

RECIPE minutes of the microbial ecology group discussion – Carentan, 8.11.2004 – ...and some news

Present : Fatima, Antonis, Andy, Rebekka, Daniel Gilbert, Laure, Andreas, Edward, and at the end : Steve

WPI – ONGOING ANALYSES

All groups are able to perform all planned analyses on all the samples taken in fall 2003, with some exceptions:

1. Antonis & Edward are focusing on the samples from La Chaux-d'Abel to optimize the molecular methods used for the analysis of Euglyphid testate amoebae. They hope that this will lead to a fingerprinting method that will be applicable to a larger number of samples towards the end of the project.
2. **News** – Edward is also working in collaboration with Jan Pawlowski from the University of Geneva on the phylogeny of the Arcellinida (the other group of testate amoebae). We now have publishable results on this group and we might, before the end of RECIPE, be in a position to apply to the Arcellinida a methodology similar to that we are using on the Euglyphida.
3. Fatima: the sugars analyses for the Scottish and Finnish samples will be performed between January and March 2005. Regarding the Finnish samples we discussed about the option of choosing an additional situation representing a more advanced stage with a new regenerating peat accumulation and then reduce the number of the fourth early situations (A, B, C, and D). Mika is sending to Orleans 3 replicates of 3 levels (n° 3, 4, and 5) from a 50-year old site.
4. The microbial communities (analysed by microscopic methods) have partly been performed for two sets of samples, fall 2003 and spring 2004. Work continues to obtain two full data sets. The molecular techniques will only be applied to the fall 2003 samples (fungi finished)
5. Andreas: may not be able to perform all the PLFA analyses.

New developments:

1. Andy suggested using a **dendrochronological approach to date the onset of regeneration**. He will core trees in the following weeks. In this respect, Fatima and Philipp Steinmann, who has facilities to do Pb210 dating in Bern, agreed to perform a test on 3 situations from La Chaux d'Abel (intact, early and advanced stages). Samples were sent to Philipp in January and analyses are in progress.
2. Edward suggested using a **paleoecological approach to confirm the space for time substitution** that we use in RECIPE. This would be done for the morphological analysis of testate amoebae. In counterpart these analyses would not be done for the spring 2004 samples. Edward will work on this in collaboration with Fatima (biochemical and physical characteristics of the peat) and Rebekka (FTIR data). The initial approach is to use the same samples as used for other analyses. The disadvantage of this approach is a poor temporal resolution but the advantage is a lower number of samples (if 218 samples can be

considered as low number). Depending on the results a more detailed approach may be envisioned, on new cores. This may require finding a MSc student to carry out the work, possibly in collaboration with Fatima for biochemical analyses. Any candidates?

We discussed the need to have an **inventory of the existing data**. Andreas offered to create an excel spreadsheet with all samples (lines) and available information (columns). This will also include the environmental data.

Note to all and especially those in charge of the fieldwork

Please make sure that we **have reliable environmental data** for all WPI, WPII and WPIII sites and plots. Not all data is useful to each of us, but it will make data analysis much easier and more powerful if we have good environmental data.

Data format

Andreas will also produce an **example of a data file** so that we stick as much as possible to a same format to make it easier for the analyses and exchange of data. We briefly discussed the possibility to include multivariate data as similarity matrices only (to cut down on file sizes, while still allowing comparisons among data sets e.g. using Mantel tests).

WPII - TIME OF SAMPLING

We discussed about the sampling for WPII. After considering several more or less scientifically sound options (degree-days, peak biomass, spring, 1 year after setup), an agreement was finally reached to sample for WPII when *Eriophorum vaginatum* is in seed. This should be around early June. This compromise will allow some plant growth and microbial activity to take place in spring while hopefully leaving enough time to perform the analyses.

Edward Mitchell 22.11.2004, reviewed and amended by Rebekka Artz, Fatima Laggoun-Défarge,