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INVERTEBRATES GATHERING AROUND FOOD FALLS – INITIAL FNDINGS FROM THE ARCTIC AND THE ANTARCTIC

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Chemical stimuli are dispersed in marine environment by different types of water movements such as tides and water currents. The occurrence of a new food-fall on the marine bottom causes changes the distribution of necrophagous animals in its vicinity.

Observations and photographical documentations of animals gathering around food falls (fish meat) were done by Scuba divers in the Admiralty Bay near Arctowski Station (King George Island, South Shetlands, Antarctica) and in Grønfjorden in the vicinity of Barentsburg (Spitsbergen, Arctic) with the aim of gathering and systematizing data on chemoreception processes in the Arctic and Antarctic benthic environments. Both environments differed significantly in respect to such factors as temperature, oxygen content, salinity, algae cover and bottom structure, but both supported rich and diversified benthic communities.

In both environments chemical signals and chemoreception are decisive factors in invertebrates' food finding processes (artificial non-odorous baits resembling by their shape, colour and texture real meat were ignored by potential scavengers).

In Grønfjorden only crabs *Hyas araneus* and gastropods *Buccinum* sp. were observed feeding on the bait and a few hermit crabs *Eupagurus pubescens* were seen moving towards the bait. No feeding aggregations were noticed. No more than two *H. araneus* were seen on the bait at the same time. Crabs were feeding for a few minutes, and only after they went away, next ones came to the bait.

In the Admiralty Bay numerous feeding agregations were formed around the baits They consisted of hundreds of Serolis polita (Isopoda) or – in other locations - thousands of Amphipods, literally covering the bait. A few sea stars *Odontaster validus* were observed going in the direction of the bait, but none was seen feeding. In ca 50 hrs the bait was wholly eaten.

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