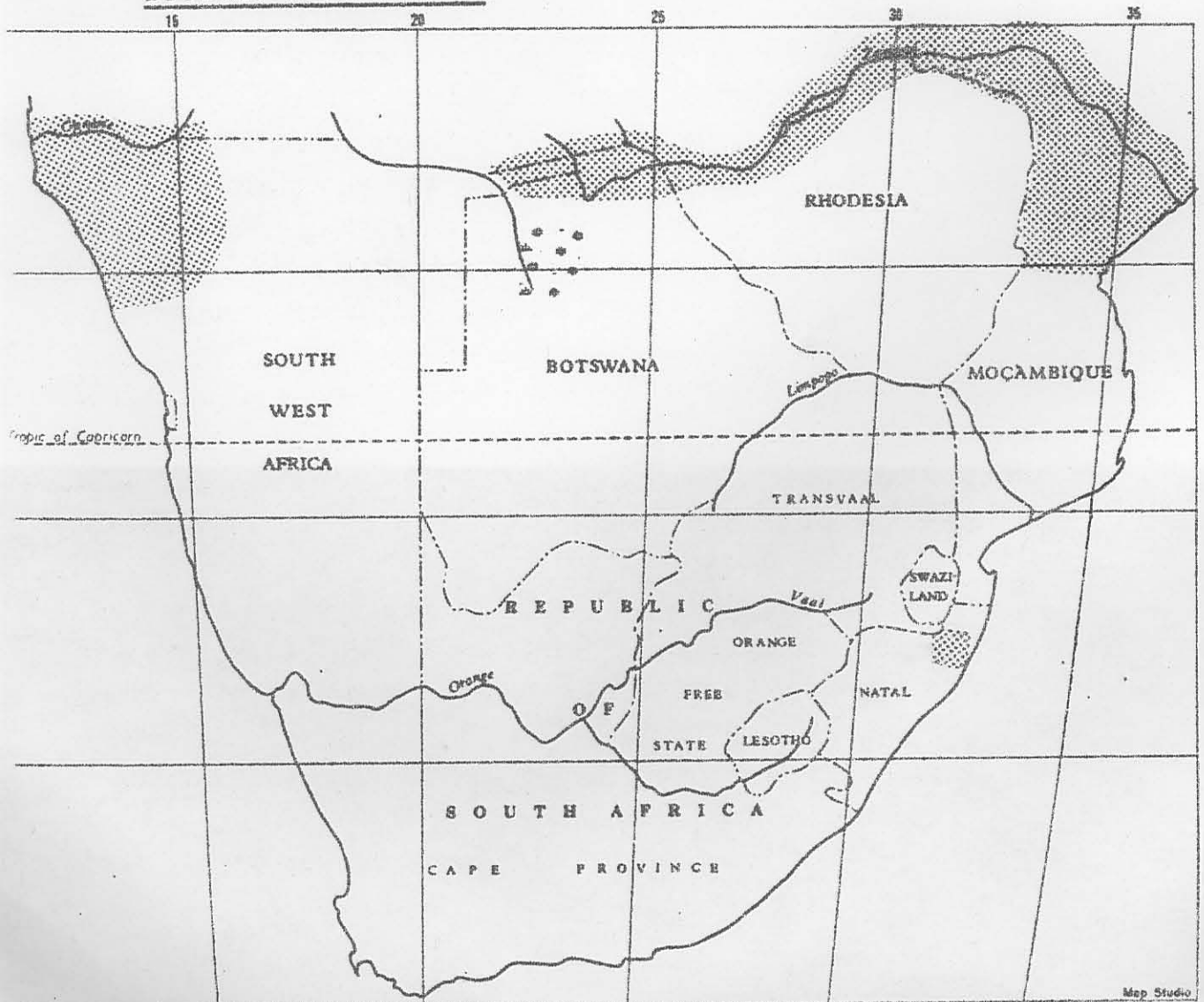




Past distribution:

Diceros bicornis (Black rhinoceros)

Present distribution:



2. Order Perissodactyla.

Family Rhinocerotidae:

The former ranges of the two rhinoceros species are difficult to determine precisely, especially where they overlapped to a large extent, since the earliest records do not distinguish between them. The difference in the upper lip is not the only distinguishing character available, and other differences such as thickness of skin, length of horns and colour have also been used in the past. The last two characteristics, especially, tend to create confusion.

