Comparative analysis of Juday and WP2 net catchability

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PINRO and IMR have monitored mesozooplankton during the Joint Ecosystem Survey of the Barents Sea since the beginning of 2000. Plankton gears used by the two institutes differ; a Juday (37 cm) net is used by PINRO whereas WP2 (56 cm) is used by IMR. Inter-calibration of the two gears sampling was conducted in August 2013 on board the IMR RV "Johan Hjort". To make simultaneous vertical hauls, Juday and WP2 nets mounted on a frame were operated. Ten replicates were conducted with a hauling speed of $0.5 \text{ m} \cdot \text{s}^{-1}$ and 10 replicates with the speed of $1.0 \text{ m} \cdot \text{s}^{-1}$. In most of paired samples, plankton biomass in the WP2 was higher than in the Juday while in some paired samples the biomass in the Juday net was the highest. Though the results showed some variability in biomass ($\text{g dw} \cdot \text{m}^{-2}$) in Juday and WP2 net catches, the differences were not statistically significant. The biomass was higher in both nets at the hauling speed of $1.0 \text{ m} \cdot \text{s}^{-1}$, than at $0.5 \text{ m} \cdot \text{s}^{-1}$. Even though the total plankton abundance ($\text{ind.} \cdot \text{m}^{-3}$) varied considerably between replicated samples, the difference within the single paired tests was not statistically significant. A similar pattern was observed for the total abundance of copepods as well as for the most abundant copepods such as *Calanus finmarchicus*, *Oithona similis*, and *Pseudocalanus* sp.

Key words: the Barents Sea, inter-calibration, zooplankton, Juday net, WP2 net

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