"Ornaments of the Desert"

Springbok Treks in the Cape Colony, 1774-1908

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COMPULSORY DECLARATION

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

Signature: Signed by candidate Date: 16 APRIL 2004

"On the 28th I had the satisfaction of beholding for the first time, what I had often heard the Boers speak of, viz. a 'trek-bokken', or grand migration of springboks. This was, I think, the most extraordinary and striking scene, as connected with beasts of the chace, I ever beheld. For about two hours before dawn I had been lying awake in my wagon, listening to the grunting of the bucks within two hundred yards of me, imagining that some large herd of springboks was feeding beside my camp; but rising when it was light, and looking about me, I beheld the ground to the northward of my camp actually covered with a dense living mass of springboks, marching slowly and steadily along; they extended from an opening in a long range of hills on the west through which they continued pouring, like a flood of some great river, to a ridge about a mile to the north-east, over which they disappeared – the breadth of the ground they covered might have been somewhere about half a mile. I stood upon the forechest of my wagon for nearly two hours, lost in astonishment at the novel and wonderful scene before me, and had some difficulty in convincing myself that it was a reality which I beheld, and not the wild and exaggerated picture of a hunter's dream.

During this time these vast legions continued streaming through the neck in the hills in one unbroken compact phalanx. At length I saddled up, and, riding into the midst of them with my rifle and after-riders, fired into their ranks until fourteen had fallen, when I cried 'Enough'. We then retraced our steps to secure from the ever voracious vultures the venison which lay strewed along my track; having collected the springboks at different bushes, and concealed them with brushwood we returned to camp.

A person anxious to kill many springboks might have bagged thirty or forty that morning. I never, in all my subsequent career, fell in with so dense a herd as I did this day, nor found them allow me to ride so near them. Having inspanned, we proceeded with the wagons to take up the fallen game, and held for the small periodical stream beside which the wandering Boers were encamped, that point being in my line of march for Beer Vley. Vast and surprising as was the herd of springboks which I had that morning witnessed, it was infinitely surpassed by what I saw on the march from my vley to old Sweir's camp; for on clearing the low range of hills through which the springbok had been pouring, I beheld the plains, and even the hillsides which stretched away on every side of me, thickly covered, not with herds, but with one vast living mass of springboks; as far as the eye could strain the landscape was alive with them, until they softened down into a dim red mass of living creatures.

To endeavour to form any idea of the amount of antelopes which I that day beheld were vain, but I have, nevertheless, no hesitation in stating that some hundreds of thousands were within the compass of my vision."

(Cumming, R.G. 1857. *The Lion Hunter of South Africa: Five Years Adventure in the Far Interior of South Africa; with Notices of the Native Tribes and Savage Animals*, New Edition, John Murray, London. pp. 79-81.)

"It is scarcely possible for a person passing over some pf the extensive tracts of the interior, and admiring that beautiful antelope, the springbuck, thinly scattered over the plains, bounding in playful ignorance, to figure to himself that these ornaments of the desert can often become as destructive as the locusts we have just described.

The incredible numbers, which sometimes pour in from the north during protracted droughts, distress the farmer as much. Any attempt at numerical computation would be vain, and by trying to come near the truth the author would subject himself, in the eyes of those who have no knowledge of the country, to a suspicion that he was availing himself of a traveller's assumed privilege."

(Hutton, C.W. (ed.). 1887. *The Autobiography of the Late Sir Andries Stockenstrom*, JC Juta & Co. Cape Town. p. 37)

ABSTRACT:

"Ornaments of the Desert" - Springbok Treks in the Cape Colony, 1774-1908

Modern scientists and popular authors alike have relied entirely on contemporary traveller accounts for their understanding of eighteenth and nineteenth century springbok treks. The effect of this in skewing explanations of both the nature and causes of these mass movements is demonstrated through a comprehensive review of the traveller accounts and the research of modern scientists. A variety of new historical sources are then introduced and utilised to clarify the ecological parameters of the phenomenon. The most important is the Karoo press, a close reading of which provides a chronological record of the spatial and temporal occurrence of springbok treks in the Karoo in the second half of the nineteenth century. This record is compared with climate reconstructions and, for the later periods, detailed rainfall records. A model explaining the mass migrations of the springbok is then developed and tested against the last great migration of 1895-6. The reasons for the cessation of springbok treks in the Karoo after this date are then explained. It is hoped that, in clarifying the questions that have been asked of historical springbok migrations, this study will prove useful to scientists and conservationists and contribute to an emerging literature on the utilisation of historical sources in ecological explanation and modelling.

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First and foremost, thank you to Lance van Sittert, for his encouragement, enthusiasm, patience, and for seeing things clearly when I didn't. He regularly gave up personal time and space and the thesis benefited greatly from his input. The idea to look at some aspect of the *trekbokke* was something Lance suggested to me in 1996 and it took a further five or six years before I decided to take the plunge and come back to the University of Cape Town. Neither of us realised the full potential of the subject and in retrospect, a year to fully research and write up a coherent and comprehensive explanation of the phenomenon was ambitious. The pressure of a limited time window to do justice to a unique subject meant I relied on many others for information and assistance.

Thank you to Andrew Bank for unrestricted access to his transcripts of the Wilhelm Bleek and Lucy Lloyd archive which significantly shortened my search through this material. Andrew also provided very helpful comments on the first section of Chapter 2 which is based on this ethnography. The Rubidge family of Wellwood Farm outside Graaff-Reinet were also very generous in allowing access to the family archives, while Maxie Hugo at the Calvinia Museum, David Morris at the McGregor Museum, Celeste Feeder at the De Beers Archive in Kimberley, Tony Fairall of the University of Cape Town Astronomy Department, Charles van den Heever (Hanover farmer), David Bell (Colesberg farmer) and Bishop Edward Risi at Keimoes were all unstintingly helpful in providing access to sources, memories and other information. Garth Sampson, Janette Deacon, Gary Marquard and others all responded enthusiastically to requests for information and my employers were generous enough to keep me on in a part-time capacity which made an enormous difference to living and tuition expenses.

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INTRODUCTION:

Environmental history or historical ecology?

Noting the lack of analyses of the "sequential impact of settlement and firearms on particular species of wildlife" in southern Africa, the eminent environmental historian William Beinart has asked: "Can we write the history of wild animals – rather than simply what was done to them?"[1] What follows is an attempt at answering this question. Such a focus of course can only be on human interpreted aspects of wild animals, such as the behaviour, population or range of a particular species, and in practical terms is most likely to focus on the human-animal interface as this is where historical sources are available. Indeed Jane Carruthers has defined the core of environmental history as "a deliberation on how people use, manage or interrelate with natural resources and the natural environment."[2] Hence my own work on the elephants of the Knysna forests examined the fate of this relict population within the context of failed nineteenth century attempts at local industrial and economic development (such as forestry, gold mining and harbour construction) and an emerging conservation consciousness among the white middle class that owed much to a local sense of identity related to 'ownership' of, and perceived benefits from, the remnant elephants.[3]

Springbok inhabiting the Karoo during the nineteenth century can be examined through much the same lens and in fact both species relate to Beinart's suggested line of inquiry: Both were favoured to some degree by settlers for consumption or trade,

[1] Beinart, W. 2002. 'South African environmental history in the African context', in: Dovers, S., Edgecombe, R., & Guest, B. (eds.). *South Africa's Environmental History: Cases and Comparisons*, David Philip, Cape Town. p.216.
[2] Carruthers, J. 2002. 'Environmental history in southern Africa: An overview', in: Dovers, et al. p. 4.
[3] See: Roche, C.J. 1996. ''The elephants at Knysna' and 'the Knysna elephants' – from exploitation to conservation: man and elephants at Knysna 1856-1920', Unpublished Honours dissertation, University of Cape Town.

both weathered the storm of colonial settlement and hunting (albeit in different ways and with very different levels of success), and both either originally exhibited or adapted certain behaviours that made their continued survival within a settled environment possible. There are significant differences of course. Elephants survived in the Knysna forests by adapting to an unnatural environment that they had most probably utilised only sporadically prior to a settler presence and which was largely inaccessible to ivory and sport hunters. Of importance too was the fact that once it was recognised that industries such as forestry and gold mining – whose development was initially thought to be prevented by the presence of elephants – were unsustainable, the pachyderms began to be seen as valuable in terms of local identity and because they were admired by visitors from urban centres such as Port Elizabeth. Similarly, springbok were able to endure in great numbers through the nineteenth century because of natural behavioural patterns and adaptations that allowed them to inhabit waterless areas beyond the permanent reach of settler society and their capacity for prodigious population growth under favourable climatic conditions. These remote semi-desert areas were eventually settled and thereafter springbok owed their continued survival to the economic and social value conferred by private 'ownership.' Graaff-Reinet was a forerunner in enclosure and systematic utilisation of springbok in a farming environment and the species became integral to both nineteenth century social status[4] and twentieth century agricultural diversification[5] in the division.

[4] See: Roche, C. 2003. '"Fighting their battles o'er again": The springbok hunt in Graaff-Reinet, 1860-1908', *Kronos*, 29, forthcoming.

[5] See: Beinart, W. 2003. *The Rise of Conservation in South Africa: Settlers, Livestock, and the Environment 1770-1950*, Oxford University Press, Oxford. pp.304-331.

As Beinart, Carruthers and others have noted, a cross-disciplinary approach is central to the idea of environmental history and requires a grasp of both scientific and historical sources, research techniques and debates.[6] Inherent in this inter-disciplinary approach is the problem of a 'mixed voice effect'. Is one writing the ecological history of a species or ecosystem, or the history of the impact of humans on a species or ecosystem ... historical ecology or environmental history? In addition, can it be written in a style intelligible, and indeed useful, to ecologists as well as historians, and how does one find the necessary interdisciplinary discourse to match the ambition of the field and speak to both audiences?

In some cases environmental history can perhaps be better described as social, or even political, history examined through an environmental lens – perhaps an attempt to justify a relatively new and still emerging field, or to broaden the scope of more conventional history. As famously elucidated in Braudel's history of the Mediterranean[7], the environment plays an important role in political and social events and organisation and, despite the popular consensus among our species that we dominate the natural world, it is clear that environmental factors still exert a significant influence over all aspects of our society. Such environmental effects have not generally been given the attention they deserve by historians. That said however, is there not a place for a sharper ecological focus within environmental history? Can historical sources be used to address and perhaps even answer ecological questions and can't the inter-disciplinary approach be widened to make this data and analysis more useful to science? In South Africa this approach has indeed been attempted in

[6] Beinart, 2002. p. 224. See also: Carruthers, 2002. p.4.
[7] See: Braudel, F. 1972. *The Mediterranean and the Mediterranean World in the Age of Philip II*, Vol. I, Collins, London; Tosh, J. 1994. *The Pursuit of History: Aims, Methods and New Directions in the Study of Modern History*, 2nd edition, Longman, London & New York. pp.107-109.

the reconstruction of nineteenth century climates[8], and even in accounting for Karoo pasture degradation[9], but as far as wild mammals are concerned has been limited to reconstructions of particular events[10], and past distributions[11]. Cultural readings have predominated in South African environmental history and to date focused on attitudes towards preservation, conservation, extermination and utilisation with an obvious and justifiable focus on how humans relate to various aspects of this environment.[12] Springbok treks and the utilisation of this species in a variety of ways by various elements of nineteenth century society do indeed lend themselves to such a reading[13], but this is not what is attempted here. Rather the aim is to shed new light on an

[8] See: Vogel, C.H. 1987. 'The reconstruction of the nineteenth century Cape climate using documentary evidence', Unpublished MA thesis, University of the Witwatersrand; Vogel, C.H. 1988a. 'Climatic change in the Cape colony, 1820-1900', *South African Journal of Science*, 84: p.11; Vogel, C.H. 1988b. '160 years of rainfall at the Cape – has there been a change?', *South African Journal of Science*, 84: pp.724-726; Lindesay, J.A & Vogel, C.H. 1990. 'Historical evidence for Southern Oscillation-southern African rainfall relationships', *International Journal of Climatology*, 10: pp.679-689; Nash, D.J & Endfield, G.H. 2002. 'A 19th century climate chronology for the Kalahari region of central southern Africa derived from missionary correspondence', *International Journal of Climatology*, 22: pp.821-841.

[9] See: Dean, W.R.J. & Macdonald, I.A.W. 1994. 'Historical changes in stocking rates of domestic livestock as a measure of semi-arid and arid rangeland degradation in the Cape Province, South Africa', *Journal of Arid Environments*, 26: pp.281-298; Hoffman, M.T., Cousins, B., Meyer, T., Petersen, A. & Hendricks, H. 1999. 'Historical and contemporary land use and the desertification of the Karoo', in: Dean, W.R.J. & Milton, S.J. (eds.). *The Karoo: Ecological Patterns and Processes*, Cambridge University Press, Cambridge. pp.257-273.

[10] See: Hoffman, T. 1993. 'Major P.J. Pretorius and the decimation of the Addo elephant herd in 1919-1920: important reassessments', *Koedoe*, 36(2): pp.23-44.

[11] See: Skead, C.J. 1962. 'The use of early historical references in the study of bird and mammal distribution', *Annals of the Cape Provincial Museums*, 2: pp.138-142; Skead, CJ. 1980. *Historical Mammal Incidence in the Cape Province, Volume 1: The Western and Northern Cape*, The Department of Nature and Environmental Conservation of the Provincial Administration of the Cape of Good Hope, Cape Town; Skead, C.J. 1987. *Historical Mammal Incidence in the Cape Province, Volume 2: The Eastern Half of the Cape Province, Including the Ciskei, Transkei and East Griqualand*, The Chief Directorate Nature and Environmental Conservation of the Provincial Administration of the Cape of Good Hope, Cape Town.

[12] See for example: Carruthers, E.J. 1985. 'The Pongola Game Reserve: An eco-political study', *Koedoe*, 28(1): pp.1-16; Carruthers, J. 1989. 'Creating a National Park, 1910-1926', *Journal of Southern African Studies*, 15(2): pp.188-216; Carruthers, J. 1993. 'Police boys and poachers: Africans, wildlife protection and national parks, the Transvaal 1902 to 1950', *Koedoe*, 36(2): pp.11-22; Van Sittert, L. 1988. 'Keeping the enemy at bay: The extermination of wild carnivora in the Cape Colony, 1889-1910', *Environmental History*, 3: pp.311-332; Beinart, W. 1998. 'The night of the jackal: sheep, pastures and predators in the Cape', *Past and Present*, 158: pp.172-206; Van Sittert, L. 2002. '"Our irrepressible fellow colonist": The biological invasion of Prickly Pear (*Opuntia ficus-indica*) in the Eastern Cape, c.1890-c.1910', in: Dovers, et al. pp.139-159.

[13] For an example of a cultural reading of the relationship of colonists to springbok see: Roche, 2003.

ecological phenomenon no longer amenable to scientific analysis and thereby to suggest a new way of using historical sources in environmental history.

While this thesis does not purport to solve the conundrum of multiple voices inherent in an inter-disciplinary field, in embracing both ecological and historical debates and discourses it does speak in two tongues and aims to achieve more than simply contribute to a historical literature that is "litter[ed] [with] footnotes … to ecological and scientific journals"[14].

"The most dramatic scenes in the world of mammals"[15] – the myth, legend and aura surrounding springbok treks

The disappearance of springbok mass migrations after 1896, combined with the lack of a scientific explanation of the phenomenon has done nothing to diminish public fascination with the subject and lent it an aura of myth. The springbok, and especially springbok hunting, had long been deemed characteristic of the Cape Colony and in the lead up to Union the antelope became a national symbol. Paul Roos's South Africa rugby team touring England in 1906 became known as 'the springbucks'[16] and even England was said to be "springbok mad"[17]. In 1910 the springbok head became the Union of South Africa watermark, and in 1926 it first displaced the King's head on the Union postage and currency[18]. The springbok sold everything from children's

[14] Beinart, 2002. p.224.
[15] Green, L.G. 1955. *Karoo*, Howard Timmins, Cape Town. p.35.
[16] See: Cape Archives Depot (hereinafter CAD): 2/1/1/44, C14/28/259 – Historical information. Miscellaneous enquiries by the public. Use of the springbuck as a South African national emblem or symbol [1942]; Lighton, C. 1951. *Sisters of the South*, Hodder & Stoughton, London. p.153.
[17] *Graaff Reinet Advertiser*, 22 October, 1906.
[18] Beinart, W. & Coates, P. 1995. *Environment and History – the Taming of Nature in the USA and South Africa*, Routledge, London. p.77.

dolls to cigarettes and the national airliner[19], was the symbol of South Africa's international sports teams and the name borne by its soldiers in war[20].

"I am the sportsman's emblem (pridefully the springbok said),
For to the shades of Pegasus I'm well and truly wed,
And the exploits of the athletes of Olympia would lose shine
If their record leaps and paces they made bold to match with mine.

As sons of South Africa fight in the teeth of war,
Be it in the British Commonwealth or on some foreign shore,
They're lauded as the springboks, and the world rings with their fame,
For on the fields of sport or battle they add lustre to my name.

On the Union's coat-of-arms and soldier's caps for all to see,
I appear (went on the springbok) in immortal effigy,
So of course you'll want to toast me in your whiskies and your beers,
And moreover I'm deserving of three very hearty cheers."[21]

Etched, as it was, in white consciousness, the national animal, and especially the phenomenon of its so-called migrations, or *trekbokken* as these mass movements were known[22], often featured in popular fiction.

Scully was the first author to really capitalise on the subject in his so-called "desert books" and both *Between Sun and Sand* (1898) and *Lodges in the Wilderness* (1915), did much to popularise the notion of enormous springbok treks that swept across the steppes of the Karoo, devouring everything before them and eventually rushing headlong into the sea where "millions" drowned.[23] Stuart Cloete's fictional account of the South African War, *The Hill of Doves*, first published in 1942, is worth quoting at length as another example of popular literature dramatising the *trekbokken*:

[19] Beinart & Coates. p.77.
[20] Bigalke, R.C. 1966. 'The springbok', *Natural History*, 75(6): pp.20-25.
[21] Stokes, C.S. 1941. *Sanctuary*, The 'Sanctuary' Production Committee, Cape Town. p.396.
[22] Rather than simply the Dutch plural of trekbok, *trekbokken* was applied as the collective noun for trekbokke migrating and came to refer to the phenomenon as a whole rather than the animals of which it was comprised.
[23] See: Scully, W.C. 1898. *Between Sun and Sand: A Tale of an African Desert*, Juta, Cape Town;. pp.99-110; Scully, W.C. 1915. *Lodges in the Wilderness*, Herbert Jenkins, London. pp.228-248.

"She still could not believe that what she saw was true. It was still a dream. She had heard about it, everybody knew that the springbok trekked sometimes from the North driven by drought. It was not a regular happening, but one which occurred every ten years or twenty years, there was no rule – only the precedent of their trek, and the tales told that she had always thought to be exaggerated, hunters' stories; the stories of those who wished to be important because of something they had witnessed.
But she had never believed it could be like this. There were thousands of them, hundreds of thousands. As far as the distant hills the veld was white with slowly moving buck; the world was blanketed with them. Some were so near that she could almost touch them. They ignored her, ignored Reuter and the dogs. They walked past with their lyre horns raised, their golden eyes unseeing, a mass of white backs and pale brown flanks streaked with a chestnut bar. Already the ground was cut up by them. The smooth, goose-grazed grass in front of the house torn, as of it had been harrowed. The grass was gone and the small bushes gone or hanging loose from their roots. Another astonishing thing was that there were big buck with them – blesbok, kudu, even a zebra foal. That was a strange thing to see in your front yard. Caught up in the stream they were unable to turn back. She wondered where the zebra had come from, there were none near-by.
There were always some springbok about – houbokke, they called them, that lived in these parts; but these were from the distant North, they were the trekbokke. No one knew whence they came or why they came – though it was assumed to be drought that drove them – or where they went. She had heard somewhere that they went as far as the distant sea, and, drinking the salt water, died there along the strand in great banks, that, rotting, smelled so strong that people living there were driven from their homes.
[Grandfather sat on the stoep ...] His chair was set up near a stoep pole and he began to fire methodically: firing, lowering his gun, and handing it to Reuter, who gave him another. The barrel of powder had been rolled up and was beside his chair. ...
And still the buck pressed on, slowly, strongly, irrepressibly, weighted by their thousands. Oupa's bullets cut through them bringing down several sometimes with a single shot. But it made no difference. At last Oupa put down his guns. ...
It was Biblical – like one of the plagues sent upon the Egyptians. The world was white with moving bodies; the horizon obscure with red dust through which, as it parted, only more buck were to be seen.
"how long will it go on Oupa?" she asked at last.
"I do not know," he said. "It is only a little trek. When I was young they really moved. Then they were so thick that their bodies touched each other".
Next day was the same. Still the buck came, a wide blanket of moving bucks being drawn from the North into the distant South. The flood showed no sign of ending. ... But at last on the third day, the buck thinned down. These were the laggards and weakly ones that came. They got thinner and thinner. A wild dog came right past the house. ...
The buck had gone, but they had left desolation. No green thing stood. There was not a buck to be seen, only in the distance a dust cloud to the south showed the path they had taken. There were only the dead buck mangled by the hooves of the multitude that had passed over them; the flayed bodies of those that the boys had skinned; and the sky filled with the circling vultures that followed the herd to eat the sick and fallen; and to clear up what was left them by the killers. Grass and bush were gone, and the smaller trees were hung with white hairs rubbed from the buck as they passed under them. The air was heavy with the smell of rotting bodies."[24]

Cloete's fictionalised account was a thinly disguised version of Cumming's description of a trek he had witnessed in 1844[25] and elements of both Cumming and other nineteenth century observers of springbok treks, such as Scully and George

[24] Cloete, S. 1983. *The Hill of Doves*, Struik, Cape Town. pp.420-426.
[25] Cumming, R.G. 1857. *The Lion Hunter of South Africa: Five Years Adventure in the Far Interior of South Africa; With Notices of the Native Tribes and Savage Animals*, New Edition, John Murray, London. pp.79-81. See inside cover of this thesis for part of the description by Cumming.

Fraser[26], are frequently and easily discernible in later accounts. Lawrence Green, another popular author writing in the second half of the twentieth century eschewed a fictionalisation of historical accounts in favour of purported eyewitness recollections and in his book *Karoo* blended these with historical accounts, helping to crystallise the modern perception of springbok treks[27]. Green and others such as Eve Palmer[28] and Eric Rosenthal[29] were familiar with the historical literature and used this to build an image of springbok treks that was even more effective when translated into visual representations for a popular audience. *Die Huisgenoot*, for example, published artists' renditions in 1962 and 1975 (see Figures I and II) that powerfully shaped its readerships perceptions of the migrations.

Figure I: *"Springbokke, honderdduisende van hulle wat deur 'n onbekende trekgier voortgedryf word ..."* An artist's rendition of a springbok trek that appeared in *Die Huisgenoot* in 1962 clearly modelled on George Fraser's account of a trek at Beaufort West in 1849.[30]

[26] See: Fraser, J.G. 1922. *Episodes in My Life*, Juta & Co., Cape Town. pp.13-15.
[27] See: Green, 1955. pp.35-47.
[28] Palmer, E. 1966. *The Plains of Camdeboo*, Collins, London.
[29] Rosenthal, E. 1962. 'Die springboktroppe van Noord-Kaapland', *Die Huisgenoot*, 16 November, pp.54-55.
[30] Rosenthal, 1962. p.55.

Figure II: An artist's impression of the *Trekbokken* published by *Die Huisgenoot* in 1975 and which accompanied an article on the establishment of a nature reserve outside Graaff-Reinet and the return of the Karoo to its former natural glories[31]

This popular perception was so strongly entrenched that it even shaped the thinking of post-war biologists and zoologists who first began to look at the ecology of springbok. Much to the chagrin of later scientists such as Liversidge, some of these pioneers uncritically accepted popular accounts of springbok treks numbering in the millions as "authoritative sources"[32]. Only in the final quarter of the twentieth century were attempts made to subject historical accounts to critical analysis. These were limited in scope however and yielded more questions than answers, leaving the popular perception of mass migrations of "millions upon millions" of springbok along well-defined paths unchallenged.

[31] Anon. 1975. 'Hier moet die ou Karoo heerleef, *Die Huisgenoot* 13 June, pp.66-71.
[32] See: Liversidge, R. 1978. 'It was all exaggeration', *African Wildlife*, 32: pp.26-27.

The bison of southern Africa?

The *trekbokken* of popular perception invites comparison with the bison of North America which have received considerable attention from American historians[33]. There are however important differences between the two. Springbok leather was not as desirable as that of the bison and was never the target of mass commercial hunting on the scale which characterised bison harvesting. Nor were springbok populations, unlike bison, stable, but rather subject to wide natural fluctuations.[34] Nonetheless there are also some obvious parallels. Both species impressed settlers by their massive and seemingly inexhaustible numbers. The advent of railways opened access to their heartlands and enabled their widespread commercial utilisation. Both subsequently experienced a dramatic drop in numbers that resulted in near extinction for one. Their collapse was an important component in the conquest of aboriginal people, and both were replaced by domesticated ungulates such as cattle and sheep. Finally both were important to the retrospective definition of the spirit of the prairie and Karoo respectively as a lost Eden. In the past fifty years both species have enjoyed something of a revival in numbers and distribution[35] and in the 1990s the bison were even the focus of an ambitious project, dubbed the 'Buffalo Commons', which aimed to transform the depressed counties of the prairie into a patchwork of wildlife reserves

[33] See for example: Cronon, W. 1991. *Nature's Metropolis – Chicago and the Great West*, Norton, New York. pp. 213-218; Flores, D. 1991. 'Bison ecology and bison diplomacy: The southern plains from 1800 to 1850', *Journal of American History*, 78(2): pp.465-485; Isenberg, A.C. 2000. *The Destruction of the Bison: An Environmental History, 1750-1920*, Cambridge University Press, Cambridge.

[34] Beinart & Coates allude to the similarities in the nineteenth century circumstances of the bison and southern Africa's elephants (Beinart & Coates, 1995. p.22), but perhaps of all the latter region's wild mammals the black wildebeest, or gnu, is the one that had the most similar experience.

[35] As far as springbok are concerned this increase in number and distribution can be charted through consulting a number of wildlife censuses. See for example: Bigalke, R.C. & Bateman, J.A. 1962. 'On the status and distribution of ungulate mammals in the Cape Province, South Africa', *Annals of the Cape Provincial Museums*, 2: pp.85-109; Van Ee, C.A. 1962. 'The distribution of ungulates in the Orange Free State', *Annals of the Cape Provincial Museums*, 2: pp.53-55; De Graaff, G. & Penzhorn, B.L. 1976. 'The reintroduction of springbok into South African National Parks', *Koedoe*, 19: pp.67-74; Lloyd, P.H. & Millar, J.C.G. 1983. 'A questionnaire survey (1969-1974) of some of the larger mammals of the Cape Province', *Bontebok*, 3: pp.1-49. For the increase in bison numbers see: Isenberg, 2000. pp164-192.

that would engineer an economic revival based on natural resource utilisation.[36] This ecological and economic renewal is perhaps the most pertinent similarity, and has already been proposed for the Karoo by biologist Richard Cowling[37].

At a time in South Africa where eco-tourism, biodiversity, expansion of protected areas and reversal of past land usage are in vogue, a scientifically robust explanation of the springbok treks takes on a new significance. The formation of large protected areas in the form of conservancies, biospheres or national parks in the Karoo has so far been driven by a need to conserve plants, birds and the riverine rabbit. Despite the expansion of the Richtersveld, Tanqua Karoo and Karoo National Parks in recent years many key species, and particularly nomadic birds, remain formally unprotected.[38] The understanding and potential recreation of the conditions vital to the renewal of springbok treks could be instrumental in providing a high profile cause behind which conservationists and the public could rally and which ultimately might provide an economic engine for the revival of the depressed Northern Cape rural economy. The attempt at specifying the ecological circumstances and dynamics of the historical springbok migrations is inspired by this possibility and takes the following structure.

[36] For a popular account of the genesis of this scheme see: Matthews, A. 1992. *Where the Buffalo Roam – the Storm Over the Revolutionary Plan to Restore America's Great Plains*, Grove Weidenfeld, New York.
[37] Beinart & Coates, 1995. p110.
[38] See: Dean, W.R.J & Lombaard, A.T. 1994. 'The protection of nomadic birds in the semi-arid Karoo: the problems of stochastic rainfall and patchy habitat use by larks (extended abstract)', *Journal fur Ornithologie*, 135: p.281; Dean, W.R.J. 1995. 'Where birds are rare or fill the air: the protection of the endemic and the nomadic avifaunas of the Karoo', Unpublished D. Phil Thesis, University of Cape Town; Dean, W.R.J. & Siegfried, W.R. 1997. 'The protection of endemic and nomadic avian diversity in the Karoo, South Africa', *South African Journal of Wildlife Research*, 27: pp.11-21; Barnes, K.N. & Anderson, M.D. 1998. 'Important Bird Areas of the Northern Cape', in: Barnes, K.N. (ed,). *The Important Bird Areas of Southern Africa*, Birdlife South Africa, Johannesburg. pp.104-122.

Chapter 1 first reviews contemporary accounts of the trekbokke and theories about the causes of their mass migrations, and then examines what modern scientists have made of the phenomenon. The historical sources used by scientists and some popular writers are considered and found to be limited in scope, an observation that is broadened in Chapter 2 through an exploration of a variety of additional sources and their ramifications for current theories and explanations of springbok treks. Chapter 3 continues this theme and focuses on the Karoo press as the most important new source in this regard. Four specific periods and their accompanying treks are then analysed more closely to develop an ecological model explaining the phenomenon. In Chapter 4 this model is tested against the final, and best documented, period of springbok treks, after which some conclusions are drawn. Chapter 5 offers an explanation for the end of the phenomenon in the Karoo with the findings summarised and reviewed in the Conclusion.

CHAPTER 1:

"As far as the eye could reach" - springbok treks and their causes: theories, explanations and conjecture c.1770-2002

Writing on springbok in 1900, Sclater was of the opinion that "far the most interesting fact … in the natural history of the springbuck is its periodical migrations, about the marvels of which much has been written, but about which little is known which will assist in forming an adequate theory on the subject."[1] This is not to say that there were no theories - even Sclater had his own - simply that too little was known to allow a comprehensive and conclusive finding on the dynamics of springbok treks. Persistent questions that were, and continue to be, asked include those posed by Lovegrove - "Where did these vast herds come from? Where did they go? Why and how often did they migrate? Were the treks true migrations or merely nomadic movements?"[2] To which others - such as how many springbok were involved, over which routes did they travel and why did the treks end? – can and have been added.

"In the same manner as the lemmings" – the late 1700s:

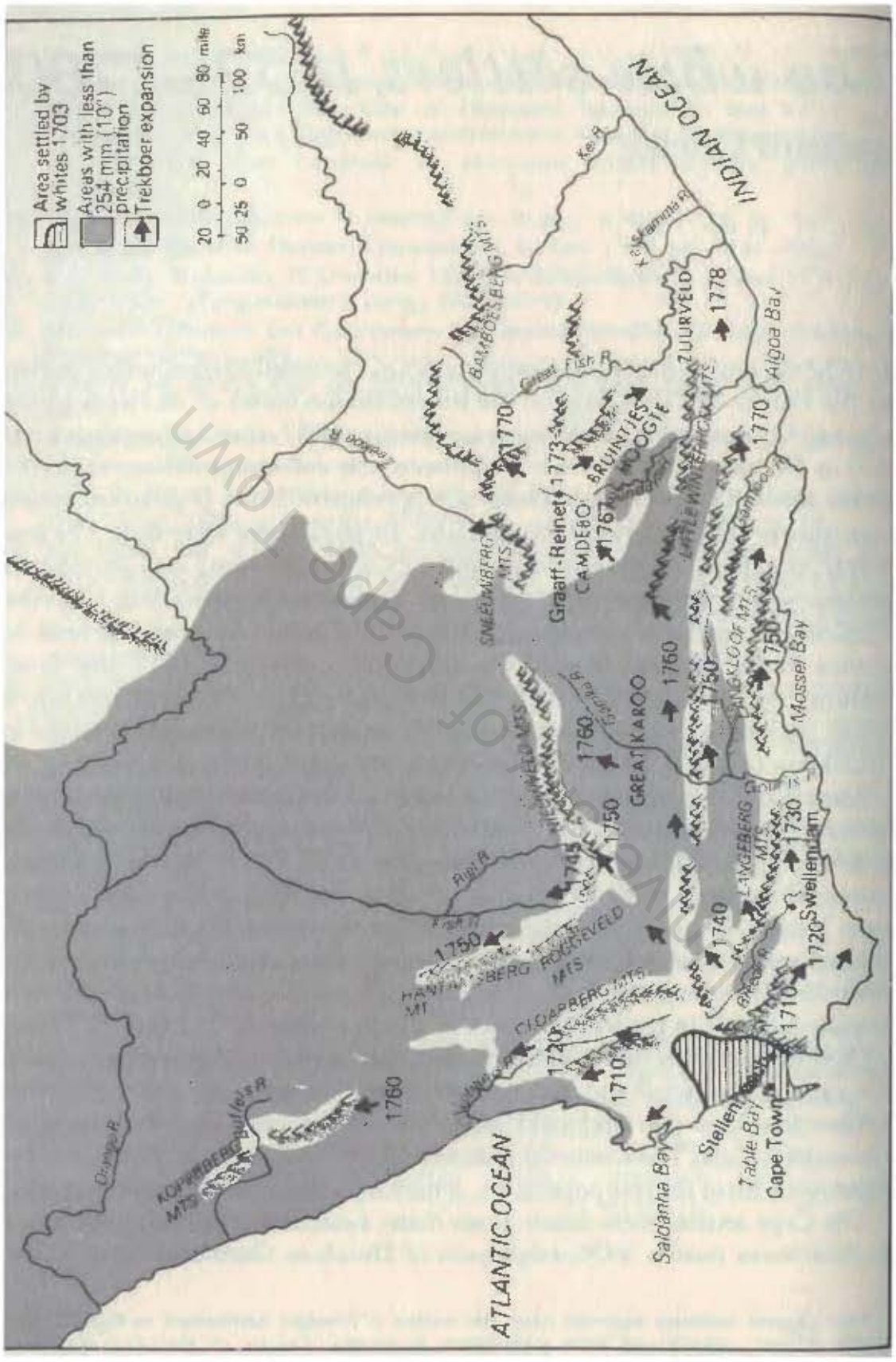
Towards the end of the eighteenth century visitors and residents at the southern tip of Africa had explored sufficiently far inland to encounter the trekbokke, or migratory springbok. Exploration and subsequent settlement had initially focused on the west coast, passing through Namaqualand towards the Orange River, as well as eastwards in an arc circumscribing the most arid interior, but covering the Great Karoo and the northern reaches of the drosty of Graaff-Reinet towards Plettenberg's Beacon in the

[1] Sclater, W.L. 1900. *The Mammals of South Africa*, Vol. I, RH Porter, London. p.213.
[2] Lovegrove, B. 1993. *The Living Deserts of Southern Africa*, Fernwood Press, Cape Town. p.161.

Seacow River Valley near its confluence with the Orange River[3] (see Figure 1.1). Despite the fact that much of this expansion had, at least in the case of the trekboers, been driven by the pull factors of additional game, grazing and trade[4], and some even by the push factors of springbok treks which necessitated the seeking of grazing elsewhere[5], it did not document the springbok treks no doubt encountered by such pioneer pastoralists, hunters and traders. Hence what is known of the springbok treks and perceptions of their causes during the period of the late 1700s has had to be gleaned from the scant literature of visitors' accounts.

[3] See: Guelke, L. 1979. 'The white settlers, 1652-1780', in: Elphick, R. & Giliomee, H. (eds.). 1979. *The Shaping of South African Society 1652-1820*, Longman, Cape Town. pp.41-74.
[4] See: Van der Merwe, P.J. 1995. *The Migrant Farmer in the History of the Cape Colony 1657-1842*, Ohio University Press, Athens. pp.29-35.
[5] Van der Merwe, P.J. 1937. *Die Noordwaartse Beweging van die Boere van voer die Groot Trek (1770-1842)*, WP van Stockhum & Zoon, Den Haag. p.213.

Figure 1.1: "Trekboer expansion, 1703-1780"[6]



[6] Guelke, 1979, p.42.

Thunberg for example wrote that the Roggeveld and even the Bokkeveld were occasionally visited by springbok which "at the expiration of a certain number of years ... emigrate in the same manner as the lemmings in Swedish Lapland, arriving in troops of millions, and going in line one after the other, eating away all the herbage wherever they pass, and suffering nothing to obstruct them in their march."[7] Masson, visiting much the same area in November 1774, heard of "great flocks of springbucks" about 160 miles north of Bockland and repeated Thunberg's claims that "it generally happens ... once in seven or eight years, that flocks of many hundred thousands come out of the interior parts of Africa, spreading over the whole country, and not leaving a blade of grass or a shrub."[8] Masson thought it likely that the springbok were forced southwards "by dry seasons, which happen sometimes in those regions to such a degree, that not a drop of rain will fall for two or three years together," and missed witnessing the trek of which he had heard due to the fact that "there happening much rain, which had recovered the grass and vegetation, they had been observed to change their course, and return to the interior parts of the country."[9]

Near present-day Somerset East, Sparrman saw herds "as far as the eye could reach" and "was informed, that in such years as are attended with great drought, the spring-boks repair in incredible numbers to the southwards, making towards the colonies at the Cape, and keeping straight forwards on their road till they are stopped by the sea, when they turn back to go home by the same way as they came."[10] Similarly Robert

[7] Thunberg, C.P. 1986. *Travels at the Cape of Good Hope, 1772-1775*, Van Riebeeck Society, Cape Town. pp.300-301.
[8] Masson, F. 1994. *Francis Masson's Account of Three Journeys at the Cape of Good Hope 1772-1775*, Table Cloth Press, Cape Town. pp.131-132.
[9] Masson, 1994. pp.131-132.
[10] Sparrman, A. 1977. *A Voyage to the Cape of Good Hope, Towards the Antarctic Polar Circle, and Round the World, but Chiefly into the Country of the Hottentots and Caffres, from the Year 1772 to 1776*, Vol. II, Van Riebeeck Society, Cape Town, 1977. p.71; p.75.

Jacob Gordon saw some ten thousand springboks near Aberdeen and recorded that "they arrive in this place in September-November to avoid drought."[11] Paterson actually encountered migratory springbok in Namaqualand north of the Camdinie River where he saw "large flocks [of] at least twenty or thirty thousand in each flock"[12], but offered no explanation for their presence. Le Vaillant appears to have encountered treks of *gazelle de parade* in both Namaqualand and the Camdeboo in the eastern Karoo. On the Camdeboo Plains in 1782 he recorded that:

"... we had met but one flock of the gazelles called spring-bock, but that flock covered all the plain, being an emigration, of which we neither saw the beginning or end; it was the season when those animals abandon the dry and rocky lands of the point of Africa, to go northwards either into Caffraria or some other well watered country.
Were I to fix the number of those animals at twenty, thirty, or even fifty thousand, I should fall short of the truth; to form any idea of the number, without having seen them, is impossible.
We continued our way through the midst of the flock, without their appearing much alarmed; I shot three from my wagon; indeed, innumerable armies might have been furnished with provisions for a considerable time.
The retreat [from the interior] of these gazelles predicted with greater certainty than the almanack of Liege, the droughts we should have to encounter."[13]

Le Vaillant's next encounter with the trekbokke was in Namaqualand where he was involved in a springbok hunt "after the Koraqua manner" which entailed numerous springbok being driven into a valley where hunters waited, this mass taking a full three hours to pass a hidden Le Vaillant and prompting him to consider the mechanics of their ecology:

"Another fact, more difficult to be explained is the prodigious multiplication of these antelopes in a country infested with carnivorous animals, which it every where produces. I had in other places met with a few of their numerous flocks; but when I beheld this, I often wondered how so many thousands

[11] Rookmaaker, L.C. 1989. *The Zoological Exploration of Southern Africa 1650-1790*, AA Balkema, Rotterdam. p.113.
[12] Paterson, W. 1790. *Travels in Africa. A Narrative of Four journeys into the Country of the Hottentots, and Caffraria, in the Years 1777, 1778, 1779*, 2nd Edition, J Johnson, London. p.169.
[13] Le Vaillant, F. 1790. *Travels from the Cape of Good Hope into the Interior Parts of Africa*, Vol. II, William Lane, London. pp.380-381.

of animals, which, by their number, must have dried up the streams, and consumed the pasturage of a whole district, could live in a place so barren and destitute of water."[14]

Barrow was another to comment on trekbokke and in the area around Middelburg saw a herd which he estimated to be about five thousand strong, "but if the accounts ... may be credited, more than 10 times that number have occasionally been seen together. Such enormous herds however only collect when they are about to migrate to some distant part of the country."[15]

Although not offering his opinion on their origins or causes, Barrow's descriptions suggest, like most of those before him, that trekbok herd sizes were variable with much dependent on local climatic conditions, the vagaries of which also governed the irregular and unpredictable appearance of the trekbokke. Of these authors Masson and Le Vaillant offered the clearest explanation of trekbok ecology, both linking springbok movements away from areas of poor resources to those offering succour and speculating that this movement was initiated by rainfall. Also of relevance is that treks, during this period of a relatively small settler presence in the interior, were recorded throughout the arc of exploration described above: northern Namaqualand (Le Vaillant and Gordon), the Roggeveld and Bokkeveld (Thunberg), north of the Bokkeveld (Masson), the Camdeboo Plains near Somerset East (Sparrman) and Graaff-Reinet (Le Vaillant), further west near Aberdeen on the fringes of the Great Karoo (Gordon), and in the Seacow River Valley (Barrow).

[14] Le Vaillant, F. 1796. *New Travels into the Interior Parts of Africa, by the Way of the Cape of Good Hope, in the Years 1783, 84 and 85*, G.G. & J. Robinson London. pp.24-29.
[15] Barrow, J. 1806. *An Account of Travels into the Interior of Southern Africa*, Vol. I, 2nd Edition, T. Cadell & W. Davies, London. p.267.

Despite this apparent consistency in explanation though, all these observers were travellers having random encounters in space and time and could not claim to accurately gauge the origins and causes of the springbok treks that they personally observed, or merely described at second hand. In most cases their explanations were derived from their Khoi and Boer guides. This was a factor that was to some extent nullified by colonial expansion and more regular encounters with springbok treks during the nineteenth century, but which nonetheless persisted in the writings of visitors who continued to serve as the major source of published information on springbok treks after the British takeover of the colony.

"A raging thirst", "migratory impulse" or "driven by protracted drought" – 1800 to 1925

The nineteenth century was a period of colonial expansion (see Figure 1.2) and subsequent consolidation as a result of which settlers and domestic livestock populations increased both in area and density, bringing them into increasing contact and inevitable conflict with the *trekbokken*. The mounting real and imagined costs of these migrations in terms of both cultivation (directly eaten by springbok) and meat and wool production (affected by springbok invading pastures) therefore began to attract official attention and the phenomenon was better documented than in the closing decades of the eighteenth century.

Figure 1.2: The spread of the colonial boundary, 1800-1824[16]

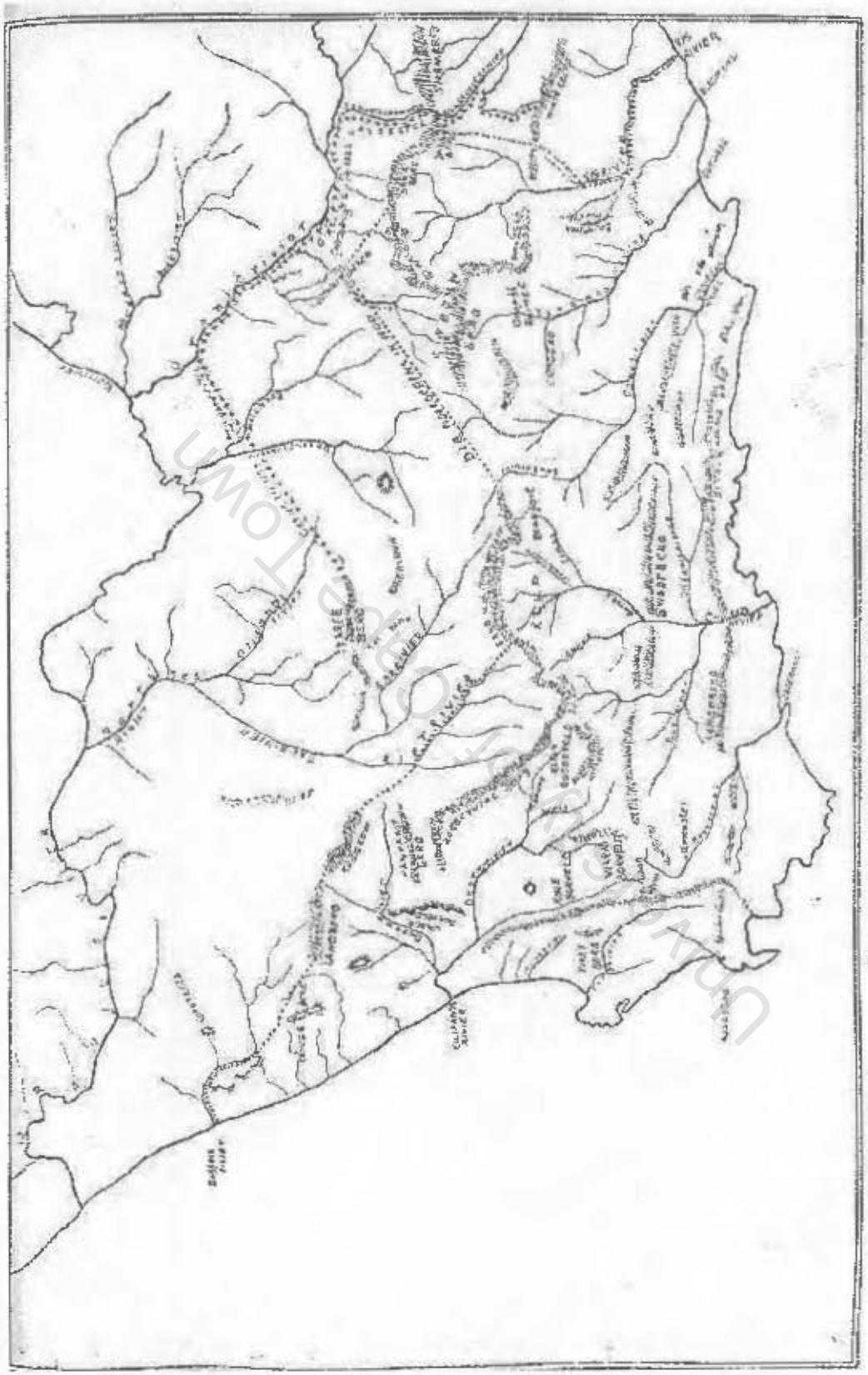


Fig. 1. Die Uitbreiding van die Kolonie (1800—1824).

+++++ *Stockenstrom se grens (1822—1824).* ..... *Die grens in 1800.*

[16] Van der Merwe, 1937. p.132.

As Landrost of Graaff-Reinet, Andries Stockenstrom dealt with the effects of trekbokke and the consequent complaints of colonists in the 1820s and it was his article on trekbokke, first published in 1824, that seems to have laid the foundation for much of what was written in the nineteenth century about both the causes and effects of migratory springbok. Stockenstrom wrote about the "incredible numbers which sometimes pour in from the north during protracted droughts" and which played havoc with the farmers crops and flocks until "no sooner do the rains fall than they disappear."[17] Although many considered the causes of these treks to be unfathomable, Stockenstrom himself was clear on their origins:

"The native Colonists themselves can form no conception of the cause of the extraordinary appearance of these animals; and from their not being able to account for it, those who have not been eye-witnesses of these scenes, consider their accounts exaggerated; but a little more minute inspection of the country south of the Orange River solves the difficulty at once. The immense desert tracts between that river and our Colony, westward of the Sea Cow River, destitute of permanent springs, and therefore uninhabitable by human beings for any length of time, are notwithstanding interspersed with stagnant pools and vleys, or natural reservoirs of brackish water, which, however bad, satisfies the game.
In these extensive endless plains, the springbucks multiply undisturbed by the hunter (except when an occasional Bosjesman is by starvation driven to make the generally unsuccessful attempt), until the country literally swarms with them, when perhaps one year out of four or five a lasting drought leaves the pools exhausted and parches up the soil, naturally inclined to sterility. Want, principally of water, drives those myriads of animals either to the Orange River or to the Colony, when they intrude in the manner above described; but when the thunderclouds pour their torrents upon our burnt-up country, reanimating vegetation, and restoring plenty to all graminivorous being – then, when we could perhaps afford to harbour these unwelcome visitors, their own instincts and our persecutions propel them again to their more sterile, but more peaceful valleys and flats, to recruit the numbers lost during their migration, and to resume their attacks upon us when their wants shall again compel them."[18]

Stockenstrom's conviction that the treks were caused by droughts in the area between the colonial border and the Orange River forcing springbok into the better watered and more densely inhabited portions of the Colony, was one which was to be oft repeated by later writers. During a drought in 1821 Pringle, who had originally urged Stockenstrom to publish his theories on the trekbokke, had seen herds "as far as the

[17] Hutton, C.W. (ed.). 1887. *The Autobiography of the Late Sir Andries Stockenstrom*, J.C. Juta & Co., Cape Town. pp.37-39.
[18] Hutton, 1887. pp.37-39.

eye could reach" that he believed "were probably part of one of the great migratory swarms which, after long-continued droughts, sometimes inundate the colony from the northern wastes."[19] In the same year, over a 50 mile course, Thompson saw 100 000 springbok which he said had migrated into the Colony from the "great desert" and noted that the colonists were "much concerned to hear that they were advancing upon them."[20] Echoing Stockenstrom, Steedman noted that the trekbokke were attracted to the inhabited parts of the country by "pasturage and water" and thereafter "led instinctively, by the approaching season of rain, to their former haunts in the unfrequented parts of the vast interior."[21] Harris was likewise clearly influenced by Stockenstrom and considered after his encounter with trekbokke that they poured "down like locusts from the endless plains of the interior, whence they have been driven by protracted drought ... until the bountiful thunder-clouds restore vegetation to the burnt-up country. Then the unwelcome visitors instinctively retreat to their secluded abodes, to renew their attacks when necessity shall again compel them."[22]

Cumming, despite an incredibly evocative description of a trek he encountered in 1844, offered no clear explanation for springbok treks, and, aside from stating that they "migrate in vast herds from one part of the country to another," Backhouse also had no explanation.[23] J.G. Fraser's description of a trek that invaded Beaufort West in

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[19] Pringle, T. 1840. *Narrative of Residence in South Africa*, New Edition, Edward Moreu, London. p.27.
[20] Thompson, G. 1967. *Travel and Adventures in South Africa, Part 1*, Van Riebeeck Society, Cape Town. pp.129-130.
[21] Steedman, A. 1835. *Wanderings and Adventures in the Interior of Southern Africa*, Vol. II, Longmans, London. p.93.
[22] Harris, W.C. 1852. *The Wild Sports of Southern Africa: Being a Narrative of a Hunting Expedition from the Cape of Good Hope, Through the Territories of Chief Moselekatze, to the Tropic of Capricorn*, Henry G Bohn, London. pp.27-28.
[23] Cumming, RG. 1857. *The Lion Hunter of South Africa: Five Years Adventure in the Far Interior of South Africa; with Notices of the Native Tribes and Savage Animals*, New Edition, John Murray, London. pp. 79-81; Backhouse, J. 1844. *A Narrative of a Visit to the Mauritius and South Africa*, Hamilton Adams, London. p.338.

about 1849 on the other hand accords very much with the convictions of Stockenstrom that springbok trekked away from drought and into areas of comparative plenty: "There had been reports of a great drought having visited the far-back country, but its effects could not be realised by us, as we had our usual rains, and our country was looking green and well. However we got the terrible effects of the drought brought home to us in another and most disastrous manner [by the trekbokke]."[24]

Numerous other travellers wrote about but did not actually witness treks. Among those who offered second hand explanations was Burchell, who thought that trekbokke "remove from one part of the country to another, and sometimes to the distance of many days-journeys, according to the state of the pasture, and the season of the year."[25] The artist Daniell was another who could only speculate that springbok trekked "for the purpose of moving to a different tract of country," while Moodie averred that springbok were "found in large herds near the frontiers of the colony, and in the remote interior, where they wander in search of pasture and water over many hundred miles of country."[26]

Considering the greater and more widely published knowledge of the Colony, and in particular its natural history, and despite often lacking direct experience of a trek, authors in the final quarter of the nineteenth and early part of the twentieth centuries had even more opportunity to examine the causality, origin and routes of the treks.

[24] Fraser, J.G. 1922. *Episodes in My Life*, Juta & Co., Cape Town. pp.13-15.
[25] Burchell, W.J. 1956. *Travels in the Interior of Southern Africa*, Vol. II, Batchworth Press, London. p121.
[26] Daniell, S. 1831. *African Scenery and Animals*, Robert Havell, London; Moodie, J.W.D. 1835. *Ten Years in South Africa: Including a Particular Description of the Wild Sports of that Country*, Vol. I, Richard Bentley, London. p.289.

One of the best known of these was Bryden who, in 1889, thought that the springbok, "impelled by drought and the loss of their more secluded pastures, migrated from their true nursery and headquarters in the country formerly known as Great Bushmanland, now forming the districts of Namaqualand, Calvinia, Fraserburg, Clanwilliam and Victoria West, and even from the far Kalahari Desert itself, where they also abound in great numbers, into more fertile districts in the interior of the Colony."[27] Nicolls and Eglington writing three years later also linked springbok treks to drought and surmised that as feeding grounds were changed and springbok were "thus on the move" numbers assembled and grew into herds of "such enormous extent."[28]

Interest in, and analysis of, springbok treks was boosted by the well-publicised trek of 1896 and Bryden revisited the subject in print in 1897 and 1899[29]. These later books did not add much, merely summarising his earlier opinion that: "Driven from one part of the country by drought and the lack of necessary vegetation, hundreds of thousands of springbok would pour from the deserts of the north-west into the Great Karroo."[30] Scully, Civil Commissioner for Namaqualand and Resident Magistrate for the Northern Border in 1892, while not referring the 1896 trek, did however introduce a new theory explaining the movement of the trekbokke. He was confident that springbok treks were "due to the instinct which impels the does to drop their young somewhere upon the eastern fringe of the Desert, which extends, north and south, for several hundred miles. This fringe is the limit of the western rains. These fall between

[27] Bryden, H.A. 1889. *Kloof and Karoo: Sport, Legend and Natural History in Cape Colony with a Notice of the Game Birds and of the Present Distribution of the Antelopes and Larger Game*, Longmans Green, London. pp.232-233.
[28] Nicolls, J.A. & Eglington, W. 1892. *The Sportsman in South Africa*, The British & Colonial Publication Co., London. p.30.
[29] Bryden, H.A. 1897. *Nature and Sport in South Africa*, Chapman & Hall, London. p. 296; Bryden, H.A. 1899. *Great and Small Game of Africa*, Rowland Ward, London. pp.334-335.
[30] Bryden, 1899. pp.334-335.

April and September when the Desert is at its driest, and bring out the green herbage necessary for the new born fawns."[31] Scully was positive that the treks were annual and "an institution of immemorial antiquity,"[32] but also made mention of exceptional treks when it seemed "as if all the springbucks in the Desert were suddenly smitten by a mad desire to collect and dash towards a certain point." According to him:

"The springbucks as a rule live without drinking. Sometimes however – perhaps once in ten years – they develop a raging thirst, and rush madly forward until they find water. It is not many years ago since millions of them crossed the mountain range and made for the sea. They dashed into the waves, drank the salt water and died. Their bodies lay in one continuous pile along the shore for over thirty miles, and the stench drove the Trek-Boers who were camped near the coast far inland."[33]

Cronwright-Schreiner published an account of his experience of the 1896 trek in 1899 and mentions that this trek had been preceded by a long drought that affected the up-country, and particularly Namaqualand:

"It is known that [the trekbokke] migrate in search of better veld, urged thereto by drought. ... If it continues dry they do not return at once but stay on until later in the season ... How they know when it has rained where they come from, when perhaps it is dry where they are, one cannot say; but it is generally held that, through a subtle sense of smell, they do know."[34]

Stockenstrom, Scully, Cronwright-Schreiner and other early authors formed the basis for later theories and Sclater, for example, cited them and a host of other nineteenth century travellers in concluding that "the cause of the migration is doubtless due to want of water and consequent absence of food. There is no doubt that the swarms which migrate towards the more settled parts of the Colony come from the vast tracts of almost waterless country occupying the districts of Namaqualand, Kenhardt and

[31] Scully, W.C. 1898. *Between Sun and Sand: A Tale of an African Desert*, Juta, Cape Town. p.104.
[32] Scully, W.C. 1915. *Lodges in the Wilderness*, Herbert Jenkins, London. p.229.
[33] Scully, 1898. pp.242-243.
[34] Cronwright-Schreiner, S.C. 1899. 'The 'trekbokke' (migratory springbucks); and the 'trek' of 1896', in: *The Zoologist*, reprinted in: Cronwright-Schreiner, S.C. 1925. *The Migratory Springbucks of South Africa (the Trekbokke). Also an Essay on the Ostrich and a Letter Descriptive of the Zambezi Falls*, Hamilton, Adams, London. pp.51-52.

Calvinia in the north west of the colony known as 'Bushmanland', and probably these again are reinforced by additional numbers coming from the desert country to the north of the Orange River and the Kalahari."[35] Lydekker was less specific and stated simply that the treks were "caused by drought in certain districts which compelled the buck to seek fresh pastures,"[36] while Fitzsimon's opinion was that the springbok were "driven from one part of the country by drought, and consequent scarcity of food [and] they migrated in vast herds of as many as half a million. This vast army would pour from the dry, desert-like highveld of the north west into the great Karoo-veld, devouring every particle of edible vegetation as they proceeded."[37] Jackson offered a more detailed explanation of the process in that "when a great drought was breaking up, and rains fell in certain areas, large numbers of these bucks made tracks for the favoured spots. As flock after flock converged on the way, they grew into a great company till there might be twenty or thirty thousand or even more."[38]

The continuing speculation and conjecture prompted Cronwright-Schreiner to attempt a more thorough analysis and the landmark *The Migratory Springbucks of South Africa* published in 1925 was the first book devoted almost entirely to the subject. The core of the book comprised his own 1899 article as well as accounts from a host of others. The overriding impetus for writing the book, Cronwright-Schreiner declared, was that "the days of the great treks have passed and ... it cannot be without interest to

[35] Sclater, 1900. p.213.
[36] Lydekker, R. 1908. *The Game Animals of Africa*, Rowland Ward, London. pp.247-248.
[37] Fitzsimons, F.W. 1920. *The Natural History of South African Mammals*, Vol. III, Longmans, Green, London. pp.91-95.
[38] Jackson, A. de J. 1919? (1920?). *Manna in the Desert: A Revelation of the Great Karoo*, Christian Literature Depot, Johannesburg. pp.250-251.

naturalists and hunters that a record should be made of what people have written on the subject."[39]

Cronwright-Schreiner included Stockenstrom's 1824 impressions, Fraser's account of the 1849 trek into Beaufort West and extracts from Scully's desert books. David Livingstone's pet theory was also republished, as were the opinions of T.B. Davie, a Prieska resident and witness to several treks. Livingstone believed that the trekbokke came from the Kalahari and that:

"They live chiefly on grass; and, as they come from the north about the time when grass most abounds, it cannot be want of food that prompts the movement. Nor is it want of water, for this antelope is one of the most abstemious in this respect. The cause of the migration would seem to be their preference for places where they can watch the approach of a foe. "[40]

Resident for a number of years in an area regularly affected by treks, Davie had a more credible argument and claimed that these movements began on the Kaaien Bult in the Kenhardt and Prieska districts when:

"... during certain years and at all sorts of uncertain seasons these antelope began to assemble in immense herds; these herds, seemingly impelled by some guiding instinct, gathered together in mobs, wandering aimlessly about, first here and then there, having no apparent destination and yet feeling restless and uneasy. At this time the slightest sight or sound would set troops of 10,000 to 20,000 scampering off in as many directions as there are points to the compass, and the slightest thing would turn them back in any given direction. ... What the aim of these migrations is, is also a mystery. Sometimes they really are in search of water and are poor and miserable, hardly fit to make biltong with. At other times ... they were sleek and fat."[41]

Cronwright-Schreiner disregarded Livingstone's theory ("It is clear he knew little personally about the trekbokke") and treated Scully's report of an occasional "raging thirst" with caution, but felt that his own theory was well supported by those of

[39] Cronwright-Schreiner, S.C. 1925. *The Migratory Springbucks of South Africa (the Trekbokke). Also an Essay on the Ostrich and a Letter Descriptive of the Zambezi Falls*, Hamilton, Adams, London. p.9.
[40] Cronwright-Schreiner, 1925. p.68. This unusual theory was partly supported by Penrice's limited observations in southern Angola. See: Penrice, G.W. 'In West Africa', in: Bryden. 1899. p.342.
[41] Davie, T.B. 1921. 'The trekbokke (migratory springbok)' *The Cornhill Magazine*, reprinted in: Cronwright-Schreiner, 1925. pp.56-60.

Stockenstrom and Fraser. He was not, however, convinced that there were not possibly other factors at work and noted the role of instinct and 'migratory impulse' hinted at by Davie, and the regularity and reliability of Scully's annual movements between winter and summer rainfall areas. Despite this lack of closure he noted with some pride and vindication that his original assertion that the movements of the trekbokke were governed by drought and rainfall had been endorsed as "the correct one" by Findlay in 1903 in his *Big Game Shooting and Travel in South-East Africa.*[42] He remained convinced that in the latter part of the nineteenth century, and in 1896 in particular, the trekbokke did not "come from one particular part of the country and again returned to it, but rather that, in times of drought, vast numbers of bucks moved off together in search of food, and that treks came from Namaqualand and 'Bushmanland' because the bucks were still so numerous there, while farther within the Cape Province there were not enough of them to mass together in an particular locality to form a big trek."[43]

After summarising and considering all the statements and opinions of other authors, Cronwright-Schreiner concluded that they don't "afford sufficient evidence to justify any hard and fast conclusions as to the cause or causes of the trek-bok migrations." Despite this his own feeling was that the treks were "erratic movements, in search of food and perhaps water, of large numbers of gregarious creatures inhabiting a vast territory which is subject in varying parts to annual droughts, often partial and not of very marked severity, but sometimes of great and devastating severity," although he still wondered if "we now [shall] ever obtain such facts?"[44]

[42] Cronwright-Schreiner, 1925. p.51.
[43] Cronwright-Schreiner, 1925. pp.82-83.
[44] Cronwright-Schreiner, 1925. pp.88-89.

