

## **The Status of Two Endangered Carnivores Occurring in The Cape Province, South Africa, *Felis serval* and *Lutra maculicollis***

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### *ABSTRACT*

*Following a survey of the carnivores occurring in the Cape Province, it was found that in addition to the large carnivores, two smaller species were also endangered. The serval *Felis serval* is now considered to be extinct as a viable species in the Province, but it is suggested that reintroductions could be successful. Populations of the spotted-necked otter *Lutra maculicollis* are still known to occur in the Bushman's, Buffalo and Keiskamma Rivers and in the vicinity of the headwaters of the Orange River system. However, no positive evidence was obtained to show that they occur in any system west of 26° East in the Cape Province. Other than trying to retain suitable water quality in these rivers, little can be done to improve the conservation position of this otter.*

### INTRODUCTION

As part of an ongoing survey of the carnivores of the Cape Province (Stuart, 1981, 1983; Stuart *et al.*, 1984), a need was identified to undertake more detailed studies of certain species, either because of their scarcity or their position as competitors with human activity.

Two species were singled out because of their apparent rarity, namely the serval *Felis serval* and the spotted-necked otter *Lutra maculicollis*.

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Smithers (1978, 1983) has documented the overall African distribution of these two species but gives little information for the Cape Province.

The purpose of this project was to establish the current status of both *F. serval* and *L. maculicollis* within the Cape Province and to try and determine the reasons for this decline.

## METHODS

Museum and literature records for these two carnivores were extracted. The problem experienced with the latter being the general confusion with other species, making many records suspect.

As part of the active survey, areas with previous records of both or one of the species involved were visited, farmers questioned, and answers graded subjectively according to accuracy and knowledge. In addition a questionnaire survey for serval was undertaken, with 765 being despatched to farmers in areas of previous or possible occurrence. The questionnaire was accompanied by a brochure with colour photographs of *F. serval*, as well as *Felis caracal*, *F. libyca*, *F. nigripes*, and *Genetta tigrina*, with which it is frequently confused.

## RESULTS

### *Felis serval*

The serval probably occurred along the coastal belt from near Cape Town, to Transkei, and then northwards into Natal. It is also possible that this cat occurred in the extreme northeastern corner of the Cape Province. The most recent proven record was of a specimen collected on the farm 'Klipdam' (Groen River, Namaqualand) in August 1975 (ZM 38724).

The only museum specimens known from the Cape Province are ZM 36359 collected in Somerset West in 1898; ZM 38724 collected in 1975 in coastal Namaqualand, and KM 14397 recorded as having been collected near King William's Town (no date, but not recent). The five accepted visual farmer records are indicated in Fig. 1, as well as historical distribution.