Diceros bicornis (Black rhinoceros):

Cape Province:

The earliest written references to rhinoceroses are found in the diary of Van Riebeeck (Bosman 1952, Thom 1958) written in 1652. In this year the occurrence of D. bicornis was reported in the immediate vicinity of the Fort at the Cape and on the slopes of Table Mountain. With each subsequent journey of discovery or trade undertaken into the interior by officials of the Dutch East India Company, a wider distribution becomes clear. At the outset these journeys were mostly made in a northerly direction along the west coast of the Cape. According to Van Riebeeck's diary and the Dutch East India Company's "Oude Wildschutte Boek" (numbers 1-3, Cape Archives) as well as Molsbergen (1916) and Theal (1964), D. bicornis was encountered in the following localities during the years 1652-1712: Salt river, Little Berg river, Great Berg river, Tygerberg, Saldanah Bay, Riebeeck Kasteel, Piketberg and along the Olifants river. Berg in 1682-3 (Mossop, 1931), Tachard (1685) and Kolben (1731) also mention rhinoceroses in the vicinity of Cape Town.

In none of these references is any distinction between species given, but in the revised version of Mentzel's description of the Cape of Good Hope in 1787 by Mandelbrote (1944), the rhinoceros found in the Cape is described as follows: "The upper lip can be stretched half a foot and ends in a pointed fleshy protuberance, which it uses as a kind of hand and imperfect trunk for taking up its food and putting it into its mouth".

Kolben (1731) writes of the Cape rhinoceros:

"His mouth is like that of a Hog, but somewhat more pointed." "He is not fond of Feeding on Grass, chusing rather Shrubs, Broom and Thistles. But the Delight of his Tooth is a Shrub, the Rhinoceros-Bush".

From the above descriptions, the characteristic prehensile upper lip and the preference for browsing can be deduced. These, together with the fact that no records of the square-lipped rhinoceros so far to the south could be found according to Sclater (1900) and others, lead to the assumption that the species recorded at the Cape was D.bicornis.

Further to the north along the west coast up to Little Namaqualand, the rhinoceros is recorded by Paterson (1789) at Renosterbos near the Bokkeveld range and by Lichtenstein (1812) near the presentday Calvinia. Wikar, according to Mossop (1935), mentions rhinoceroses along the left bank of the lower Orange river between Goodhouse and the presentday Kakamas during the period 1775-1779. Shortridge(1942) confirms Wikar's encounter with rhinoceroses at Coboopfontein and Kaykoop in 1779. It is impossible to identify the species, but Shortridge (1934) contends that the square-lipped species was never found south of the Orange river.

An illustration of the "Africaanse Rhinoster" in a map by Gordon (Map no. 3, Gordon Collection, Cape Archives) is probably that of the prehensile-lipped species. It is drawn to the south of the Orange river in the Cape Province, but this does not necessarily imply that he encountered it at the locality shown. On drawing no. 64 of the same collection, however, he states: "Hier had ik het schoonste en singulierste gesigt in alle mijne Reizen, siende met een opslag van een oog in een halve Cirkel, twaalf Cameelpaarden, in de vyftig Oliphanten, 5 Rhinocerossen," This refers to a point just below the Aughrabies Falls and the species was probably his "Africaanse Rhinoster".

In due course journeys were also made along the Cape east coast and more to the centre and east of the Province. The earliest records found were those of Schrijver (Mossop, 1931) who encountered the rhinoceros near the Kariëga river in the Karoo in 1689, and of Gordon who, according to Shortridge (1934), recorded it near the Gamka river in the Oudtshoorn district in 1790.

Thunberg (1795), on his second journey in 1773, mentions the rhinoceros at Krakakamma in the vicinity of the Swartkops river.

According to VC.104, Cape Archives (author unknown), the rhinoceros was still to be found along the banks of the Great Brak river between the years 1796-8.

Paterson (1789) recorded it at Coega in the Algoa Bay vicinity in fair numbers, and also at Sandflats near Alexandria. In this same vicinity it was also recorded by Le Vaillant (1780) and Lichtenstein (1812), and by Barrow (1801) in the Tsitsikamma area.

Along the Little and Great Fish rivers, and especially at the mouth of the latter, the rhinoceros is mentioned by Sparrman (1772), Paterson (1789), Barrow (1801), Rose (1829), Bunbury (1848) and Backhouse (1884). According to Pringle (1835) its range included the Eastern Province, although it was nearly extinct in that area by 1822. The Komadagga-Agterbruinjieshoogte-Camdebo area is mentioned by Sparrman (1775), Mentzel (Mandelbrote, 1944) in 1780 and Lichtenstein (1812).

In the Cape Province north of the Orange river, D.bicornis was distributed in Griqualand West and also near the Cape-Western Transvaal border. Records from Bain (Lister, 1949) in 1816, Methuen (1848), Campbell (1822), Smith (Kirby, 1939) and Moffat (Wallis, 1945) substantiate this distribution.

