**Introduction**

Plant distribution 🡪 habitat selection

To assess host specificity with accuracy, it is necessary to separate between host availability and host use. A species has specificity towards a host if its use differs significantly from availability (higher or lower). In addition, a species can show specificity towards a set of traits shared by many species, such as bark roughness, pH, or tree size, instead of towards a particular species. Consequently, trait specificity can be mistaken for phorophyte species specificity if photophyte traits are not taken into account. Untangling whether epiphytes prefer host tree species or, by contrast, particular traits, requires a multivariate approach that includes data on available vs. used phorophyte species, as well as their traits. [Análisis crítico de la literatura sobre quién ha trabajado en esto y quien no].

E**piphytes** are plants that live non-parasitically on tree trunks and branches, and therefore need to find a **suitable host tree** for physical support. [three possible, non-exclusive drivers of epiphyte distribution] Their distribution depend on host availability. Phorophyte preferences… In tropical forests, where the . Because of their life style, epiphytes face strong ecological gradients at relatively short distances which may further determine a patchy distribution. Finally, dispersal distance from maternal plants my lead to a clustered distribution.

We aim to blabla. A resolutive way of assessing whether epiphytes have preference for their phorophytes is to collect data on trees that act as phorophytes with trees that do not host any epiphytes. Otherwise, .

To this end, we will test the following hypotheses:

1. Phorophyte species available in general do not differ from phorophyte species used
2. Epiphytes select particular phorophyte traits. This allows them to live in more than one phorophyte species.
3. How intra-specific variation in bark type affects epiphyte load?

**Nota:** si incluimos spatial patterns: In tropical forests, random vs. patterned. Combining such data with a detailed spatial distribution of trees, we will assess to what extent phorophyte preference or spatial distance between trees underlie the distribution of epiphytes in small spatial scales.

**Methods**

*Study site [Carlos]*

*Sampling design [Carlos]*

*Data analysis*

A) Exploratorios.

A.1) Descripción de la población de árboles

1. Abundancia de spp (gen/fam) con vs sin epifitas.

2. Composición de spp. (gen/fam) con vs. sin epipfitas.

A.2) Descripción de la población de epífitos

A.3) Descripción de los rasgos de los árboles

Madera (con vs. sin)

Musgo (con vs. sin)

Tamaño (con vs. sin)