



# 6<sup>th</sup> Regional Science and Technology Congress Region 5

Districts of Howrah, Nadia, North 24  
Parganas, South 24 Parganas

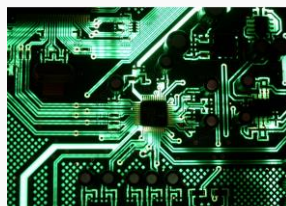
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## ABSTRACT VOLUME

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$$H(t)|\psi(t)\rangle = ih \frac{d}{dt} |\psi(t)\rangle$$



## **Revisiting the concept of zooplankton diversity assessment: perspectives from carcasses**

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### **ABSTRACT**

In case of zooplankton sampling a considerable number of animals are generally captured dead. Biodiversity matrix of zooplankton traditionally considers species richness and abundance; however, alive/dead state of an organism is generally overlooked. Estimation of diversity indices; therefore, reflects both the alive and dead zooplankton. The study aims to revisit that traditional way of assessing biodiversity by incorporating the alive/dead state. The copepods of Indian Sundarbans were used as an example community and their live and dead status during sampling were considered for the evaluation of the aforementioned purpose. Copepods were sampled seasonally in 2022-2023 from the six stations spread across the Indian Sundarbans on an east-west diagonal. Vital neutral red staining process was used to quantify carcasses for the study. The water-temperatures were 30.83<sup>0</sup>C, 24.64<sup>0</sup>C and 27.95<sup>0</sup>C, respectively. The species richness (median) in monsoon, postmonsoon and premonsoon were 8, 16 and 17, respectively when traditional method is deployed. If one counts alive copepods only then such were 6, 16 and 17, respectively. In monsoon, postmonsoon and premonsoon, 37-55%, 76-93% and 81-90% samples respectively were caught alive. As per the traditional method, Shannon diversity in monsoon, postmonsoon and premonsoon were 2.64, 1.86 and 2.40, respectively but such were 1.57, 2.40 and 2.62, respectively if only alive copepods were considered. The results showed if alive/dead status is incorporated in the estimation of the biodiversity indices then some degree of deviation from the traditional method is likely, implications of that in the functional role of the copepod community shall be investigated in details.