

The growth process of Oyster reefs and Diatom assemblage in Tokyo bay - focus on a genus Amphora of diatoms

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Around the tidal zone of Funabashi coast, Sanbanze, the northern Tokyo Bay, Chiba Prefecture, living oyster reefs appeared abruptly 10 years ago. Here is sandy tidal flat near the river mouth of Edo River, where a few reefs of *Crassostrea gigas* ranging 100m or 200m long were formed in the lower tidal zone. Some small colonies of *C. gigas* have been found out at least before 20 years, however, the reason why recently the living oyster reefs appeared around Sanbanze should be clarified in relation to the environmental changes.

In this study, the ecosystems of the oyster reefs are composed of *C. gigas*, sea anemone, ragworms, seaweeds, seagrasses and diatoms. In particular, we investigate living oyster reefs and diatoms. Oyster feed on diatoms playing a role in the base of food chain. Our field survey checks size of reefs, habitation density in reefs and organisms around the reefs, in comparison with various environmental indicators by the monitoring post of the Bay.

In general only macro-benthos and fishes are treated in the ecosystems of coastal areas, though seaweeds and seagrasses are important to comprehend the ecosystem. Gastropods in tidal zone eat mollusks, seaweeds and seagrasses. In fact, in Sanbanze, sea lettuces (*Ulva* sp., a kind of seaweeds), grows conspicuously along with seagrasses. A genus *Amphora*, one of the dominant diatoms in the reefs, is living in brackish to marine water, settling on algae or plants and is useful as an important marker of seaweeds and seagrasses in Sanbanze.

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