

Year-to-year variations in developmental timing of large grazing copepods
at Site H in the Oyashio region

親潮域 Site H における大型かいあし類の発育タイミングの年変動

To evaluate interannual variations in developmental timing of large grazing copepods (*Neocalanus cristatus*, *N. flemingeri*, *N. plumchrus*, *Eucalanus bungii* and *Metridia pacifica*) in the Oyashio region, time-series samplings were made at Site H (rectangle defined by 41°30' to 42°30'N and 145°00' to 146°00'E) during the periods of September 1996-October 1997 and May 2002-March 2004. Zooplankton samples were collected monthly or bimonthly by vertical hauls of a 60-cm ring closing net (1996-1997) or a NORPAC net (2002-2004) with 0.1 mm mesh openings from 500 m to the surface. The timing of recruitment of early copepodid stages was December-February for *N. cristatus*, March for *N. flemingeri*, and May-June for *N. plumchrus* and *E. bungii*, showing little year-to-year variations. As an exception, the recruitment of early copepodid stages of *M. pacifica* in 2003 and 2004 occurred 1-3 months earlier than that in 1997. The presence of interannual variations in the recruitment season in *M. pacifica* may be interpreted by the shorter generation length, no diapause phase, and close coupling of feeding and spawning of this species as compared with the other species mentioned above. The incidence of salp blooms in 2003 affected to the recruitment size of *N. plumchrus* and *E. bungii* but not to those of other copepods, suggesting possible food competition between young copepodid of the two species and salps. The relationship between year-to-year differences in whole zooplankton biomass and developmental timings of large copepods will also be discussed.

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