

IMPACT OF NON-INDIGENOUS SCALLOP (*ARGOPECTEN IRRADIANS*) FARMING IN LAIZHOU BAY (BOHAI SEA, CHINA): EVIDENCE FROM MEIOFAUNA COMMUNITIES AND THEIR FOOD SOURCE UTILIZATION

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Non-indigenous species (NIS) have become an important section of aquaculture but culturing NIS especially shellfish implies high risks on ecosystem. Benthic meiofauna is sensitive to environmental stressors and could respond to the stressors through structural and functional changes in communities. We investigated the impact of farming NIS shellfish *Argopecten irradians* in Laizhou Bay (Bohai Sea, China) on benthic meiofauna in terms of community composition and food source utilization. Two sampling events in Laizhou were conducted before aquaculture activity and during a high organic loading period. Meiofaunal higher taxon composition was compared between control sites and farming sites. The nMDS showed that no separation between 'farm community' and 'control community' before aquaculture activity, but a clear separation occurred during the high organic loading period, indicating the changes of community caused by *A. irradians* farming. Nematoda were found to explain most of this difference. Food utilization by meiobenthic Nematoda and Copepoda was tested by analyzing their carbon and nitrogen stable isotope composition and this of their food sources in control sites and farming sites. The organic matters derived from the scallop farms was consumed by Nematoda and Copepoda under the scallop farm, indicating that changes in the energy flow and the overall ecosystem functioning caused by farming *A. irradians* can be expected.