The specimen from Namaqualand, shot by a farmer in 1976, is difficult

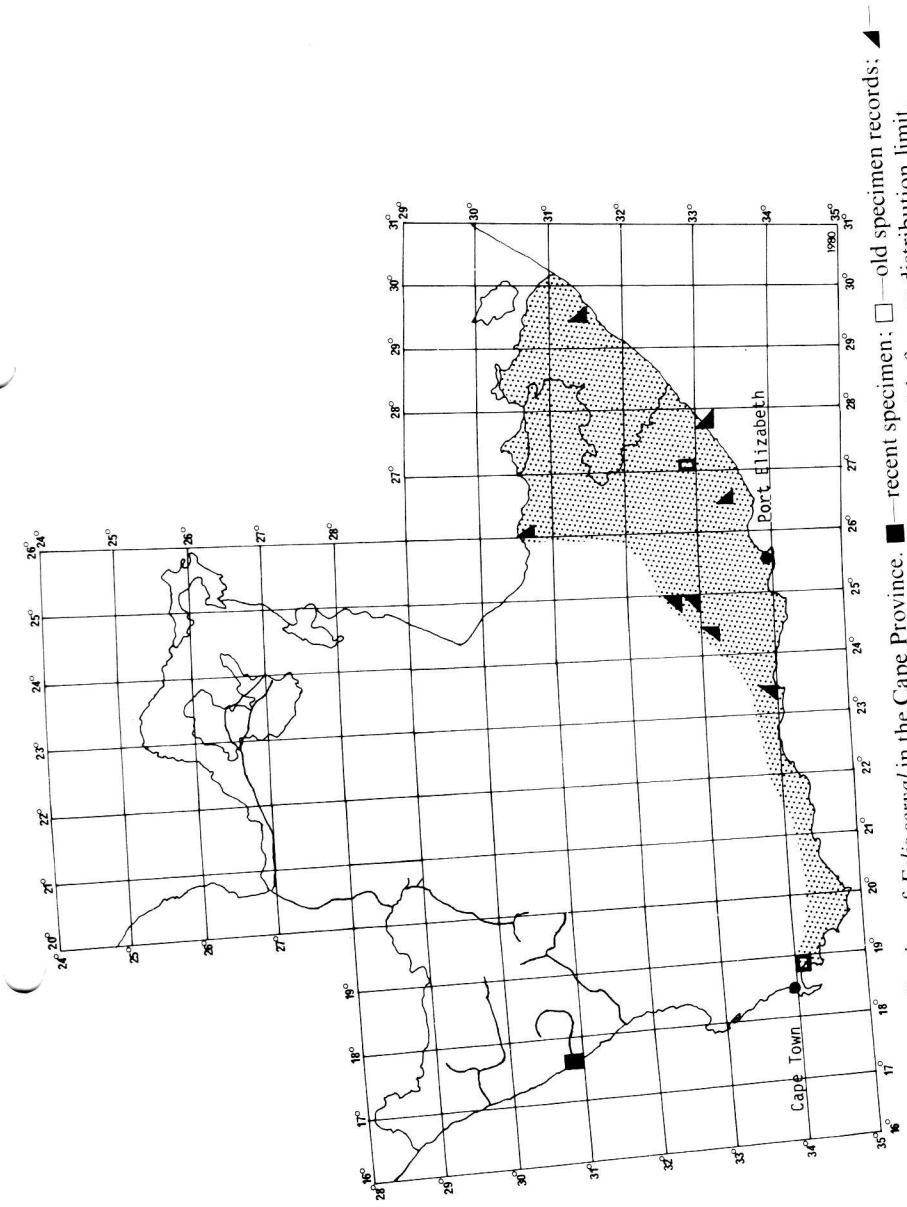


Fig. 1. The past and present distribution of *Felis serval* in the Cape Province. ■—recent specimen; □—old specimen records; ▲—confirmed farmer records; ▲—literature records. Stippled overlay indicates probable former distribution limit.

to explain. Farmers questioned in the area had never encountered this cat before. It is atypical habitat, being arid succulent coastal sandveld with *Acacia* scrub along the Groen River. It is possible that the animal followed one of the river courses southwards, but the nearest known locality for *F. serval* is at least 1000 km away. It is unlikely that it was an escaped pet, as this would have come rapidly to the attention of the local population.

One of the principal problems encountered was the regular confusion of *Felix serval* with the *Genetta* spp., *F. libyca*, *F. nigripes* and even *F. caracal*.

Of the 765 questionnaires despatched, 615 were returned, giving a percentage return of 80.39%. Of these 376 (61.14%) were negative returns, 66 (10.73%) said that *F. serval* used to occur, 70 (11.38%) said that it did not occur on their farm but they thought it was present in the district. Only 103 (16.75%) farmers said that serval occurred on their properties. Of these, 62 (60.2%), were eliminated by follow-up correspondence and telephone conversations. The vast majority were clearly mistaken identity. The remaining 41 (39.8%) were considered to be possible occurrence. However, on follow up work in the field, only five were considered to be valid records, and of these only one was recent (1978). A previous recorded occurrence (Visser, 1976) in the Tsitsikama National Park has since been shown to have been *Genetta* spp.

In the case of the five acceptable farmer records, three of the localities were associated with open, relatively dry country, and dry, *Acacia*-fringed, river beds. The remaining two records were associated with pockets of indigenous forest, and open grassland on hill slopes.

