UNIVERSITY OF THE PHILIPPINES VISAYAS
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SURVIVAL AND GROWTH OF JUVENILE SEA CUCUMBER *Holothuria scabra* Jaeger (1833) IN SHRIMP POND SEDIMENT

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ABSTRACT

Many high valued sea cucumbers e.g. *Holothuria scabra* are detritivores and thrive on organic matter and thus are potential bioremediating agents in eutrophic systems e.g. aquaculture ponds. Sea cucumbers cultured in shrimp ponds would act as natural bioremediators and lessen the organic matter content of the sediments hence make the pond environment more favorable for shrimp culture. This study looks at the feasibility of growing sea cucumbers in pond sediments for their bioremediating role and for their economic value. In this study, growth and survival of hatchery-produced *H.scabra* juveniles in Bare substrate (Treatment 1), Sand from natural habitat (Treatment 2) and Shrimp Pond sediment (Treatment 3) were compared after 5 weeks of culture. This study demonstrates that it is feasible to grow *H. scabra* juveniles in shrimp pond sediments without compromising their survival ($p > 0.05$). Results showed that those reared in Pond sediment grew best and significantly better compared to the other treatments (ANOVA, $p<0.05$). Juveniles grown in Pond sediment increased from mean weight of 3g to 14g while in the other treatments they just grew from mean of 2.7g to 8.7g. The consistently higher organic matter in Pond sediment could have contributed to better growth of sea cucumbers relative to other treatments. The bioremediating role of sea cucumbers was indicated by significant reduction in organic matter content in pond sediment by Week 5.