

東海夏季病毒裂解與微細鞭毛蟲攝食對細菌生產量的控制影響

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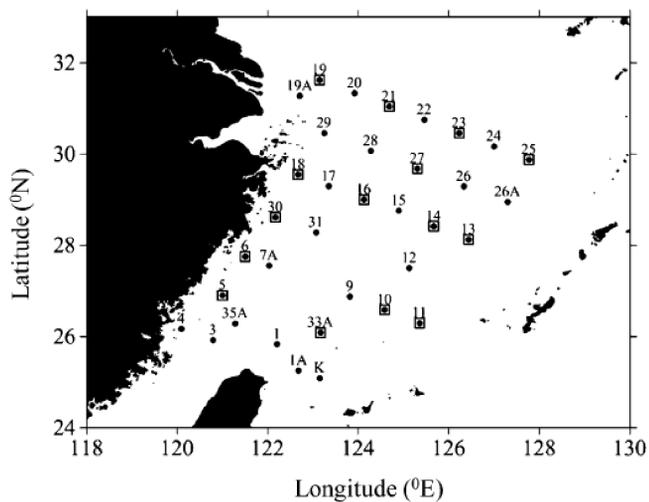


Fig. 1. Map of sampling stations. Modified dilution experiments stations are shown in square symbols.

在東海陸棚大範圍空間的採樣發現，細菌，微細鞭毛蟲及病毒皆是在長江沖淡水影響區域(鹽度 < 31 psu)內發現有較高的數量存在。此區域內主要控制細菌成長量的主要因子是微細鞭毛蟲的攝食(平均可佔61%的細菌成長量)。但在長江沖淡水影響區域外的範圍，其病毒裂解作用的重要性則會增加。

Results

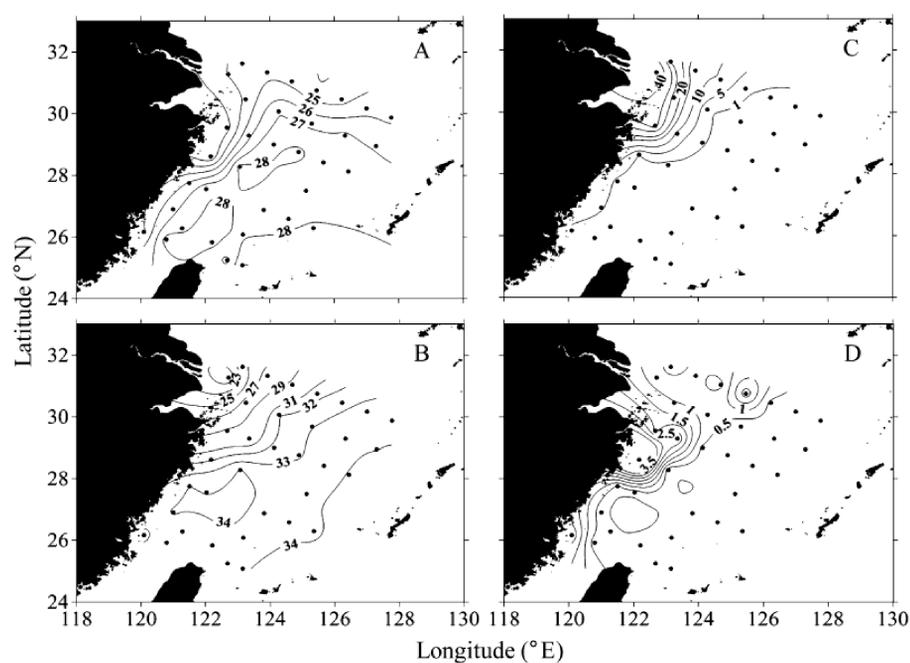


Fig. 2. Spatial variations of temperature ($^{\circ}\text{C}$) (A), salinity (psu) (B), NO_3 (μM) (C) and Chl *a* concentrations (mg m^{-3}) (D) of surface water (2 m) in the East China Sea during the study period (July 2011).

