R E P O R T

DENSITIES OF OTTERS IN THE DRAKENSBERG OF KWAZULU-NATAL, SOUTH-AFRICA

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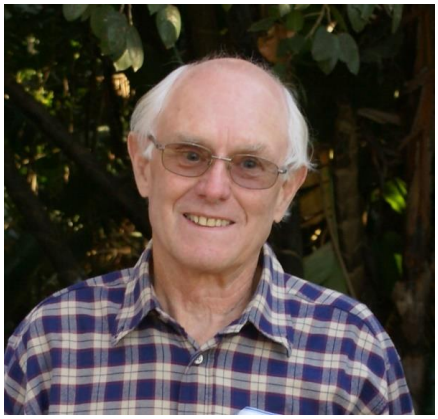

(Received 6th July 2016, accepted 2nd September 2016)

Abstract: Cape clawless otters *Aonyx capensis* and spotted-necked otters *Lutra maculicollis* were studied on three rivers in the Drakensberg Park, South Africa. Densities of clawless otters were between 1/2.5 km and 1/0.7 km. For spotted-necked otters densities were between 1/5 km and 1/0.45 km.

Studies on the ecology of otters in the Drakensberg have been performed by Rowe-Rowe (1975), Carugati (1995), D'Inzillo Carranza (1995), and recently by Kubheka et al. (2013). Amongst other information collected by these researchers, are estimates of otter numbers and densities. As figures on otter densities are not readily available to field workers, they are summarised in this report.

The studies were done at four localities on three rivers in the large 240 000-ha Drakensberg protected area, South Africa. The two otters which coexist at all localities are Cape clawless otter *Aonyx capensis* and spotted-necked otter *Lutra maculicollis.*

At Kamberg Nature Reserve the Mooi River starts in the protected area, then flows out of it for 8 km through farmed land, then re-enters the protected area. The lower section is known as the Stillerust area and the upper section is referred to as the Hatchery area.

Table 1: Mooi River (Kamberg Nature Reserves)
Stillerust section (4,2 km of river plus oxbow lakes and vlei (marsh))
Numbers and densities of otters in the Stillerust section

Otter	1972 – 1974 Rowe-Rowe (1992)		1993 – 1994 Carugati (1995)		1993 – 1994 D'Inzillo Carranza (1995); Perrin et al (2000)	
	No.	Density n/km	No.	Density n/km	No.	Density n/km
Clawless	5 - 6	1/0.84 – 0.7 km	6	1/0.7 km	-	-
Spotted-necked	3 - 4	1/1.4 – 1.05 km	4	1/1.05 km	4	1/1.05 km

Table 2: Mooi River (Kamberg Nature Reserves)
"Hatchery" section (5 km of river, six dams, vlei)
Numbers and densities of otters in the "Hatchery" section

Otter	1993 – 1994 Carugati (1995)		1993 – 1994 D'Inzillo Carranza (1995); Perrin *et al* (2000)		2010 Kubheka *et al* (2013)	
	No.	Density n/km	No.	Density n/km	No.	Density n/km
Clawless	3	1/1.7 km	-	-	3 - 5	1/1.7 – 1 km
Spotted-necked	6	1/0.83 km	11	1/0.45 km	8 - 9	1/0.63 – 0.55 km

Table 3: Polela River (Cobam Nature Reserves)
5 km of river
Numbers and densities of otters in the Polela River section

Otter	1993 – 1994 Carugati (1995)	
	No.	Density n/km
Clawless	2 - 3	½.5 – 1.7 km
Spotted-necked	1 - 2	1/5 – 2.5 km

Table 4: Loteni River (Loteni Nature Reserves)
5 km of river.
Numbers and densities of otters in the Loteni River section

Otter	1993 – 1994 Carugati (1995)	
	No.	Density n/km
Clawless	2 - 4	1/2.5 – 1.25 km
Spotted-necked	2	1/2.5 km

Overall, clawless otter densities ranged from 1/2.5 km to 1/0.7 km, being highest along the Stillerust section of the Mooi River in both 1972 – 1974 and 1993 – 1994. This section, comprising river, oxbow lakes, and a large vlei (marsh) was considered to be ideal habitat (Rowe- Rowe 1975, Carugati 1995). The densities of spotted-necked otters ranged from 1/5 km to 1/0.45 km, highest in the "Hatchery" section of the Mooi River. The habitat here comprised 5 km of river, six dams (two of which had been stocked with trout), as well as vlei areas.

When both the Stillerust section and the Hatchery section were surveyed in 2010 (Kubheka et al 2013), estimated numbers of both otter species in the Hatchery section were similar to those of the earlier studies done in 1993 – 1994. At Stillerust, however, so little sign of both species was found, and only one otter was seen, therefore it was not possible to estimate numbers. The marked decline was attributed to chronic deterioration of river health, owing to upstream riparian habitat changes and human population increase on the properties Tendele and Riverside.

The numbers of spotted-necked otters recorded by D'Inzillo Carranza were determined using radio telemetry. The estimates of otter numbers by the other authors reported above were based on otters actually seen, sizes of tracks, and scat diameters at spraint sites. Two researchers (Arden- Clarke 1986; Vervoerd 1987), who studied clawless otters at coastal habitats used the number of holts (dens) to estimate otter numbers. Rowe-Rowe (1992) found that if this formula was applied to the otters at Stillerust the density would be 1/4 km and 1/6 – 11 km for clawless otters and spotted-necked otters respectively. In the light of numbers and densities which have been recorded in the Drakensberg, I suggest that this formula does not apply to freshwater habitats.

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RÉSUMÉ

DENSITÉ DE LOUTRES DANS LE DRAKENSBERG À KWAZULU-NATL EN AFRIQUE DU SUD

Les études sur la loutre à joues blanches *Aonyx capensis* et la loutre a cou tacheté *Lutra maculicollis* ont été menées sur trois rivières du parc Drakensberg en Afrique du sud.
La densité de loutre à joues blanches était comprise entre 1/ 2.5km et 1/0.7km, celle des loutres a cou tacheté comprise entre 1/5km et 1/0.45km.

RESUMEN

DENSIDADES DE NUTRIAS EN EL DRAKENSBERG, KWAZULU-NATAL, SUDÁFRICA

Estudié a la nutria de mejillas blancas *Aonyx capensis* y a la nutria de cuello manchado *Lutra maculicollis* en tres ríos del Parque Drakensberg, Sudáfrica. Las densidades de la nutria de mejillas blancas estuvieron entre 1/2.5 km y 1/0.7 km. Para las nutrias de cuello manchado las densidades estuvieron entre 1/5 km y 1/0.45 km