From time to time, apparent records of *F. serval* are obtained from the extreme northeastern area of the Cape Province. However, to date, there have been no substantiated records. The area consists of open bush/savanna, and therefore suitable for *F. serval*.

### *Lutra maculicollis*

Unlike the Cape clawless otter *Aonyx capensis*, which is widely distributed in the Cape Province, *Lutra maculicollis* is restricted to the Province east of 25° East (Fig. 2). Other than one specimen taken in 1909 (AMSA/M 966) at the point where the Vaal River enters the Cape Province from the Transvaal, and one animal (KM 13272) taken in 1922, 4° to the west, on the Orange River, there are no substantiated records westwards. There

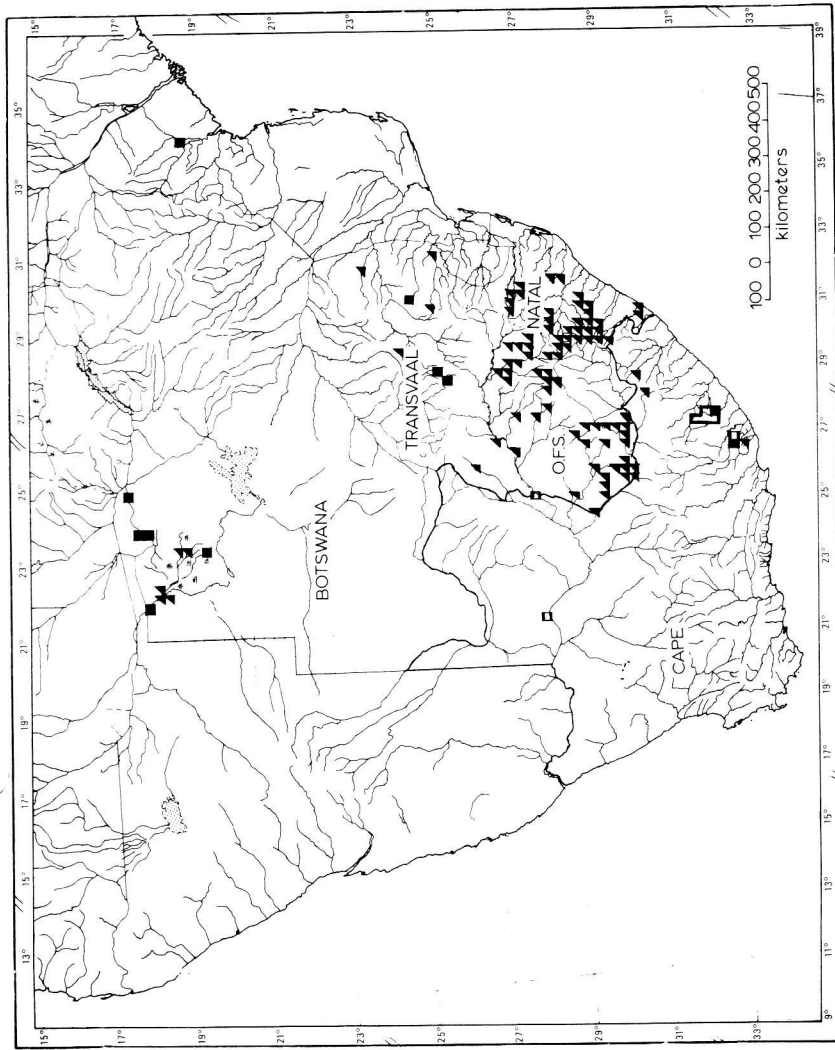


Fig. 2. The distribution of *Lutra maculicollis* in Southern Africa. ■—recent specimens; □—old specimen records; ▲—literature and other records.

are no proven records of past or present occurrence of *L. maculicollis* in the well-watered areas between 22° and 25° East, along the Indian Ocean seaboard, nor from the river systems of the western Cape Province. Shortridge (1942) considers *L. maculicollis* to be probably more numerous than *Aonyx capensis* in the northwest Cape. Rautenbach & Nel (1980), in their survey of the Cedarberg Wilderness Area, found no direct evidence of its occurrence in the Olifants River but they believe its occurrence possible on the basis of anecdotal evidence. Stuart (1981) found no evidence to support the possible past or present distribution of *L. maculicollis* in the region. Only one specimen has been collected in the Cape Province since 1964, namely a young animal caught in a trap, some 2 km from the New Year's River (3324AB) and now lodged in the Albany Museum (AMSA/M4449).

