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**NEW INFORMATION ABOUT THE BEHAVIOR OF
Lontra longicaudis (CARNIVORA: MUSTELIDAE)
BY RADIO-TELEMETRY**

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Abstract: During the development of a study about a community of carnivorous mammals, an otter was captured and equipped with a radio transmitter in an area of mangrove in the south coast of the State of São Paulo, southeast of Brazil. This study verified that: 1 - the animal used at least three burrows without communication between them. 2 - the most used burrow was at a distance of 2,6 km from the capture place; 3 - this individual usually moved between two islands that were separated by an estuary whose medium width was of approximately 1 km; 4 - it spent a long period on a small island of approximately 0,06 Km² where a muddy substratum prevailed, not allowing the construction of a burrow. In spite of the little time that the otter stayed with the radio-transmitter, the data obtained are of relevant importance as they show an unknown activity pattern, besides showing in a short period some patterns of burrow use. Even though the otter removed its radio-collar, it didn't cause any damage to the individual and it allowed the registration of behaviour patterns that had not been described before. Based upon the radio-transmitter as adapted, new perspectives open up for the effective study of this species, increasing the possibilities of obtaining data about activity patterns and home range for *Lontra longicaudis*.

INTRODUCTION

During the development of a study about a community of carnivorous mammals in the area of the south coast of the State of São Paulo, southeast of Brazil (of 25°00' to 25°04' S and 47°54' to 47°56' W), (Figure 1), a male otter (1,23 m and 10,00 kg) was captured in a live-trap (Figure 2). The capture happened on September 12th 2003 in an area of mangroves 100 m from Jacó River and 300 m from Trapandé Bay. The use of collars as a form of adapting the radio-transmitter is not the most appropriate for mustelids, due to its lanky body, funneled neck and head, and short ears, so we adapted the radio-transmitter on two collars so that it hindered the withdrawal of the equipment by the animal (Figure 3). Aiming at verifying the efficiency of the adaptation, we were careful to keep it in observation until the following day. Approximately 24 hours after the capture, the male didn't seem to be bothered by the radio-transmitter, it had already fed itself and was taking care of its fur as usual and, therefore, it was released. Apparently the equipment was well tied to the otter and it didn't disturb the animal while it walked, swam or fed. For a period of 35 days the otter was monitored, allowing us to verify that: 1 - the animal used at least three burrows without communication between them; 2 - the most used burrow was at a distance of 2,6 km from the capture place; 3 - this individual usually moved between Cananéia Island and Comprida Island, which are separated by an estuary whose medium width is of approximately 1 km; 4 - twice, it spent a long period, between 07:00am and 02:00pm, and between 8:00pm and 11:00pm, on a small island of

approximately 0,06 Km² (Pai Mato Island) where a muddy substrate prevails, not allowing the construction of a burrow.

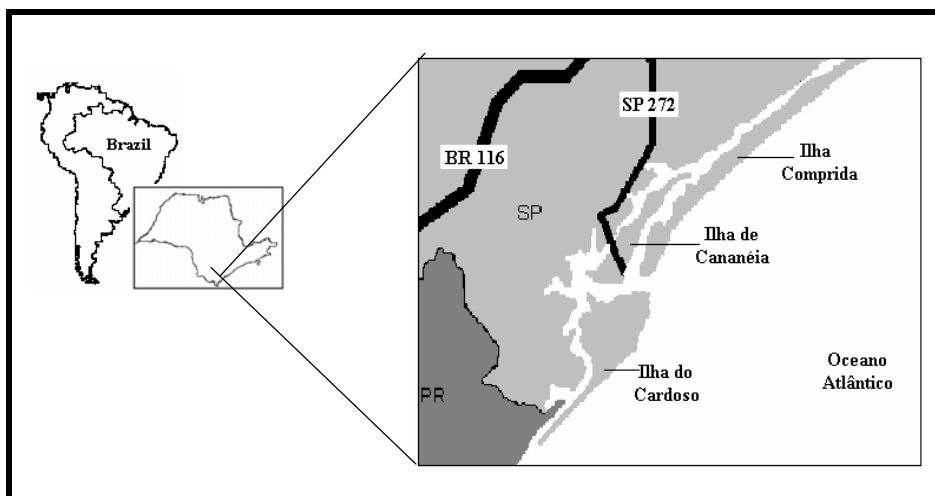


Figure 1. Location of the study area, south coast of the State of São Paulo, Brazil.

After this period, the signal emitted by the transmitter stopped varying; leading us to suppose that the otter was dead or it had removed the equipment with the transmitter. For about 5 days the signal was traced and finally the radio-transmitter was found in perfect condition inside a burrow on the coast of the estuary on a nearby island (Comprida Island). The hypothesis that the otter had removed its own collar is based on the fact that did not find signs of blood or struggle at the place or on the collar and it was still closed, excluding the possibility that the animal had been predated upon or that hunters had removed the collar. This hypothesis was confirmed 12 days after the radio-transmitter had been found when the male was seen feeding itself peacefully at 07:20 pm on the beach 300 m far from the burrow where we found the transmitter. Identification was possible due to the fact that we had shaved a small part of its side at the moment of capture to identify it in case it removed the collar.



