

SHORT NOTE

DOES THE AFRICAN (CAPE) CLAWLESS OTTER EAT MAMMALS?

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Abstract: In studies done in southern Africa on the diet of African (Cape) clawless otters *Aonyx capensis* in freshwater habitats, using faecal analysis, the incidence of mammal remains was < 1% to 2% (relative per cent occurrence), and at four localities no traces of mammals were recorded. In a detailed study on the predatory behaviour of *A. capensis* mammals were never killed or eaten, which was also found to be the case in observations on many *A. capensis* by a wildlife rehabilitator. It is suggested that *A. capensis* does not naturally prey on or eat mammals, and that the presence of mammal remains in scats (spraints) can be attributed to incidental ingestion by the otter, or the inadvertent inclusion of water mongoose *Atilax paludinosus* scats, similar in appearance to those of the otter, in the sample. As otters in South Africa are often blamed for killing sheep or goats, the information that *A. capensis* does not kill mammals should be used to prevent unnecessary persecution.

Keywords: *Aonyx capensis*, diet, mammal avoidance, southern Africa.

Eleven southern African diet studies done on the African (Cape) clawless otter *Aonyx capensis* in freshwater habitats, using faecal analysis, were reviewed (Rowe-Rowe, 1977a; Butler and du Toit, 1994; Ligthart et al, 1994; Purves et al, 1994; Somers and Purves, 1996; Purves and Sachse, 1998; Perrin and Carugati, 2000; Somers and Nel, 2003; Watson and Lang, 2003; Okes, 2017; Shabel, in litt.). Remains of mammals were recorded in seven of the studies. In six of the seven samples the relative per cent occurrence (RPO) of mammals was < 1% to 2% (Rowe-Rowe, 1977a; Purves et al, 1994; Butler and du Toit, 1994; Somers and Nel, 2003; Watson and Lang, 2003; Okes, 2017), and in the other it was 16% (Ligthart et al 1994). However, during a 19-month period in which I made observations on a captive adult female *A. capensis*, no feeding on mammals was recorded (Rowe-Rowe, 1977b). Numerous prey-capture and food-selection tests were done, and in all instances involving mammals, dead or alive, none were eaten or killed. Neither would the otter eat meat (beef, mutton, pork) or tinned commercial pets' food made from mammal products. I concluded that whereas the fixed action patterns involved in the capture, killing, and eating of crabs, frogs, fish, and birds were released by certain stimuli, the sight or movement of mammals did not provide the stimuli, which released chasing, capture, or killing behaviour. Just as it was found that the African weasel *Poecilogale albinucha* preyed and fed only on warm-blooded vertebrates (small mammals and

small birds on the ground), and even when hungry, would not kill or eat cold-blooded vertebrates or invertebrates (Rowe-Rowe, 1978).

In the field studies done by me (Rowe-Rowe, 1977a) 1361 scats (spraints) were examined. I recorded mammal remains in four scats (< 1% RPO). All were from the same study area in which 863 scats were collected. On one of my visits to this area I came across the posterior half (very fresh) of an olive house snake *Lamprophis inornatus* (non-poisonous constrictor) on the shore of an oxbow lake. At the point at which the snake had been bitten through, there was portion of an adult vlei rat *Otomys irroratus* in its gut. On the same day, at an *A. capensis* holt 200 m away, where I had collected all scats on the previous day, there were two scats which contained remains of both the snake and the vlei rat. So my conclusion was that the vlei rat had been ingested incidentally.

In the other two scats in which I recorded small-mammal remains, I believe that the scats might have been those of a water mongoose *Atilax paludinosus*. Their scats are similar in appearance to those of *A. capensis* (Rowe-Rowe, 1992, 2011), and in the study area there were some spraint sites that were used by clawless otters, spotted-necked otters *Hydrictis maculicollis*, and water mongooses (Rowe-Rowe, 1992). Furthermore, mammals comprise on average 17% (RPO) of the water mongoose's diet at freshwater habitats in southern Africa (Rowe-Rowe and Somers, 1998). Perhaps other researchers have made the same error that I probably did, and included water mongoose scats in their samples.

In January 2018 I made an appeal to all Otter Specialist Group members, asking whether anyone was able to provide conclusive proof that *A. capensis* feeds on mammals; or whether *A. capensis* had ever been seen killing or eating a mammal. The response was that mammal predation had not been witnessed. Michael Somers (in litt.) agreed that it was very likely that the very low occurrence of mammals in the samples was owing to misidentification of scats, for the reasons given above: both species using the same spraint site, the similar appearance and size of the scats, and furthermore he believes that contamination of otter scats with hairs from scats of water mongoose is also a possibility. The 16% RPO of mammals in the investigation done by Ligthart et al (1994) is an anomaly. My opinion is that it is the result of misidentification of scats, possibly owing to the investigators' a lack of field experience with otters and water mongooses at the time.

