

Supplementary Material 1

Relating Depth and Diversity of Bivalvia and Gastropoda in Two Contrasting Sub-Arctic Marine Regions

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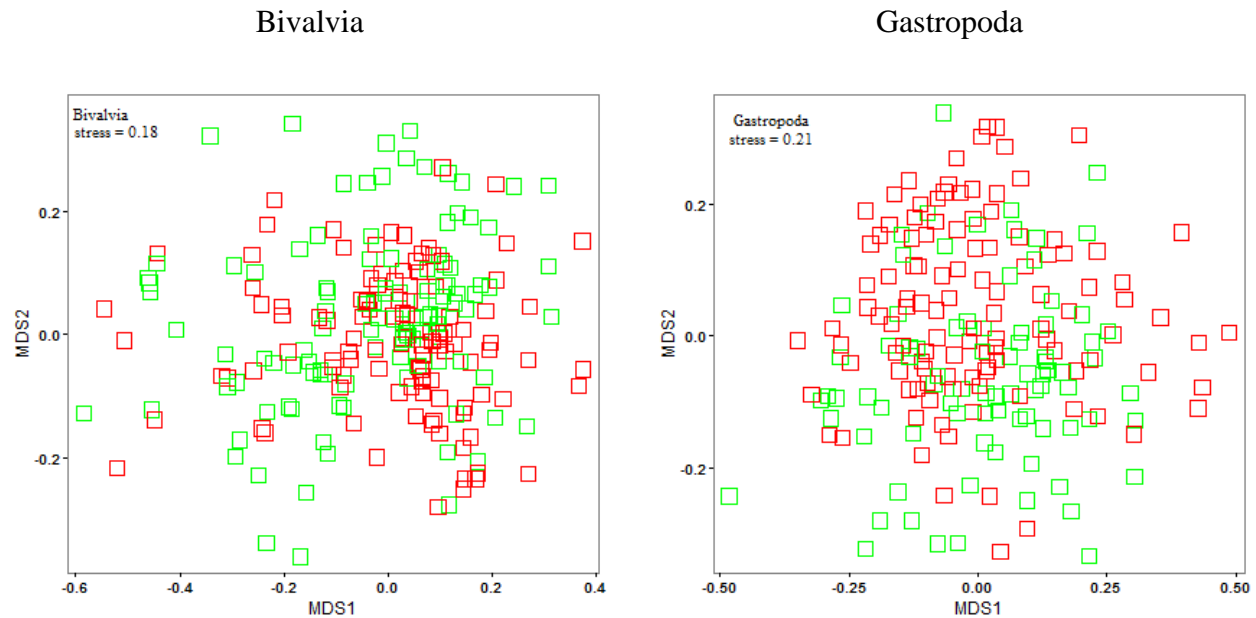
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1 Justification for pooling Sneli sled samples and RP sled samples in analysis of diversity of Bivalves and Gastropods north and south of the Greenland-Iceland-Faroe island ridge.

Analysis was first conducted separately for species data collected using a Sneli sled and RP sled types but with similar results. A non-metric multidimensional scaling analysis (NMDS) did not indicate that the species assemblages sampled differed significantly between the gears. For this reason, samples collected in the BIOICE program using these two sample gears, were pooled in all analysis of biodiversity presented in the manuscript ‘Relating depth and diversity of Bivalvia and Gastropoda in two contrasting sub-Arctic marine regions.’

1.1 Results of NMDS analysis

To examine if species assemblages differed significantly between the gear types a two dimensional non-metric multidimensional scaling (NMDS) analysis was conducted on Sørensen (Bray-Curtis) sample dissimilarity scores (Sørensen 1948) for bivalves and gastropods. A Student t-test was then used to test if average score for the x-axis (MDS1) and y-axis (MDS2) differed between gear types. Although statistically significant, the bivalve assemblages did not exhibit strong differences between sampling gears (MDS1: $t(240) = -2.7$, $p = 0.008$ and MDS2: $t(218) = 3.25$, $p < 0.001$) and the gastropod assemblages did not exhibit any differences in MDS1 ($t(181) = 0.32$, $p > 0.5$) but a significant difference was however observed for MDS2 ($t(183) = -4.28$, $p < 0.001$). Based on these results (Supplementary figure 1), and the similar results from performing analysis on RP sled and Sneli sled separately, the difference between the sampling gears were considered negligible for the purpose of this study.



Supplementary Figure 1. The results of the NMDS analysis where points are coloured based on gear type. Red boxes represent species assemblages collected using an RP sled and green boxes represent species assemblages collected using Sneli sled.

2 References

Sørensen T. 1948. A method of establishing groups of equal amplitude in plant sociology based on similarity of species and its application to analyses of the vegetation on danish commons *Biologiske skrifter* **5**: 1-34.