A R T I C L E

MONITORING OTTER ABUNDANCE IN UKHAHLAMBA DRAKENSBERG PARK, SOUTH AFRICA

Sonja KRÜGER

Scientific Services, Ezemvelo KwaZulu-Natal Wildlife, P.O. Box 13053, Cascades, 3202, Pietermaritzburg, South Africa
Centre for Functional Biodiversity, School of Life Sciences, University of KwaZulu-Natal, Pietermaritzburg, South Africa
Member of the IUCN Species Survival Commission Otter Specialist Group and African Otter Network
e-mail address: sonja.krueger@kznwildlife.com

(Received 31st October 2024, accepted 29th November 2024)

Abstract: uKhahlamba Drakensberg Park is one of the largest and most important inland freshwater protected areas in South Africa for both the African clawless otter *Aonyx capensis* and spotted-necked otter *Hydrictis maculicollis*. The relative abundance of both species was estimated by recording the number of spraint sites at four localities on three major rivers in the park for six consecutive years at the same time each year. Findings were compared with previous surveys done during the 1970s and 1990s at all four localities, and in 2010 at one of them, using the same methods. Otter spraint site abundance in this study differed significantly between species and study sites but not between years, with spotted-necked otter being more abundant than African clawless otter. There was a significant difference in otter spraint site abundance between study periods, and the relationship between species and study periods. The results indicated that the park's otter population had not declined significantly in the past 30 years. An observed difference was that more sign of spotted-necked otter was found in the current study, whereas in previous studies the sign of African clawless otter was more abundant. The park thus continues to contribute to otter conservation in the country, particularly that of the spotted-necked otter. Further studies are required to determine the drivers of the annual fluctuations in the number of sign, and the substantial increase in spotted-necked otter sign in the park in recent years.
Citation: Krüger, S. (2025). Monitoring Otter Abundance in Ukhahlamba Drakensberg Park, South Africa. *IUCN Otter Spec. Group Bull*. **42** (2): 53 - 62
Keywords: *Aonyx capensis*, *Hydrictis maculicollis*, spraint sites, surveys, protected area, montane rivers.

INTRODUCTION

African clawless *Aonyx capensis* and spotted-necked *Hydrictis maculicollis* otters coexist in the 242,813 ha uKhahlamba Drakensberg Park, the largest freshwater protected area in South Africa that conserves the headwater catchments of five major rivers in the country. This park was recognised by Rowe-Rowe et al. (1995) as an important otter sanctuary. The aim of this study was to investigate whether this is still the case.

Studies undertaken by Rowe-Rowe in the 1970s (Rowe-Rowe, 1975, 1992, 1995), and by Carugati 20 years later (Carugati, 1995; Carugati et al., 1995; Perrin and Carugati, 2006), revealed a regular abundance of otter sign. However, a more recent study confirmed that the amount of otter sign had declined by 75% at a section of previously surveyed river that was downstream of a human settlement and farmed area (Kubheka et al., 2013). Following these findings, it was decided that a programme of regular monitoring of that river and other rivers previously surveyed in the park by Carugati (1995) and d'Inzillo Carranza (1995), was required.

In 2013, a monitoring programme was initiated at four different locations in the park in an attempt to assess whether there had been any change in the abundance of the two resident otter species over four time periods: the 1970s, 1990s, 2010 and present. As otters are seldom seen, sign (spraint sites, tracks, dens) are used to establish presence and estimate abundance, with the number of spraint sites being the most reliable in estimating otter abundance (Jenkins and Borrows, 1980; Mason and Macdonald, 1987). First, I compared the otter spraint site data between annual surveys undertaken during the current study between 2018-2023. Then, I compared these abundance estimates with those of previous studies (Rowe-Rowe, 1992; Perrin and Carugati, 2006; Khubeka et al., 2013) summarised by Rowe-Rowe (2016).

The methods employed to determine otter abundance are similar to those used previously to ensure comparable results. The results will determine whether conservation action is required.

MATERIALS AND METHODS

Study Area

uKhahlamba Drakensberg Park is a crescent shaped protected area in the KwaZulu-Natal province of South Africa. It forms the South African component of the Maloti-Drakensberg Park World Heritage Site, a transfrontier park with Sehlabathebe National Park in the Kingdom of Lesotho (Fig. 1). The park is 242 813 ha in size and comprises 15 management units. The Maloti-Drakensberg Park is a World Heritage Site, proclaimed for both its cultural and natural values. uKhahlamba Drakensberg Park is a Ramsar Site, a wetland of International Importance, is recognised as one of BirdLife South Africa's Important Bird and Biodiversity Areas and also serves as the most important conservation area for montane habitats in southern Africa (Ezemvelo KZN Wildlife, 2020).

