Perspective
Volume 10:3, 2022

Journal of Biodiversity & Endangered Species

ISSN: 2332-2543 Open Access

Biological Traits Analyses

Xinpeng Fan*

School of Life Sciences, East China Normal University, Shanghai 200241, P.R China

Introduction

Human activities including as pollution, mining, dredging, and trawling have a significant impact on soft seafloor environments around the world. These activities frequently occur in the same regions, stressing organisms in a variety of ways, necessitating an understanding of cumulative consequences. Many individuals may not consider this a problem since they believe these habitats are homogenous sand or mud plains. These locations, on the other hand, are complex, species-rich ecosystems that play an important role in how the larger ecosystem functions. This means they are crucial to the goods and services provided by marine ecosystems to humans. Despite the fact that various studies have provided definitions, it is still unclear how ecologists define "trait" and "functional trait." We examine how these terms are used by researchers and the literature, as well as variances between sub disciplines and study systems (taxa and biome). We explore the hypothesis that ecologists' working definition of "trait" is adapted or transformed when confronted with the realities of collecting, evaluating, and presenting data by conducting a survey and a literature review. We discovered inconsistencies in researchers' knowledge and usage of terminology, as well as a lack of definitions in the published literature, based on 486 survey responses and 712 peer-reviewed papers. Discrepancies were not explained by sub discipline, research system, or respondent characteristics, implying that there may be a lack of consensus even among experts [1].

Until recently, reductions in biodiversity were simply interpreted as the extinction of species. As a complement to species diversity, there is also a shift toward the concept of functional diversity, which refers to the number, kind, and distribution of tasks performed by organisms in an ecosystem. The loss of one species in an environment with two or more species providing the same function may have no effect. However, if all of the species that perform that function become extinct, the function itself becomes extinct. Ecosystem services are frequently lost as a result of this. For example, the switch from coral- to algal-dominated reefs in Jamaica in the 1980s was likely caused by a drop in the number of herbivorous fish (fishing) followed by the mass deaths of herbivorous sea urchins [2].

Description

While there is substantial empirical evidence to interpret faunal changes in connection to environmental conditions, these approaches provide few hints as to why species assemblages vary and what the ecological repercussions are. There is a pressing need in current marine resource and environmental management to analyse the ecological ramifications of human actions and the ways in which natural systems may be impacted. Essentially, every species has an ecological role to perform in the overall functioning of ecosystems. Ecosystem functioning, in general terms, refers to all of the system's operations as well as the chemical, physical, and biological components involved. Macro fauna are a significant biological component in soft sediments, as they drive crucial activities such sediment reworking, bio-irrigation, nutrient intake, and oxygen and dissolved matter transfer. These processes are influenced by the resident creatures' biological characteristics, such as movement, burrowing activity, tube construction, feeding strategies, food selection, and size [3].

BTA was employed in this study to investigate and characterise the effects of pollution on the functional features of soft-bottom species assemblages, with an emphasis on pollutants and organic matter. The study used data from the in Norway, which has been heavily impacted by municipal and industrial effluents over time and displays gradients in various pollutants (cadmium, mercury, lead, DDT, PCB) and organic load. The study region included places ranging from extremely contaminated inner neighbourhoods near Oslo's main harbour to less damaged areas further away from pollution sources. Changes in functional features along pollution gradients were investigated using multivariate ordination approaches. Relationships between function and environment were studied in particular [4,5].

Conclusion

On a large scale, the species assemblages varied gradually from the inner fjord to the farthest reaches of the fjord away from Oslo. The stations with poor environmental conditions nearest to Oslo's harbour, on the other hand, stood out. The primary faunal patterns were associated to pollutant levels, sediment oxidation state (Eh), depth, and sediment components, according to the canonical correspondence analysis (CCA). The first axis was used to symbolise.

References

1. Brauko, K.M. "Comparing structural and functional approaches to distinguish benthic communities from eutrophic and non-eutrophic estuaries." *Marine Pollution Bulletin* 157 (2020): 111290.
2. Chevene, Francois, Sylvain Doleadec, and Daniel Chessel. "A fuzzy coding approach for the analysis of long-term ecological data." *Freshwater Biol* 31 (1994): 295-309.
3. Cranford, Peter J. "An ecosystem-based approach and management framework for the integrated evaluation of bivalve aquaculture impacts." *Aqua Envir Inter* 2 (2012): 193-213.
4. De Juan, Silvia, S.F. Thrush, and Montserrat Demestre. "Functional changes as indicators of trawling disturbance on a benthic community located in a fishing ground (NW Mediterranean Sea)." Marine Ecology Progress Series 334 (2007): 117-129.
5. Delpech, C. "Development of a fish-based index to assess the ecological quality of transitional waters: The case of French estuaries." *Marine Pollution Bulletin* 60 (2010): 908-918.

***Address for Correspondence:** Xinpeng Fan, School of Life Sciences, East China Normal University, Shanghai 200241, P.R China; E-mail: xpfan20@bio.ecnu.edu.cn*

Received: 05 March, 2022, Manuscript No. jbes-22-61720; **Editor Assigned:** 07 March, 2022, PreQC No. P-61720; **Reviewed:** 15 March, 2022, QC No. Q-61720; **Revised:** 20 March, 2022, Manuscript No. R-22-61720; **Published:** 25 March, 2022, DOI: 10.37421/2332-2543.2022.10.414

How to cite this article: Fan, Xinpeng. "Biological Traits Analyses." J Biodivers Endanger Species 10 (2022): 414.