



Research School in Biosystematics – ForBio [Tromsø](#)

## The 3<sup>rd</sup> DNA Metabarcoding spring school in Tromsø

Eric Coissac, Sergei Drovetski, Inger Greve Alsos, Nigel Yoccoz

March 30<sup>th</sup> – April 5<sup>th</sup> 2014

# Air biodiversity: a high throughput plant species identification on environmental DNA

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The aerobiological spectrum is characterized by different types of biological particles (pollens, spores, bacteria, *etc.*), with a variability linked to site and environmental factors.

Data on airborne pollen reflect differences in the species composition of the local flora and may capture the spreading of alien species. The air biomonitoring may also detect the flowering season of anemophilous taxa as well as the reproductive response of plants to environmental changes at a temporal and spatial scale.

Aim of this research is to characterize the air biodiversity of different ecosystems through a DNA-based metabarcode analysis applied on complex air samples. The metabarcoding of environmental DNA will allow the taxonomic identification based on specific genetic markers, leading to an estimation of the biodiversity.

Since loss in biodiversity can endanger ecosystem health, natural ecosystems of different vegetation zones will be selected on the basis of their putative degradation and invasion by alien species, such as *Ambrosia* (ragweed), to highlight differences in species composition and richness.

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