Cronwright-Schreiner's concerns were well founded. No more mass migrations were reported after 1896/7 and during the nineteenth century, as the colonial boundaries were expanded, the range of springbok treks was steadily reduced. Until about 1860 the published literature includes accounts of treks in the eastern and Great Karoo in areas such as Somerset East (Pringle), Richmond (Thompson), Seacow River Valley (Stockenstrom; Harris; Cumming; Backhouse), Murraysburg (Steedman), Middelburg (Cumming), Britstown (Cumming), Beaufort West (Fraser; Jackson) and Steytlerville (Bryden). By contrast, between 1860 and 1896 treks are reported only from more remote areas on the colony's boundaries and elsewhere such as Prieska (Van Jaarsveld[45]; Davie; Livingstone; Cronwright-Schreiner), Namies and Kat Vlei in Namaqualand (Scully), southern Angola (Penrice), Britstown (Cronwright-Schreiner) and Kenhardt (Davie).

Fecundity, vegetation and rainfall cycles – 1925 to 2002

The cessation of mass springbok movements after 1896/7 did indeed prevent further direct observation of the phenomenon and it passed into legend with all later interpretations drawing heavily on *The Migratory Springbucks of South Africa* and the opinions, in particular, of Cronwright-Schreiner and Scully. Popular authors, and even naturalists, simply repeated their, and other authors', earlier descriptions and claims without offering new analysis or interpretation.[46] Shortridge for example chose to give

[45] Van Jaarsveld, A.Z.A. n.d. *Kroniek van Eeu-ou Prieska 1882-1982*, Municipaliteit Prieska, Prieska. p.170.

[46] See: Stokes, C.S. 1941. *Sanctuary*, The 'Sanctuary' Production Committee, Cape Town. pp.408-410; Mockford, J. 1949. *The Golden Land, A Background to South Africa*, Adam & Charles Black, London. p.213; Lighton, C. 1951. *Sisters of the South*, Hodder & Stoughton, London. p.152; Miller, W.J. n.d. *Wildlife of Southern Africa*, Shuter & Shooter, Pietermaritzburg. No page numbers; Rosenthal, E. 1962. 'Die springboktroppe van Noord-Kaapland', *Die Huisgenoot*, 16 November, pp.54-55; Palmer, E. 1966. *The Plains of Camdeboo*, Collins, London. pp.141-153; Barrow, B. 1975. *Song of a Dry River*, Purnell, Cape Town. pp.83-85; Pringle, J.A. 1982. *The Conservationists and the Killers*, T.V. Bulpin and Books of Africa, Cape Town. pp.68-69; Nussey, W. 1993. *The Crowded Desert: The Kalahari*

credence to earlier claims (Bryden in 1889 and Sclater in 1900) that the trekbokke "at varying intervals used to evacuate the Kalahari, cross the Orange River and invade the Cape Province,"[47] while as late as 1936 Bryden believed that treks still took place in Bushmanland and added some new elements to his earlier explanations: "These migrations seem to be caused by drought and lack of food, and perhaps from the desire of the ewes to drop their fawns within the limits of the rains, where pasturage is rich. On these occasions not merely tens of thousands but literally millions of springbok move eastward, devouring everything before them."[48] Green managed to track down surviving trek witnesses and in the process uncovered 'new' records of treks from Calvinia, Matjesfontein and the Molopo River as well as additional accounts of the 1896/7 springbok trek.[49]

While also relying heavily on the usual historical accounts, Austin Robert's seminal *The Mammals of South Africa*, published in 1951, initiated a new trend by marrying these older theories with modern advances in mammalology. Using what had recently been discovered from observations of springbok movements in relation to rain in Namibia, he deduced that springbok treks must have been due to "the demands arising from protracted droughts in some areas and good rainfall in others."[50] Later advances in science and the initiation of ecological and behavioural studies in the Kalahari Gemsbok National Park (KGNP) in the late 1950s also yielded new perspectives. Despite surmising that "since the great 'treks' now belong to the past, there is no way

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Gemsbok National Park, William Waterman, Cape Town. pp.157-160; Furstenburg, D. 2002. 'Springbok *Antidorcas marsupialis* (Zimmerman, 1780)', *Wild & Jag/Game & Hunt*, 8(5). pp.12-14.

[47] Shortridge, G.C. 1934. *The Mammals of South West Africa*, Vol. II, William Heinemann, London. p.545.

[48] Bryden, H.A. 1936. *Wild Life in South Africa*, George G. Harrap & Co., London. p.35.

[49] Green, L.G. 1955. *Karoo*, Howard Timmins, Cape Town. pp.35-39; pp. 47; 63.

[50] Roberts, A.A. 1951. *The Mammals of South Africa*, The Trustees of 'The Mammals of South Africa' Book Fund, Cape Town. p.35.

in which we can hope to ascertain, beyond doubt the cause or causes of these mass game migrations," Barnard, then biologist of the South African National Parks Board, noted that a certain degree of trekking still occurred in the Kalahari and that an examination of such movements might reveal the underlying causes of the historical treks.[51] Barnard was writing after a number of treks had been witnessed in the KGNP and the adjacent area of southern Botswana in the late 1940s and 1950s. Le Riche, warden of the KGNP, and Baffingthwaite both noted probably the same trek in 1946 when a herd of at least 15 000 animals moved south down the Nossob River from north of the KGNP, and eventually exited the Park with some penetrating as far south as Upington.[52] The following year another herd of about 5000 animals followed the same path southwards along the Nossob[53], while in 1948 Laurens van der Post encountered hundreds of thousands of springbok between Tsabong and Lehututu and further north-west.[54] In 1950 a trek which took three days to pass Tsabong crossed the Molopo River on a 200 mile front heading south[55] (see Figure 1.5), this being followed by less dramatic movements to the south and north of the KGNP in 1956 and 1957.[56] The best documented on these modern treks however occurred in 1959 when Fritz Eloff, Professor of Zoology at the University of Pretoria, was working on the movement and habits of KGNP antelope.

[51] Barnard, P.J. 1961. 'Phenomenon of game migration in the Kalahari Gemsbok National Park', *Koedoe*, 4: p.179.
[52] Skinner, J.D. 1993. 'Springbok (*Antidorcas marsupialis*) treks', *Transactions of the Royal Society of South Africa*, 48: p.301; Child, D. & Le Riche, J.D. 1969. 'Recent springbok treks (mass movements) in south-western Botswana', *Mammalia*, 33: pp.500-501.
[53] Skinner, 1993. p.301.
[54] Skinner, 1993. p.301.
[55] Child & Le Riche, 1969. pp.501-503.
[56] Eloff, F.C. 1959a. 'Observations on the migration and habits of the antelopes of the Kalahari Gemsbok Park, Part I,' *Koedoe*, 2: p.2; Bigalke, R.C. 1972. 'Observations on the behaviour and feeding habits of the springbok, *Antidorcas marsupialis*', *Zoologica Africana*, 7(1): p.339.

Huge concentrations of springbok were noted in an area of southern Botswana between Mabua Sehubi, Kang and Kukong between March and April 1959. In May, coinciding with a southward shift in the wind, thousands of springbok from two main concentrations began to move south-south-west, the movements continuing over June and July (see Figure 1.5). Attempts to trace the movements of these springbok thereafter were initially unsuccessful and it was only in October that thousands of the 'missing' antelope were seen 30 to 45 miles north west of Khuis. Another concentration of 80-90 000 springbok had formed 80 miles north of Union End in July however and may have originated farther east in the area reporting concentrations in March and April. The exact path of the trek was therefore not established and as a result numerous questions remained unanswered, Eloff however felt that it was "fairly obvious that rain and grazing conditions are the most important factors. Local belief is that wind and the antelopes' sense of smell play an important part in initiating the mass movements."[57] Earlier Morris and Leistner, ecologists working in the KGNP, had both noted how game movements in and around the park were influenced by rain and subsequent veld condition. Morris ascribed the movement of large numbers of springbok to the present-day Namibian border to "the fact that the area mentioned had slight rains which caused the driedoring [*Rhigozum trichotomum*] and other shrubs to sprout and the annuals to germinate. In the absence of any other cause for such movement of the springbok, it must be assumed that the instinct of at least the springbok must be so highly developed that it can perceive the presence of rain miles distant."[58] Leistner thought that this kind of movement was purely logical and that it could perhaps be tied to predictable local conditions: "It is not surprising, therefore,

[57] Eloff, F.C. 1961. 'Observations on the migrations and habits of the antelopes of the Kalahari Gemsbok Park, Part III', *Koedoe*, 4: p.20.
[58] Morris, J.J. 1958. 'Veldaangeleenthede en beweging van wild in die Kalahari-Gemsbokpark', *Koedoe*, 1: p.142.

that these animals will trek as soon as they perceive any improvement of the veld outside of the Park [KGNP]. In most cases they seem to move eastwards into the area between the Molopo and the Kuruman River. Reasons for this may be the following: As one proceeds from the Park in the direction of Vryburg the mean annual rainfall increases rapidly and appreciably."[59]

This apparent resurgence of treks and the publication of the data inspired other South African scientists working on the national animal and reawakened a fascination with what had previously been assumed to be a historical phenomenon. Rudi Bigalke, director of the McGregor Museum in Kimberley and one of the early pioneers of modern springbok studies, agreed with Eloff that the treks were unlikely to follow regular patterns and that rain and grazing conditions were seemingly the most important drivers.[60] Bigalke later incorporated the results of his own research into springbok fecundity into the theory, noting that they had a mechanism for rapid reproduction, the "prodigious multiplication" noted by Le Vaillant. Populations could, and occasionally did, produce two groups of young within six months, this being achieved by ewes coming into post-partum oestrus after lambing during the usual peak of October and then giving birth again in March or April the following year, and could also involve yearling ewes coming into oestrus for the first time during the usual lambing period[61]. This, as he acknowledged, was to be expected in an animal whose range extended over the desert and semi-desert where resources were unpredictable, but nonetheless "one could imagine periods of rapid population growth induced by a fortuitous succession of 'good years', with (at least sometimes) two

[59] Leistner, D.A. 1959. 'Notes on the vegetation of the Kalahari Gemsbok National Park with special reference to its influence on the distribution of antelopes', *Koedoe*, 2: p.149.
[60] Bigalke, 1966. p.22.
[61] Bigalke, R.C. 1970. 'Observations on springbok populations', *Zoologica Africana*, 5(1): p.67.

increments a year preceding the well-known springbok 'treks'".[62] This theory served as an extension to that of Wynne-Edwards who viewed treks as an example of an irruption occurring in species which inhabit harsh and unpredictable environments[63] and Bigalke combined the two in discussing the possibility of the 1946 and 1950 treks documented by Child, wildlife ecologist with the Botswana Department of Wildlife and National Parks, and Le Riche being spectacular dispersal movements from areas of high population density[64], something which Child and Le Riche had themselves believed probable.[65]

These advances notwithstanding, Winterbottom, then Director of the Percy Fitzpatrick Institute of African Ornithology, was still of the opinion in 1971 that the springbok treks, or mass movements, of the eighteenth and nineteenth century were "inadequately studied at the time and now, with drastic reduction in numbers by indiscriminate slaughter by man and, still more, by the fencing of farms, it is impossible to be sure whether they should be classified as migration or irruptions."[66] This still did not dissuade speculation about the causes and conditions surrounding springbok treks. Liversidge, Skead, Lovegrove and Skinner all critically analysed the historical sources in light of modern observations and theories. Liversidge, Bigalke's successor at the McGregor Museum, used simple logic to refute the claims of Scully and Davie for estimates of "millions" and "a hundred million" springbok respectively and made the point that in Davie's case the density implied is more than 2 springbok

[62] Bigalke, 1970. p.67.
[63] Wynne-Edwards, V.C. 1962. *Animal Dispersion in Relation to Social Behaviour*, Oliver & Boyd, Edinburgh & London. pp.474-476.
[64] Bigalke, R.C. 1972. 'Observations on the behaviour and feeding habits of the springbok, *Antidorcas marsupialis*', *Zoologica Africana*, 7(1): pp.338-339.
[65] Child & Le Riche, 1969. pp.503-504.
[66] Winterbottom, J.M. 1971. *An Introduction to Animal Ecology in Southern Africa*, Maskew Miller, Cape Town. p.40.

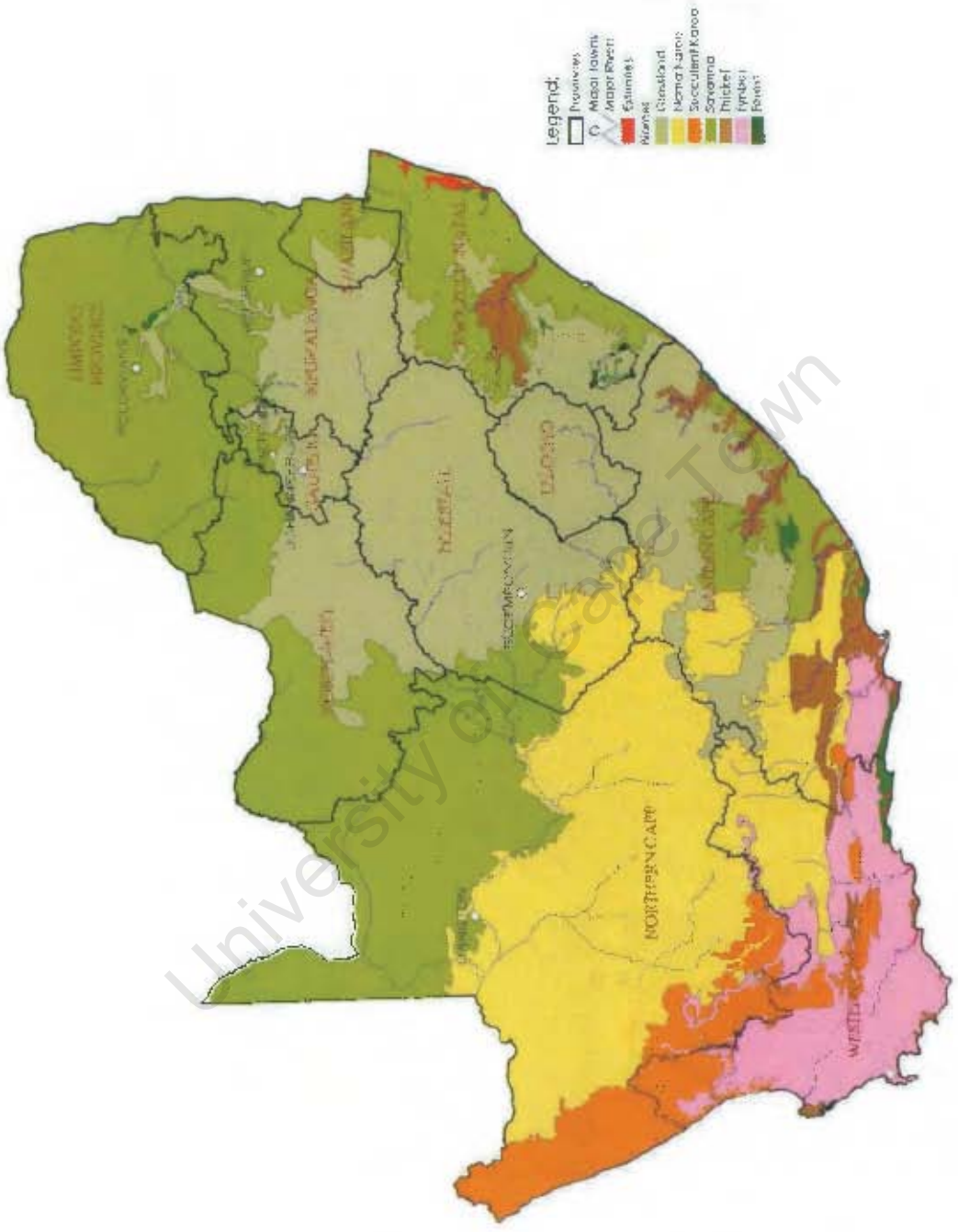
per square metre for 4000 hectares. As for Scully's claim of millions of springbok dying in the Atlantic after drinking the salt water, Liversidge pointed out that even a million springbok lying dead on the shore for 30 miles would require 20 animals per yard.[67] Well-known ornithologist and biologist, Jack Skead, recognised both the huge advantages and the potential pitfalls of working with historical sources[68], and during the 1980s produced two tomes of historical mammal distribution[69]. In addition to the distributional data, Skead's second volume contains an in depth analysis of the trekbokke[70]. Like Liversidge he focused on estimates of trekbok numbers and was critical of "such wild guesses as five hundred thousand [Cronwright-Schreiner] and a hundred million [Davie]."[71] Skead also compared the historical records with those of Eloff, Child and Le Riche from the Kalahari and noted defiantly "the age of the trekbok is not dead – yet!"[72]. He too though was wistful about the effective passing of the mass migrations: "With today's technological advances such as aerial surveys using gridded photograph patterns, [the early travellers] would have resolved within a few days the mystery surrounding the trekbokke, and produced a reasonably accurate count."[73]

[67] Liversidge, R. 1978. 'It was all exaggeration', *African Wildlife*, 32: pp.26-27.
[68] See: Skead, C.J. 1962. 'The use of early historical references in the study of bird and mammal distribution', *Annals of the Cape Provincial Museums*, 2: pp.138-142.
[69] Skead, CJ. 1980. *Historical Mammal Incidence in the Cape Province, Volume 1: The Western and Northern Cape*, The Department of Nature and Environmental Conservation of the Provincial Administration of the Cape of Good Hope, Cape Town; Skead, CJ. 1987. *Historical Mammal Incidence in the Cape Province, Volume 2: The Eastern Half of the Cape Province, Including the Ciskei, Transkei and East Griqualand*, The Chief Directorate Nature and Environmental Conservation of the Provincial Administration of the Cape of Good Hope, Cape Town.
[70] Skead, 1987. pp.664-678.
[71] Skead, 1987. pp.664-678.
[72] Skead, 1987. p.669.
[73] Skead, 1987. p.664.

Further advances in the study of arid systems and their fauna, as well as the increasingly refined understanding of veld types[74] and biomes (see Figure 1.3), were employed by the zoologist Lovegrove in 1993 in order to make sense of the springbok treks.[75] Critiquing Fraser, Cronwright-Schreiner, Scully and Davie, Lovegrove felt that springbok treks were nomadic mass movements and not true migrations and that they may have followed the 18-year rainfall cycles identified by Tyson[76]. Lovegrove highlights the relationship between rainfall and springbok numbers in the Namib-Naukluft Park and also suggest a similarity between the movements of Ludwig's Bustard and the trekbokke between the summer rainfall Nama karoo and winter rainfall succulent karoo biomes[77] (see Figure 1.4).

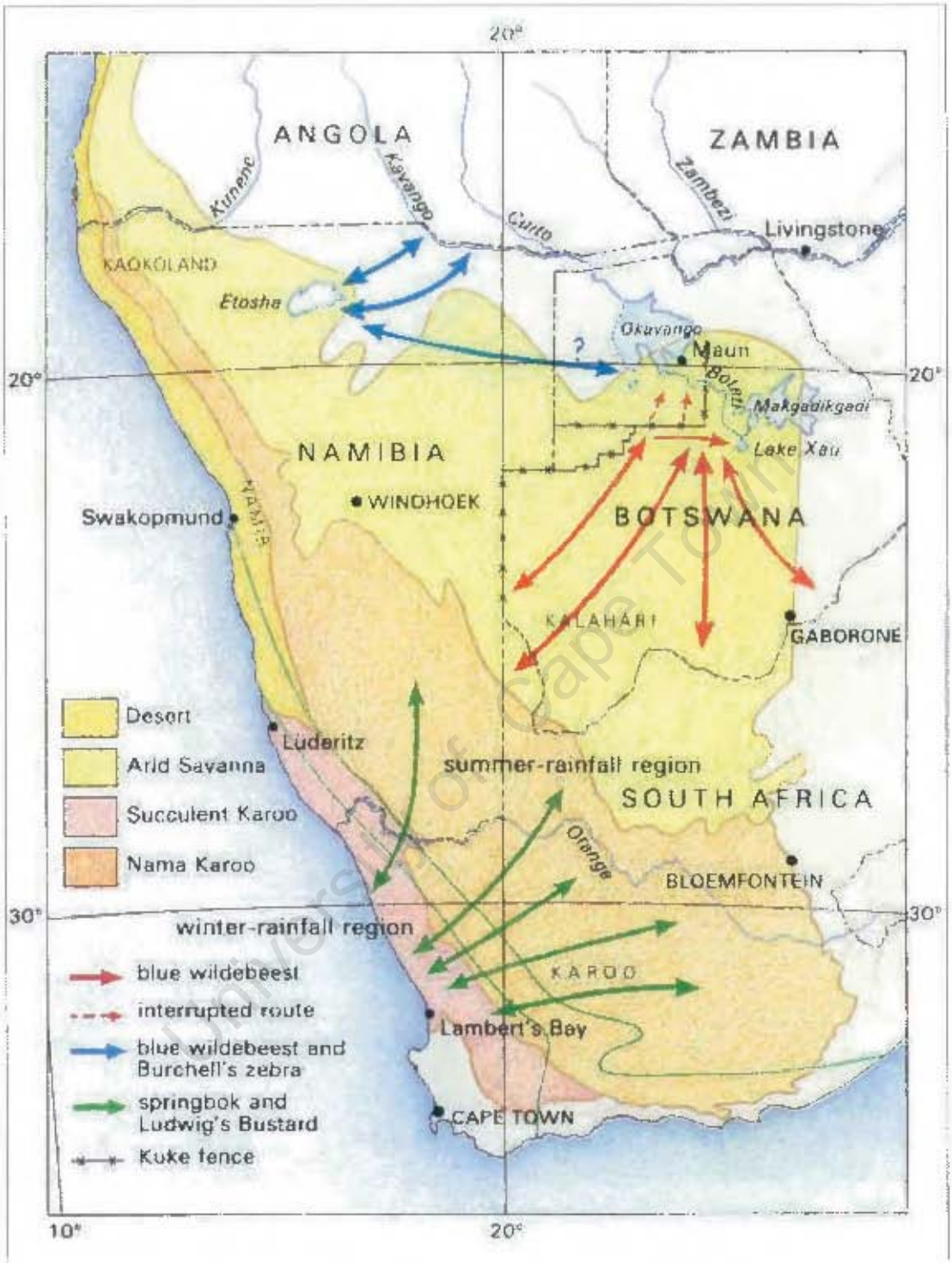
[74] See: Acocks, J.P.H. 1988. *Veld Types of South Africa*, Memoirs of the Botanical Survey of South Africa No. 57, Botanical Research Institute & Department of Agriculture and Water Supply, South Africa.
[75] See: Lovegrove, 1993. pp.142-163.
[76] See: Tyson, P.D. 1987. *Climatic Change and Variability in Southern Africa*, Oxford University Press, Cape Town. pp.67-92.
[77] Lovegrove, 1993. p.143; p.163.

Figure 1.3: Biomes or Ecoregions of South Africa[78]



[78] Anon (compiled by J Le Roux). 2002. *The Biodiversity of South Africa: Indicators, Trends and Human Impacts*, Nedbank/Endangered Wildlife Trust, World Wildlife Fund – South Africa/Struik. p.3.

Figure 1.4: Comparison of Ludwig's bustard and springbok movement patterns[79]



[79] Lovegrove, 1993. p.155.

With regard to the rainfall cycles, and acknowledging Bigalke's earlier theories of springbok fecundity, Lovegrove pointed out that:

> "It is also likely that cyclic fluctuations in the size of the total springbok population, associated with the rainfall cycle, added to the adverse conditions which stimulated the treks. The idea here is that, during the wetter years in the northern deserts the springbok population would have grown in response to good herbage, but that these greater numbers and the consequent heavy browsing pressure would have taxed all animals during the drier times of the rainfall cycle as good quality food became scarce. Thus a combination of poor quality herbage and high population numbers could have been the stimulus which triggered the mass aggregations and subsequent treks. Then the activities of the European hunters aside, the springbok population size would again have decreased markedly during the actual treks as a result of starvation, natural mortality and predation."[80]

Despite this neat theory, Lovegrove was cautious and acknowledged that "we may have to accept that the enigma of the springbok treks is one which will never be adequately revealed."[81] At the same time though, Skinner, another pioneer of modern springbok research and then Director of the Mammal Research Institute at the University of Pretoria, was working on his own analysis of springbok treks. His paper on the subject was the first to analyse the routes of all the known treks (see Figure 1.5) and attempt an overarching interpretation of their causes and the reasons for their cessation[82]. Skinner divided treks into three main loci – the western region [Namaqualand], Karoo, and Kalahari – and after combining an extensive analysis of historical records with modern climatological data and his own and others' work on springbok reproduction and fecundity, offered some hard conclusions. Of the 33 treks he was able to identify, almost all involved movement away from arid or drought affected regions to more mesic ones and in his opinion there was little doubt that either rainfall events or rainfall patterns were the inducement for these treks. In other words, treks in Namaqualand were migrations between summer and winter rainfall areas, while those from the southern to eastern Nama Karoo and from the Kalahari

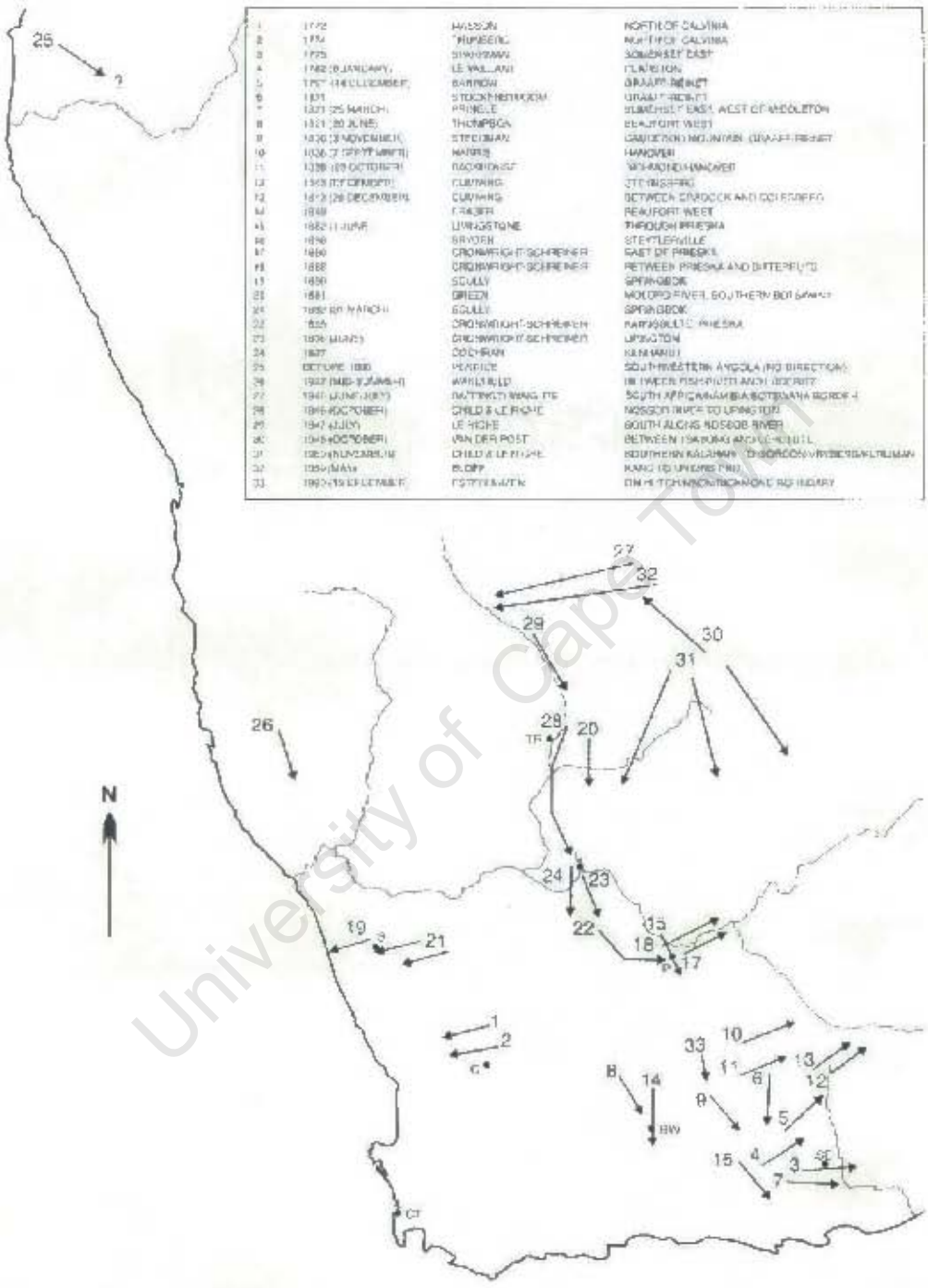
[80] Lovegrove, 1993. p.163.
[81] Lovegrove, 1993. p.163.
[82] Skinner, 1993. pp.291-305.

into the Nama Karoo were driven by drought. "Like the Scandinavian lemming *Lemmus lemmus*," Skinner stated, "emigration of springbok seems to follow an exponential increase in numbers resulting in a population which could not be supported by the available food supply (or possibly a local accumulation of animals which then exceed the capacity of that particular area)."[83] Sight and hearing were identified as the senses that enabled springbok to take advantage of locally suitable habitats and most likely facilitated dispersal once widespread conditions of abundance arose.

As far as the cessation of springbok treks at the end of the nineteenth century was concerned, Skinner thought that the cause was "almost certainly" the rinderpest epidemic which spread rapidly through the Cape from 1896. He discounted fencing as being far too recent, allegedly only being erected 20 years after the treks ceased, and conceded that hunting may have played a role.[84] Skinner and Louw revised this explanation slightly in 1996 concluding that the termination of springbok treks was "probably due to a complex set of factors, such as the extension of stock farming, fencing and improved hunting techniques. Nevertheless, the impact of rinderpest ... which reached the Cape in 1896, killed thousands of antelope and was probably an important contributing factor in this regard."[85]

[83] Skinner, 1993. p.295.
[84] Skinner, 1993. p.302.
[85] Skinner, J.D. & Louw, G.N. 1996. *The Springbok: Antidorcas marsupialis (Zimmermann, 1780)*, Transvaal Museum Monograph No. 10, Transvaal Museum, Pretoria. p.7.

Figure 1.5: "Map indicating recorded treks and direction. The treks are numbered in chronological order and listed from 1-33"[86]



[86] Skinner. 1993. p.293.

Adequate answers?

Lovegrove and, more particularly, Skinner have been widely quoted as the authorative modern sources[87], although, as Karoo ecologists Dean and Milton point out, there are still some aspects unsatisfactorily explained[88]. Can we, for example, adequately answer the questions posed by Lovegrove's and others? Where did these vast herds come from? Where did they go? Why and how often did they migrate? Were the treks true migrations or merely nomadic movements? How many springbok were involved? Over which routes did they travel? Why did treks cease abruptly after 1896/7?

The early authors, such as Masson and Le Vaillant, could only state that the trekbokke came from the interior, were driven by drought, directed by rain, occurred sporadically and consisted of numbers from 5000, to twenty or thirty thousand, to many hundred thousands, to millions. Impressions of trek sizes in the nineteenth century were equally variable over essentially the same range while Stockenstrom's opinion that the springbok originated between the Orange River and the colonial boundary and were driven out of that area into better watered parts of the Colony at irregular periods by drought was largely taken as gospel. Cronwright-Schreiner was largely of similar mind while Scully thought of the treks as predictable, annual migrations. A few authors held that some of the Bushmanland treks were joined by numbers from the Kalahari, and in this regard Skinner appears to have misquoted Stockenstrom, claiming that the origin of the springbok treks was *north* and not *south*

[87] See: Lovegrove, B.G. 1999. 'Animal form and function'; in: Dean, W.R.J. & Milton, S.J. (eds.). *The Karoo: Ecological Patterns and Processes*, Cambridge University Press, Cambridge. pp.145-163; Dean, W.R.J. & Milton, S.J. 1999. 'Animal foraging and food' in Dean & Milton. (eds.). pp.164-177; Milton, S.J., Davies, R.A.G. & Kerley, G.I.H. 1999. 'Population level dynamics', in: Dean & Milton. (eds.). pp.183-207.

[88] Dean & Milton, 1999. in: Dean & Milton. (eds.). p.176.

of the Orange River[89]. As a consequence he placed too much emphasis on movement between the Kalahari and Nama Karoo, a flaw also evident in Lovegrove's analysis[90]. Modern research into springbok biology, rainfall patterns, and vegetation has nonetheless removed some of the 'mystery' surrounding springbok treks and authors such as Bigalke, Liversidge, Skead, Lovegrove and Skinner have provided insights into the probable causes, distribution and scale of such phenomena.

The modern consensus, however, rests on a very limited sample of historical springbok treks and is confined to those recorded by travellers or officials based in the interior for fairly limited periods of time. These records are severely compromised by this observer effect, being entirely random in space and time and thus cannot really provide a dataset for a comprehensive analysis. Modern arid system ecology and springbok biology have allowed significant advances in understanding the historical springbok migrations, but without a comprehensive inventory of treks this remains conditional. While noting that "Khoisan artists are purported to having perhaps avoided painting springbok", Skinner does not investigate this potential source. Likewise both Skinner and Lovegrove ignore archaeological evidence and neither includes any real data on nineteenth century rainfall in relation to treks. The biggest deficiency in any analysis to date though is the absence of a comprehensive chronological sequence of treks over a protracted period. The difficulty in generating such a sequence has been regarded as prohibitive by biologists and has not been investigated by environmental historians, but without it no final conclusions can be drawn. The only potential source providing consistent coverage of a wide area and collective experience over a prolonged period is the settler press and it is with this, as

[89] Skinner, 1993. p.298.
[90] Lovegrove, 1993. p.163.

well as ethnographic, archaeological, archival and other sources, that the subsequent chapters are concerned.

CHAPTER 2:

Ethnographers, archaeologists, journalists and meteorologists – alternative sources of historical trek information

A wide range of additional historical sources – such as ethnography, archaeological and meteorological surveys, and colonial newspapers – offer scope for the re-interpretation of springbok mass movements. Some of these sources have been used in isolation to debate specific aspects of springbok and even trekbok movements[1] and in one notable case even combined[2], but all have been confined to specific areas of the historical springbok range and do not provide an overview of the phenomenon as a whole. This chapter reads these and other historical sources across the whole of the springbok range for evidence relevant to springbok treks.

"The springbok ... drink the rain's blood" – the /Xam and springbok

The /Xam were a Bushman[3] group of more than one dialect, parts of which during the colonial period lived in the area centred on a triangle of land from roughly Kenhardt

[1] Lenssen-Erz, T. 1994. 'Jumping about: springbok in the Brandberg rock paintings and in the Bleek and Lloyd collection: an attempt at a correlation', in: Dowson, T.A. & Lewis-Williams, J.D. (eds.). *Contested Images: Diversity in Southern African Rock Art Research*, Witwatersrand University Press, Johannesburg. pp.275-191; Plug, I. 1993. 'The macrofaunal remains of wild animals from Abbot's Cave and Lame Sheep Shelter, Seacow Valley, Cape', *Koedoe*, 36(1): pp.15-26; Plug, I. 1994. 'Springbok, *Antidorcas marsupialis* (Zimmermann, 1780) from the past', *Zeitschrift fur Saugetierkunde*, 59: pp.246-251.

[2] Neville, D.E. 1996. 'European impacts on the Seacow River valley and its hunter-gatherer inhabitants, AD. 1770-1900', Vol. I & II, Unpublished MA Thesis, University of Cape Town.

[3] The discussion of suitability of terms such Khoi, Khoi-Khoi, Khoekhoe, Khoisan, Bushman and San does not fall within the scope of this thesis and hunter-gatherers and hunter-gather-pastoralists are referred to by their ethnic signifier as used in the main source consulted, hence /Xam, Swy'ei and so on. Where generalised terms are applied these can be broadly defined as follows: Khoi – pastoralists incorporating elements of hunting and gathering; San or Bushmen – hunter-gatherers without elements of pastoralism. For discussion on this topic see: Schapera, I. 1930. *The Khoisan Peoples of South Africa: Bushmen and Hottentots*, George Routledge & Sons, London; Elphick, R. 1985. *Khoikhoi and the Founding of White South Africa*, Ravan, Johannesburg; Barnard, A. 1992. *Hunters and Herders of Southern Africa. A Comparative Ethnography of the Khoisan Peoples*, Cambridge University Press, Cambridge; Lewis-Williams, J.D. (ed.). 2000. *Stories that Float from Afar*, David Philip, Cape Town.

to Brandvlei to Van Wyk's Vlei[4] (see Figure 2.1). The /Xam were a vanishing people by the 1870s[5], and Lewis-Williams has suggested that their society had been destroyed by the middle of the nineteenth century[6]. Many had been systematically slaughtered by trekboers[7] who used the area for grazing, while others became boer servants and shepherds and yet others escaped death and servitude only to serve prison sentences for varying forms of resistance and crimes under colonial law. Despite the seemingly inexorable demise of their culture over the course of the nineteenth century it is to the /Xam convicts that ethnographers, and indeed environmental historians, are indebted. While being held at the Breakwater Prison in Cape Town several /Xam men were at different stages released into the custody of Wilhelm Bleek, son of a free thinking theologian and himself a distinguished linguist who had been involved in a study of Zulu grammar and indigenous African languages in general[8]. Realising the dire situation of the Bushman languages, he resolved to record the folklore and language of the /Xam and together with his sister-in-law, Lucy Lloyd, interviewed several /Xam men and one woman over a period of 9 years, 1870-1879.[9] Bleek and Lloyd's transcripts of /Xam interviews run to 12000 pages with summaries and extracts having been published by them in 1873, 1875 and 1889 and a much more detailed collection in 1911[10]. These publications, later analyses by Bleek's

[4] See: Deacon, J. 1996a. 'The /Xam informants', in: Deacon, J. & Dowson, T.A. (eds.). *Voices from the Past: /Xam Bushman and the Bleek and Lloyd Collection*, Witwatersrand University Press, Johannesburg. pp.11-39; Lewis-Williams, D. & Dowson, T. 1999. *Images of Power: Understanding San Rock Art*, 2nd Edition, Struik, Cape Town; Lewis-Williams, 2000; James, A. 2001. *The First Bushman's Path: Stories, Songs and Testimonies of the /Xam of the Northern Cape*, University of Natal Press, Pietermaritzburg.

[5] See: Penn, N. 1991. 'The /Xam and the Colony, 1740-1870' in: Skotnes, P. (ed.). *Sound from the Thinking Strings*, Axeage Private Press, Cape Town. p.24.

[6] Lewis-Williams, 2000. p.8.

[7] See: Cape of Good Hope, 1863. *Message from His Excellency the Governor, with Enclosures, relative to Affairs in the North-western Districts of the Colony* [A.39-'63].

[8] Lewis-Williams, 2000. pp.12-14

[9] Bleek himself died in 1875, with all interviews between August 1875 and December 1879 being conducted by Lloyd.

[10] Cape of Good Hope, 1873. *Report of Dr. Bleek concerning his Researches into the Bushman Language and Customs presented to the Honourable the House of Assembly by command of His*

daughter Dorothea[11], as well as several recent collections provide an insight into /Xam culture, beliefs and to some extent daily life, but they are limited in coverage and it is necessary to work with the original transcripts in order to decipher the /Xam relationship to springbok and their knowledge of the species' movements.[12]

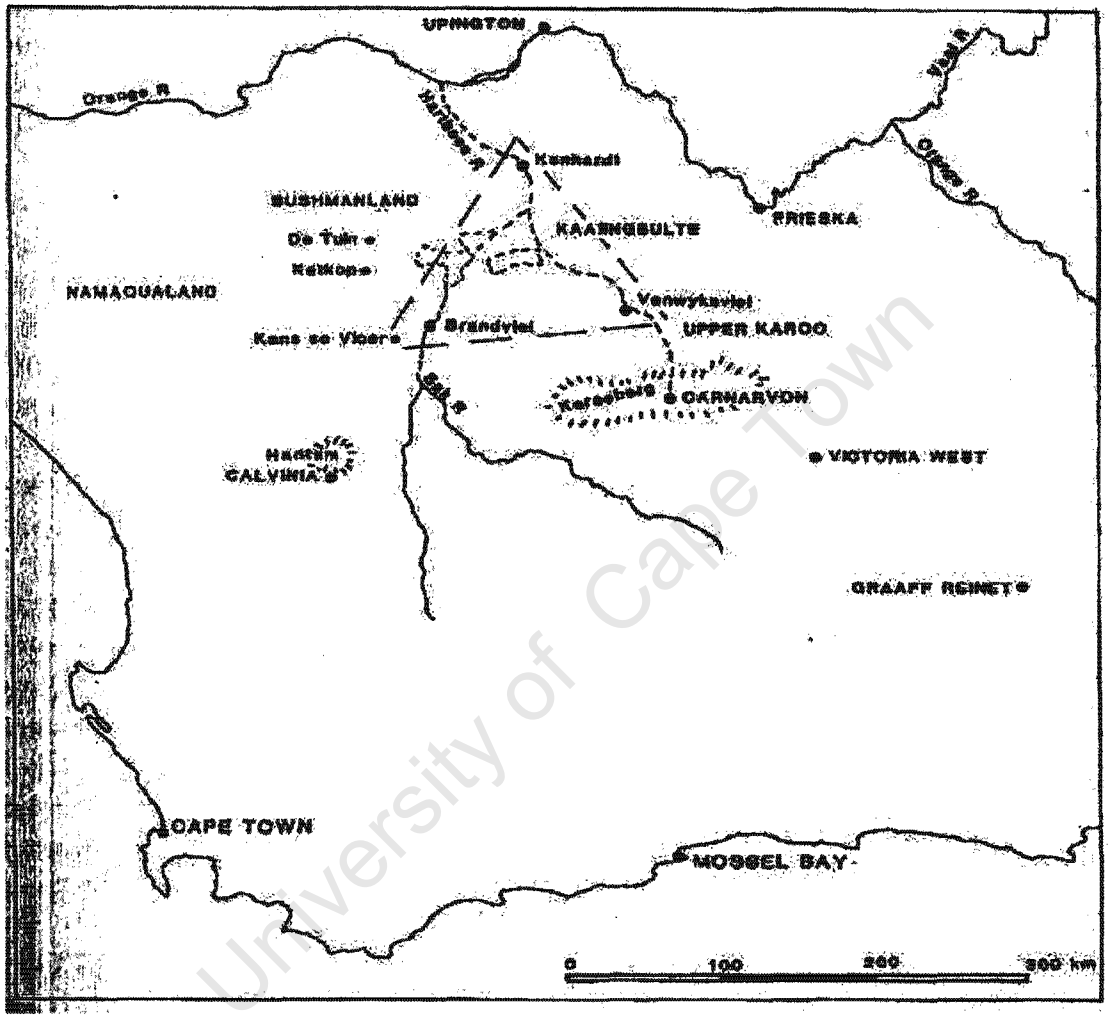


Figure 2.1: The area of the northern Cape Colony occupied by the /Xam[13]

Excellency the Governor [A.17-'73]; Cape of Good Hope, 1875. *Second Report concerning Bushman Researches by WHI Bleek, PhD, Curator of the Grey Library, foreign Member of the Royal Bavarian Academy of Sciences, &c,* [G.54-'75]; Lloyd, L.C. 1889. *A Short Account of Further Bushman Material Collected*, David Nutt, London; Bleek, W.H.I & Lloyd, L.C. 1968. *Specimens of Bushman Folklore*, Struik, Cape Town.

[11] See for example: Bleek, D.F. 1933-36. 'Customs and Beliefs of the /Xam Bushmen,' Parts I-VII,[reprinted from *Bantu Studies*], University of the Witwatersrand Press, Johannesburg.

[12] I am extremely grateful to Andrew Bank for allowing me access to his transcripts of the Bleek and Lloyd Collection and for reading a draft of this section.

[13] Deacon, 1996a. p.27.

Springbok, or *whai*, feature regularly and often in some detail in the accounts given to Bleek and Lloyd by their principal /Xam informants: /A!kunta, //Kabbo, =Kasin, Dia!kwain, !Kweiten-ta-//ken and /Han=kass'o. The species was an integral part of /Xam folklore[14], and it has even been suggested that the /Xam believed that in the "early time" they themselves had been springbok[15]. Even more apparent, however, is the importance placed on springbok as a source of food and raw materials. Aside from superstitions and taboos governing springbok and springbok hunting[16], numerous accounts deal with springbok hunt preparation, hunt techniques (see Figures 2.2 and 2.3) and descriptions, carcass apportionment and meat consumption[17]. Among other things, springbok skins were used as roof layers for shelters, water containers, clothes, bags, sacks, karosses, drum skins and even, during famines, food[18]; bones as needles and spoons[19]; sinews as bowstrings[20]; and ears as dancing rattles[21]. The wide range of uses to which springbok were put was confirmed by observers such as Dunn who travelled south of Kenhardt in the 1870s and recorded how the women in the bands of Bushmen they encountered (most likely the /Xam) wore "gowns" of springbok leather. At the time of this encounter, Dunn noted, the men of the clan were away, either hunting springbok or as shepherds. Other springbok products observed were the use of a springbok horn as the handle on an old woman's walking and digging stick,

[14] B25; LII–2; LII–3; LII-23; LII-24; LV-3; LV-9; LV-15; LVIII-29. (The notebooks of Bleek and Lloyd Collection are prefixed by the initial of the recorder, i.e. B = Bleek; L = Lloyd, and are followed by the numeral assigned to each informant – I = /A!kunta; II = //Kabbo; IV = =Kasin ; V = Dia!kwain; VII = VIII = /Han=kass'o. Thereafter each notebook is numbered chronologically. Additional explanatory notes were included by Bleek and Lloyd on the left hand page of the notebook or in the transcripts themselves and are included here, where relevant, in italics.)

[15] Although this contention has received widespread acceptance it is based only on an insert in an unrelated story: "We who are Bushmen were once springbuck and the Mantis shot us, and we really cried (like a child). Then the Mantis said we should become a person, become people, because we really cried." (LVIII-4). See also Lewis-Williams & Dowson, 1999. p.129; James, 2001. p.181.

[16] LII-12; LII-14; LII-36; LV-17; LV-25; LVIII-14; LVIII-26.

[17] LI-2; LII-1; LII-3; LII-6; LII-12; LII-13; LII-14; LII-22; LII-24; LII-25; LII-36; LIV-1; LIV-2; LV-9; LVII-22; LVIII-1; LVIII-7; LVIII-8;LVIII-14.

[18] B26; 'Day's Heart'; LI; LII-1; LII-3; LII-5; LII-6; LII-14; LVIII-1; LVIII-14

[19] LII-14; LV-10.

[20] LII-19; LII-36.

[21] LVIII-1.

springbok sinew twisted into bow strings ("very strong, but unserviceable in damp weather") and freshly killed springbok paunches used for the storing and carrying of water ("one involuntarily feels thankful that he is not thirsty just now").[22] He later remarked on spoons made from springbok ribs and also suggested that two of the most important sources of protein for the Bushman of the Kenhardt district were locusts and the "travelling springbok."[23]

Figure 2.2: A sketch showing a disguised stalk technique used by Bushmen to get within reach of their prey, in this case a herd of springbok[24]

[22] Dunn, E.J. 1873. 'Through Bushmanland, Part II', *Cape Monthly Magazine*, 31: p.31.
[23] Dunn, E.J. 1931. *The Bushman*, Charles Griffin & Co., London. pp.23; 29-30.
[24] Manuscripts and Archives, University of Cape Town: Charles Davidson Bell Sketchbooks, BC686 #25.

Figure 2.3: "Tactics in springbok hunting"[25]

Row of sticks with feathers tied upon them, used in springbok-hunting, to turn the game. The lines represent the Bushmen lying in wait for them.

1. From this direction the herd of springbok comes.
2. Here they go towards the row of sticks with feathers tied upon them.
3. Here stands a woman, who throws up dust into the air.
4. This man, whose sticks they are, lies at their head.

5, 6, 7, 8, 9 } See VIII.—23. pp. 8067-8072.

Bleek's, Dec., 1873.

[25] Bleek & Lloyd, 1968. Between p.164 & p.165.

Rock paintings are rare on the arid plains once occupied by the /Xam, but rock engravings at a variety of sites across the area have been surveyed and, while apparently without any direct connection to folklore[26], do feature springbok. Their representation is fairly limited however and of eight sites mentioned by Deacon, springbok only occur at two, while eland occur at all eight and even elephant feature at six[27]. Although the area has been relatively neglected archaeologically until recently[28], a few limited surveys have confirmed the use of springbok by the /Xam and other groups. The apparently ephemeral nature of settlements has restricted excavations, and hence findings, but springbok have been discerned in the faunal remains at Droegrond (about 100km west of Kenhardt)[29] and Arbeidsvreugd (south of Kenhardt)[30]. Despite the limited amount of work, Beaumont *et al* are confident that "the hunters had a strong predilection for the exploitation of the large herds of small medium bovids available to them [i.e. springbok],"[31] a claim later supported by Smith who suggested the hunter-gatherers of the area targeted migratory game.[32]

[26] Deacon, J. 1994. 'Rock engravings and the folklore of Bleek and Lloyd's /Xam San informants', in: Dowson & Lewis-Williams (eds.). p.255.
[27] Deacon, 1994. p.243. See also: Morris, D. & Beaumont, P. 1994. 'Portable rock engravings at Springbokoog and the archaeological contexts of rock art of the Upper Karoo', in: Dowson & Lewis-Williams (eds.). pp.11-28. Gerhard and Dora Fock also found only limited representation of springbok in rock engravings in the area around Kimberley and Vryburg, a fact they ascribed to the ratio of meat to effort expended in the hunt, while also acknowledging the potential symbolic or ritual value of species such as eland. See: Fock, G. 1979. *Felsbilder in Sudafrika Teil I: de Gravierungen auf Klipfontein, Kapprovinz*, Bohlau Verlag, Koln Wien. p.54; Fock, G. & Fock, D. 1984. *Felsbilder in Sudafrika Teil II: Kindersdam und Kalahari*, Bohlau Verlag, Koln Wien. p.165; Fock, G. & Fock, D. 1989. *Felsbilder in Sudafrika Teil III: die felsbilder in Vaal-Oranje-Becken*, Bohlau Verlag, Koln Wien. p.143; p.151.
[28] See: Beaumont, P.B, Smith, A.B. & Vogel, J.C. 1995. 'Before the Einiqua: The archaeology of the frontier zone', in: Smith. A.B. (ed.). *Einiqualand: Studies of the Orange River Frontier*, University of Cape Town Press, Cape Town. pp.236-237.
[29] Smith, A.B. 1995. 'Archaeological observations along the Orange River and its hinterland', in: Smith (ed.). pp.281-292.
[30] Deacon, J. 1996b. 'Archaeology of the Flat and Grass Bushmen', in: Deacon & Dowson (eds.). pp.245-270.
[31] Beaumont, Smith & Vogel, 1995. p.258.
[32] Smith, A.B. 1999. 'Hunters and herders in the Karoo landscape', in: Dean, W.R.J. & Milton, S.J. (eds.). *The Karoo: Ecological Patterns and Processes*, Cambridge University Press, Cambridge. p.251.

Lenssen-Erz, in an analysis of springbok in /Xam folklore, has suggested that the springbok "may be a symbol for the intactness of the environment or for harmony with nature,"[33] but even if this was not the case, the species was clearly an important feature of life and, as James has noted, was of "considerable cultural and economic significance" to the /Xam.[34]

Given the arid nature of */Xam-ka !au*[35] this reliance on, and complete use of, a desert-adapted antelope such as the springbok for protein and raw materials is unsurprising. It is also a dependence that would have intensified during the course of the nineteenth century as other large ungulate species, such as eland, red hartebeest and quagga, and even to a lesser extent animals such as gemsbok and ostrich, were dramatically reduced by the hunting.[36] Such dependence, however, would have necessitated a thorough knowledge of springbok behaviour and an understanding of this, and the movements of the herds, in relation to environmental cues such as rainfall. As Deacon and others have noted, "the /Xam had an intimate knowledge of the habits and physical characteristics of the animals familiar to them."[37] This necessary, indeed critical, understanding and the recording of it by Bleek and Lloyd in a variety of narratives allows us an insight into springbok behaviour in a remote area not often

[33] Lenssen-Erz, 1994. p.282.
[34] James, 2001. p.64.
[35] The /Xam home territory, literally "ground, or dust, of the /Xam" (Lewis-Williams, 2000. p.9).
[36] Aside from white colonists, indigenous people, including /Xam, had acquired firearms to a limited degree and even to some extent become implicated in an economy other than that of largely independent subsistence. Dia!kwain mentions hunting springbok using a gun (LV-9) although this was evidently unusual amongst the /Xam. //Kabbo relates an account of ostrich hunting and the trading of the valued feathers with the colonists for which they received tobacco. "Thou shalt take to the white man yonder its feathers. He shall give us tobacco. We shall smoke." (LII-7). For a broader discussion of this process elsewhere in the Colony see: Westbury, W. & Sampson, C.G. 1993. 'To strike the necessary fire: acquisition of guns by the Seacow Valley Bushmen', *South African Archaeological Bulletin*, 48(157): pp.26-31.
[37] Deacon, 1994. p.243.

covered by contemporary traveller or newspaper reports, and as yet not subject to substantial archaeological research.

Despite Anthing's dire pronouncement in 1863 that "in consequence of the colonists having guns and horses, and their being expert hunters ... the wild game of the country had become scarce, and almost inaccessible to the Bushman"[38], the /Xam certainly continued to encounter every element of springbok association, from solitary rams, to bachelor herds, small breeding herds, larger aggregations and of course trekbokke. They spoke of the trekbok as "those which send up the dust"[39] and thought that their numbers "resemble the stars"[40]. The ubiquitous subject of hunting, so intrinsically linked to springbok, inevitably informed such descriptions:

"They are, they seem as if we should not have sufficient arrows. For the bushes are not there (*i.e. the springbok are so numerous that the bushes are not visible*). For thou art the one who beholdest that the bushes are not there, for it is the springbok bodies which are coming. And thou art the one who beholdest that the dust is arising on account of them."[41]

This hunting was not limited to just that of the /Xam and, in describing the incredible numbers of springbok, /Han=kass'o reported on the efforts of the Boers whose gunpowder and bullets, like the arrows of the /Xam were insufficient to extinguish the trekbokke:

"The springbok resemble the water of the sea. Therefore [when] the springbok come in numbers (?) to the place which is here, the springbok cover the whole place. Therefore the Boers' gunpowder becomes exhausted, that and the balls."[42]

[38] Cape of Good Hope, 1863. *Message from His Excellency the Governor, with Enclosures, relative to Affairs in the North-western Districts of the Colony* [A.39-'63].
[39] LII-14.
[40] LVIII-14.
[41] LVIII-8.
[42] LVIII-14. Skotnes has incorrectly interpreted this passage as symbolically referring to the /Xam and their resistance to the Boers. See: Skotnes, P. 1999. *Heaven's Things: A Story of the /Xam*, LLAREC Series in Visual History, Cape Town. pp.31-32.

All age and sex classes of springbok were recognised as being driven out of */Xam-ka !au* by drought - a time which did not bode well for the /Xam: "...the Bushmen become lean on account of it, if the rain does not fall. And the springboks are not there on account of it. The locusts are not there. And the locusts vanish/disappear. The springboks also vanish."[43] Yet even during a normal dry season the majority of springbok, with the possible exception on certain occasions of some of the rams in the local population, would leave the area, forcing the /Xam to rely on other seasonally available food sources, such as ostrich eggs and honey, in a cycle until the springbok returned[44]:

"For the rain does not quickly fall, that the water may fall, making the springbok to return, for the springbok did go in the sun to the springbok's place. And then the people await the springbok, while the springbok do go lean, the male springbok. And then the people did shoot them, that the she springbok might become fat. And then the springbok returning come, when the //khwai comes. When the skin (cells) are black, the //khwai comes out, the //khwai's rain falls. That rain, it rains bringing out [when the foliage is always great]. That green is indeed great in that when foliage always comes out in all places. That the vegetation may come out, when bad food grows out."[45]

The *//khwai* stars appear in the constellation Aquila[46] and according to James seem to have been directly associated by the /Xam with clouds and rain.[47] Appearing as they did in the early morning sky in February/March[48] every year, the *//khwai* stars thus served as a portent of the usual late summer rain of the region and the inevitable response of the springbok. The role of the rain in transforming vegetation and the regularity with which this happened at a certain time of the year was thus clearly recognised by the /Xam. //Kabbo noted that "The springbok comes (when) the rain liquid is a little dried [*(the earth being still wet within)*], that the springbok might

[43] LVIII-16.
[44] For an account of this seasonal cycle see: LII-22; LII-23.
[45] LII-23.
[46] See: Bleek & Lloyd, 1968. p.79.
[47] James, 2001. p.228.
[48] Professor Tony Fairall, University of Cape Town, Astronomy Department, *Pers comm.*

going eat the little [], which are just come out. Those which the springbok going swallows them, which the rain rained (bringing) them out,"[49] and thought that it was the "rain-scent" (of the moisture itself and the way it enlivened the scents of bushes and the earth) that brought the springbok to "running come."[50] The constellation of Orion's Belt, appearing in the early morning sky in June/July, was called *whai ta Tkuatti*, or the springbok star[51], this designation perhaps also linking the parallel seasonal nature of both springbok and constellation. The dependence of the /Xam on the springbok and therefore the seasonal rain that brought them to */Xam-ka !au* resulted in the use of shamans[52] to cause a certain kind of rain to fall. //Kabbo for example, while relating the fear of a community before the expected onslaught of a storm that would blow their houses away and their plans to light a fire (perhaps burning the keratinous sheath of springbok horns[53]) to turn the rain back, recounted the following story, described by James as "a concord of environmental observation, socio-economic statement and aesthetic appreciation"[54]:

"Old man says to his grandson, "Thou shalt not make a fire, for our place's bushes are dry. Thou shalt gently await for us the rain. For I will cut a she-rain; that the milk that might []. I must milk her, she who rains soft the earth, that the earth may be wetted, deep in the earth inside. Then the bushes (growing) sprout, that the bushes may become nicely green. The springboks galloping coming, that the springbok may travel to all places. That all the people may shoot. For all places are dry, for the heaven is great. It (the sky) great sits.
Therefore the rain indeed shall fall on all places, for I will milk a she-rain. I do cut her. I must cutting, let out the rain's blood, that the rain-blood may run upon the earth. That the springbok may going drink the rain's blood, as the springbok does galloping go."[55]

Dia!kwain had a similar story in which he reported his father's belief that his own deceased father had been a shaman and that when rain was needed he called on him

[49] LII-25.
[50] LII-25; LII-14.
[51] LIV-4.
[52] 'Shaman' is a term favoured by Lewis-Williams and indeed appears more suitable than 'sorcerer', the translation originally assigned by Bleek and Lloyd.
[53] This apparently divided the rain clouds. See: LVIII-23.
[54] James, 2001. p.181.
[55] LII-25.

for help, believing he would hear him.[56] When questioned on this point by his daughter-in-law he replied: "go out and climb the Brinkkop. We will go and sit on the Brinkkop and look around for springboks."[57] Deacon's investigations into the Brinkkops confirms that these are dolerite outcrops that "served as vantage points, especially when looking out for springbok migrations,"[58] implying that Dia!kwain's father expected to see springbok approaching and felt that this would be evidence of his own father's rainmaking prowess. /Han=kass'o in turn recorded another method of causing rain to attract springbok:

"We are wont to beat the bushes when we desire that the wind may blow hard. We beat the bushes [with a stick (with a man's stick)]. We say, 'Listen! I have wished that the wind shall blow hard for us that we may quickly go behind the hill. For thou art the one who beholdest (those) springbok which are coming. ... Therefore I desired that our brother, whose wind is wont to blow hard from the north, he should beat the bushes that we might quickly go round in front of the game."[59]

Rain in Bushmanland, and indeed in the central interior of western South Africa, is caused by the northerly flow of tropical air that brings with it moisture from the north.[60] This phenomenon is initiated by a high pressure system that develops in March and the resultant rain falls mainly in late summer and autumn and a possible interpretation of the above passage is that the desire to cause a north wind to blow must indicate knowledge of the connection between the two and an attempt to pre-empt this.

[56] It is unclear if this person was in fact Dia!kwain's grandfather and elsewhere the genealogy suggests not. Andrew Bank, *Pers comm.*
[57] LV-14.
[58] Deacon, J. 1997. '"My heart stands in the hill": rock engravings in the northern Cape', *Kronos*, 24: pp.18-29. See also: LII-6; LII-13; LII-14; LII-28.
[59] LVIII-8.
[60] Tyson, P.D. & Preston-Whyte, R.A. 2000. *The Weather and Climate of Southern Africa*, 2nd Edition, Oxford University Press, Cape Town. p.176.

Another element that indicates the extent of the metaphysical connection the /Xam had with springbok is illustrated by *!gwe*, or presentiment, where /Xam sensed the coming of the springbok by interpreting a multitude of 'tapping' in their own bodies that related to specific features of, or associations with, springbok. //Kabbo, for example, mentions 'tapping' in the body – or 'the springbok sensation' as Bleek and Lloyd later described it[61] - that related to the habit of springbok scratching itself with its horns and hooves, a feeling in the ribs that corresponded with the black lateral stripe of springbok, a sensation of blood running down his legs and back that mimicked the feeling of springbok blood while a carcass was being carried over the shoulder, as well as 'tapping' in their feet, heads and eyes that related respectively to the rustle of springbok hooves in the bushes, the chopping off of springbok horns, and the black stripe of the springbok's eyes.[62]

Aside from the ability to bring rain, some shamans were even said to control, or possess, the game and other usually erratic food sources. Dia!kwain's uncle, Tuherre, for example was said to posses ostriches[63], and it was believed that locusts, a favoured food source, were released from imprisonment by sorcerers who "charm them with magical doings."[64] Springbok, as perhaps the most important source of protein, of course had their own sorcerers or shamans. One story tells of "a great Bushman Doctress and Sorceress", Ttano !khauken, and her "heart's" springbok, "who was not a food springbok." This springbok was usually fastened up, but "a springbok which went out of a riem it was":

[61] Bleek & Lloyd, 1968. p.333.
[62] LII-28.
[63] LV-10; LV-11.
[64] LV-21.

