Presentation 2 (oral; T. Sutton presenting):
Trophic structure over the northern Mid-Atlantic Ridge: the bathypelagic zone really matters

T.T Sutton1, J.C. Hoffman2, J. Kidwell1, T. Falkenhaug3 and O.A. Bergstad3

1 Department of Fisheries Science, Virginia Institute of Marine Science, PO Box 1364, Gloucester Point, Virginia 23062 USA. Tel. 01 804 684 7372. e-mail: tsutton@vims.edu
2 Mid-Continent Ecology Division, National Health and Environmental Effects Research Laboratory, 6201 Congdon Blvd, Duluth, Minnesota, 55804 USA
3 Institute of Marine Research, Flodevigen Marine Station, 4817 HIs, Norway

We present preliminary results and ongoing efforts to characterize the trophic structure and energy flow of the pelagic ecosystems of the northern Mid-Atlantic Ridge (MAR), from Iceland to the Azores. This study is one component of the international CoML field project MAR-ECO (www.mar-eco.no). We found a diverse deep-pelagic fish fauna (205 spp.), with unexpectedly high bathypelagic fish biomass and spatial complexity. Based on literature reports of species present, crustacean planktivory is the dominant trophic guild (79% of individuals 47% of species), primarily within the mesopelagial. “Gelatinivory” was second (12% ind., 4% spp.), primarily within the bathypelagial. Omnivory (3%, 13%), “shrim pivory” (2%, 4%), and piscivory (1%, 21%) were the remaining major feeding guilds. The diets of 22 spp., primarily bathypelagic, are unknown. A spatially explicit food web model revealed that of 12 fish assemblages discriminated by multivariate analysis, only three accounted for more than 4% of total fish consumption. The most striking finding was that along much of the MAR, fish consumption in the bathypelagic equals or exceeds the epi- and mesopelagic. Further, “alternate” trophic pathways (gelatinous zooplankton and shrimp consumption) appear to me major energy vectors in the deep North Atlantic

This abstract does not necessarily reflect USEPA policy.