

## AN EARLY DUTCH SETTLEMENT PATTERN ON THE NORTH EAST FRONTIER OF THE CAPE COLONY\*

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\*Accepted for publication June 1994

### ABSTRACT

Pioneer trekboer farm boundaries in the Seacow River valley, northeastern Karoo are described. Data are collated from the survey diagrams attached to original quitrent title deeds drawn up between 1823-1841. Three of the land surveyors engaged in this work included the rectangular outlines of the much older Loan Places on which some quitrent farms were based. The list of places thus recorded fits best with an archival Loan Place request list dated 1808, but a few others may be some years older. This frontier settlement pattern was based on irregular clusters of rectangles, and not on the evenly spaced, 3000 morgen circles prescribed for Loan Place occupancy of the Karoo districts. Although the frontier was ideal terrain for applying the "one-hour rule", this was ignored in the interests of having neighbours within easier reach. The dangers of frontier life, including stock thefts by Bushmen, would have been a factor in shaping this pattern.

### INTRODUCTION

Pioneer travellers' accounts indicate that trekboers first attempted to settle in the Sneeuberg headwaters of the Seacow River valley (Fig. 1) in the 1770s (Raper & Boucher 1988), but several were driven out by Bushmen. A few farms were reoccupied in the 1780s and 1790s, with signs of new settlement in the middle reaches of the valley (Barrow 1806). Isolated new farms had appeared in mid-valley by 1803 (Plumptre 1815; Godée-Molsbergen IV 1932; Blommaert & Wiid 1937; De Kock 1965), and by 1808 a minor land rush had occurred between the Sneeuberg and the border of the Colony at van Plettenberg's Baaken (Hutton 1887; Moodie V 1960). Before the border was moved to the confluence with the Orange River there was a further surge of settlement

between 1810-1820 (Campbell II 1823; Burchell 1824; Sales 1975).

These eyewitness impressions have been checked against archival sources listing contemporary Loan Place requests in the Seacow valley. The Request Lists name many more farms than appear in travellers' journals, but the whereabouts of some listed farms are uncertain thanks to later name changes and duplications. Because there are no maps, other than the very incomplete and inaccurate examples with some travel journals, early Dutch settlement topography is not easily reconstructed. None of the V.O.C. maps taken back to Holland before the British occupation of the Colony describe the farm distributions north of the Sneeuberg (Koeman 1984), where the Seacow River originates.

It is of particular interest, therefore, that outlines of

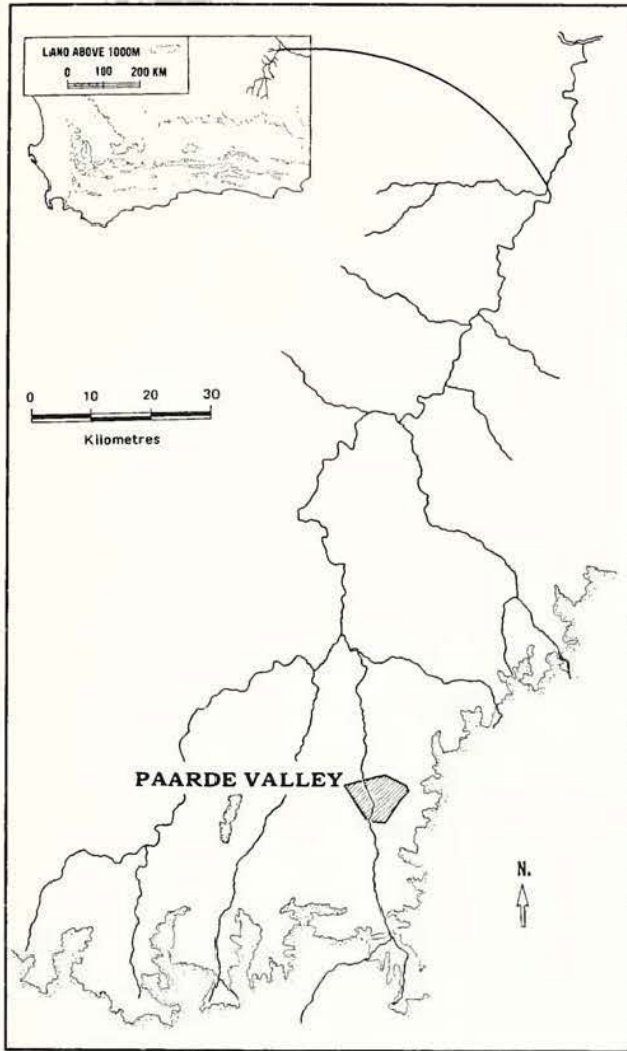


Fig. 1. The Seacow River drains the Sneeu Berg and Roode Bergen (Agter Renosterberg) Mountains (stippled) and flows into the Orange River in the north eastern Karoo (inset). The survey diagram for Paarde Valley (shaded) is shown in Fig. 2.

some pioneer farms have been preserved on later survey diagrams, drawn up in the 1820s and 1830s, when Loan Places were being converted to quitrent tenure. Here, we present the case for dating most of these earlier outlines to the year 1808. The frontier settlement pattern thus obtained, nicely reflects the local adaptations made to official land tenure policy.