"She had unloosened the springbok from the riem. She sent the springbok in among the other springbok, while she desired that the springbok should take to mamma the other springbok, to the place at which mamma was. Mamma was the one who had asked her for springbok, that the springbok might go to her, that she might do what she had said. She (mamma) has wished, she said, that she (the old woman) should formerly make to travel for her springbok, that mamma might cut springbok."[65]

Lewis-Williams points out that "it seems most unlikely that a springbok could be trained to act as a decoy, [and that] this animal was probably, like the rain animal, hallucinatory. It existed in the spirit world rather than the real world."[66] The story related by /Han=kass'o regarding the killing of his pet leveret by his mother ("... for we do not play with meat, for we lay meat to roast"[67]) perhaps lends some support to this theory, but even if the springbok referred to was in fact a tame animal, the story nonetheless indicates an attempt to control the springbok and a belief that this was possible.

Regardless of the cosmology of /Xam spiritual beliefs however, it is clear that they were informed by ecological imperatives. The relationship between springbok and rain (and resultant vegetation response) is clear and unequivocal: springbok were forced to leave the land of the /Xam by a lack of rain and only returned after precipitation had prompted the regrowth of bushes and grass. These movements, despite some seasonality and a certain degree of predictability, were not consistent and were affected by local rainfall events such as droughts. As a result springbok herd sizes were variable, with times of plenty being appreciated by the /Xam. Taboos, such as not hunting the white springbok, *!guara-!guara*, believed to appear only with large herds of springbok[68], serve to confirm this.

[65] LV-10.
[66] Lewis-Williams & Dowson, 1999. p.100.
[67] LVIII-14.
[68] See: LVIII-14.

Rock art and faunal remains – Cederberg, the Eastern Cape and the Seacow River Valley

In contrast to the relative lack of archaeological work in greater Bushmanland, the Cederberg in the south western Cape and the Seacow River Valley in the eastern Karoo have both yielded a number of research sites and generated a significant body of scholarship. The Cederberg falls largely outside the historical range of the springbok[69], and the hilly terrain cannot have been either prime habitat or affected by *trekbokken*, nevertheless springbok remains, representing a very small proportion of the overall faunal sample, have been discovered at, at least one site[70] and the area is the scene of limited springbok portrayal in painted rock art. A tracing of one such image from Clanwilliam is featured in Figure 2.4[71]. A copy of a painting from the Eastern Cape by Stow, whose description read: "group of bucks trekking"[72], has been taken as evidence of the "single reference to the remarkable phenomenon [of the *trekbokken*] in the folklore of the Khoisan."[73] In light of the /Xam ethnography this claim is obviously incorrect, but the panel nonetheless does contain images of springbok. As Skinner noted[74], and in contrast with Dorothea Bleek's claims[75], springbok were not often portrayed in rock art[76]. Lewis-Williams has suggested however, that the fact that where springbok are represented they are often rendered in polychrome like the spiritually important eland, and the grey rhebuck they seem to

[69] Skinner and Louw also feature a photograph of this well-known image. See: Skinner, J.D. & Louw, G.N. 1996. *The Springbok: Antidorcas marsupialis (Zimmermann, 1780)*, Transvaal Museum Monograph No. 10, Transvaal Museum, Pretoria. p.4.
[70] Parkington, JE. 1976. 'Follow the San: An analysis of seasonality in the prehistory of the South Western Cape, South Africa', Unpublished PhD Thesis, University of Cambridge.
[71] Skinner & Louw, 1996. p.6.
[72] Stow, G.W. & Bleek, D.F. 1930. *Rock-Paintings in South Africa from Parts of the Eastern Province and Orange Free State, copied by George William Stow, with an Introduction and Descriptive Notes by DF Bleek*, Metheun, London. Plate 10.
[73] Skinner, J.D. 1993. 'Springbok (Antidorcas marsupialis) treks', *Transactions of the Royal Society of South Africa*, 48: p.291.
[74] Skinner, 1993. p.291.
[75] Stow & Bleek, 1930. p.ix.
[76] Deacon, 1997. p.22.

replace, perhaps indicates some not yet understood link to rain rituals.[77] Given the clear link the /Xam noted between rain and springbok this would seem plausible and would account for polychrome renditions of the species, yet if this was true it fails to explain the apparent under-representation of springbok in San rock art of both painted and engraved forms. Springbok are also represented in Namibia's Brandberg and Lenssen-Erz has sought to explain the contrasting abundance of images of this species here in terms of /Xam mythology.[78]

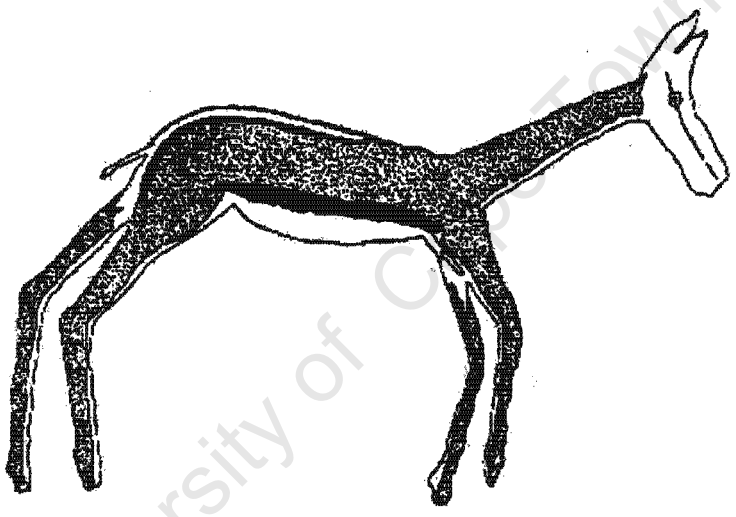


Figure 2.4: Tracing of a detailed polychrome springbok from Clanwilliam in the Cederberg by Townley Johnson[79]

The Seacow River Valley, in contrast to the Cedarberg, falls both within the historical range of springbok and also played host to the *trekbokken*[80]. Neville's study of European impacts on the Seacow River Valley and the Bushmen living there over the course of the nineteenth century includes an extensive analysis of the changing fauna,

[77] Lewis-Williams & Dowson, 1999. p.129.
[78] See: Lenssen-Erz, 1994.
[79] This image is featured on the cover of: *The South African Archaeological Bulletin* 58(177), June 2003.
[80] See Chapter 1.

vegetation and rainfall of the region and his use of a variety of sources such as contemporary literature and newspapers gives us perhaps the most complete chronological sequence of springbok treks, albeit in a limited area, to date. Neville recorded definite treks in the Seacow River Valley in 1844, 1858, 1859, 1861, 1862, 1864, 1871, 1872, 1877, 1882, 1893 and 1896 and suggested that treks, at least in this areas, were irregular and closely related to droughts[81].

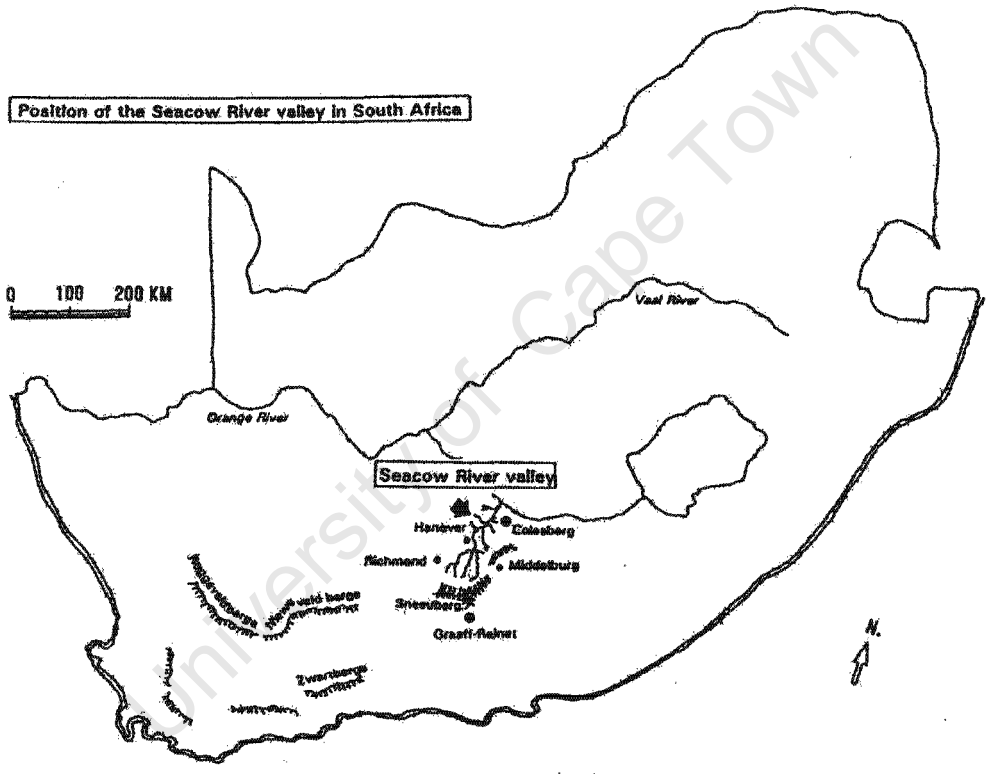


Figure 2.5: Position of the Seacow River Valley[82]

The area has also been subject to extensive archaeological survey and excavation over a period of more than twenty years and has yielded some interesting findings regarding faunal diversity and abundance in the valley and the impact of both

[81] Neville, 1996. Vol. I. pp.121-122.
[82] Neville, 1996. Vol. II. p.1.

Bushman and European hunting.[83] The historical record of Barrow, Stockenstrom and others who encountered "endless droves of ... not only [springbok], but of wildebeests, quaggas, hartebeests, gemsboks, and blesboks"[84] and thought that "all kinds of game are particularly abundant [here]"[85] has been confirmed by the archaeological record: No less than 43 mammalian species from nine different shelters have been identified by Plug and Sampson, with springbok dominant in terms of the quantity of macro-mammal remains.[86]

Faunal remains from two of the sites have been identified and analysed by Plug and an overwhelming proportion of these are springbok. At Abbot's Cave springbok constitute 49% of all identified remains, while at the adjacent Lame Sheep Shelter the figure was 32%. In addition an unknown percentage of the unidentified medium sized bovid remains from the two shelters were undoubtedly also springbok, and, as Plug notes, "it is clear that the hunters of [Abbots Cave in particular] were predominantly preying on this species."[87] Given that springbok dominated the mammal assemblage of the valley numerically[88] and that the Bushmen of the area, variously termed the Swy `ei[89] or Sun `ei[90], are likely to have shared much in common with the /Xam in terms of diet and hunting skills and techniques, this conclusion is unsurprising. What

[83] See: Plug, 1993. pp.15-26; Westbury & Sampson, 1993; Plug, 1994. pp.246-251; Sampson, C.G. 1994. 'Ostrich eggs and Bushman survival on the north-east frontier of the Cape Colony, South Africa', *Journal of Arid Environments*, 26: pp.383-399; Plug, I. & Sampson, C.G. 1996. 'European and Bushman impacts on Karoo fauna in the nineteenth century: an archaeological perspective', *South African Archaeological Bulletin*, 51(163): pp.26-31; Neville,1996.
[84] Hutton, C.W. (ed.). 1887. *The Autobiography of the Late Sir Andries Stockenstrom*, JC Juta & Co. Cape Town. p.33.
[85] Barrow, J. 1806. *An Account of Travels into the Interior of Southern Africa*, 2nd Edition, T. Cadell & W. Davies, London. Vol. I, p.219; Vol. II, p.75.
[86] Plug & Sampson, 1996.
[87] Plug, 1993. p.23.
[88] See: Barrow, 1806. Vol. I, p.219; Moodie, D. 1960. *The Record; or a Series of Official Papers Relative to the Condition and Treatment of the Native Tribes of South Africa*, AA Balkema, Cape Town. Part V. p.2; Cole, A.W. 1852. *The Cape and the Kafirs: or, Notes of Five Years Residence in South Africa*, Richard Bently, London. p. 214.
[89] Sampson, 1994. p.383.
[90] Westbury & Sampson, 1993. p.26.

is unique about the faunal sample at Abbot's Cave however is the unusually high occurrence of foetal and neonate remains. For a variety of reasons these remains do not normally persist in the archaeological record, and their preponderance (13.5% of the total bovid sample)[91] at Abbot's Cave therefore points to a specific predation on this sector of the population by the Swy `ei. As Plug has argued "predation was aimed specifically at pregnant ewes, or ewes with new born lambs. Such animals would have had reserves of body fat, which would have made them preferred prey."[92] This predation, in addition, indicates a seasonal focus, and citing the historical record, Plug suggests that annual springbok migrations passed through the Seacow River Valley during September each year, allowing the Swy `ei to plunder the crop of lambs and the vulnerable females.[93]

Plug later discounted the possibility that these were annual springbok treks however, and suggested instead that they were an indication of the existence of more than one type of migratory movement by the springbok in the Karoo: The high proportion of foetal and neonate remains could not be expected in such high numbers in a trekbok herd which would be representative of all age and sex classes, this make up in turn presumably being reflected in the archaeological record.[94] Given that springbok remains in the various layers at Abbot's Cave contain no, or very few, examples of juvenile, sub-adult or young animals, Plug concluded that the lamb crop matured elsewhere and that predominantly female herds habitually moved into the Seacow

[91] Plug, 1993. p.23.
[92] Plug, 1993. p.24.
[93] Plug, 1993. p.25.
[94] Plug, 1994. p.250.

River Valley, either to lamb or shortly after lambing, and were sufficiently mobile to optimise grazing opportunities that would have resulted from the later summer rains.[95]

Plug's final conclusion that springbok remains analysed by her " were not part of the occasional mass movements" conflicts with Neville's analysis of trek patterns in the historical record in the Seacow River Valley. It is, however, consistent with observations of springbok behaviour in the modern era[96] and suggests that not every 'migration' can be considered a trek. What is clear, from both the travellers' accounts and an examination of /Xam ethnography and Swy'ei archaeology, is the role seasonal trends in drought and rainfall played in initiating and directing such 'migrations'. Hence any understanding of the phenomenon of the trekbokke of the nineteenth century must revolve around an examination of recorded treks in relation to rainfall: Seemingly a simple task.

Historical Meteorology – climate reconstructions for the nineteenth century

Determining rainfall for specific points in the Cape Colony during the nineteenth century is, however, anything but simple. As Tyson points out, the first station to systematically record weather, and thus climate, was only established in 1840 in Cape Town[97] – a winter rainfall, fynbos biome outside the springbok range. By 1880 thirty-five such stations had been established over a much wider area, but even these do not

[95] Plug, 1994. p.250.
[96] See: Morris, J.J. 1958. 'Veldaangeleenthede en beweging van wild in die Kalahari-Gemsbokpark', *Koedoe*, 1: p.142; Bigalke, R.C. 1966. 'The springbok', *Natural History*, 75(6): p.22; Bigalke, R.C. 1972. 'Observations on the behaviour and feeding habits of the springbok, *Antidorcas marsupialis*', *Zoologica Africana*, 7(1): p.339; Berry & Siegfried, 1991, quoted in: Lovegrove, B. 1993. *The Living Deserts of Southern Africa*, Fernwood Press, Cape Town. p.160; Verlinden, A. 1998. 'Seasonal movement patterns of some ungulates in the Kalahari ecosystem of Botswana between 1990 and 1995', *African Journal of Ecology*, 36: pp.124-125.
[97] Tyson, P.D. 1987. *Climatic Change and Variability in Southern Africa*, Oxford University Press, Cape Town. p.67.

provide us with the requisite data, being largely located in the more densely populated southern and eastern divisions of the Colony.

This problem has been noted by various scholars[98] and resolved to some degree by Vogel who used the documentary evidence of missionary and travellers' diaries, Civil Commissioner reports and bank archives to determine a qualitative measure of rainfall variability for the eastern and southern Cape over most of the nineteenth century.[99] Attempts at reconstructing climate have also been made by van der Merwe, Neville and Nash and Endfield.[100] All used similar sources to Vogel, with Neville also employing colonial newspapers. Van der Merwe and Neville both employ a finer focus than Vogel, with their reconstructions restricted to smaller geographical areas and shorter time frames. Van der Merwe covers the 'Veld Cornetcies of the Northern Border' over the years 1813-1839, while Neville's analysis of the similar area of the Seacow River Valley climate is discontinuous over the years 1827 to 1900. Using the London Missionary Society archive, Nash and Endfield cover 21 stations scattered across the Kalahari. The Kuruman series, although discontinuous, provides by far the longest sequence and is the most relevant of Nash and Endfield's sites to this study. All four reconstructions are influenced by the subjectivity of the observers they derive their data from. Drought and floods, particularly in the colonial period, were subjective events descriptions of which were influenced by previous experiences and expectations of the observers, and without a consistent measurement the accuracy of

[98] For a broad discussion on the debate on climatic change and variability see: Tyson, 1987.
[99] See: Vogel, C.H. 1987. 'The reconstruction of the nineteenth century Cape climate using documentary evidence', Unpublished MA Thesis, University of the Witwatersrand; Vogel, C.H. 1988. '160 years of rainfall at the Cape – has there been a change?', *South African Journal of Science*, 84: p.724-726.
[100] See: Van der Merwe, P.J. 1937. *Die Noordwaartse Beweging van die Boere van voer die Groot Trek (1770-1842)*, WP van Stockhum & Zoon, Den Haag; Neville, 1996; Nash, D.J. & Endfield, G.H. 2002. 'A 19th century climate chronology for the Kalahari region of central southern Africa derived from missionary correspondence', *International Journal of Climatology*, 22: pp.821-841.

such reports must remain suspect. This point was made by the editor of the *Graaff-Reinet Herald* in 1863 who lamented the use of subjective terms such "fine rains", "splendid rains" and "very heavy rains" in describing local rainfall.[101] Nonetheless it is clear from the ethnographic record of the /Xam, the Seacow River Valley archaeology and the work of Neville that springbok treks and droughts were closely connected. In this light a comparison of nineteenth century springbok trek and climate records would seem to be an obvious next step in establishing this connection.

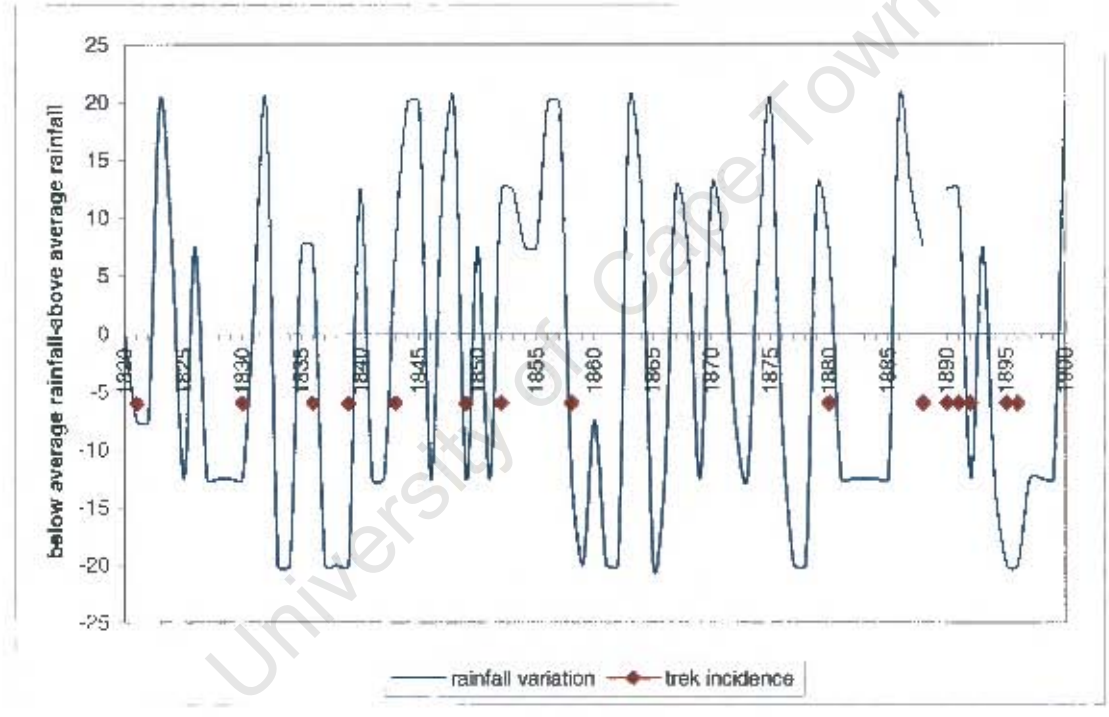


Figure 2.6: A comparison of rainfall variation in the Eastern Cape (Vogel) with recorded springbok trek incidence in the Karoo (Skinner), 1820-1900[102]

Figure 2.6 compares Vogel's reconstruction of rainfall variability where each year is graded on a subjective three-point scale of either above or below average rainfall with Skinner's incidence of nineteenth century treks in the Cape Colony. There appears to

[101] *Graaff Reinet Herald*, 3 January 1863.
[102] See: Vogel, 1987. p.93; Skinner, 1993. pp.291-305. Measurement of rainfall variation is divided into 6 categories representing "very wet", "wet", "seasonally wet", "seasonally dry", "dry" and "very dry" conditions. Treks are assigned an even value.

be a correlation between drought and treks, with the two events often occurring in the same year. The years 1821, 1830, 1839, 1849, 1858, 1892, 1895, 1896 are all drought years in which treks occur. Just as obviously there are some clear exceptions to this generalisation: treks do occur in years of above average rainfall, though never in those years which Vogel denotes as having received abundant rain or floods. For example the years 1836, 1843, 1852, 1880, 1888, 1890, 1891 all received above average rainfall yet treks were still recorded. From this comparison therefore it would appear as if it was just as likely that treks occurred in years of above average rainfall as drought years. The comparison itself is flawed however, in that Vogel's rainfall variation reflects only the Eastern Cape, while the treks recorded by Skinner cover a wide range of locations, from Graaff-Reinet in the east, to Prieska in the north and Springbok in the north west. The same trend is evident in a comparison of trek incidence with Nash and Endfield's climate reconstruction for Kuruman (see Figure 2.7). Nonetheless the relationship is clear enough to warrant further investigation on a local level.

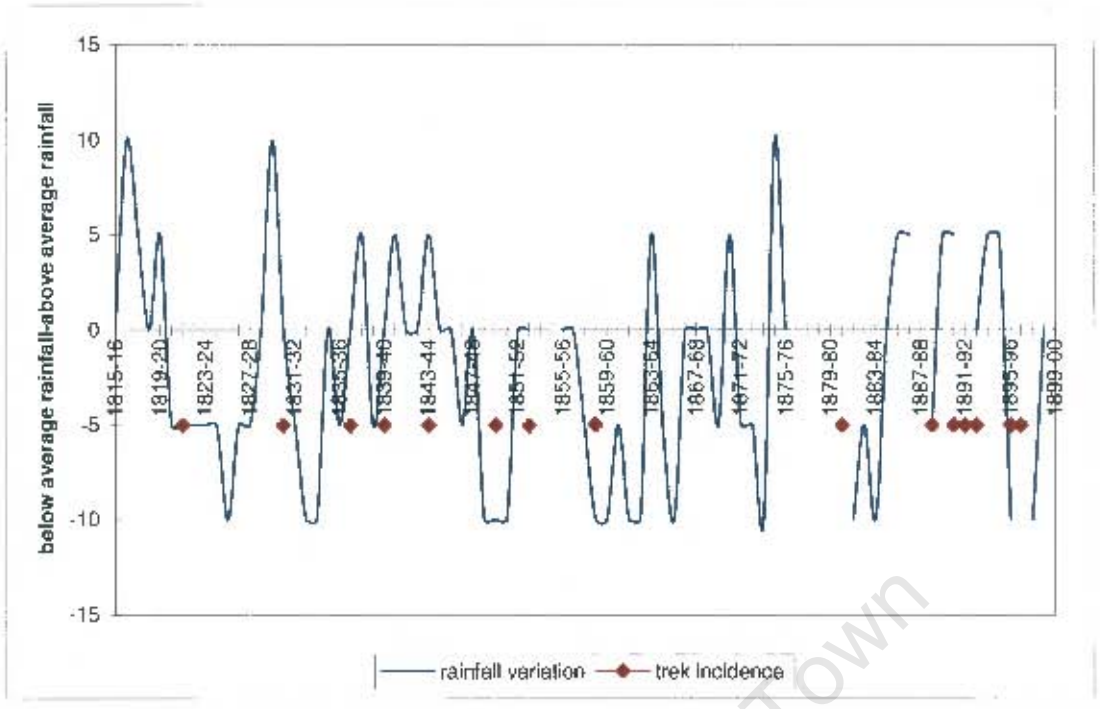


Figure 2.7: A comparison of rainfall variation at Kuruman (Nash & Endfield) with recorded springbok trek incidence in the Karoo (Skinner), 1815/16-1899/00)[103]

Data gathered by Neville for the Seacow River Valley provides an opportunity to measure local drought and trek incidence against each other and Figure 2.8 shows, much more clearly, the relationship between drought and springbok treks. Aside from 1871, every trek into the Seacow River Valley noted by Neville over the period 1871-1900 occurs during a drought year.

[103] See: Nash & Endfield, 2002, p.828; Skinner, 1993, pp.291-305. Like Vogel, measurement of rainfall variation is divided into a number of categories – in this case 5 – representing "very wet", "relatively wet", "normal", "relatively dry" and "very dry" conditions. This comparison is affected by Nash and Endfield's measurement of annual rainfall reflecting the fact that a summer rainfall season overlaps two years whereas Vogel and Neville measure this within a calendar year. Treks are again assigned an even value.

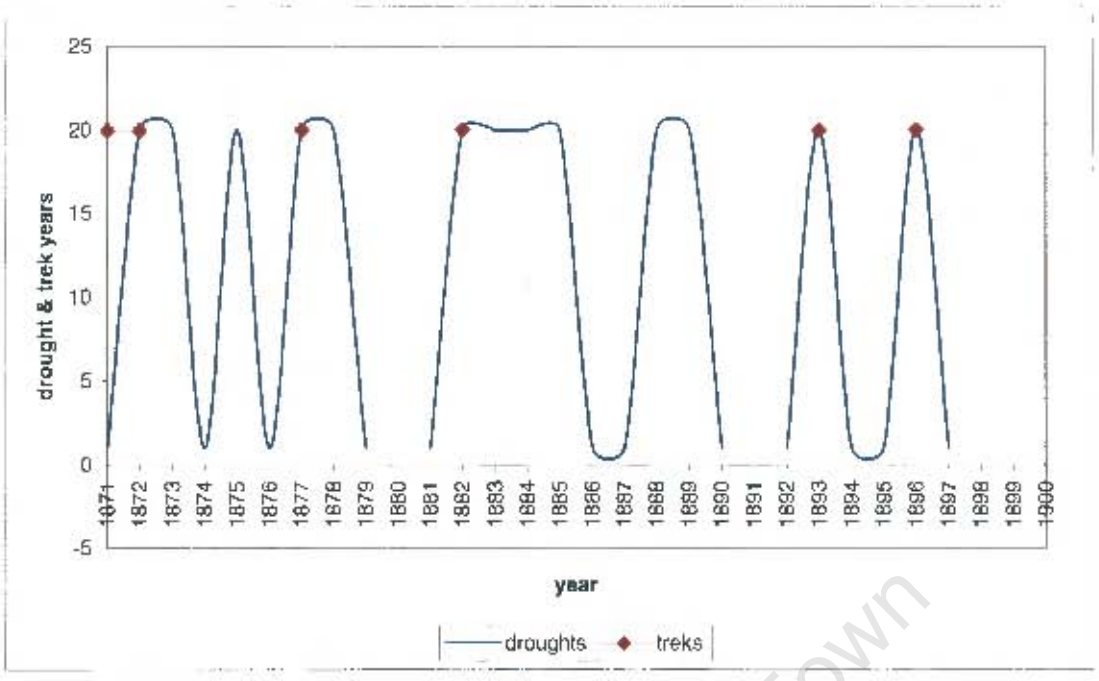


Figure 2.8: A comparison of drought and trek incidence in the Seacow River Valley, 1871-1900[104]

This apparent correlation between drought and springbok treks is a valuable, but also problematic. If springbok were driven by drought and attracted by rain as the /Xam ethnography, and indeed logic, suggests, why would they have moved into a drought afflicted area as indicated in Figure 2.7? One possible explanation is that when droughts occurred in the Seacow River Valley they were more severe in the remainder of the frontier districts to the north. This suggest that the generally higher mean annual rainfall of the eastern districts of the Cape Colony would be sufficient to attract springbok even during periods of drought, areas such as the Seacow River Valley perhaps representing the best pasture relative to the rest of the colony during such crises. Neither Vogel nor Neville's climate reconstruction purports to represent the areas of the northern Cape or Kalahari where the springbok treks apparently originated. Nash and Endfield's record for Kuruman, although providing a

[104] See: Neville, 1996, Vol. I. pp.117-122; pp.149-152. As with treks, Neville did not differentiate between levels of drought intensity and simply records years in which conditions described as drought occurred.

reconstruction for the south eastern Kalahari is nonetheless inconclusive in this regard and a reconstruction of the northern Cape Colony, or *Achterveld*, is needed to clarify the exact relationship between droughts and springbok treks.

Conclusions

The almost exclusive use of traveller accounts in previous analyses of springbok treks clearly ignores a range of additional sources that cover both new geographical areas and ecological relationships. The /Xam ethnography for example is hugely significant in that a clear relationship between springbok treks and both drought and rainfall (and consequent vegetation response) can be established. Evidence from /Xam informants is also important in that it deals with an area not densely settled and thus not well covered by either traveller accounts or colonial newspaper reports and suggests that the springbok treks originated in Bushmanland or the *Achterveld*. Conclusions reached from a reading of the Bleek and Lloyd collection are partly supported by rock paintings and engravings and also by archaeological findings, primarily in the Seacow River Valley, between Colesberg and Richmond. An analysis of faunal remains near Hanover indicates a predictable seasonal movement of springbok into the area and again highlights the importance of rain in driving springbok movements.

In contrast Neville's pioneering reading of the eastern Karoo press established that springbok treks into the Seacow River Valley were irregular and were driven by drought. The climate reconstructions of Vogel, Neville and Nash and Endfield are useful in illustrating the link between drought and springbok treks, but are limited in that they deal only with rainfall variations in Seacow River Valley and eastern Cape respectively, thus allowing a consideration only of where springbok trekked to, not

from. The work done by Neville in particular demonstrates what can be achieved through the use of more varied sources than the traditional traveller accounts, but also underscores the need for an expanded coverage of springbok treks and rainfall to understand trek dynamics. The need for rainfall and trek data over a wide area and regional comparisons is thus obvious and will be developed in the following chapter.

CHAPTER 3:

"*Springbokke is al wat in die droogte nog grooi*" – colonial newspapers as a source of historical springbok trek and rainfall records

As Neville has noted, "newspapers can be regarded as a good source of evidence on the movement of [trekbokke]"[1]. Indeed, as he so effectively demonstrated in his analysis of European impacts on the Seacow River Valley and its Bushmen inhabitants, the colonial press is a massively under-utilised resource as far as records of both treks and rainfall are concerned. Neville, of course, was only concerned with those treks that affected the Seacow River Valley and accordingly based his findings primarily on a reading of the *Colesberg Advertiser*, with some additional evidence from the *Graaff Reinet Herald* and *Richmond Era*. All three papers include trek and climate records from other areas however and indicate that a close reading of these and other small town broadsheets can provide a wealth of 'new' information. Perhaps the most significant aspect of this information is that it is chronological and provides more than the random snapshots of climate and springbok treks gleaned from traveller accounts. A comparison of drought and springbok trek records for all the relevant districts of the Cape Colony would enable an explanation of the ecological triggers of the phenomenon and to this end a reading of key Karoo newspapers over the nineteenth century was undertaken.

The Karoo press

Although newspapers were founded in Cape Town, Port Elizabeth and Grahamstown in the first half of the nineteenth century, it is only in 1852 that a newspaper was first

[1] Neville, DE. 1996. 'European impacts on the Seacow River valley and its hunter-gatherer inhabitants, AD. 1770-1900', Vol. I, Unpublished MA Thesis, University of Cape Town. p.118.

published in Graaff-Reinet, the oldest Karoo town. At the time the *Graaff Reinet Herald* was the mainstay of the Karoo press and, aside from reporting news in key centres such as Kimberley, Bloemfontein, Port Elizabeth and Cape Town, covered towns like Hope Town, Colesberg, Hanover, Richmond, Middelburg, Murraysburg, Aberdeen and Beaufort West – essentially all the inland eastern and central districts with sizeable white populations. The Graaff Reinet Advertiser superseded the English language Herald in 1884, with both papers facing some competition from Dutch newspapers over the years. The main Dutch competitor of the latter was the *Graaff Reinetter*. The *Herald* had initially been published weekly, but from as early as 1864 two editions a week were produced. The *Advertiser* increased this to three editions a week in 1898, while the *Graaff Reinetter* served its smaller audience with just two issues a week.

As the rural population grew so too did the demand for regular and locally relevant publications, and newspapers began in Beaufort West where the largely bilingual *Beaufort Courier* first appeared in 1869 and served both the town and farming communities. Aside from Beaufort West, the *Courier* was initially the Government Gazette for the divisions of Victoria West, Fraserburg and Prince Albert with issues being produced first weekly and then bi-weekly. The bilingual *Victoria West Messenger*, which began in 1876, took over the responsibility of publishing official notices for its division and also served the northern districts such as Carnarvon, Kenhardt, Prieska and Britstown on a weekly basis. Aside from these three key loci other papers that proved useful for particular periods were the *Colesberg Advertiser*, *De Britstowner*, *De Britstown Bode* and the *Era* all of which were bilingual and ensured a comprehensive coverage of the settled Karoo districts.

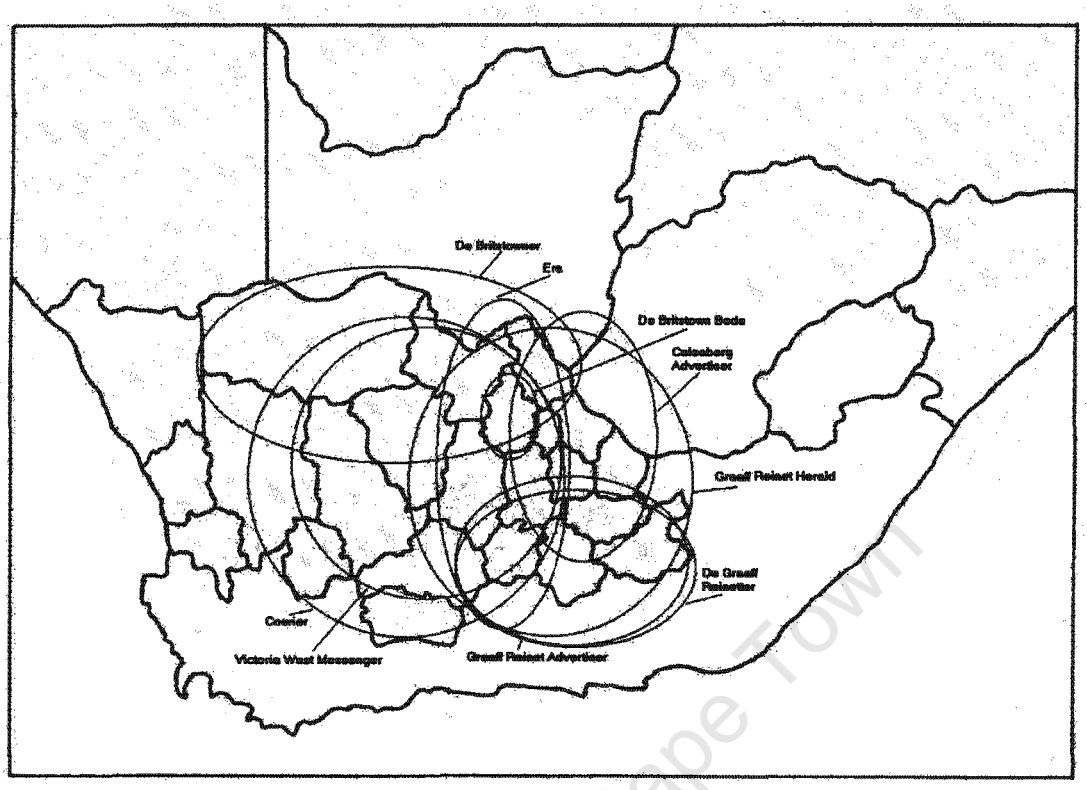


Figure 3.1: Newspapers consulted and coverage of the Karoo (These were towns and districts from which the paper in question received regular correspondence and stories, many other districts were covered less regularly. These included areas such as Bushmanland and Namaqualand with all papers featuring occasional reports from travellers there. Refer to bibliography for periods of coverage.)

Springbok treks in the Karoo press

Colonial newspapers depended on local readership for advertising and subscription revenue and as a result local papers only arose where there was a viable market. Thus towns like Port Elizabeth, Graaff-Reinet, Grahamstown and Beaufort West boasted regular periodicals, and even competitors, by the 1860s and 1870s, but newer towns such as Richmond, Hanover, Victoria West, Britstown and Kenhardt were served only much later in the century, or remained satellites of relatively more developed regional towns such as Colesberg. As coverage of the *Achterveld* is sometimes erratic the only areas for which there is a more or less consistent record for the second half of the nineteenth century are those situated in the eastern Karoo in the districts of Richmond,

Hanover and Colesberg, an area whose climate and springbok treks over the period are largely covered by Neville.

Consequently the overall picture of springbok treks is confined to those areas where established newspapers existed. There is an irony in this, in that where coverage increased, the incidence of springbok treks likely declined as a result of increased human and livestock numbers and other human induced changes such as hunting and fencing. Nonetheless a reasonably clear picture emerges from a reading of the Karoo press outlined above. The accuracy and coverage of such reports increased dramatically by the late 1880s and early 1890s, and the final fifteen years of the century provide much greater detail. Many reports were reproduced across the range of colonial newspapers and in the competition for readers, spectacular news items, such as springbok treks, were culled from wherever they could be found and reprinted for a local audience. This ensured a fairly even coverage of springbok treks wherever they occurred within the ambit of the Karoo press and a close reading of the trek accounts contained therein provides a rich and detailed insight into this phenomenon. Aside from colonial attitudes towards the trekbokke, such a reading reveals the effects of "visits" by the trekbokke, the estimated sizes of treks, the perceived reasons for the treks and their origins, the areas that were affected by them and, most importantly, when these areas were affected and when they were exempted.

The relationship between settlers and springbok treks was fraught.[2] On the one hand the springbok provided a very welcome source of protein and potential profit for some

[2] This is something that has also been identified by others. See: Brown, K. 2002. 'Cultural constructions of the wild: The rhetoric and practice of wildlife conservation in the Cape Colony at the turn of the twentieth century', *South Africa Historical Journal*, 47: pp.79-80.

and sport and entertainment for others[3], while on the other the springbok adversely affected crops, pasture and even water sources[4]. Perhaps the pronouncement that best captured this dynamic tension came from a Fraserburg resident: "*Springbok vleesch smakelijk, en Springbok Biltongen vooral niet te verwezen maar wanneer zij komen in meingten is het voor den boer ongeriefelijk als hij een lapje grond heft wat groen is en hij moet het afgeven aan die onwelkome gasten, die zelfs niet de beleefheid heben te vragen of ze mogen weiden.*"[5] To the farmers and other rural settlers the only apparent solution was the amendment of the Game Act and the year round destruction of the springbok[6] and in this they received support from local officials who also attested to the devastation caused by the antelope[7]. The impressions of the numbers of springbok involved in treks published in the Karoo press are as variable as those recorded by travellers and range from "thousands"[8] to "tens of thousands" [9], "hundreds of thousands" [10] and even "millions" [11] leaving one with no firm sense of the size of herds involved. An approximate idea of the size of a trek can however be gauged from a combination of things. The number of newspaper accounts of a particular trek, the area covered and the time period over which such reports were published suggest, for

[3] See for example: *Graaff Reinet Herald*, 25 July 1856; 27 December 1856; 24 October 1857; 7 August 1858; 26 July 1862; *Colesberg Advertiser*, 17 December 1861; *Courier*, 18 October 1872; 2 November 1877; *Victoria West Messenger*, 21 June 1880.
[4] See for example: *Graaff Reinet Herald*, 6 November 1858; 30 April 1859; 21 May 1859; *Era*, 1 June 1871; *Colesberg Advertiser*, 9 November 1872; 30 November 1872; *Courier*, 18 April 1873; 2 November 1877.
[5] *Courier*, 2 November 1877. "Springbok meat tasty, springbok biltong above everything else, but when they come in hordes it is unbearable for the farmer who happens to have a piece of ground that is still green that he must give over to these unwelcome guests who don't even have the decency to ask if they may graze."
[6] See for example: *Graaff Reinet Herald*, 14 May 1859; *Colesberg Advertiser*, 30 November 1872; *Victoria West Messenger*, 4 October 1880.
[7] See for example: Cape of Good Hope, 1862. *Statistical Register*: Report of Civil Commissioner, Richmond; Cape of Good Hope, 1867. *Statistical Register*: Report of Civil Commissioner, Calvinia; Cape of Good Hope, 1869. *Statistical Register*: Report of Civil Commissioner, Fraserburg; Cape of Good Hope, 1873. *Statistical Register*, Report of Civil Commissioner, Hope Town.
[8] *Graaff Reinet Herald*, 14 May 1859.
[9] *Graaff Reinet Advertiser*, 21 August 1893.
[10] *Victoria West Messenger*, 4 October 1880.
[11] Cape of Good Hope, 1867. *Statistical Register*: Report of the Civil Commissioner, Calvinia.

example, both the extent and duration of the trek. Reports of the number of carcasses brought into town, any additional herbivore or carnivore species accompanying the trek, the local price of springbok venison and the reaction of local butchers also contribute to a better understanding of springbok numbers.

Similarly, although it was not always clear where the springbok treks originated, the colonists' impression was that they came from "the vast unknown interior", "the far north", or "*het binnenland*" echoing the accounts of travellers. In the 1850s and 1860s very little explanation was attempted in the eastern Karoo districts often affected such as Hopetown, Colesberg, Richmond and Middelburg. It was enough to know that the springbok had arrived and that they came from the north[12]. Conversely settlers in the west were of the firm opinion that Bushmanland was where the springbok disappeared to after their occasional incursions into the colony.[13] The 1870s saw an emerging consensus over the whereabouts of the "native grazing grounds" of the trekbokke, but exact locations were still vague – "far inland"[14], "further inland"[15], "*het Achterveld*"[16] – with the majority opinion being that the trekbokke were purely nomadic and wandered at random. Permanent expansion into previously unsettled areas did little to clarify the matter and in 1877 a resident of Fraserburg proposed the Kalahari as a potential site of origin[17]. Clearly "the north" or "the interior" could equally be applied to the Kalahari or Bushmanland and by the 1880s and 1890s some were confident that the springbok came from the Kalahari[18] while others were equally sure that

[12] *Colesberg Advertiser*, 29 April 1862.
[13] *Colesberg Advertiser*, 3 December 1861.
[14] *Colesberg Advertiser*, 28 April 1877.
[15] *Colesberg Advertiser*, 16 June 1877.
[16] *Courier*, 12 August 1880.
[17] *Courier*, 2 November 1877.
[18] See for example: *Victoria West Messenger*, 23 August 1880.

Bushmanland was the source[19]. For reasons to be explored towards the end of this chapter the question was never settled with any unanimity and the idea of a single place of origin was naive. More important to the colonists than 'the where', however, was 'the why.'

Like the early travellers and naturalists, and /Xam ethnography, correspondents and journalists in the Karoo press recognised that springbok treks were both attracted by rain ('pull factors') and driven by drought ('push factors'). Isolated rain during extended droughts quickly drew concentrations of springbok to localised areas[20], while widespread rain caused the immediate departure of springbok from such an area, no doubt enabling the dispersal of the herds[21]. The widespread nature of this folk wisdom is evidenced by its repetition by local government representatives.[22]

Crucially however, and in contrast to traveller reports, the Karoo press provides us with a chronological record of trek incidence. Whereas Skinner was able to identify only 10 years in which treks were recorded between 1852 and 1900 (the period for which newspapers were examined)[23], we now know that no less than 38 years in this period were affected by treks of one form or another. This quadrupling of the data – and even this is probably an under-representation - cannot but force us to revise our thinking with regard to springbok trek causality, frequency and indeed definition.

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[19] *Colesberg Advertiser*, 18 August 1893.
[20] See for example: *Graaff Reinet Herald*, 30 April 1859; *Colesberg Advertiser*, 9 November 1872; *Courier*, 18 April 1873; *Agricultural Journal of the Cape of Good Hope*, 17 May 1894; 6 February 1896.
[21] See for example: *Graaff Reinet Herald*, 28 May 1859; *Graaff Reinet Herald*, 9 August 1862; *Colesberg Advertiser*, 29 April 1862.
[22] Cape of Good Hope, 1869. *Statistical Register*: Report of the Civil Commissioner, Fraserburg.
[23] See: Skinner, J.D. 1993. 'Springbok (*Antidorcas marsupialis*) treks', *Transactions of the Royal Society of South Africa*, 48: pp.291-305.

Of additional significance is that each trek was more often than not also covered by more than one description or report, serving the dual purposes of confirming the existence of the event and of providing greater detail. By reading a variety of newspapers the movements of the trek can to some extent be tracked, as can the duration spent in each area and the exact timing with regard to season. The impact on residents is also more powerfully conveyed by local inhabitants than by transient travellers and all in all a much clearer picture of springbok treks emerges than has been the case previously. This surfeit of detail in comparison to earlier records also enables a kind of ranking, albeit subjective, to be established for the magnitude or intensity of treks. For instance a trek of several thousand springbok strong that appeared only briefly in one isolated area before dispersing or moving on can be ranked lower than a trek estimated to be a hundred thousand or more strong and which affected a wide area over an extended period of several months. Treks sourced from the Karoo press were thus ranked on a scale from 1 to 8 (see Table 3.1). This impressionistic ranking has not been applied to the period prior to extensive coverage of the Karoo by the colonial press.

Year	Where trek recorded	Source	Drought - Eastern Cape (Vogel) (1=minor; 3=severe)	Trek intensity (1=minor; 9=severe)*
1821	Somerset-East/Pearston; Richmond	Pringle, 1840; Thompson, 1967.	1	
1822	-		1	
1823	-			
1824	-			
1825	Seacow River Valley	Van der Merwe, 1937	2	
1826	-			
1827	Seacow River Valley	Van der Merwe, 1937	2	
1828	-		2	
1829	-		2	
1830	Beaufort-West/Murraysburg	Steedman, 1835	2	
1831	-			
1832	-			
1833	-		3	
1834	-		3	
1835	-			
1836	Seacow River Valley	Harris, 1852		
1837	-		3	
1838	-		3	
1839	Seacow River Valley	Backhouse, 1844	3	
1840	-			
1841	-		2	
1842	-		2	
1843	-			
1844	Middelburg, Seacow River Valley, Britstown	Cumming, 1857		
1845	Davinar's Drift	Cumming, 1857		
1846	-		2	
1847	-			
1848	-			
1849	Beaufort West	Fraser, 1922	2	
1850	-			
1851	Graaff-Reinet	Rubidge Diary	2	1
1852	Prieska	Livingstone in: Skinner, 1993		1
1853	-			
1854	-			
1855	-			
1856	Middelburg	*Graaff Reinet Herald*		3
1857	Graaff-Reinet	*Graaff Reinet Herald*		1
1858	Middelburg, Richmond, Steytlerville	*Graaff Reinet Herald*; Bryden, 1889	2	7
1859	Colesberg, Hopetown	*Graaff Reinet Herald*	3	5
1860	Beaufort West	Jackson, 1919/20	1	2
1861	Namaqualand, Clanwilliam, Colesberg	Dunn, 1875; *Colesberg Advertiser*	3	2
1862	Colesberg, Hopetown, Richmond	*Colesberg Advertiser*; *Graaff Reinet Herald*; CGH, 1862. *Statistical Register*: Report of the Civil Commissioner, Richmond	3	4
1863	Hanover, Colesberg	*Graaff Reinet Herald*		1
1864	Colesberg	*Colesberg Advertiser*		
1865	Victoria West	*Graaff Reinet Herald*	3	1
1866	Hopetown, Hanover	*Graaff Reinet Herald*	2	1
1867	Calvinia	CGH, 1867 *Statistical Register:* Report of the Civil Commissioner, Calvinia		3
1868	Springbok	*Graaff Reinet Herald*		5
1869	Fraserburg	CGH, 1869. *Statistical Register:* Report of the Civil Commissioner , Fraserburg	2	4
1870	-			
1871	Richmond, Hanover	*Era*		2
1872	Kenhardt/Van Wyk's Vlei, Beaufort West, Hopetown, Victoria West, Colesberg,	Dunn, 1873; *Courier*; *Colesberg Advertiser*; CGH, 1872, *Statistical Register:* Report of the	1	8

	Middelburg	Civil Commissioner, Hopetown		
1873	Fraserburg, Hopetown, Prince Albert, Hantam/Calvinia	*Courier*, CGH, 1873. *Statistical Register:* Report of the Civil Commissioner, Hopetown	2	7
1874	-			2
1875	Fraserburg	*Courier*		2
1876	Beaufort West, Richmond	*Courier*	1	2
1877	Colesberg, Hanover, Fraserburg, Prince Albert, Victoria West, Hopetown, Richmond	*Colesberg Advertiser*; *Courier*; *Victoria West Messenger*; *Graaff Reinet Herald*	3	8
1878	Calvinia	*Graaff Reinet Herald*	3	4
1879	-			
1880	Victoria West, Beaufort West, Hanover, Britstown, Richmond, Prieska	*Courier*; *Victoria West Messenger*; *Graaff Reinet Herald*; *Courier*; van Jaarsveld, n.d.; Cronwright-Schreiner, 1899.		8
1881	Beaufort West	*Graaff Reinet Herald*	2	1
1882	Hopetown	*Colesberg Advertiser*; *Graaff Reinet Herald*	2	4
1883	Britstown	*Graaff Reinet Herald*	2	1
1884	Richmond	*Courier*	2	2
1885	-		2	
1886	Matjesfontein	Green, 1955		1
1887	-			
1888	Prieska/Bitterputs	Cronwright-Schreiner in: Skinner, 1993		1
1889	Carnarvon	*Victoria West Messenger*	?	2
1890	Kenhardt	*Victoria West Messenger*; Scully in: Skinner, 1993.		1
1891	Prieska	*Victoria West Messenger*		1
1892	Kaaien Bult, Hopetown, Philipstown, Namaqualand, Britstown, Kenhardt	*Victoria West Messenger*; CAD: AGR 157, 720; CAD: AGR 157, 137; Scully, 1898; *De Graaff Reinetter*; *Courier*; CAD: AGR 156, 7000, Scully, 1898.	2	5
1893	Van Wyk's Vlei, Middelburg, Colesberg, Namaqualand, Calvinia, Douglas	*Victoria West Messenger*; *Graaff Reinet Advertiser*; *Colesberg Advertiser*; *Agricultural Journal of the Cape of Good Hope*; *De Graaff Reinetter*; *Era*; CAD: AGR 156, 702; CAD: AGR 203, 1455		4
1894	Kenhardt, Van Wyk's Vlei, Victoria West, Prieska, Britstown, Carnarvon, Beaufort West	*Victoria West Messenger*; *Graaff Reinet Advertiser*; *Agricultural Journal of the Cape of Good Hope*; *De Britstowner*; *Era*; CAD: AGR 156, 6970	2	5
1895	Kenhardt, Victoria West, Carnarvon, Britstown, Van Wyk's Vlei, Fraserburg, Namaqualand, Prieska, Vosburg	*Victoria West Messenger*; *De Britstowner*; *Courier*; *De Graaff Reinetter*; *Colesberg Advertiser*; *Graaff Reinet Advertiser*, *Agricultural Journal of the Cape of Good Hope*; CGH, 1896 [G.10-'96]; CAD: AGR 238, 2357; CAD: AGR 157, 733; CAD: AGR 156, 700; Davie, 1921.	3	6
1896	Prieska, Victoria West, Kenhardt, Britstown, Naauwpoort, Richmond, Vosburg	*De Britstowner*; *Agricultural Journal of the Cape of Good Hope*; *Graaff Reinet Advertiser*; *De Graaff Reinetter*; *Colesberg Advertiser*; CAD: AGR 405, 2376; *Courier*; Davie, 1921; Cronwright-Schreiner, 1925; Green, 1955; Jackson, 1958.	3	8
1897	Kenhardt, Prieska, Van Wyk's Vlei, Britstown	*Agricultural Journal of the Cape of Good Hope*; *Victoria West Messenger*; *De Graaff Reinetter*; *De Britstowner*; Green, 1955	2	3
1898	-		2	
1899	-		2	
1900	-			

Table 3.1: Springbok treks and trek intensity recorded in the Cape Colony, 1821-1900

Table 3.1 vividly illustrates how rich a source of trek records the Karoo press is. It is also apparent from the table that coverage and knowledge of springbok treks increased steadily over the course of the nineteenth century. The chronology and ranking of trek intensity that such an examination allows provides a far more representative record for comparison with Vogel's nineteenth century climate reconstruction and, as can be seen in Figures 3.2 and 3.3 below, there is a clear relationship between drought years and trek occurrence. This is not to say that treks do not occur during years of above average rainfall in the Eastern Cape or at Kuruman, but it is clear than when this is the case, it only involved treks of moderate to low intensity – in other words local rather than regional movements and of only short duration. Years of high trek intensity occur during droughts of varying severity. The trek during 1880 is nonetheless an exception when compared with Vogel's climate reconstruction (see Figure 3.2), and similarly the treks of 1893-94 and 1894-95 when compared with Nash and Endfield (see Figure 3.3), and it is clear from this comparison that higher resolution rainfall data is needed in order to better define the relationship between drought and springbok treks.

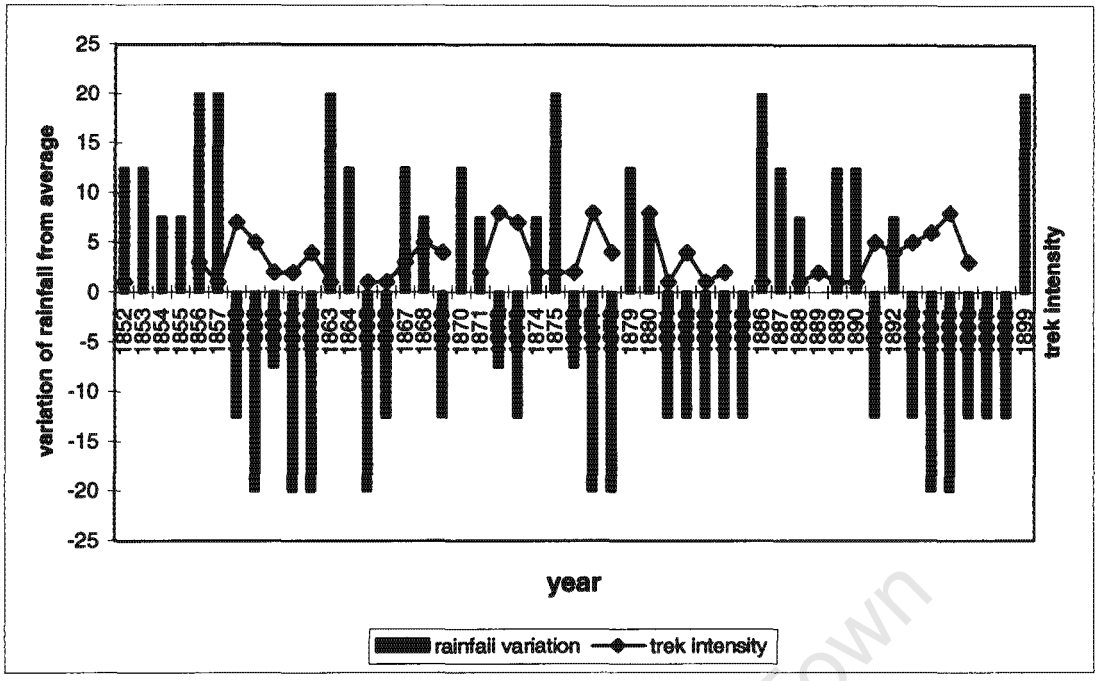

Figure 3.2: Rainfall variability in the Eastern Province compared with trek intensity in the Cape Colony, 1852-1900[24]

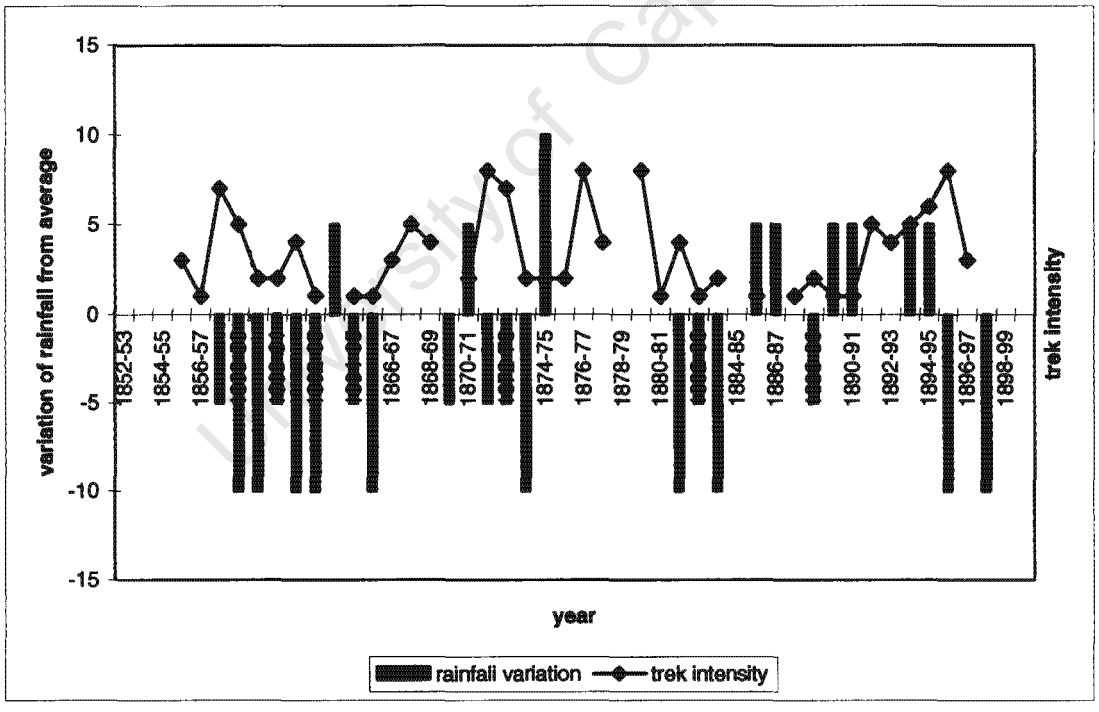

Figure 3.3: Rainfall variability at Kuruman compared with trek intensity in the Cape Colony, 1852/53-1899/00[25]

[24] See: Vogel, C.H. 1987. 'The reconstruction of the nineteenth century Cape climate using documentary evidence', Unpublished MA thesis, University of the Witwatersrand. p.93. Measurement of rainfall variation is divided into 6 categories representing "very wet", "wet", "seasonally wet", "seasonally dry", "dry" and "very dry" conditions.

Aside from chronology and intensity, an examination of the Karoo press is also invaluable in revealing which areas were affected and, equally importantly, which were not. A spatial representation (see Figure 3.4) provides additional perspective and context and demonstrates the role of topography in guiding trek movements.

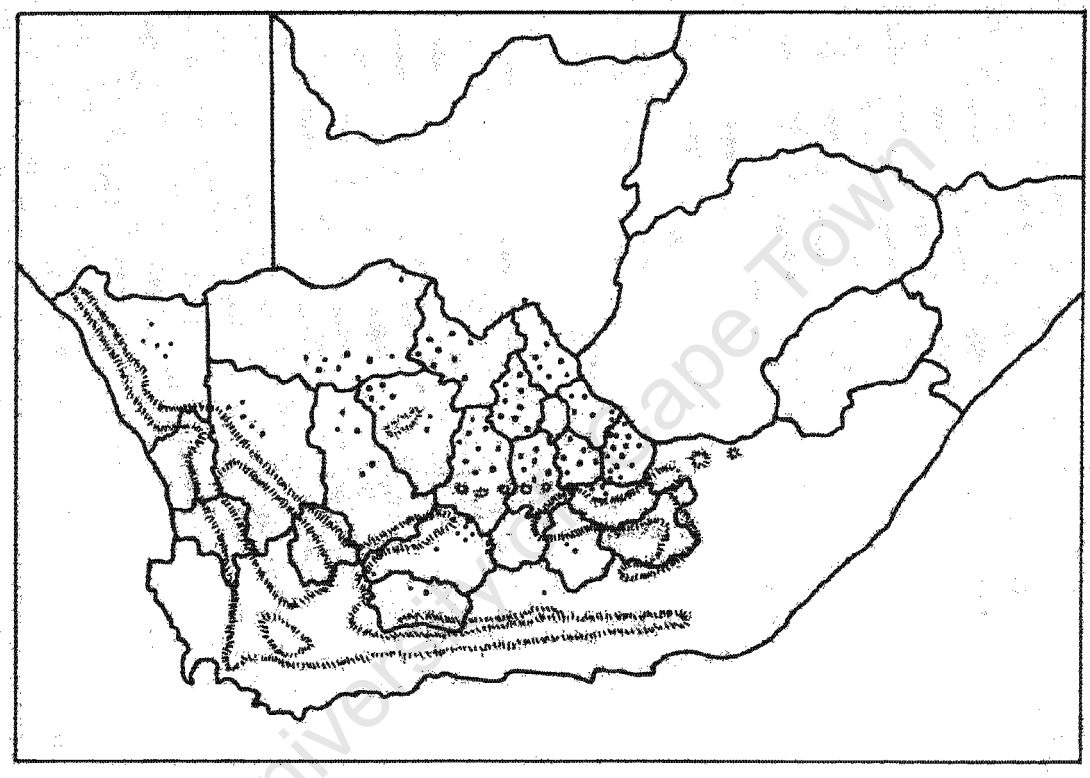

Figure 3.4: Springbok trek localities in the Karoo in the nineteenth century in relation to topography. (Note the overlap with newspaper coverage in Figure 3.1.)