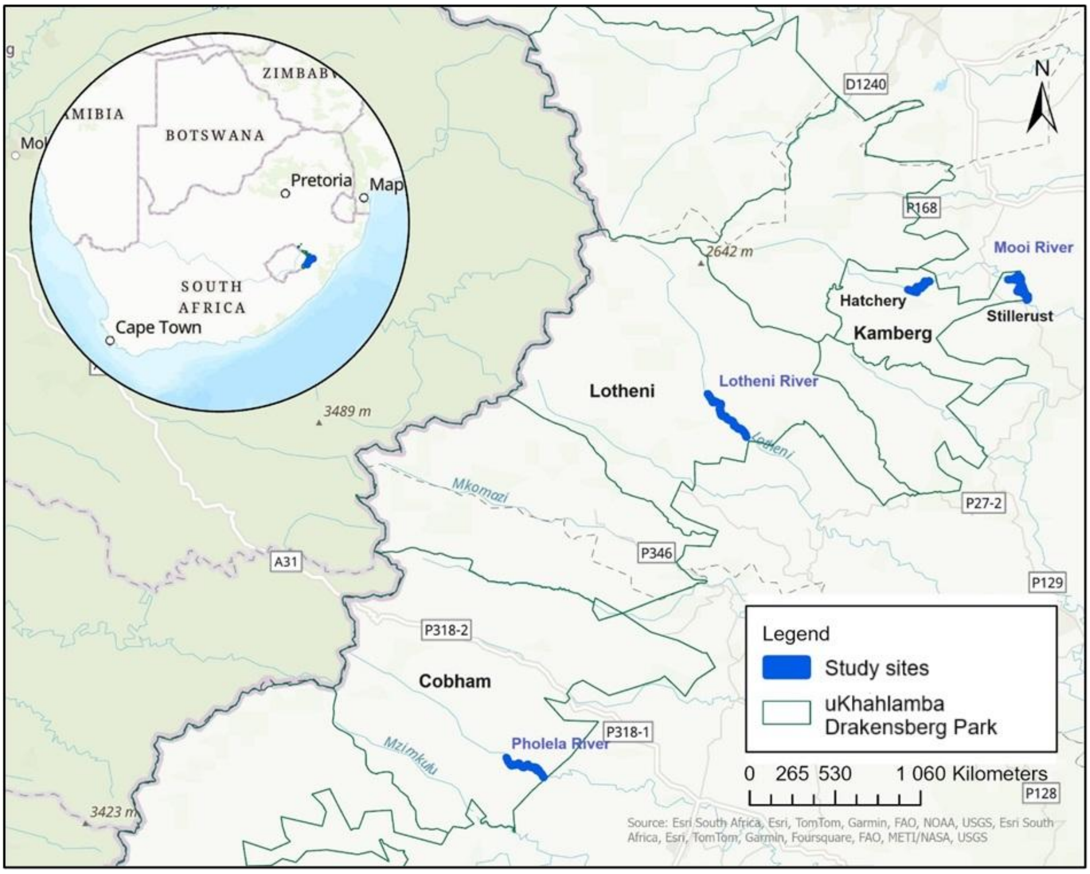

Figure 1. The location of the study sites in uKhahlamba Drakensberg Park, KwaZulu-Natal province, South Africa.

On the South African side, the Drakensberg catchment area is of major economic importance as it contributes significantly to the flow of the uThukela, uMkhomazi and uMzimkhulu Rivers, the three largest catchments in KwaZulu-Natal. The park plays a key role in the economy of KwaZulu-Natal and South Africa, through the production of high-quality water from its dense network of wetlands and rivers, the sustainable use of natural resources, and serving as a core destination for the tourism industry.

Ezemvelo KZN Wildlife is the management authority of the protected area and has monitored the population trends of riparian carnivores, the African clawless otter, spotted-necked otter and water mongoose *Atilax paludinosus,* through annual surveys since 2013.

Survey Methods

Annual surveys were conducted in late winter/early spring along 4-5 km stretches of three rivers in four management units of the park between 2013 and 2023 (Fig. 1). These surveys were undertaken by trained Ezemvelo KZN Wildlife staff.