Natal:

In Natal the first record found of the rhinoceros was that of Isaacs (Herrman, 1936) who, between 1825 and 1832 in his description of Zulu hunting methods, writes that these animals were easily hunted and killed owing to their bulkiness and inability to move at speed. The species is not indicated. Another unidentified record of what may have been the black species is that of Fynn (Stuart and Malcolm, 1950) who encountered rhinoceroses in the presentday Utrecht district during the period 1824-36.

The first record of a black rhinoceros as such is that of Drummond (1875) who describes it from Zululand between 1853-55. Between the Umkuzi pass in the Lebombo range and Mbuluzi he encountered more of the black than of the white species.

Baldwin (1894) records the black species in 1863 in the direction of the Pongola river between the Mkuzi and Pongola rivers. He also met it in fair numbers in the vicinity of St. Lucia Lake.

Sclater (1900) mentions Zululand, whilst Findlay (1903) specifies the vicinity of the Hluhluwe river, the Manzibomvu river and the Hlabisa, N'dwande, Umfolosi and Ubombo areas.

Orange Free State and Lesotho:

No 'on the spot' records of encounters with rhinoceroses could be found. Brand (1964) states that it occurred in this province and was exterminated by about 1853, but no reference to it could be found in any of the works of travellers who visited this area. According to Liebenberg (1964), early travellers such as Smith in 1834 and the French missionaries Arbousset and Daumas who visited the province in 1836, did not encounter rhinoceroses. Liebenberg also quotes Steytler (1932) who contends that since the Orange Free State had few trees, rhinoceroses did not range there. This could be true of the browser D.bicornis, but does not necessarily apply to R.simus.

Whether the rhinoceros ever ranged into Lesotho is uncertain. Smith (Kirby, 1939) who passed through a portion of the country in 1834, does not mention having encountered any.

Transvaal:

As the first pioneers only entered the Transvaal during the years 1834-6, records of game distribution prior to that time are not available. According to Wallis (1945) however, Moffat travelled to Moselekatse at the end of 1829. In his description of this journey and a subsequent one to the same part of the Transvaal, he mentions D.bicornis near the present-day Zeerust and between this town and the Magaliesberg range. Smith (Kirby, 1940) encountered a large number of the black species during 1835 near Zeerust, and also near Swartruggens and in the Rustenburg district. He also mentions the Magaliesberg mountains and the junction of the Marico and Crocodile rivers.

Trigardt, according to Le Roux (1966), frequently mentions rhino in his diary during his stay

in the Soutpansberg district during 1836-7. Unfortunately he does not distinguish between the two species. He also mentions rhinoceroses in the eastern Transvaal, while on his way to Lourenco Marques.

Wahlberg (Gyldenstolpe, 1934) encountered the black rhino near the Apies river and in the Dwarsberge in northwestern Transvaal in the 1840's.

Methuen (1848) mentions the Marico river. Elton (1871) encountered it more to the north, between the junctions of the Nuanetsi and Olifants rivers with the Limpopo. Van Oordt (1895-7) who was warden of the old Pongola Reserve, lists it in his annual reports.

Bryden (1899) writes that there were still a few in the remotest corners of northeastern Transvaal at that time, including a few in the Matamiri Bush and a few in the Lebombo range near the Olifants River Poort.

Hofmeyr (1890) records unidentified rhinoceroses in 1865 from the Soutpansberg district. Sclater (1900) was of the opinion that at the end of the nineteenth century it was still to be found in the Lydenburg district.

Glynn (1926) mentions shooting the black species on the opposite side of the Crocodile river to where Nelspruit Station is today and also below White River during the period between 1873 and the turn of the century.

Mocambique:

In Portuguese territory south of the Zambezi river and to the east of the Transvaal and Rhodesia, the following records show a fairly wide range in the past:

Livingstone (Schapera, 1963): along the Zambezi in the vicinity of Tete in 1856.

Kirk (1864): along the Zambezi near Sena.

Erskine (1875): between Inhambane and the mouth of the Limpopo (Gazaland).

Vaughan Kirby (1899): near the Chiringoma range and near the Madsumbi and Urema rivers.

Bryden (1899): parts of the Barue country and in Chiringoma.

Sclater (1900): Mocambique.

Maugham (1910): near the Lupata Gorge on the Zambezi.

Breyer (1915): in Maputaland at the Mandhlene Lake (unidentified species).

Haagner (1920): Portuguese East Africa.

Shortridge (1934): on both sides of the Portuguese border between the Shingwedzi and Limpopo rivers and further as described by Vaughan Kirby (1899) (see above).

