ABSTRACT

One of the most significant bodies of water in the Philippines is the Port of Estancia, which receives local vessels that may transport non-indigenous macrofouling species. This study was conducted to assess the macrofouling community in the Port of Estancia, Iloilo. Nine fouler collectors were deployed in the 3 sampling points on November 2022 to January 2023. The physico-chemical parameters of the seawater sacli as pH, temperature, and salinity were monitored weekly. The fouler collectors were retrieved 60 days after deployment. Macrofouling organisms were sorted, grouped according to major taxonomic groups, and preserved in 10% seawater-formalin. Identification of macrofouling community was done through morphological examination based on taxonomic guides and online databases. A total of 247 organisms were classified under five major phyla and 15 families. Phylum Arthropoda had the highest species composition with 70%, followed by the Mollusca with 10%, Echinodermata with 3%, Annelida with 11%, and Chordata with 6%. The most abundant species was the porcellain crab Petrolisthes armatus, followed by the gammarid shrimp Gammarus sp., and the striped barmacie Amphibalarus amphitrite Two invasive biofouling species were identified, the striped bamacle Amphibalcones amphitrite, and the serpulid tubeworm Hydroides elegans. Results also showed a diverse macrofouling community in the area with a Shannon Index of 1.00. The physico-chemical parameters of temperature, salinity, and pH also showed comparable values within the reported range in similar studies in the country. These findings highlight the need for continued monitoring and the development of management strategies for the control and prevention of invasive macrofouling species in the Port of Estancia to mitigate their impacts on local ecosystems and shipping operations.

Keywords: macrofouling, Petrolisthes armatus, Gammarus sp., Amphibalanus ampharite, Hedroides elegans, fouler collectors, Port of Estancia, Iloilo, diversity