The study sites were chosen to be the same as previous studies (Rowe-Rowe, 1975, 1992; Carugati, 1995; Perrin and Carugati, 2006; Khubeka et al., 2013). This included i) a 5 km section of the Pholela River in Cobham, ii) a 5 km section of the Lotheni River in Lotheni, iii) a 4.2 km section of the Mooi River in Kamberg (Stillerust), including an oxbow, and iv) a 5 km section of the Mooi River in Kamberg, including three trout fishing impoundments (dams). At Kamberg, the Mooi River starts in the protected area, then flows out of it for 8 km through a dense rural settlement and farmland, then re-enters the protected area. The upstream section of the Mooi River is known as Kamberg (previously referred to as the Hatchery - historically the location of a trout hatchery), and the downstream section is known as Stillerust.

I used the method described by Rowe-Rowe (1975, 1992) to establish the presence and densities of otters. As otters are seldom seen, various authors have used sign to establish presence and estimate numbers, including faeces (known as scats or spraints), tracks, rolling places, runs, slides and dens (e.g. Mason and Macdonald, 1987; Rowe-Rowe, 1992).

Each bank of each section of river and the shoreline of dams were surveyed for sign of otters once per year between 07:00h-17:00h in the last week of August or the first week of September; because it is easy to identify sign in late winter/early spring, and the two otter species are most widely distributed during this time. The survey method involved slowly walking and visually scanning along both banks of the river and the shoreline of the dams including near the dam walls and inlets. Three observers were used; one walked in the river to identify sign in mud and sand between the rocks and along the water's edge, and entry and exit points of slides. The second observer walked along the bank to identify sign within 5-10 m of the water's edge, because signs are generally found within 10 m of the water (Rowe-Rowe, 1992). The third observer walked 10-20 m from the water's edge, looking for sign amongst the riparian vegetation. Where the riverbanks are very steep, at Kamberg and Stillerust, the observer in the river used a boat in 2019-2021 to improve the detection of sign. The type and location of all signs were recorded using a GPS and saved to a database for further analyses.

Analyses

The number of spraint sites has been found to be the most reliable method for estimating otter abundance (Jenkins and Borrows, 1980; Mason and Macdonald 1987). Similarly, as a result of differences in the riparian zone between study sites and years, it was felt that spraint sites were the most reliable sign of otter presence at the four study sites. I thus report only on spraint sites. Where spraint sites contained more than 10 spraints, indicating that they had been used numerous times, they were referred to as latrines or main sites. The number of spraint sites was used to estimate the relative abundance of each species.

First, I compared the otter spraint site data between annual surveys undertaken during 2018-2023 to establish whether there was variation in otter spraint abundance in recent years. To compare spraint abundance between species (African clawless and spotted-necked otter), sites (Cobham, Lotheni. Kamberg and Stillerust) and years (2018, 2019, 2020, 2021, 2022, 2023), I used a Generalised Linear Model (GLiM) with a Quasi-Poisson distribution for over-dispersed data and Wald chi-square tests. Spraint site abundance was used as the response variable, and species, site and year were fitted as fixed factors in the model. I then used a Generalised Linear Mixed Model (GLMM) to determine whether there was a significant difference in otter spraint site abundance between years when controlling for study site.

Second, I compared the mean total number of spraint sites recorded during this study (2018-2023), inclusive of the oxbow site at Stillerust, with those of previous studies. For this I used data from each study period recorded in the same season or month as my study, i.e. the dry season or the last week of August/first week of September. Rowe-Rowe's (1975) study was undertaken in Stillerust only, over a 24-month period between 1972-1974 (Rowe-Rowe, 1975; 1992). The average number of spraint sites, density per km and total number of spraint sites were reported on by season (Spring, Summer, Autumn and Winter). Carugati's (1995) study covered all of my study sites, and the total number of spraint sites seen over a 12-month period (March 1993 - February 1994) were reported on by month and by season (wet and dry season) (Carugati, 1995; Perrin and Carugati, 2006). Khubeka et al. (2013) reported on the total number of spraint sites recorded over a four-month period in the dry season (July 2010 - September 2010) in two of my study sites, Stillerust and Kamberg.

To investigate differences in spraint site abundance between study periods, I used the ‘‘lme4’’ v.1.1-35.5 package within R (Bates et al., 2015) to perform a GLMM with Wald chi-square tests to explore the relationships between species and study period, while controlling for study site. All analyses were conducted in R v. 4.4.1 (R Core Team 2013).