Figure 2. *Lontra longicaudis* captured in a live trap. Foto: Eduardo Nakano C. Oliviera



Figure 3. *Lontra longicaudis* with the radio-transmitter adapted on two collars. Foto: Ana Carolina Atem

In spite of the little time that the otter stayed with the radio-transmitter, the data obtained are of relevant importance because they show an unknown activity pattern; besides showing, over a short period, some pattern of use of burrows.

Among the 13 recognised species of otters, *L. longicaudis* is one of the less studied, being considered 'vulnerable' in Brazil due to a lack of knowledge (FOSTER-TURLEY, 1990). Until recently, knowledge about the ecology and behavior of this species were based on studies about diet and use of shelters in different ecosystems (BLACHER, 1987, 1991; GALLO, 1991; PARERA, 1993, SOLDATELI and BLACHER, 1996; PARDINI, 1998; PARDINI and TRAJANO, 1999; WALDEMARIN and COLARES, 2000; CASTRO-REVELO and ZAPATA-RÍOS, 2001; QUADROS and MONTEIRO-FILHO, 2000, 2002; CEZARE et al. 2002) and the activity patterns were extrapolated from studies accomplished with the European otter *Lutra lutra* and with the North American otter *Lontra canadensis*.

However, even if the otter had removed its radio-collar, it didn't cause any damage to the individual and it allowed the registration of behaviour patterns that had not been described. Based upon the adapted radio-transmitter used, new perspectives open up for the effective study of this species, thereby increasing the possibilities of obtaining data about activity patterns and home range for *L. longicaudis*.

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RÉSUMÉ

NOUVELLES DONNEES SUR LE COMPORTEMENT DE *LONTRA LONGICAUDIS* (CARNIVORA : MUSTELIDAE) OBTENUES PAR RADIO-PISTAGE

Une loutre a été capturée et équipée d'un émetteur-radio, au cours d'une étude sur la population de mammifères carnivores de la région de mangroves de la côte sud de l'état de Sao Paulo, situé au sud-est du Brésil. Cette étude a permis de vérifier que : 1 - la loutre a utilisé au moins trois terriers qui ne communiquaient pas entre eux. 2 - le terrier le plus utilisé se situait à une distance de 2,6 km du lieu de capture. 3 - cet individu se déplaçait habituellement entre deux îles, séparées par un estuaire ayant une largeur de 1 km. 4 - il a passé une longue période sur une petite île de 0,06 km², où le substrat essentiellement boueux ne permet pas le creusement d'un terrier. Malgré le fait que la loutre n'ait porté l'émetteur que pendant une courte période, les données obtenues se révèlent être d'un grand intérêt, car elles montrent un cycle d'activité encore inconnu, en plus de mettre en évidence la stratégie d'occupation des terriers sur une courte durée. Bien que la loutre ait retiré son collier émetteur, celui-ci n'a causé aucun dommage à l'animal et a révélé un schéma comportemental encore non décrit. Ainsi, le collier émetteur que nous avons adapté à la loutre et les observations effectuées ouvrent de nouvelles perspectives pour l'étude de *Lontra longicaudis* et augmente les possibilités d'obtenir des informations sur l'activité et la répartition de l'espèce.

RESUMEN

Durante la realización de un estudio mastozoológico, una nutria fue capturada y equipada con un radio-transmisor en un área de manglares en la costa sur del Estado de São Paulo, en el sureste de Brasil. Este estudio permitió verificar que: 1) el animal utilizó al menos tres madrigueras sin comunicación entre ellas; 2) las madrigueras más utilizadas estaban a una distancia de 2.6 km del sitio de captura; 3) el individuo monitoreado generalmente se movilizaba entre dos islas que están separadas por un estuario cuyo ancho promedio es de aproximadamente 1 km; y 4) el animal pasó un largo periodo de tiempo en una pequeña isla con superficie aproximada de 0,06 km² con sustrato lodoso que no permite la construcción de madrigueras. A pesar del corto tiempo de monitoreo del animal radio-equipado, los datos obtenidos son relevantes porque muestran un patrón de actividad poco conocido, y además, se pudo documentar el uso de varias madrigueras. No obstante que la nutria se liberó del radio-collar en poco tiempo, aparentemente el animal no sufrió daño. Esto permitió registrar patrones de comportamiento que no habían sido descritos previamente. Los datos obtenidos a partir del radio-collar adaptado, brindan nuevas perspectivas para el estudio de los patrones de actividad y ámbito hogareño de *Lontra longicaudis*.