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Identification of *Salicornia* Populations : Comparison between Morphological Characterization and RAPD Fingerprinting

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Abstract: In Japan, there are two taxa of the genus *Salicornia* plants; *S. europaea* L. distributed in Hokkaido and *S. herbacea* L. distributed on the coast of Inland Sea of Seto. To estimate the polymorphism of the *Salicornia* plants, we statistically analyzed the morphological features and random amplified polymorphic DNA (RAPD) of five groups from three populations found at Lake Tofutsu and Lake Notori in Hokkaido and Okayama Prefecture on the coast of Inland Sea of Seto. The morphological features, such as plant length, segment number, length and number of branches, and incidence of the secondary branches showed variations among locations. The morphological plasticity of *Salicornia* plants was also observed at different plant densities. Thereby these features were difficult to use for identifying the populations. On the other hand, the genotype based on the RAPD markers implied five groups : two groups from the Notori population, two groups from the Tofutsu population and one group from the Okayama population. Additionally the Notori and Tofutsu populations were identified as genotypically related, and different from the Okayama population. The RAPD method, which is one of the simplest and fastest molecular techniques, was found useful for identifying the type of *Salicornia* plant.

Keywords: [DNA fingerprinting](#), [Genotype](#), [Glasswort](#), [Halophyte](#), [Phenotype](#)


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