RESULTS

Present Study

Surveys were undertaken annually from 2013, but only data from surveys undertaken between 2018-2023 (n=6), when the survey team received training, and the methods used (but see below) were consistent and reliable, were used in the analyses.

During the 2018-2023 surveys, an oxbow lake at Stillerust was excluded for the first two years (2018 and 2019). An average of 2.75 spraint sites of African clawless otter and 3.25 of spotted-necked otter were seen in the four years that the oxbow was surveyed (2020-2023). I tested whether the exclusion of the oxbow area in the first two years affected the results by removing all spraints identified at the oxbow at Stillerust. The exclusion affected the significance values; therefore, the data from the oxbow were excluded for comparisons between species, years and sites in my study, but the average values obtained for both species from four years (2020-2023) were included for between study comparisons. The use of the boat at Kamberg and Stillerust for three of the six years, during 2019-2021, was assumed not to affect the results since it improved the detection of sign such as tracks and slides rather than spraint sites.

The total numbers of spraints recorded from 2018-2023 are shown by species, study site and survey year (Table 1). There was a significant difference in spraint site abundance between species (χ^2=34.22, df=1, P<0.001) and sites (χ^2=12.16, df=3, P=<0.05), but not between years (χ^2=1.89, df=5, P=0.864). The average number of spotted-necked otter spraints accounted for this significant effect (P<0.001), with a higher average number of spraints than African clawless otter at every site apart from Kamberg where the average abundance of spotted-necked otter spraints (n=15) was slightly lower than the average abundance of African clawless otter spraints (n=16) (Table 1), accounting for the effect of this study site (P=<0.1), although this was not highly significant.

When controlling for study site, the difference in spraint abundance between years was not significant overall ($\chi^2_{(5)}$=8.16, P=0.148), although 2021 showed the most significant effect (P<0.01). The number of African clawless otter spraints was lowest in Lotheni in 2021 (n=10) and highest in Kamberg in 2021 (n=20) and 2022 (n=23) (Table 1). The number of spotted-necked otter spraints, on the other hand, was much lower in Kamberg (n=7) and higher in Lotheni (n=60) in 2021 than in other years (Table 1).

Table 1. The total number of otter spraint sites recorded at the four study sites in uKhahlamba Drakensberg Park between 2018-2023 (where the number of main sites or latrines are in parentheses and included in the total number of sites).

Species	Study Site	Year 2018	2019	2020	2021	2022	2023	Average ± Standard Deviation
African clawless otter	Cobham	10 (5)	13 (8)	14 (6)	9 (3)	7 (1)	3 (3)	9 ± 4.03
	Lotheni	18 (7)	11 (2)	26 (8)	10 (5)	30 (14)	15 (12)	18 ± 8.12
	Kamberg	4 (3)	19 (6)	18 (4)	20 (9)	23 (17)	11 (9)	16 ± 7.02
	Stillerust	9 (8)	6 (2)	6 (3)	16 (6)	23 (13)	1 (1)	10 ± 7.98
Spotted-necked otter	Cobham	30 (4)	37 (6)	48 (6)	38 (8)	28 (6)	40 (16)	37 ± 7.22
	Lotheni	34 (5)	41 (4)	36 (4)	60 (10)	30 (2)	36 (11)	40 ± 10.65
	Kamberg	19 (5)	24 (5)	12 (2)	7 (1)	12 (4)	18 (2)	15 ± 6.28
	Stillerust	18 (10)	25 (4)	19 (1)	33 (7)	23 (11)	48 (21)	28 ± 11.31

Differences in the Abundance of Otter Spraints

There was a significant difference in otter spraint site abundance between study periods ($\chi^2_{(3)}$ =17.24, *P*<0.001) and the relationship between species and study periods ($\chi^2_{(3)}$ =31.99, *P*<0.001), when controlling for study site.

Pairwise comparisons showed that the number of African clawless otter spraint sites differed significantly between the 1993-1994 and the 2010 study (*P*<0.05), with numbers being much lower at Stillerust in 2010 (n=5) than in 1993-1994 (n=20) (Fig. 2).