Drought and rainfall in the nineteenth century Karoo

Official rainfall measurements for the Cape Colony were recorded by the Meteorological Commission (the first report of which covered the rainfall of 1875) and were published in the *Statistical Register of the Cape of Good Hope*, as well as in

[25] Nash, D.J. & Endfield, G.H. 2002. 'A 19th century climate chronology for the Kalahari region of central southern Africa derived from missionary correspondence', *International Journal of Climatology*, 22: pp.821-841.

the *Agricultural Journal of the Cape of Good Hope*. As mentioned in the previous chapter, however, these official rainfall and weather recording stations were initially limited to Cape Town and other major population centres in the south and east and it was only from the 1880s that a number of stations directly relevant to an analysis of springbok treks were established. Prior to this period the climate reconstructions of Vogel, Nash and Endfield, Neville and van der Merwe have a limited utility but fail to offer any information on weather conditions in the remote and unpopulated interior. As the century progressed however, numbers of so-called "progressive" farmers began to measure rainfall for their own purposes and these records were sometimes published in local newspapers, families such as the Jacksons in Victoria West and the Rubidges in Graaff-Reinet, annually presenting their data to the local editor as a matter of pride. The longest available sequence of rainfall for present purposes is from Graaff-Reinet where monthly rainfall data is available from 1862 and where, by the 1890s, more than 20 rainfall stations on private farms in the district contributed monthly rainfall figures. Records from Victoria West go back to 1866[26], but are initially subjective assessments, only being replaced by quantitative rainfall measurements from 1873. Records in Beaufort West began in 1878. All three of these sites fall in the summer rainfall Nama Karoo and are complemented by the rainfall record in Calvinia on the edge of the winter rainfall Succulent Karoo which begins in 1878.

[26] *Victoria West Messenger*, 5 January 1878.

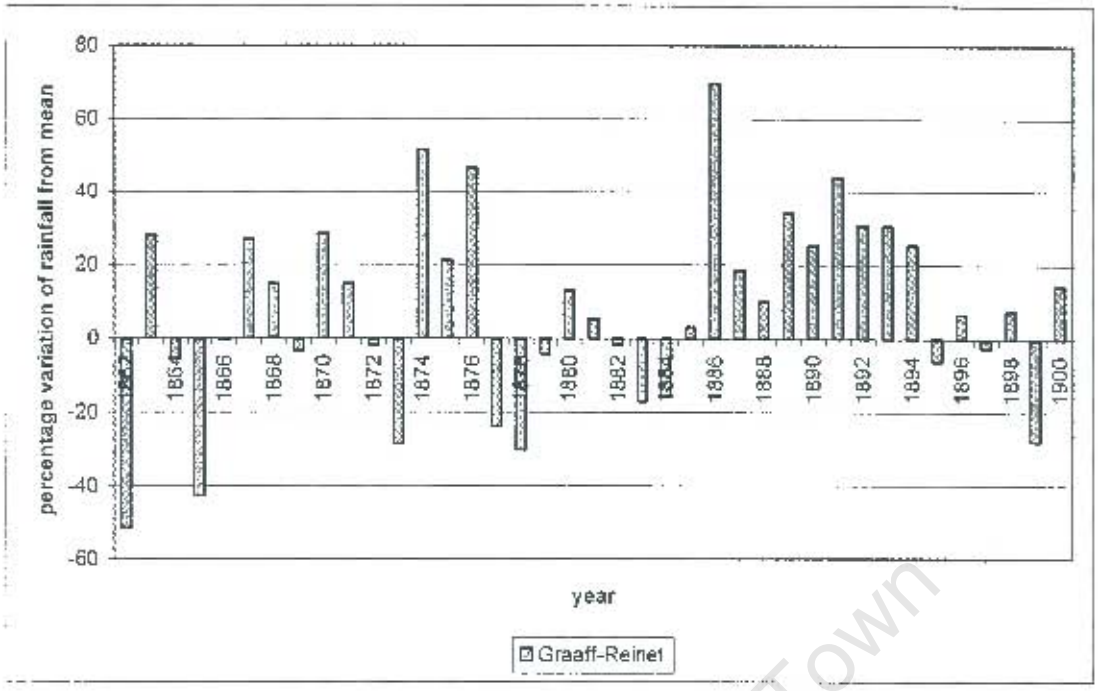

Figure 3.5: Annual percentage variation from average rainfall (inches) at Graaff-Reinet, 1862-1900[27]

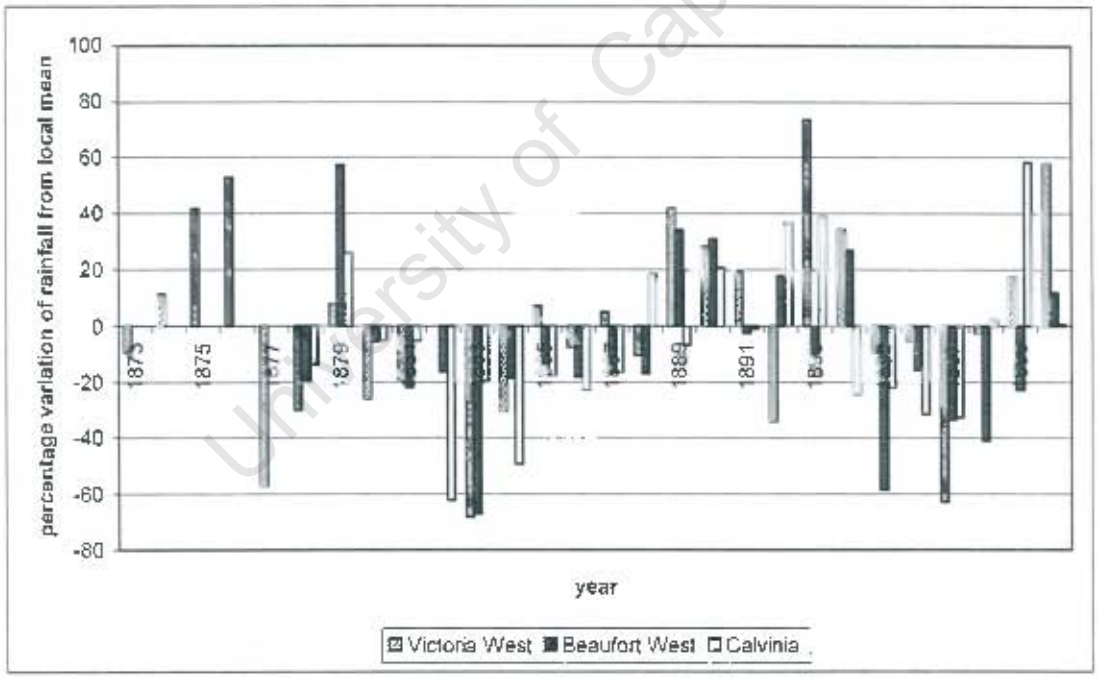

Figure 3.6: Annual percentage variation from average rainfall (inches) at Victoria West, 1873-1900, Beaufort West, 1878-1900 and Calvinia, 1878-1900[28]

[27] Average rainfall was taken from: Union of South Africa, 1927. *Rainfall Normals up to the End of 1925 – With an Introduction and a Brief Summary of the Rainfall of the Union of South Africa* [UG.23-'27]. Graaff-Reinet rainfall was derived from a variety of sources and represents the rain that fell in the town at either the Midland Hospital or another point, only a kilometre distant and therefore receiving almost identical falls. From 1861 to 1883 monthly rainfall is available in the *Graaff Reinet Herald*, from 1884 to 1890 and 1892-1899 in the *Graaff Reinet Advertiser*, 1900 in Playne, S. 1910-11. *Cape Colony (Cape Province) – its History, Commerce, Industries, and Resources*, The Foreign and Colonial Compiling and Publishing Co., London, and 1891 in the Cape of Good Hope, *Statistical Register*.

While the rainfall record at Graaff-Reinet is similar to Vogel's reconstruction, all four of the above series greatly expand our understanding of climate in the last quarter of the nineteenth century Karoo and by comparing rainfall variation and trek intensity our understanding of this relationship is still further enhanced.

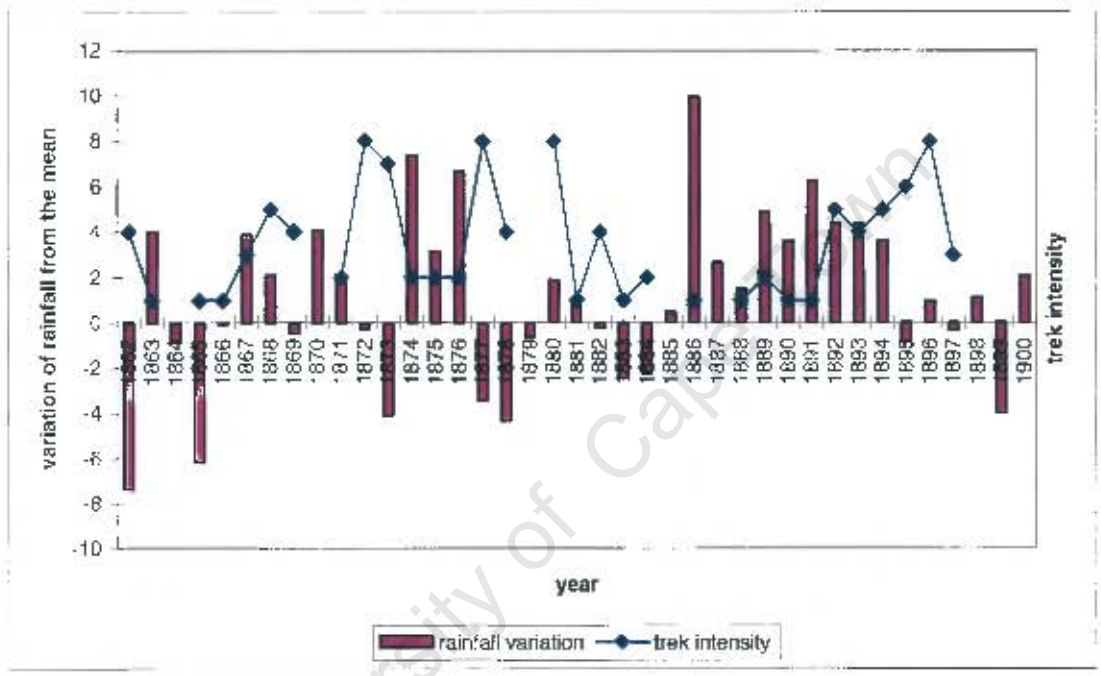

Figure 3.7: Rainfall variability (inches) at Graaff-Reinet compared with trek intensity in the Cape Colony, 1862-1900

[28] Average rainfall for all three sites was taken from: Union of South Africa, 1827, [UG.23-'27]. Rainfall at Victoria West is derived from three different points: an unspecified point in town, the Town Gaol and the farm 'Brakfontein' on the outskirts of town. Rainfall at the last site is generally slightly lower than that of the two town sites when figures are given for the same years, but this difference is marginal and, when direct comparisons are possible, all three sites reflect the same monthly trends. Records for 1873-1879, 1881, 1883-1884, and 1887-1899 are available in the *Victoria West Messenger*, 1900 in Burton, A.R.E. 1903 *Cape Colony for the Settler*, PS King & Son, London; JC Juta & Son, Cape Town, and 1880, 1885 and 1886 in the *Beaufort Courier*. From the late 1860s rainfall was measured at a number of farms in the Beaufort West division. None of these provided a consistent sequence however and thus records of rainfall in the town that extend back only to 1878 must be used instead. Rainfall in town was measured at the Government Gaol and at the stores of Charles Alport, neither of which gave a consistent sequence in the *Courier*. A complete record is provided by Vivier, WGH & Vivier, S. 1969. *Hooyvlakte: Die Verhaal van Beaufort West, 1818-1968*, Nasionale Boekhandel, Cape Town. Rainfall for Calvinia was kindly provided by Mrs Maxie Hugo at the Calvinia Museum.

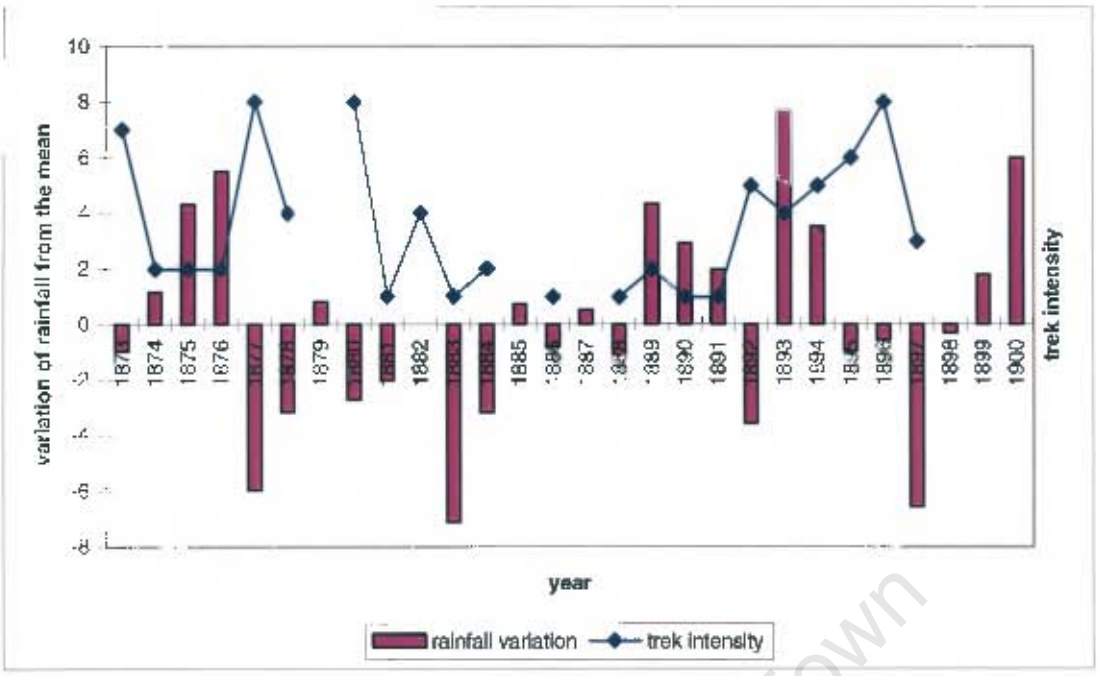

Figure 3.8: Rainfall variability (inches) at Victoria West compared with trek intensity in the Cape Colony, 1862-1900

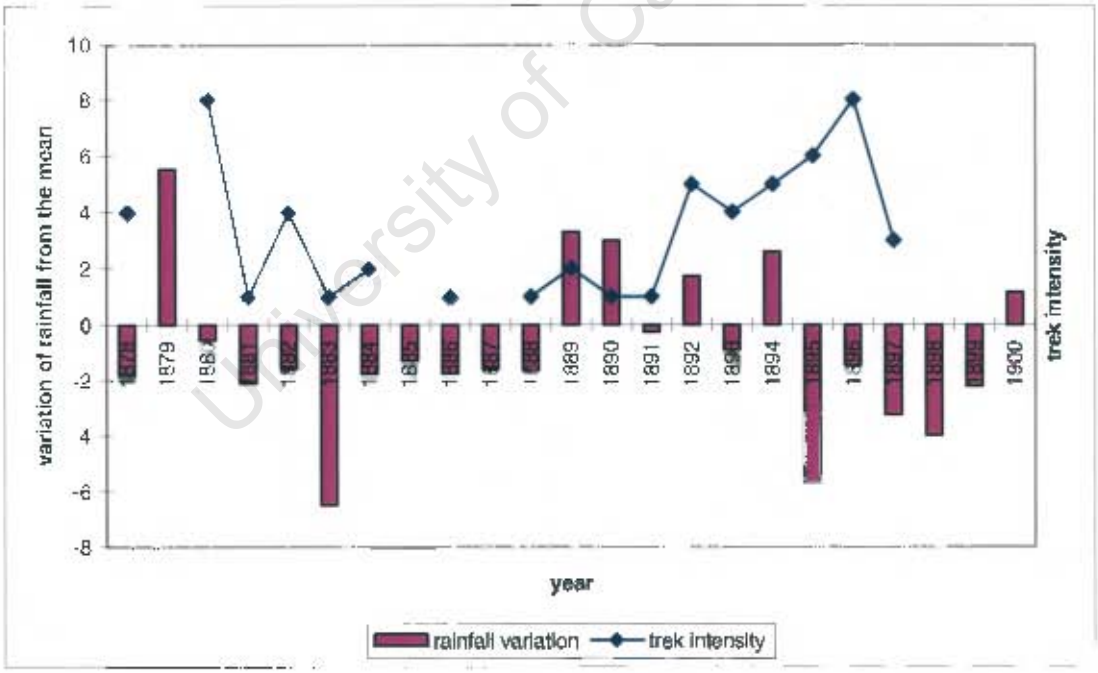

Figure 3.9: Rainfall variability (inches) at Beaufort West compared with trek intensity in the Cape Colony, 1878-1900

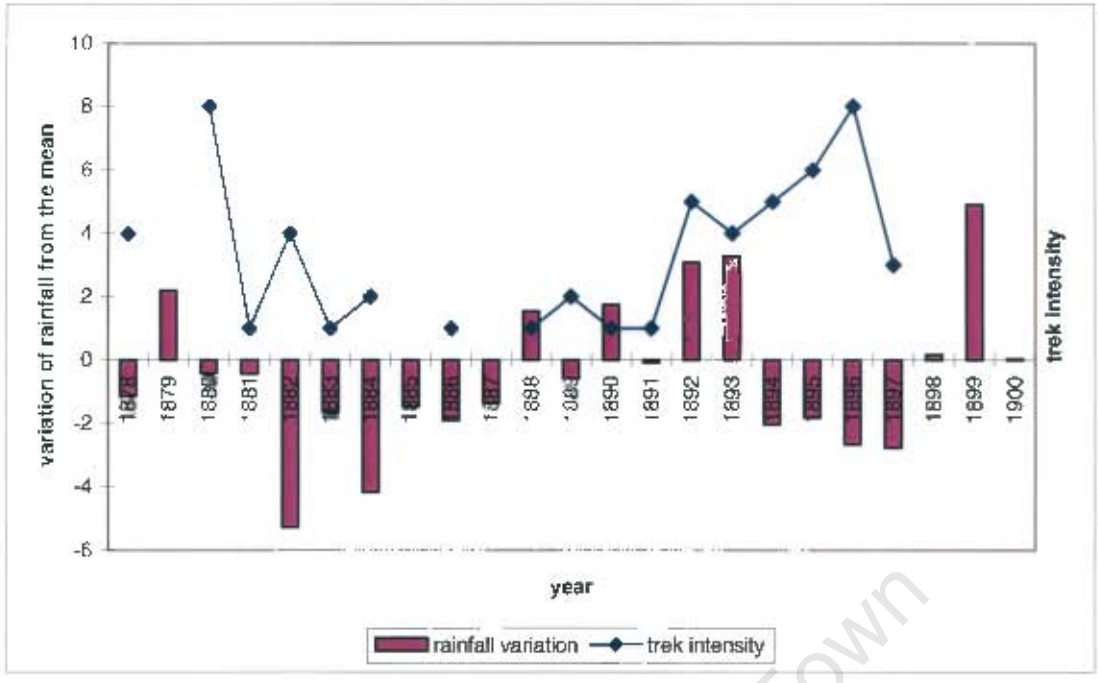

Figure 3.10: Rainfall variability (inches) at Calvinia compared with trek intensity in the Cape Colony, 1878-1900

Much as for the comparison between trek intensity and the climate reconstructions of Vogel and Nash and Endfield (Figures 3.2 & 3.3) Figures 3.7 to 3.10 also suggest a fairly strong correlation between drought years and trek intensity. In contrast to the relatively high rainfall recorded for the Eastern Cape by Vogel in 1880 however, rainfall at Graaff-Reinet is only just above average, while Victoria West, Beaufort West and Calvinia all recorded rainfall below average. Similarly, above average rainfall was recorded at all stations except Beaufort West (where rainfall was average) in 1893 during a year of high trek intensity. Vogel's significantly below average rainfall recorded for 1892, another year of high trek intensity, contrasts starkly to the above average rainfall recorded at all four stations except Victoria West. These variations again indicate that although there does appear to be a significant relationship between drought and springbok trek intensity, it is impossible to comprehensively evaluate the relationship between springbok treks and rainfall (or

lack thereof) without rainfall records for areas such as Bushmanland and the *Achterveld.*

"Big treks"[29] – major springbok treks in the Cape Colony, 1860-1900

As has been suggested above and as was noted by Cronwright-Schreiner in 1899, treks were not always the same size, but rather varied in number, duration and extent from year to year. Table 3.1 gives some idea of this variation and it is immediately apparent that while some years featured only minor local movements that soon dispersed, other years were witness to dramatic invasions of large numbers of springbok that were apparently undiminished by the efforts of hunters and farmers at extermination. These larger treks of course received more attention in the press and as a result featured in a number of reports from different newspapers. Given this greater detail it is possible to plot the route and duration of individual mega-trek events, a process that is instrumental in increasing our understanding of the dynamics and ecological parameters of such phenomena. During the last forty years of the nineteenth century the years 1861-62, 1872-1873, 1877-1878, 1880 and 1895-96 stand out for their exceptional springbok treks and four of these events are examined below.

1861-62: venison versus veld

After the prosperous years of the 1850s, generally characterised by good rainfall, there is no question that 1861 and 1862 were years attended by severe drought. Both

[29] Cronwright-Schreiner characterised the trek of 1895 as a "big trek" and reported the rumour that the springbok on this occasion were unusually numerous (Cronwright-Schreiner, S.C. 1899. 'The 'trekbokke' (migratory springbucks); and the 'trek' of 1896', *The Zoologist*, reprinted in: Cronwright-Schreiner, S.C. 1925. *The Migratory Springbucks of South Africa (the Trekbokke). Also an Essay on the Ostrich and a Letter Descriptive of the Zambezi Falls*, Hamilton, Adams, London. p.44).

Vogel and Neville characterised it as such in the eastern parts of the colony[30], rainfall records at Graaff-Reinet show 1862 as a particularly dry year (see Figure 3.2 and 3.5), Kuruman experience a similar period of drought (see Figure 3.3) and reports from elsewhere confirm the widespread affects of the drought. By December 1861 the north-western parts of the country were being affected by the "worst drought in forty years"[31], while in the eastern parts "some anxiety [was] beginning to be felt on account of the long continuance of drought."[32] The summer rains brought some short-lived respite, but by the middle of the following year distress was reported from Namaqualand[33] and Calvinia[34] – the two most north-westerly districts of the colony – and by October the Free State was as badly affected as the northern and eastern districts[35]. In Hanover "the drought and its effects form[ed] the grand topics of conversation,"[36] and in Richmond there were reports of farmers deserting their farms[37].

According to Dunn, 1861 had seen an influx of springbok into Little Namaqualand (the area south of the Orange River, as opposed to Great Namaqualand in present day Namibia) "where there was neither grass nor water for them,"[38] and where they had perished in thousands when "many of them ran into the sea to drink and were drowned."[39] The summer rains falling in Bushmanland in December 1861 had pulled

[30] See: Vogel, 1987. p.93; Neville, 1996. Vol. I. p.151.
[31] *Colesberg Advertiser*, 3 December 1861.
[32] *Graaff Reinet Herald*, 11 September 1861.
[33] *Colesberg Advertiser*, 15 July 1862.
[34] *Colesberg Advertiser*, 22 July 1862.
[35] *Graaff Reinet Herald*, 18 October 1862.
[36] *Graaff Reinet Herald*, 18 October 1862.
[37] *Graaff Reinet Herald*, 1 November 1862.
[38] Dunn, E.J. 1875. 'South African antelopes', *Cape Monthly Magazine*, 65: pp.289-290. "About fourteen years since" would put this trek as occurring in 1861.
[39] Dunn, 1875. This would appear to be the original source of Scully's tale of the same theme. Importantly, neither of the two authors ever saw the spectacle themselves, but merely reported on an event 14 and 37 years later respectively.

the trekbokke back from the western districts however[40] and for the remainder of summer they do not appear to have invaded the populated districts again. The first reports of trekbokke in 1862 came from the neighbourhood of Colesberg in early April when a "great number" were reported from the surrounding flats.[41] Given an irregular postal system however, a later report from a correspondent in Hope Town would seem to indicate that the trekbokke had first arrived in this district and then moved south towards Philipstown and only then Colesberg: "I have met with large herds of Springboks, or as they are now called, *trek-bokken*. They come southwards in vast herds, doubtless in search of water ..."[42] This southward movement appears to have continued over the next few months, enveloping Hanover (at this stage still incorporated into the districts of Colesberg and Richmond) and the northern parts of Richmond. By early July "whole droves" had penetrated as far as the area around the village of Richmond[43], and then even further south towards the divisional border with Graaff-Reinet where their arrival attracted a party of Graaff-Reinet hunters who "took about 250 *bokken* home."[44] A local farmer himself shot 225 springbok over a three week period and to the relief of the local inhabitants, rain finally fell in early August: "The best news I have to communicate to you this week is, that we have had a good supply of rain, lasting, without intermission for two days and nights, and from what we have heard it has been pretty much the same over the whole district and even far beyond. ... The springboks have trekked and only a few stray ones are now to be met with."[45]

[40] *Colesberg Advertiser*, 3 December 1861.
[41] *Colesberg Advertiser*, 8 April 1862.
[42] *Colesberg Advertiser*, 29 April 1862.
[43] *Graaff Reinet Herald*, 26 July 1862.
[44] *Colesberg Advertiser*, 29 July 1862.
[45] *Graaff Reinet Herald*, 9 August1862.

This did not mean the disappearance of the trekbokke however, only that they moved back north. By January 1863 the residents of Hanover could report that the springbok had left the area[46], but in February others still lingered on the boundary of the Colesberg Commonage[47]. After this however there are no more reports of the trekbok and it can be assumed that the usual late summer rains allowed a dispersal of the animals back into more remote areas.

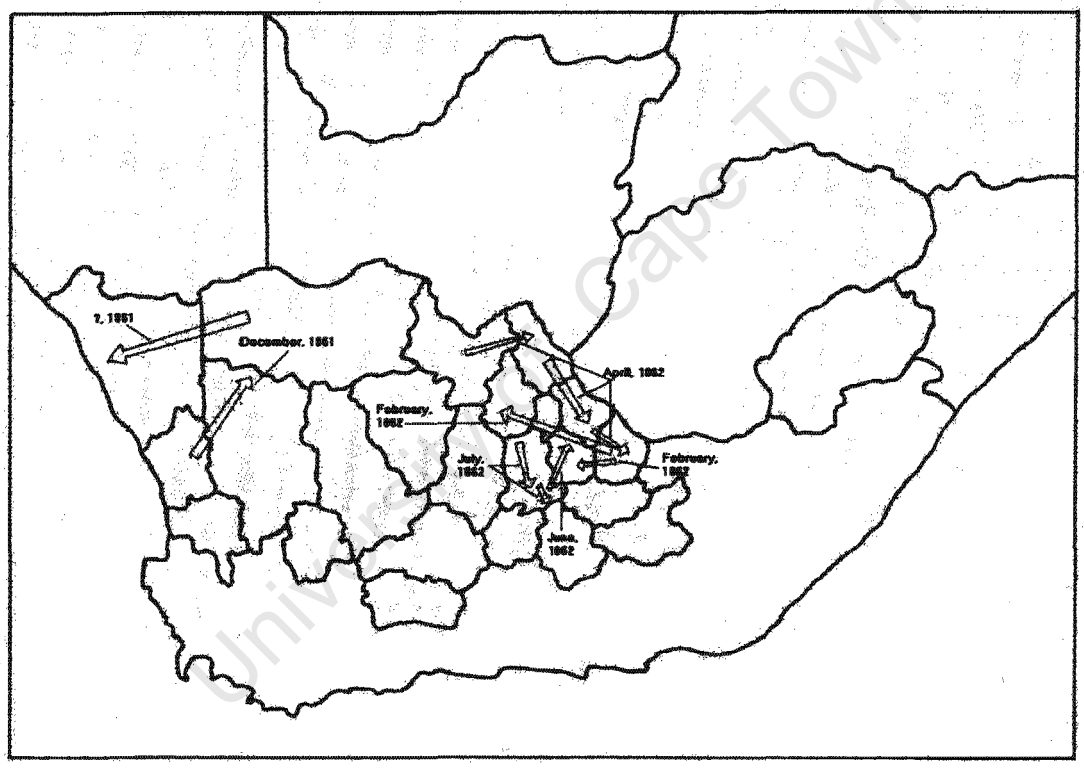

Figure 3.11: Trekbok movements, 1861-62

In his report for 1862 the Civil Commissioner of Richmond summarised the year: "Richmond has suffered very severely during the past year from the long protracted drought. ... Some farmers out of 5000 sheep, have only now one fifth of that number,

[46] *Graaff Reinet Herald*, 31 January 1863.
[47] *Graaff Reinet Herald*, 11 February 1863.

others of 3000 one fourth, and so on. The *trekbokken*, which appeared in countless numbers, did much towards the destruction of pasturage which might have served the numerous sheepwalks. The losses sustained … have … been … chiefly from want of food."[48] The eventual retreat of the springbok had only worsened the situation for those residents who had suffered most: "Since the springboks have left our neighbourhood many of the poorer classes are frequently without meat, and are reduced to short commons."[49]

1872-73: "a perfect scourge"

The generally good rainfall years of the latter half of the 1860s meant that, aside from local movements, the eastern districts were not troubled by springbok treks over this period. The interior of the country experienced large numbers of springbok however and the annual report of the Civil Commissioner for Calvinia for 1867 claimed that "millions" of springbok affected the farming fortunes of the district[50]. In 1868 tens of thousands of springbok are reported to have trekked into the area around Springbok due to "denuded herbage" in Bushmanland[51] and in 1869 Fraserburg was affected by the influx of "countless herds" of springbok.[52]

Rainfall dropped off in the 1870s however and 1872 brought a widespread drought. In August of that year Dunn saw vast numbers of springbok between Kenhardt and Van Wyk's Vlei and estimated that tens of thousands, in herds of between 2000 and 6000 separated by two to three miles, covered an area through which they had ridden for 35

[48] Cape of Good Hope, 1862. *Statistical Register*: Report of the Civil Commissioner, Richmond.
[49] *Graaff Reinet Herald*, 31 January 1863.
[50] Cape of Good Hope, 1867. *Statistical Register*: Report of the Civil Commissioner, Calvinia.
[51] *Graaff Reinet Advertiser*, 21 August 1893.
[52] Cape of Good Hope, 1869. *Statistical Register*: Report of the Civil Commissioner, Fraserburg.

miles.[53] Impressed by their numbers Dunn felt that at night "the movement of so many tens of thousands can be compared to nothing but the distant breaking of sea on rocks." By October increased numbers of springbok had been noted in the vicinity of Beaufort West[54], perhaps the vanguard of later movements, and at about this time reports that reached Victoria West, which had initially received good rains[55], from "*onderscheindene binneslandsche distrikten*" began to suggest that due to the drought in the interior thousands of springboks had appeared and were devastating crops and pasture.[56]

Sure enough November saw the "invasion" of thousands of springbok into the districts of Hope Town, Colesberg, Richmond and Middelburg where "Crops [were] destroyed, ostrich enclosures taken possession of, and vast extents of country overrun and pasturage destroyed."[57] By December some had advanced even as far as the plains near Aberdeen where a sharp increase in numbers was noted.[58] Writing at the end of the year the Civil Commissioner of Hope Town lamented that "a protracted drought has cast a gloom over this Division. ... Herds of trekboks ravage the scanty pasturage."[59] The editor of the *Colesberg Advertiser* was not as diplomatic:

"The Colonial Game Laws are, no doubt, very essential to the preservation of game, which would, were those laws repealed, soon become very scarce indeed, and ultimately be exterminated altogether from the Colony. But whilst admitting the usefulness of the game laws in the preservation of some descriptions of game, we must protest against their being enforced in an emergency such as the present. Springboks, especially when they make their appearance in vast herds, clearing off everything in the shape of pasturage along their line of route, can be regarded as nothing more nor less than vermin, the preservation of which can serve no useful purpose, but must be productive of great disaster, not only to the farmer but to the Colony as a whole. ... We do not blame the framers of the law – they simply know nothing of the matter – *trekbokken* ... they may perhaps have read of, but they could form no conception of the damage which may be done by such vermin. But, as several of our legislators have

[53] Dunn, E.J. 1873. 'Through Bushmanland, Part II', *Cape Monthly Magazine*, 31: pp.31-32.
[54] *Courier*, 18 October 1872.
[55] *Victoria West Messenger*, 5 January 1878.
[56] *Colesberg Advertiser*, 9 November 1872.
[57] *Colesberg Advertiser*, 30 November 1872.
[58] *Colesberg Advertiser*, 7 December 1872.
[59] Cape of Good Hope, 1872. *Statistical Register*: Report of the Civil Commissioner, Hopetown.

recently had practical experience of the hardships under which farmers labour by reason of the preservation of these animals, it is to be hope that the law will now be amended, and the destruction of the pests, in season and out of season, and by person licensed and unlicensed, be rendered legal."[60]

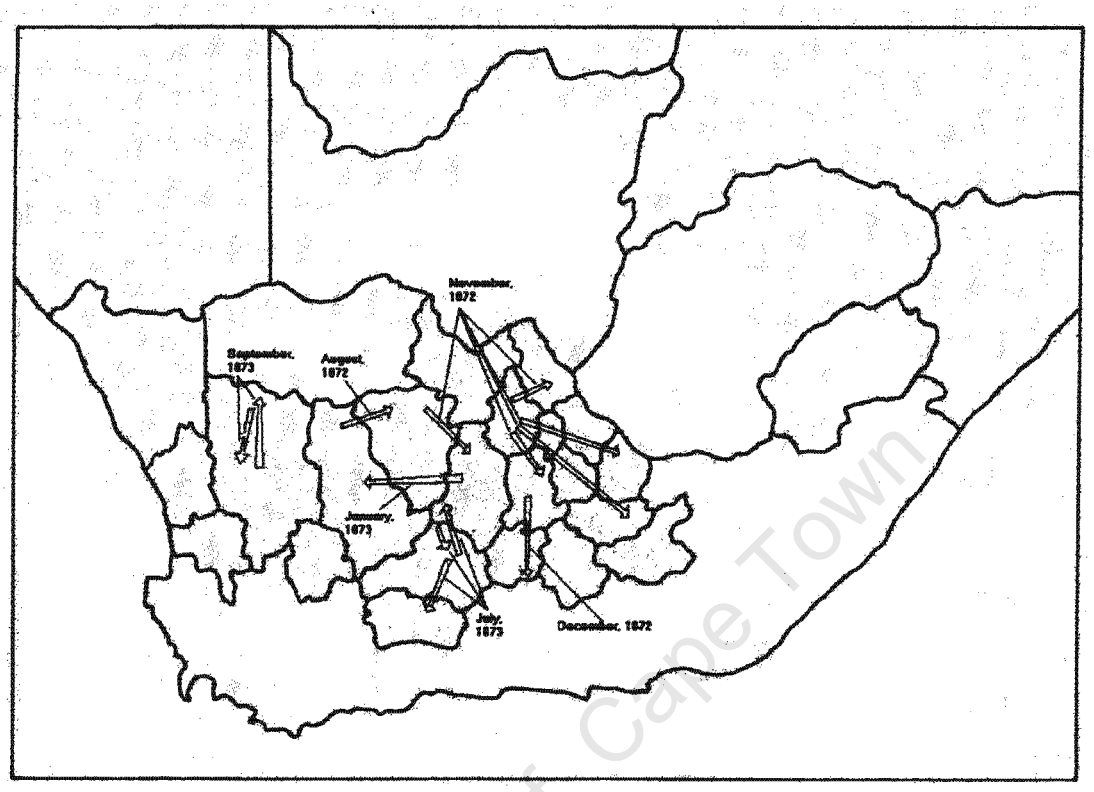

Figure 3.12: Trekbok movements, 1872-73

January 1873 saw rains in the Fraserburg district which "revived our withered pasture, and caused it to assume a most promising appearance, [causing] large herds of springbuck [to come] pouring in, devastating every semblance of vegetation, and besieging every fountain or dam which lay in their course, and doing as much mischief by trampling down the embankments as they did by drinking the contents, which in so 'dry and thirsty a land' as this, is saying a great deal."[61] Having consumed the pasturage the springbok moved off in search of fresh grazing, the summer rains apparently allowing a re-dispersal. By July however no substantial rains could be said to have broken the drought and springbok were again reported invading the more

[60] *Colesberg Advertiser*, 30 November 1872.
[61] *Courier*, 18 April 1873.

densely inhabited parts such as Prince Albert[62]. Drought continued in the eastern districts though and the bulk of the trekbokke appear to have gravitated towards the north-west again. In early September the trekbokke were reported to be making their way into the Hantam in the region of the town of Calvinia[63] and although they were expected to proceed from there towards Fraserburg by the end of the year, the lack of any such report suggests they returned again to Bushmanland. The eastern divisions were thus largely spared the devastation of the trekbokke in the latter half of 1873, but the Civil Commissioner of Hope Town again complained that "locusts and springbucks are a perfect scourge in this part of the country."[64]

1877-78: "*bizonder waar laatst regen is gevallen*"

Generally good rains characterised the mid-1870s and Fraserburg reported "*ontelbare*" numbers of springbok north of the town in 1875[65]. Localised droughts in 1876 apparently caused relatively minor springbok aggregations – and a surfeit of venison - around Beaufort West and Richmond in 1876[66], but the Civil Commissioner of Victoria West was satisfied that over the year "the much dreaded scourges – locusts and springbok – did not appear."[67] The following year heralded a severe drought however (see Figures 3.2, 3.5 and 3.6). Complaints of drought filled the press from as early as January and February 1877[68] and by August marked losses of sheep were reported for the Richmond district with farmers having "been compelled to trek towards Hanover, where food and water may still be found, though very scarce."[69]

[62] *Courier*, 1 August 1873.
[63] *Courier*, 12 September 1873.
[64] Cape of Good Hope, 1873. *Statistical Register*: Report of the Civil Commissioner, Hopetown.
[65] *Courier*, 29 October 1875.
[66] *Courier*, 9 June 1876; 23 June 1876.
[67] Cape of Good Hope, 1876. *Statistical Register*: Report of the Civil Commissioner, Victoria West.
[68] See all issues of the *Graaff Reinet Herald* over this period.
[69] *Graaff Reinet Herald*, 29 August 1877.

Fraserburg was affected by drought from May[70] and by September no rain had fallen in the area around Britstown where "in some parts of the district, the air is poisoned with the stench arising from dead animals,"[71] and the English Church at Beaufort West advertised that it would be open three times a day during the week to conduct prayers for rain.[72]

The trekbokke first made their appearance in the Colesberg district in late April arriving in "considerable numbers" and providing a sure sign "that the drought extended far inland."[73] The continued presence of the herds in the area over May and June is confirmed by the hunting efforts of both Europeans and "men of colour" and the subsequent abundance of springbok venison and biltong on the market, haunches being sold for the very reasonable price of 1s 6d apiece.[74] Following rains in mid-June the number of springbok noticeably decreased and they were thought to be "making for their native grazing grounds further inland."[75] They moved only as far as Hanover however and were again the subject of concentrated hunting with venison and biltong from Hanover being sold on the Colesberg market in early July – the price of haunches was unchanged, while shoulders fetched 6d and biltong was sold at 9d per lb.[76] Hanover and Colesberg were not the only affected districts over this period and between late May and early July Prince Albert was also inundated with trekbokke. At least 1942 springbok were shot "chiefly by [the] village" by the time rain caused the retreat of the springbok in July.[77] Even at this stage, springbok still remained in some

[70] *Courier*, 2 November 1877.
[71] *Graaff Reinet Herald*, 12 September 1877.
[72] *Courier*, 28 September 1877.
[73] *Colesberg Advertiser*, 28 April 1877.
[74] *Colesberg Advertiser*, 16 June 1877.
[75] *Colesberg Advertiser*, 16 June 1877.
[76] *Colesberg Advertiser*, 7 July 1877.
[77] *Graaff Reinet Herald*, 4 August 1877.

numbers in the "back part" of the district of Fraserburg – probably around present day Kenhardt – and without a ready market for venison one farmer used springbok venison as feed for his forty or fifty ostriches during the drought.[78]

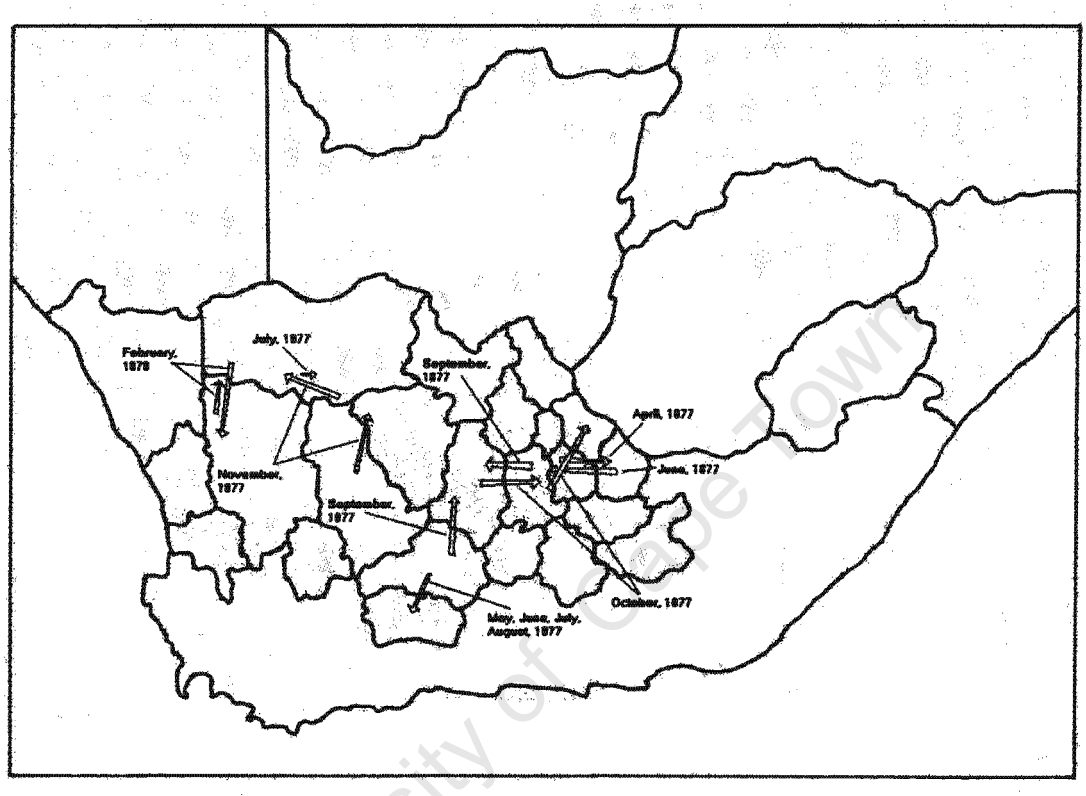

Figure 3.13: Trekbok movements, 1877-78

The rains reported in July appear to have been widespread and allowed the trekbokke to disperse further inland as reports of the "scourge" do not appear during August. By September however complaints from Victoria West took the form of a poem which lamented:

"Die droogte is zwaar in onze land
Ons lees daarvan in elke krant;

By ons gaat het ook maar regte naar
En die boere kryg het byzonder zwaar;
Zy heebn al hot en haar getrek
Maar de vee die hou maar aan met vrek
....
Springbokke is al wat in die droogte nog grooi,

[78] *Courier*, 20 July 1877.

Dis te zeg als een mens niete veel met hulle moei."[79]

By October the trekbokke had invaded the eastern districts again and in Hanover by the middle of the month "*Groote troepen springbokken over dekken het veld, bizonder waar laatst regen is gevallen.*"[80] They soon moved on however and headed into 'Onder Zeekoeirivier', or present day Philipstown where they devastated the remaining pasture intended for sheep and goats.[81] By late October and early November rain had begun to fall in the interior and the trekbokke left the eastern districts which they had plagued in varying degrees over the preceding eight months. One Richmond farmer boasted of having shot 338 springbok during that period[82], while a Prince Albert resident shot 111 springbok in less than two months[83]. Although seemingly being better off than the eastern districts, Carnarvon and Van Wyk's Vlei were extremely appreciative of rain in November[84], and Fraserburg also received the relief of rainfall after a six-month drought. As a result of this rain a Fraserburg correspondent of the *Beaufort Courier* could report that:

"Gisteren tegen den middage begin het te regenen eene zachter, verwikkende en doordringende regen viel tot laat in den avond. God zij gedankt de nood was groter als men dacht maar nu is de uitkomst ook naar evenredigheid vooral de vrees voor de gevreesde Springbokken is nu geweken daar die beetjes zeker hun instinct zullen volgen en regts om keeren zullen maken naar de Kalihari of waar dan ook hun Doimicilie is."[85]

[79] *Victoria West Messenger*, 15 September 1877. "The drought is severe in our land/We read about it in every newspaper/With us it is also hard going/And the farmers are especially hard hit/They have trekked all over/But the stock just keep dying/Springbok are the only things that grow in the drought/That's as long as people don't interfere"
[80] *Colesberg Advertiser*, 20 October 1877.
[81] *Colesberg Advertiser*, 27 October 1877.
[82] *Graaff Reinet Herald*, 21 November 1877.
[83] *Graaff Reinet Herald*, 4 August 1877.
[84] *Courier*, 9 November 1877.
[85] *Courier*, 2 November 1877. "Yesterday at about midday it started to rain a soft, soaking and much needed rain. Thank God as the situation was worse than people though, but now the outcome is looking up especially as the dreaded springbok should now turn around and follow their instinct back to the Kalahari or wherever it is that they come from."

Good rains fell over Bushmanland in November[86] and no further reports of trekbokke appeared in the press during December that year or the following January. By February 1878 however, springbok made their presence felt again and at Calvinia "were seen in thousands, a living mass for miles, and many were laid low by the rifles of sportsmen. The veld is literally eaten up by these animals."[87] No further reports followed and it can be assumed that the usual summer rains fell in March and April and allowed the springbok to disperse back into the less populated and settled areas of greater Bushmanland.

1880: "the springbuck droogte"

While 1880 is not regarded as a drought year in the Eastern Cape by Vogel, press reports from Hanover and the *Nieuweveldt*, in July and August respectively, suggest otherwise, as does the fact that drought was experienced in Victoria West, Beaufort West and Calvinia (see Figure 3.6). The veld was considered bad and in need of rain in Hanover by early July[88], while stock losses of up to 75% were reported from the *Nieuweveldt* the following month[89]. Drought was evidently more severe in the *Achterveld*, or interior.[90] In June the *Victoria West Messenger* reported that: "In some parts of the district, especially in the *Achterveld*, drought is setting in, and farmers are commencing to 'trek' in search of better pasture for their stock. On some farms there is still a good supply of water, but the 'veld' is bad."

The latter part of June also saw the first influx of "myriads" of springbok into the district of Victoria West, their passage causing such "great damage to the pasturage

[86] *Courier*, 9 November 1877.
[87] *Graaff Reinet Herald*, 27 February 1878.
[88] *Graaff Reinet Herald*, 14 July 1880.
[89] *Graaff Reinet Herald*, 4 August 1880.
[90] *Victoria West Messenger*, 12 August 1880.

where they pass through" that the farmers "declared war against them."[91] The trekbokke proceeded to the vicinity of Victoria West where numerous herds were present near the town. So numerous were the springbok that whole carcasses were sold in town for just 4s each,[92] and one farmer managed to shoot 124 in a single day.[93] The trek continued further east and by the end of the month had penetrated as far as Hanover where a party of twenty-eight farmers managed to shoot 750 in one hunt.[94] The effects of the drought and "dried up veld" were also felt in Beaufort West where in June it was reported that springbok could not be kept out of the crops.[95] By July the main 'front' of the trekbokke was present in the area bounded by the villages of Victoria West, Richmond and Britstown. In Britstown thousands of springbok were within striking distance of the settlement and the carcasses fetched only 1s 6d[96], a far cry from the price of springbok legs in Colesberg in 1882 when this portion of the carcass sold for between 3s 6d and 5s 3d[97]. In Richmond, where devastation to grazing and soil was reported, a farmer counted between nine and ten thousand springbok on his farm, and additional accounts indicated that this was not an isolated instance.[98] Initial reports from Victoria West suggest a decrease in springbok numbers at the beginning of the month when Britstown and Richmond seemed to be worse affected, by the end of the month however with a worsening drought in the *Achterveld* thousands of springbok were described as trampling the veld "*tot stof en asch*" and were so numerous and concentrated that in only a minute a farmer was able to shoot no less than 68 springbok without taking a step.[99]

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[91] *Victoria West Messenger*, 28 June 1880.
[92] *Victoria West Messenger*, 21 June 1880.
[93] *Victoria West Messenger*, 28 June 1880.
[94] *Graaff Reinet Herald*, 30 June 1880.
[95] *Courier*, 24 June 1880.
[96] *Victoria West Messenger*, 5 July 1880.
[97] See: *Colesberg Advertiser*, 4 March - 30 December 1882.
[98] *Courier*, 15 July 1880.
[99] *Victoria West Messenger*, 2 August 1880.

The district of Prieska was also affected during July and in early August *Nachtmaal* "was very small indeed owing to the 'springbuck droogte' as it is called."[100] "The whole country [was] overrun" by springbok and the damage caused to pasture forced the farmers to trek across the Orange River to Griqualand West where the veld was still in good condition. A quarter of an inch of rain fell in Prieska, but soon thereafter the trekbokke disappeared[101], with subsequent reports from the *Achterveld* of Victoria West indicating that they had headed south west[102]. Springbok were decried as "destroying the sheep industry owing to the immense amount of herbage they devour and the fact that sheep will not graze where springbok have cropped the grass,"[103] but by the middle of August good rains had been received in this area and the springboks were reported to be heading back north again, supposedly across the Orange River, although the correspondent who reported this was based in the "back country" of Victoria West and the statement reflects speculation rather than observation.[104]

[100] *Victoria West Messenger*, 9 August 1880.
[101] *Victoria West Messenger*, 16 August 1880.
[102] See also: Cronwright-Schreiner, 1899. p.44.
[103] *Graaff Reinet Herald*, 7 August 1880.
[104] *Victoria West Messenger*, 23 August 1880.

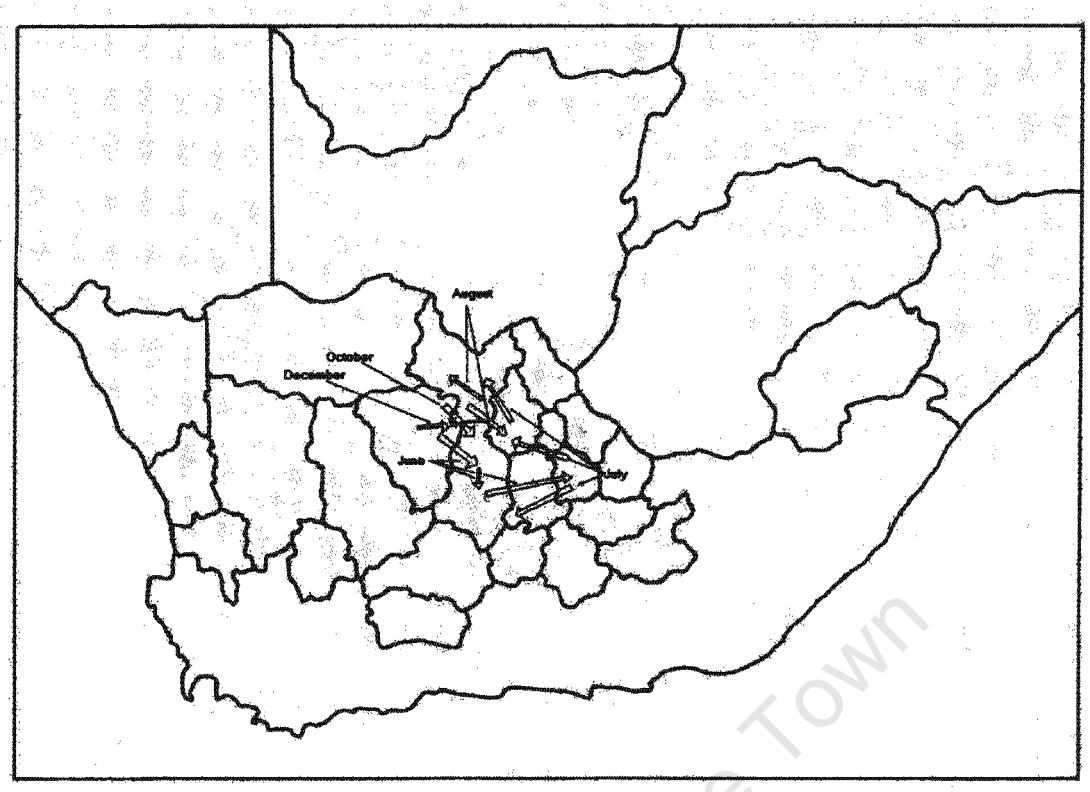


Figure 3.14: Trekbok movements, 1880

The rains were short-lived however, as was the dispersal of the trekbokke, and in early October the editor of the *Victoria West Messenger* complained of the "invasion of hundreds of thousands of springbucks." In his opinion, and echoing the *Colesberg Advertiser* of a decade earlier, trekbokke should not have been protected by the Game Laws, which "if our lawmakers had been aware of the damage that can be inflicted by myriads of these animals roaming about private property" would surely not have been included in the legislation. As an alternative he suggested that, "every farmer should try to enclose the whole extent of his farm, which would enable him to carry on that industry with little difficulty, and moreover secure his acres from an invasion by springbucks."[105]

[105] *Victoria West Messenger*, 4 October 1880.

The invasion did not last long however and nothing immediately came of the pleas of the editor. By the middle of the month "fine rains" had fallen in the back country and the springbok were said to be moving off.[106] Once again though the drought continued and in December another temporary occupation of farms in the remote areas of the Victoria West had been effected[107] the trekbokke apparently dispersing soon thereafter and not reappearing again over the ensuing year.

Conclusions:

The four "big treks" discussed above display some important similarities that can guide us in reaching conclusions as to the ecology of springbok treks. All four events occurred during periods of severe drought in Bushmanland or the *Achterveld* and involved a movement of springbok into neighbouring areas in either a westerly or easterly direction – at least one of these periods (1877-78) is also identified by Vogel as a possible ENSO/El Nino event[108], and Lindesay and Vogel quote Quinn as identifying 1862, 1873, 1877, 1880 and 1896 as El Nino years of varying intensity[109], thereby indicating the role global weather patterns may have played in triggering springbok treks. Different rainfall and springbok movements characterise each trek and in this sense there is no uniformity between events. What is also apparent however is that each drought was preceded by a relatively prolonged period of good rainfall. It is difficult to determine with any accuracy the exact situation within the *Achterveld*, but for those years for which we do have information it would appear that

[106] *Victoria West Messenger*, 18 October 1880.
[107] *Victoria West Messenger*, 6 December 1880.
[108] Vogel, 1987. p.93. ENSO, or the El Nino Southern Oscillation, is the result of changes in sea-surface temperature in the eastern and western Pacific Ocean and resulting pressure systems that influence global rainfall. ENSO events result in drier conditions over central and eastern southern Africa. See: Tyson, P.D. & Preston-Whyte, R.A. 2000. *The Weather and Climate of Southern Africa*, 2nd Edition, Oxford University Press, Cape Town. pp.228-232.
[109] Lindesay, J.A. & Vogel, C.H. 1990. 'Historical evidence for Southern Oscillation-Southern African rainfall relationships', *International Journal of Climatology*, 10: p.683.

springbok numbers grew during these good rainfall periods and were able to survive by undergoing relatively localised movements – for example between Kenhardt and Fraserburg, or Van Wyk's Vlei and Calvinia. It was only once drought set in that large scale movements of the now exploded springbok population became necessary, some parts of the population choosing to move west into the winter rainfall Succulent Karoo of Namaqualand and western Calvinia, and others into the higher rainfall areas of the east, primarily the districts of Prieska, Hopetown, Britstown, Victoria West, Richmond, Hanover and Colesberg. Major concentrations occurred when other grazing resources had been exhausted forcing the springbok to congregate on what remained. As Winterbottom has suggested springbok seem to fit the pattern of irruption rather than migration. Irruption can be defined as "an irregular abrupt increase in population size or density typically associated with favourable changes in the environment and often resulting in the mass movement of the population."[110] Without taking into account strategies such as migration or mass movement, Mellville explained the situation, as it applies to ungulates, as follows: "The animals react to the excess of food … [and] increase exponentially until they overshoot the capacity of the plant community to sustain them; their populations crash, then reach an accommodation with the now-reduced subsistence base at a lower density."[111]

As Bigalke and others pointed out[112], the extraordinary fecundity of springbok enables massive population increases over short periods. These populations can just as quickly

[110] Lincoln, R.J. & Boxshall, G.A. 1990. *The Cambridge Illustrated Dictionary of Natural History*, Cambridge University Press, Cambridge.
[111] Mellville, E.G.K. 1994. *A Plague of Sheep: Environmental Consequences of the Conquest of Mexico*, Cambridge University Press, Cambridge. p.6.
[112] Bigalke, R.C. 1970. 'Observations on springbok populations', *Zoologica Africana*, 5(1): p.67.

crash.[113] This modern understanding of springbok population dynamics suggests that settler notions of springbok treks having a beginning and end point were naïve. The beginning point was population growth and the end point its crash, or at the very least dispersal. Without detailed information on rainfall in Bushmanland for this period it is impossible to test the correctness of this model, but, following Lovegrove's lead in comparing bird and springbok migrations[114], support for such a theory can be found in studies of nomadic and irruptive bird species of the Karoo and Bushmanland.

Nomadic birds are those that move en masse, often including all or most of the species' population, from place to place without regard to season or direction, while migrants are those that make a seasonal movement from defined breeding to non-breeding areas.[115] In a nutshell, "nomadism is an unpredictable movement in response to unpredictable conditions."[116] Several Karoo birds fall into this category, with the highest incidence of occurrence apparently centring on Bushmanland[117] and nomadic bird species abundance and breeding attempts in the Great Karoo have been linked to seed and ephemeral plant abundance[118]. Dean and Milton suggest that nomadic birds move into an area after the flush of new vegetation and time this arrival to coincide with the ripening of seed and furthermore that the most numerous nomadic species, such as grey-backed sparrowlarks and lark-like buntings, tend to be more abundant in

[113] See: Skinner, J.D., Dott, H.M., van Aarde, R.J., Davies, R.A.G. & Conroy, A.M. 1987. 'Observations on a population of springbok *Antidorcas marsupialis* prior to and during a severe drought', *Transactions of the Royal Society of South Africa*, 46: pp.191-197.
[114] See: Lovegrove, B. 1993. *The Living Deserts of Southern Africa*, Fernwood Press, Cape Town. p.143, p.163.
[115] Davies, S.J.J.F. 1984. 'Nomadism as a response to desert conditions in Australia', *Journal of Arid Environments*, 7: pp.183-184.
[116] Hockey, P.2002. 'Incredible journeys – unravelling the mysteries of bird migration' *Africa: Birds and Birding*, 7(4): pp.32-39.
[117] See: Dean, W.R.J. & Siegfried, W.R. 1997. 'The protection of endemic and nomadic avian diversity in the Karoo, South Africa', *South African Journal of Wildlife Research*, 27: p.14.
[118] Dean W.R.J. & Milton, S.J. 2001. 'Responses of birds to rainfall and seed abundance in the southern Karoo, South Africa', *Journal of Arid Environments*, 47: pp.101-121.

drier periods when resources are more limited.[119] Another common nomadic bird species of the Karoo with which parallels to springbok can be drawn is the Namaqua sandgrouse which, in tracking potential seed availability, moves east into summer rainfall regions during autumn and then back westwards into winter rainfall areas of Bushmanland where it breeds.[120] Ostrich also share some similarities with springbok and their success in adapting to the unpredictable and patchy rainfall of the Karoo and other arid areas within their distribution has been ascribed to their ability "to emigrate from drought-stricken areas and rapidly repopulate resource-rich patches."[121] Movements of the emu in arid western Australia are also apparently random in response to unpredictable local rainfall but can be linked to general long-term climate patterns,[122] while the example of Africa's red-billed quelea may suggest further nuances to the nomad theme when individual species are considered holistically. The quelea was initially understood to be purely nomadic with random movements in response to rainfall, but these movements have since been re-examined in the context of distinct regional sub-populations and have been found to display a consistency that is governed by essentially predictable rainfall patterns that differ from year to year only in rate of travel.[123]

While a single bird species cannot be expected to mirror the behaviour and adaptations of springbok in the Karoo exactly, in the absence of present day *trekbokken* the concepts of arid system nomadism in birds provide useful clues for interpreting historical data. The period 1884 to 1897, including the "big trek" of 1895-

[119] Dean & Milton, 2001. pp.116-118.
[120] Milton, S.J., Davies, R.A.G. & Kerley, G.I.H. 1999. 'Population level dynamics', in: Dean, W.R.J. & Milton, S.J. (eds.). *The Karoo: Ecological Patterns and Processes*, Cambridge University Press, Cambridge. p.198.
[121] Milton *et al*, 1999.
[122] Davies, 1984. pp.187-191.
[123] Davies, 1984. p.185.

96, provides us with far more detailed information of trek and rainfall records from Bushmanland and the *Achterveld* than can be obtained for the preceding events and a detailed examination of this period provides a truer test of the mega-trek model as outlined above.