### THE LOAN PLACE SYSTEM

Applying for a Loan Place (leening plaats) from the V.O.C. was a relatively simple routine (de Smidt 1895; Botha 1919; Denoon 1947; Baker 1958; Duly 1968; Guelke 1984). Any person could apply for land on loan from the Land Revenue Office by giving the shortest possible description of its whereabouts and by satisfying the officials that the request did not encroach on neighbouring land grants. At first there was no fee, but after 1711 an annual rent was charged. From 1714 licences were issued to the applicant, at additional cost.

Unlike freehold grants, a loan farm grant did not require that a surveyor draw up a diagram of the requested property to be attached to the license.

By 1760 the trekboer frontier had expanded so far across the Karoo that the government had all but given up collecting rents, although leases were automatically renewed and requests for new lands continued to be recorded. Links between the farthest flung colonists and the Cape were strengthened in 1778 when Governor van Plettenberg journeyed to the frontier and, among other things, re-set the northeast limit of the Colony at van Plettenberg's Baaken some way down the Seacow River. Government control was consolidated in 1786 when a Landdrost was installed at Graaff-Reinet. Loan Place rents were again collected, and transfers to new owners became dutiable at a rate calculated by the worth of buildings, fields and improvements (opstal).

Comprehensive instructions appeared in 1793 to regulate the whole system of allocations, collections, transfers and inheritance. These were also designed to prevent speculation in frontier land. The license for a new Loan Place was renamed the ordonnantie, a name retained by the Batavian administration when they issued further rules in 1804. These were formulated into a resolution of the Governor in 1805. Again, no surveyor's diagram was required with the ordonnantie.

### The Hour Rule

Ordonnantien were issued under specific conditions. The applicant had to establish a beacon, known to the local Field-cornet, in the middle of the requested property. Required since 1714, this beacon could be a rough shelter, usually the intended site of the homestead, or a large stone, or a natural prominence. Through common usage, the beacon itself became synonymous with the license, and was also called the ordonnantie. At first, the applicant did all this himself, but field inspections by officials became common after 1805. Application was then made through the Landdrost and Heemraden to the Governor. If the request was granted, the Landdrost was instructed to define the limits of the Place and this duty fell to the local Field-cornet. The latter then walked for half an hour in each direction from the central beacon "at a normal pace" and a roughly circular outline was thus defined. For a while, long-legged Field-cornets were popular, but the distance was soon standardized at 750 roods (about 3 km). As a circle of that radius is 2946 morgen, the designated area of a Loan Place soon became 3000 morgen.

Although boundaries were fixed by the Field-cornet, farmers were indifferent about maintaining beacons, nor were they pressed to do so. The outline was there not to contain the applicant, but to reduce possible friction with encroaching neighbours. The original intent was that neighbours should be distributed at least one hour apart (South African State Archives [SASA] Stellenbosch 1/4:120), but in the Karoo where water was scarce, the hour rule was more often honoured in the breach. Barrow (1806:380) observed that the real average separation was closer to two hours travel. As long as the distance

between neighbours did not exceed two hours walking time, no new lands could be allocated between their properties.

### From Circles to Rectangles

The system was obviously wasteful because it created large amounts of unappropriated land (uitval grond) between contiguous circles. Also, the various parties had great difficulty with the computing of the areas of circular farms. For a while, the notion of hexagonal outlines was introduced to cut down on the waste, but hexagons "were beyond the skill of the Field-cornet to compass" (Denoon 1947:331). Circles and hexagons were dropped in favour of squares of 1341,64 roods per side or, simplest of all, rectangles with sides of 1500 roods by 1200 roods. Although the central beacon was retained, corner beacons would have become the significant markers. Thus far, no clear guidelines for the selection of corner beacons have been found. Nor have we found any official document ordering that farms be laid out in rectangles rather than circles, consequently we are unable to fix the date at which this practice took hold.