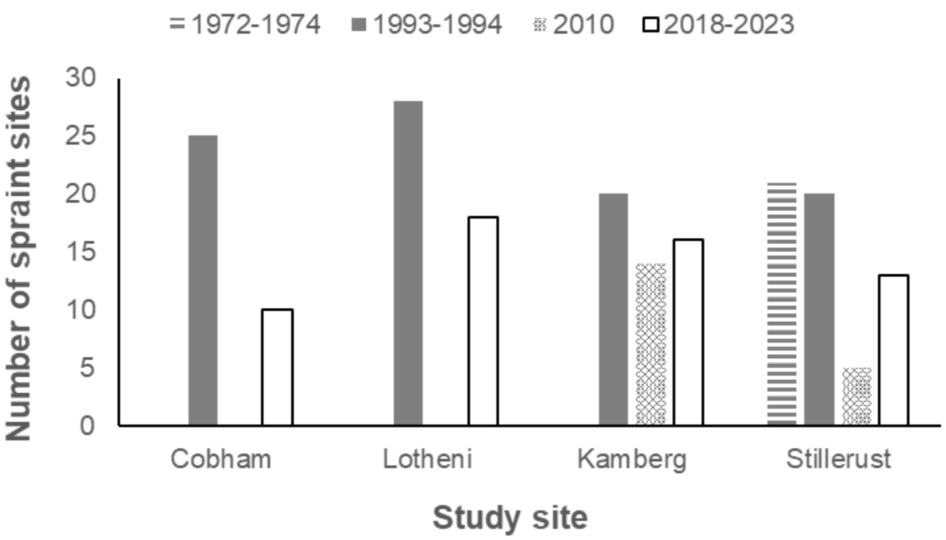

Figure 2. The average number of **African clawless otter** spraint sites at each of four study sites over four time periods in uKhahlamba Drakensberg Park: 1972-1974 (Rowe-Rowe, 1992); 1993-1994 (Perrin and Carugati, 2006); 2010 (Kubheka et al., 2013) and this study 2018-2023. N=6 for each study.

The difference in the number of spotted-necked otter spraint sites was highly significant between the 1993-1994 study and my study (*P*<0.001) with numbers being much higher at three of the four study sites in my study (Fig. 3). The difference in the number of spotted-necked otter spraint sites was also highly significant between 2010 and my study (*P*<0.001) with numbers being much higher in Stillerust in my study (n=31) than in the 2010 study (n=4).

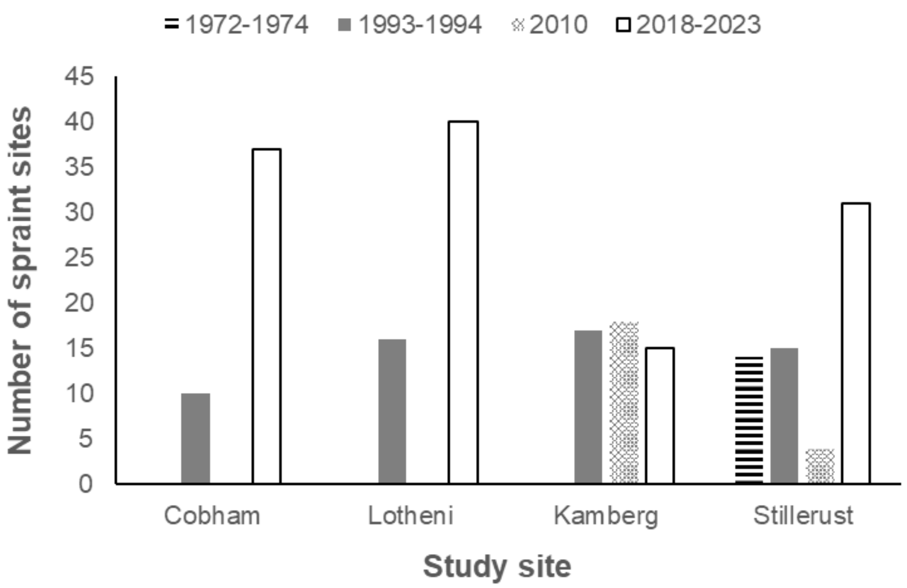

Figure 3. The average number of **spotted-necked otter** spraint sites at each of four study sites over four time periods in uKhahlamba Drakensberg Park: 1972-1974 (Rowe-Rowe, 1992); 1993-1994 (Perrin and Carugati, 2006); 2010 (Kubheka et al., 2013) and this study 2018-2023. N=6 for each study.

Overall, spotted-necked otter spraint abundance remained similar in Kamberg in the past 30 years, whereas numbers at the other study sites were higher in recent years (Fig. 3). On the other hand, African clawless otter spraint abundance was lower overall during the current study period than it was 30 years ago (Fig. 2).

