



# DIET OF *LONTRA LONGICAUDIS* (OLFERS, 1818) (CARNIVORA: MUSTELIDAE) IN THREE LIMNIC SYSTEMS IN SOUTHERN RIO GRANDE DO SUL STATE, BRAZIL

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## INTRODUÇÃO

### INTRODUCTION

South America hosts four species of otters being the Neotropical river otter *Lontra longicaudis* the widest distributed, ranging from Mexico to northern Argentina (Eisenberg and Redford, 1999). Studies on feeding habits of the neotropical river otter were conducted in several environments in Brazil (Helder - José and De Andrade, 1997; Pardini, 1998; Colares and Waldemarin, 2000; Quadros and Monteiro - Filho, 2001; Alarcon and Simões - Lopes, 2004; Kasper *et al.*, 2004; Quintela *et al.*, 2008). Despite the fact the accumulated data provides a relative knowledge on *L. longicaudis* feeding ecology, there are few studies evaluating the diet composition of the species in areas characterized by the presence of distinct limnic systems.

## OBJETIVOS

### AIMS

Herein, we analyzed the diet of *L. longicaudis* in three distinct limnic systems in southern Rio Grande do Sul, aiming on an approximation about the diet spectrum of the species in this region.

## MATERIAL E MÉTODOS

### MATERIAL AND METHODS

This study was conducted in the municipality of Rio Grande, southern coastal plain of Rio Grande do Sul State, southern Brazil. Scat samples were collected in three limnic systems: 1. "Navio Altair" coastal stream (32°17'S, 52°16'W). A coastal stream originated in marshes, crossing sandy dunes and sandy plains and discharging in the Atlantic Ocean. Vegetation on the edges is composed mainly by gramineous and herbaceous. 2. Anthropogenic shallow lakes in *Campus Carreiros* of Universidade Federal do Rio Grande - FURG (32°04'S, 52°33'W). Two shallow palustrine water bodies formed by accumulation from pluvial precipitation in depressions originated by the removal of the sand; Lake A: area of ca. 1.5 ha, vegetal covering of edges composed mainly by herbaceous and sparse arboreal; Lake B: area of ca. 1.2 ha, vegetal covering of edges composed mainly by herbaceous. 3. Pluvial channel in Permanent Protection Area n°6 (32°07'S, 52°09'W). An artificial drainage channel in the border of peat forest and marshes, ca. 1.6km length and 10m width; vegetation on the edges composed mainly by herbaceous. The diet composition was determined based on the identification of scat remains. The consumed taxa were determined based on identification of remains such as scales, vertebrae, hair, carapaces and other structures. The frequency of occurrence (FO) of each prey item was calculated by the rate of the number of scats containing such item over the total number of analyzed scats.

## RESULTADOS

### RESULTS

Coastal stream: 139 scats collected from August 2008 to January 2010. The food items and their frequency of occurrence were fish (89.92%), decapod crustaceans (47.48%), gastropod mollusks (10.79%), cricetid rodents (8.63%), birds (3.59%), amphibians (2.87%), dipsadid snakes (2.17%) and hexapods (insects) (1.43%). The identified fish families were Mugilidae (58.99%), Cichlidae (56.83%), Characidae (32.37%), Callichthyidae (18.70%), Synbranchidae (17.26%), Erythrinidae and Curimatidae (7.19% each) and Heptapteridae (5.75%). Decapod crustaceans correspond to crabs (47.48%) and shrimps (0.71%) while hexapods comprise belostomatid heteropterans (0.71%) and unidentified remains (0.71%). Anthropogenic shallow lakes: 116 scats collected from May 2007 to May 2008. The food items and their frequency of occurrence were fish (81.89%), birds (42.24%), mollusks (12.06%), hexapods (insects) (10.34%), reptiles (8.62%), isopod crustaceans (3.44%), cricetid rodents and amphibians (1.72% each). The identified fish families were Cichlidae (56.89%), Synbranchidae (38.79%), Callichthyidae (34.48%), Erythrinidae (26.72%), Curimatidae (3.44%), Characidae and Heptapteridae (2.58% each). Reptiles comprised dipsadid snakes (5.17%) and testudines (4.31%). Insects were represented by coleopterans (7.75%), belostomatid heteropterans and unidentified remains (2.58% each). Pluvial channel: 80 scats collected from November 2007 to February 2010. The food items and their frequency of occurrence were fish (82.5%), decapod crustaceans (33.75%), mammals (10%), dipsadid snakes and hexapods (insects) (7.5% each), amphibians and birds (6.25% each), vegetal remains (3.75%) and gastropod mollusks (1.25%). The identified fish families were Mugilidae (43.75%), Synbranchidae (42.5%), Characidae (17.5%), Curimatidae (12.5%), Cichlidae (11.25%), Callichthyidae (7.5%) and Erythrinidae (6.25%). Insects comprise belostomatid heteroptereans (3.75%), coleoptereans (1.25%) and unidentified remains (3.75%). Mammals comprise cricetid rodents (7.5%), coypu (1.25%) and armadillo (1.25%).

### DISCUSSION

*Lontra longicaudis* presented a varied diet in the studied systems. Fishes, however, represented the most consumed item, as observed in all of the previous studies (Helder - José and De Andrade, 1997; Pardini, 1998; Colares and Waldemarin, 2000; Quadros and Monteiro - Filho, 2001; Alarcon and Simões - Lopes, 2004; Kasper *et al.*, 2004; Quintela *et al.*, 008). Decapod crustaceans were also well representative in the pluvial channel and coastal stream samples. Decapods were commonly found in previous studies, whose authors attribute the high frequencies to the species

low motility and availability in the environment. A noteworthy higher frequency of birds in the anthropogenic shallow lake samples is observed when compared to previous studies. Other interesting fact observed is the presence of remains of freshwater turtles and armadillo.

## CONCLUSÃO

### CONCLUSION

In the present work we verified a varied diet of *L. longicaudis*, with a clear predominance of fishes. The variation in the composition of minor prey items and their frequencies reflects the exploitation of the available food resources in each system and its surrounding terrestrial environments.

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