There are only three other records for the Cape Province, obtained during this survey, one on the Bell River and on the upper Kraai River (both based on clear tracks seen by the author), both in the region of the southern Drakensberg and four animals watched for some time disporting in the New Year's River (3326 AB).

## DISCUSSION

As with most drastic population reductions, that for the two carnivores under discussion is probably a result of several factors. It is these that are now discussed.

### *Felis serval*

Historically *Felis serval* was almost certainly restricted to the southern Cape coastal belt and only extended inland to the east of 24° East. One of the major difficulties in examining past distribution of this species is that most literature records present some doubt as to the species involved.

It is a relatively easy animal to hunt, and if chased by hounds usually 'trees', and as the southern coastal belt holds the bulk of the Cape's human population they came under constant pressure. In tandem with hunting, there was also habitat degradation, although there are still a number of areas that are suitable for serval populations. An additional reason cited by a number of farmers is the influx of *Felis caracal* into the coastal belt, with which *F. serval* was unable to successfully compete. Unfortunately, it is not possible to substantiate this claim.


Test introductions could be undertaken in suitable reserves within the past distribution of *Felis serval*. Unfortunately, at present, there are only two suitably sized reserves within the past distribution, namely the De Hoop Nature Reserve in the Western Cape, and the Andries Vosloo Kudu Reserve in the Eastern Cape. From the conservation viewpoint *Felis serval* can be considered at best unviable, and at worst extinct, in the Cape Province. Natural re-population seems unlikely and therefore re-introduction would appear to be the only option.

### *Lutra maculicollis*

*Lutra maculicollis* is easily confused with *Aonyx capensis* and even *Atilax paludinosus*, and for this reason many sight records are suspect.

The most recent proven record of this species from the Orange River is 1922, and as the water quality has changed drastically in recent times it is thought unlikely that this otter will be found to occur, other than sporadically.

Heavy agricultural development along the banks of the Orange River and its major tributaries has resulted in increased silt loads. Regulation of water flow through major impoundment projects has resulted in regular flow which ensures a permanent, relatively high, silt load. Before impoundment, silt load was at its highest during the summer wet season, but during winter, water was at its clearest. During the summer wet season greater use could have been made of the tributaries.

 Unlike *Aonyx capensis*, which hunts principally by touch, *Lutra maculicollis* relies heavily on sight, and therefore clear water is an important requirement in the hunting activity of this species. With heavy, and near continuous, silt loads, such rivers become unsuitable for *L. maculicollis*.

The upper section of the Kraai River, a major tributary of the Orange River, still maintains *L. maculicollis*, but this remains undammed and has clear water. Up to 1964 *L. maculicollis* were collected in gill nets set for fish in the Rooikranz and Maden Dams of the Buffalo River System, but since that date there have been no records. These dams are generally clear water, and their apparent demise here is probably attributable to hunting and drowning in gill nets. The lower Buffalo River is heavily utilized by both agriculture and industry and *L. maculicollis* is no longer known to occur, although there are records of *Aonyx capensis*. *Lutra maculicollis* still occurs in the New Year's River (a tributary of the Bushman's River)

and in the Bushman's River itself. It is known to have occurred in the Kei River in the past but there are no recent records.

There is little that can be done to ensure the future of *Lutra maculicollis* as there are no suitable stretches of clear water under conservation control within the Cape Province. Emphasis should be given to conserving the water quality of, particularly, those rivers already identified as having *Lutra maculicollis* present.

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