DISCUSSION

This study has shown differences in spraint site abundance between otter species and study sites. Although I was not able to determine the density of the two otter species coexisting at the four study sites in uKhahlamba Drakensberg Park, the evidence of sign is useful to obtain a trend in the abundance of both species.

Although no significant differences in sign were found over the past six years, there were marked differences in that there was less evidence of African clawless otter recently than in the past, whereas there is currently more evidence of spotted-necked otter. When comparing my results with those of a previous study covering all study sites (1993-1994), the only notable difference was in the number of spotted-necked otter spraint sites, that were higher in my study. There were also notable differences in African clawless sign between 1993-1994 and 2010, and in spotted-necked otter spraint abundance between 2010 and the present.

Earlier studies revealed a regular abundance of African clawless otter sign (Rowe-Rowe, 1992; Perrin and Carugati, 2006), whereas a more recent study showed that numbers of both species had declined, particularly at Stillerust (Khubeka et al., 2013). The lack of otter sign at Stillerust in 2010 was attributed to the impacts of a densely populated subsistence farming settlement and intensive commercial dairy farming, leading to river health deterioration downstream (Khubeka et al., 2013). The substantial increase in otter sign in my study, about 20 years later, is unexpected. I predicted a further decrease in otter sign over time with the increased human population of the settlement and the intensification of farming leading to further degradation of the riverine habitat. Further investigation into the drivers of this increase is required. The Cobham, Kamberg and Lotheni study sites are within a protected area; therefore, little change in otter spraint site abundance was expected between 1993-1994 and the present.

The greater amount of sign of spotted-necked otter than that of African clawless otter presents a conundrum. Based on all African studies, Rowe-Rowe and Somers (1998) concluded that the spotted-necked otter has evolved more as a piscivorous otter and is, therefore, dominant in the fish-rich lakes and large rivers. The African clawless otter, on the other hand, is well-adapted for the capture and consumption of crabs and is thus the dominant otter in waters which are poor in fish faunas but rich in crabs, as is the case in Drakensberg rivers and minor streams. The findings of this study, therefore, deserve further investigation, particularly in terms of prey availability.

I recommend an investigation into the drivers of the decline in African clawless otter spraint sites and the increase in spotted-necked otter spraint sites. Further studies can be undertaken to determine the factors that most influence the annual fluctuations in the numbers of spraint sites of both species. The spotted-necked otter is more aquatic than the African clawless otter (Lejeune and Frank, 1990; Rowe-Rowe and Somers, 1998); therefore, I would expect higher numbers with improved water quality and quantity. Prey availability and water flow levels can be used as surrogates for water quality and quantity, respectively. Prey availability can then be compared with that reported by Perrin and Carugati (2000), which may help clarify why more spotted-necked otter sign was noted in the current study. Both species require some degree of cover along the riverbank (Carugati, 1995; Lejeune and Frank, 1990; Rowe-Rowe, 1992); therefore, the fire management programme (whether the riverbank has burnt or not) will indicate the available vegetation cover. The location of the river (whether in the catchment area or further downstream) will provide a further indication of the value of the protected area in conserving these riparian carnivores.

I recommend regular monitoring of otter populations at the four study sites, as well as a baseline survey of additional suitable rivers in the central and northern sections of uKhahlamba Drakensberg Park. Otters as apex predators are indicators of freshwater ecosystem health (Rowe-Rowe, 1995). Surveys of water quality and prey availability will provide a good indication of river health. Regularly monitoring these aspects at all study sites and other major rivers in the protected area could indicate changes at an early stage, which can then be addressed before the situation worsens.

CONCLUSIONS

Jenkins and Borrows (1980) studied otter distribution using the location of spraints and concluded that change in the number of spraints only gives an approximation of the change in the number of otters. However, I suggest, based on the data presented here, that regular surveys are sufficient to monitor the presence of these species and that the use of sign, in particular the density of spraints sites, allows comparisons between years and studies.

The results of this study suggest that uKhahlamba Drakensberg Park continues to contribute significantly to otter conservation in the country, specifically spotted-necked otter. The healthy increase in the number of spraint sites of spotted-necked otter is encouraging, considering its vulnerable status. The decrease in the sign of African clawless otter from the original study is concerning and requires further investigation.

