

invertebrate diversity. Surveys of Australia's western continental margin (~100 to 1000 m depths) were undertaken in 2005 and 2007 by CSIRO Marine and Atmospheric research in conjunction with museum taxonomists from around Australia. Sampling was completed at a total of 195 stations within 26 latitudinal sites between 12 ° and 35 ° S. The species composition and distributional patterns of decapod crustaceans were investigated by Museum Victoria with the aim of testing hypotheses on taxonomic surrogacy and the biogeography of Australia's biodiversity. Decapods are useful in this context as they have a diverse and relatively well documented taxonomy in Australia, and feature strongly in biogeographic debates.

#### 17:15 17:30 LARGE SCALE PATTERNS IN THE DIVERSITY AND COMMUNITY STRUCTURE OF DEEP-SEA NEMATODES

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Nematodes represent the most abundant metazoan group in deep-sea sediments. In general, their relative importance in the benthos and their diversity increase with water depth from the continental shelf to mid slope depths to the abyssal plain. However, this high biodiversity is not well understood yet, especially when local diversity estimates are extrapolated to regional or even global scales. In the framework of the Census of Marine life projects CoMarge and CEDAMAR more than 60 datasets collected worldwide were analysed in order to unravel large scale patterns in deep-sea nematode diversity, distribution and community composition. Both community composition and density showed a tight correlation with ocean surface productivity. On the other hand, the expected unimodal distribution of diversity in relation to water depth was not general. Different ocean basins showed clear differences in regional diversity estimates with higher values in the South-West Atlantic and Indian Oceans compared to North-East Atlantic or the Mediterranean Sea. Habitat heterogeneity contributed significantly to the total diversity. Cold water coral rubble and manganese nodule areas are particularly interesting hot spots of nematode biodiversity.

#### 17:30 17:45 HETEROGENEITY OF MACROFAUNAL COMMUNITIES AT LOCAL SCALE IN THE GULF OF GUINEA

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The BIOZAIRE programme developed an integrated study of the benthic ecosystems on the Congo-Angola margin where a very active pockmark field was discovered at 3150m depth in the vicinity of the Congo submarine system. The links between the chemosynthesis based ecosystem and the surrounding detritus based ecosystem was investigated by comparing the macrofaunal communities and the sediment characteristics in the pockmark field and along two transects around the active area. The macrofaunal communities of the two systems were clearly distinct in terms of density, composition, and vertical distribution. In the chemosynthetic ecosystem, macrofauna associated to megafaunal clusters showed a great variability, linked to the great variability in sediment physico-chemical parameters. This spatial heterogeneity in habitat characteristics likely enhances the diversity of macrobenthic communities at the scale of the pockmark. Further than 250m from the active area, macrofaunal