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Autun Purser, **Covadonga Orejas**, Andrea Gori, Ruiju Tong, Vikram Unnithan, Laurenz
Thomsen, (2013). [Local variation in the distribution of
benthic megafauna species associated with cold-water coral reefs on the Norwegian
margin](#) . Continental Shelf Research.
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Abstract: The spatial variability in the mix of species making up Cold-water coral reef
communities is not well known. In this study abundances of a selection of megafauna (
Lophelia pertusa

,
Madrepora oculata

,
Paragorgia arborea

,
Primnoa resedaeformis

,
Mycale lingua

,
Geodia baretii

,
Acesta excavata

and fish) were quantified through out 9 manned submersible video transects from 3 reef
complexes (Røst Reef, Sotbakken Reef and Traena Reef) on the Norwegian margin. Substrate
type (coral structure, rubble, exposed hard ground or soft sediment) was also recorded.
Variations in the densities of these fauna (with respect to both reef complex and substrate type)
were investigated, with spatial covariance between species assessed. For the majority of fauna
investigated, densities varied by both reef and substrate. Spatial covariance indicated that some
species may be utilising similar habitat niches, but that minor environmental differences may
favour colonisation by one or other at a particular reef. Fish densities were generally higher in
regions with biogenic substrate (coral structure and coral rubble substrates) than in areas of soft
or hard ground substrate. Further, fish were more abundant at the northerly Sotbakken Reef at
time of study than elsewhere. Community structure varied by reef, and therefore management
plans aimed at maintaining the biodiversity of reef ecosystems on the Norwegian margin should
take this lack of homogeneity into account.

Keywords: Cold-water corals, *Lophelia pertusa*, Norway, Species distribution