Acknowledgements - *David Rowe-Rowe's unwavering support, encouragement, assistance, and comments on a draft of this manuscript are greatly appreciated. I thank Ezemvelo KZN Wildlife staff that have assisted with surveys since 2013. This includes the Field Rangers and Environmental Monitors in Cobham, Lotheni and Kamberg, the Officers in Charge of Lotheni (Sibongiseni Khoza) and Kamberg (Siphiwe Khoza, Stephen Richert), and the Ecological Advice technicians (Rickert van der Westhuizen,* *Alicia Gomez, and Nontethelelo Mchunu). Yvette Ehlers Smith is thanked for her assistance with the statistical analyses.*

REFERENCES

Bates, D., Mächler, M., Bolker, B., Walker, S. (2015). Fitting Linear Mixed-Effects Models Using lme4. *J. Stat. Softw.* **67(1)**: 1–48. https://doi.org/10.18637/jss.v067.i01

Carugati, C. (1995). Habitat, prey, and area requirements of otters (*Aonyx capensis* and *Lutra maculicollis*) in the Natal Drakensberg. MSc thesis, University of Natal. Pietermaritzburg.

Carugati, C., Rowe-Rowe, D.T., Perrin, M.R. (1995). Habitat use by *Aonyx capensis* and *Lutra maculicollis* in the Natal Drakensberg, South Africa: Preliminary results. *Hystrix* **7**: 239-242. https://doi.org/10.4404/hystrix-7.1-2-4075

d'Inzillo Carranza, I. **(1995).** Use of space and activity rhythms of spotted-necked otters in the Natal Drakensberg. MSc thesis, University of Natal, Pietermaritzburg. http://hdl.handle.net/10413/10346

Ezemvelo KZN Wildlife. (2020). uKhahlamba Drakensberg Park: Integrated Management Plan. *Ezemvelo KZN Wildlife Unpublished Report Vs. 2.0*., Pietermaritzburg, KwaZulu-Natal, South Africa, pp. 235.

Jenkins, D., Borrows, G.O. (1980). Ecology of otters in northern Scotland. III. The use of Faeces as indicators of otter (*Lutra lutra*) density and distribution. *J. Anim. Ecol.* **49**: 755-774. https://doi.org/10.2307/4225

Kubheka, S.P., Rowe-Rowe, D.T., Alletson, J.D., Perrin, M.R. (2013). Possible influence of increased riparian activity (stream modification and agricultural intensification) on abundance of South African otters. *Afr. J. Ecol.* **51**: 288-294. https://doi.org/10.1111/aje.12033.

Lejeune, A., Frank, V. (1990). Distribution of *Lutra maculicollis* in Rwanda: Ecological constraints. *IUCN Otter Spec. Group Bull.* **5**: 8-16. https://www.iucnosgbull.org/Volume5/Lejeune_Frank_1990.html.

Mason, C.F., Macdonald, S.M. (1987). The use of spraints for surveying otter *Lutra lutra* populations: an evaluation. *Biol. Conserv.* **41**: 167-177. https://doi.org/10.1016/0006-3207(87)90100-5

Perrin, M.R., Carugati, C. (2000). Food habits of coexisting Cape clawless otter and spotted-necked otter in the KwaZulu-Natal Drakensberg, South Africa. *S. Afr. J. Wildl. Res.* **30:** 85-92. https://hdl.handle.net/10520/EJC117096

Perrin, M.R., Carugati, C. (2006). Abundance estimates of the Cape clawless otter *Aonyx capensis* (Schinz 1821) and the spotted-necked otter *Lutra maculicollis* (Lichtenstein 1835) in the KwaZulu-Natal Drakensberg, South Africa. *Trop. Zool.* **19**: 9-19. https://www.researchgate.net/publication/285919457

R Core Team. (2013). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. Available: http://www.R-project.org.

Rowe-Rowe, D.T. (1975). Biology of Natal Mustelids. MSc thesis, University of Natal, Durban.

Rowe-Rowe, D.T. (1992). Survey of South African otters in freshwater habitat, using sign. *S. Afr. J. Wildl. Res.* **22**: 49-55. https://journals.co.za/doi/pdf/10.10520/ EJC116892.

