Effects of Desiccation and Salinity on the Outbreak of a Green Tide of *Ulva pertusa* at the Artificial Salt Marsh along the Coast of Osaka Bay, Japan

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Field surveys and laboratory experiments were conducted to examine the effect of desiccation and salinity on the outbreak of a green tide of *Ulva pertusa* at Osaka Nanko bird sanctuary. Reduction of biomass of *Ulva* spp. was observed at stations where the exposure rate to air was from 30 to 40%. In addition, the exposure rate of 30 to 40% to air showed no negative impacts on the biomass of benthic microalgae, infauna and non-motile epibenthos. Laboratory experiments revealed that photosynthetic activity of *Ulva pertusa* decreased when exposed to air for 4 to 7 hours at 25-35 °C. Salinity decreases from 30 to 25 or 20 accompanied with exposure to air drastically reduced the rate of photosynthesis of this species. These results suggest the possibility of controlling a green tide of *Ulva pertusa* without serious physico-ecological damage to benthic microalgae, infauna and non-motile epibenthos by a combination of exposure to air with low salinity.

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