

Influence of rocky tidal pool characteristics on diversity and abundance of fish in Tudor Creek, Kenya.

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1. Introduction

- Tropical rocky intertidal habitats currently receive limited management attention and remain poorly understood.
- They provide refuge for fish, breeding and foraging areas, sustaining local fisheries and coastal livelihoods
- The structural complexity of rocky tidal pools influences the variety and abundance of fish species they support



Figure 1. Rocky intertidal zone

2. Objectives

- To determine the composition of fish species in sandy and seagrass tidal pools in Tudor creek.
- To evaluate the influence of type of substratum on the diversity and abundance of fishes
- To determine the influence of monsoon seasons on diversity and abundance of fish in the tidal pools

3. Study area

Study area: Tudor Creek, Kenya

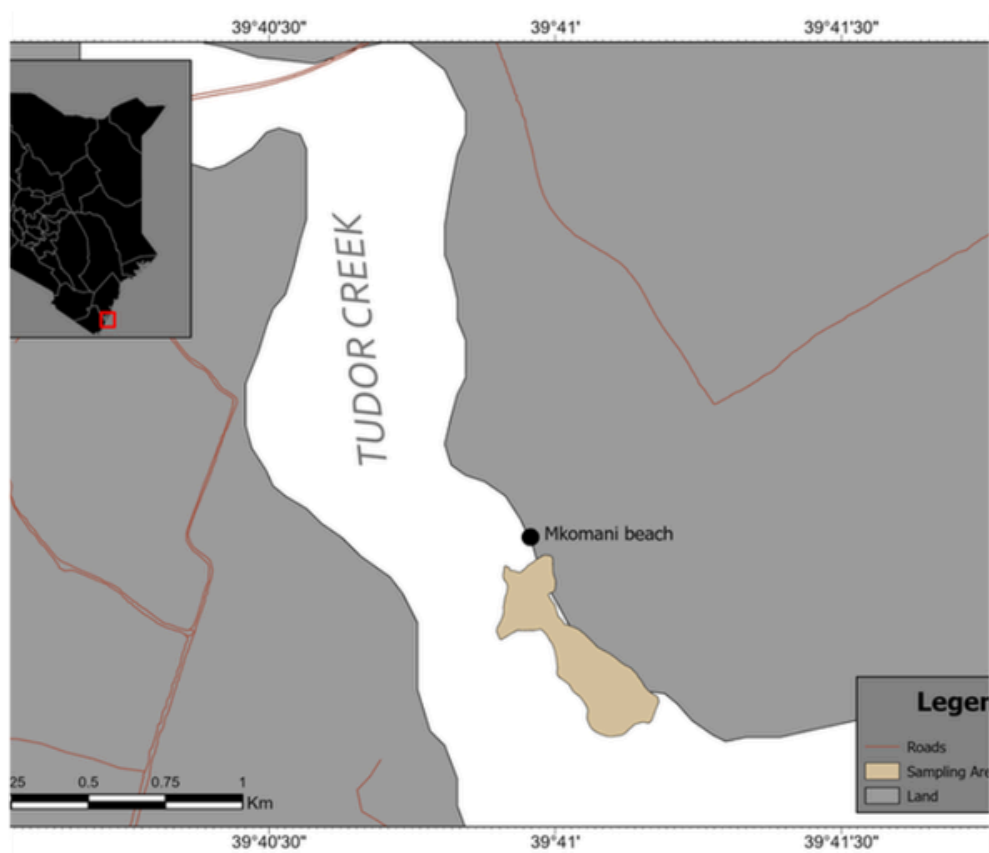


Figure 2:A map of Kenya showing the location of study area.



