

Groundwater discharge and food web structure in a sandy beach, central Wakasa Bay

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Sandy beach is an important ecosystem for coastal fish as a nursery and feeding ground. Although groundwater supplies nutrients into the water column and contributes primary productivity, there is little evidence in relation to groundwater discharge and biological production in the sandy beach ecosystem. In this study, we conducted the simultaneous survey for (1) quantifying the groundwater discharge and associated nutrient transport, and (2) assessing the food web structure, at the sandy beach in central Wakasa Bay. In the presentation, we will show that groundwater discharge is a major source for nutrients in the beach and autochthonous organic matter such as benthic and pelagic phytoplankton sustained the production of mysid and juvenile of fishes.

Keywords: Groundwater discharge, Food web, Stable and radio isotopes