Although a Proclamation issued on October 16, 1812 ordered landowners "...to cause conspicuous Beacons to be placed at the Angles of their respective properties..." (Anon 1827). we doubt whether this refers to the rectangular Loan Farm layout. By this date, preparations were under way by the British administration to replace the Loan Farm system with a properly surveyed quitrent system.

### THE SURVEY DIAGRAMS

The Cradock Proclamation of 6th August 1813 gave the right to Loan Place holders to apply for their lands to be held in Perpetual Quitrent, and Provision 13 of the Proclamation required that survey diagrams be prepared and attached to the new documents of ownership (Anon 1827). As soon as they learned of the new regulations, most Seacow valley farmers petitioned for an indefinite delay on the grounds that they had no coin to pay the fees and were too burdened with other hardships to carry the new costs (SASA, CO 58, 13 Oct. 1813). They need not have bothered, as the authorities were hopelessly short staffed with poorly trained surveyors. A huge backlog of survey work built up throughout the Colony while new surveyors were trained. In the following ten years only 2-3 farms in the south east corner of the valley were surveyed, but these inadequate diagrams were never used. Only one has survived, drawn up by H. Azerond in 1819 (SASA, LBD 1819). His successor C. J. Abo complained repeatedly that he could not find Azerond's beacons (Co. Q. 5-45, 1841).

The subsequent history of land surveys done in the Seacow valley between 1823-1875 is detailed in Sampson & Sampson (1994). Although several surveyors worked here, only three recorded the earlier Loan Place outlines on the new diagrams drawn up for quitrent agreements. The diagram S.G. Dgm. No. 430/1830 for Paarde Valley (Fig. 1) is a typical example (Fig. 2). On this copy of

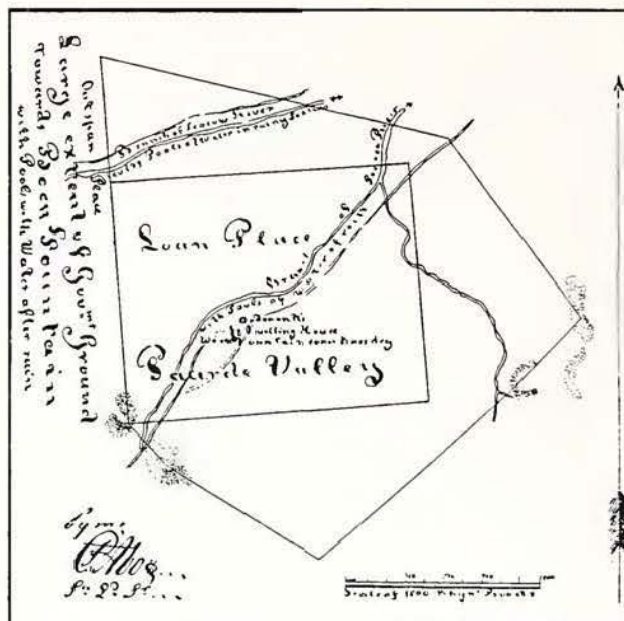


Fig. 2. Part of the survey diagram made by C.J. Abo in 1830 and attached to the original quitrent title deed for Paarde Valley (see Fig. 1). The rectangular Loan Place outline denotes an even earlier, but undated land grant boundary.

Abo's 1830 original, a tributary stream is marked "Branch of the Seacow River having Pools of water in rainy seasons". The Klein Seekoei River channel is marked "Stream of Seacow River with Pools of water of rain". A wagon track runs parallel to the stream channel. The only structure is marked "Dwelling House". The open circle marking the "Ordonantie" may have been a small barn which still stands at this spot today. The blob-and-squiggle marking the spring eye is here annotated "weak fountain some times dry". The scale is in Rhyndland Roods. The outer, near-pentagonal boundary is the 1830 quitrent property outline, but contained within it is an undated rectangle prominently labelled "Loan Place Paarde Valley". One corner is fixed to the peak of an easily recognized kopje, but beacons for the other four corners are not marked. The ordonnantie is markedly off-centre.

### The Surveyors

Figure 3 shows all such Loan Place outlines in the Seacow valley, culled from original quitrent survey diagrams. Those in the central valley were drawn by Abo in 1827 and 1830. He drew another in 1839 and one more in 1841. It is important to note that at least seven diagrams of other former Loan farms surveyed by Abo in 1827 and 1830 contain no trace of the original rectangular outline.

