

Effects of co-occurrence of invading



Single invaders often substantially alter ecosystems, but the potential impacts by multiple invaders remain understudied. The golden apple snail (*Pomacea canaliculata*) and the red swamp crayfish (*Procambarus clarkii*) are two widespread coinvasors. To test the effects of co-occurrence of the two species on a clear-water macrophyte state, we performed a 20-day experiment in 16 mesocosms (4 contained only two snails, 4 contained only two crayfishes, 4 contained two snails and two crayfishes, and 4 controls). Comparing with the control, the leaf length, number, and biomass of *Vallisneria spiralis* had decreased in the snail-only and crayfish-only treatments. In the crayfish-only treatment, total nitrogen, total phosphorus and total suspended solids had increased compared with the control, while they did not differ between the snail-only and the control treatment. Nutrients and turbidity concentrations did not differ between the snail + crayfish and the crayfish-only treatment, and plant biomass did not differ between the snail + crayfish and the snail-only treatment. These findings suggest that golden apple snails mainly affected the lake ecosystem by plant grazing, while red swamp crayfishes disturbed the sediment by increasing nutrients in the water and through resuspension. These snail and crayfish together had mainly additive effects on macrophyte and the physico-chemical variables studied.

Auteurs du document : Jian Gao, Cheng Yang, Zehui Zhang, Zhengwen Liu, Erik Jeppesen

Obtenir le document : EDP Sciences

Mots clés : Biological invasions, red swamp crayfish, golden apple snail, submerged macrophytes, Invasions biologiques, écrevisse de Louisiane, escargot-pomme, macrophytes immergés

Thème (issu du Text Mining) : MILIEU NATUREL, ANALYSES ET TESTS

Date : 2021-08-19

Format : text/xml

Source : <https://doi.org/10.1051/kmae/2021029>

Langue : Anglais

Télécharger les documents : <https://www.kmae-journal.org/10.1051/kmae/2021029/pdf>

Permalien : <https://www.documentation.eauetbiodiversite.fr/notice/effects-of-co-occurrence-of-invading0>

Evaluer cette notice: