

Reliability of spatial and temporal patterns of *C. finmarchicus* inferred from the CPR survey

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ABSTRACT

The Continuous Plankton Recorder (CPR) survey has collected plankton since 1958 in the North Atlantic Ocean and its adjacent seas. Among all species recorded by the CPR, *Calanus finmarchicus* has probably been the most investigated species because of its ecological importance for the temperate and subpolar regions of the North Atlantic Ocean. However, abundances of *C. finmarchicus* assessed from the CPR survey have been rarely compared to more traditional sampling methodologies. In this study, we examine and compare spatial (surface and vertical) and temporal (diel and seasonal) patterns in the abundance of *Calanus finmarchicus* with another sampling technique in the gulf of Maine (i.e. Georges Bank). Our results provide evidence that the CPR survey not only gives internally consistent time series of *Calanus finmarchicus*, but also an accurate representation of both spatial (surface and vertical) and temporal (diel and seasonal) patterns.

Key words: *Calanus finmarchicus*, Continuous Plankton Recorder, Sampling, Distribution, Georges Bank, North Atlantic Ocean, Global warming.