{rokbox title=|Fjordo de NyAlesund :: Foto: Heike Lippert| thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-covadonga-orejas-obelia-2012-thumb.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-covadonga-orejas-obelia-2012.jpg{/rokbox}

Covadonga Orejas, Sergio Rossi, Àurea Peralba, Eva García, Josep Maria Gili, Heike Lippert, (2012). **Feeding ecology and trophic impact of the hydroid *Obelia dichotoma* in the Kongsfjorden (Spitsbergen, Arctic)**. Polar Biol, DOI 10.1007/s00300-012-1239-7.

Abstract: *Obelia dichotoma* is a thecate hydroid with a worldwide distribution, occurring mainly on shallow water hard substrates. Since the trophic ecology of hydroids in polar waters is badly understood, the aim of the present work was to study qualitatively and quantitatively the diet of these organisms in an Arctic environment and to determine their trophic significance. For this purpose, the density of the hydroid population was documented, and simultaneously, zooplankton was sampled in two different years (1997 and 1998). Prey capture rates were estimated by analysing the gastrovascular content of the polyps in a diurnal cycle. Additionally, the digestion time of *O. dichotoma* was measured by laboratory feeding experiments using diatoms as food items. The analyses of the gastrovascular cavities of the polyps sampled during the diurnal cycles showed that *O. dichotoma* fed mainly on faecal pellets, organic matter and microalgae. Zooplankton prey was also observed, but gastrovascular contents and zooplankton abundance did not show any correlation in both years. The consumption rates of the hydroid populations differed between the 2 years. It was almost double (8.9 mg Carbon m-2) in 1998 compared to 1997 (5.5 mg Carbon m-2). The significance of the environmental variability in the feeding ecology and population dynamics of hydroids under Arctic conditions is discussed.

Keywords: Trophic ecology, Benthic suspension feeders, Hydroids, *Obelia dichotoma*, Arctic