His colleague J.L. Leeb, who surveyed nearly all the lower reaches of the valley, contributed the five original Loan Place outlines nearest the colonial boundary (Fig. 3), plus the one inferred from its quitrent outline. Leeb omitted the original outlines from three other former Loan Place diagrams in this area. Although the work was

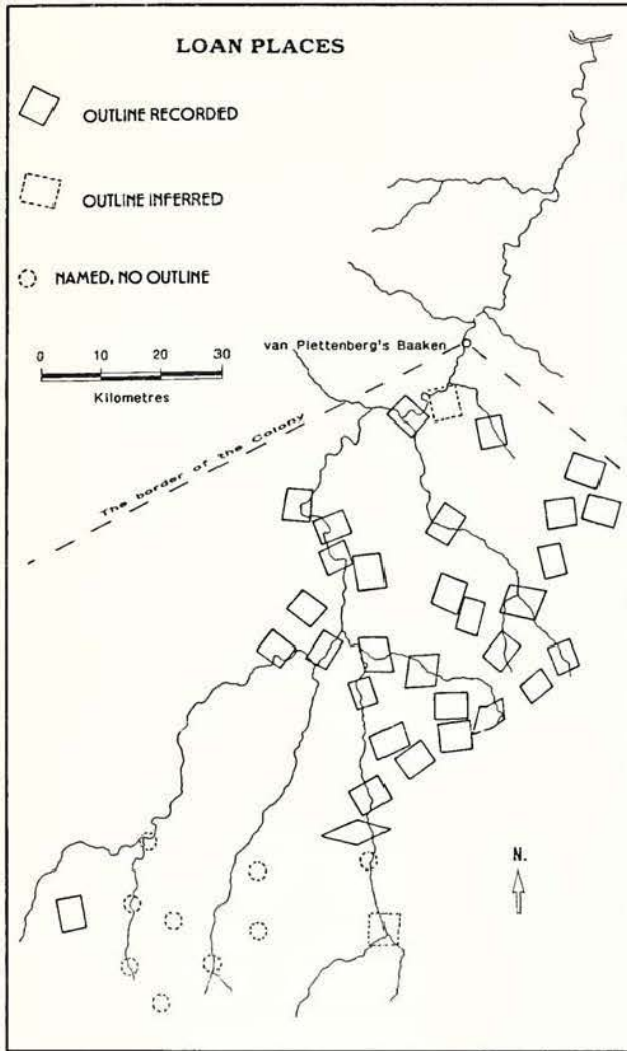


Fig. 3. All surviving Loan Place outlines in the Seacow valley, recovered from a search of the 204 original quitrent title deeds.

completed in the 1820s (SASA, LBD 30, 1823,1825) they were only attached to title deeds in 1836-7. Unlike Abo, Leeb marked the corner beacons on the rectangular outlines and some even have beacons placed along the sides of the rectangle.

Only one outline in the upper valley (Fig. 3) was drawn in by the surveyor C.L. Stretch in 1841, but he omitted the rectangles from two neighbouring places. Diagrams drawn up by the surveyors C.H. Rodgers and G.D. Greaves, who covered most the upper valley in 1839, consistently omitted the original outlines. Although some of their work mentions that the new quitrent farm was a "former loan farm" (Fig. 3) neither of them was consistent in doing this. One original outline can be inferred from the shape of its quitrent boundary (Fig. 3).

Clearly, Loan Place outlines were not recorded consistently by any of the five surveyors working in this area, nor were such outlines plotted during a specific run of years. All former Loan Farms in the valley had been surveyed by 1841, which explains why no further rectangles were recorded after that year. This raises the

question why individual surveyors recorded or omitted the original outlines from the diagrams they produced. Their instructions on this subject were vague. The most complete guide to surveyors appears in a Government Advertisement of 16 July 1813, spelling out in detail how diagrams were to be drawn up, yet there is no mention of this topic (Alexander 1902:200).

A more direct clue comes from Provision 2 of the Cradock Proclamation (August 6, 1813) which required that the 3000 morgen (maximum) "core" of the Loan Place be distinguished from the other Crown Land normally used by the farmer. This raises the question whether the rectangles thus demarcated (e.g. Fig. 2) were hypothetical constructs of the surveyors (P. Whitlock pers. comm.) or were really marked out on the landscape. As will be shown, the balance of evidence supports the latter interpretation.

Although the tone of Provision 2 suggests that the authorities did not take the Rcores boundaries (and corner beacons) seriously, not all officials held this view. For example we have J. Melvill complaining to the Colonial Secretary as early as 1812 that "the colonists claim 3/4 more land than they have legal right to". (SASA, CO 53, 23 July 1812). It would seem, then, that the farmers continued to expand their use of surrounding land until they abutted on to their neighbours who were likewise expanding, leading to the polygonal farm outlines entrenched in the quitrent survey diagrams.