From Mocambique to the west coast of South-West Africa across the Caprivi, the range of D.bicornis was continuous. Shortridge (1934) comments: "The Zambezi-Okavango-Cunene regions are the only part of Africa where the Black Rhinoceros was ever known to be distributed across the continent".

Rhodesia:

The following records indicate a wide distribution in Rhodesia in the past:

Livingstone (Schapera, 1963): along the Zambezi river in 1856.

Baines (1864): near the Victoria Falls.

Mauch (Petermann, 1870): between the Umgezi and Little Umgezi rivers in 1868.

Elton (1873): between the Ramaquabane and Satsuki rivers.

Baines (1877): near the junction of the Simbo rivulet and the Umfule river (species unidentified).

Oates (1899): along the Simukwe, Ramaquabane and between the Nata and Tamasanka rivers (unidentified, but doubtless included the black species as well).

Selous (1893): the Hanyami, Umsengaisi, Sabi and Zambezi river vicinities.

Selous (1907): the present Que-Que district; the Umniati vicinity; the Dett area; between the Daka and Thammasetje rivers; between the Gweo river and Inyoga's Town; near the Umbila, Umsengaisi, Umfule, Gwenia and Umzweswe rivers; near the junction of the Umfule and Umniati rivers and near the confluence of the Gwai and Shangani rivers.

Selous (1908): the Dett Valley.

Chubb (1909): his list of the mammals in the Rhodesian Museum includes a specimen from Gwelo.

Shortridge (1934): summarises the past distribution of D.bicornis in Rhodesia as Matabeleland and Mashonaland.

Botswana:

In Botswana D. bicornis was distributed wherever water was available, up to the Zambezi river. Moffat (Wallis, 1945) mentions the area between Kanye and Lithubaruba and also the Mahalapye, Shashi, Ramaquabane, Matlokotlo and Serule rivers in 1829.

Methuen (1848) reports the black rhinoceros near Sichele's Kraal (Molepolole); Cumming (1850) between the Notwani and Marico rivers; McCabe (in Holden, 1855) near Ghanzi; Andersson (1856) records unidentified rhinoceroses at Ghanzi and D. bicornis at Kobi and Lake Ngami; Livingstone (1857) reports it at Kolobeng; Anderson (1888) in the northern and eastern parts of Botswana, especially in the vicinity of the Quito, Chobe, Cubango and Touga rivers; Noack (1889, in Schinz, 1890); Holub (1890) at the confluence of the Chobe and the Zambezi rivers; Bryden (1893) along the Chobe swamps and the Zambezi river and Baldwin (1894) at Kolobeng.

South West Africa:

The black rhinoceros probably ranged throughout the entire territory, where water was available.

According to Mossop (1935), Jacobus Coetsé Jansz first met with the rhinoceros just north of the Orange river in 1760 as did Van Reenen in 1791, Hop in 1761 and Brink and Rhenius in 1761 (Molsbergen, 1916). No indication of the species is given, but according to later records such as those of Alexander (1838), Andersson (1861) and Shortridge (1934), D. bicornis formerly ranged through Great Namaqualand.

Alexander (1838) records the species in Great Namaqualand near the Chuntop river; at Bull Mouth's Pass and in Damaraland.

Tindall (Tindall, 1959) : between Gobabis and Gibeon and near the Black Nossob during 1839-55.

Andersson (1861 and 1867) : at Omanbonde and in Damaraland.

McKiernan (Serton, 1954): from Omaruru to the Okavango river during 1874-9.

Galton (1853) : Tunobis (Otjimbinde).

According to Noack (1889), Schinz, who collected in Damaraland, Ovamboland and the Kalahari, mentioned both species along the Okavango and Cunene rivers.

Slater (1900) gives a probable distribution in Ovamboland at the turn of the century.

According to Shortridge (1934), the black rhinoceros ranged as far south as Great Namaqualand and northwards through Damaraland, the Kaokoveld, Ovamboland and the Caprivi. He quotes Wilhelm (1931) as saying that it had been extinct in the Omaheke and Kaukouveld for at least 50 years, extinct in the Kungveld and formerly found along the Omarumbas Omatako and Omanbonde.

Shortridge (1942) confirms Alexander's records of both species from the Fish river valley in Great Namaqualand in 1895-6.

Ansell (1967) cites evidence of comparatively recent occurrence in southern South West Africa and of its ranging in all probability, only marginally within the South West Arid zone.

Present distribution:

Cape Province:

By about 1853 the black rhinoceros had become extinct in the entire Cape Province (Shortridge, 1934). According to Bigalke and Bateman (1962), two were re-introduced into the Addo Elephant National Park recently. A further four were added, bringing the total to six (Brand, 1964). These have increased to 8 in 1969 (De Graaff, in litt.).

