

Project Update: January 2021

## Introduction

In this report we inform the progress made in the project since October 2020. This has focused mainly on the extraction of microbial DNA from leaf litter and cockroach gut and outreach planning. All these activities have been carried out without major complications despite pandemic restrictions. However, the sad news is that two of the sample sites have been affected by current wildfires in our region (<https://metro.co.uk/2021/01/16/chile-wildfire-blaze-turns-sky-red-after-being-started-deliberately-13915401/>). We hope that when this finish we can go to verify the surviving data loggers installed in field.

### 1- DNA Extraction.

Between October and December 2020, we extracted microbial DNA from leaf litter and native cockroach's gut from two sites: Cuesta Zapata (33°23'18"S 71°14'59"W), Lago Peñuelas (33°08'50"S 71°28'35"W) (Figure 1). This activity was carried out as planned without major complications. At the end of December 2020, we sent these samples for sequencing (Australomics UACH, Valdivia, Chile) and we are waiting metabarcoding library results. Meanwhile, we have been studying microbial diversity through microscopy, we have observed a great diversity of microorganisms, we are sure that these are an important part of the ecosystem processes in the native forest and plantations. (Figure 2).



Figure 1. DNA extraction: A. leaf litter B. DNA samples.

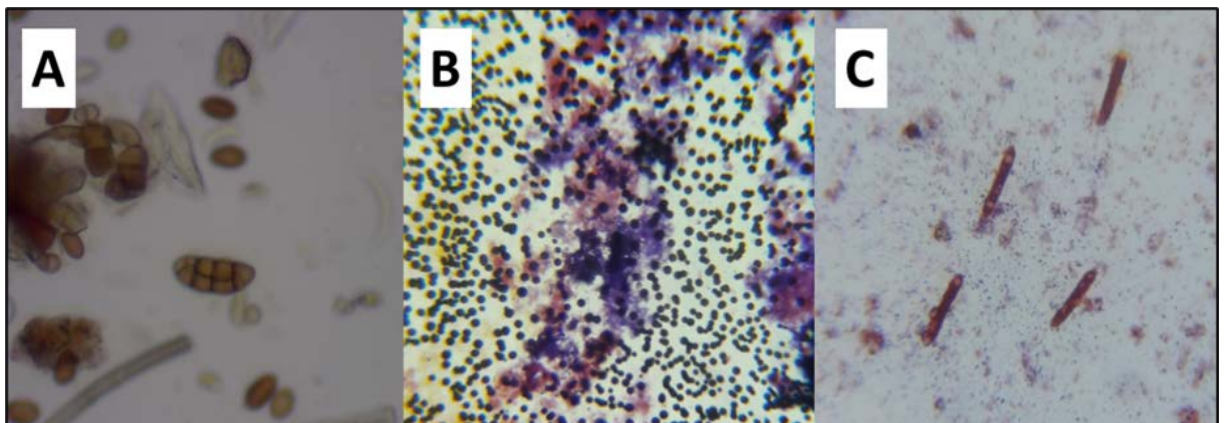


Figure 2. Microbial diversity from leaf litter. A. fungi. B. Gram+ bacteria. C. Gram- bacteria.

## 2- Outreach

Adapting to the quarantine isolation circumstances, we have carried out these activities remotely, for example with the online education NGO *Naturalistas Chile*, we gave a talk about the importance of the conservation of insects and microorganisms for ecosystem processes (Figure 3).



Figure 3: Online talk poster.

In the same way, in collaboration with colleagues from Universidad de Concepción and Pontificia Universidad de Valparaíso we are organising a native plant propagation workshop, thanks to this we have collected biological material to initiate the propagation of native plants during the first semester of 2021. These species will be delivered to local communities and schools in order to encourage biome's vegetation restoration.