Effects of ulvoid (*Ulva* spp.) accumulation on the structure and function of eelgrass (*Zostera marina* L.) bed

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The objective of this study is to clarify the effect of ulvoid (*Ulva* spp.) accumulation on the structure and function of an eelgrass bed by the coast of Iwakuni, Seto Inland Sea, Japan. We monitored eelgrass shoot density and volume of ulvoid accumulation in the study site, and evaluated effects of the accumulated ulvoid canopy on the percent survival, seedling density, growth rates, photosynthetic photon flux density (PPFD) and carbon contents of eelgrass.

The shoot density of eelgrass decreased by the accumulation of ulvoid. Also, seedling density decreased by the increase in the ulvoid volumes. Shoot density, seedling density and leaf elongation were negatively correlated with ulvoid volume. Carbon contents in eelgrass decreased by the accumulation of ulvoid (canopy height: 25cm).

These results suggest that accumulations of ulvoid blooms show significant negative impacts on the structure and function of eelgrass bed, i.e. decreases in vegetative shoot density, seedling density, shoot height and growth rate.