Natal:

In Natal, and specifically in Zululand, the black rhinoceros fortunately survived in small numbers and has increased considerably. According to Vincent (1962) it is confined to the Mkuzi, Hluhluwe and Umfolozi Game Reserves, but is also found in state-owned lands between the latter two.

Brand (1964) gives the following figures for Natal: Ndumo, 2; Mkuzi, 20; Hluhluwe, 33; Umfolozi, 80, with an annual overall increase of about 20.

According to Bourquin (1966), the black rhinoceros is rare in the Ndumo Game Reserve (7 in 1965); fairly common in the Mkuzi Game Reserve; very common in the Hluhluwe Game Reserve (approx. 300); fairly common in the Umfolozi Game Reserve (60).

Transvaal:

In the entire Transvaal only two captive animals are to be found in the Pretoria Zoological Gardens (Brand, 1964).

Mocambique:

In Mocambique Fajardo (1953) records it from the slopes of the Gorongosa Mountain in the Gorongosa National Park.

Sidney (1965) gives its distribution as follows: large numbers in Barue, Gorongosa, Chemba, Morrumbala and Palma; fair numbers in Mopeia, Alto Molucue, Gurue, Ribané, Amaramba and Marrupa; scarce in Mossurize, Buzi, Chimoio, Cheringoma, Concelho de Tete, Macanga, Maravia, Zumbo, Namacurra, Mocuba, Milange, Maganja da Costa, Mogovolas, Mogincual, Erati, Vila Cabral, Maniamba, Montepuez, Macondes, Mocimboa de Praia, Macomia and Quissanga; extinct in Lourenco Marques district, Sul do Save, Sofala, Concelho de Manica, Mutarara, Angonia, Concelho de Chinde, Prebane, Lugela, Ile, Nhamarra, Moma, Concelho de Nampula, Malema, Concelho de Antonio Enes, Meconta, Mossuril, Nacala, Nemba, Mecufi, Concelho de Porto Amelia. She finds it impossible to estimate the number surviving in Mocambique, but mentions a figure of about 500, with the majority occurring in the region between the Save and the Zambezi rivers.

Simon (1966) gives an estimated number of 500 for Mocambique.

Ansell (1967) follows Sidney (1965) when stating that it is still common between the Save and Zambezi rivers but no longer found to the south of the former.

Tinley (in litt) agrees with the distribution of the black rhinoceros in Mocambique as given by Sidney (1965) but adds that it also occurs on the upper Limpopo near Pafuri and that it is scarce in the north of Gorongosa.

Rhodesia:

In Rhodesia the highest concentration of black rhinoceros a few years ago, according to Fraser (1958), occurred in the Sajarira range of the Sebungwe Native District. Numbers were not known but it was still fairly plentiful. It also occurred along the Zambezi valley in the Urunge Native District in fair numbers and was reported from the Darwin Native District. Two pockets were known in the southern part of Rhodesia, i.e. in the Ciepangai valley, Chipinga Native District and also in a confined area north of the Ramisikana river in the Nuanetsi Native District.

Child and Savory (1964) state that the species is limited to the Zambezi valley, with a relict population in the Sabi valley. The Wankie National Park and the Matopos National Park are both areas where D.bicornis has been re-introduced recently.

According to Sidney (1965) it is still to be found in the Sebungwe Native District between Kariangwe and the Zambezi valley. A few also occur in the Chipinga Native District and probably in the Mtoko Native District along the Mudsí river.

Ansell (1967) quotes Fraser (1958) and Smithers (1966) when stating that fair numbers occur in the Zambezi valley and a few in the southeast and that it was re-introduced to the Wankie National Park.

Simon (1966) estimates that 1500 still occur in Rhodesia.

Botswana:

Kay (1962) records a black rhinoceros on the Mababe Flats in northern Botswana.

Sidney (1965) finds it facing extinction in this territory, probably not more than 20 occurring in the entire Botswana.

Simon (1966) also estimates the number surviving in Botswana as 20.

Child (1968) records a relic population of small numbers in the northeast.

Smithers (1968) estimates the number of black rhinoceros in Botswana at less than 20. These are found in the area north of Tsotsoroga Pan and include approximately 9 animals occurring to the north-west of the Selinda Spillway. Spoor was recorded on the Chobe river near Kachikau as well as on the north-western border of the Mababe Depression.

South West Africa:

According to Lundholm (1951) there seems to have been an increase in the numbers of the species in the Kaokoveld since it was reported upon by Shortridge (1934). Bigalke (1958) describes it from the Outjo district in the northern part of South West Africa. He states that it ranges throughout the Kaokoveld and occasionally into the Etosha Pan region. No reports of its presence along the Okavango are available, but it has been recorded from the eastern Caprivi.