CHAPTER 4:

"*Apres nous le deluge*" - the trek of 1895-6 and its aftermath: an analysis and some reassessments of the period 1884-1908

Given the conclusions reached in Chapter 3 we would expect the years preceding the trek of 1895-6 to feature an extended period of above average rainfall which would have allowed both opportunistic and seasonal breeding and a build up of springbok numbers in Bushmanland or the *Achterveld*. Considering the notoriously variable rainfall in this part of the Colony this period would have been characterised by smaller, and apparently random, regional movements of springbok taking advantage of localised patches of abundance. These movements would have become more pronounced over the period of good rainfall as springbok numbers grew, but are still likely to have been confined to the back country of greater Bushmanland. A period of drought following this good cycle would have been the proximate cause of springbok treks into the better-watered eastern districts as identified in Chapter 3, with large numbers of springbok being forced to congregate on greatly diminished patches of food resources. Rainfall records for, and newspaper coverage of, 'Bushmanland' or the *Achterveld*, greatly increased from the mid 1880s and as a result the conclusions reached in Chapter 3 can be tested against more comprehensive data in an effort to provide a fuller analysis and explanation of what is widely regarded as the last "big trek".

Rainfall in the *Achterveld*, 1884-1897:

As was alluded to in the previous chapter, rainfall stations in the Karoo interior, in the areas identified as integral to springbok treks, were only established from the 1880s.

Reporting of rainfall was still hampered by irregularity though and the absence of data for one or even several months during a year prevents the calculation of annual rainfall for some stations in some years. Other stations (such as Brandvlei and Upington) were simply too unreliable to provide a meaningful record. Nonetheless rainfall records for stations at Calvinia, Fraserburg, Carnarvon, Kenhardt and Van Wyk's Vlei provide us with a reasonable picture of rainfall and climate over the period extending from 1884.

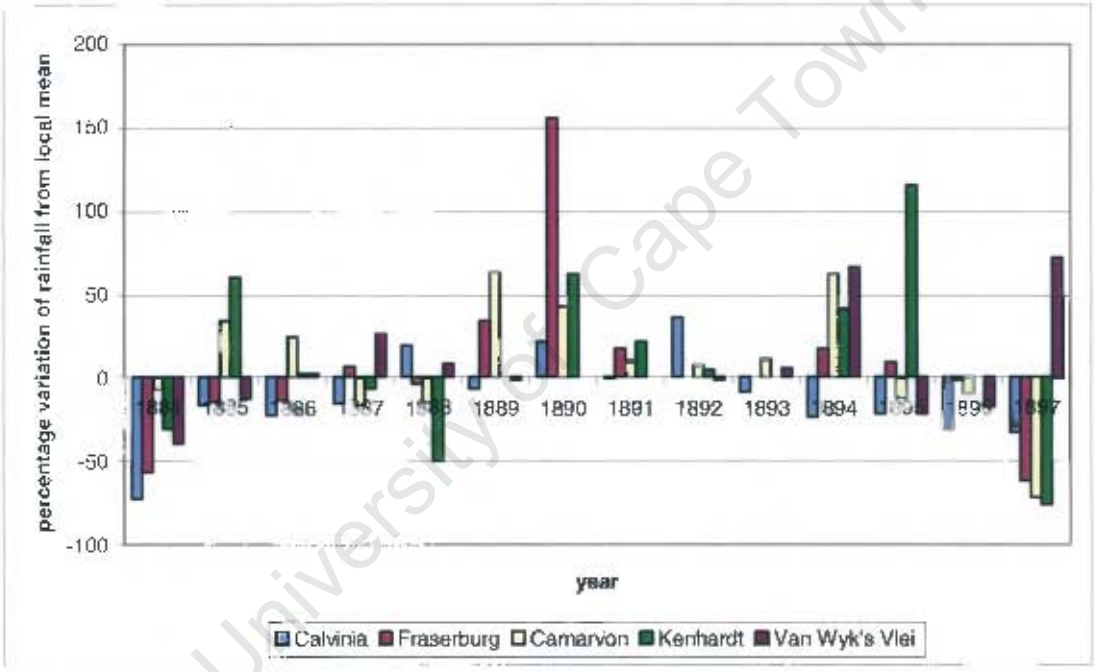


Figure 4.1: Percentage variation of annual rainfall in the *Achterveld*, 1884-1897[1]

As can be seen from Figure 4.1, despite substantial variation between these five stations an overall trend for the period 1884 to 1897 can be discerned. While 1884 was generally dry across the region, the reasonably good rainfall of 1885 exhibits the beginning of an upward trend that intensified over 1889 and 1890 and continued until

[1] Annual rainfall figures taken from Meteorological Commission data published in the *Statistical Register* of the Cape of Good Hope. Average rainfall figures obtained from: Union of South Africa, 1927. *Rainfall Normals up to the End of 1925 – With an Introduction and a Brief Summary of the Rainfall of the Union of South Africa* [UG.23-'27].

1894 when, notwithstanding the good rainfall received at Kenhardt in 1895 and Van Wyk's Vlei in 1897, the onset of a dry period is apparent. A similar trend over the same period was noted by a farmer outside Graaff-Reinet who suggested that rainfall in the Cape Colony could be divided into seven-year cycles: The period 1886-1892 was noted as being very wet with an average annual rainfall at Graaff-Reinet of 14.63 inches, while the period 1893-1899 was dry with an annual average of only 9.11 inches.[2]

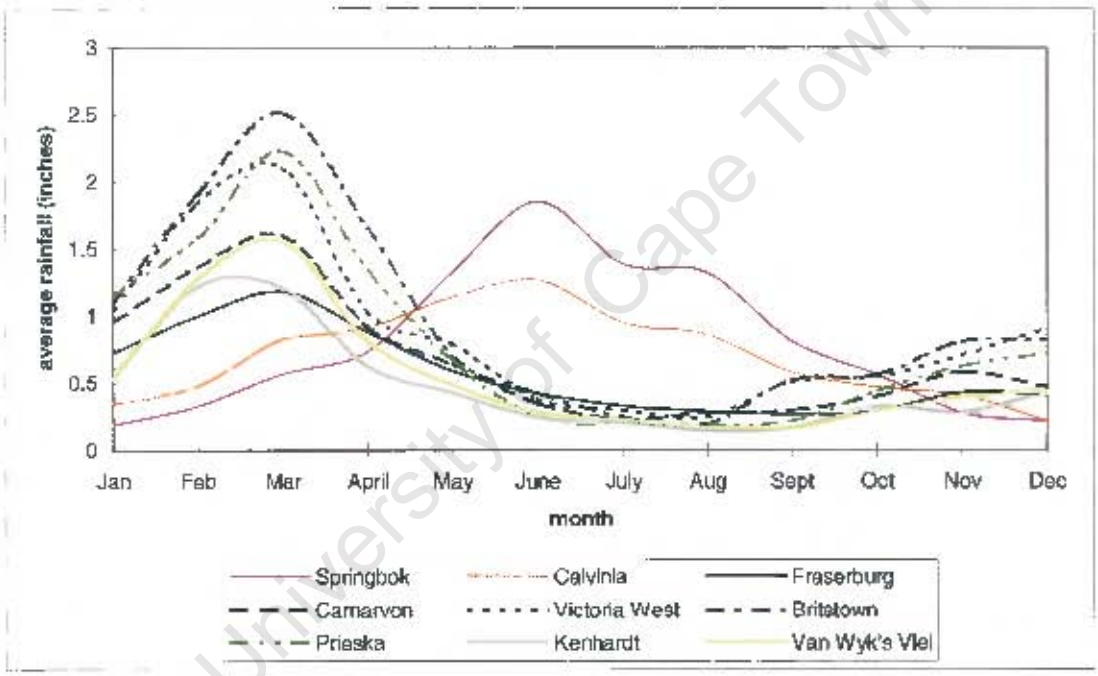


Figure 4.2: Seasonality and average monthly rainfall in the *Achterveld* and surrounding districts[3]

As can be seen in Figure 4.2, an analysis of rainfall in the *Achterveld* and surrounding districts also reveals a very marked seasonal expectancy. The western stations of Calvinia and Springbok for example experience peak-rainfall during June with the bulk of precipitation falling in the five winter months running from April to August.

[2] *Graaff Reinet Advertiser*, 21 February 1908.
[3] Average monthly rainfall figures obtained from: Union of South Africa, 1927.

In contrast peak rainfall for the central and eastern stations falls in April, with the wet season mainly coinciding with the six-month period, November and April.

Given modern studies of springbok reproduction and general population dynamics, and the conclusion established in Chapter 3 that the *Achterveld* was the core area responsible for springbok population growth during the latter half of the nineteenth century Figure 4.1 would appear to support the hypothesis that springbok numbers grew substantially in this area over the period 1885 to 1894, crucial years being 1889, 1890 and 1894, and that subsequent drier years forced this population to seek grazing elsewhere with emigration from the region intensifying over 1895 and 1896 when almost all stations reflected in Figure 4.1 received rainfall significantly below average. These preliminary conclusions must however be measured against recorded springbok movements as reported by the local press and officials, as well as against local rainfall at an even higher resolution.

1884-1891: "the pasturage is so luxuriant all around"

After the "springbuck droogte" of 1880 the press in all parts of the colony received very few reports of springbok treks. A localised springbok movement was reported from Beaufort West in 1881[4], while larger treks were reported from Hopetown in 1882[5] and Britstown in 1883[6]. A herd of 20 000 was reported to have approached to within 6 hours of Richmond of 1884[7] and a local movement apparently occurred near Matjesfontein in 1886[8]. Trekbokke, or "springbok actually migrating", were nonetheless officially exempted from legal protection by the Game Law Amendment

[4] *Graaff Reinet Herald*, 14 December 1881.
[5] *Colesberg Advertiser*, 24 June 1882.
[6] *Graaff Reinet Herald*, 18 July 1883.
[7] *Courier*, 30 December 1884.
[8] Green, L.G. 1955. *Karoo*, Howard Timmins, Cape Town. p.63.

Act No. 36 of 1886. While this might conceivably have licensed slaughter on an unprecedented scale, it had no immediate adverse effect on springbok numbers.[9] Particularly in the larger and less densely populated divisions, farmers had long employed all manner of strategies to bypass earlier game laws which protected trekbokke as "game" through a closed season even when "actually migrating." All slaughter was thus committed "in such a manner that nothing should be known of the matter by outsiders"[10], and in 1880 the *Victoria West Messenger* could observe that "we seldom hear of any prosecution under the 'Game Preservation Act.'"[11] Numbers in the interior had in fact built up dramatically by 1888 when T.B. Davie, a Prieska resident, rode through them for four and a half hours near Bitterputs and provided a rather extravagant estimate of 100 000 000![12] With the exception of Davie's massively exaggerated head count[13] however, the press contained only isolated reports and it is evident that springbok treks over this period were neither massive nor sustained. The reason for this appears to be that, although the above reports were made in the drier times of the year, wherever springbok movements were recorded the veld was reported to be good. A report in the *Courier* in 1890 lamented the scarcity of fresh and dried venison which it accounted for by the fact that: "The pasturage is so luxuriant all around, that springbucks prefer going far afield ... Though this is doubtless a drawback to sportsmen, the farmers will have no cause to complain, as

[9] Even when permission to destroy trekbokke was sought this was not always granted, it being disputed whether the springbok in question were actually migrating. See for example: CAD: AGR 203, 1455: Acting Under Secretary for Agriculture to Civil Commissioner, Herbert, 6 November 1893.
[10] *Colesberg Advertiser*, 30 November 1872.
[11] *Victoria West Messenger*, 4 October 1880. When prosecutions did take place the defence appears to have been to claim to springbok were vermin or "*ongediertes*" and therefore justifiably destroyed. See: *Colesberg Advertiser*, 21 December 1872.
[12] Davie, T.B. 1921. 'The trekbokke (migratory springbok)' *The Cornhill Magazine*, reprinted in: Cronwright-Schreiner, S.C. 1925. *The Migratory Springbucks of South Africa (the Trekbokke). Also an Essay on the Ostrich and a Letter Descriptive of the Zambezi Falls*, Hamilton, Adams, London. pp.60-61.
[13] Liversidge for example had the following criticism: "T.B. Davie, a man of nearly 80, was remembering the figures of a companion of his 28 years earlier, recording what was in effect 24 700 springbok in one hectare." (Liversidge, R. 1978. 'It was all exaggeration', *African Wildlife*, 32: pp.26-27.)

springbucks do much damage to the pasturage, especially when it is growing fast, which it is doing now to an astonishing degree ..."[14] The same was true of the interior where rumours of the invasion of "*duizenden*" springbok were offset by a general feeling that although water was scarce the veld in the district was "*nocj goed.*"[15] As late as July 1890 the veld in the Prieska district was considered "*uitstekend*"[16] and even by October, despite the local build up of springbok numbers between Kenhardt and Prieska, was "*nog leefbaar.*"[17] Also of importance was the fact that the new Game Law exempted "springbucks actually migrating" from protection, thus no doubt limiting the level of complaint from both farming and town communities.[18]

These generally good conditions and above average rainfall continued into 1891 when, despite springbok being "very plentiful" in Prieska[19], no treks were reported. This was short lived however and with lower rainfall in the *Achterveld* the situation changed quite markedly the following year.

1892: "profitable shooting"

Poor rainfall experienced in the "backcountry" districts of Calvinia, Fraserburg and Carnarvon in the initial stages of 1892 (see Figure 4.4) caused farmers to trek with their stock to more favourable pastures[20] and as early as January the movement of trekbokke was reported in the press, with herds east of Kenhardt expected to move

[14] *Courier*, 7 January 1890.
[15] *Victoria West Messenger*, 15 June 1889.
[16] *Victoria West Messenger*, 25 July 1890.
[17] *Victoria West Messenger*, 17 October 1890.
[18] The springbok trek of 1880 had evidently turned the tide and debate in the House of Assembly was largely unanimous in excluding trekbokke from the Act. See: Cape of Good Hope, 1886. *House of Assembly Debates*, 26 May & 22 June.
[19] *Victoria West Messenger*, 11 September 1891.
[20] *Graaff Reinet Advertiser*, 11 February 1892.

even further east into the districts of Prieska and Britstown[21]. February was even drier than January and this combination of increasing springbok numbers and deteriorating veld conditions had already raised the ire of farmers in the eastern districts. In Hope Town an "alarming increase" in local springbok numbers prompted a "numerously signed petition" to be forwarded to the Under Colonial Secretary by the Divisional Council requesting the suspension of the Game Law Amendment Act of 1886 with regard to springbok and asking that they be protected only during December and January instead of the usual six month close season.[22] Soon thereafter, the Divisional Council of Philipstown forwarded a similar petition to the Secretary for Agriculture. Although the Philipstowners had originally wanted springbok to be denied protection under the Game Law across the whole district a strategic decision was taken to request its suspension only for the Field Cornetcies of McNaughton and Petrusville "as it is mostly from that side that Springbucks flock into this District from the Hopetown side."[23] Proclamation No. 60 of the same year duly granted their request.[24]

[21] *Victoria West Messenger*, 8 January 1892.
[22] CAD: AGR 157, 720: Divisional Council Hopetown to Under Colonial Secretary, 12 January 1892.
[23] CAD: AGR 157, 137: Divisional Council Philipstown to Secretary for Agriculture, 25 January 1892; Civil Commissioner Philipstown to Secretary for Agriculture, 18 February 1892.
[24] Cape of Good Hope, 1892. *Government Gazette,* p.450.

Figure 4.3: Monthly rainfall across the *Achterveld* and surrounding districts, 1892[25]

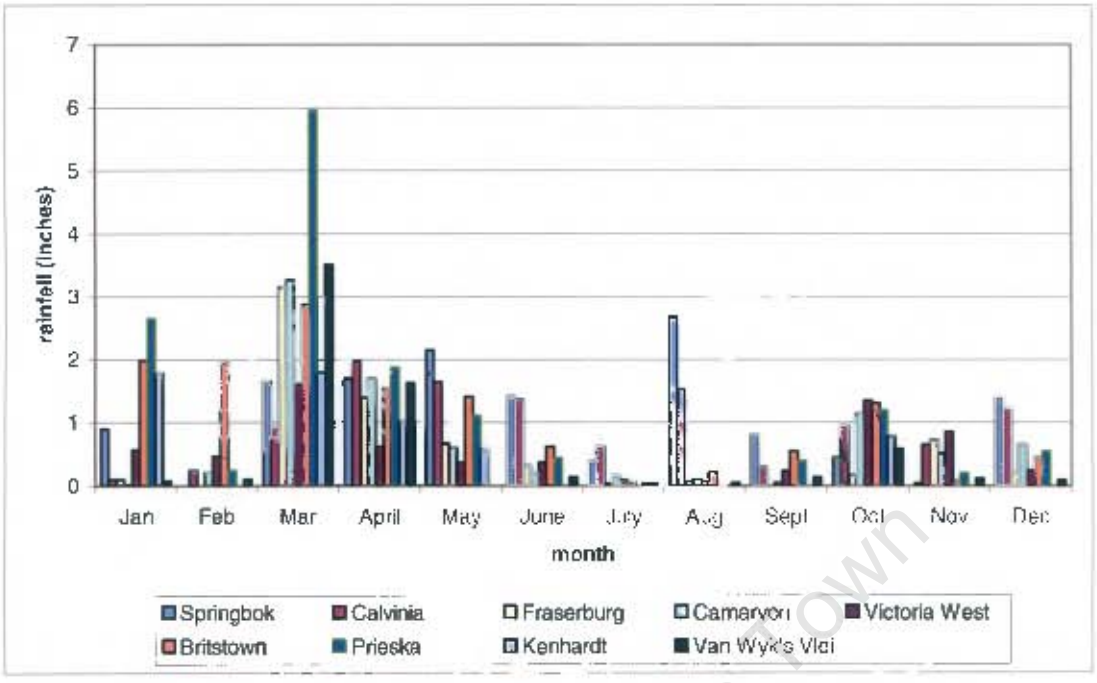
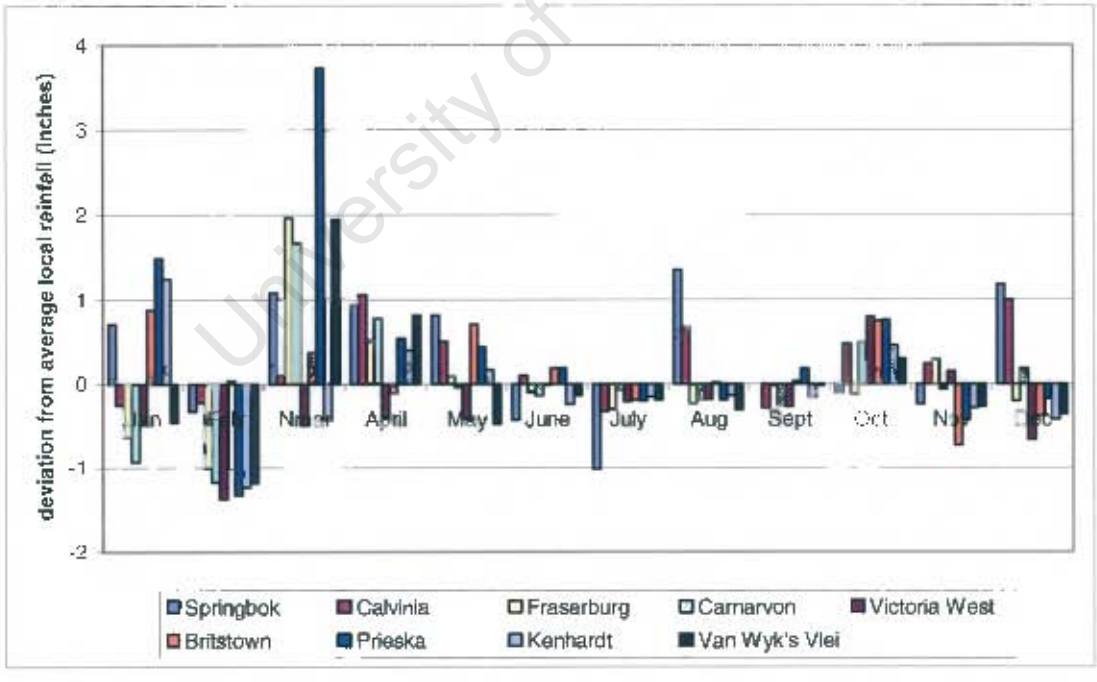


Figure 4.4: Monthly deviation from average local rainfall across the *Achterveld* and surrounding districts, 1892[26]



[25] Cape of Good Hope, 1893. *Report of the Meteorological Commission for the Year 1892* [G.31-'93].
[26] Cape of Good Hope, 1893; Union of South Africa, 1927.

These local increases were not reported in the Karoo press and represented the local springbok subpopulations rather than the core trek population of the *Achterveld*, and it was only from June that these latter animals appear to have penetrated as far as the eastern district of Britstown when news of their presence on the plains north of this town was greeted with excitement by sportsmen and hunters as far away as Graaff-Reinet.[27] Prior to this, it appears as if, after the significantly below average rainfall experienced across the region in February (see Figure 4.4), the bulk of the population had in fact headed west into Bushmanland and Namaqualand. Sites such as Fraserburg and Carnarvon experienced much increased rainfall in March, while the exceptional falls recorded in Prieska indicate that the springbok population was most likely dispersed over this period. Scully, based at Springbok and Special Magistrate for the Northern Border from 1891 to 1892[28], nonetheless later recorded that during March 1892 near Kat Vlei, on the cusp of the Nama and Succulent Karoo, he had encountered a herd of about 8-9000, "one of the flying patrols of the great migratory army"[29]. In a more detailed account of the events of 1892 in which he does not stipulate the month but which, from rainfall records, is likely to have been May or perhaps April, Scully issued "a hundred stand of Government arms to the Boers for the purposes of driving back the game which threatened to overrun those parts of Namaqualand where ground is cultivated"[30]. One of these cultivated areas was apparently half a day's ride from Namies, near Pofadder, and Scully records that "for

[27] *De Graaff Reinetter*, 4 June 1892.
[28] See: Marquard, J. 1983. 'Scully's desert books'. in: Anon. "Association of University English Teachers of Southern Africa Conference University of Cape Town, July 1983", Unpublished collection. p.27.
[29] Scully, W.C. 1915. *Lodges in the Wilderness*, Herbert Jenkins, London, pp.242-243.
[30] Scully, W.C. 1898. *Between Sun and Sand: a Tale of an African Desert*, Juta, Cape Town. p.vii. That Scully did in fact issue arms and ammunition to the local inhabitants is supported by the memoirs of Bishop Simon based at Pella over this period: "In fact the magistrate even gives out arms and ammunition to those who do not have them, for the springbok harms many of the pastures and even destroys crops when it enters cultivated areas." (Simon, J.M. 1997. *Bishop for the Hottentots: African Memories 1882-1909*, Namaqualand Tourism Development Company, Springbok. pp.106-107.

three days and nights the trek was at its height ... [although] for a week or more ... plenty of profitable shooting could be had at the stragglers."[31] From these sources therefore it would appear as if an initial move eastwards by the springbok in January had in fact been supplanted by a shift westwards across Bushmanland in March and into Namaqualand by late April or May. Winter rainfall – in June, July and August when figures there are higher than elsewhere in the region (see Figure 4.2) - perhaps allowed some dispersal across the districts of Namaqualand and Calvinia before renewed reports of trekbokke in the eastern divisions, such as Britstown, started to appear towards the end of winter.

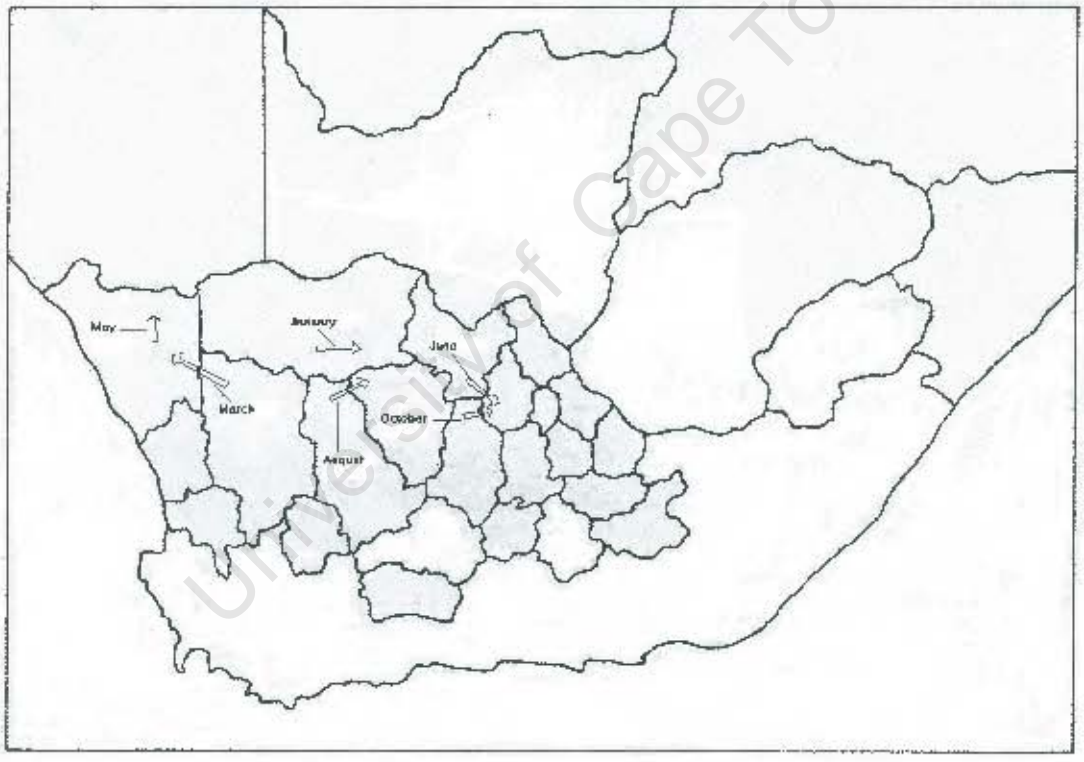


Figure 4.5: Trekbok movements, 1892

During this apparent winter dispersal thousands of springbok persisted in the interior of Bushmanland as is evidenced by a report of a concentration on a farm between

[31] Scully, 1898, p.109.

Carnarvon and Kenhardt in August.[32] Summer, however, brought a renewed influx into the eastern district of Britstown where in October a formal complaint to the Civil Commissioner was made by at least one farmer who felt that "if he is not allowed to shoot them as soon as possible, he will have to seek pasturage for his stock elsewhere."[33] Despite this desperate complaint the springbok apparently soon moved on (November saw below average rainfall at Britstown) and no further press reports concerning the trekbokke appeared over the remainder of the year, a fact no doubt facilitated by the generally low rainfall across the region in November and the above average rainfall received in the more remote north western districts in December (see figure 4.4).

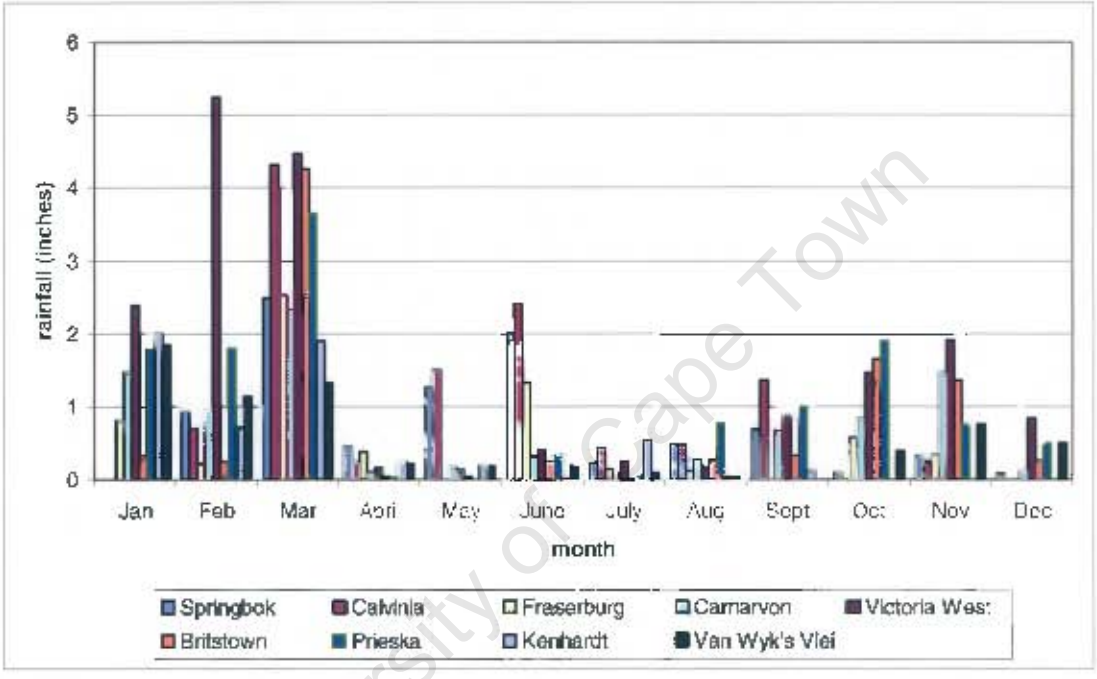
1893: "real trek bucks"

The generally low rainfall experienced across the interior towards the end of 1892 was compensated for by good falls in January 1893 (see Figure 4.7). The area between Carnarvon, Van Wyk's Vlei and Kenhardt was apparently most affected and Van Wyk's Vlei in particular was witness to a congregation of springbok after a dramatic downpour dispelled the previously dry conditions: "On the 20th nearly 1,5 inches fell … Between this and Carnarvon it rained heavily and I believe towards Kenhardt also, but I am sorry to state that many farms are still suffering from drought. ... A herd of springbucks has paid us a visit, a thing which has not happened for many years, as they generally keep away to the northward of us in the [Kaaien] bult, so naturally all of us were eager for sport, and consequently they suffered much."[34] Generally high rainfall over February and especially March ensured a summer dispersal of springbok with no further reports of concentrations, the summer

[32] *Victoria West Messenger*, 12 August 1892.
[33] CAD; AGR 156, 700; Civil Commissioner to Colonial Secretary, 15 October 1894.
[34] *Victoria West Messenger*, 3 February 1893.

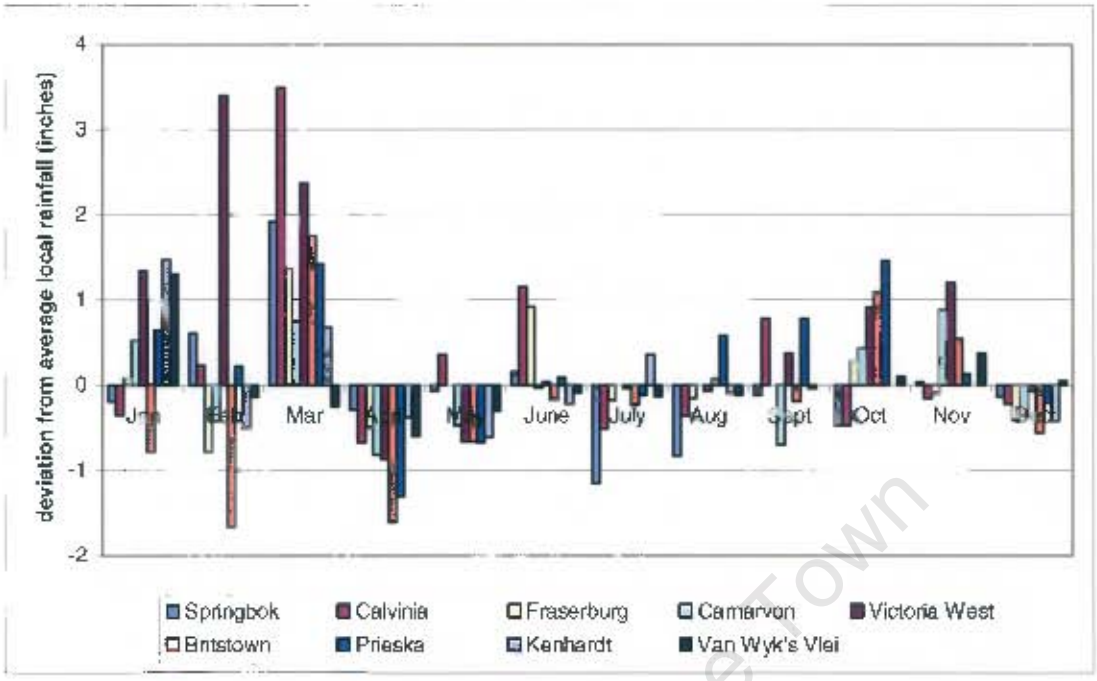
abundance offsetting lower rainfall in April, May and June when higher than average winter rainfall fell over Calvinia and Fraserburg, no doubt preventing major mortality in the summer crop of lambs, and perhaps even allowing a second winter lambing of both first year and adult ewes.

Figure 4.6: Monthly rainfall across the *Achterveld* and surrounding districts, 1893[35]



[35] Cape of Good Hope, 1894. *Report of the Meteorological Commission for the Year 1893* [G.43-'94].

Figure 4.7: Monthly deviation from average local rainfall across the *Achterveld* and surrounding districts, 1893[36]



The effect of the subsequent dramatic decline in rainfall across the region in July was not immediately apparent in the springbok population. Although a report of a trek in the Colesberg district was sensationalised by the Karoo press – "*Tusschen Colesberg en Middelburg zyn nu vele springbokken, die naar het zuiden trekken. Dit bewyst dat het naar het noorden zoo droog is dat de bokken er geen weiveld of water meer kunnen vinden.*"[37] – it would appear as if this was only a small local movement, which was misinterpreted by a visitor to the area unaccustomed to large herds of springbok. The *Colesberg Advertiser* was particularly scathing of the reports:

"It puzzles us to know how these bucks manage to 'trek' when the whole country is traversed by a network of wire fences and a still greater puzzle is, how it comes about that no inhabitant of this district has seen the 'trek bucks.' There are considerable numbers of springbuck in the district whose homes

[36] Cape of Good Hope. 1894. Union of South Africa, 1927.
[37] *De Britstowner*, 14 July 1893. See also: *Graaff Reinet Advertiser*, 10 July 1893; *De Graaff Reinetter*, 10 July 1893; *Era*, 8 August 1893. "Between Colesberg and Middelburg there are now plenty of springbok that are trekking south. This shows that in the north it is so dry that the springbok can find neither grazing nor water."

have been on our wide flats for as long as the oldest inhabitant can remember, but trek bucks! – buncombe!"[38]

Nonetheless the absence of "*weiveld*" made itself felt the following month and in his report for August the Civil Commissioner for Namaqualand complained that after "practically nil" rainfall in July springboks had concentrated in "countless numbers" within two hours of Springbok with enormous damage done to the remaining veld.[39] It would seem as if this concentration exhausted the veld and was then forced to trek southwards into the district of Calvinia, which, like the area around Springbok, had until July received unusually good rainfall. Accordingly, by mid-August, a farmer along the Visch River reported what was no doubt a massive amalgamation of springbok herds from both Namaqualand and Bushmanland estimated to cover an area 100 miles long and 30 miles wide.[40] The trek was immediately cast as the worst to affect the area since 1868, when "tens of thousands of springbok" had died of starvation around the copper mines near Springbok, and the trekbokke were reported to be in poor condition with many suffering from scab.[41] Even the *Colesberg Advertiser* was forced to acknowledge this phenomenon as "Real Trek Bucks."[42] There was scepticism however and some Calvinia residents claimed that all they knew of the trekbokke was what was published in newspapers in the Cape and the Karoo.[43] One cited a week long hunting trip that produced only two springbok as proof that a trek could not be present[44], but this could equally be regarded as proof of a massive concentration elsewhere.

[38] *Colesberg Advertiser*, 21 July 1893.
[39] *Agricultural Journal of the Cape of Good Hope*, 7 September 1893.
[40] *Victoria West Messenger*, 18 August 1893. See also: *Era*, 22 August 1893.
[41] *Victoria West Messenger*, 18 August 1893. See also: *Graaff Reinet Advertiser*, 21 August 1893.
[42] *Colesberg Advertiser*, 18 August 1893.
[43] *Colesberg Advertiser*, 1 September 1893.
[44] *De Graaff Reinetter*, 4 September 1893.

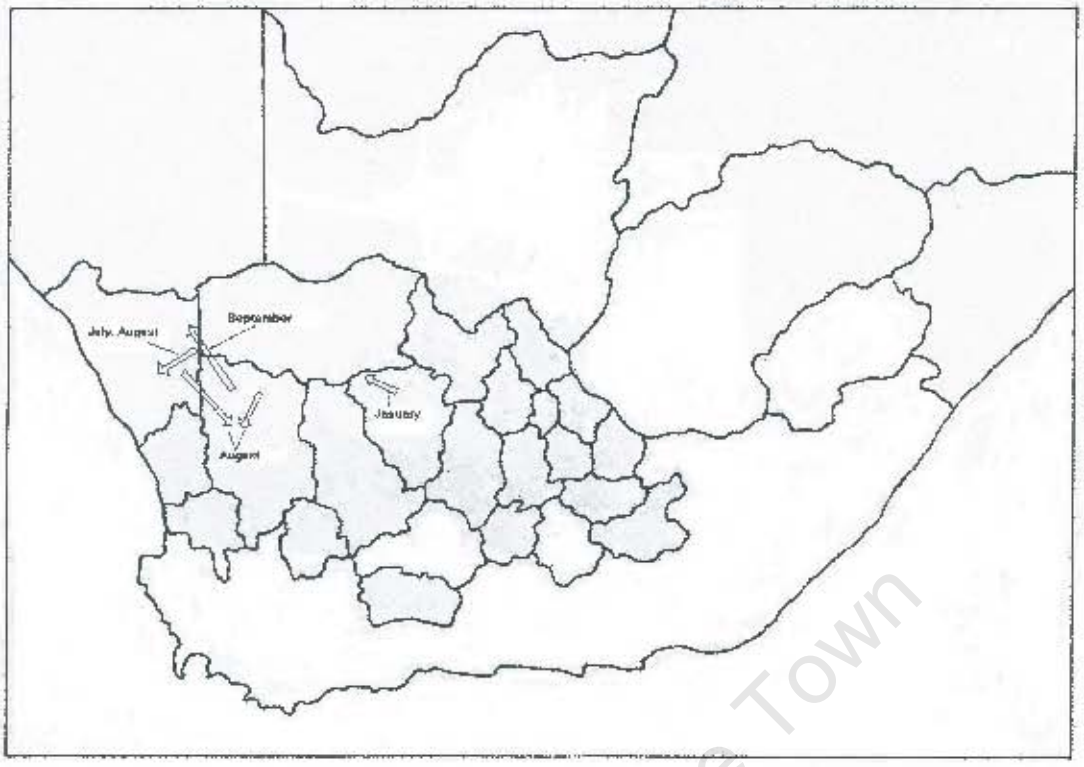


Figure 4.8: Trekbok movements, 1893

The Cape Government was certainly convinced of the authenticity of the reports and intended to send 20 hunters to stem the influx[45], a measure regarded with some incredulity by the Karoo press[46]. One newspaper estimated the springbok to number in the millions[47] prompting another to calculate that if every resident of Calvinia, "*man, vreeuw en kind*", was armed they would each have to shoot 363 927 springbok to eradicate the scourge.[48] In any event it seems as if the springbok dispersed and by 2 September the Civil Commissioner of Calvinia could report that "large troops [of springbok were] to be found scattered & trekking north towards Namaqualand."[49]

[45] *Era*, 22 August 1893.
[46] See for example: *Colesberg Advertiser*, 25 August 1893.
[47] *Cape Times* quoted in *De Graaff Reinetter* 24 August 1893; *Victoria West Messenger* 25 August 1893.
[48] *De Graaff Reinetter*, 24 August 1893.
[49] CAD: AGR 156, 702: Civil Commissioner Calvinia to Department Lands, Mines etc., 2 September 1893.

This perception of dispersal is supported by rainfall records for the rest of the year (see Figure 4.7) which indicate that the herds are likely to have become scattered with no need to concentrate on isolated resources. Localised concentrations of smaller herds were of course inevitable, but complaints from a farmer in the division of Herbert of an invasion of only 2000 springbok[50] were greeted with scepticism and his request to destroy them refused.[51]

1894: "the springbuck we can eat ..."

The generally low rainfall within the *Achterveld* during January[52] (see Figure 4.10) caused localised concentrations of springbok on remaining pastures. One such concentration occurred at Van Wyk's Vlei, but during February widespread rains enabled dispersal: "In two days 3.33 inches of rain fell ... The rain appears to have been a general one, so I can say that the drought has broken up. ... Locusts have disappeared as well as springbucks ..."[53] As a result of these rains no further reports of springbok treks were recorded in the press until May.

[50] CAD: AGR 203, 1455: JA van Niekerk (Doornlaagte) to Civil Commissioner/Resident Magistrate Douglas [Herbert], 13 October 1892.
[51] CAD: AGR 203, 1455: Acting Under Secretary for Agriculture to Civil Commissioner Herbert, 6 November 1893.
[52] See for example: *Victoria West Messenger*, 16 February 1894.
[53] *Victoria West Messenger*, 2 March 1894.

Figure 4.9: Monthly rainfall across the *Achterveld* and surrounding districts, 1894[54]

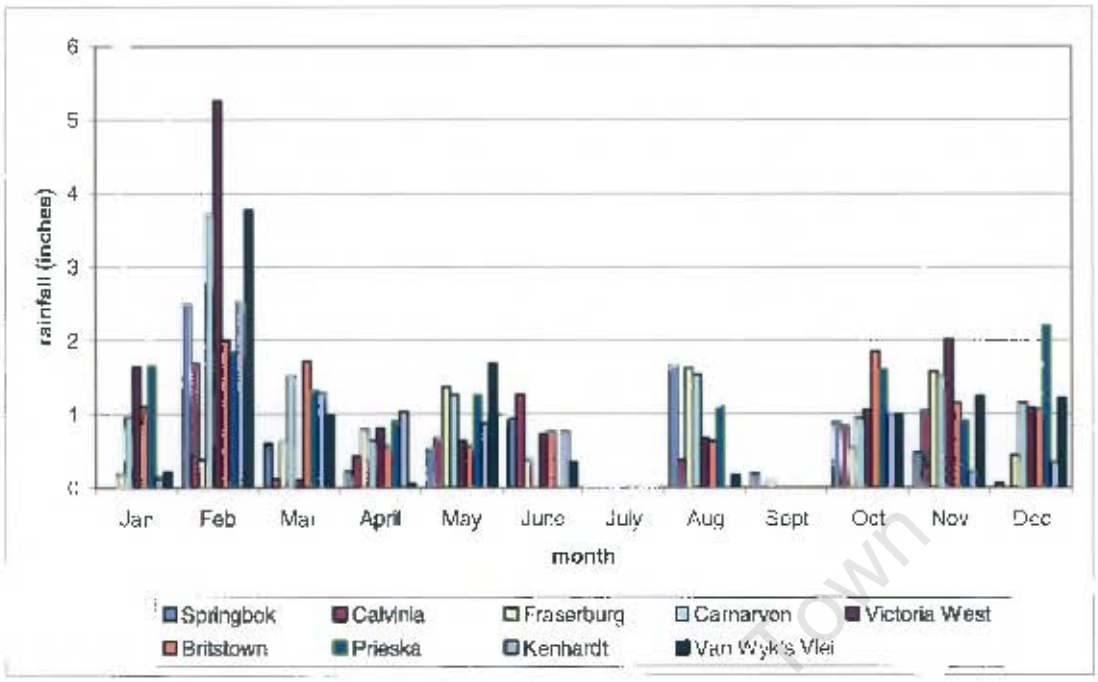
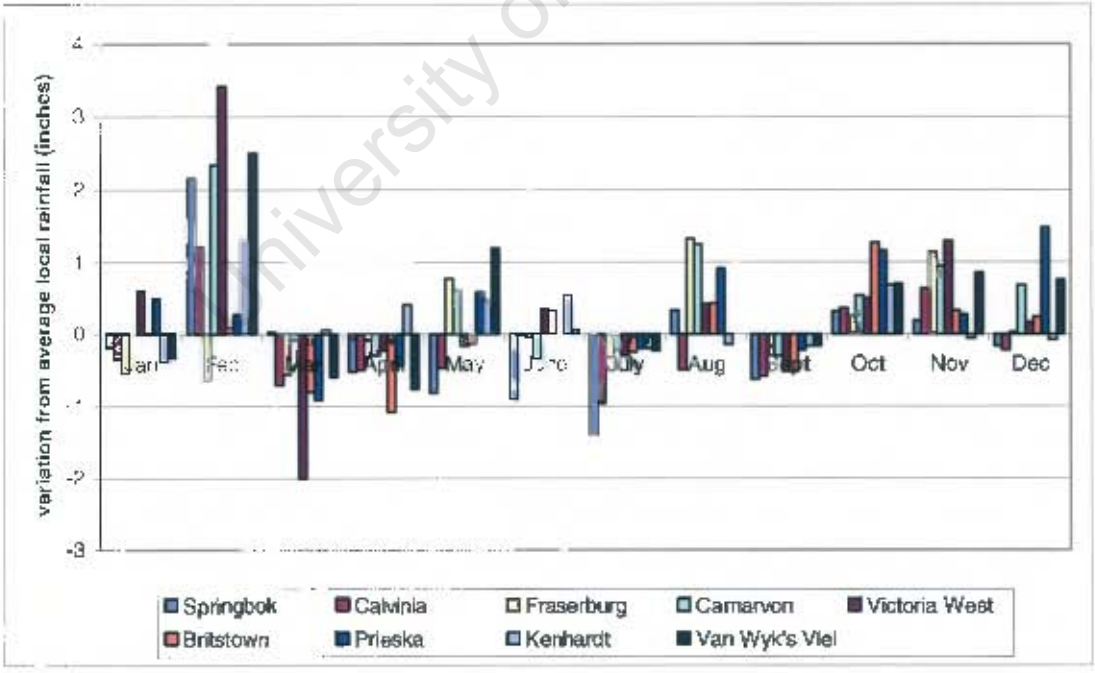


Figure 4.10: Monthly deviation from average local rainfall across the *Achterveld* and surrounding districts, 1894[55]



[54] Cape of Good Hope, 1895. *Report of the Meteorological Commission for the Year 1894* [G.35-'95].
[55] Cape of Good Hope, 1894; Union of South Africa, 1927.

Following very low rainfall in March and April, "fine rains" at Kenhardt in the late part of the latter month and through May brought the mixed blessings reported by the Civil Commissioner: "Unfortunately the migrating springbucks have invaded the district and the devastation caused by their ravages is extensive. Still of the two plagues that of the springbuck is undoubtedly the lesser, and as farmers say, and rightly too 'the springbuck we can eat, but what can we do with the locust.'"[56] Generally poor rainfall, particularly in the north western areas[57] (see especially Springbok and Calvinia over May to September in figure 4.10), continued however and caused an eastward movement of springbok. The generally higher rainfall areas of the eastern districts were perhaps sought out as reserve pasture and by June and July districts such as Victoria West[58] and Britstown[59], both of which experienced above average rainfall in June and where the veld was still considered "very good", were reporting influxes. The widespread rain of August meant that no treks were reported during the month, but the relative drought of September resulted in damage caused by springbok concentrations in the western portions of Prieska.[60]

[56] *Agricultural Journal of the Cape of Good Hope*, 17 May 1894.
[57] *De Britstowner*, 10 August 1894.
[58] *Victoria West Messenger*, 29 June 1894.
[59] *De Britstowner*, 13 July 1894.
[60] *Agricultural Journal of the Cape of Good Hope*, 18 October 1894.

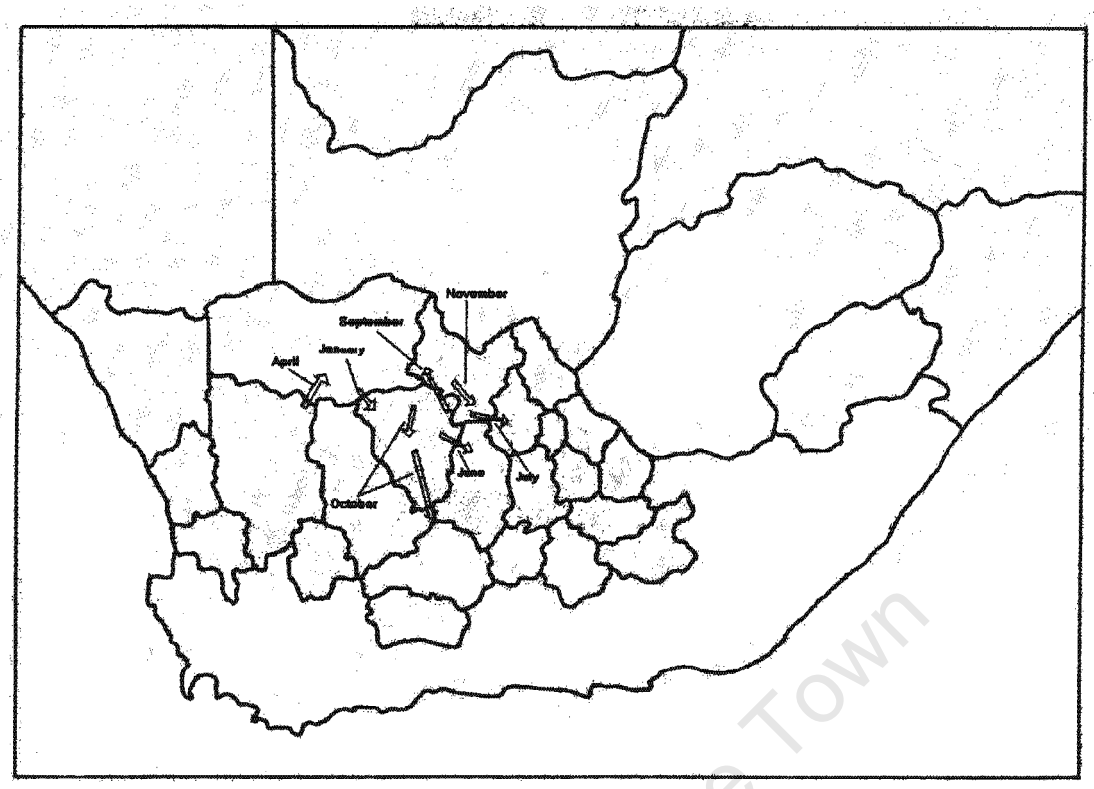


Figure 4.11: Trekbok movements, 1894

October and the advent of early summer rain saw movement of springbok back into the interior and by the second week they were reported south of Van Wyk's Vlei trekking towards Carnarvon[61]. By mid-month they were in the vicinity of the village in their thousands, being visible even from town,[62] whereafter some seem to have continued south into the district of Beaufort West from where a request to destroy or drive the springbok away was received[63]. Following "copious [local] rains" similar influxes were reported from within 12 miles of Britstown during November[64]. Despite these localised movements, the December report of the Civil Commissioner for

[61] *Victoria West Messenger*, 12 October 1894.
[62] *Victoria West Messenger*, 19 October 1894. See also: *Era*, 30 October 1894; *Graaff Reinet Advertiser*, 1 November 1894.
[63] CAD: AGR 156, 697: J Donaldson (Ryst Kuil) to Civil Commissioner Beaufort, 26 October 1894.
[64] *De Britstowner*, 23 November 1894.

Prieska suggests that the bulk of the concentration through until December was in the western parts of Prieska[65].

1895: "*onvernielbare getallen*"

The general acceptance of the trekbokke and attempt to put them to the best use possible that characterised 1894 continued into the early months of 1895 when by February the concentrations previously present in Prieska had evidently made their way into the remote northern reaches of Victoria West where their good physical condition was recognised and eagerly exploited by hunters.[66] It was even hoped that some herds would move as far south as the town of Victoria West itself.[67] The same positive attitude prevailed in the neighbouring district of Carnarvon which also played host to large numbers of springbok: "*Hier in die beurte is dikwels een lottery, en Mr Hans van Heerden gaan gewoonlyk met die eerste prys. Hy schiet ook vele springbokken.*"[68] The presence of the springbok and wholesale hunting continued into March in Carnarvon, Victoria West and Britstown[69], but the novelty of the persistent presence of trekbokke soon wore off. There were complaints that they made so much noise that sleep was scarcely possible[70] and more seriously that: "*Springbokken zyn ... in overvloed en veroorzaken veel schade nietegenstaande er veel geschoten.*"[71] Exceptional rainfall over the next few months was to change things however.

[65] *Agricultural Journal of the Cape of Good Hope*, 10 January 1895.
[66] *Victoria West Messenger*, 22 February 1895.
[67] *Victoria West Messenger*, 22 February 1895.
[68] *Victoria West Messenger*, 22 February 1895.
[69] *De Britstowner*, 22 March 1895.
[70] *Victoria West Messenger*, 8 March 1895.
[71] *Victoria West Messenger*, 29 March 1895.

In mid-April "glorious rains" were reported from the Kaaien Bult between Prieska and Kenhardt[72] and "... splendid rains .. about three inches in a week's time" fell in Kenhardt during which time "thousands [of springbok could] be seen almost every morning within a mile's radius" of the village.[73] It appears as if the springbok lambed during March on the Kaaien Bult[74] and then moved towards Kenhardt. Descriptions of this now even larger congregation leave no doubt as to the enormous numbers involved and it is clear that the occasional months and even years of below average rainfall recorded during the early 1890s had no negative effects on springbok numbers that had been building up since 1885. A visitor to Kenhardt at the time, while no doubt wishing to furnish sensational images for readers back in Beaufort West, provided the following eyewitness account: "Sometimes a herd of a few thousands will come sweeping past within ten yards of one, and often surround one in spite of his rifle, in such numbers as to become dangerous. I have it on good authority that some time ago a Bushman, with one of those old muzzle-loaders, was trampled to death as was also an ox that came in the line of march."[75]

[72] *Victoria West Messenger*, 11 April 1895.
[73] *Courier*, 19 April 1895.
[74] Cronwright-Schreiner, 1899. p.44.
[75] *Courier*, 19 April 1895.

Figure 4.12: Monthly rainfall across the *Achterveld* and surrounding districts, 1895[76]

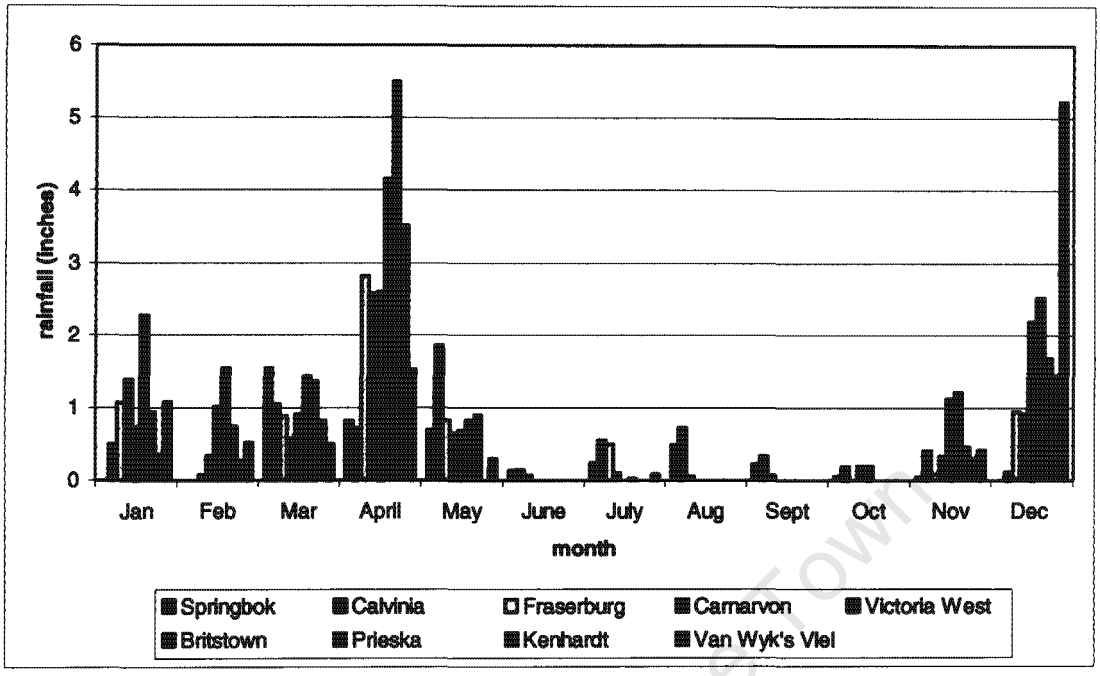
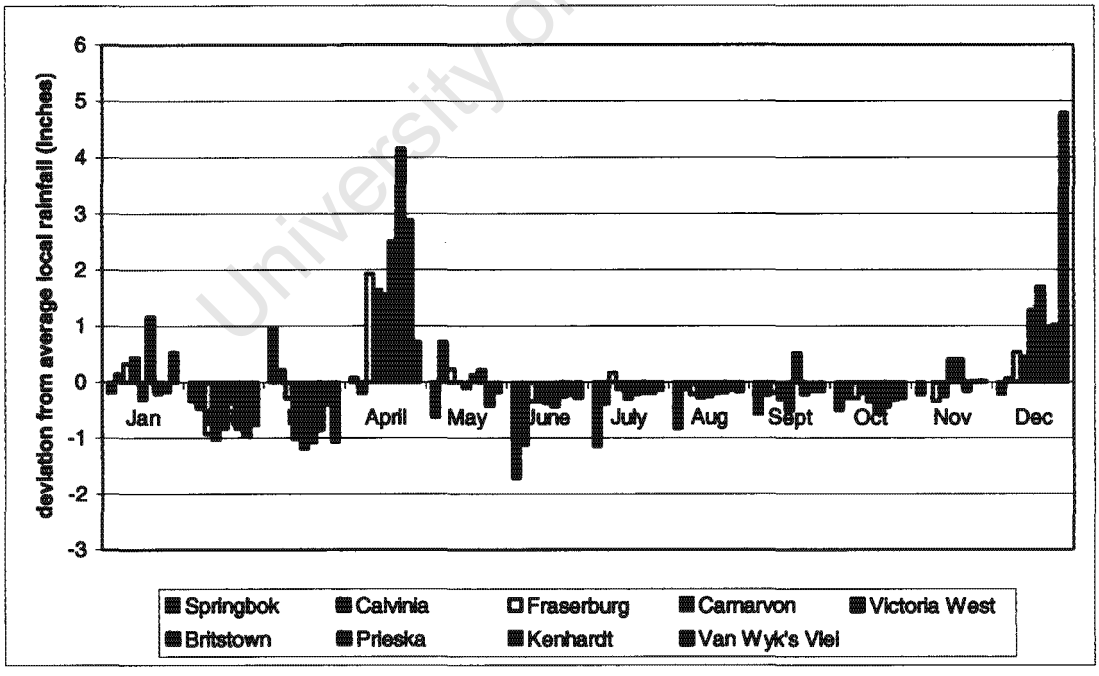


Figure 4.13: Monthly deviation from average local rainfall across the *Achterveld* and surrounding districts, 1895[77]



[76] Cape of Good Hope, 1896. *Report of the Meteorological Commission for the Year 1895* [G.44-'96].
[77] Cape of Good Hope, 1896; Union of South Africa, 1927.

From Kenhardt the trekbokke had apparently tried to cross the torrent of the ephemeral Hartebeest River to head further west where the veld was said to be in excellent condition.[78] The absence of further reports suggest they did not and rainfall in all the other northern districts, especially Kenhardt, Prieska and Britstown, was in any event substantially higher than the extreme northwest. Indeed prior to the evident dispersal of springbok during May, herds of thousands and tens of thousands were reported from Kenhardt[79].

