Geophysical Research Abstracts, Vol. 7, 01758, 2005
SRef-ID: 1607-7962/gra/EGU05-A-01758

Recognising functional-diversity requires assessing functional-mechanisms, an interdisciplinary approach.

C. D. Lowe, D. J. S. Montagnes, S. J. Kemp, A. D. Bates
School of Biological Sciences, University of Liverpool (clowe@liv.ac.uk)

Morphological features and neutral molecular markers are typically used to assess micro-eukaryote biodiversity. The results from such studies are then often used to describe phylogeographies. While these approaches provide useful data to assess dispersal potential and population structures they may not always reflect functional diversity. Using a protist (Oxyrrhis marina) and a micrometazoan (Brachionus plicatilis) as examples, this presentation will examine a multidisciplinary approach to assessing functional diversity. Six hierarchical approaches will be presented, the use of: morphological structures; ecophysiological responses; biochemical responses; neutral molecular markers; functional molecular markers, and functional marker expression. The value of these tools as methods to assess global diversity will be assessed in relation to our data and in terms of general concepts.