Brand (1964) estimates 54 in the Etosha area, 58 in the Kaokoveld and a further 23 on private farms.

Simon (1966) gives an estimate of 280 black rhinoceroses for the entire South West Africa.

Change in distribution:

The black rhinoceros has totally disappeared from the Cape and the Transvaal, except where re-introduced, ie. into the Addo Elephant National Park.

It still occurs in the Zululand Game Reserves of Natal; in Mocambique mainly between the Save and the Zambezi rivers, but extinct in the south; in Rhodesia, apart from re-introduction in certain cases, it only occurs in the Zambezi Valley with a relict population in the Sabi valley; in Botswana it has disappeared from the southern, central and eastern parts, but is still to be found in the north in very limited numbers; in South West Africa it is reported from the northern districts as well as from the eastern Caprivi.

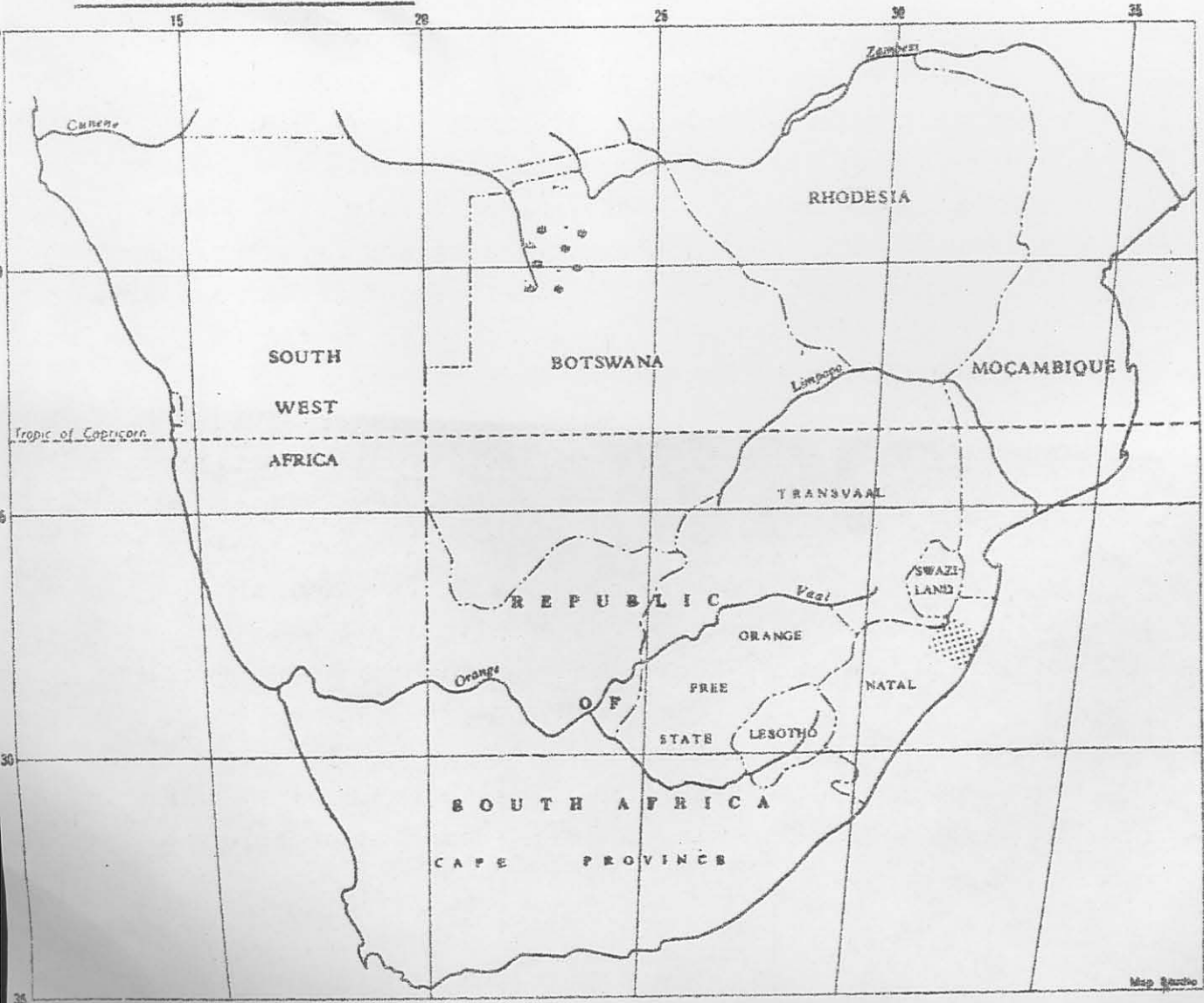
From the above it is clear that black rhino have disappeared from large parts of southern Africa, where large numbers roamed in the past and where a single hunter could shoot more in a year than the total number surviving today.