Figure 3&4. Field sampling/ *Lutjanus fulvivflamma*



4. Results

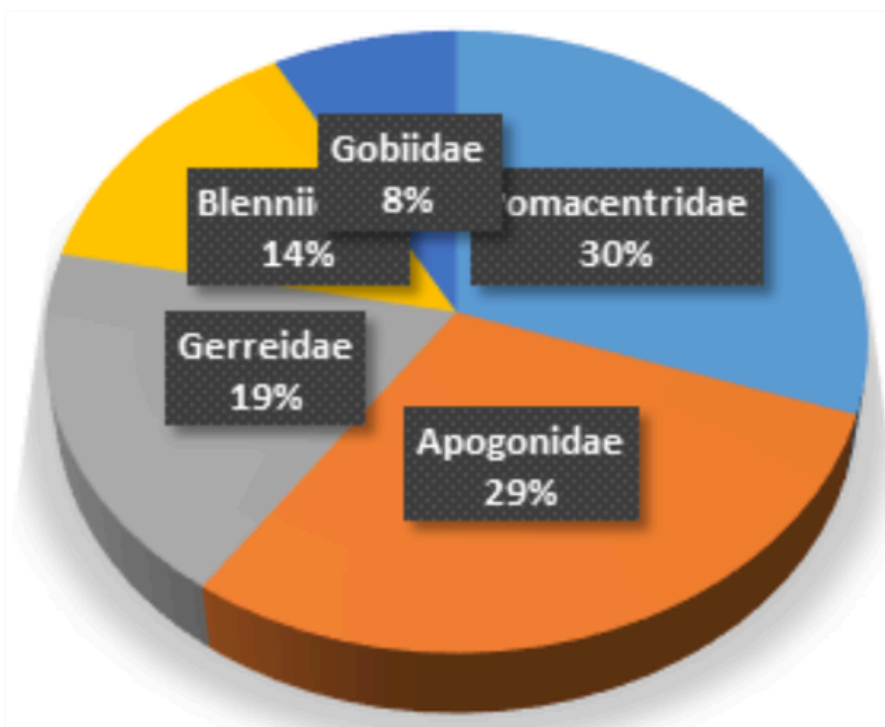


Figure 5. Proportion of top 5 families

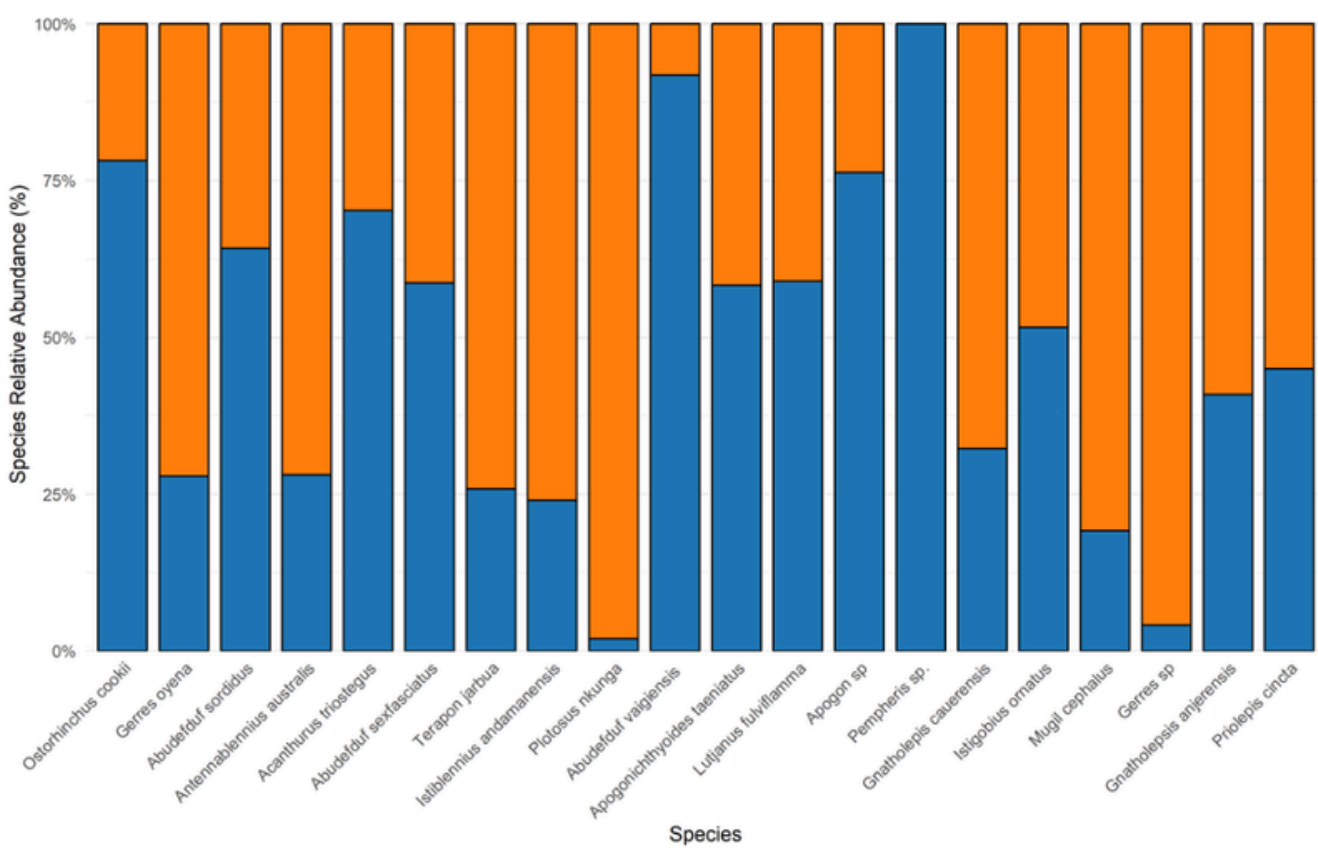


Figure 7. Dominant species found in the study

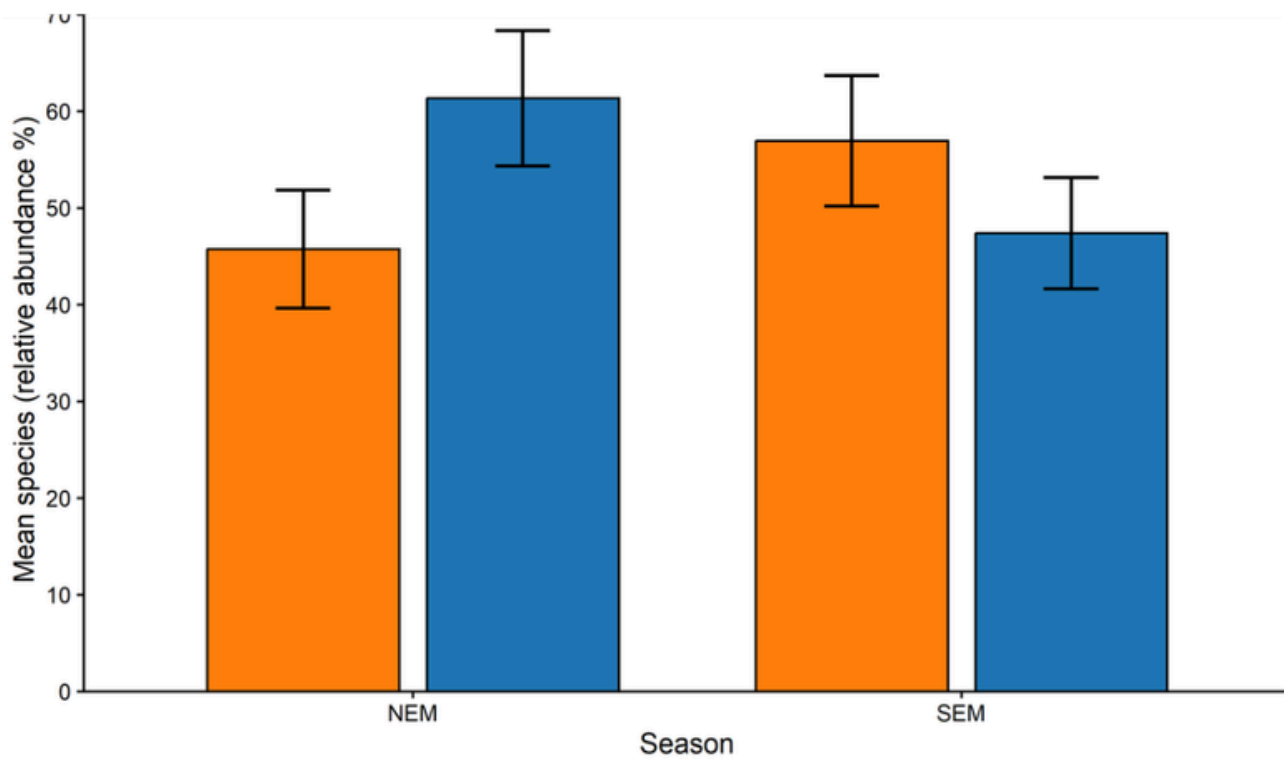


Figure 6. Mean species relative abundance across season

- A total of 1,907 individual fishes, belonging to 35 families and 85 taxa, were sampled
- Overall, the seagrass pools supported a higher number of species compared to the sandy pools and across season
- Resident intertidal species such as gobies and blennies rapidly recolonized the pools

5. Discussion

- The greater diversity observed in seagrass pools can be attributed to the structural complexity of seagrass beds, which provide both protection from predators and access to food resources.
- In contrast, sandy pools are relatively homogeneous and provide fewer refuges and resources, which may explain their lower species richness.
- The occurrence of species in both substrata suggests some level of ecological overlap and habitat flexibility.
- The different developmental stages, including larvae, juveniles, and adults, suggest that the pools serve not only as temporary refuges but also as important nursery grounds.
- The presence of both permanent residents and transient reef-associated species highlights the ecological connectivity between intertidal pools and adjacent reef systems

6. Way forward

- Integration of eDNA approaches
- Long-term monitoring and comparative assessment
- Functional and ecological assessment.



7. References

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