#### DATING THE LOAN PLACE OUTLINES

There are no clues on the quitrent diagrams about the age of the original Loan Place outlines. As they are all located behind the border defined by Plettenberg's Baaken, they must predate 1822, when the border was shifted to the Orange River. To arrive at a more exact date, we conducted an archival search for all land applications made to the authorities at the Cape in the Zeekoe (later Seacow) valley prior to 1822. The goal was to locate a dated list containing the largest number of farm names that coincided with the farms for which original outlines are available. Lists of quitrent applications (SASA CO. 8495) and annual payment records (SASA GR 14/31) for 1814 include all of the outlined farms, but they also contain as many farm names for which there is no outline, so the fit is not good. This also holds for all records later than 1814. The closest to the list of outlined farms is an 1808 Request list (SASA CO. 2564), which is headed:

Bericht van Zodaanige op Requist verzogte Nieuwe Leeningsplaatzen onder Het Drostamp Graaff Reinet, als Tot nog toe door Landrost en gecommiteerde Heemraaden suksewelyk onderzogte zynde bestaanbaar bevonden, en volgens hun best voordeels, zonder nadeel van iemand zeinde kunnen werden uitgegeeven. Overgelegd In vergadering van Landrost en Heemraaden voornoemd op den 4 du January 1808. (Report of requests for certain new loan

farms falling under the Drostdy office Graaff-Reinet, to date, the Landdrost and delegated Heemraaden have accordingly investigated their existence and find that they can be granted in their best interests and without disadvantage to anyone else. Deliberated at a meeting of the Landdrost and above mentioned Heemraaden on 4th of January 1808).

The list that follows is numbered consecutively in the left hand column. The Field-cornetcy appears in the second column. The third column contains the applicants' names, grouped by Field-cornetcy, and the fourth column has the farm name. Table 1, column 2 shows all listed Seacow valley farms. Nos. 47-8 are listed under Voor Sneeuwberg Field-cornetcy and the others are from Zeekoerivier Field-cornetcy.

We have original Loan Place outlines for all but three of these listed farms (Fig. 4). Of the three exceptions, two (Nos. 47-8) are in the upper valley. These were diagrammed by Rodgers, who never included the original outline. Although the third case (Klipkraal) at the northernmost edge of the border (Fig. 4) was diagrammed by Leeb, who included most Loan Place outlines, he may have omitted the older outline because the new quitrent boundary was almost identical (Fig. 3).

From this we conclude that corner beacons were being fixed by an official and maintained by the owner at least from 1808 onwards. Exactly when this practice was introduced is more difficult to determine. Seven Loan Place outlines do not appear on the 1808 list, five of them at the southern end of the settlement pattern (Fig. 4), and the other two still farther south in the valley headwaters. Because settlement was spreading northwards

**Table 1. Seacow valley: two Loan Place Request lists and a Recognitie (annual fee) record, compared with the list of quitrent survey diagrams showing original Loan Place outlines.**

