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SHORT RESEARCH NOTE

Note on organic dormancy of estuarine *Ruppia maritima* L. seeds

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Abstract Information on seed dormancy is one of the primary requirements for successful seedling propagation of submerged aquatics and seagrass. Studies on *Ruppia maritima* seed germination have been done, but the presence, requirements, and the types of dormancy have not been well understood. A laboratory study was conducted to understand presence and types of organic dormancy of the seeds of estuarine *R. maritima* collected from Lake Pontchartrain, Louisiana, USA. Our study results indicate that the brackish estuarine *R. maritima* population produces seeds that do not have any noticeable initial morphological, physical, and physiological dormancy. Although dry stratification reduced seed viability and final germination rates, drying seems to induce an earlier germination in *R. maritima*. Desiccation also appears to induce an environmental dormancy that can be disrupted by exposure to water. Further study on environmental dormancy is needed to provide information to develop methods for long-term seed storage that can be employed in greenhouse seedling propagation.

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Short research note

Artificially induced seagrass revegetation using transplants requires enormous budget and human labors, which often plagues large-scale restoration projects. Seed propagation has been suggested as a cost-effective alternative to whole-plant transplanting. Seeds have been used in eelgrass (*Zostera marina* L.) restoration, and the efficient seed broadcast methods, including "floating seed bags" and "Mechanized Underwater Seed Planter," have been developed and tested in Chesapeake Bay, Delaware Coastal Bay, and Rhode Island (Orth et al., 2006; http://ciceet.unh.edu).

The potential usage of seeds of the euryhaline submerged aquatic vegetation (SAV), *Ruppia maritima* L., in restoration projects has been also addressed (Seeliger et al., 1984; Ailstock & Shafer, 2004). *Ruppia maritima* is a cosmopolitan species that occurs in broad salinity zones (Den Hartog, 1970; Eleuterius, 1987); a pioneer species as it often colonizes bare habitats, grows rapidly, matures quickly under favorable environmental conditions (Verhoeven, 1979); and highly dependent on sexual reproduction, producing abundant seeds (Kantrud, 1991; Cho & Poirrier, 2005).