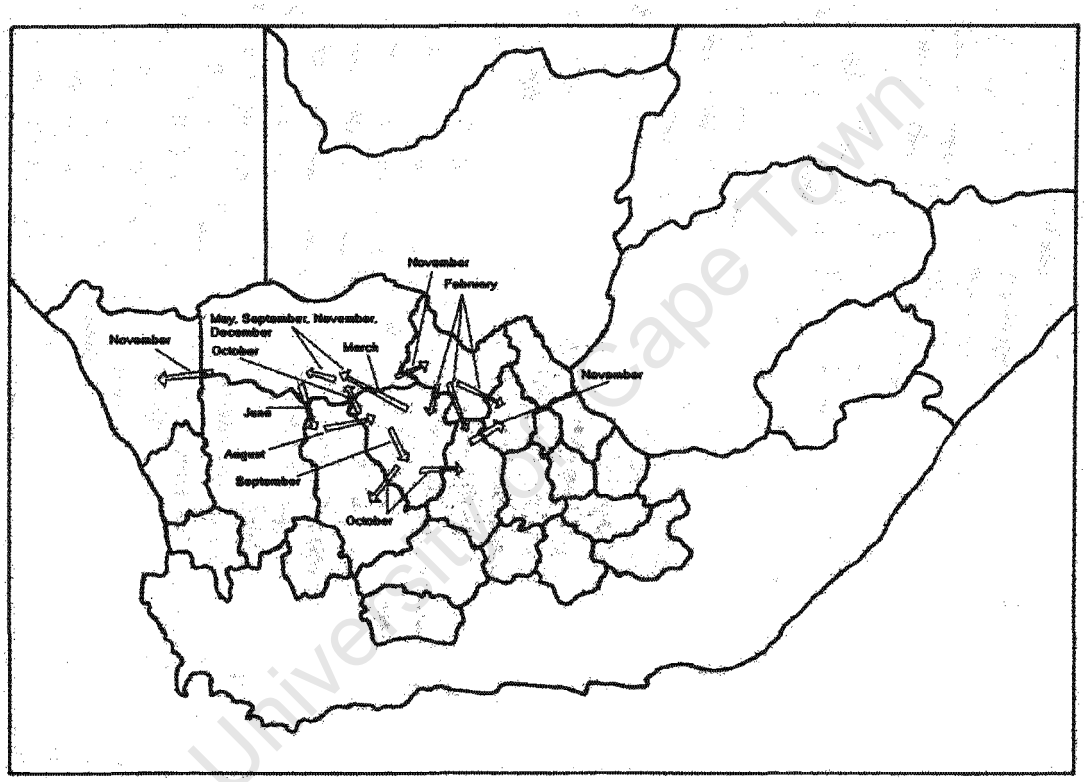


Figure 4.14: Trekbok movements, 1895

Rainfall at Kenhardt was very low during May however and by June renewed reports of springbok depredations in the district appeared in the press. On a farm south of Kenhardt near the confluence of the Zak and Hartebeest Rivers one farmer reported that the springbok in herds of 3-4000 "*oorlog verklaarden*" on his pastures, and that

[78] *Courier*, 19 April 1895.
[79] *Victoria West Messenger*, 3 May 1895.

the veld was rendered useless for sheep, donkeys and horses.[80] In an effort to keep damage to a minimum he made regular forays against this localised concentration, the report of one such hunt providing a rare example of a first hand account of the danger posed by stampeding trekbokke:

"Het was eene schoone Zaterdag morgen omstreeks 8 uur. Ik liep naar een kopje (ongeveer 20 yards van ons huis) om zoo naar de rivier te gaan (ongev. 60 yards) om te zien waar de bokken zich bevonden. Tusschen genoemd kopje en de rivier liggen de strooihuizen van ons volk.
Voordat ik op het kopje uitkwam, [heeft ik aftergekom] ... Hooger opkomende gewaardelik springbokken, die met volle vaart op mij oekwamen. Ongeveer 2,000 is getal.
Aan terrugaan viel voor mij niet meet te denken en daar ik mijn gewer niet bij mij had, was ik zelf in groot gevaar. Wanneer ik mijn mond niet het geluid van een geweer het na geboost, ze zouden zeer zeker mij hebben doodgetrapt. Hun plan was door de rivier te trekken maar aangezien deze hier zeer boomrijk is hebben ze uren verzuimd. In dien tijd het ik een geode gelegenheid mij voor de jacht te prepareen.
Nu lagen het bokken zoo ongev.70 yards van het huis. Mer geladen geweeren gingen wij hen tegemoet. Toen het eerste schot viel sprongen zij op hun spoor terug, over het kopje, over de pondoks, over de jonge kaffertjes (deze laatste schreeuwende dat het hooren en zien me verging) en tot mijne verwondering onze makboklammers meenemende."[81]

The concentrations of springbok in the central areas of the Colony appear to have continued through July and into August when rainfall was significantly below average throughout the region (see Figure 4.13) and thousands were reported near Van Wyk's Vlei, attracting hunters from far and wide. Those who donated their spoils to the local Rifle Club qualified for boxes of cartridges at only 1s 3d.[82] Similar concentrations around Kenhardt the following month were also subjected to attempted extermination, but although "hundreds [were] killed every week, and [were] taken away by wagon-

[80] *Colesberg Advertiser*, 12 July 1895.
[81] *Colesberg Advertiser*, 12 July 1895. "It was a clear Saturday morning at about 8 o'clock. I headed to the kopje (bout 20 yards from our house) to get to the river (about 60 yards) to see where I would find the springbok. Between the kopje and the river lie the straw houses of our workers. Before I got to the kopje, [I noticed] ... a herd of oncoming springbok which advanced on my at full speed. I counted about 2000. As I didn't have my rifle with me, I was myself in danger. When I opened my mouth, the noise of a rifle report burst out and were it not for that the springbok would surely have trampled me to death. They had intended to cross through the river, but as it was thickly wooded here they milled around for hours. In that time I had a good opportunity to prepare for the hunt.
Now the springbok were about 70 yards from the house. With loaded rifles we went to meet them. At the first shot many of them turned in their tracks, over the kopje, over the straw houses and over the small kaffers (these last ones screaming that the horns and ? ? ?) and to my astonishment took our tame goat kids with them."
[82] *Victoria West Messenger*, 30 August 1895.

loads by hunters to other parts, ... their numbers [didn't] seem to diminish."[83] Efforts at Van Wyk's Vlei also did not have the desired affect and there was great concern in September that springbok would overwhelm the irrigated fields and destroy the crops. As a consequence "armed guards [were] stationed round the crops to keep the buck back for farmers know they are more destructive than locusts."[84] Even despite these measures "immense" droves of springbok ate a considerable quantity of corn on the 350 morgen of ploughed lands, and although "at one time [they] threatened to destroy the whole of the growing crops ... energetic measures were taken ... and the main crops preserved."[85] The energetic measures included a petition for the issue of Rifle Club ammunition to non-members, a request denied, despite an offer of prepayment, due to the problems caused by acceding to a similar request in Calvinia previously.[86]

The continued below average rainfall in September and October resulted in an increasing concentration of both grazing and springbok. The Civil Commissioner at Carnarvon reported during September that thousands of springbok were passing through the district and that the impact of unrestricted hunting was imperceptible[87], widespread slaughter merely exhausting local supplies of ammunition.[88] Similarly the Civil Commissioner for Fraserburg reported springbok in "*onvernielbare getallen*" in October with shooting in defence of cultivated lands conducted both day and night. Van Wyk's Vlei also continued to be affected, with 24-hour shooting exhausting cartridges by mid-October when a desperate open invitation was issued to the Editor

[83] *Graaff Reinet Advertiser*, 26 September 1895.
[84] *Graaff Reinet Advertiser*, 3 October 1895.
[85] Cape of Good Hope, 1896. *Report of the Baillif, Van Wyk's Vlei Estate, for the Year 1895* [G.10-'96].
[86] CAD: AGR 238, 2357: Agricola Van Wyk's Vlei to Agricola Cape Town, 20 September 1895; Agricola Cape Town to Agricola Van Wyk's Vlei, 20 September 1895. The request for the issue of cartridges in Calvinia was noted as being during 1894, but it seems more likely that this was in fact during the trek of 1893 and thus an oversight or memory lapse of an official.
[87] *Agricultural Journal of the Cape of Good Hope*, 17 October 1895.
[88] *De Graaff Reinetter*, 4 November 1895.

of the *Victoria West Messenger* and "*zooveel meer als willen komen om ons van de springbokken te bevryden.*"[89]

Victoria West itself was soon to be affected as well however and by late October springbok had begun to invade the outlying reaches of the district.[90] This movement to the east was neither immediate nor absolute and through November thousands remained in the region of Kenhardt.[91] Conditions in the interior districts such as Kenhardt were not favourable however with dry veld, daily mortality of sheep and dwindling water supplies reported[92], no doubt encouraging the general movement of springbok away from the area over the ensuing months.

These poor conditions initially forced the springbok both east and west. "Hundreds of thousands" of springbok were reported from Namies in Namaqualand in November eliciting a desperate request for the Game Laws to be suspended, not to drive the springbok away, but so they could be used for food to prevent starvation.[93] Around the same time the local Civil Commissioner recorded a herd of springbok estimated at 150 000-160 000 entering the western parts of Prieska.[94] The beginning of November also saw the initial stages of the trekbok invasion of the area between Victoria West, Vosburg and Britstown which, in contrast to everywhere else, had received above average rainfall.[95] Around this time constant complaints from farmers in Wards 3 and

[89] *Victoria West Messenger*, 25 October 1895.
[90] *Victoria West Messenger*, 25 October 1895.
[91] *De Britstowner*, 29 November 1895.
[92] *De Britstowner*, 29 November 1895.
[93] CAD: AGR 157, 733: Civil Commissioner Namaqualand to Government of Cape Colony, 18 November 1895. This serves as another example of the confusion that surrounded the definition of trekbokke. The reply to this request clarified the issue and suggested the hunting of the springbok which, it had been noted in the margin of the civil Commissioner's letter, "must be migratory springbok".
[94] *Agricultural Journal of the Cape of Good Hope*, 19 March 1896. p.131.
[95] *De Britstowner*, 29 November 1895. See also: *Victoria West Messenger*, 1 November 1895.

6 of the division came to a head and the Divisional Council requested a two-year suspension of the Game Law with regard to springbok from 1 January 1896,[96] a request granted by Proclamation No 487 of 1895[97].

Those springbok deemed "migratory" were of course already exempt from protection and even before the suspension came into effect, the close proximity of these animals to the village lead to hunting expeditions involving even the local *predikant*[98] and prompted the editor of *De Britstowner* to comment that "spring buck shooting seems to be a kind of mania."[99] Widespread, above average rainfall in December enabled a dispersal of springbok back west however and Britstown and the neighbouring districts welcomed the reprieve. Kenhardt on the other hand, a week after the rains, "was just recovering from the ten month's drought, [when] springbucks and the new kind of locust ... visited the green strips of veld where they remained until there was nothing left to eat."[100]

1896: "nobody benefits much by this springbuck invasion"

The large numbers of springbok reported from Kenhardt towards the end of 1895 were certainly not dispersed by the good rainfall during December and in January concentrations were still present[101]. With drought gripping Namaqualand, Calvinia and Carnarvon,[102] Prieska and Victoria West apparently held the bulk of the population, with "myriads" reported to be within two hours of Prieska village, and

[96] CAD: AGR 156, 700: Secretary Divisional Council to Secretary for Agriculture, 12 November 1895; Civil Commissioner Britstown to Under Secretary for Agriculture, ? November 1895.
[97] Cape of Good Hope, 1895. *Government Gazette*, p.2246.
[98] *De Graaff Reinetter*, 9 December 1895.
[99] *De Britstowner*, 29 November 1895.
[100] *Agricultural Journal of the Cape of God Hope*, 6 February 1896. p.50.
[101] *Agricultural Journal of the Cape of Good Hope*, 5 March 1896. p.102.
[102] *Agricultural Journal of the Cape of Good Hope*, 9 Jan 1896. p.2; 23 January 1896. p.26; 6 February 1896. pp.49-52. *Courier*, 23 January 1896. *Graaff Reinet Advertiser*, 13 January 1896; 9 March 1896.

"larger numbers than ever before" rumoured to be trekking into the northern parts of Victoria West.[103] Britstown, like Victoria West, experienced reasonable rainfall in both January and February and was thus also affected. By the beginning of February farmers there complained of the damage done by springbok in the district.[104] At this early stage the townsfolk were still enthusiastic about the presence of the springbok however and enjoyed a "real royal hunt".[105]

Over January and March it seems as if the main concentration of trekbokke – the herd of 150 000-160 000 reported by the Civil Commissioner of Prieska – moved between the district of Prieska and the northern parts of Victoria West and Britstown. By the beginning of March however, after two months of below average rainfall, Prieska was" bare and parched ... [with] an absence of grass and herbage"[106] and the springbok increasingly congregated in the region of Britstown and Vosburg.

Markedly above average rainfall in Britstown in April 1896 saw an influx of springbok from Prieska. The first reports appeared in the *De Britstowner* on 10 April noting that several farms had already been "*vertrapt*" by the trekbokke and that springbok hunting was the local "monomania."[107] Good rains experienced in neighbouring districts of Victoria West and Prieska during April meant that springbok dispersed towards the end of the month, but drought reigned in the inland districts of Kenhardt, Fraserburg and Carnarvon[108] and reasonable concentrations remained in the Britstown district throughout April and May. "Immense numbers" were reported on

[103] *De Britstowner*, 17 January 1896.
[104] *De Britstowner*, 7 February 1896.
[105] *De Britstowner*, 7 February 1896; 14 February 1896.
[106] *Agricultural Journal of the Cape of Good Hope*, 19 March 1896.
[107] *De Britstowner*, 10 April 1896.
[108] See: *Agricultural Journal of the Cape of Good Hope*, 2 April 1896; 30 April 1896; 25 May 1896; 23 June 1896; 23 July 1896; 20 August 1896. *Courier*, 23 July 1896; 30 July 1896.

Figure 4.15: As well as the bounty, this undated photograph from the 1890s reflects the multi-racial and varied age composition of a trekbok hunting party (McGregor Museum: Hunting 799.2 HUN, MMKP 3996.)

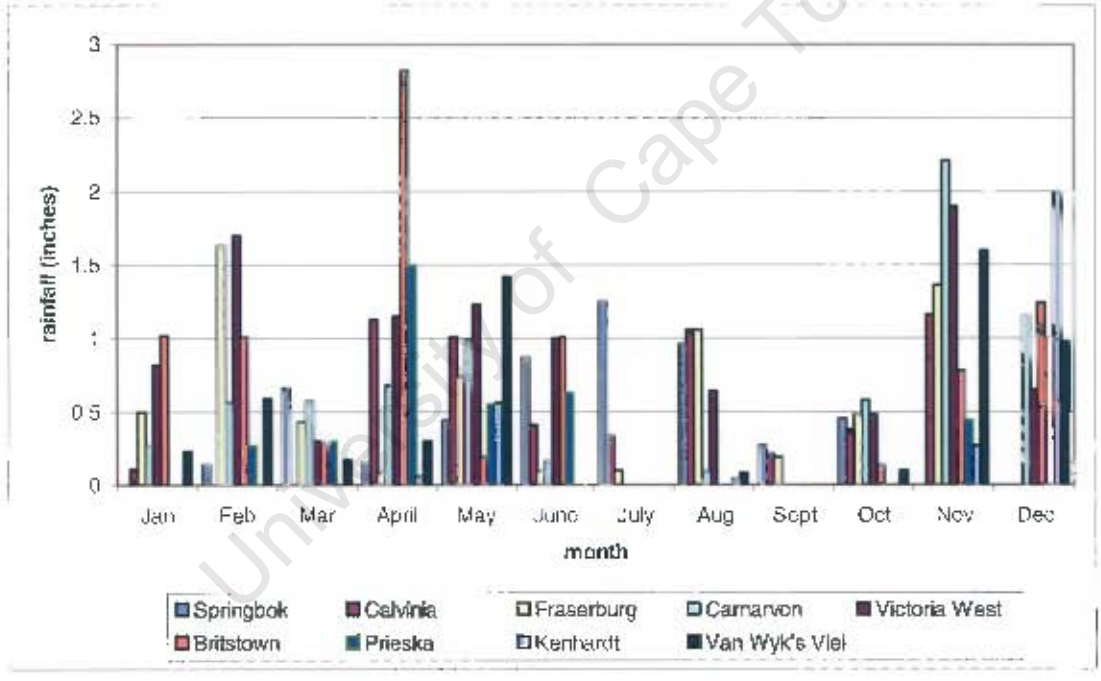
the farms Pompsfontein and Holpan towards the end of May[109], and in early June the concentration seems to have shifted to the farms Biesjespoort and Zout Aar where, as a result, it was estimated that the veld would take years to recuperate.[110] Even fences at the second two properties were "run down" by the springbok and a pack of wild dogs was seen as well. This latter sighting, combined with earlier reports of species such as gemsbok, blesbok[111], kudu and red hartebeest[112] not usually seen in the area, sparked rumours that even "some wild Bushmen had made their appearance."[113]

The sustained presence, and resultant devastation, of the springbok lead to an organised hunting expedition consisting of five wagons that in less than a week shot almost 1000 springbok. This particular party estimated the largest herd seen by them to number 10 000[114] and news of this and an appeal published in the press for help in eradicating the springbok resulted in inquiries being made from far afield about the possibility of visiting the area to hunt the trekbokke. One farmer even inquired of the Prime Minister, Sir Gordon Sprigg, if cartridges could be obtained at cost price; a request which was politely declined.[115] Cronwright-Schreiner was invited to a relative's farm near the borders of the Hopetown, Britstown and Prieska districts in July where the first concentration he encountered consisted of several herds totalling 10 000-15 000 and he later estimated that the entire *trekbokken* covered an area of 138 miles by 15 miles within which at one stage he could see not less than 500 000 springbok.[116] Dry conditions in Britstown in July, combined with some rainfall in

[109] *De Britstowner*, 29 May 1896.
[110] *De Britstowner*, 12 June 1896. All four farms were later described as a "lead mine" due to the amount of springbok shooting that took place on their flats (*De Britstowner*, 22 July 1896).
[111] *De Britstowner*, 10 April 1896.
[112] Cronwright-Schreiner, 1899. p.46.
[113] *De Britstowner*, 12 June 1896.
[114] *Graaff Reinet Advertiser*, 15 June 1896.
[115] CAD: AGR 405, 2376: JHS van der Walt (Wildsfontein) to Gordon Sprigg, 18 July 1896.
[116] Cronwright-Schreiner, 1899. pp.44-46; pp.49-50.

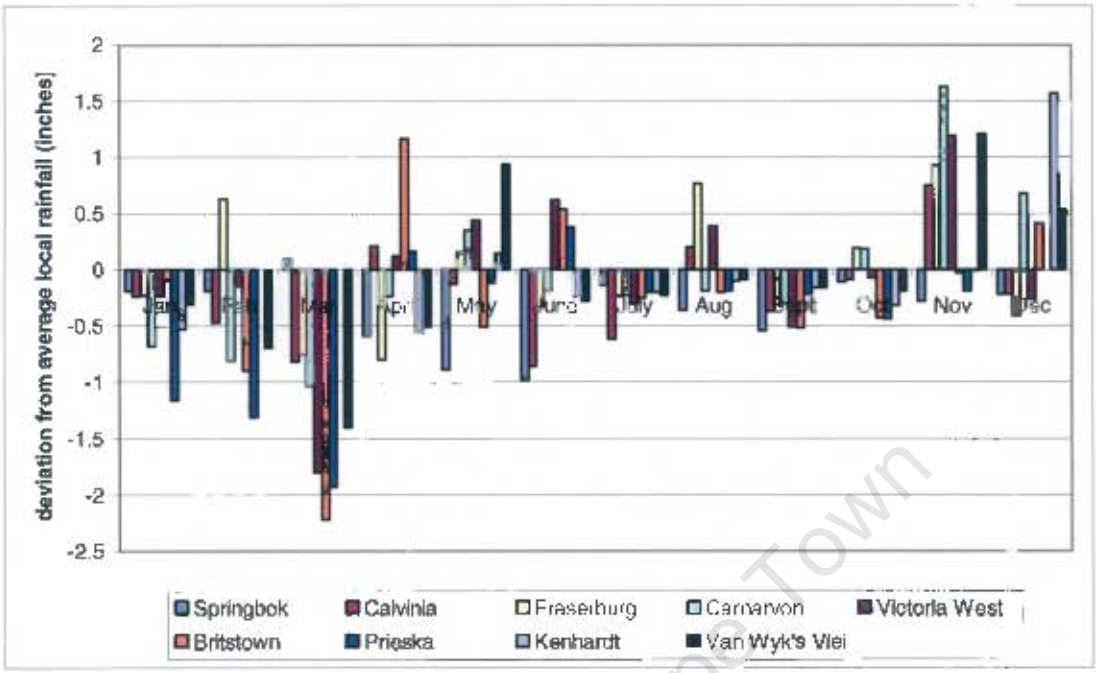
Prieska meant that the trekbokke retreated from the area, leaving at least one hunting party disappointed, if only temporarily.[117] The devastation wrought up until this point however was sufficient for calls to be made for government assistance: "The Government might even go so far as to provide our people with ammunition free, to enable them to kill these pests without expense. At present our farmers are spending a great deal of money in cartridges and the number locally sold, during the last six weeks is enormous."[118]

Figure 4.16: Monthly rainfall across the *Achterveld* and surrounding districts, 1896[119]



[117] *De Britstowner*, 8 July 1896.
[118] *De Britstowner*, 8 July 1896.
[119] Cape of Good Hope, 1897. *Report of the Meteorological Commission for the Year 1895* [G.87-'97].

Figure 4.17: Monthly deviation from average local rainfall across the *Achterveld* and surrounding districts, 1896[120]



The protests grew louder still during the month, even taking a poetic turn: "Springbuck, Springbuck everywhere, and not a blade to eat."[121] The antelope invasion, initially such a novelty, had become "rather monotonous" with wagonloads of carcasses coming into town two or three times a week and badly affecting butchers. The latter were nonetheless unable to meet the demand for bacon or mutton which was "a drug in the market." Despite the enormous concentrations, rumour abounded that this was only the advance guard of a much larger army still to come: "The French say: *Apres nous le deluge*. We will have to say – After us the Springbucks."[122]

In the mean time by the second week of July another splinter of trekbokke in "*ontelbare getallen*" had penetrated as far as Naauwpoort Station where a hunting

[120] Cape of Good Hope, 1897; Union of South Africa, 1927.
[121] *De Britstowner*, 22 July 1896.
[122] *De Britstowner*, 22 July 1896.

Figure 4.18: "The Trekbokke of 1896. Party of Boers: The outspan." (Cronwright-Schreiner, 1899. Between p.48 & p.49.) This well-known image also appeared in other publications and was often presented as evidence of the fruits of hunting in the Cape Colony. See for example: Anon. c.1898. *Picturesque South Africa*, Dennis Edwards & Co., Cape Town.

party shot as many as 600 in a few hours.[123] A leopard was also shot prompting rumours that numerous predators accompanied the trekbokke.[124] This trek was expected to move further north towards Colesberg[125], but comparatively good rainfall in the interior and reports of trekbokke within 15 miles of Richmond village in mid-August suggest that they moved northwest instead.[126] This concentration drew hunters from both Victoria West, with hundreds of springbok being taken by wagonload back to town[127], and Richmond, into which no less than 1200 springbok were brought in a single week.[128] Not all carcasses were sold in town of course and, until the trekbokke dispersed further northwest into Victoria West towards the end of the month, farmers in the surrounding areas freely bartered biltong for cartridges or even corn[129].

While lack of rainfall drove the remaining springbok herds from Prieska[130], Britstown continued to be inundated with springbok and by August, with no demand locally, carcasses were being transported first by wagon to De Aar and then by rail to Cape Town, Kimberley, Port Elizabeth, Johannesburg and all over the Colony – "game of this kind [being] quite common" in places such as Cape Town as a result.[131] Many of these springbok were hunted by people from outside the district - even two visiting English officers from the 60th Rifle Regiment were escorted to the *jachtveld* by the

[123] *De Graaff Reinetter*, 13 July 1896.
[124] *Colesberg Advertiser*, 24 July 1896.
[125] *Colesberg Advertiser*, 31 July 1896.
[126] *De Graaff Reinetter*, 20 August 1896.
[127] *De Graaff Reinetter*, 20 August 1896.
[128] *Courier*, 3 September 1896.
[129] *Courier*, 3 September 1896.
[130] *Agricultural Journal of the Cape of Good Hope*, 3 September 1896.
[131] *De Britstowner*, 5 August 1896. See also: Cronwright-Schreiner, 1899. p.48. All efforts to trace rail freight records have proven fruitless.

local Magistrates Clerk[132] - and Britstown was inundated as much with hunters as springbok, several farmers posting notices warning against trespassing[133].

"Between the springbucks on the one side and the springbuck hunters on the other side, the farmers are getting their veldt pretty well ruined. In fact nobody benefits much by this springbok invasion, except Host Nicholson [the owner of the Britstown Hotel] who must be rapidly making a small fortune."[134]

Even farmers from Richmond and the Sneeuwberg bypassed the concentrations around Richmond to hunt near Britstown and one party were rewarded with "a bag of close on 500."[135] Vosburg, a small village 80km west of Britstown, was even described as a "springbuck town" by a visitor who later wrote an account of his experience for the *Empire*. According to him Vosburg thrived on the springbok trade with one of the three shops in the village having bought as many as 16 600 springbok skins in a few months and selling as many as 12 000 cartridges every week.[136] Its proprietor also had no less than 8000 lbs of springbok biltong in stock. At Omdraai Vlei, half way between Britstown and Prieska, in August another shop was buying 3000 springbok skins a week at between 5d and 6d apiece.[137] Although biltong was a commodity which, according to a trader at Draghoender, near Prieska, was not in demand, thousand's of pound's weight were being sold at less than 6d per lb[138]. Skins realised between 3d and 6d in Port Elizabeth where they were used in book binding.[139] Nonetheless established general dealers continued to advertise springbok biltong and skin mats for sale.[140]

[132] *De Britstowner*, 26 August 1896.
[133] See for example: *De Britstowner*, 1 July 1896; 26 August 1896.
[134] *De Britstowner*, 12 August 1896.
[135] *Graaff Reinet Advertiser* 27 August 1896.
[136] *De Britstowner*, 21 October 1896.
[137] Cronwright-Schreiner, 1899. p.45.
[138] Jackson, A. 1958. *Trader on the Veld*, AA Balkema, Cape Town. p.39.
[139] Jackson, 1958. p.39.
[140] See *De Britstowner*, September 1896 through to May 1898.

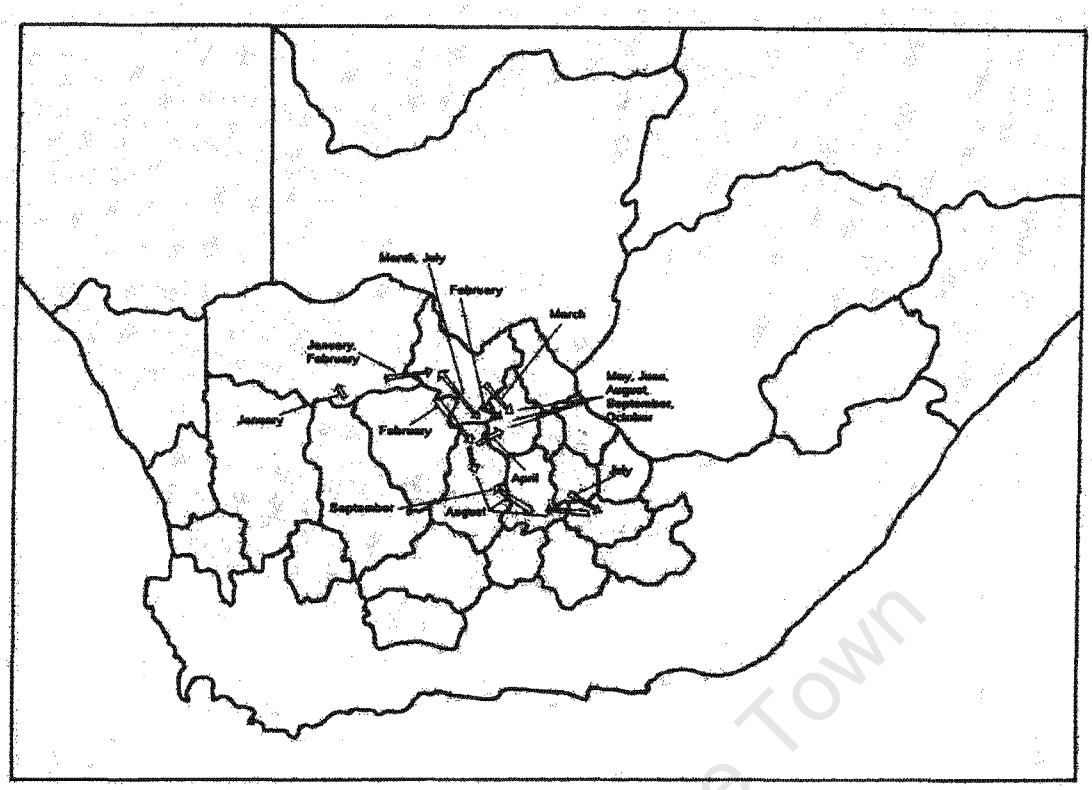


Figure 4.19: Trekbok movements, 1896

From late August through to October the trekbokke continued to inundate the area around Britstown and Vosburg, but significant concentrations also strayed into the northern parts of the Richmond and Victoria West districts which had received some rain in August, the latter town experiencing above average rainfall for the month. This rain, as well as attracting springbok, also drew troops of ostriches numbering up to 200, both evidently from the north.[141] Over September the trekbokke advanced steadily on the village of Britstown from the devastated western portions of the district already abandoned by trekboers and their stock.[142] Another hunting party from Richmond managed to secure no fewer than 505 carcasses and the herds were estimated to number in the thousands with a single ewe sometimes being

[141] *De Graaff Reinetter*, 31 August 1896; *Agricultural Journal of the Cape of Good Hope*, 17 September 1896.
[142] *De Britstowner*, 16 September 1896.

accompanied by as many as 10 to 15 orphaned lambs.[143] By the 16th of September thousands were reported to be on the farm Rooidam within an hour of the town[144] and by the following week were in "great numbers" on the Town Commonage, only three quarters of a mile away.[145] Even at this stage the local town-dwelling Nimrods were "jubilant" at the chance of sport, although those with sheep and cattle didn't relish the prospect of the commonage being reduced to dust[146] – an attitude shared by farmers in Victoria West who also complained bitterly to the Civil Commissioner about the damage caused by springbok.[147] At the end of September these trekbokke were followed by an influx of newcomers into the northern parts of Britstown that were of a discernibly lighter colour and in better condition than those that had first occupied the district.[148] These springbok were likely of the northern subspecies[149] and must have originated in the Kalahari north of the Orange River, their arrival giving credence to the theories of Bryden and others that this subpopulation sometimes joined that of the south during the bigger treks.

This additional pressure on an already exhausted ecosystem inevitably lead to further complaints that the springbok had "completely destroyed" the veld in a great part of

[143] *De Britstowner*, 10 September 1896.
[144] *De Britstowner*, 16 September 1896.
[145] *De Britstowner*, 23 September 1896.
[146] *De Britstowner*, 23 September 1896.
[147] *Agricultural Journal of the Cape of Good Hope*, 15 October 1896.
[148] *De Britstowner*, 30 September 1896.
[149] Although there is a certain amount of debate two subspecies are generally recognised as occurring in South Africa, *Antidorcas marsupialis marsupialis* of the Karoo and Free State and the lighter coloured *Antidorcas marsupialis hofmeyri* from the extreme northern Cape across the Kalahari. (See: Bigalke, R.C., Liversidge, R. & Schijf, J. 1975. *Springbok Management*, Northern Cape Branch of the Wildlife Society of Southern Africa, Kimberley. p.4; Skinner, J.D. & Smithers, R.H.N. 1990. *The Mammals of the Southern African Subregion*, 2nd Edition, University of Pretoria, Pretoria. pp.642-643.) There are also eyewitness accounts of trekbokke crossing the Orange River, which dropped to very low levels during widespread drought, in both northerly and southerly directions (Davie, 1921. p.61;Green, 1955. p.39).

the district and by October were now "attacking" the remainder.[150] At the end of the month the veld had been reduced to a vast open-air abattoir:

"The first thing that struck me was, the nearer I got to Vosburg [from Britstown] the more parched the veldt seemed. From Platkuil to Vosburg the veldt is regularly tramped to dust by the Springbucks, and one wonders how the sheep still manage to exist on it. That great havoc has however been created among these migrating antelopes is a certainty. Everywhere along the road the heads and legs of springbucks are seen, at several places there lie the dead carcasses of these animals which have provided plenty of food for the vultures, which are seen circling round in great numbers. At one spot the writer saw a veritable slaughtering place, where hundreds of springbuck-heads were strewn about, evidently left there by some large hunting-party. But not only dead springbucks, but unfortunately dead sheep, are *en evidence* proving that the trek farmers have paid a severe toll to our parched district."[151]

Cronwright-Schreiner provides a similar description of several *outspans* marked by "ash-heaps and charred bones and the straw of bundles of forage; while offal and heads and lower portions of the legs of the bucks lay about to such an extent as to be quite disagreeable."[152] The widespread rains of November and December relieved the pressure and by December the trekbokke and hunters had disappeared from the eastern districts.[153]

1897: "the invasion ceased suddenly"

Rainfall at Kenhardt in January was accompanied by reports that "locusts, moths and springbucks are fast destroying all good veld"[154] and the good rainfall received in Prieska, Britstown, Van Wyk's Vlei and Kenhardt no doubt allowed dispersal of the remaining trekbokke in the eastern districts. More springbok evidently trekked into the Colony from the Kalahari however and a herd crossing the Orange River brought down a five hundred yard section of the rinderpest fence.[155] The rains dried up though with Kenhardt being one of very few sites to experience above average rainfall over

[150] *De Britstowner*, 7 October 1896.
[151] *De Britstowner*, 21 October 1896.
[152] Cronwright-Schreiner, 1999. pp.47-48.
[153] *Agricultural Journal of the Cape of Good Hope*, 21 January 1897.
[154] *Agricultural Journal of the Cape of Good Hope*, 4 February 1897.
[155] Green, 1955. p.39.

March, April and May, isolated thundershowers there soon attracting trekbokke[156]. Prieska and Van Wyk's Vlei suffered similar fates during March and April respectively[157] with an apparent eastward movement of springbok over this period ending in the relatively well-watered districts of Prieska and Britstown which had received good rains in January and probably still harboured comparatively good pasture.

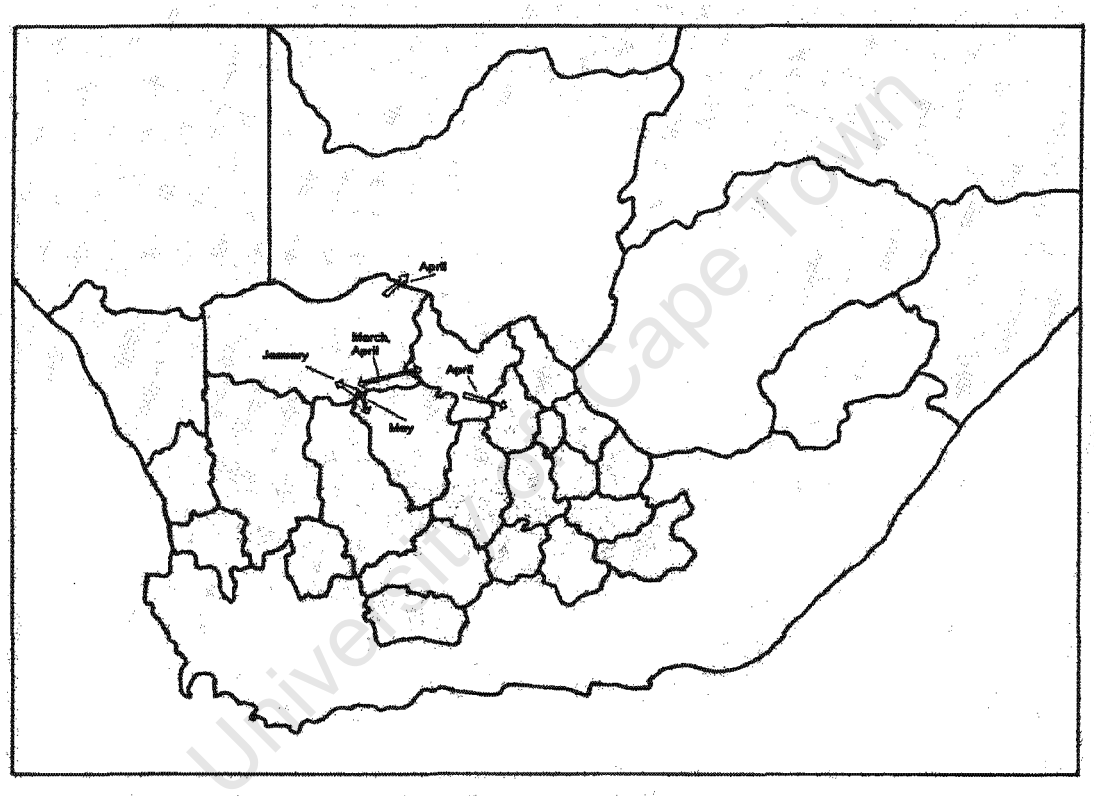


Figure 4.20: Trekbok movements, 1897

[156] *Agricultural Journal of the Cape of Good Hope*, 29 April 1897.
[157] *Victoria West Messenger*, 26 March 1897; 9 April 1897.

Figure 4.21: Monthly rainfall across the *Achterveld* and surrounding districts, 1897[158]

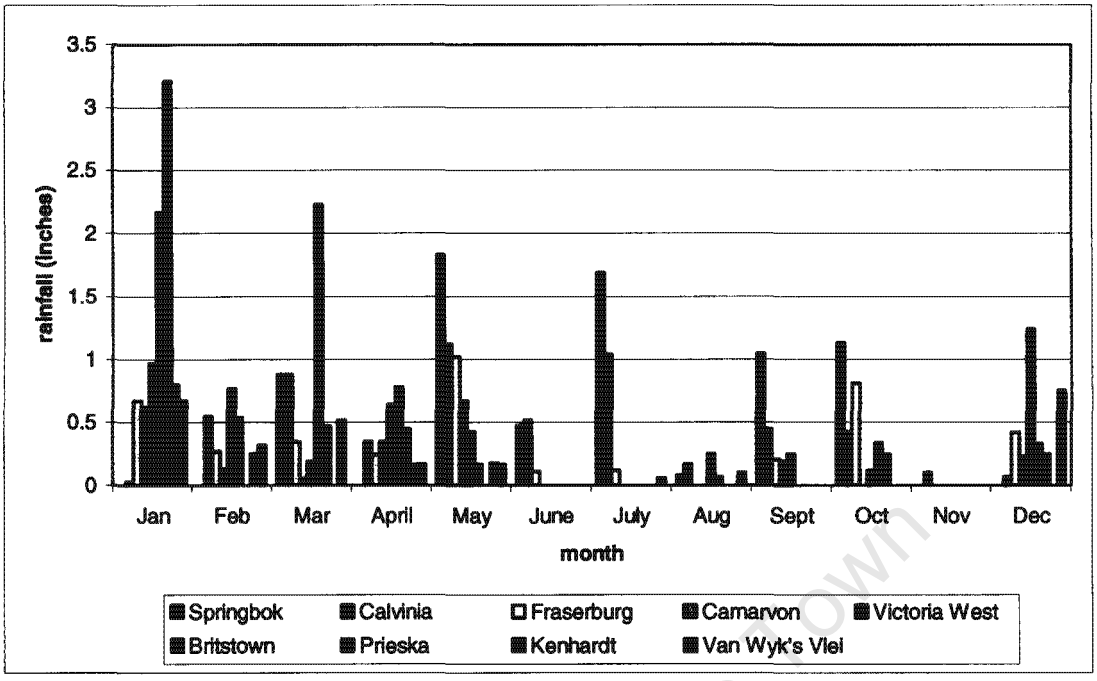
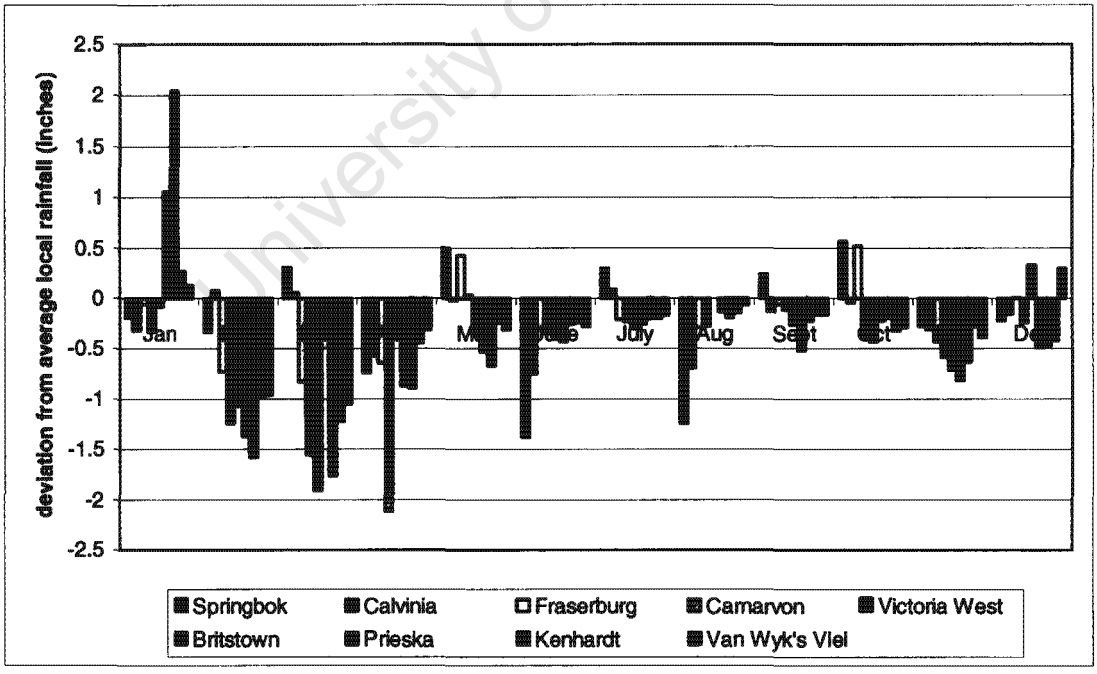


Figure 4.22: Monthly deviation from average local rainfall across the *Achterveld* and surrounding districts, 1897[159]



[158] Cape of Good Hope, 1898. *Report of the Meteorological Commission for the Year 1897* [G.76-'98].
[159] Cape of Good Hope, 1898. Union of South Africa, 1927.

By early April, while drought set in at Kenhardt, Brandvlei and Carnarvon[160] and across the *Achterveld* (see Figure 4.22), thousands of trekbokke were reported to again be invading the Britstown district with hunting parties from Richmond and Graaff-Reinet urged and organised to take part in the expected slaughter.[161] The north western part of the district was rumoured to be covered in springbok, but no further reports followed and the evocative account given by Green of a trek passing north through Kenhardt towards the Kalahari during 1897 would appear to have taken place at about this time:

"Everyone in the place seemed to be shooting from his stoep. It was probably the most devastating migration within living memory. Police gave the alarm and distributed ammunition to farmers at half-price. The damage was tremendous, but it might have been worse. For the invasion ceased suddenly. The springbok horde turned and raced back to the Kalahari. It was said that rain had fallen behind them, and the north wind had brought them, over hundreds of miles, the irresistible smell of damp earth and young grass."[162]

Considering the presence of two distinct subspecies in the trekbok population it seems unlikely that all the springbok trekked north however and relatively good rains over winter in Springbok, Calvinia and Fraserburg suggest that the remaining springbok dispersed west and south, while some continued to cause damage in Kenhardt and Prieska[163]. Numbers had evidently been greatly diminished though and apart from reports of the lasting damage caused over the preceding couple of years[164], there are no further mentions of trekbokke for the remainder of a year that was devastated by drought.[165]

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[160] *De Britstowner*, 28 April 1897.
[161] *De Graaff Reinetter*, 12 April 1897.
[162] Green, 1955. p.39.
[163] *De Britstowner*, 5 May 1897.
[164] Cape of Good Hope, 1899. *Reports by the Special Commissioner appointed to inquire into the Agricultural Distress and Land Matters in the Divisions of Clanwilliam, Van Rhyn's Dorp, Calvinia, Fraserburg, Carnarvon, Kenhardt, Gordonia, Prieska and Hope Town.* [G.68-'99]
[165] For reports of drought and poor pasture in the central interior see: *Victoria West Messenger*, 2 July 1897; 1 October 1897; 8 October 1897; 22 October 1897; 29 October 1897; 2 November 1897; 26 November 1897; 17 December 1897.

1898-1908: "*de springbokken zyn byna niet meet te zien in ons district*"

As can be seen from Figure 4.23 rainfall across the *Achterveld* rose markedly after 1897 with pastures and crops in Kenhardt and Prieska recovering well and the Orange River that had barely been running in December 1897[166] now at nearly its highest level in living memory[167]. The threat and expectation of trekbokke putting in an appearance was initially very much on the minds of the public,[168] but by 1900 there was a general acknowledgement, particularly in the eastern districts, that the days of the trekbokken were over. The fencing and encampment of springbok already underway in Graaff-Reinet for over twenty years[169] now extended across the more northerly Karoo districts and in Victoria West, aside from these "*makke klompjes*", springbok "*zyn byna niet meer te zien in ons district ...*"[170]

[166] *Victoria West Messenger*, 17 December 1897.
[167] *Victoria West Messenger*, 4 February 1898.
[168] *Agricultural Journal of the Cape of Good Hope*, 1 September 1898.
[169] See: Roche, C. 2003. '"Fighting their battles o'er again": The springbok Hunt in Graaff-Reinet, 1860-1908', *Kronos*, 29: forthcoming.
[170] *Victoria West Messenger*, 30 November 1900.

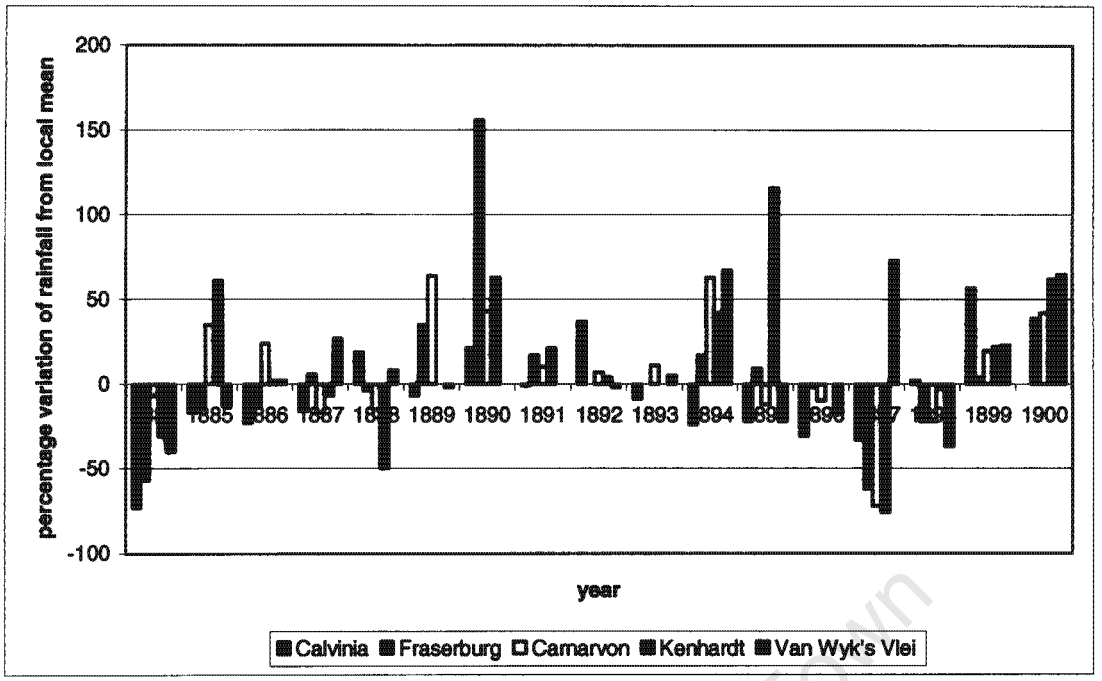


Figure 4.23: Percentage variation of annual rainfall in the *Achterveld*, 1884-1900[171]

Great excitement greeted even small, localised movements of springbok, as happened in Aberdeen in 1903 when a "small herd of trekbucks" caused a hunting party to be organised for "a week's shoot"[172], and wistful rumours of an influx of trekbokke into the Kenhardt district persisted well into the first decade of new century. Small herds of springbok from Namaqualand were attracted by rainfalls in Kenhardt in December 1903 sparking fears of a repeat of the trek of 1895-6[173] and the following November it was insisted that this time "*de Springbokken nu reg, reg kom*"[174]. Even this proved to be a false alarm however and the reporter was forced to qualify his predictions of doom and "*straf*" with the admission that "*in sommige opzichten Springbokken niet*

[171] Annual rainfall figures taken from Meteorological Commission data published in the *Statistical Register* of the Cape of Good Hope. Average rainfall figures obtained from: Union of South Africa, 1927.
[172] *Graaff Reinet Advertiser*, 15 March 1903.
[173] *Victoria West Messenger*, 11 December 1903.
[174] *Victoria West Messenger*, 18 November 1904.

als een straf beschouwd moeten worden" as they could provide protein in times of need.[175]

This scarcity of springbok resulted in a changed attitude towards trekbokke which last plagued Kenhardt in 1897, and the good rains that fell in the district in February 1905 after a short period without rain were welcomed for attracting "*ons oude vrienden, namelik de springbokken*" which made their appearance some 10 hours' ride west of the town.[176] The opportunity to procure meat was appreciated by both white and "coloured" alike and the Kenhardt correspondent of the *Victoria West Messenger* regretted only that "*die vluchtige diertjes niet wat nader willen komen.*"[177] This period was also characterised by increasing numbers of farmers in the Kenhardt, Prieska and Britstown districts prohibiting all hunting and trespassing on their farms[178] and special close seasons for springbok in districts such as Hanover, Philipstown and Hopetown[179] where they had previously been numerous and their destruction actively encouraged. Even in Britstown, the scene of mass devastation and slaughter only ten years earlier, springbok became a specially protected species.[180]

Not only were the trekbokke now restricted to the most remote north-westerly reaches of the Colony, but their numbers were also much reduced, and by July 1908 one of the proposed changes to the Game Law by the honourable member for Prieska was to include trekbokke as "game."[181] His proposal passed unopposed into law in the

[175] *Victoria West Messenger*, 18 November 1904.
[176] *Victoria West Messenger*, 24 February 1905.
[177] *Victoria West Messenger*, 24 February 1905.
[178] See: *De Britstowner*, 30 June 1897; 12 January 1898; 2 February 1898; 2 March 1898; 13 April 1898; 18 May 1898;
[179] See: *Agricultural Journal of the Cape of Good Hope*, 1 March 1903; 1 March 1905.
[180] See: *Agricultural Journal of the Cape of Good Hope*, 2 February 1908.
[181] Cape of Good Hope, *House of Assembly Debates*: 1 July 1908. See also: *Courier*, 9 July 1908; *Victoria West Messenger*, 9 July 1908.

Game Law Amendment Act No 11 of August 1908, a measure that, for reasons examined in the following chapter, was the proverbial case of too little too late.[182]

Conclusions:

The free ranging springbok of the *Achterveld* therefore followed a clearly discernible and largely predictable trend over the period 1884-1897. It is impossible to determine the actual growth in numbers or the recruitment to the population between 1885 and 1894[183], but the combination of rainfall records and springbok biology suggest that numbers would have grown significantly over this period, particularly in the years 1889, 1890 and 1894. Relatively drier periods in the *Achterveld* in 1892 and 1893 resulted in springbok being forced to trek beyond their 'good cycle range' in both a westerly and easterly direction. The level of intensity of these treks varied, but in general increased as pasture became more desiccated. The drought of 1895 and 1896 saw the advent of even larger treks, culminating in a nine month long concentration of the bulk of the trekbokke in the area between Victoria West, Britstown and Vosburg during 1896. The treks tailed off in the early months of 1897 when reduced numbers of springbok dispersed westwards after late summer and early winter rains, some perhaps even temporarily heading north of the Orange River.

In the absence of 'hard' figures the attitude of settlers in the affected areas, more than anything else, provide a gauge of trek intensity. The luxuriance of pasture in the late 1880s and into 1891, combined with the relatively recent exemption of trekbokke from the protection of the Game Law, meant that even those concentrations of

[182] The attempt to protect something which no longer existed is exemplified by the inclusion of the already extinct quagga in the 1886 legislation. See: MacKenzie, JM. 1988. *The Empire of Nature: Hunting, Conservation and British Imperialism*, Manchester University Press, Manchester. p.204.

[183] One possible means is by using a springbok population model and comparison with livestock numbers and peak carrying capacities.

springbok that did occur during this period were not reviled, but rather welcomed. The attitude towards the increasing numbers and intensity of treks during 1892 was one of fear tinged with opportunism. If the damage done was limited, trekbokke might be turned to profit through hunting. This attitude was tempered somewhat the following year when larger numbers penetrated the populated parts of Namaqualand and Calvinia, and from 1894 was characterised by a grudging acceptance of the inevitability of treks and a determination to benefit from them where possible, even if only by securing a free supply of scarce protein. The following two years, 1895-1896 confirmed that despite everyone's best efforts the trekbokke were indestructible and settlers could not hope to benefit from them in the long run. Things would just have to run their natural course. As ensuing years would demonstrate this perception of the antelope's invincibility was misplaced and eager anticipation of the return of at least limited numbers of trekbokke was never fulfilled.

An examination of this cycle as a whole therefore helps clarify answers to the questions posed by Lovegrove and others in Chapter 1. The "vast herds" came from Bushmanland and other areas of the *Achterveld*, such as the Kaaien Bult, where good rainfall years allowed a build-up of springbok numbers and subsequent drier years forced these now super herds to seek grazing wherever it remained – often in the winter rainfall areas of Namaqualand or otherwise in the generally higher rainfall areas in the eastern districts of the Karoo. They were occasionally joined by additional trekbokke from north of the Orange River and moved as often as they needed to according to the grazing needs of the different herds, which, in temporary concentrations could number in the hundreds of thousands, but which more often moved in herds of between eight and ten thousand. The movements therefore were to

some extent random and cannot be defined as migrations, but were rather nomadic movements caused by population irruptions, with routes often following similar, but certainly not predictable, paths.

One tantalising conundrum still begs an adequate answer: Why did the phenomenon of springbok treks end? Why was the dispersal of the trekbokke during the first few months of 1897 the last to happen in the Karoo and why was the inclusion of trekbokke as game in the 1908 legislation a dead letter?

CHAPTER 5:

"The days of the great 'treks' are over"[1] – reasons for the end

It is clear that, as many other authors have noted, 1896-1897 witnessed the last 'mega-trek' in the Karoo. Thereafter, dramatically reduced springbok numbers continued to exhibit some localised movement in response to rain, but not on a scale that could be considered treks. Explanations for the disappearance of the mass migrations remain wholly unsatisfactory, often being based on nothing more than conjecture and coincidence. Skinner, and subsequently Skinner and Louw, attempted to provide a more reasoned explanation. Skinner was initially dismissive of fencing as a cause, claiming, on the basis of a single oral source, that enclosure began only twenty years after treks had ended, and, while conceding that hunting may have played a role in reducing numbers, held that the rinderpest epidemic, which spread rapidly in the Cape from 1896, was "almost certainly" the overriding cause.[2] Three years later Skinner and Louw were more circumspect, concluding that the treks had probably been terminated by a combination of factors such as increases and advances in stock farming, fencing and hunting techniques, but still singled out rinderpest as the single most important cause.[3] While this latter combination has the ring of common sense to it, it has not been substantiated to any significant extent and even the passage of the rinderpest epidemic through the Cape Colony, although tracked with regard to social

[1] Cronwright-Schreiner, S.C. 1925. *The Migratory Springbucks of South Africa (the Trekbokke). Also an Essay on the Ostrich and a Letter Descriptive of the Zambezi Falls*, Hamilton, Adams, London. p.55.
[2] Skinner, J.D. 1993. 'Springbok (*Antidorcas marsupialis*) treks', *Transactions of the Royal Society of South Africa*, 48: pp. 291-305. p.302.
[3] Skinner, J.D. & Louw, G.N. 1996. *The Springbok:* Antidorcas marsupialis *(Zimmermann, 1780)*, Transvaal Museum Monograph No. 10, Transvaal Museum, Pretoria. p.7.

impact and veterinary science[4], has yet to be plotted chronologically or quantitatively in any detail. Skinner and Louw's claims therefore remain based on intuitive logic not empirical evidence and can at best be regarded as a provisional hypothesis.

"The fearful pest": the spread and impact of rinderpest in the Cape Colony, 1896-8

Skinner's conclusion that rinderpest was the primary cause for the termination of springbok treks appears to be based on two pieces of circumstantial evidence. Firstly that the epidemic roughly coincided with the end of springbok treks and secondly that treks originated in the Kalahari and moved south into the Cape Colony and the Karoo. This would have exposed the trekbokke to rinderpest as it swept down through Botswana from Zimbabwe and into the area north of the Orange River. Although springbok did apparently trek south across the Orange River in 1895-6 (see Chapter 4), these animals did not comprise the bulk of the last mega trek. The vast majority of the springbok involved in the trek of 1896 would therefore not have been exposed to rinderpest. This does not exclude the possibility that a small minority introduced rinderpest at a later stage decimating the tightly massed population south of the Orange River, but it does cast some doubt on one premise of Skinner's explanation. As far as the other coincidence is concerned, the rinderpest epidemic was closely tracked by the colonial administration and its path and timing of entry into both the area immediately north of the Orange River and the Cape, as well as its impact on

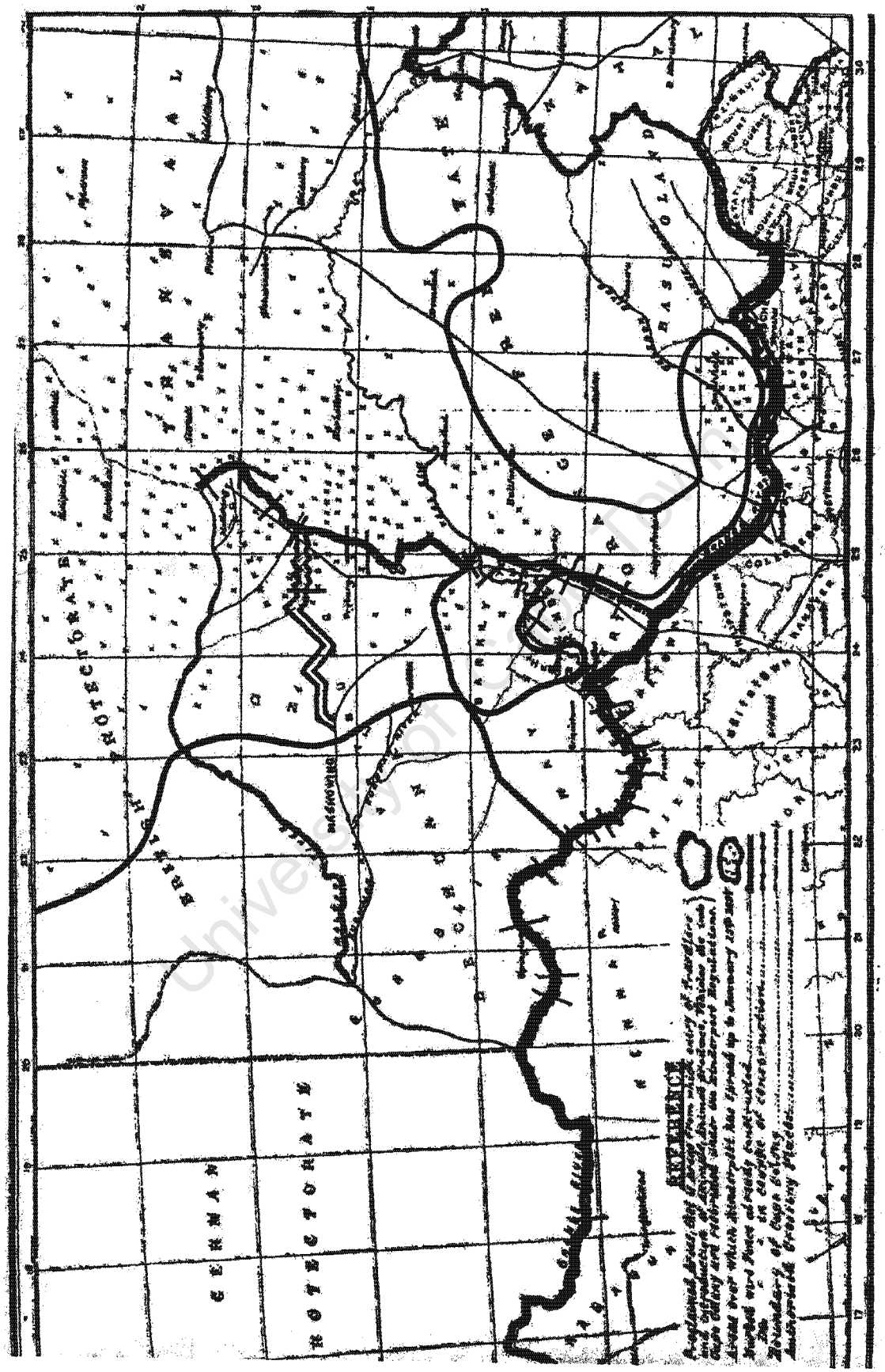
[4] See: Van Onselen, C. 1972. 'Reactions to rinderpest in southern Africa', *Journal of African History*, 15: pp.473-488; Phoofolo, P. 1993. 'Epidemics and revolutions: the rinderpest epidemic in late-nineteenth century South Africa', *Past and Present*, 138: pp.112-143; Gilfoyle, D. 2002. 'Veterinary science and public policy at the Cape Colony, 1877-1910', Unpublished D.Phil Thesis, University of Oxford. pp.161-200; Gilfoyle, D. 2003. 'Veterinary research and the African rinderpest epizootic: the Cape Colony, 1896-1898', *Journal of Southern African Studies*, 29(1): pp.133-154; Phoofolo, P. 2004. 'The natives' extremity and the white man's opportunity: the rinderpest and the supply of African labour from the Transkeian Territories, 1897-8', *Kronos*, 30: forthcoming.

livestock in border districts from Hope Town through to Namaqualand were documented in considerable detail.

Rinderpest spread rapidly from its first recorded occurrence in southern Africa on 5 March 1896 in Bulawayo and as early as that same month a cordon of Cape Mounted Police had been established along the northern and eastern border of the Colony to prevent it crossing from Rhodesia and the Bechuanaland Protectorate.[5] By May this cordon had been breached and redeployed further south.[6] By June the Kalahari was described as "swept clean by rinderpest" rendering it "hoofless".[7] Nothing but dead cattle were apparently to be seen along the Molopo River, with massive losses of both revenue and animals recorded: The Protectorate estimated a loss of £4,000,000 while the Bechuana under Khama were said to have lost 600 000 head of stock.[8] In the Transvaal any hope of stamping out the disease outside the cordon (see Figure 5.1) was relinquished by July when the veld was said to be "simply rotten with disease stricken game, koedoe, gemsbok, duiker &c. being in such a condition that policemen simply ride up and shoot them down with revolvers."[9] Further south similar fatalism prevailed. Rinderpest had broken out in Vryburg in July[10] and by September had reached Herbert on the northern bank of the Orange River and it was felt that "the fearful pest ... [was] most likely to find its way eventually to the coast."[11]

[5] *Courier* 26 March 1896.
[6] *De Britstowner*, 15 May 1896.
[7] *Graaff Reinet Advertiser*, 15 June 1896.
[8] *Courier*, 25 June 1896.
[9] *Graaff Reinet Advertiser*, 6 July 1896.
[10] *Courier*, 16 July 1896. Skinner quotes Kotze citing May as the date of outbreak in Vryburg. (Skinner, 1993. p.302)
[11] *Courier*, 10 September 1896.

Figure 5.1: The spread of rinderpest in central southern Africa by January 1897[12]



[12] *Agricultural Journal of the Cape of Good Hope*, 18 February 1897.

