

## SEASONAL FLUCTUATIONS IN USE OF RESOURCES BY FIVE SMALL ENDEMIC FISHES (CHARACIDAE) IN SUBTROPICAL ENVIRONMENTS

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Seasonality is characterized by environmental changes derived from the annual cycles of temperature and water levels, with consequent changes in the availability of food resources. In this study, we hypothesized that seasonal changes in the use of resources by species promotes trophic niche segregation. Samplings were performed quarterly between August 2013 and May 2014 at 14 sites in the Pelotas River basin, using gill nets of different mesh sizes, seining, casting nets and electrofishing. We analyzed 1,253 stomach contents belonging to Astyanax dissensus, Astyanax paris, Astyanax saquazu, Astyanax xiru and Bryconamericus patriciae according to the volumetric method. Allochthonous resources were clearly the most consumed by the species especially in periods of higher temperatures. A. xiru, A. saquazu and B. patriciae, presented a more constant diet during the sampling period (herbivore, aquatic insectivorous and detritivore/aquatic insectivorous, respectively). The diet of A. dissensus and A. paris, more drastic changes were observed in the proportions of allochthonous and autochthonous resources. For these species, the consumption of allochthonous resources increased during November, February and May. The differences observed in the proportions of consumption of allochthonous and autochthonous items were significant (Chi-square,  $x^2 > 5.99$ , p < 0.05). The trophic niche breadth evaluated by Permutational Analysis of Multivariate Dispersions (PERMIDISP) was significantly different between the species, being that in August, the species presented lower values of diet breadth. In the other periods, the highest values of niche breadth were related to the increase in the consumption of allochthonous items. Thus, the variations observed in the proportions of the resources against the seasonal oscillations seem to be important factors for the trophic segregation, species interactions and coexistence.

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