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Deep-Sea Fishes of the Mid-Atlantic Ridge: Results of the 2009 Henry Bigelow Expedition

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Deep-Sea Fishes of the Mid-Atlantic Ridge: Results of the 2009 Henry Bigelow Expedition

As part of an ongoing study of the northern Mid-Atlantic Ridge biodiversity and ecology (CoML field project MAR-ECO), a detailed survey of the pelagic and demersal fishes in the region of the Charlie-Gibbs Fracture Zone (~600 n.m. south of Greenland) was conducted. A total of 17181 pelagic fishes (92 spp., 35 families) were sampled from 0-3000+ m, with the Myctophidae the most species-rich. The bristlemouth Cyclothone microdon was by far the dominant species in numbers (82% of total), while the sawtooth eel Serrivomer beani dominated biomass (27%). A total of 441 deep-demersal fishes (28 spp., 13 families) were sampled from 1872-3527 m, with the Macrouridae and Alepocephalidae comprising half of species numbers. The abyssal halosaur Halosauropsis macrochir was most abundant, while the abyssal grenadier Coryphaenoides armatus contributed the most biomass. Remarkable among the pelagic fish data were routine shallow catches of bathypelagic fishes (see A.B. Cook et al., this volume), and among the demersal fishes were the large size of the individuals, above or near the maximum known for many species. The high species number relative to sample number portends the enhanced deep-sea biodiversity about abrupt topographic features, while the lack of asymptote of species number versus sampling effort underscores our incomplete inventory of this biodiversity.

Distribution and Trophic Ecology of Bathylagus euryops (Teleostei: Microstomatidae) along the Northern Mid-Atlantic Ridge

The assemblage structure and ecology of meso- and bathypelagic fishes are poorly known in general, particularly over mid-ocean ridges. In June 2004, the month-long MAR-ECO (Census of Marine Life) research expedition aboard the R/V G.O. Sars sampled the deep-pelagic fauna over the northern Mid-Atlantic Ridge with the objective of quantitatively assessing the nekton associated with the ridge from Iceland to the