Attitudes towards rinderpest within the Colony varied however. There was the inevitable panic-tinged response that regarded any unusual cattle death as evidence of the epidemic and imagined the disease to be advancing far more quickly than it was. This was counter-balanced by sceptics who believed the threat to be exaggerated. For example, an outbreak of rinderpest was prematurely reported for Kenhardt in September, having to be corrected the following week as a mistake,[13] and the same occurred in Prieska the following July[14]. Conversely the farmers of the Prieska district felt that, in light of the rinderpest fence which prevented access to the Orange River, it was "better to have rinderpest than fence, as the latter will mean death to all river farm cattle and stock generally, as no other water is available owing to the drought."[15]

Rinderpest duly spread from Vryburg and Herbert to Kimberley by October 1896[16] and thereafter broke out in the Free State being well established along its southern and eastern border by January 1897 (see Figure 5.1) from where it crossed to the Colony in March that year.[17] This breach may have been enabled by the practice of some farmers in the Colony of breaking the fence, as happened in Hopetown in late December 1896[18], and resulted in renewed attempts to encourage inoculation of all cattle[19]. Although rinderpest penetrated the eastern districts its route into the northern districts from the Kalahari continued to be obstructed. The double barbed wire fence along the Orange River from Hopetown to Prieska was guarded by 50 special police and their supervisors, from Prieska to the Kenhardt boundary by another 160 "specials" and from here to Zeekoestreek by a further 230. Protection along the

[13] *Courier*, 28 September 1896; 1 October 1896.
[14] *De Britstowner*, 14 July 1897; 28 July 1897.
[15] *Courier*, 8 October 1896.
[16] Skinner, 1993. p.302.
[17] *Courier*, 30 March 1897. See also Phoofolo, 1993. p.114.
[18] *De Britstowner*, 6 January 1897.
[19] *De Britstowner*, 14 April 1897.

remaining 300 miles to the west coast was considered "exceedingly unsatisfactory" with this section thought to represent the greatest danger of infection to the northern districts.[20] As an added precaution, and to create a buffer zone, Gordonia was declared an infected district prior to any documented rinderpest outbreak[21] and by May, despite appearing on the borders, the disease had yet to enter the district[22].

Meat prices in Kenhardt had been on the increase since February partly in anticipation of a rinderpest outbreak[23] and in October rinderpest did finally reach the district[24]. The disease had advanced from Hopetown via Britstown in September, and then on to Victoria West[25] and Prieska. As a result of limited inoculation the cattle population in Britstown was "devastated."[26] The interior and extreme north western districts were not affected however and by August 1898 the Civil Commissioner believed that rinderpest had "entirely disappeared" from Kenhardt.[27] There was a risk of reintroduction from Gordonia where it still existed but despite fears that it would remain for some time[28], by December it had been eradicated there as well[29].

Rinderpest, although relatively short-lived in the Colony had a massive impact and, writing towards the end of 1897, a correspondent to the *Victoria West Messenger* summed up the devastating dual effects of drought and rinderpest as a pivotal moment in South African history:

[20] *De Britstowner*, 5 May 1897.
[21] *De Britstowner*, 19 May 1897.
[22] *Agricultural Journal of the Cape of Good Hope*, 24 June 1897.
[23] *De Britstowner*, 10 February 1897.
[24] *Victoria West Messenger*, 8 October 1897.
[25] *Victoria West Messenger*, 1 October 1897.
[26] *De Britstowner*, 1 September 1897; 15 September 1897.
[27] *Agricultural Journal of the Cape of Good Hope*, 1 September 1898.
[28] *Agricultural Journal of the Cape of Good Hope*, 28 April 1898.
[29] *Agricultural Journal of the Cape of Good Hope*, 27 October 1898.

"Ja als er ooit iets belangryks was om opgestekend te worden in de geschiednis van Zuid Afrika, dan is het de gebeurtenissen van 1896 en 1897, de zware droogten,, sterven van duizenden van groot en klein vee, door droogte en rinderpest."[30]

As can be seen in Figures 5.3 and 5.4, the impact of rinderpest on settler cattle and sheep holdings is easily quantifiable. For the purposes of this argument, and because divisions regularly changed size, the core of the Succulent and Nama Karoo can be divided into four regions (see Figure 5.2), allowing a spatial analysis of the impact of rinderpest and other factors.

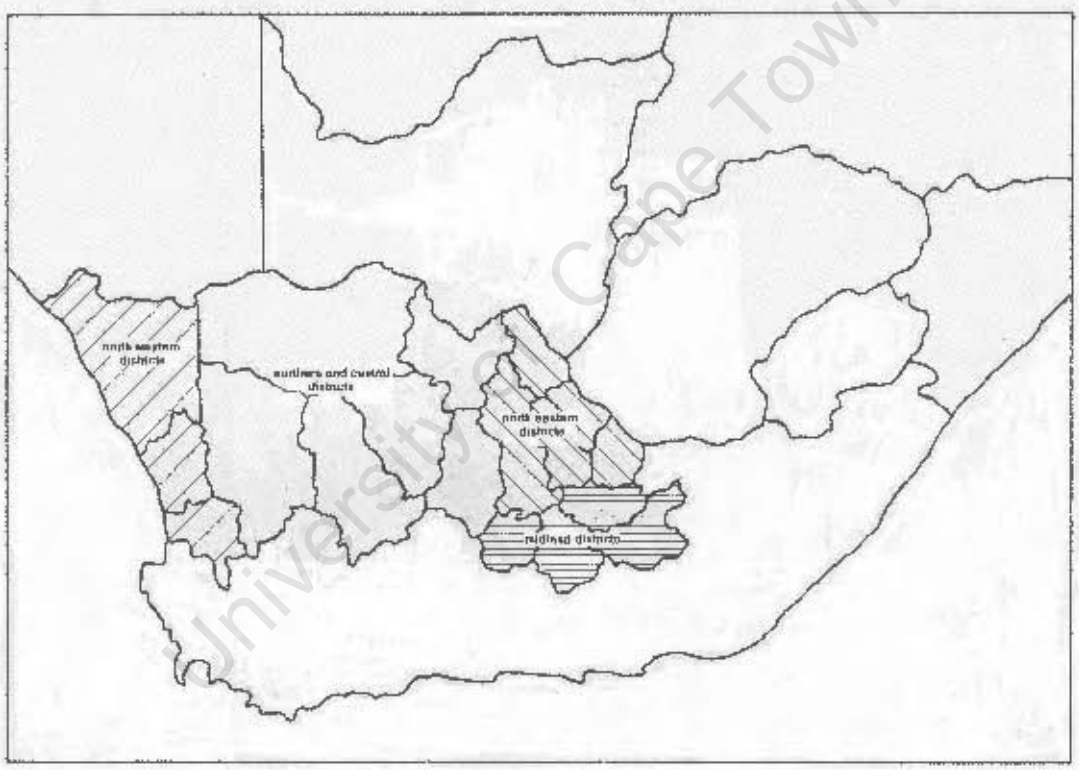


Figure 5.2: The districts of the core of the Nama and Succulent Karoo divided into four regions, north western districts (Namaqualand; Van Rhyn's Dorp; Clanwilliam), northern and central districts (Kenhardt; Calvinia; Fraserburg; Carnarvon; Prieska; Victoria West), north eastern districts (Hopetown; Britstown; Richmond; Hanover; De Aar; Philipstown; Colesberg) and the midland districts (Murraysburg; Graaff-Reinet; Middelburg; Cradock).[31]

[30] *Victoria West Messenger*, 22 October 1897. "Yes, if ever there was something important to emphasize in the history of South Africa, it is the events of 1896 and 1897, the severe drought, the deaths of thousands of large and small stock as a result of drought and rinderpest."
[31] See Appendices 2 and 3 for Cape Colony and Union of South Africa divisional maps for 1891, 1904 and 1911.

The north eastern districts were worst hit in terms of cattle numbers, suffering a decrease of almost 68% between 1891 and 1898, with only minor recovery demonstrated by 1911. Similarly the northern and central region lost over 64% of cattle between 1891 and 1898 and numbers rose only slightly by 1911. An analysis of the effect of rinderpest on cattle density is even more revealing: The number of cattle per hectare in the northern and central districts fell by only a third between 1891 and 1904, while in the north eastern districts this figure was over 70%. That these losses were driven by rinderpest and not drought is supported by the fact that the north western districts, which suffered an even worse period of drought in the mid-1890s show a loss of 53% between 1891 and 1898 and a decline in density between 1891 and 1904 of only 12,5%. Furthermore this region reflected a significant increase by 1911. An analysis of sheep numbers shows a similar trend over 1891 to 1898 with the northern and central districts and those of the north east suffering losses of 57.3% and 43.1% respectively, while over the same period the sheep population of the north western districts declined only 22.9%. A comparison of densities is once again more insightful and shows a decrease in the number of sheep per hectare in the northern and central districts, and the north eastern districts between 1891 and 1904 of almost 65% and 59% respectively. Sheep proved more resilient to rinderpest than cattle and, particularly in the northern and central, and the north eastern districts, numbers grew significantly following recovery from both this disease and drought.

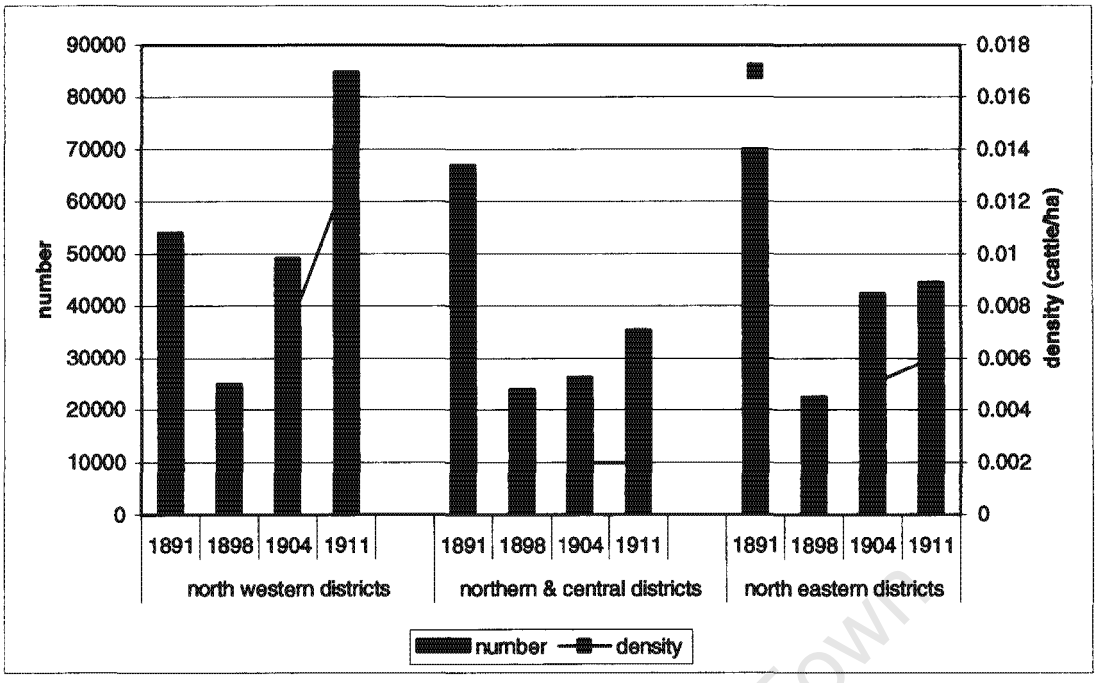


Figure 5.3: Cattle numbers and densities in the north western districts, northern and central districts, and north eastern districts, 1891-1911[32]

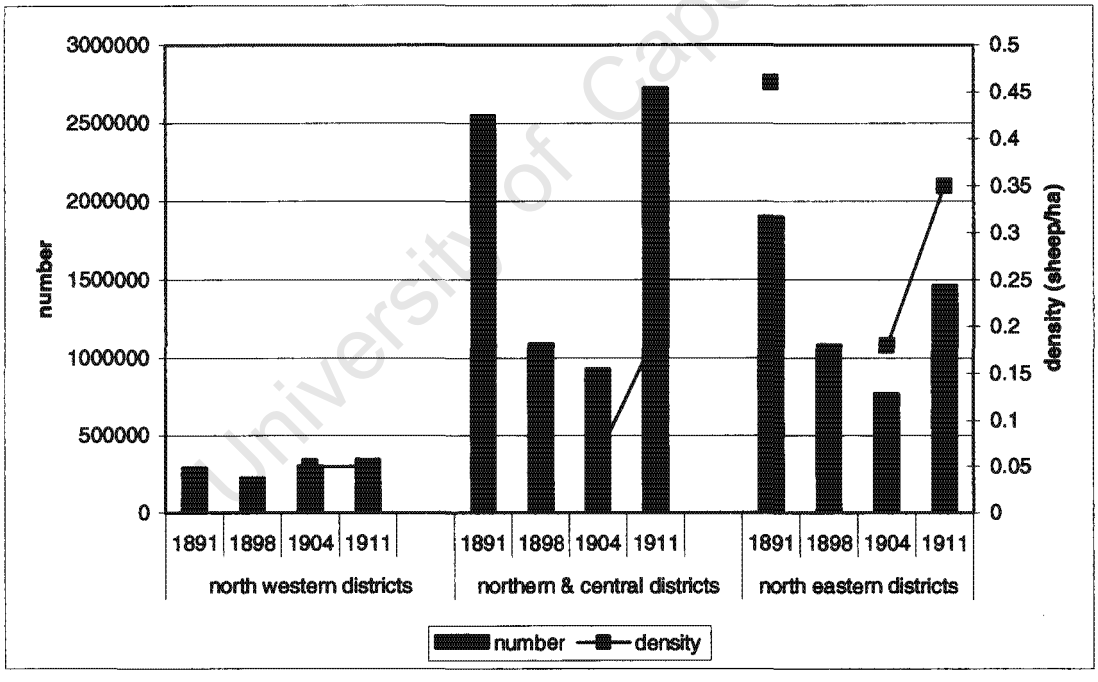


Figure 5.4: Sheep numbers and densities in the north western districts, northern districts and central districts, and north eastern districts, 1891-1911[33]

[32] Cattle numbers here comprise all breeds of cattle. Source: Cape of Good Hope, 1892. *Census of the Cape, 1891* [G.6-'92]; Cape of Good Hope, 1898. *Statistical Register*: Livestock enumeration; Cape of Good Hope, 1905. *Results of a Census of the Colony of the Cape of Good Hope, 1904* [G.19-1905]. Union of South Africa, 1912. *Census of the Union of South Africa, 1911* [UG.32-1912].

[33] Sheep numbers here comprise numbers of both woolled sheep and all other species. Source: Cape of Good Hope, 1892; 1898; 1904; Union of South Africa, 1912.

The impact of rinderpest on wild ungulates is not so easily quantified. The estimates of game numbers in the Colony provided by the Agricultural Department and published by the Western Districts Game Protection Association (WDGPA) (see Table 5.1) suggest a slight decrease in numbers of key species occurring in the northern districts of the Colony after July 1897. It is difficult, however, to draw any firm conclusions from the impressionistic estimates provided by Civil Commissioners, which do not, for the most part, differentiate between districts. Indeed, although it was known that some large game succumbed to rinderpest[34] it was admitted that, "the amount of loss from this cause cannot be accurately ascertained."[35] Nonetheless the WDGPA warned that: "The effect of rinderpest on large game has been disastrous in several tracts of country ... From the best information available it would appear that kudu, eland and buffalo suffered most; but hartebeest, the other antelope, were affected only to a slight extent."[36] The omission of springbok suggests they were not obviously decimated by the disease. In addition the persistence of gemsbok in Kenhardt and the fact that the numbers of ostrich[37] show similar trends to those of gemsbok and hartebeest would seem to indicate that the rinderpest did not completely obliterate wild game populations in the northern districts and that some other factor, such as the protracted drought or illegal hunting during this period, is likely to have been the primary driver of these fluctuations.

[34] Duiker and Grey Rhebok were reported to have died from rinderpest near East London (*De Britstowner*, 13 October 1897) while Rhodes' Groote Schuur Estate apparently lost an eland, kudu, red hartebeest, klipspringer, steenbok and an "antelope" (perhaps a springbok) to the disease (*De Britstowner*, 1 December 1897).

[35] *Graaff Reinet Advertiser*, 24 August 1898.

[36] Pringle, J.A. 1982. *The Conservationists and the Killers*, T.V. Bulpin & Books of Africa, Cape Town. p.69. This is supported by the fact the Kalahari was reported to be "teeming with vast herds of gruisbok [gemsbok], hartebeest, wildebeest and wild ostriches in 1899 (*Agricultural Journal of the Cape of Good Hope*, 13 April 1899) and that red hartebeest occurred in sufficient numbers to trek out of the Kalahari to Upington towards the end of 1903. Even a single blue wildebeest appeared at the same time (*Victoria West Messenger*, 16 October 1903; 4 December 1903).

[37] Ostrich are not known to be susceptible to rinderpest, which is most prevalent in cloven-hoofed animals. See: http://www.vet.uga.edu/vpp/gray_book/FAD/rin.htm. Gilfolye quotes *A Pocket Companion to Veterinary Medicine* in defining rinderpest as "A highly contagious, fatal disease of ruminants and swine ..." (Gilfoyle, 2002. p.161).

Species	July 1897	July 1898	August 1900	September 1908
Gemsbok	9500 (Gordonia; Kenhardt; Namaqualand; Vryburg)	5000 (Bushmanland; Kenhardt; Gordonia; Vryburg)	4000 (Bushmanland; Bechuanaland; Barkly West)	6150 (Bushmanland; Bechuanaland; Kenhardt [150])
Red Hartebeest	3000 Barkly West; Gordonia; Kimberley; Namaqualand; Vryburg)	? (Barkly West; Hay; Herbert; Kimberley; Namaqualand; etc)	? (Bechuanaland; Barkly West)	10 000 (Barkly West; Gordonia; Herbert; Kimberley etc)
Wild Ostrich	3400 (Barkly West; Namaqualand; Oudtshoorn; Vryburg)	?	2500 (Bechunaland; Griqualand West)	5000 (Namaqualand; Prince Albert)

Table 5.1: Population estimates of large wild game species occurring in the *Achterveld*, 1897-1908[38]

In addition, farmers' inherent fear of wild animals transmitting disease to livestock should also be borne in mind. This is clearly evident in the northern districts of the Colony in the case of scab which was endemic in sheep and goats, as well as springbok. Springbok suffering from scab were blamed for the spread of the disease[39] and an infected skin was eventually sent to the Colonial Veterinary Surgeon, for confirmation. Hutcheon found that a different species of sarcoptes mite was involved however and that, although it might possibly affect non-fleeced animals such as the Boer goat, its transmission to sheep was very unlikely.[40] The obsession with disease transmission between wild and domesticated ungulates suggests that any hint of rinderpest in the springbok herds would have sparked vigorous calls for their complete extermination and, at the very least, its effect on springbok numbers, had it occurred, would have been noted. No mention whatsoever of rinderpest affecting springbok appears in the contemporary press however.

[38] Estimates for the respective years were published in the following sources: *Graaff Reinet Advertiser*, 5 August 1897; 24 August 1898; 7 September 1900. *Courier*, 22 October 1908. The increase in the number of ostriches in the Prince Albert district in the 1908 figures may have been due to escape or release of once domesticated birds (See: *Courier*, 16 April 1903).

[39] *Victoria West Messenger*, 26 October 1894. The restrictions placed on the movement of stock, but not springbok, through the Scab Act were also attacked. See: *De Britstowner*, 29 November 1895.

[40] *De Graaff Reinetter*, 16 August 1894; *Agricultural Journal of the Cape of Good Hope*, 7 March 1895.

District	Dispersal of trekbokke	Arrival of rinderpest
Hopetown	-	March 1897
Britstown	April 1897	September 1897
Victoria West	October 1896	September 1897
Prieska	May 1897	September 1897
Kenhardt	May 1897	October 1897

Table 5.2: Comparison of timing of rinderpest and trekbokke in the northern parts of the Cape Colony[41]

Rinderpest then, as can be seen in Table 5.2, followed in the wake of the springbok dispersal. The disease entered the eastern districts of the Colony only some months after springbok had dispersed. The trekbokke did not penetrate as far as Hopetown during 1896 and the arrival of rinderpest in Britstown and Victoria West in September occurred no less than four months after the dispersal of the trekbokke. The movement of the diseases westwards was also several months behind that of the springbok, arriving as it did in Kenhardt in October, also at least four months after the apparent dispersal of springbok, and it did not penetrate as far west as Namaqualand or as far south as Fraserburg and Sutherland[42]. It can safely be said then that rinderpest was not the primary cause of the cessation of springbok treks, and that although the possibility of a limited role cannot be completely discounted there is no contemporary evidence to suggest this.

[41] For timing on the arrival of rinderpest in these divisions, see: *Courier*, 30 March 1897; Phoofolo, 1993. p.114; *Victoria West Messenger*, 1 October 1897; 8 October 1897.
[42] See: *Agricultural Journal of the Cape of Good Hope*, 15 September 1898.

"They drove the springboks away" – the increase in livestock and human populations 1865-1911

In 1867, in reply to a question as to whether illegal hunting had been the cause of the demise of the great game herds of the Colony the Auditor General replied that this was not altogether the case and that: "When I first came out to the Colony in 1830, there were very few flocks of sheep in the district I lived in; as the sheep increased they drove the springboks away. The quantity of game has diminished quite as much by the increase of sheep as by other causes."[43]

This increase in livestock numbers in the Colony as a whole and also in the Karoo has been noted by a number of scholars[44], mostly in regard to its contribution to the Cape economy and impact on grazing conditions and carrying capacities, the latter theme already being well developed by the end of the nineteenth century. The Zwarte Ruggens Farmers' Association for example decried the replacement of the natural rotation system of herds of wild game with overstocking, overgrazing, erosion, increased stock mortality and lowered output, fearing that if this system continued the Karoo would become "A region of emptiness, howling and drear – Which man has abandoned from famine and fear."[45]

[43] Cape of Good Hope, 1867. *Report of the Select Committee appointed to consider and report on the Game Laws Bill* [A.9-'67]. p.11. MacKenzie also makes the connection between the appearance of merino sheep in the Colony and the hastening in the retreat of large game. See: MacKenzie, JM. 1988. *The Empire of Nature: Hunting, Conservation and British Imperialism*, Manchester University Press, Manchester & New York. p.92.

[44] See for example: Christopher, A.J. 1976. *Southern Africa*, Dawson, Folkestone. pp.55-86; Dean, W.R.J. & Macdonald, I.A.W. 1994. 'Historical changes in stocking rates of domestic livestock as a measure of semi-arid and arid rangeland degradation in the Cape Province, South Africa', *Journal of Arid Environments*, 26: pp.281-298; Beinart, W. 2003. *The Rise of Conservation in South Africa: Settlers, Livestock, and the Environment 1770-1950*, Oxford University Press, Oxford. pp.1-27. For an appraisal of similar themes in colonial Mexico see: Mellville, E.G.K. 1994. *A Plague of Sheep: Environmental Consequences of the Conquest of Mexico*, Cambridge University Press, Cambridge.

[45] *Graaff Reinet Advertiser*, 2 February 1900.

Springbok and sheep, contrary to contemporary opinion, do not compete for the same resources however[46] and it was not direct competition but rather disturbance and an increasingly impoverished ecosystem, resulting from overstocking and overgrazing, that pushed the indigenous species back. Also of importance was the settler perception of direct competition, and reaction to it through hunting and driving springbok away, along with the steady settlement of previously unoccupied land. The human advance moved in tandem with an increase in sheep and other livestock numbers and it is useful to track the increase in numbers and densities of all these species over the period 1865 to 1911.[47]

[46] See: Davies, R.A.G. & Skinner, J.D. 1986a. 'Spatial utilisation of an enclosed area of the Karoo by springbok *Antidorcas marsupialis* and merino sheep *Ovis aries* during drought', *Transactions of the Royal Society of South Africa*, 46: pp.115-132; Davies, R.A.G. & Skinner, J.D. 1986b. 'Temporal activity patterns of springbok *Antidorcas marsupialis* and merino sheep *Ovis aries* during a Karoo drought', *Transactions of the Royal Society of South Africa*, 46: pp.133-147; Davies, R.A.G., Botha, P. & Skinner, J.D. 1986. 'Diet selected by springbok *Antidorcas marsupialis* and merino sheep *Ovis aries* during a Karoo drought', *Transactions of the Royal Society of South Africa*, 46: pp.165-176.

[47] There is some doubt about the accuracy of such numbers and livestock enumeration in state census statistics has been described as having an implicit "progressivist gaze" that, among other things, did not take into account resistance through non-cooperation by rural farmers in the north west of the Colony. See: Nell, D.D. 1998. '"You cannot make the People Scientific by Act of Parliament": Farmers, the State, and Livestock Enumeration in the North-western Cape, c.1950-1900', Unpublished MA thesis, University of Cape Town.

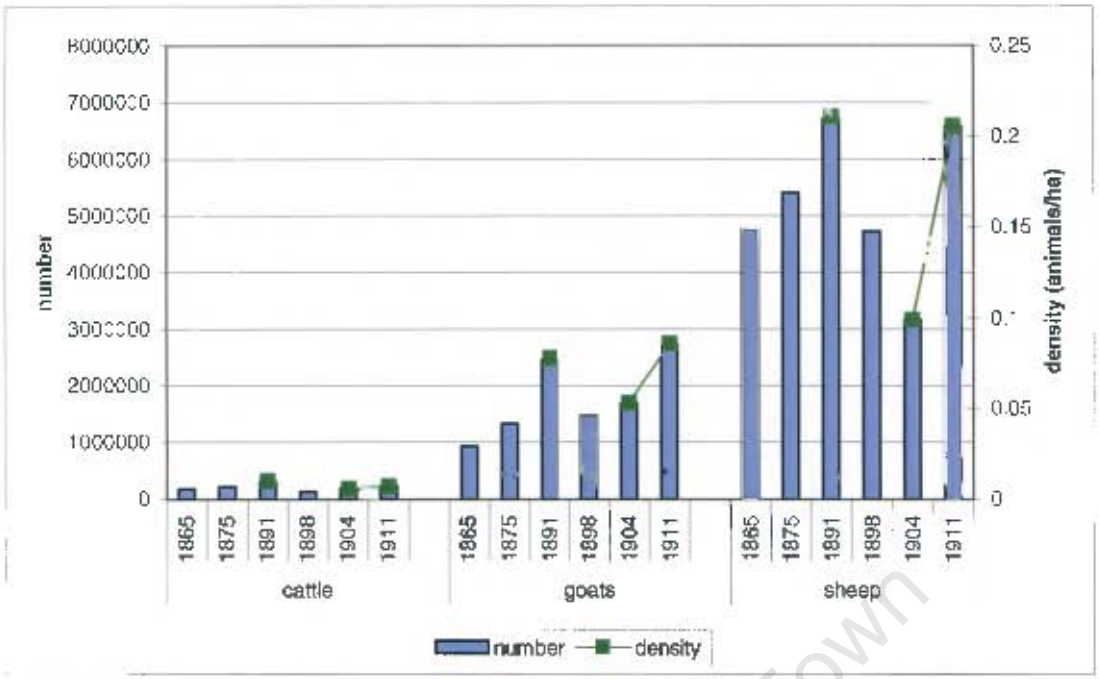


Figure 5.5: Increase in livestock numbers and densities in districts historically associated with springbok treks, 1865-1911[48]

Figure 5.5 clearly shows an increase in cattle, sheep and goat numbers and densities in those parts of the Karoo historically associated with springbok treks over the course of the final few decades of the nineteenth century. The impact of rinderpest and drought hereafter is obvious. This general increase, followed by the rinderpest effect, is even more marked when broken down into the regions previously considered in discussing the impact of rinderpest. All three regions showed an increase in cattle numbers up until 1891, with this growth persisting only in the north western districts thereafter. Sheep numbers also showed consistent growth across the board between 1865 and 1891, and post rinderpest continued to a limited degree in both the north western and northern and central districts. The better-watered north eastern districts

[48] This includes: Namaqualand; Van Rhyn's Dorp; Clanwilliam; Calvinia; Sutherland; Fraserburg; Carnarvon; Kenhardt; Prieska; Beaufort West; Prince Albert; Murraysburg; Graaff-Reinet; Cradock; Richmond; Britstown; Hanover; De Aar; Philipstown; Middelburg; Hopetown; Colesberg; Victoria West. Cattle, sheep and goat numbers are comprised of all species occurring. Source: Cape of Good Hope, 1866. *Census of the Cape, 1865* [G.20-'66]; Cape of Good Hope, 1876. *Census of the Cape, 1875* [G.42-'76]; Cape of Good Hope, 1891; 1898; 1904; Union of South Africa, 1912.

having been the target of the earlier thrust of commercial pastoral expansion had perhaps already reached and even exceeded their carrying capacity by 1891.

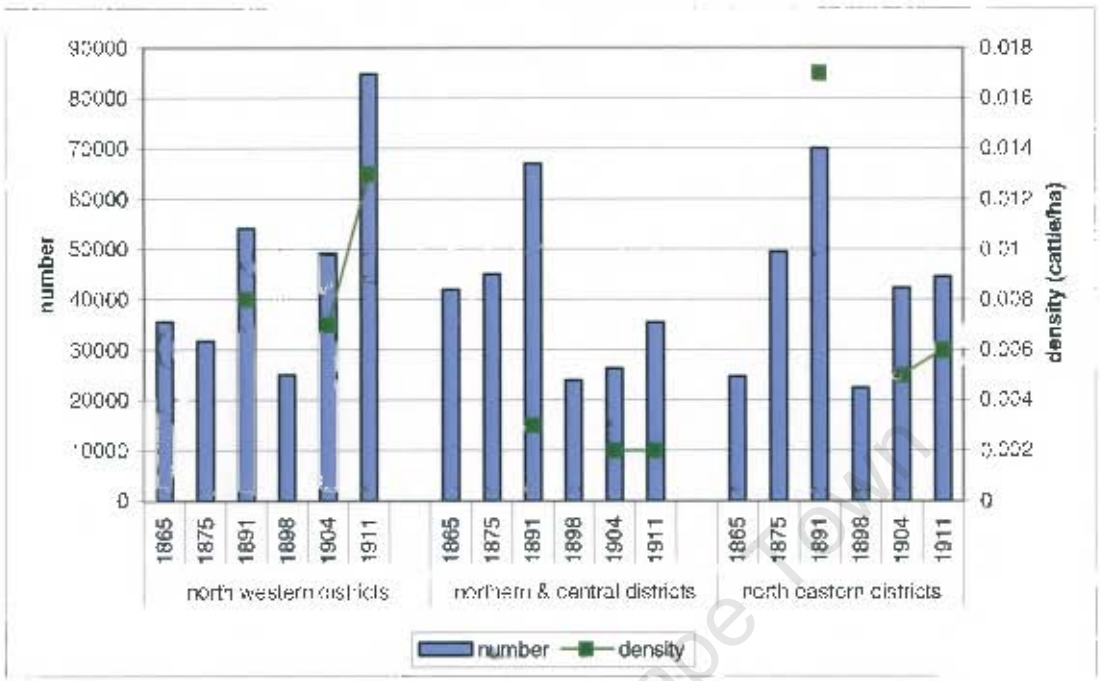


Figure 5.6: Cattle numbers and densities in the north western districts, northern & central districts, and north eastern districts, 1865-1911[49]

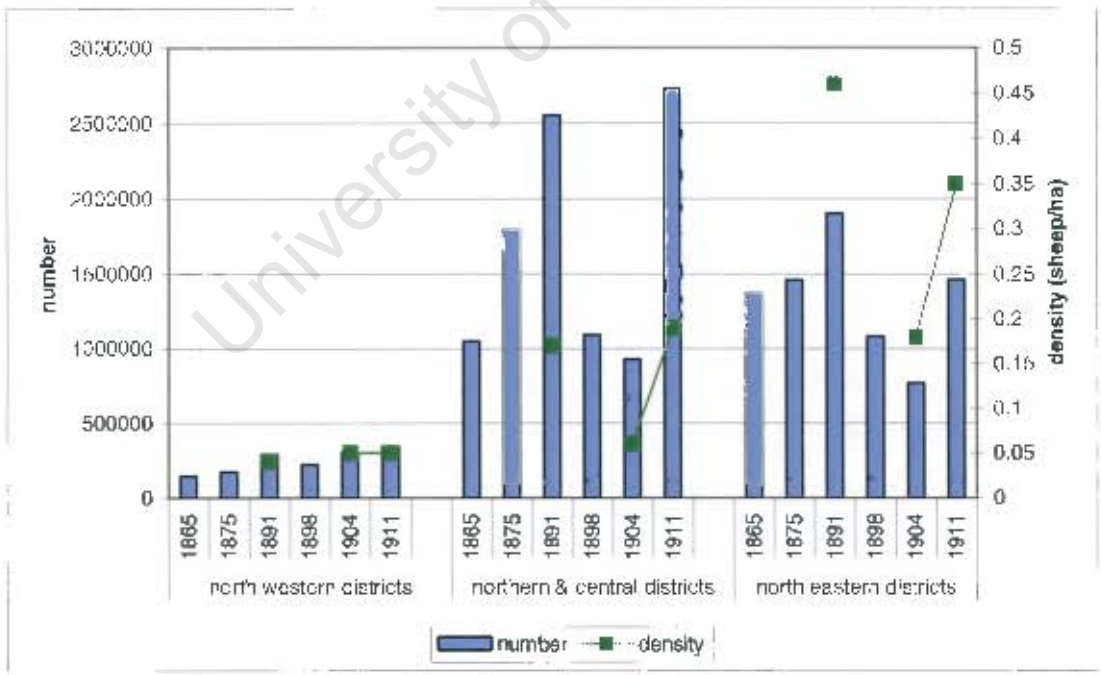


Figure 5.7: Sheep numbers and densities in the north western districts, northern & central districts, and north eastern districts, 1865-1911[50]

[49] Cattle numbers here comprise all breeds of cattle. Source: Cape of Good Hope, 1865;1875;1891;1898;1904; Union of South Africa, 1912.

[50] Sheep numbers here comprise numbers of both woolled sheep and all other species. Source: Cape of Good Hope, 1865;1875;1891;1898;1904; Union of South Africa, 1912.

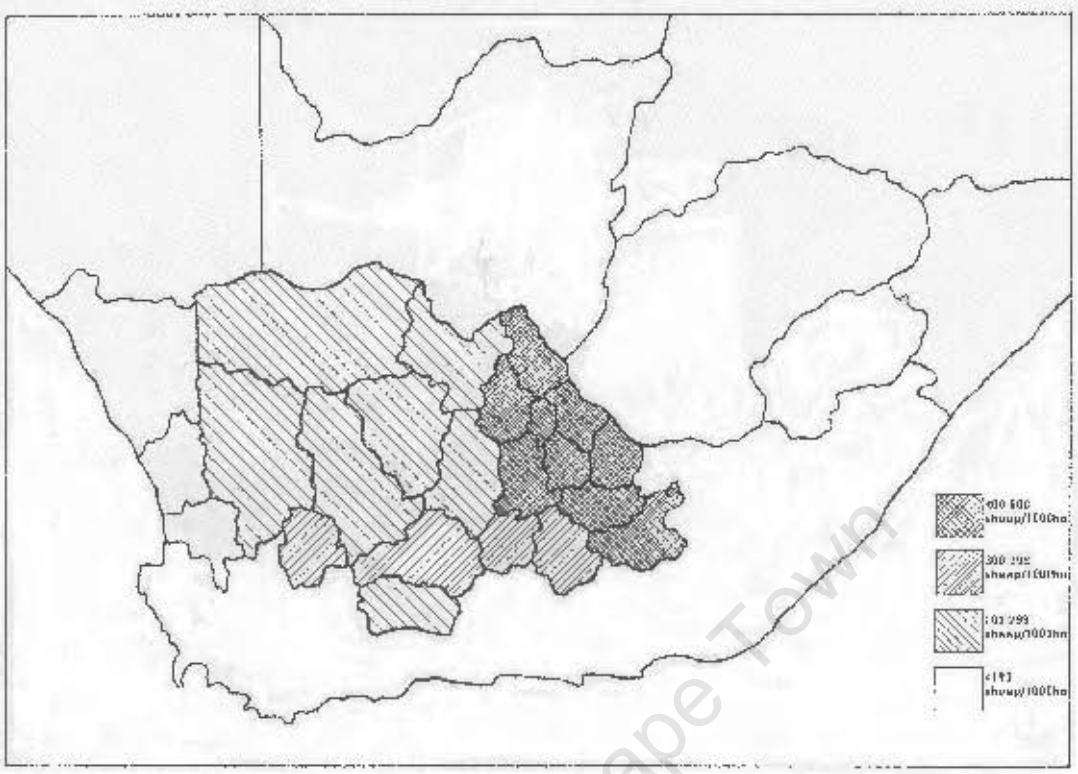


Figure 5.8: Densities of sheep per 1000 hectares, 1891

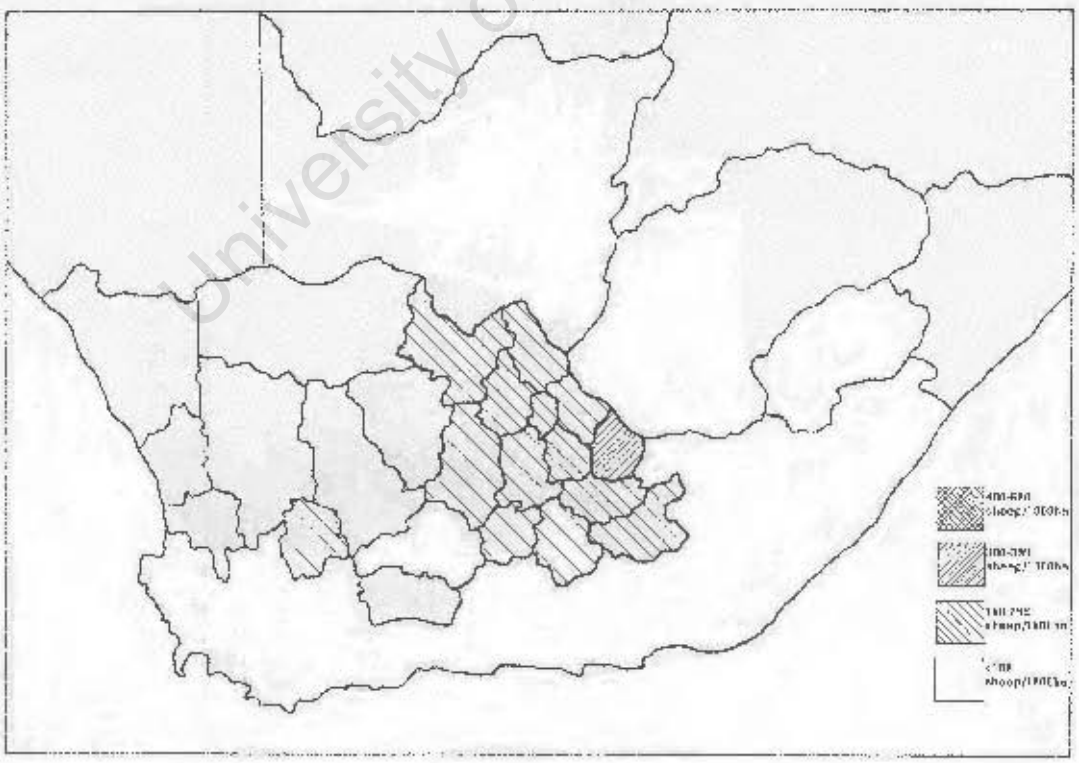


Figure 5.9: Densities of sheep per 1000 hectares, 1904

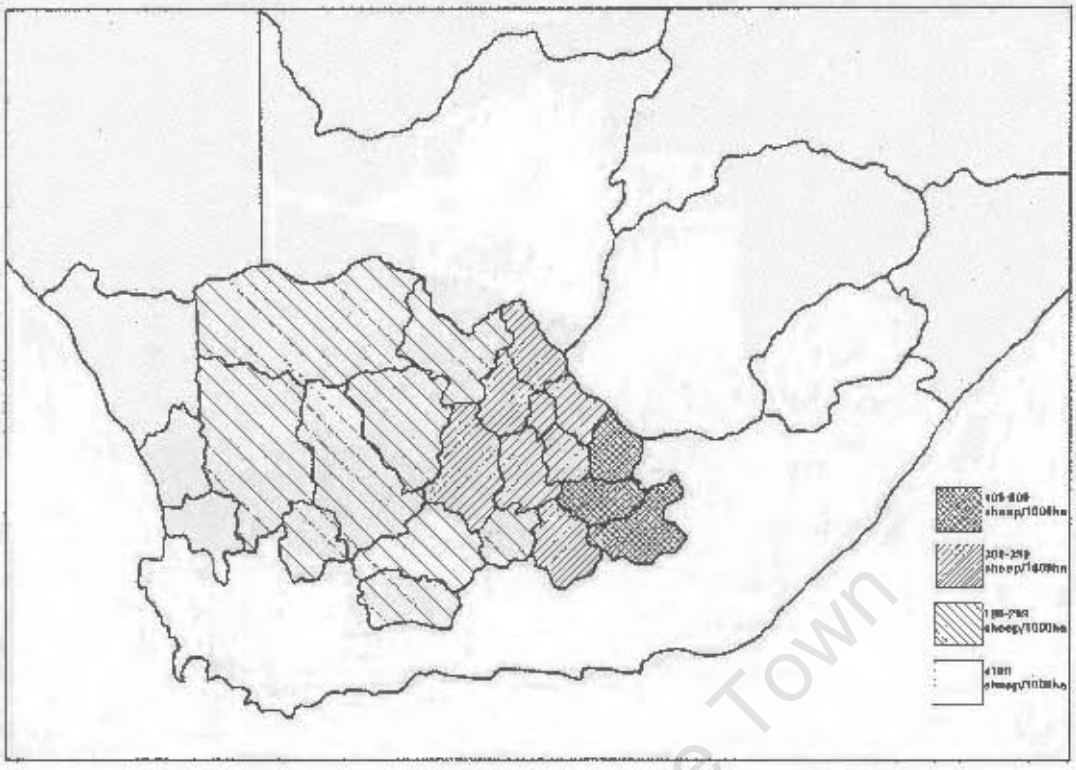


Figure 5.10: Densities of sheep per 1000 hectares, 1911.

It is clear that, apart from the mortality caused by rinderpest, there was a general increase in both cattle and sheep in all the regions prior to the trek of 1895-6. The general upward trend in sheep numbers is most marked, with sustained growth occurring in the north western and northern and central districts notwithstanding the impact of the rinderpest, drought and indiscriminate stock theft during the Anglo-Boer War[51]. These regions were essential to the phenomenon of springbok treks, providing, as they did, the space for population growth during favourable climatic conditions, and the increase in livestock numbers here cannot have boded well for the antelope and its natural population fluctuations. Equally importantly densities remained highest in the north eastern districts and continued to prevent the overflow of trekbokke from

[51] See: Constantine, R.J. 1996. 'The guerilla war in the Cape Colony during the South African War of 1899-1902: A case study of the republican and rebel commando movement', Unpublished MA Thesis, University of Cape Town. pp.20-44; pp.133-149; pp.165-175.

the northern and central districts into this area. Although, as can be seen from Figure 5.8, 5.9 and 5.10, sheep densities fell slightly across the board between 1891 and 1904, the trend for greater densities to persist in the eastern districts, and effectively exclude trekbokke, continued.

The colonisation of the *Achterveld* by both humans and livestock was of course facilitated by the provision of water and the increase in boreholes and wells also provides an insight into this process.

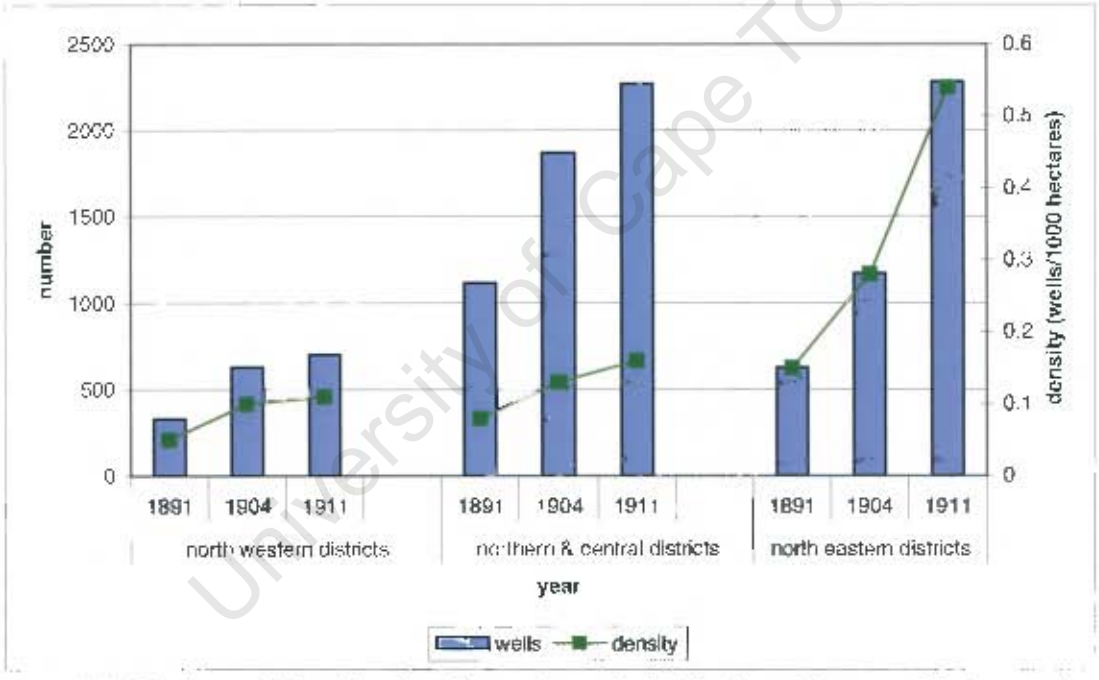


Figure 5.11: Numbers and densities of wells (artesian and other) in the north western districts, northern & central districts, north eastern districts, 1891-1911[52]

Figure 5.11 reflects the significant increase in artificial sources of permanent water over the period 1891 to 1911 and this development was instrumental in enabling extensive and permanent pastoralism in the previously seasonally utilised northern Cape Colony. Perhaps more important than the increase in livestock numbers however

[52] Source: Cape of Good Hope, 1891;1904; Union of South Africa, 1912.

was the associated growth in the human population, and more specifically that of white settlers.

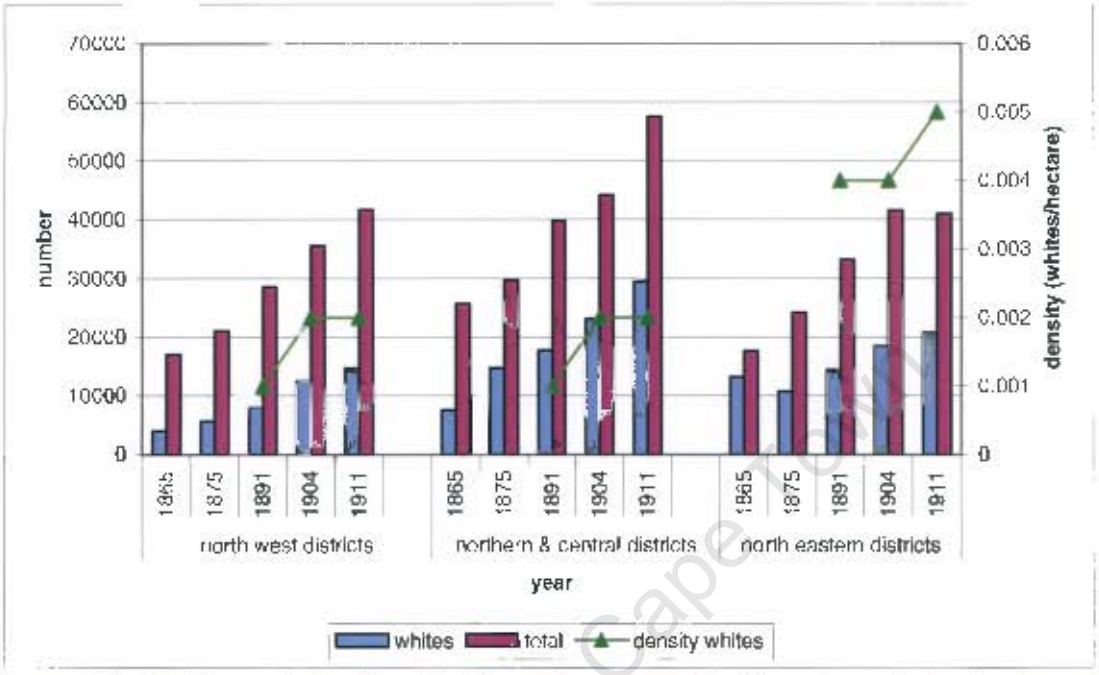


Figure 5.12: Numbers and densities of white settlers compared with total population in the north western districts, northern and central districts, and north eastern districts, 1865-1911[53]

Settlers brought with them their own need for protein. Wild game, such as springbok, would have supplied an important part of this, with domestic stock such as woolled sheep, being preserved for the market. Even more importantly springbok, especially the trekbokke, did massive damage to the pasture and gardens maintained by farmers. Even when the veld wasn't trampled to dust it was said that sheep wouldn't graze where springbok had cropped the grass.[54] This damage, both real and imagined, encouraged the indiscriminate slaughter of springbok. Stockenstrom, in 1824, had identified the arid areas of the northern and central districts, and the absence of a

[53] Source: Cape of Good Hope, 1865; 1875; 1891; 1898; 1904; Union of South Africa, 1912.
[54] *Courier*, 12 August 1880.

permanent settler presence, as the key to the springbok treks[55]: With this refuge increasingly penetrated and ultimately lost to settlement and livestock, the Karoo springbok treks were seriously imperilled.

"The fertile brain and inventive power of man" – the effects of fencing

Another innovation brought by settlers to the springbok range was fencing. This development was integral to both control and ownership of the landscape.[56] As early as 1880, the *Victoria West Messenger* argued for wide scale fencing of farms to protect both stock and grazing against the invasion of springbok herds[57] and it is clear that as wire fencing spread it proved effective against invasion by trekbokke. Springbok did occasionally damage and tear down small stretches of fence[58] but the confidence with which the *Colesberg Advertiser* could refute claims of a trek in the area in 1893 citing the fact that the whole country was "traversed by a network of wire fences"[59] suggests that this generally proved an efficient method of exclusion. In 1893 only about 17% of the Colesberg district was enclosed indicating the extent to which even limited enclosure curtailed springbok movements.

Similarly, in Graaff-Reinet the initial decline in springbok numbers in the 1850s was blamed on fencing and the end of the age of the trekbokke locally was widely ascribed to enclosure. Ironically however, this process, driven by the ostrich feather

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[55] Hutton, C.W. (ed.). 1887. *The Autobiography of the Late Sir Andries Stockenstrom*, J.C. Juta & Co., Cape Town. pp.37-39.
[56] See: Van Sittert, L. 2002. 'Holding the line: The rural enclosure movement in the Cape Colony, c.1865-c.1910', *Journal of African History*, 43: pp.95-118.
[57] *Victoria West Messenger*, 4 October 1880.
[58] See: *De Britstowner*, 10 April 1896; Cronwright-Schreiner, S.C. 1899. 'The 'trekbokke' (migratory springbucks); and the 'trek' of 1896', *The Zoologist*, reprinted in: Cronwright-Schreiner, S.C. 1925. *The Migratory Springbucks of South Africa (the Trekbokke). Also an Essay on the Ostrich and a Letter Descriptive of the Zambezi Falls*, Hamilton, Adams, London. p. 45; Green, L.G. 1955. *Karoo*, Howard Timmins, Cape Town. p.39.
[59] *Colesberg Advertiser*, 21 July 1893.

	1884	1885	1891	1892	1893	1894	1895	1896	1897	1898	1899	1903	1905	1906	1907	1908	1909
Midland Districts																	
Graaff-Reinet	P18/ 251																
Cradock			P4/ 22														
Murraysburg					P278/ 1479												
Middelburg						P70/ 414											
North eastern Districts																	
Hanover	P246/ 1095	P96/ 1279		P85/ 594													
Colesberg				P46/ 330													
Philipstown				P390/ 2334	P407/ 1958			P332/ 2056									
Hopetown						P65/ 395			P526/ 2659	P124/ 800							
Richmond							P260/ 1178, P363/ 1639		P330/ 1843	P5/13, P255/ 2024	P179/ 1336						
Britstown													P274 789	P22/ 333			
Northern & central Districts																	
Victoria West							P178/ 830										
North western Districts																	
Van Rhyn's Dorp												P128/ 1493 P313/ 1674	P290/ 966				
Clanwilliam														P125/ 1575	P595/ 2023	P163/ 1156	
Namaqualand														P324/ 1129			P330/ 459

Table 5.3: Year of proclamation of the Fencing Act in four regions of the Karoo (Source: Cape of Good Hope, *Government Gazette*, 1883-1909; P18/251 = Proclamation 18 of 1884, *Government Gazette*, p 251)

boom, also allowed the recovery of the local springbok population, encamped populations being "jealously protected", except during annual Hunts given for family, friends and neighbours.[60] This transformation in the nature of springbok populations from nomadic to sedentary was an irrevocable one that was to follow in the wake of fencing's advance across the Colony.

Fencing was initially most concentrated in the Midland divisions of the Cape Colony[61] where long established districts such as Graaff-Reinet (78%), Cradock (79%) and Colesberg 90%) were almost completely enclosed by 1911. Districts such as Middelburg (75%), Philipstown (72%) and Hope Town (82%) were not far behind and in some cases even overtook their predecessors. The more remote and less densely populated districts such as Namaqualand and Kenhardt were much slower to follow and both still less than 1% enclosed by 1911. The proclamation of the Fencing Act (No.30, 1883) spread steadily across the Karoo (see Table 5.3) and as can be seen in Figures 5.13-5.16, fencing flourished first in the older, more densely settled eastern districts of the Karoo, only spreading very gradually into the lower rainfall districts of the interior where population densities were lower, farms larger and farming more extensive.

[60] See: Roche, C. 2003. '"Fighting their battles o'er again": The springbok Hunt in Graaff-Reinet, 1860-1908', *Kronos*, 29: forthcoming.
[61] See: Van Sittert, 2002.

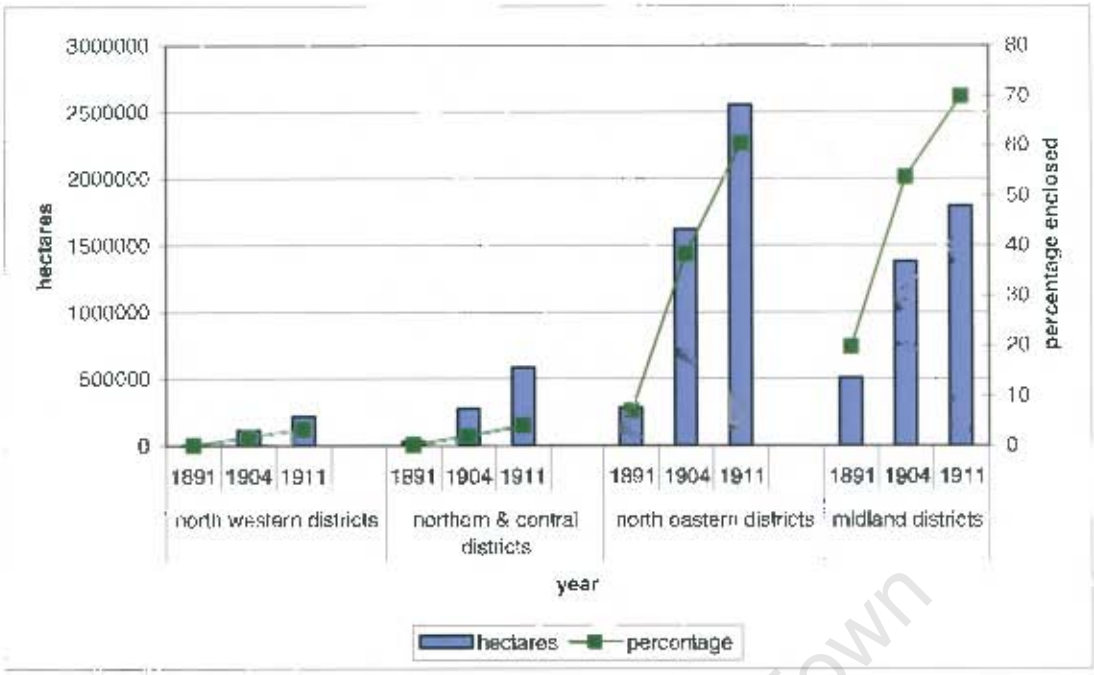


Figure 5.13: The increase in fencing (ha) and the extent (%) of the country enclosed in the north western districts, the northern & central districts, north eastern districts, and the midland districts, 1891-1911[62]

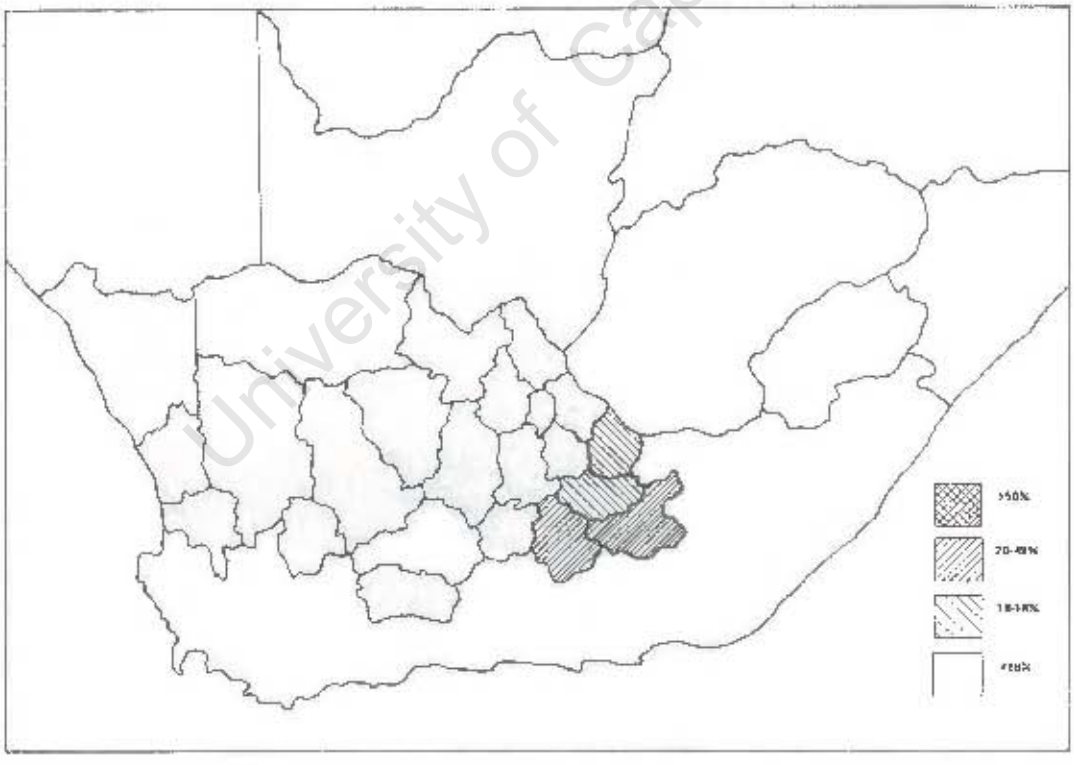


Figure 5.14: Extent of enclosure, 1891

[62]Source: Cape of Good Hope, 1865;1875;1891;1898;1904; Union of South Africa, 1912.

