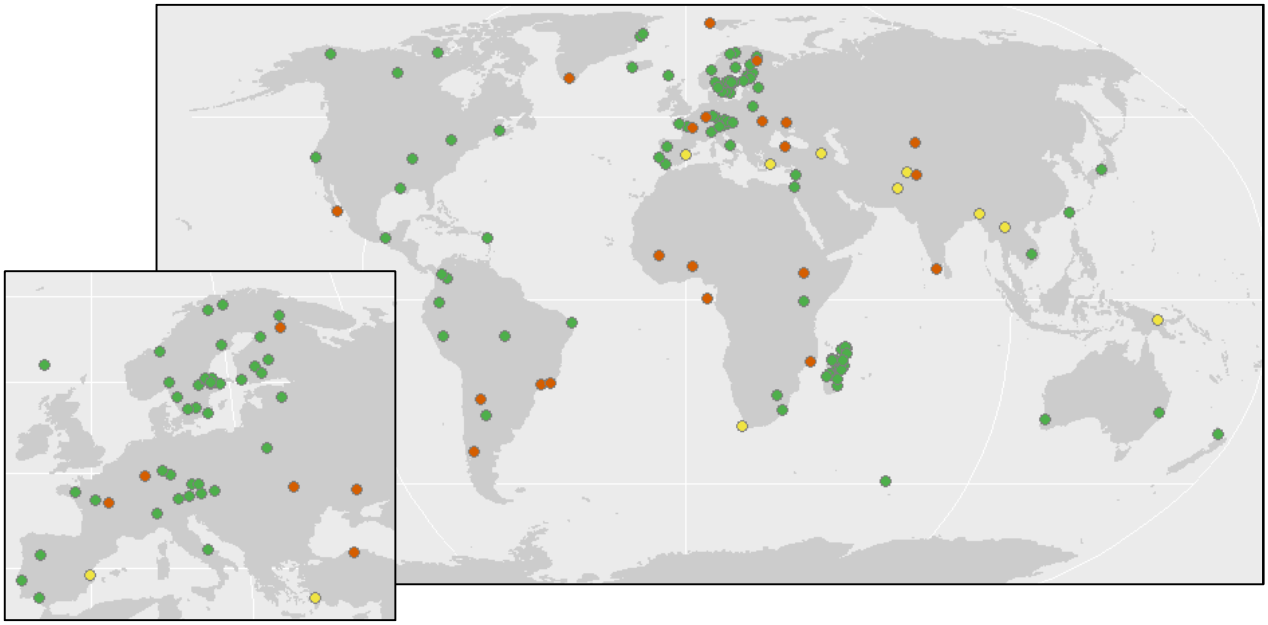
What's going on with Lifeplan?

We will have our next Lifeplan Webinar on May 9th 2023, at 12:00 Noon UTC time. This time we will focus on how we will disseminate results to teams. We will look at the different types of data being generated, and at proposed formats and timetables for your results summaries and raw data. We will collect feedback from you on what kind of results summaries would be useful, in terms of reporting to your stakeholders, permitting authorities, etc. A link to the webinar will be emailed to you closer to the event.

There have been fewer Nextcloud outages in the past few months, but instead we have started seeing incomplete deletions for some teams. In these cases, the data have been successfully transferred to us and Nextcloud has started the deletion process, but for some reason some of the files are left behind in the Nextcloud folder and no "Error deleting" message is received. If you see this happening, and if you are absolutely sure that the folder was fully synchronised before you added the share link, you can go ahead and delete the remaining files. Do still feel free to check in with us frequently over email if your Nextcloud folders are not emptying.

Progress as of March 1 in numbers:

Of 165 global + Nordic + Madagascar sites or site pairs, 144 have all their equipment and contracts and are OK to start. 146 sites have now sent in some image/audio data. 19 still lack some contract or permit, and 8 still lack some equipment. From the 146 sites that have started some sampling, we have received 7 895 337 camera trap images and 194 TB of audio recording, which is equivalent to about 29 151 922 minutes of recording.

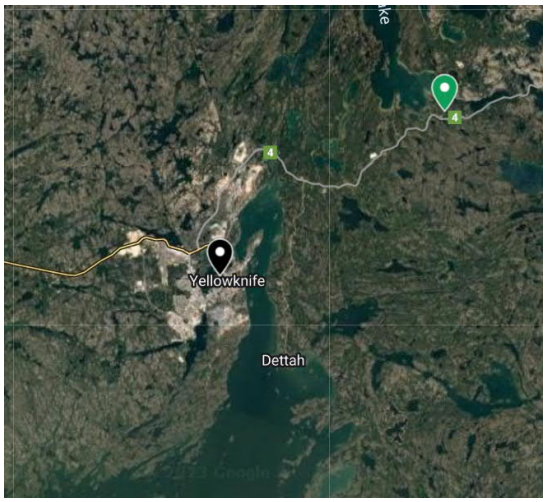


Maps with teams colour coded: Red = lacking some equipment or contract, Yellow = has all equipment and contracts, OK to start sampling if local permits received, Green = has contracts and equipment, and has uploaded image or audio data

Sampling team of the month: Yellowknife

A Lifeplan Global site, Yellowknife, is situated on the north side of Wıìlıìdeh (Great Slave Lake in English), the traditional home of the Déne and Métis people. Yellowknife is the capital of the Northwest Territories (NWT), where half of NWT's 40,000 residents are living. The Lifeplan team in Yellowknife includes members of the North Slave Métis Alliance, the Wek'èezhìı Renewable Resources Board, Government of Canada, and the Government of the Northwest Territories (coordinator).

