

# **Growth Characteristics of *Zostera Japonica*, A Sea grass Growing in Brackish Lake Nakaumi, Shimane, Japan**

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The increasing rate of seagrass loss as a result of human disturbance has led to considerable concern about the health of coastal ecosystems. In many localities in Japan, seagrass bed has been diminishing considerably during the last two decades and restoration of seagrass meadows is currently needed. Lake Nakaumi is a coastal lagoon lake located in the southwestern part of Honshu, Japan, and it is reported that there occurred a luxuriant growth of *Zostera japonica* Aschers. et Graebn., a seagrass growing in seashores, brackish estuaries and lakes. Because of the land reclamation and deterioration of water quality, however, suitable habitat for the growth of *Z. japonica* in this lake has been diminishing. *Z. japonica* is now listed as a data deficient species in the Red Data Book of Japan, and little is also known for the life history traits of this plant. Thus, in order to conserve and restore this species, the author started the ecological observation in the field and conducted the study designed to determine the growth response of *Z. japonica* under semi-natural conditions throughout the year. In the field, the range of vertical distribution of *Z. japonica* was 0.2 - 1.7 m, and the depth limit coincided with mean Secchi depth. The plant ceased to grow when water temperature decreased below 15 C and belowground part with only a small amount of aboveground part remained during winter. The plant started to grow next spring and flowered soon in early- and mid-June. Rhizome elongation rate changed seasonally and 1 cm/day was recorded in September. A practice of transplantation in the field and the effects of light and salinity on the growth of *Z. japonica* will also be discussed.