Requested in 1802-4 (1 GR 14/16 Part I)	Requested in 1808 (C). 2564)	Recognitie 1808-12 (1 GR 14/16 Part I)	Outline Surveyed (Farm No. of diagram)
3 Zuurfontein (1802)	47 hartebeestefontein	-	-
	48 Zuurefontein	-	-
	80 hartebeestefontein	-	Hartebeestefontein (Co. 80)
	81 Rietfontein	folio 803	Rietfontein (Co. 145)
	82 Ventersfontein	folio 804	Ventersfontein (Co. 146)
199 Mooijfontein (1804)	83 Elandsfontein	folio 805	Elandsfontein (Co. 146)
	84 Mooyfontein	folio 805	Morgenwacht (Co. 109)
	85 Klipkraal	folio 806	Klip Kraal (Co. 104)
	86 Klipkop	folio 806	Klip Kop (Han. 81)
	87 Schuilhoek	folio 807	Schuil Hoeck (Han. 81)
	88 Leeufontein	folio 806	Allemans Fontein (Nou. 83)
	89 Damhoek	folio 808	Damfontein (Nou. 114)
174 Kleinefontein (1804)	90 Kleinefontein	folio 808	Kleinefontein (Nou. 177)
	91 Caroluspoort	folio 809	Carolus Poort (Nou. 166)
	92 Valsefontein	folio 809	False Fontein (Nou. 165)
	93 hartebeestehoek	folio 810	Hartebeest Hoek (Nou. 182)
	94 Naauwepoort	folio 810	Naauw Poort (Nou. 1)
202 Winterhoek (1904)	95 Winterhoek	folio 811	Winterhoek (Nou. 118)
	96 Rietpoort	folio 811	Uitzicht (Mid. 3)
	97 Leewenkop	folio 812	Leuwe Kop (Nou. 120)
101 Kalkoenkrans (1804)	98 Kalkoenkrans	folio 812	Kalkoen Kranz (Han. 76)
	99 Elandsgat	folio 813	Elands Gat (Han. 77)
64 Paarde Verlies (1803)	100 Paarde verlies	folio 813	Paarde Verlies (Han. 89)
198 driefontein (1804)	101 Driefontein	folio 814	Drie Fontein (Han. 87)
201 Oppermanskraal (1804)	102 Oppermanskraal	folio 814	Oppermans Kraal (Han. 91)
200 Beeste Kuil (1804)	103 de fontein	folio 815	Beeste Kuil (Han. 110)
	104 oude Kraal	folio 815	Oude Kraal (Han. 123)
	105 Holle fontein	folio 816	Holle Fountain (Nou. 133)
	106 Zaayfontein	folio 816	Zaayfontein (Mid. 65)
	-	folio 997 (1807)	Paarde Valley (Mid. 62)
	-	folio 698 (1807)	Wonder Heuvel (Nou. 140)
	-	folio 672 (1807)	Gordons Fontein (Han. 111)
-	folio 675 (1807)	Elands Heuvel (Nou. 146)	
-	folio 700 (1807)	Hoogemoeds Fountain (Han. 109)	
-	-	Cephanjes Poort (Mid. 143)	
-	-	Riet Valley (Ric. 112)	

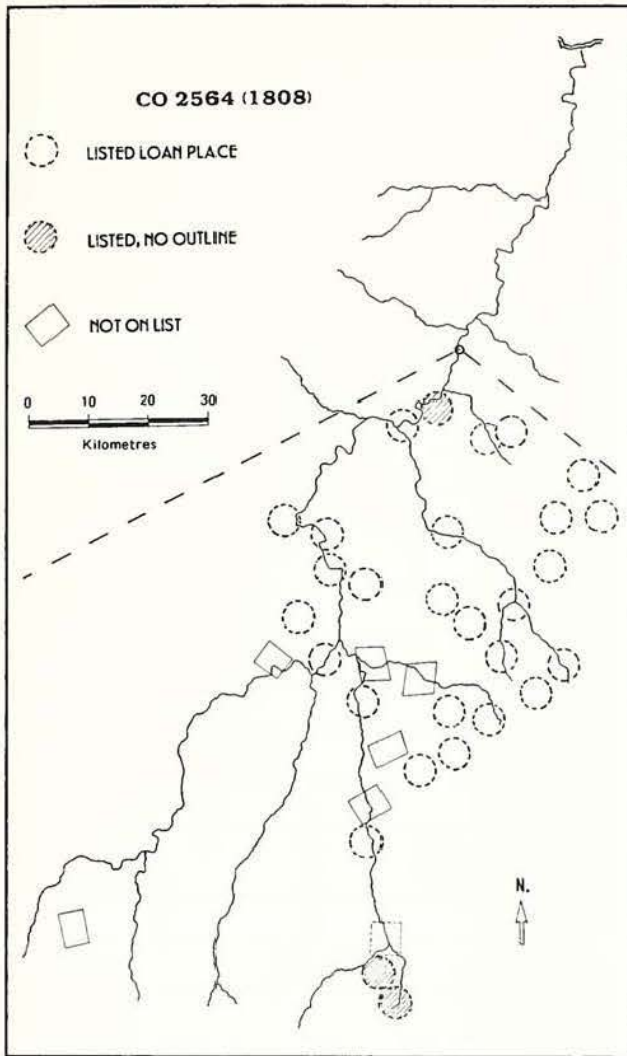


Fig. 4. Locations of new Loan Place requests in the Seacow valley on a list dated 1808, submitted by Landdrost Stockenström (Snr.).

our assumption was that all these outlines would pre-date 1808. A letter (SASA C.O. 2564) written a few months after the 1808 request list, from Landdrost A. Stockenström (the elder) to the Earl of Caledon, probably refers to the aforementioned group of five farms.