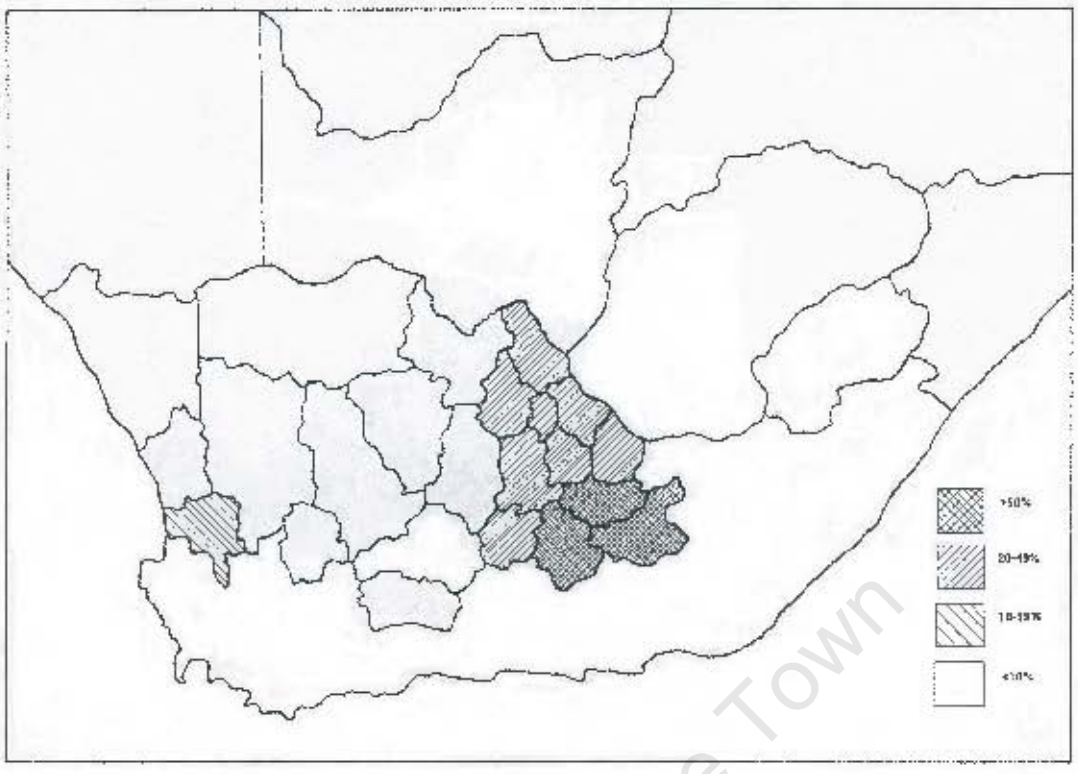


Figure 5.15: Extent of enclosure, 1904

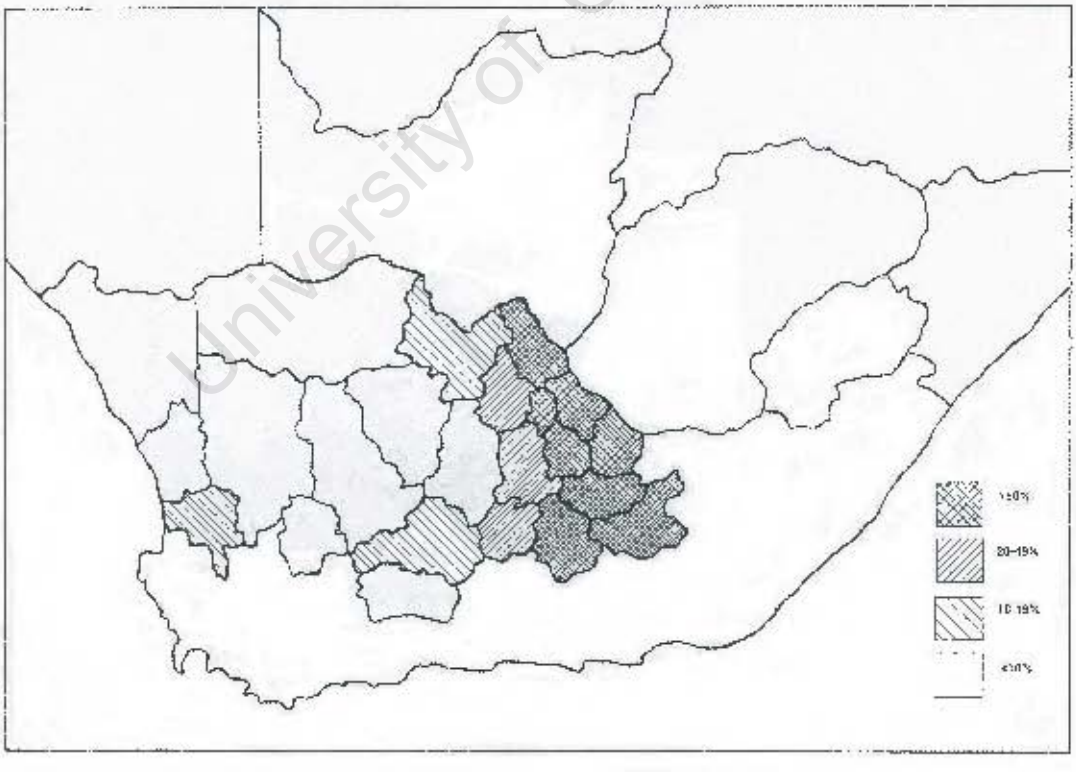


Figure 5.16: Extent of enclosure, 1911

While the eastern districts were soon covered with a "network of wire fences" that prevented the invasion of trekbokke into these better-watered areas, the *Achterveld* remained relatively unenclosed. Between 1904 and 1911 however, key districts such as Calvinia, Fraserburg and Carnarvon increased the area fenced by 54%, 61% and 68% respectively. Fencing over this period appears to have actually decreased in Kenhardt[63], but ultimately, between 1891 and 1911, "the fertile brain and inventive power of man" invoked by the Victoria West Messenger in 1880[64] had triumphed and the "gigantic scheme" of fencing the perimeter of every farm began to gain momentum. Skinner's original contention that fencing began only twenty years after treks had already ceased is patently incorrect. Instead the opportunistic movement in the *Achterveld* in response to rain, integral to both springbok population fluctuations and treks, was significantly curtailed. The trek overflow areas of the better-watered eastern karoo districts were the first to be enclosed by a moving wire fencing front advancing gradually westward. The effective fencing out of springbok from the districts of Hopetown and Philipstown and the Seacow River Valley by the 1890s resulted in the build up and concentration of trekbok numbers in the unenclosed triangle between the towns of Britstown, Vosburg and Victoria West in 1896. Exacerbating this cul de sac was the effect of drought in the districts to the north, south and west suggesting that the natural mortality of the 1896 trek was considerably higher than in earlier, more dispersed, mass movements.

[63] The figures presented in the 1911 census are perhaps incorrect as the decrease – 60732.2ha to 38018.2ha, or 37% - could be considered too large to be realistic.
[64] *Victoria West Messenger*, 4 October 1880.

"*de klacht van den dag is der verschrikkelyke droogte*" – the twin effects of drought and hunting, 1895-1908

Perhaps the most important impact on the 1895-6 trek was hunting. The unnatural concentration of springbok in a cul de sac of fencing and drought in the Britstown-Vosburg-Victoria West triangle allowed for a more focused and sustained exploitation, and ultimately decimation, of the trekbokke than previously. Whereas earlier 'mega-treks', such as those of 1861-2, 1872-3, 1877-8 and 1880, had followed the same pattern and build up as that of 1895-6 their movements were far less restricted with the result that concentrations were not as marked or as prolonged and the human-induced impact on mortality therefore significantly less, permitting the natural 'boom and bust' springbok population cycle to continue.

The effects of both prolonged hunting and drought on the 1895-6 trek, reviewed in Chapter four, produced an unprecedented mortality of trekbokke. The continuing drought of 1897 and 1898 only exacerbated the initial impact and ensured that there was no immediate recovery in the population. Rather, instead of a wet cycle, the promising years 1899-1901 gave way to a decade, that, with the exception of 1907, was significantly drier than even the mid-1890s.

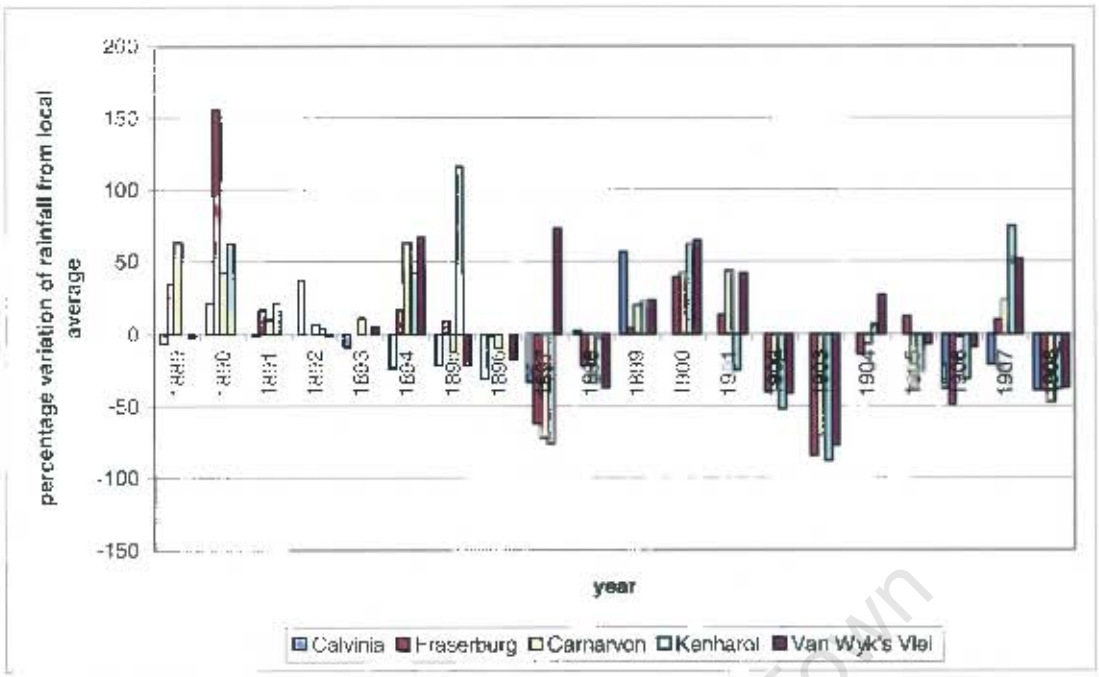


Figure 5.17: Percentage variation of annual rainfall in the *Achterveld*, 1889-1908[65]

In Upington during 1903 "*de klacht van den dag [was] der verschrikkelyke droogte*"[66] and the same was also true of most of the districts south of the Orange River. Complaints of drought in districts such as Kenhardt and Prieska filled the local press[67] and in Beaufort West the proverbial "oldest farmers in the district" held that it was "by far the severest drought that has been known here."[68] By July 1903 Kenhardt was described as devoid of people or stock, the inhabitants having trekked north of the Orange River in search of pasture.[69] By year end it was accepted that the districts worst affected were Fraserburg, Carnarvon, Victoria West and Beaufort West.[70]

[65] Annual rainfall figures taken from Meteorological Commission data published in the Statistical Register of the Cape of Good Hope. Average rainfall figures obtained from: Union of South Africa, 1927. *Rainfall Normals up to the End of 1925 – With an Introduction and a Brief Summary of the Rainfall of the Union of South Africa* [UG.23-'27].
[66] *Victoria West Messenger*, 16 October 1903.
[67] See for example: *Victoria West Messenger*, 24 February 1905; CAD: CO 7750, 1810: Kenhardt distress. [1902-1903]
[68] *Courier*, 26 March 1903.
[69] *Courier*, 23 July 1903.
[70] *Courier*, 19 November 1903.

Public prayers for rain were held in Beaufort West in early 1904[71] and although the drought conditions in the interior lifted somewhat during 1904 and 1905 (see Figure 5.17), as a result of exhausted local grazing the *trekboere* of the Fraserburg district were said to "*rond maal soo's spring-bokke, en weet ni waarheen ni.*"[72] Even in the regions of much higher rainfall such as Graaff-Reinet, the drought took its toll, and as a result even these springbok, which were known to be more drought resistant that domestic stock, were "so *ma'er* that they die easily from fright,"[73] and hundreds reportedly perished during the drought.[74] By 1908 the persistent drought lead to widespread speculation that "South Africa [was] becoming parched up" due to the "decreasing African rainfall."[75]

This extended drought precluded a recovery in springbok numbers, a fact borne out by the lack of reported treks during this period. Hunting continued of course, not on the scale of 1896, but in the *Achterveld* springbok were still regarded as vermin and a threat to what was essentially a marginal agrarian economy under massive pressure from drought[76].

[71] *Courier*, 7 January 1904.
[72] *Victoria West Messenger*, 24 February 1905.
[73] *Victoria West Messenger*, 20 May 1905.
[74] *Graaff Reinet Advertiser*, 28 June 1905.
[75] *Victoria West Messenger*, 6 February 1908; 13 August 1908.
[76] *Victoria West Messenger*, 5 July 1906.

Figure 5.18: A hunt in the Prieska district in 1900[77]

In addition to hunting organised, either for sport or for vermin extermination, springbok was also important as a source of protein during both the South African War (see Figure 5.19) and the drought, the activities of Boer guerrillas affecting all the districts discussed[78].

[77] Van Jaarsveld, A.Z.A. n.d. *Kroniek van Eeu-ou Prieska 1882-1982*, Municipaliteit Prieska, Prieska. p. 171.
[78] See: Constantine, 1996. pp.20-44; pp.133-149; pp.165-175.

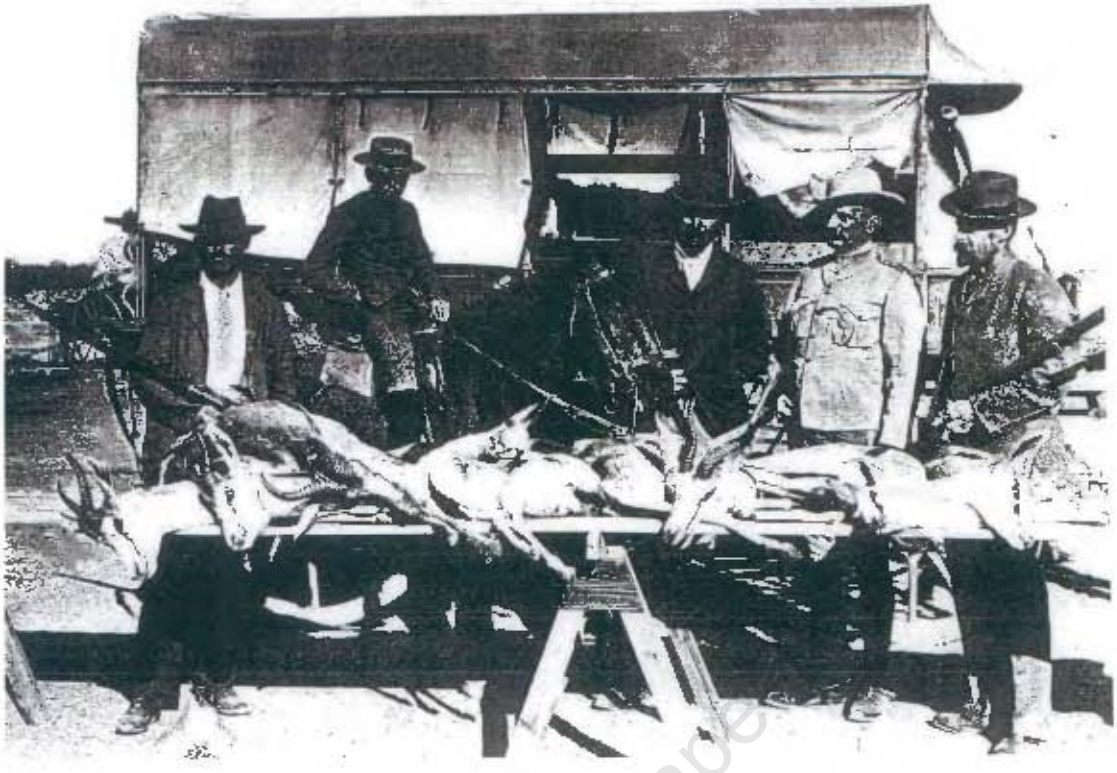


Figure 5.19: "Group of Boers beside a trestle table loaded with Springbok carcasses."[79]

In Victoria West during 1903, to the great relief of the population, the Game Law was suspended, "not so much to serve sportsmen, but to enable the poorer class to eke out their meagre food supply with game."[80] The similar importance of springbok to households in the Kenhardt district was noted the following year by a correspondent of the *Victoria West Messenger*,[81] and even ostrich, during the open season, were hunted for biltong and to protect the pasture.[82] Kimberley, although beyond the range of the *trekbokken* and a substantially larger town than those within the *Achterveld*, serves as a vivid example of the importance of "game" to sustenance. Accounts of the diamond fields record how an industry developed to meet the demand of the diggings

[79] CAD; AG 2221: "Anglo-Boer War. Group of Boers beside a trestle table loaded with Springbok carcasses. A covered wagon is in the background."
[80] *Victoria West Messenger*, 18 December 1903.
[81] *Victoria West Messenger*, 18 November 1904.
[82] *Victoria West Messenger*, 27 September 1906.

Figure 5.20: "Game on Morning Market Kimberley. 6.5.05" While a few guineafowl and steenbok are apparent in the foreground, the bulk of the carcasses displayed are springbok. (McGregor Museum: Hunting 799.2 HUN, MMKP 5031.)

for meat, "many men [spending] their morning in the veld, shooting whatever they came across, and trekking towards the diggings in the afternoon to sell what they shot on the early morning market,"[83] and there is no doubt that this "extractive industry" was both burgeoning and profitable. In the 1904 hunting season for example 12975 "head of game", realising £2752, was sold on the Kimberley market. In 1905 this figure was 29119 at £4667, and in 1906, 40933 at £4829. Springbok were not the only target of market hunting however and in 1906 the composition of the trade was: Springbok 4025; Duiker 174; Steenbok 1415; Hares 5131; Korhaan 3565; Redwing Francolin 2957; Guineafowl 818; Bustards 59; Wild Duck 130; Geese 33; small birds 22626.[84]

In short, the twin effects of drought and hunting first ensured abnormal mortality during the 1895-6 trek and then, together with a range steadily shrunken by fencing, effectively prevented any recovery in the population over the ensuing decade, thus accounting for the mass mortality that precipitated the disappearance of springbok treks and which Skinner ascribed to rinderpest.

Conclusions

The theory that i) the increase in livestock and human populations, ii) the spread of enclosure and iii), the effects of drought and hunting, restricted the movement of trekbokke and ultimately caused the extinction of the phenomenon of springbok treks

[83] McNish, J.T. 1968. *The Road to El Dorado*, C. Struik, Cape Town. pp.261-262.
[84] Horsbrugh, B. 1912. *The Game-birds and Waterfowl of South Africa*, Witherby & Co., London. p.26. This contradicts Shillington who believed that springbok disappeared from the Kimberley market by 1877. He cites newspaper records as evidence for this, but it is more likely that rather than being absent altogether, the sale of springbok was simply not reported in the local market reports. See: Shillington, K. 1982. 'The impact of the diamond discoveries on the Kimberley hinterland: Class formation, colonialism and resistance among the Thlaping of Griqualand West in the 1870s', in: Marks, S & Rathbone, R. (eds). *Industrialisation and Social Change in South Africa: African Class Formation, Culture and Consciousness 1870-1930*, Longman, New York. p.105.

is supported by mapping the extent and record of treks between 1770 and 1897. Figures 5.21-5.23 all show clearly the manner in which springbok movements were circumscribed and pushed back westward by encroaching settlement. The process had been noted by Scully in 1898, who observed that "as the area over which the bucks range becomes more and more circumscribed, the trek, although the numbers of bucks is rapidly diminishing, becomes more and more destructive owing to its greater concentration."[85] He used this argument to explain the destructive impact of the 1892 trek in Namaqualand, but this can be even more clearly seen in the far better documented 1895-6 trek. In the case of the latter trek, the cul de sac caused by colonial expansion, a significant aspect of which was fencing, and drought resulted in an unusually concentrated, sustained and severe impact on pasture. Abnormal mortalities resulted, and, combined with the devastating impacts of equally unprecedented hunting, effectively reduced the trekbokke to numbers below a population threshold from which early recovery was possible. This recovery was further prevented by a continued period of prolonged drought and exacerbated by continued hunting.

[85] Scully, W.C. 1898. *Between Sun and Sand: a Tale of an African Desert*, Juta, Cape Town. pp.104-105.

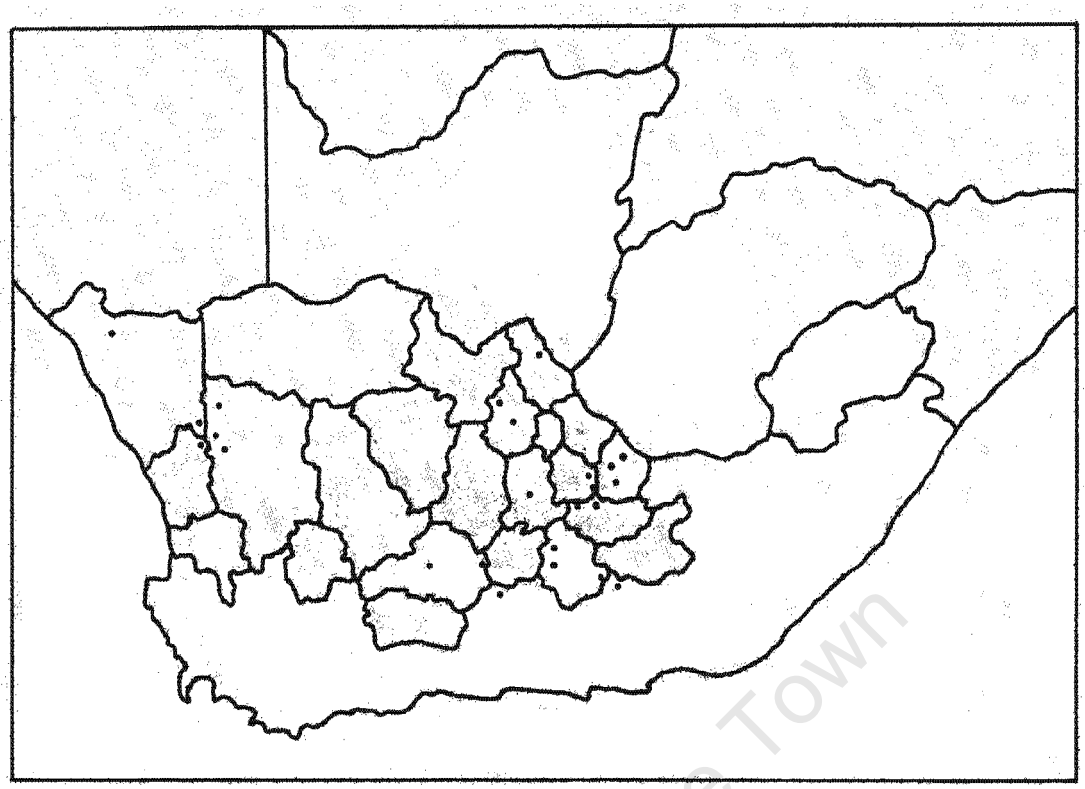


Figure 5.21: Location of recorded springbok treks in the Karoo, <1850

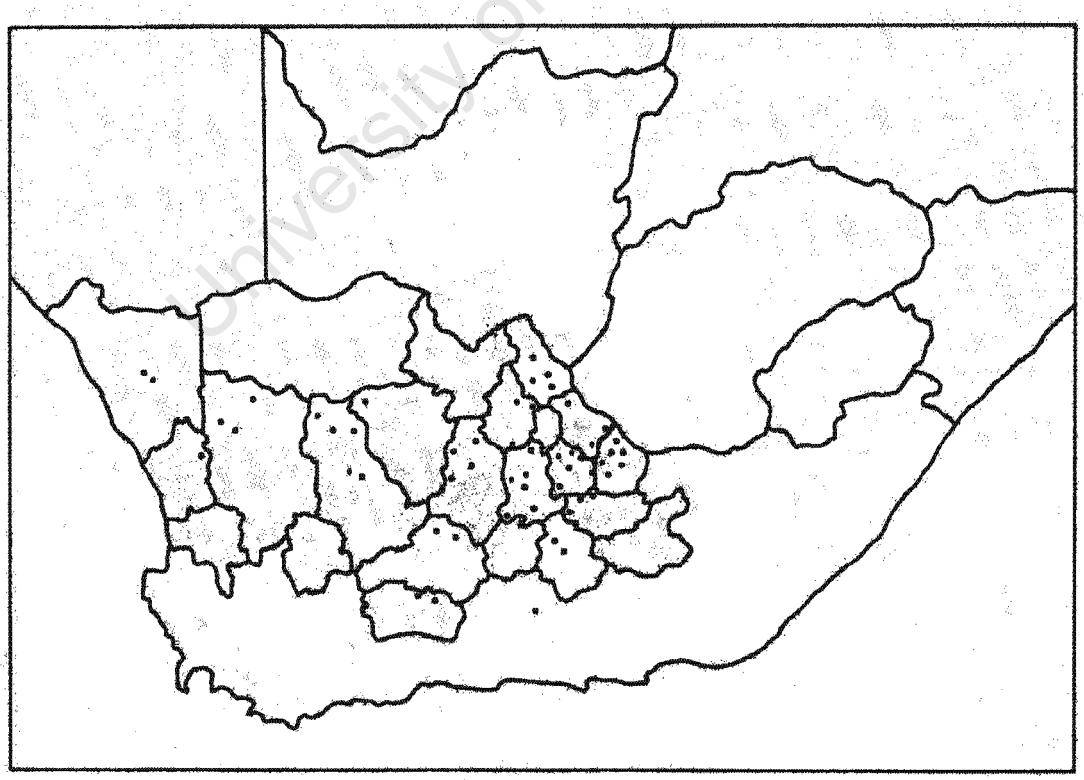


Figure 5.22: Location of recorded springbok treks in the Karoo, 1851-1879

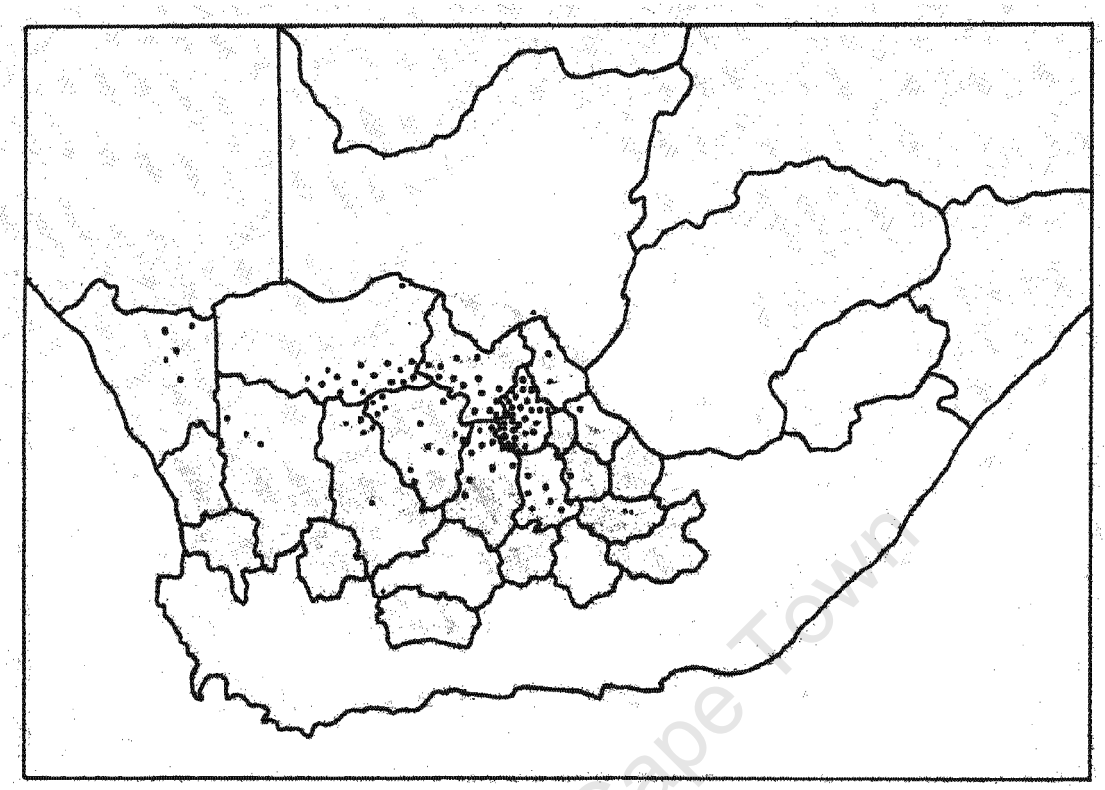


Figure 5.23: Location of recorded springbok treks in the Karoo, 1880-1897

Skinner and Louw's conclusion that rinderpest was the main cause of the demise of the springbok treks is thus clearly wrong, the disease playing little or no role in the 1895-6 trek or in springbok mortality in the years thereafter. In much the same way as an amalgam of environmental and anthropogenic factors are considered to have caused the destruction of the bison[86], the end of springbok treks in the Karoo can instead be attributed to a complex combination of factors including the increase in livestock and human populations, the spread of fencing and increasing enclosure, drought and hunting. The combined effect of all these factors ensured that the conditions necessary to sustain cyclical springbok treks in the Karoo were completely eroded and the advent of the Game Law Amendment Act No 11 in August 1908, for

[86] See: Isenberg, A.C. 2000. *The Destruction of the Bison: An Environmental History, 1750-1920*, Cambridge University Press, Cambridge. pp.123-163.

all its good intentions to include the trekbokke as "game", was a clear case of closing the stable door after the horse had bolted.

CONCLUSION:

In essence this thesis had at its core three main aims. The first was to clarify the circumstances of the nineteenth century Karoo springbok treks and, in understanding its dynamics and ecology, to demythologise the phenomenon. The second was to generate data and a model useful for potential protected area proclamation and management in the Karoo with regard to re-instituting large-scale springbok movements. Finally, in achieving the first two it was hoped to further explore new ways of using historical sources in environmental history and to further bridge the gap between it and historical ecology.

Adequate answers?

The questions posed by Lovegrove and others and introduced in Chapter 1 - Where did these vast herds come from? Where did they go? Why and how often did they migrate? Were the treks true migrations or merely nomadic movements? How many springbok were involved, over which routes did they travel and why did the treks end? – formed the main line of inquiry in the thesis and were addressed in Chapters 2,3,4 and 5. A review of contemporary and scientific literature as well as /Xam ethnography provided a background against which a close reading of the Karoo press could be measured, this latter source providing a chronological record of trek events. The temporal and spatial occurrence of springbok treks compared with climate reconstructions and later detailed rainfall records, allowed the formulation of a model explaining the ecological parameters of the phenomenon.

While contemporary and modern commentators had largely viewed treks as single, isolated events, it is now clear that they must be viewed as part of a cycle of rainfall

and reproduction, with favourable climatic conditions resulting in exponential population growth in an extraordinarily fecund ungulate until such growth (or a change in climatic conditions) exhausts the available food supply whereupon mass migration away from the exhausted resources takes place. Dispersal may result from renewed abundance of the food supply, but population growth is invariably followed by a crash, the degree of which is dependent on prior growth, as well as past and present rainfall. While on a regional level this cycle is partly predictable, at a finer scale the temporal and spatial occurrence of rainfall within the cycle, and thus springbok reproduction and mortality, are not. Trek routes and sizes are not therefore regular and reliable aspects of the phenomenon and cannot be predicted. It is also clear, when the phenomenon is conceptualised in terms of a cycle that there is no physical beginning or end point. Rather the cycle begins with the growth of scattered sub-populations during good rainfall years, is followed by the concentration of these subpopulations on shrinking resources during periods of below average rainfall, the exhaustion of these resources and the resultant emigration of the population away from this area – the overwhelming majority of which is likely to have followed the same environmental cues and moved together in a mega-trek. The end point is either dispersal or a population crash.

In the Karoo this phenomenon ended as a result of a combination of anthropogenic factors. Contrary to established opinion, springbok treks were not terminated by the rinderpest epidemic, but the conditions essential for the maintenance of the phenomenon were increasingly smothered by factors such as the increase in sheep and human populations as a permanent artificial water supply allowed the *Achterveld* to be settled. Enclosure played a significant role in restricting the access of springbok to the

eastern districts of the Colony – an essential overflow area during times of severe drought – and, together with the increased livestock and human presence, resulted in an abnormal springbok concentration of extended duration during 1896. The natural mortality of such a trek was thus exacerbated by both the reduced area and resources available to it and the enormous toll taken on it by hunting. With continued drought and hunting and the increase in fencing and livestock the springbok population of the *Achterveld* was allowed no chance for recovery and as a result of this, and a much reduced area available to treks, the phenomenon was extinguished.

"The age of the trekbok is not dead – yet!"

Despite the apparent extinction of springbok treks the image of 1896 trek lingered on. As the best-documented and last springbok trek in the Karoo it is the image of this human shaped mega-trek that has remained entrenched in popular and even scientific consciousness and which has resulted in a skewed perception that mistakes the abnormal for the archetypal. In other words, the popular perception of springbok treks is governed by the record of an abnormal event, the 'natural' process of which had already been extensively reshaped by settler impacts. Nonetheless, encouraged by the occurrence of the Kalahari treks in the mid-twentieth century, Skead noted optimistically in 1987, "the age of the trekbok is not dead – yet!"[1]

While this might have applied to the Kalahari, as we have seen the trekbok age had certainly passed in the Karoo. This is not to say that it cannot be resuscitated and following the lead of the 'Buffalo Commons' scheme proposed for the American

[1] Skead, C.J. 1987. *Historical Mammal Incidence in the Cape Province, Volume 2: The Eastern Half of the Cape Province, Including the Ciskei, Transkei and East Griqualand*, The Chief Directorate Nature and Environmental Conservation of the Provincial Administration of the Cape of Good Hope, Cape Town. p. 669.

prairie (see Appendix 4), a similar plan implemented in the Karoo. Dean has analysed land use practises and potential in the Karoo with an eye to identifying suitable areas for formal bird conservation[2] and has mapped priority areas for bird species conservation based on endemism and diversity[3]. He does acknowledge though that eco-tourism in arid areas is likely to attract only low numbers of "specialist" eco-tourists and that large conservation areas are unlikely, for sociological and economic reasons, to be proclaimed.[4]

A spectacular phenomenon, such as springbok treks (with attendant predators of course), is perhaps the key to attracting large numbers of "generalist" eco-tourists, and associated economic development, to a generally depressed region, and may be the catalyst to drive large protected area proclamation in the arid areas of the Karoo most suitable to both trekbok and range restricted species such as the endangered riverine rabbit and vulnerable red lark.

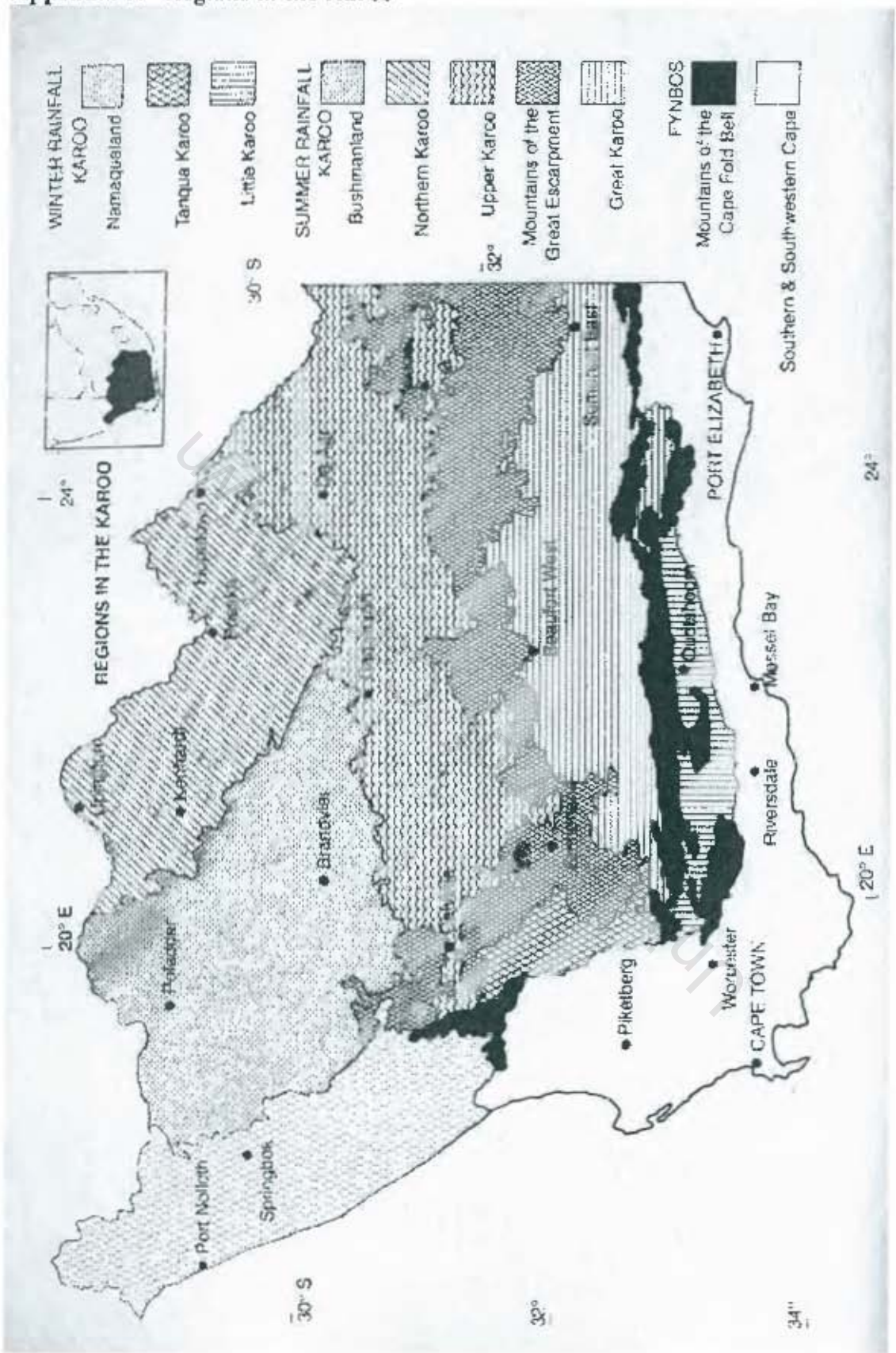
A new model?

Like much environmental history, this thesis does straddle a number of disciplines and may perhaps infringe on the territory, or territoriality, of the exponents of other fields. For this I make no apologies. The subject matter is important, in that it focuses on an ecological and historical phenomenon that no longer occurs, and disappeared before scientists could subject it to systematic scrutiny. This immediately precludes ecological study. The phenomenon was a unique one however and, having as it does such a powerful resonance in white South African consciousness, it would be a pity to

[2] Dean, W.R.J. 1995. 'Where birds are rare or fill the air: the protection of the endemic and the nomadic avifaunas of the Karoo', Unpublished D. Phil Thesis, University of Cape Town. pp. 39-48; pp.175-185.
[3] Dean, 1995. pp.187-219.
[4] Dean, 1995. p. 210; pp. 218-219.

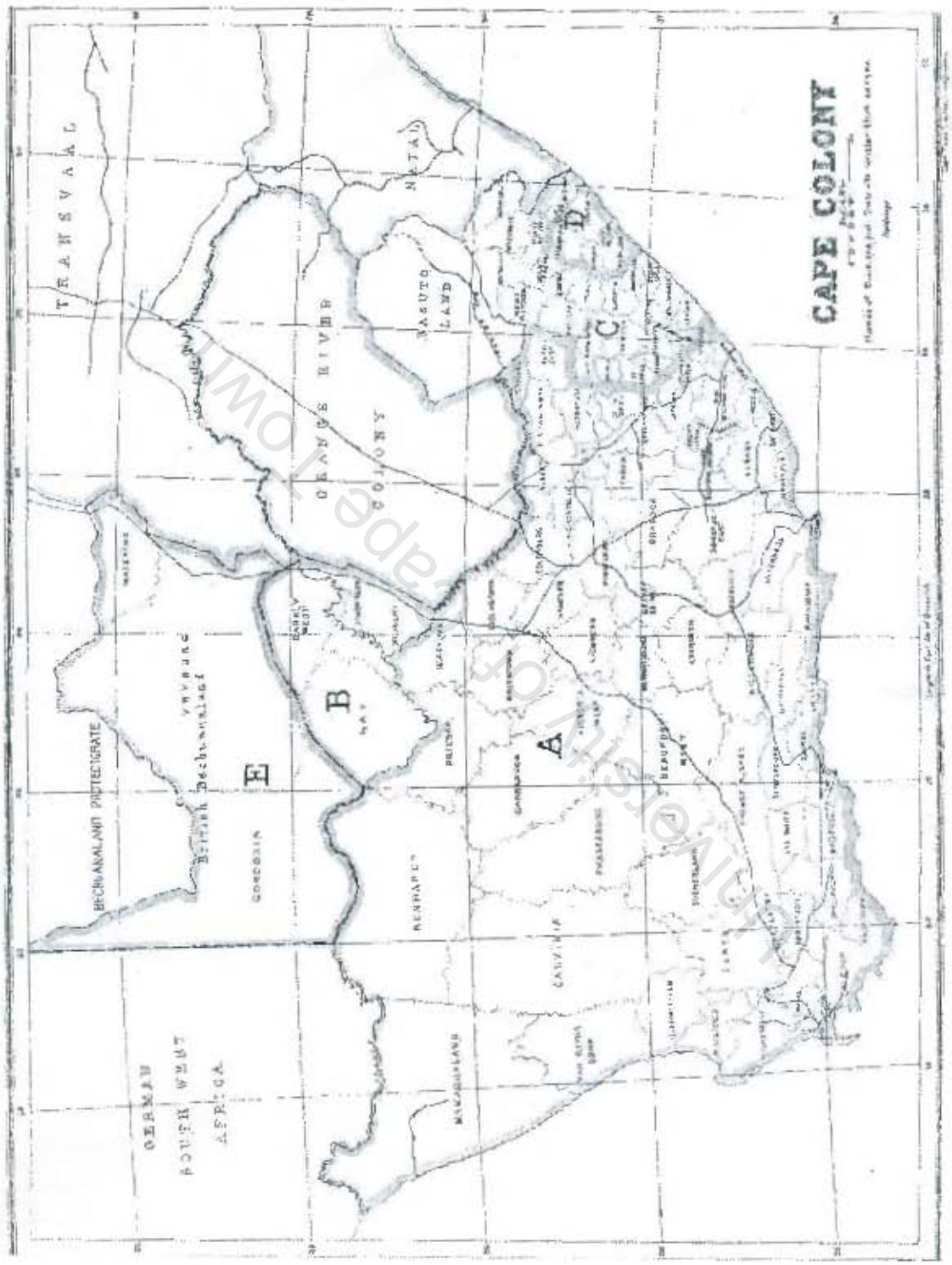
have it consigned to waste heap of bad history and poor science. The subject is of course deserving of more detailed cultural analysis and this will be pursued in an ongoing project, but in writing up the findings presented here it was decided that the ecological focus was the first priority. Whether what is presented here is the foundation for a new model of using of historical sources is a moot point, but what is clear is that, as historical climatologists have proved in elucidating the history of ecological events and the ecology of historical events, such use of historical sources to ask and answer ecological questions is possible and ultimately the resignation that springbok treks would remain an enigma unfounded.

Appendix 1: "Regions in the Karoo"*



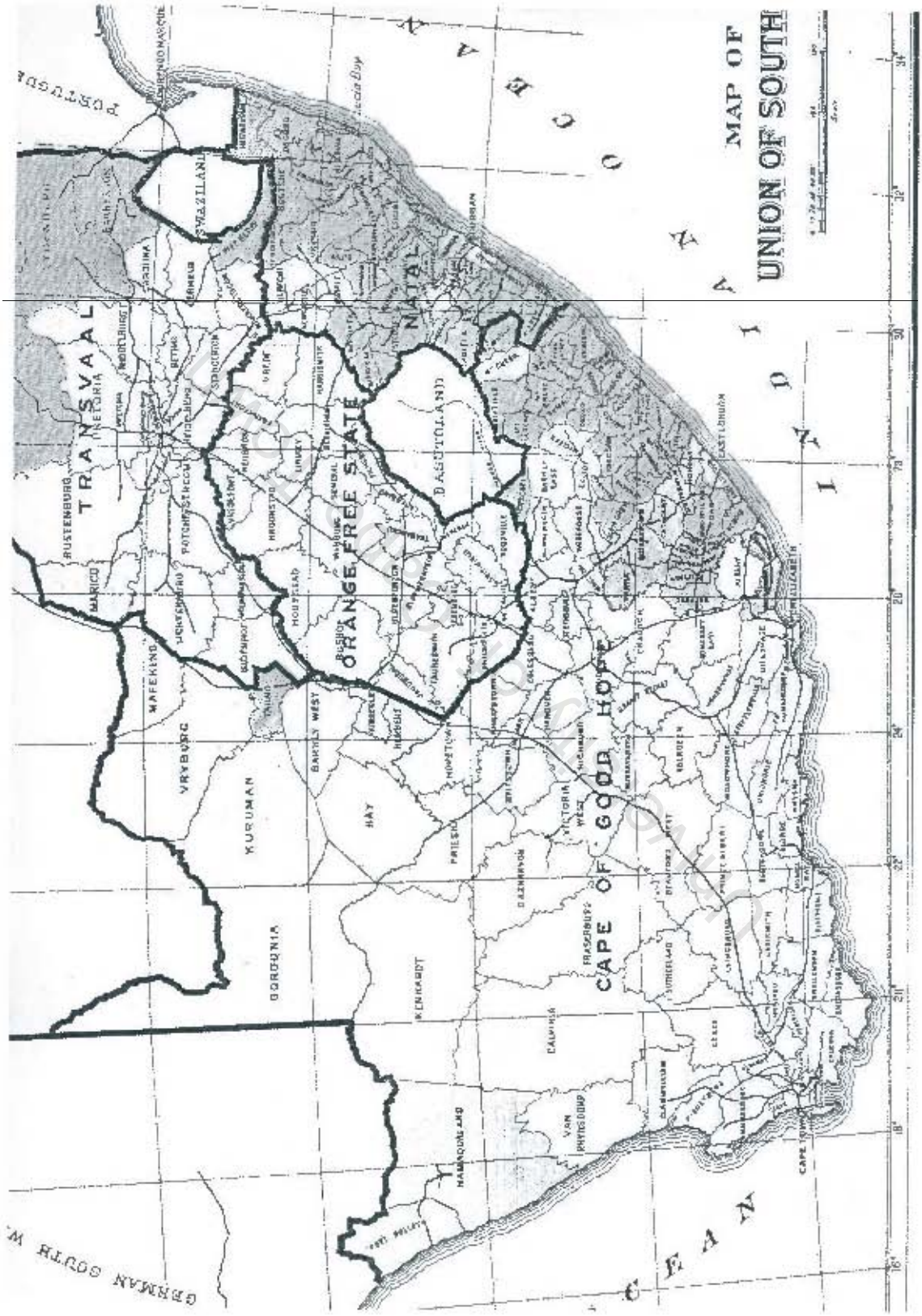
* Shearing, D. 1994. *Karoo: South African Wild Flower Guide 6*, Botanical Society of South Africa, Kirstenbosch. Inside front cover.

Appendix 2: "Division of the Colony into Census Sections in 1891 and 1904"[**]



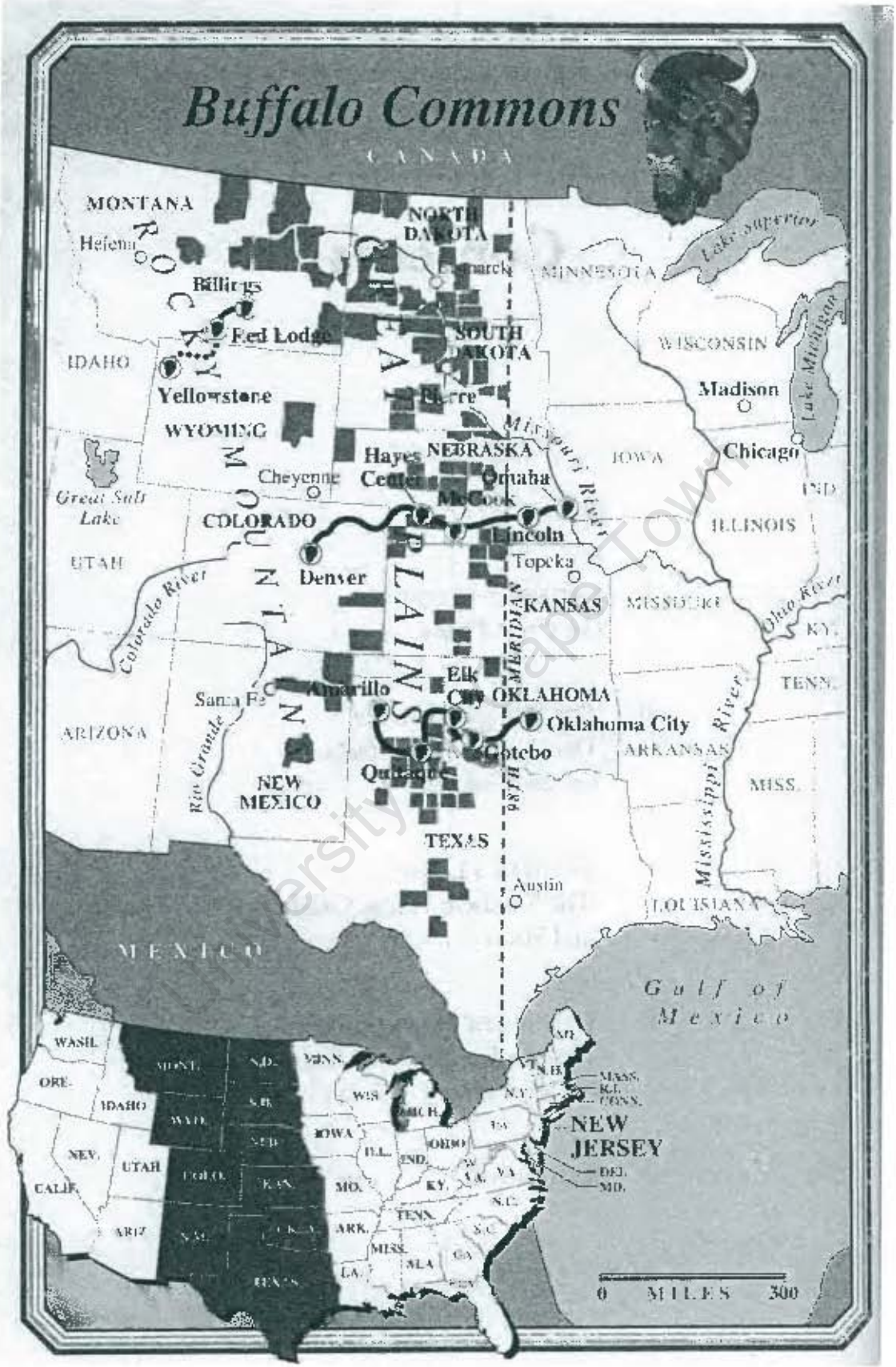
[**] Cape of Good Hope, 1905. *Results of a Census of the Colony of the Cape of Good Hope, 1904* [G.19-1905].

Appendix 3: "Map of the Union of South Africa"***



*** Union of South Africa, 1912. *Census of the Union of South Africa, 1911* [UG.32-1912].

Appendix 4: "Buffalo Commons"**



**** Matthews, A. 1992. *Where the Buffalo Roam – the Storm Over the Revolutionary Plan to Restore America's Great Plains*, Grove Weidenfeld, New York. p.x

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AGR 156, 697	Game protection Beaufort West Division – permission to shoot [1894]
AGR 156, 700	Game protection Britstown – Miscellaneous [1892]
AGR 156, 700	Game protection Britstown – close season for game [1892-1894]
AGR 156, 700	Britstown. Suspension of act with regard to springbok in wards 3 and 6 [1895]
AGR 156, 702	Game protection Calvinia division [1893]
AGR 156, 704	Game protection Carnarvon division [1894-1895]
AGR 156, 712	Game protection Fraserburg division [1892-1894]
AGR 156, 716	Game protection Hanover division [1893-1894]
AGR 157, 720	Game protection Hopetown division [1892-1895]
AGR 157, 723	Game protection, Kenhardt division [1893]
AGR 157, 733	Game protection Namaqualand division [1892-1895]
AGR 157, 737	Game protection Philipstown division [1891-1892]
AGR 157, 741	Game protection, Prieska division [1893-94]
AGR 157, 744	Game protection Richmond division [1893-1894]
AGR 158, 761	Game protection Victoria West division [1892]
AGR 168, 855	Rainfall returns [1893-1895]
AGR 203, 1455	Springbuck on Doornlaagte, Herbert – J.A. van Niekerk's application to shoot without interference [1893]
AGR 211, 1598	Game, permits to shoot, Prieska [1893]
AGR 238, 2357	Van Wyksvlei: issue ammunition for destroying springbucks [1895]
AGR 348, 697	Game protection – Beaufort West [1898-1902]
AGR 348, 700	Game protection - Britstown [1896-1903]
AGR 352, 741	Wild ostriches, Prieksa [1898]
AGR 405, 2376	Springbuck shooting [1896]

Lands Department:

LND 1/284, l1554	Applications for relief under Act 27/87. Division of Carnarvon. [1887-1888]
LND 1/287, L1576	Application for relief on farm 'Graspan' Hopetown [1887]
LND 1/287, L1582	Hope Town Division. Applications for relief under Act 27/87 [1887-1889]
LND 1/309, L2475	Prieska Division, applications for relief under Act 27/87 [1888]
LND 1/385, L6448	Map, Prieska Division, showing outspans [1892]

Colonial Office:

CO 4205, M60	Memorial. H.E. McTaggart forwarding receipt for ammunition brought [1879]
CO 7750, 1810	Kenhardt distress [1902-1903]

Public Works Department:

PWD 2/5/289, U21	Namaqualand, Port Nolloth, driftsands rainfall [1893]

Chief Inspector of Sheep:

CIS 46, 24	Kenhardt: report re: rain in the district [1906-1907]

Graaff-Reinet:

GR 12/127:	Game, trading and wagon licences [1790-1839]

Attorney General:

AG 2221 Anglo-Boer War. Group of Boers beside a trestle table loaded with Springbok carcasses. A covered wagon is in the background.

Cape Archives Depot:

CAD 2/1/1/44 C14/28/259 Historical information. Miscellaneous enquiries by the public. Use of the springbuck as a South African national emblem or symbol. [1942]

NON-OFFICIAL UNPUBLISHED SOURCES

The Bleek and Lloyd Collection – Andrew Bank transcripts:

(Aside a small number of miscellaneous recordings, the notebooks of Bleek and Lloyd Collection are prefixed by the initial of the recorder, i.e. B = Bleek; L = Lloyd, and are followed by the numeral assigned to each informant – I = /A!kunta; II = //Kabbo; IV = =Kasin ; V = Dia!kwain; VII = VIII = /Han=kass'o. Thereafter each notebook is numbered chronologically)

B 24	LII – 18	LII – 37	LV – 16	LVIII – 11	LVIII – 4
B 25	LII – 19	LII – 4	LV – 17	LVIII – 12	LVIII – 5
Black Crow	LII – 2	LII – 5	LV – 18	LVIII – 13	LVIII – 6
Bleek Library	LII – 20	LII – 6	LV – 19	LVIII – 14	LVIII – 7
Bushman speakers	LII – 21	LII – 7	LV – 2	LVIII – 15	LVIII – 8
Day's Heart	LII – 22	LII – 8	LV – 20	LVIII – 16	LVIII – 9
Eclipse of the Sun	LII – 23	LII – 9	LV – 21	LVIII – 17	Mantis & !goe
Genitalia & ...	LII – 24	Lion & f mouse	LV – 22	LVIII – 18	Mantis & moon
How the Elephant	LII – 25	Lion & tortoise	LV – 23	LVIII – 19	Mantis & moon II
Hyena & Lion	LII – 26	Lion, tortoise & ...	LV – 24	LVIII – 2	Moon & hare
L 11	LII - 27	LIV – 1	LV – 25	LVIII – 20	Pictures
LI	LII – 28	LIV – 2	LV – 3	LVIII – 21	Rainmaking
LI – 2	LII – 29	LIV – 3	LV – 4	LVIII – 22	Resurrection of ...
LII – 1	LII – 3	LIV – 4	LV – 5	LVIII – 23	Sending of the ...
LII – 10	LII – 30	LV – 1	LV – 6	LVIII – 24	Songs
LII – 12	LII – 31	LV – 10	LV – 7	LVIII – 25	Monster's speech
LII – 13	LII – 32	LV – 11	LV – 8	LVIII – 26	Young girls
LII – 14	LII – 33	LV – 12	LV – 9	LVIII – 27	
LII – 15	LII – 34	LV – 13	LVII – 1	LVIII – 28	
LII – 16	LII – 35	LV – 14	LVIII – 1	LVIII – 29	
LII – 17	LII - 36	LV – 15	LVIII - 10	LVIII - 3	

The Wellwood Farm Archive:

-Correspondence of Maria Mangin Brown Ca... 5/12/1872 - 29/4/1875; Extracts and notes from Wellwood Diary 1845-1890
-Diary Chas Rubidge from Dec 1850-Feb 1856
-HJ Rubidge – Wellwood – Stock Book 1871-1875
-Wellwood Journal from September 1876 to December 1892
-Stock 1885-1891 also RR cash 1878
-Wellwood Journal 1893-1904
-Wellwood Journal 1905-1910
-Stock 1897-1919
-Remarks on Wellwood Rainfall, 1875-1934 (GW van Zyl, 1934)
-Early History of Wellwood (complied from notes by founders Chas Rubidge 1818-1889 & Richard Rubidge 1853-1927)
-Wellwood History (compiled by RSR, 1958; extracts from diaries of Charles and Richard Rubidge)

The Vosburg Museum:

-Notulen Boek van de Communitsie [?] (Board of Managers) van de Derde Klas Publieke School te Vosburg van 1 Jan 1896-14 Dec 1916

Manuscripts and Archives, University of Cape Town:

BC 234 – letters of WCScully to Harry Bolus (Bolus Herbarium)
BC 293 – letters of WC Scully to WEM Stanford

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1861. *Correspondence on the Subject of the Trekvelden near the Zak River* [A.113-'61]

1863. *Message from His Excellency the Governor, with Enclosures, relative to Affairs in the North-western Districts of the Colony* [A.39-'63]

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1867. *Report of the Select Committee Appointed to Consider and Report on the Game Laws Bill* [A.9-'67]

1868. *Reports received from Various Public Officers in the Divisions of Victoria West, Fraserburg, Calvinia, and Namaqualand relative to the Unsettled State of a Tract of Country lying South of the Orange River* [A.25-'68]

1872. *Report by EJ Dunn, Esq., on the Country Traversed by the 'Gold Prospecting Expedition in Namaqualand &c.*[G.21-'72]

1873. *Report of Dr. Bleek Concerning his Researches into the Bushman Language and Customs Presented to the Honourable the House of Assembly by Command of His Excellency the Governor* [A.17-'73]

1875. *Second Report Concerning Bushman Researches by WHI Bleek, PhD, Curator of the Grey Library, Foreign Member of the Royal Bavarian Academy of Sciences, &c.*,[G.54-'75]

1876. *Census of the Cape, 1875* [G.42-'76]

1879. *Report on and Papers connected with Affairs on the Northern Border of the Colony of the Cape of Good Hope* [G.61-'79]

1887. *Report of the Select Committee of the Legislative Council on Van Wyk's Vley Reservoir and Lands* [C.1-'87]

1887. *Report upon the Reservoir and Irrigable Lands at Van Wyk's Vley, by Garwood Alston, CE, GLS, Baillif in Charge* [G.30-'87]

1888. *Reports upon the Reservoir and Irrigable Lands at Van Wyk's Vley, by Garwood Alston, GLS, Baillif of the Estate, and Professor PD Hahn, PhD. &c.*,[G.49-'88]

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1892. *Census of the Cape, 1891* [G.6-'92]

1892. *Report of Commission on Van Wyk's Vley Estate* [G.31-'92]

1893. *Report of the Meteorological Commission for the Year 1892* [G.31-'93]

1894. *Report of the Meteorological Commission for the Year 1893* [G.43-'94]

1894. *Report of the Baillif, Van Wyk's Vlei Estate, for the Year 1893* [G.57-'94]

1895. *Report of the Baillif, Van Wyk's Vlei Estate, for the Year 1894* [G.32-'95]

1895. *Report of the Meteorological Commission for the Year 1894* [G.35-'95]

1896. *Report of the Baillif, Van Wyk's Vlei Estate, for the Year 1895* [G.10-'96]

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1896. *Rinderpest Conference held at Vryburg, August, 1896* [G.82-'96]

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1897. *Reports by Professor R Koch upon his Investigations into Rinderpest at Kimberley, December 1896, to March 1897* [G.70-'97]

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1898. *Report of the Meteorological Commission for the Year 1893* [G.76-'98]

1899. *Reports by the Special Commissioner Appointed to Inquire into the Agricultural Distress and Land Matters in the Divisions of Clanwilliam, Van Rhyn's Dorp, Calvinia, Fraserburg, Carnarvon, Kenhardt, Gordonia, Prieska and Hope Town* [G.68-'99]

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NEWSPAPERS AND PERIODICALS

NEWSPAPERS:

Newspaper	Districts & Towns covered	Frequency	Language	Dates
The Graaff-Reinet Herald	Graaff-Reinet, Hope Town, Colesberg, Hanover, Richmond, Middelburg, Murraysburg, Victoria West, Willowmore, Aberdeen, Pearston, Somerset East, Cradock and Beaufort West	Weekly & twice weekly	English	25 August 1852-27 August 1884
The Graaff-Reinet Advertiser	Graaff-Reinet, Murraysburg, Richmond, Hanover, Middelburg, Aberdeen, Victoria West,	Twice & thrice weekly	English	6 January 1885-January 1909
De Graaff Reinetter	Graaff-Reinet, Murraysburg, Aberdeen, Richmond, Middelburg and Cradock	Twice weekly	Dutch	1 January 1886-30 June 1902
The Beaufort Courier/ De Beaufort Courant (later *Courier/Courant*)	Beaufort West, Fraserburg, Victoria West, Prince Albert, Richmond, Kenhardt, Carnarvon, Prieska and Van Wyk's Vlei	Weekly & twice weekly	English & Dutch	1 October 1869-25 January 1909 [excluding 1898-9; 1901]
The Victoria West Messenger/ De Victoria West Nieuwsbode	Victoria West, Carnarvon, Van Wyk's Vlei, Kenhardt, Prieska, Britstown, Vosburg, Beaufort West and Richmond	Weekly	English & Dutch	1 July 1876-January 1909 [excluding 1885-7; 1896]
The Colesberg Advertiser/ Afrikaansche Boerenvriend	Colesberg, Philipstown, Hope Town, Hanover, Richmond and Middelburg	Weekly	English & Dutch	1861-1862; 1864; 1871-1872; 1877; 1882; 1893-1896
The Era/ Bonds Bazuin	Richmond, Britstown, Murraysburg, Hanover, Hope Town and Victoria West	Weekly	Dutch & English	1871; 1893-1894
De Britstowner	Britstown, Vosburg, Prieska and Kenhardt	Weekly	Dutch & English	3 February 1893-14 September 1898
De Britstown Bode	Britstown	Weekly	Dutch & English	6 January 1900-24 December 1901

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-*Cape Monthly Magazine* Jan 1857-June 1862; July 1870-June 1872; Feb; April; August-December 1874 [monthly; English]

-*Cape Quarterly Review* October 1881-April 1883 [quarterly; English]

-*Eastern Province Monthly Magazine* September 1856-August 1858 [monthly; English]

- *South African Illustrated News* April 1884-December 1884; February 1885-December 1885 [twice weekly; English]

-*South African Magazine* January-November 1868; January, April, June; July October-December 1869 [monthly; English]

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McGregor Museum, Kimberley:

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MMKP 2001: 'Rooipoort 27.7.1896'/'A day's shoot: Brakpan'

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MMKP 5031: 'Game on Morning Market Kimberley, 6.5.05'

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'Shooting party given by CJ Rhodes: 1897 May 20'

Karoo Gallery, Graaff-Reinet:

'Morning Coffee: Before the Hunt' by William Roe, Graaff-Reinet photographer

'Springbok Hunt: Lunch in the Veld' by William Roe, Graaff-Reinet photographer

Untitled (trekbok-hunting party with carcasses)

Untitled (hunting party on the veld)

Britstown Museum, Britstown:

'Frans Eagleton' by JG Fourie, Philipstown photographer