Missing 40-60cm M. paradoxus on the south coast in survey data

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This document is in response to the observation that there are very few 40-60cm M. paradoxus on the south coast, according to the survey data. Below is a map showing the grid system which is used as the basis for the Demersal survey design. The 200m-500m depth stratum is very narrow and is further limited by grounds which are untrawlable with survey gear. The stations are selected randomly within each longitudinal band, proportionate to the area and thus it is possible for all the stations to fall in the narrower or deeper end of the depth range.



The stations trawled in previous surveys were assigned to 100m intervals in the 201-500m depth strata based on the recorded bottom depth. It is immediately apparent in Figure 1 that there are several surveys where the 201-300m interval was not sampled (circled) and surveys where the 401-500m interval was not sampled (squares); years are repeated when both April and September surveys were completed.



Figure 2 illustrates the catch of *M. paradoxus* caught in the three intervals which comprise the 200-500m depth stratum and figure 3 is the proportion of measured *M. paradoxus* which were 40-60cm total length. The data for 2006 to 2014, corresponding to the surveys which were "fully" sampled, indicates that the 40-60cm fish are in fact mainly caught in water deeper than 400m. Thus, the survey data though not sampled consistently prior to 2006, is not the source of the "missing" length class.



The panels opinion on the inconsistent sampling and possible impacts on the survey-based abundance estimates and raised length frequencies would be appreciated.