"My lord, The district or track of land situated between the Roodeberg and the Zeekoerivier, usually called after the said river, seems to have been formerly inhabited, but is now reduced in consequence of the ravages committed by the Bosjesmans, to only 5 Loan places at the upper part, which have hitherto been looked upon as belonging to the district of the hinder Renosterberg". We suggest that his "5 Loan places" are the five unlisted outlines shown in Figure 4. They are Elands Heuvel, Gordon's Fontein, Wonder Heuvel, Paarde Valley and Hoogemoeds Fountain (Table 1). Annual payments were made in 1807 by the occupants of four of them (Table 1, column 3), and all five can be shown to have existed before 1808. Barrow (1806) found four families living together for safety at Gordons Fontein in 1797. Wonder Heuvel was a registered Loan

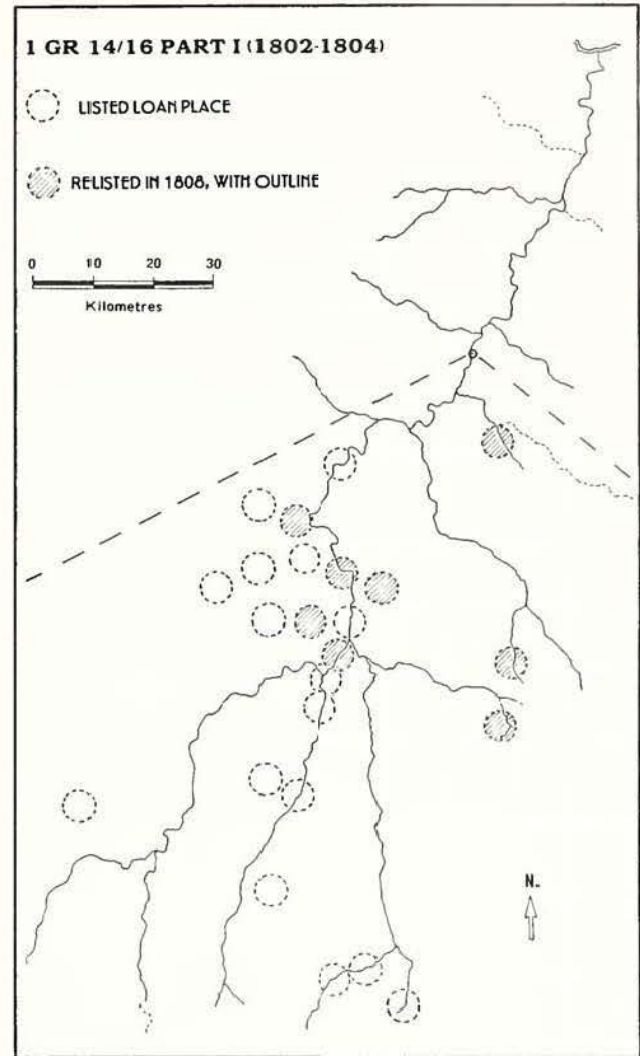


Fig. 5. Locations of new loan Place requests in the Seacow valley on a list dated 1802-1804.

place since 1798 (SASA 1 GR 14/15 Part II) and Paarde Valley since 1770 (SASA RLR 78a No. 4). The latter may have been abandoned, but was re-registered in 1801. Hoogemoeds Fountain is mentioned in four sources dating to 1803 (Plumptre 1815, Godée-Molsbergen IV 1932, Blommaert and Wiid 1937, de Kock 1965).

This leaves the two southernmost outlines (Fig. 4) to be accounted for. Cephajes Poort (Mid. 143) was a registered Loan Place since 1772 (SASA RLR 78a no.22) in the Voor Sneeuberg. It is mentioned by Barrow in 1797. The other is Riet Valley (Ric. 112) which was registered since 1775 (SASA RLR 78a no. 51) in the "district" of Op Sneeuberg.

It is unlikely that rectangular outlines were being laid out at such early dates. Perhaps the corner beacons of these older farms were also fixed by Stockenström in 1808, because they were being transferred to new applicants. If, however, their beacons were fixed some years earlier, then they should occur on the preceding request list. Working back through archival records from 1808, we came to an 1802-1804 list (SASA 1 GR 14/16 Part I) which included 24 requests for land in the

Seacow valley:

Lys der Plaatsen welke op verzoek van de volgende personen alhier syn aangetekend onder die Conditie dat so dra een m[a]gistraat Present is, sig by syn WELED. te moeten vervoegen en om deselve in leening te hebben verzoek te doen. (List of farms which are on request by the following persons who are already in occupation; recognized on condition that as soon as a Magistrate is present, they must attend upon his Worship in order to request that they may have the same on loan).

None of the seven outlined farms with older occupation histories, described above, appears on this 1802-1804 list (Fig. 5 and Table 1, column 1). If their rectangular outlines were fixed before 1808, then this was done at some time between 1805-1808.

