GFÖ 2009 – Bayreuth - Symposium

Darkness visible: molecular ecology going underground

Life on Earth relies on life in earth! Soil organisms are likely to be sensitive indicators of ecological change due to altered environmental conditions, such as impacts of land use, pollutants or climate. Recently, molecular ecology has become central to the study of soil systems. On the microbial level many organisms are unculturable, which traditionally has been a barrier to an efficient analysis. The application of molecular techniques allows a more thorough assessment of microbial communities and their function in soil processes. Moreover in cryptic habitats identification of trophic links is difficult without disturbing the system under study, especially in predators which are small and live belowground. PCR-based techniques have potential to assess predator-prey relationships and to connect microbial and faunal food web. Overall molecular ecology has revolutionized our ability to characterise the abundance and activity of soil microbial and animal populations as well as their interactions. This symposium aims to link researchers working in various fields of soil molecular ecology in order to significantly enhance the understanding in soil resilience and ecosystem sustainability in the light of global change.