



Variability of physiological types of phytoplankton in the world ocean.

C Descolas

Universite Montpellier II Institut des Sciences de l'Evolution (ISEM),UMR 5554
Paleoenvironnements Case Courrier 061,34095 Montpellier cedex 05 France

The CO₂ fixation processes observed in marine phytoplankton are more numerous than those of continental plants. These different mechanisms have been reported principally on cultures of phytoplankton. Here we report on original data sets obtained in the field on natural communities of phytoplankton with a same method (enzymatic activities). These data had been collected from different parts of the world ocean: Atlantic and Antarctic ocean, Mediterranean sea. Different groups based on the results of carboxylases activities measurements have been defined and compared with the results of environmental parameters from the different biogeochemical provinces. The interest of the groups determination on a physiological basis is discussed as links between oceanic and terrestrial inorganic carbon fixation processes and between present and fossil ones. The aim of this approach is to ameliorate the accuracy of entry parameters for the climate models.