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ZOOPLANKTON COMMUNITIES ON ARCTIC SHELVES: A PANARCTIC ANALYSIS OF FAUNAL REGIONS

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Substantial differences occur in the physical environment of arctic shelves, not only in their mean depth and relative width, but also in the degree to which they are connected to adjoining waters. Recently, efforts to consolidate existing information on zooplankton communities by the Census of Marine Life's Arctic Ocean Diversity project and the Circumpolar Biodiversity Monitoring Program have accumulated data stretching from the Barents Sea, across Russia, to the Beaufort Sea. We used multivariate methods to explore the similarity of communities across this domain, and relate those patterns to the physical environment. The most distinct communities occur in the inflow regions of the Barents and Chukchi Seas, as well as brackish-waters regions in the vicinity of the Arctic's major rivers. Shallow saline communities are dominated by the copepod genus *Pseudocalanus*, and give way to dominance by *Calanus* species as waters deepen, while *Oithona similis* is abundant in both. The major plankton predators are the arrow worm Parasagitta elegans and a suite of the hydrozoan jellies. The East Siberian Sea remains the biggest data gap to be addressed by future sampling programs.