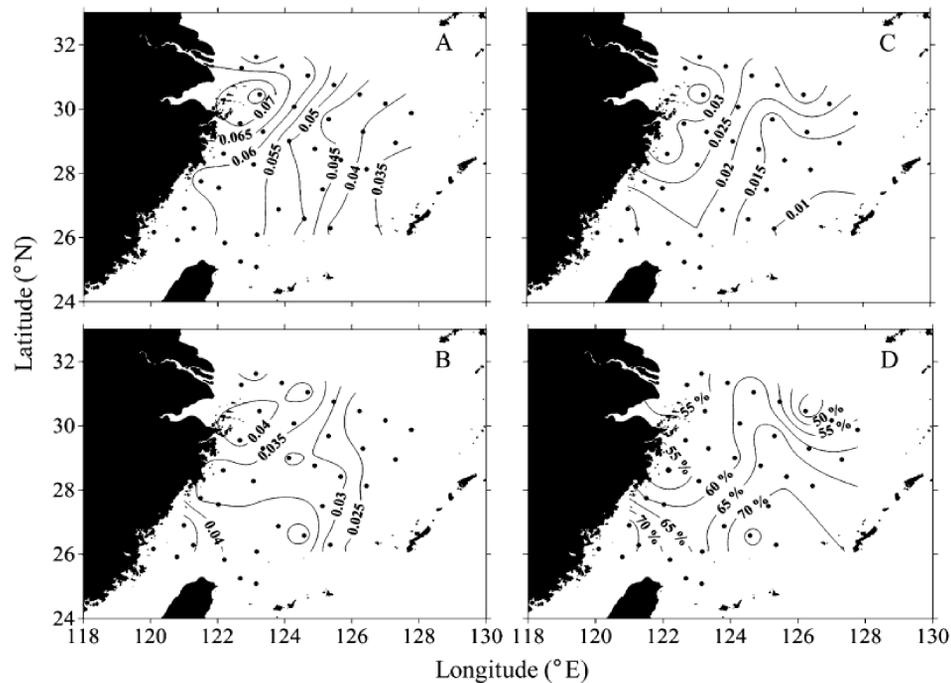


Fig. 5. Spatial variations of bacterial growth rates (h^{-1}) (A), grazing rates (h^{-1}) (B), viral lysis rates (h^{-1}) (C) and ratio of grazing rates to total mortality (%) (D) of surface water (2 m) in the East China Sea during the study period (July 2011).

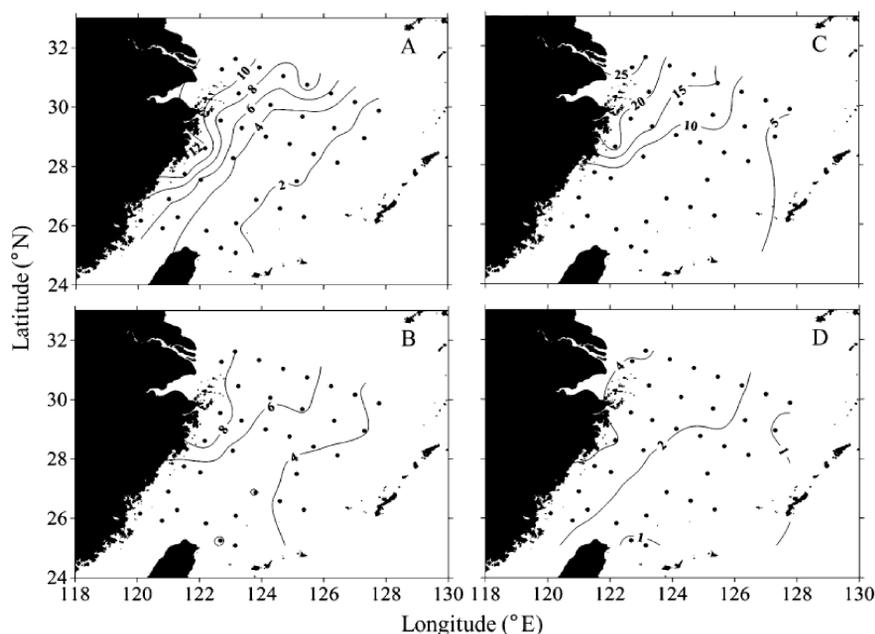


Fig. 3. Spatial variations of bacterial (10^5 cells mL^{-1}) (A), heterotrophic nanoflagellate (10^2 cells mL^{-1}) (B), pigmented nanoflagellate (10^2 cells mL^{-1}) (C) and viral abundance (10^7 viruses mL^{-1}) (D) of surface water (2 m) in the East China Sea during the study period (July 2011).

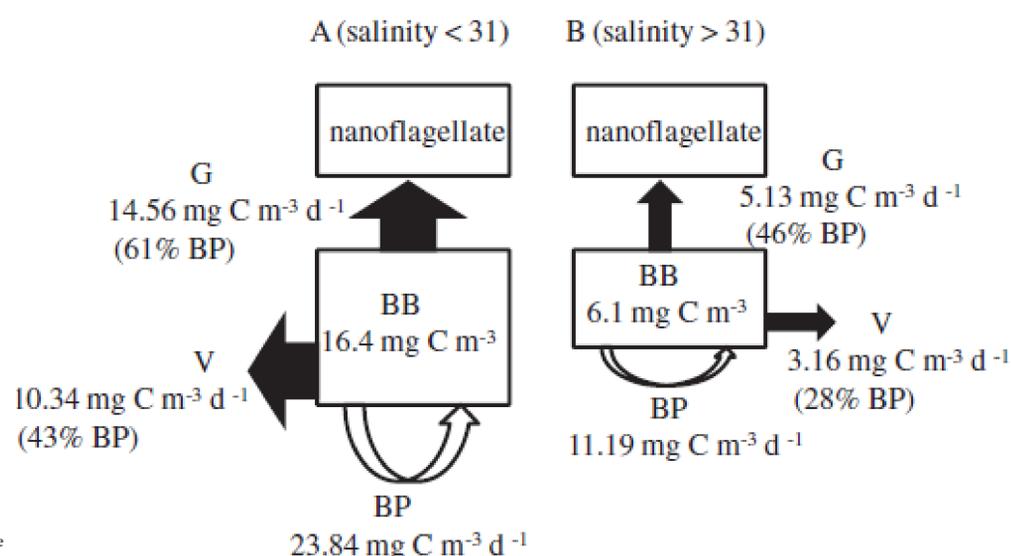


Fig. 8. Schematic carbon flow diagrams depicting spatial variations of salinity < 31 and > 31 area in energy transfer of heterotrophic bacterial production to nanoflagellate and released by viral lysis in the ECS. The numbers within individual heterotrophic bacterial boxes refer to their biomass (BB). The numbers next to looped arrows represent heterotrophic bacterial production (BP). Straight arrows pointing to nanoflagellates show their grazing rates (G) and (V) as viral lysis, respectively. Arrow thickness represents the level of production, grazing rates and viral lysis.