

**Vertical distribution of diatom species in the Indian sector of the Southern Ocean in summer**

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We investigated vertical distribution of diatoms species in the Indian sector of the Southern Ocean in summer. Water samples for species identification and cell counting were taken at 25 stations during the period from January to March in 2002 and from February to March in 2003. For thirty diatom species which appeared at half the stations, vertical distributions at stations with subsurface chlorophyll maximum (SCM), which indicates low iron concentration in the surface layer (Holm-Hansen et al. 2005) were compared with those without SCM. Eight diatom species showed that vertical distributions at stations with SCM were largely different from those without SCM, and abundance was higher at SCM than in the surface layer at stations with SCM. This indicates that some diatom species in the Southern Ocean deepen the main distributional depth to adapt to the surface oligotrophic environment in summer.

Holm-Hansen, O., Kahru, M., Hewes, C.D. (2005) Deep chlorophyll a maxima (DCMs) in pelagic Antarctic waters. II. Relation to bathymetric features and dissolved iron. *Mar. Ecol. Prog. Ser.*, 297, 71-81.