Rowe-Rowe, D.T. (1995). Distribution and status of African otters. In: **Reuther, C., Rowe-Rowe, D.** (Eds.), *Proceedings VI International Otter Colloquium, Pietermaritzburg 1993. Habitat* **11**: 8-10. https://hdl.handle.net/10520/EJC116997

Rowe-Rowe, D.T. (2016). Densities of otters in the Drakensberg of KwaZulu-Natal, South Africa. *IUCN Otter Spec. Group Bull.* **33**(2): 64–67. https://www.iucnosgbull.org/Volume33/Rowe-Rowe_2016.html

Rowe-Rowe, D.T., Carugati, C., Perrin, M.R. (1995). The Natal Drakensberg as an otter sanctuary. In: **Reuther, C., Rowe-Rowe, D.** (Eds,), *Proceedings VI International Otter Colloquium, Pietermaritzburg 1993*. Habitat **11**: 22 - 24. https://hdl.handle.net/10520/EJC116997

Rowe-Rowe, D.T., Somers, M. (1998). Diet, foraging behaviour and coexistence of African otters and the water mongoose. In: **Dunstone, N., Gorman. M.** (Eds.), *Behaviour and Ecology of Riparian Mammals* (Symposia of the Zoological Society of London, pp. 215-228). Cambridge: Cambridge University Press. https://doi.org/10.1017/ CBO9780511721830.014.

RÉSUMÉ: SUIVI DE L'ABONDANCE DES LOUTRES DANS LE PARC DRAKENSBERG D'UKHAHLAMBA EN AFRIQUE DU SUD

Le parc Drakensberg d'Ukhahlamba est l'une des plus grandes et des plus importantes zones protégées d'eau douce intérieures d'Afrique du Sud pour la loutre à joues blanches *Aonyx capensis* et la loutre à cou tacheté *Hydrictis maculicollis*. L'abondance relative des deux espèces a été estimée en enregistrant le nombre de sites d'épreintes dans quatre localités sur trois grands fleuves du parc pendant six années consécutives à la même période chaque année. Les résultats ont été comparés aux enquêtes précédentes effectuées dans les années 1970 et 1990 dans les quatre localités, et en 2010 dans l'une d'entre elles, en utilisant les mêmes méthodes. L'abondance des sites d'épreintes de loutres dans cette étude différait significativement entre les espèces et les sites d'étude, mais pas d'une année à l'autre, la loutre à cou tacheté étant plus abondante que la loutre à joues blanches. Il y avait une différence significative dans l'abondance des sites d'épreintes de loutres entre les périodes d'étude, et la relation entre les espèces et les périodes d'étude. Les résultats ont indiqué que la population de loutres du parc n'avait pas diminué de manière significative au cours des 30 dernières années. L'étude actuelle a permis de mettre en évidence qu'il y avait davantage d'indices de présence de loutre à cou tacheté, alors que dans les études précédentes, les indices de présence de loutre à joues blanches étaient plus abondants. Le parc continue donc de contribuer à la conservation des loutres dans le pays, en particulier, celle de la loutre à cou tacheté. D'autres études sont nécessaires pour déterminer les facteurs à l'origine des fluctuations annuelles du nombre de d'indices de présence et de l'augmentation substantielle des indices de présence de loutre à cou tacheté dans le parc ces dernières années.

RESUMEN: MONITOREO DE LA ABUNDANCIA DE NUTRIAS EN EL PARQUE UKHAHLAMBA, SUDÁFRICA

El Parque uKhahlamba Drakensberg es una de las áreas protegidas de aguas dulces continentales más grandes y más importantes en Sudáfrica, tanto para la nutria sin uñas Africana Aonyx capensis y la nutria de cuello manchado Hydrictis maculicollis. La abundancia relativa de ambas especies fue estimada registrando el número de sitios con fecas en cuatro localidades en tres ríos grandes en el parque, por seis años consecutivos, durante el mismo período cada año. Los hallazgos fueron comparados con relevamientos previos hechos durante los 1970s y los 1990s en las cuatro localidades, y en 2010 en una de ellas, utilizando los mismos métodos. La abundancia de sitios con fecas/marcas olorosas en este estudio difirieron significativamente entre especies y entre sitios de estudio pero no entre años, siendo más abundante la nutria de cuello manchado que la nutria sin uñas Africana. Hubo una diferencia significativa en la abundancia de sitios con fecas entre períodos de estudio, y en la relación entre especies y períodos de estudio. Los resultados indican que la población de nutrias del parque no ha declinado significativamente en los últimos 30 años. Una diferencia observada fue que en el presente estudio encontramos más signos de la nutria de cuello manchado, mientras que en los estudios previos fueron más abundantes los signos de nutria sin uñas Africana. El parque, por lo tanto, continúa contribuyendo a la conservación de nutrias en el país, particularmente la nutria de cuello manchado. Se requieren ulteriores estudios para identificar los determinantes de las fluctuaciones anuales en el número de signos, y del incremento sustancial de los signos de nutria de cuello manchado en el parque en años recientes.