Our site is in the Taiga Shield, where the Precambrian bedrock is exposed and soil is shallow; our forests are open with short pine, spruce, aspen, and birch trees, where lichen thrives in dry habitat, and moss thrives in wet bogs. Our climate is subarctic. We have short but intense summers with 22 hours of sunlight, and long cold winters. Our wildlife is adapted to cold.



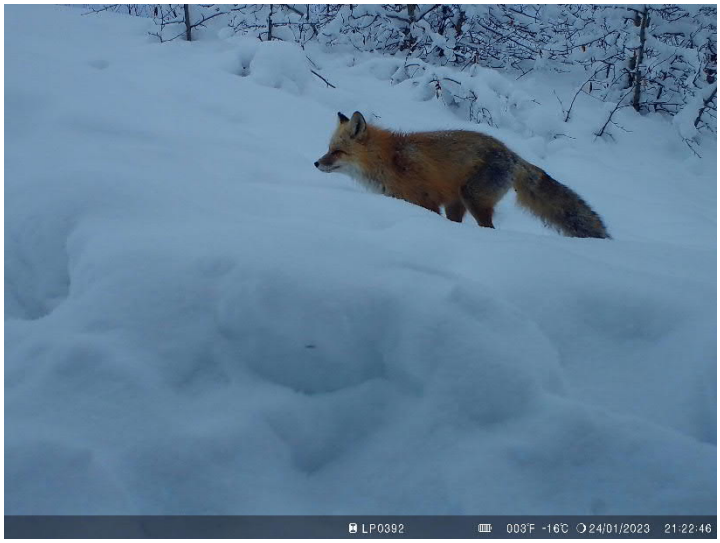
Locations of the natural (green) and urban (black) Yellowknife plots in Northwest Territories, Canada.

Randi Jennings (Wek'èezhìı Renewable Resources Board) and Jessica Hurtubise (North Slave Métis Alliance), January 2022.

We have conducted sampling for 2 years now, in both urban and natural settings. The team is used to the cold and we always dress for it, but we are really testing the equipment. Something special happens to plastic below -40 C, so we have had to replace dead timers, work with a cracked cyclone vial remover, and re-wire electrical cables that just split in two when touched. The team has adopted tricks to ensure the data is collected every week in winter, such as using sugar tongs to remove batteries while wearing large mitts, laying out a pillowcase to prevent cards disappearing in the fluffy snow layer, carrying two phones and always keeping one warm inside our parkas. On the coldest days, with a -50C wind chill factor, we use warming packs placed inside thin working gloves to keep our hands free of frost bites. The Yellowknife site is one of few situated north 60 degree latitude and our team is proud of showcasing our northern wildlife to the world.

Yellowknife Site: winter sampling on a typical cold day (J Hurtubise, S Carriere, N Johnson, and B. Reid).

Yellowknife Site: Summer sampling is short but intense and hot: in June our Malaise bottles are full of flying insects (Sheraz Daher).



Red fox in the snow at Yellowknife site.

Researcher of the month: Nicolas Chazot

I am currently an Associate Senior Lecturer at the Swedish University of Agricultural Sciences (SLU), where I share my time between research and teaching in Master and undergraduate programs. I was born in France and in 2011 I started a PhD at the National Museum of Natural History in Paris with Dr. Marianne Elias. At that time, my training and research focused primarily on tropical ecology. My goal was to illuminate the origin and structure of butterfly biodiversity in South-American Neotropics. I was able to spend several months in South America, collecting butterflies in the Andean and Amazonian forests and had a rough but fantastic time there. I quickly discovered that I enjoyed working at the interface of multiple questions, methods and conceptual frameworks and I developed a line of research that nowadays integrates phylogenetics, community ecology, biogeography, macroecology, metabarcoding, geometric morphometrics at different geographical scales. I graduated in 2014 with a PhD in Evolutionary Biology and after one more year at the Museum in Paris I moved to Sweden. I first landed at Lund University for a first post-doc project, followed by a second post-doc at the University of Gothenburg in 2018. Throughout these years, my work has primarily focused on Lepidoptera, although I also contributed to a few studies on palm trees for a change! In 2020 I finally started working as an Associate Senior Lecturer at SLU, Uppsala.

During the pandemic, I would join the Lifeplan team on field days once in a while for the fun of moving out from the office and about a year ago Tomas Roslin kindly offered to join Lifeplan through the co-supervision of Johanna Orsholm's PhD. My interest in the Lifeplan data lies in the Malaise samples and the insect fauna. My main goal is to build a comprehensive phylogenetic framework for Lifeplan data to explore insect assemblages through the lenses of phylogenetic trees. Using metabarcoding for the identification of Malaise samples, Lifeplan is generating millions of short fragments of mitochondrial DNA for insects and arthropods in general. These DNA fragments can be used not only to identify what is found in the Malaise samples, but also to place these taxa within a phylogenetic context, and in that way, build the Lifeplan Tree of Life.

To me, both the most exciting aspects of Lifeplan AND the most challenging ones lie in the sheer size of the project. The sampling effort, the amount of data generated, the community of researchers involved, altogether open so many unprecedented possibilities to explore biodiversity patterns through time and space. However, they also bring real methodological challenges, which sometimes appear too daunting a task!

Camera trap image of the month

Warthogs in northern South Africa. Photo by team Telperion.