Urban microbiome monitoring

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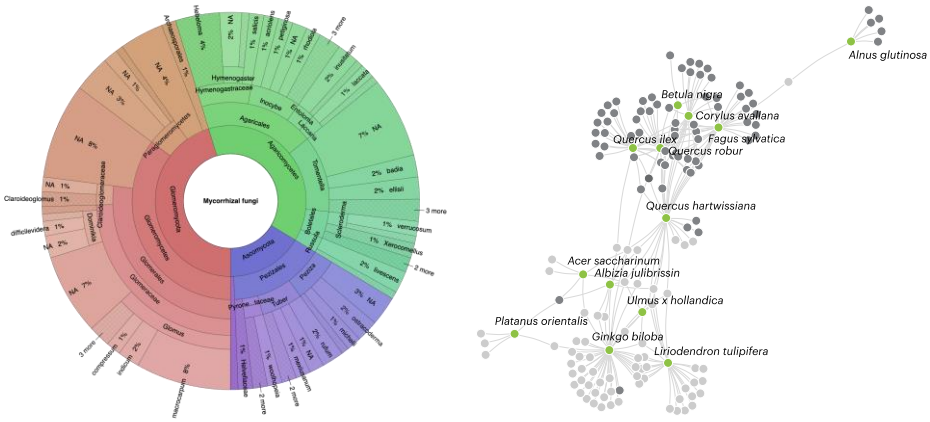
The world is becoming more urban every day and while the consequences of urbanization on the diversity of aboveground macro-organisms are well-known, the relationship between urbanization and belowground diversity remains to be studied. A better understanding of the environmental factors and management practices associated with urban soil biodiversity and its associated ecosystem functions and services is critical to ensure the sustainability of urban greenspaces. This is likely to become more crucial with an increase in the global human population and rising concerns of climate change.



The goal of this joint Leiden University / Naturalis MSc internship is to start a monitoring initiative of soil biodiversity in the city of Leiden. Several taxonomic groups will be investigated and shifts in community composition will be identified in relation to heat stress. DNA metabarcoding techniques will be employed to obtain the diversity of various soil organisms, to then link soil biodiversity to soil properties and heat stress vulnerability.

Skills: field sampling, soil analysis, DNA extraction and library prep for sequencing, bioinformatics, statistical analysis.

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