Past distribution:

Ceratotherium simum (Square-lipped rhinoceros)

Present distribution:



Ceratotherium simum (White rhinoceros):

Cape Province:

The question of the occurrence of the white rhinoceros south of the Orange river has never been properly settled and the chances are that it never will be. This species was usually described as being distributed between the Orange river in the south and the 17th degree south latitude in the north, but occasional references exist of its occurrence south of the Orange river in the Cape Province. Most of the early authors who encountered rhinoceroses just south of this river unfortunately seldom specified the species, thereby making it impossible to outline the southern boundary of its distribution with any degree of certainty. The rhinoceroses encountered by Wikar (Mossop, 1935) in 1779 for example, could also have included the square-lipped species, since he describes them just south of the lower Orange river near the present-day Goodhouse and Kakamas, just north of which they are known to have occurred. Although Shortridge (1934) and others contend that the square-lipped rhinoceros did not occur south of the Orange, the possibility cannot be ruled out entirely since the river in itself did not offer a formidable barrier in dry periods.

The unknown author of "Een Generale Beschryving van de Colonie De Kaap de Goede Hoop", 1796-98, (VC. 104, Cape Archives) as a rule gives a very accurate survey of the larger animals of the Cape Colony at that time. His observations and descriptions were correct and corroborated by those of latter authors. One of his statements, however, may have rested on mistaken identity. When he reviews the fauna of the Great, Middle and Little Roggeveld he writes of this area: "Onder anderen is de witte Rhinoceros overvloediglijk in, en waarschynlijk eigenaardig aan, dit gedeelte van het land. de zelve verschild in niets van de gemeene twee hoornige Afrikaansche Rhinoceros, als alleen in groote, waar in het dezelve aanmerkelijk overtreft, en in de dunheid en buigzaamheid van het vel".

Barrow (1801) contends that the white rhinoceros was not uncommon beyond the Hantam mountain range on the outskirts of the Cape Colony of that time. He lists the differences between the white and black

species but does not mention the lip structure. Bigalke (1963) doubts if Barrow's rhinoceros could be definitely identified as the white species since the differences given (colour and thinness of skin) are not recognised criteria of distinction. Carmichael Smythe (1805) compiled a map very similar to that of Barrow and had it printed in 1805 by Arrowsmith. On this he states: "The White Rhinoceros plentiful in this part of the Country", and indicates its presence in the present Bushmanland.

Shortridge (1942) does not clarify the issue with the following statement: "Although the Black Rhinoceros (D.bicornis) was always, presumably, more plentiful than Ceratotherium simum south of the Orange River !HABA the Hottentot name, still surviving, refers correctly to the white species, in indication of its former occurrence in Little Namaqualand". He also mentions a weathered pair of white rhinoceros horns in the Port Elizabeth Museum, discovered at Seeheim (Great Namaqualand) by G.Wickam in 1919.

In the Cape north of the Orange river, Ceratotherium simum was recorded for the first time by Burchell in 1812 near Kuruman at Chue Spring or Heuningvlei (Burchell, 1822).

Other authors describing its occurrence north of the Orange river in the present-day Cape Province, are:

Campbell (1822): near the present-day Vryburg and near the rivers Mashowing, Molopo and Mareetsane.

Moffat (1829): near the Mareetsane river.

Smith (Kirby, 1940): near the Molopo river and also near the present-day Mafeking.

Smith (1849): in earlier times near Latakoo (the present-day Vryburg).

Bain (Lister, 1949): near Honing-(=Heuning) vlei (Chue Lake = Chue Spring) and Segutshane. He describes the white rhinoceros as follows: "Its nose is broad & flat like that of a Sea Cow".

Sclater (1900) and Shortridge (1934): extinct in the northern Cape at the turn of the century.

Natal:

The records of C.simum from Natal indicate that its distribution was probably confined to Zululand.

Daniell (1804) in his "African Scenery and Animals" includes a drawing of a rhinoceros that resembles the white species. In his description of this animal he mentions that it is a variety of the species usually met with and states that it was very common in all the thickets on the eastern frontier of Natal.

Wahlberg (Gyldenstolpe, 1934) records white rhino from Zululand in 1842.

Drummond (1875) records large numbers from the valley of the White Umfolozi river; the upper Umkusi river; the plains south of Hlopekulu and near the Black Umfolozi river.

