

Changes In Dominant Species Of Seagrass Bed On Eastern Yamaguchi

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In the area on eastern Yamaguchi, Seto Inland Sea, seagrass bed consist of two species, *Z. marina* and *Z. japonica*. Consequently, to study the cause of changes in dominant species of seagrass after typhoon in 2004, the distribution of seagrass on eastern Yamaguchi and changes in the sandy bottom of the seagrass bed were investigated and gradually recovered. From 2005 to 2007, distribution range of *Z. marina* had decreased by every attack by typhoon and after 2008, it had repeated the life cycle in which the distribution range did not recover to the level prior to typhoon in 2004 even though there had been no typhoon attack and disappeared at a low ebb. The objective of this study is to clarify the cause that a dominant species changed in *Z. japonica* from eelgrass after a typhoon invasion in eelgrass ground of the eastern Yamaguchi. We investigated physical environment of the *Z. marina* and *Z. japonica* before and after the typhoon invasion. We analyzed water temperature, photosynthetic rate of *Z. marina* and *Z. japonica* to be able to put according to quantity of photon, a respiration rate and analyzed measurement of the growth quantity of *Z. marina* and *Z. japonica*, component nitrogen, component phosphorus, component chlorophyll a. Water temperature quantity of photon, daylight hours, bottom sediments in the eastern Yamaguchi did not have the high difference in approximately a typhoon invasion. The photosynthetic rate per unit mass of *Z. japonica* was faster than *Z. marina*. regardless of temperature. The respiration rates of seagrass increased so that temperature was high and that of *Z. japonica* was higher than that of *Z. marina*. *Z. japonica* is higher in photosynthetic rate than *Z. marina*, and it is thought that the growth condition was advantageous, and it is thought with one of the cause that it changed in *Z. japonica* a dominant species from *Z. marina* on the eastern Yamaguchi. Keywords: *Zostera marina* L., *Zostera japonica*, Photosynthesis, Dominant species

