

Spatial distributions of bacteria and viruses along a transect across the Northwest Pacific from the East Sea to the Bering Sea during summer 2012

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Bacteria and viruses are at the bottom of the marine food web and play important roles in biogeochemical cycles of organic matters and nutrients. In this cruise, abundances of total bacteria, cyanobacteria and viruses, and bacterial community structures were investigated in the epipelagic zone (upper 100 m) at 12 stations along a transect across the Northwest Pacific from the East Sea to the Bering Sea. BA ranged from 0.1 to 1.9×10^6 cells ml^{-1} in the upper 100 m of the water column during the cruise. Maximum values of BA were mostly found in the surface or at subsurface chlorophyll maximum (SCM) depth, which was similar pattern to that of chl *a* concentration. CBA ranged from ND (not detected) to 1.8×10^5 cells ml^{-1} in the study area. CBA was highest at the SCM depth in the East Sea (1.8×10^5 cells ml^{-1}), but decreased to ND in the whole water column in the Bering Sea. In every sample, viruses was most abundant entities and exceeded to BA by ca.7-fold. Interestingly, VA was relatively higher in high latitude stations than low latitude ones. Results of in-depth analyses of relationships between microbial variables and environmental variables will be discussed in the oral presentation.