



TEMPORAL AND VERTICAL PERSISTENCE OF THE NON-NATIVE ROTIFER *KELLICOTTIA BOSTONIENSIS* DURING WATER STRATIFICATION AND MIXING OF A DEEP TROPICAL RESERVOIR

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The non-native rotifer *Kellicottia bostoniensis* (Rousselet, 1908) has been recorded for ten years in an oligotrophic monomictic deep tropical reservoir in southeastern Brazil, where this study was conducted. This study evaluated how water column conditions in this reservoir influence the occurrence and density of *K. bostoniensis* throughout the year. The occurrence and density of *K. bostoniensis*, phytoplankton composition, and limnological variables were assessed from the surface to 40m depth at the dam area for two consecutive years. The effects of seasonal stratification and dry-season mixing were analyzed using non-parametric tests and linear mixed-effects models (LMM). *K. bostoniensis* occurred throughout the water column, with significantly higher densities during the dry seasons. Nanophytoplankton was positively associated with *K. bostoniensis* density, whereas cyanobacteria showed a negative relationship, indicating that food structure and quality, rather than total algal biomass, is a key driver of population dynamics. *K. bostoniensis* exhibited higher densities at intermediate depths (5–25 m), and its vertical distribution was positively associated with the dissolved oxygen levels. Overall, our findings advance the understanding of the ecological drivers underlying the distribution of *K. bostoniensis*, highlighting how this non-native species responds to interacting vertical gradients and seasonal dynamics in tropical reservoir systems.

Palavras-chave: Zooplankton; biological invasion; seasonality; water column mixing