

Distribution and population structure of *Dissostichus eleginoides* and *D. mawsoni* on Banzare Bank (CCAMLR Division 58.4.3b), Indian Ocean, Antarctic

Kenji Taki¹, Masashi Kiyota¹, Taro Ichii² and Tetsuo Iwami³

¹National Research Institute of Far Seas Fisheries ²Fisheries Agency ³Tokyo Kasei Gakuin University

Distribution, relationship between sizes and depths, sex ratio, size composition and maturity condition for *Dissostichus eleginoides* and *D. mawsoni* were investigated on Banzare Bank, using the biological data sampled by a Japanese commercial fishing vessel during austral summer from 2006/07 to 2008/09 fishing season. *D. eleginoides* was mainly caught in the shallower bank <1000 m, while *D. mawsoni* was mainly caught in the deeper slope >1500 m. The separation of the two species by depths may be related to the physical intolerance to the cooler temperature by the lack of antifreeze for the former species. The mean total length (TL) of females was significantly larger than that of males for both species. The proportion of males to the total adults decreased significantly with the depths with gradual slope for both species. Male *D. mawsoni* showed a significant correlation between depth and the TL with gradual slope. The size structure varied among the fishing seasons and showed the polymodal distribution in *D. eleginoids*, while the size structure was very similar among fishing seasons and showed the unimodal distribution in *D. mawsoni*. *D. eleginoides* showed resting stage in sexual maturity, while *D. mawsoni* was in running ripe condition. In both species, small fish contributed low proportion in abundance, which suggest that substantial recruitment does not take place on Banzare Bank and the population may consist primarily of adults migrating from other areas.