

Correlation of Environmental Factors with Population of Horseshoe Crab (*Tachypleus gigas*) in Sedati Waters, Sidoarjo District

ABSTRACT

Horseshoe crabs (*Tachypleus gigas*) in local called Mimi are coastal animals belonging to the Limulidae family. The horseshoe crabs live at the bottom of calm coastal waters and river estuaries with sandy and muddy bottoms. The decrease in the population number of horseshoe crabs in nature could be caused by habitat degradation, including coastal abrasion, ecosystem damage, and the death of natural resources in the waters. This study aims to determine the correlation of environmental factors with the population of Horseshoe Crab (*Tachypleus gigas*) in Sedati waters, Sidoarjo District. This type of research was exploratory with data analysis using linear regression and simple correlation. Moreover, the sampling was carried out by purposive random sampling at predetermined points of the station in Sedati Waters, Sidoarjo District. The results show that the average density in October was 0.08 ind/m², in November was 0.05 ind/m², and in December was 0.05 ind/m². Moreover, the correlation between the horseshoe crabs and water quality is noted in the current of 58%, transparency of 37%, and DO of 33%. Based on the results of this study, the environmental factors including transparency, currents, and DO have a strong correlation on the horseshoe crab population in Sedati waters, while pH, ammonia, carbon, and microfauna parameters have a quite influential effect on the population of horseshoe crabs.