

Structural Role of Macrophytes on Testate Amoeba Communities in Aquatic Environments of the Iberá System

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Introductions and Aims

Testate amoebae play a crucial role in aquatic ecosystems. In Argentina, research on these organisms has been scarce thus far, requiring exhaustive studies on this group in the Iberá aquatic environments.

The aims of this study is **to describe the testate amoeba communities in terms of species richness and abundance across different aquatic environments in the Iberá wetlands.**

Method

June 2023
In situ
Portal Carambola (Corrientes)

non-vegetated
vegetated

- Observed in vivo
- Measurements
- Specimen count
- Richness (S)
- β -diversity
- Multiple β -diversity

Results & Discussion

Testate amoebae communities in vegetated areas exhibited greater taxonomic richness (22 taxa) (**Figure 1**).

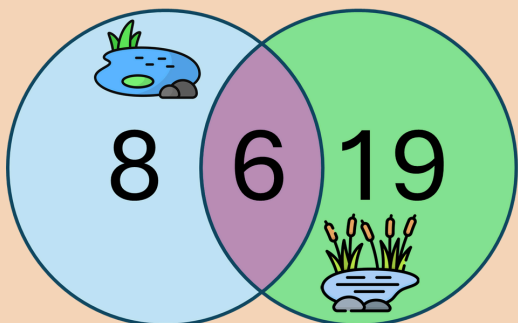


Figure 1. Taxa recorded in vegetation-associated environments (green), in vegetation-free environments (blue), and recorded in both environments (pink).

The families with the greatest taxon richness were Arcellidae and Diffugiidae (**Figure 2**).

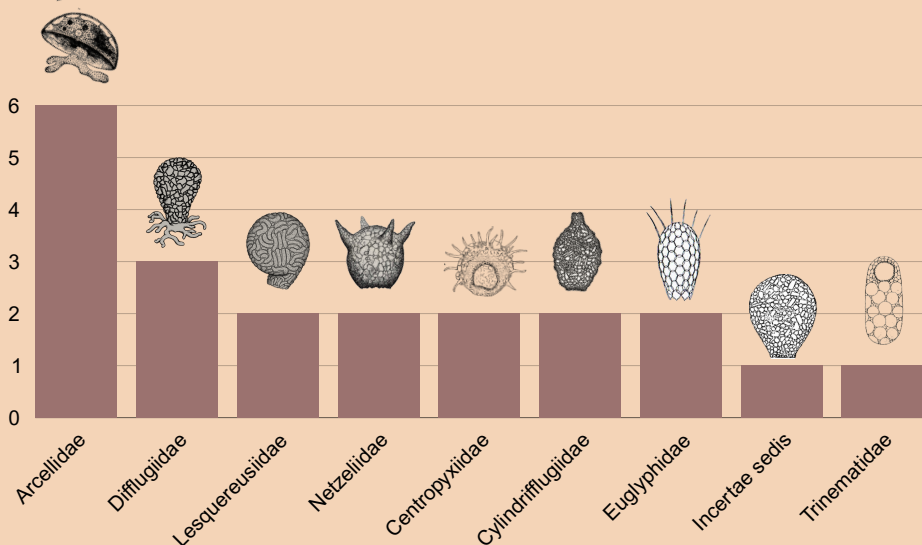


Figure 2. Number of taxa per family.

The species composition of testate amoebae in both communities tends to differ between the two types of environments analyzed. The component that contributes the most to the observed differences is species turnover between the communities (**Figure 3**).

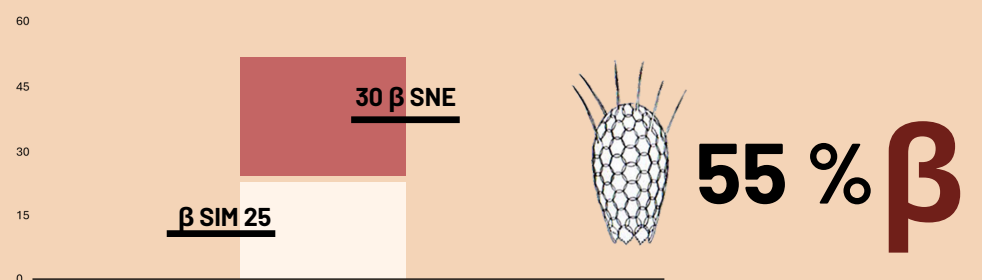
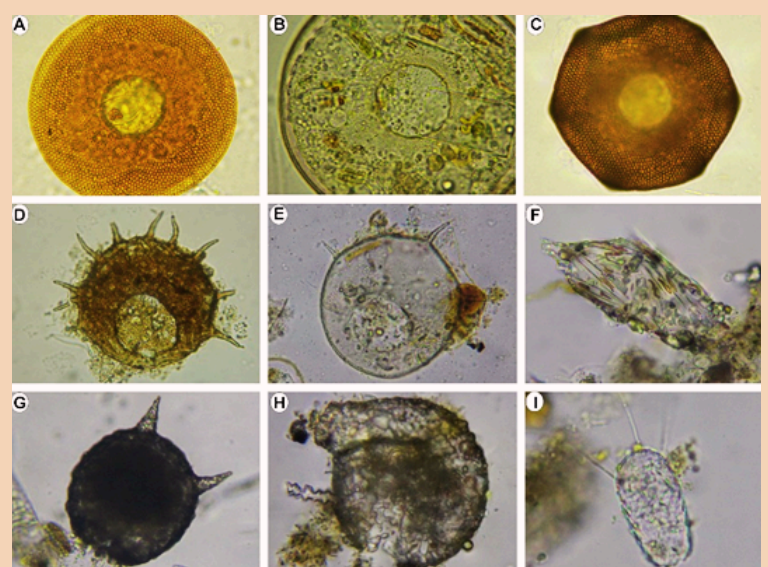


Figure 3. β -diversity analysis based on the Sørensen index



Families of testate amoebae recorded in Portal Carambola (Iberá Nature Reserve). (A, B, C) Arcellinidae. (D, E) Centropyxiidae. (F) Cylindrodiffugiidae. (G) Netzeiliidae. (H) Lesquereusidae. (I) Euglyphidae.

Conclusion

- Macrophytes provide resources and favorable environmental conditions that benefit a greater diversity of testate amoebae.
- The density and presence of macrophytes are key determinants for the diversity of testate amoeba communities.
- The reduction of macrophytes is associated with a decrease in taxonomic richness, underscoring their crucial role in these ecosystems

References

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