Of the 24 farms requested in 1802-1804, nine were again requested in 1808 (Table 1, column 1). Significantly, eight of them were requested by new applicants, indicating a transfer of land (and sale of opstal). The ninth was occupied by a farmer who was making two additional requests for adjacent land in 1808. The outlines of all these twice-requested farms have been recorded, except Zuurfontein which was skipped by the surveyor Rodgers (see above). No other farm on the 1802-1804 list has its outline recorded, so the fit between this list and the list of outlined farms is generally poor. We conclude that the corner beacons of the nine farms on the 1802-1804 list were not fixed in those years, but during the later (1808) transfers.

Had the corner beacons of any other 1802-1804 farms been known, there can be no doubt that Abo and Leeb would have recorded them. This leads us to suggest that corner beacons were not established during the 1802-1804 grants, and no outlines date to that land grant episode.

## DISCUSSION AND CONCLUSIONS

The dozen or so grazing places granted before 1802 in the headwaters of the Seacow valley (Sampson *et al.* in prep.) were allocated piecemeal, probably without official field inspections. It is possible that these pioneer grazing places had central beacons and ill-defined, circular boundaries fixed by applying the hour rule. However, two of this group have been recorded with rectangular outlines, perhaps laid at a later, unknown date.

If any of the 24 properties allocated between 1802-1804 (Fig. 5) was inspected and marked with beacons, no certain record of the operation has survived. Although eight (probably nine) of them were laid out as rectangular farms, we believe they were done in 1808. If any, of the others had fixed boundary markers, they could have been either rectangles or circles.

The most parsimonious interpretation of all other rectangular Loan Place outlines, captured on later quitrent survey diagrams (Fig. 3), is that they resulted from a single land grant exercise executed in 1808 on the

east side of the valley (Fig. 4). The five previously established farms at the south end of this area were probably laid out at the same time. A model for future field testing is that Landdrost A. Stockenström (snr.), who was then in charge of field inspections of new land requests, saw to it that substantial beacons of piled stone were erected, and he impressed upon both new and former occupants that these were to be maintained in good order. In each survey, a prominent kopje was selected for one corner of the rectangle, with the other beacons placed in the veld at measured positions. Consequently the applicant's original claim beacon (ordonnantie) was not always at the centre of the property (Fig. 2) as it would have been under the old one hour rule. Subsequent land grant operations probably followed rectangular principles, but were not as rigorously executed, so the beacons were forgotten.

If the rectangular outlines were hypothetical constructs drawn on to later quitrent diagrams by surveyors under instructions to differentiate the "core" Loan Place, then several coincidences must be explained. Why did later surveyors draw in the core rectangle on some but not all the farms in their areas? Why are the cores areas of different sizes and shapes? Why do Leeb's diagrams show circles at the corners and even along some edges of the rectangles? Finally, why does the sum of all recorded outlines match the 1808 listing this closely? The chances of such a coincidence are remote in the extreme.

The settlement pattern glimpsed in the 1808 data (Fig. 3) is one of irregular clusters of rectangular farms, not the evenly spaced circles generated by the so-called hour rule. The latter pattern is seen mainly in areas such as the Overberg and the Cape coastal ranges, dating to almost a century earlier (*e.g.* Liebenberg 1979:16-17). Although even spacing was still entrenched in the layout of (rectangular) farms at the foot of the Sneeuberg in the later 1700s (P. Whitlock pers. comm.), the extreme north east frontier pattern abandoned this in favour of irregular clusters of rectangular farms. We suggest that the threat of stock theft by Bushmen living on the Crown Land between the clusters made the hour rule (~6 km spacing between homesteads) maladaptive. In 1808 there was still sufficient danger (Moodie V 1960) to justify small clusters of homesteads spaced at less 6 km apart. Unlike drier parts of the Karoo where scarcity of water forced a spacing of up to two hours travel between homesteads, this was not a problem in the Seacow valley. Another factor causing farms to cluster would have been the need for arable land, available mainly on the river and stream banks where alluvium was deep enough to be ploughed. Thus many good springs and seeps were left unclaimed, where residual Bushman groups were able to survive between the clusters of farms.

## ACKNOWLEDGEMENTS

Colin Martin gave us early guidance in research. We also thank the staff of the State Archives, the Surveyor General's Office and the Reference Section of the South African Library for their friendly help and advice.

Special thanks are due to Peter Traut of the Cape Town Deeds Office for his expert guidance in our searches. To Peter Whitlock we are also specially grateful for his stimulating criticism of our text. This program is supported by the National Science Foundation, Washington D.C. and the Foundation for Research Development, Pretoria.

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