OSG member Nicci Wright (in litt.), an experienced wildlife rehabilitator, found that both hand-reared and wild *A. capensis* ate all of the natural foods offered (crabs, frogs, fish, birds, reptiles, insects), but never ate mice; agreeing with my hypothesis that mammals do not elicit feeding responses.

My conclusion is that there is no evidence that *Aonyx capensis* preys on or eats mammals, and that all of the records of mammals in the diets referred to above are either the result of incidental ingestion or misidentification of the faecal samples.

In South Africa predation by wildlife on domestic livestock (sheep and goats) is a very emotional issue. The main predators on these farm animals have been shown to be mainly black-backed jackals *Canis mesomelas*, caracal *Felis caracal*, and domestic dogs *Canis familiaris*. However, farmers blame many other carnivores, including clawless otters. In some of the diet studies referred to in the first paragraph, above, scats were collected on farms, and no evidence of predation on sheep or goats was found. A detailed study of predation on livestock on farms in western KwaZulu-Natal, South Africa, was undertaken by Roberts (1986). This is a highland region which receives a high rainfall and is well watered by four major rivers, numerous streams, and impoundments (farm dams), therefore providing much suitable otter habitat: clawless otters being rated as fairly common in the area. Roberts's investigation

involved examining all reported predation casualties and conducting post-mortem examinations. Predators responsible for the deaths were identified from their killing and feeding patterns, as well as the distance between canine punctures in the skin. In total Roberts examined 395 sheep carcasses. Deaths were attributed to black-backed jackals (13%), caracals (2%), and domestic dogs (83%), with no evidence of predation by otters.

I believe that Roberts's findings, considered together with my conclusion that *A. capensis* does not kill or eat mammals, has important implications for the conservation of this otter. Nature conservation officers, and both wildlife and agricultural extension officials should take note of this information, and use it to inform livestock farmers, thus helping prevent unwarranted persecution of otters.

There are, however, some farm animals that *A. capensis* occasionally preys on, namely domestic fowls, ducks, and geese (Stuart, 1981; Lynch, 1983). These raids usually occur during dry periods when stream levels are low and the otters then visit farm dams and farmyards.

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RÉSUMÉ

LA LOUTRE À JOUES BLANCHES D'AFRIQUE (CAPE) MANGE-T-ELLE DES MAMMIFÈRES ?

Dans le cadre d'études menées en Afrique australe sur le régime alimentaire des loutres à joues blanches (*Aonyx capensis*) d'Afrique (Cape) des habitats d'eau douce, à l'aide d'analyses des matières fécales, l'incidence de restes de mammifères était de <1% à 2% (pourcentage relatif d'occurrence), et dans quatre localités aucune trace de mammifères n'a été retrouvée. Dans une étude détaillée sur le comportement prédateur d'*A. Capensis*, les mammifères n'ont jamais été tués ou consommés, ce qui a également été constaté lors des observations sur de nombreuses *A. capensis* réalisées par un gestionnaire de la faune. Il est suggéré qu'*A. Capensis* ne s'attaque pas naturellement aux mammifères et ne les mange pas, et que la présence de restes de mammifères dans les excréments (épreintes) peut être attribuée à une ingestion accidentelle par la loutre ou à l'occasion, par inadvertance, la présence d'excréments de mangouste des marais *Atilax paludinosus*, en apparence similaires à ceux de la loutre, dans un échantillon. Comme les loutres d'Afrique du Sud sont souvent accusées d'avoir tué des moutons ou des chèvres, l'information selon laquelle *A. capensis* ne tue pas de mammifères devrait être utilisée pour éviter toute persécution inutile.

RESUMEN

LA NUTRIA SIN GARRAS AFRICANA (DEL CABO) ¿COME MAMÍFEROS?

En estudios hechos en el sur de Africa, sobre la dieta de nutrias sin garras Africanas (del Cabo), *Aonyx capensis*, en hábitats de agua dulce, utilizando el análisis fecal, la incidencia de restos de mamíferos fue entre menos de 1% y 2% (ocurrencia relativa porcentual), y en cuatro localidades no se registraron restos de mamíferos. En un estudio detallado del comportamiento de predación de *A. capensis* nunca se observó que fueran matados ó comidos mamíferos, lo que tampoco se observó nunca por parte de un rehabilitador de fauna que trató con muchas *A. capensis*. Se sugiere que *A. capensis* no preda ni come mamíferos naturalmente, y que la presencia de restos de mamíferos en fecas puede atribuirse a la ingestión incidental por parte de la nutria, ó a la inclusión inadvertidamente de fecas de la mangosta acuática *Atilax paludinosus*, simmilares en apariencia a los de la nutria, en la muestra. Como las nutrias en el Sur de Africa son a menudo culpadas de matar ovejas o cabras, la información de que *A. capensis* no mata mamíferos debería utilizarse para prevenir la persecución innecesaria.