Buckley (1876) mentions the Zulu country at about latitude 28°.

Baldwin (1894) specifically mentions the white species as occurring in fairly large numbers along the St. Lucia river and near the Tegwan mountain during the years 1852-60.

Ward (1896): still a few at the confluence of the Black and White Umfolozi rivers.

Bryden (1899): numerous in Zululand in 1871.

Findlay (1903): a small number between the forks of the White and Black Umfolozi rivers.

Selous (1908): approximately half a dozen left in Zululand.

Bryden (1909): a few left in the reed thickets at the junction of the Black and White Umfolozi rivers.

Shortridge (1934): gives the same locality as Bryden, but fixes the number at approximately 50 at that time.

Orange Free State:

No conclusive evidence exists that C. simum ever ranged into the Orange Free State (Bigalke, 1963). Bryden (1899) expresses uncertainty as to whether the first pioneers encountered the white species here, but he was inclined to think that they did since places were shown to him just north of the Vaal river on the grassy plains of southern Transvaal where the species had occurred. He also describes the pasture to the south of the Vaal river as very suitable for this animal and the river as easily fordable at many points during the dry season.

Transvaal:

The earliest records of the white rhinoceros in the Transvaal are those of:

Moffat (Wallis, 1945): near the present-day town of Zeerust and along the Magaliesberg range between the years 1829-60.

Smith (Kirby, 1940) : in the Magaliesberg range in the present-day Rustenburg and Brits districts and near the confluence of the Marico and Crocodile rivers in the Marico district, during 1834-6.

Wahlberg (Gyldenstolpe, 1934): near the confluence of the Apies and Pienaars rivers.

Harris (1841): very common after passing Kurrichane (present-day Zeerust) along the Magaliesberg range during 1836-7.

Trigardt (Le Roux, 1966) in the Soutpansberg vicinity in 1836-7 and Wangemann (Grosskopf, 1957) in the Lydenburg district in 1866-84. Both unfortunately omit to identify or describe the species they encountered there.

Van Oordt (1894 and 1895): a few occasionally visited the old Pongola Reserve.

Bryden (1899): parts of eastern and south-eastern Transvaal during 1871.

Glynn (1926): low down along the Sabi river on the edge of the Matemere Bush in 1877.

Stevenson Hamilton (1929) states that the white rhinoceros had already disappeared from the Transvaal lowveld between the years 1840 to 1860 as a result of hunting by natives, especially the well-armed hunters of Albasini. Bigalke (1963) however, fixes the date of extinction from the eastern Transvaal lowveld as about 1896.

Mocambique:

In Mocambique the white rhinoceros had a more confined range. Elton (1873), whilst travelling along the right bank of the Limpopo river in 1870, met with both species between the confluences of the Nuanetsi and Olifants rivers with the Limpopo in Mocambique. Bryden (1899) states that it was still to be found in Gazaland at that time, but Maugham (1910) believed it to be extinct in the whole of Mocambique. Sidney (1965) also declares it extinct in the territory, and that it was still hunted near the foothills of the

Gorongosa mountains between Gauveia and Marcorsa in 1935.

Dias (1961) contends that the white rhinoceros was to be found in the vicinity of the Maputo river in Gazaland just north of the Zululand border in the past.

Tinley (1969) writes that the last known occurrence of white rhino is between Gorongosa mountains and Vila Gauveia.

Rhodesia:

The distribution of C. simum in Rhodesia, once widespread, shows a steady decline once the hunters started their activities at about the year 1870. The earliest written records include the following:

Livingstone (Schapera, 1963) and Kirk (1864): the species was either extinct or unknown along the Zambezi during the years 1853-1863.

Anderson (1888): from the Zambezi valley and near the northeastern border of Botswana.

Gates (1889): between Panda ma Tenka and the Victoria Falls.

Holub (1890): between Panda ma Tenka and the Victoria Falls.

Selous (1893, 1907 and 1908), who hunted extensively in Rhodesia between the years 1872 and 1896, encountered the square-lipped species mainly in Matabeleland and in Mashonaland, and particularly in the following vicinities: near the Mangwe river; Jomani; in the angle formed by the Gwai and Zambezi rivers about 80 miles from the Victoria Falls; near the Victoria Falls in quite considerable numbers; between the Deka and Thammasetje rivers; between the Deka and Nata rivers; in the vicinity of the Umniati and Umbila rivers; between the Umfule and Umzweswe rivers; between the Musengezi and Hunyani rivers; near the Angwa river; near the Sewhoiwhoi river and in the Dett Valley where he reports more of the white than of the black species. The wide range of the white rhinoceros can be inferred from the above as well as from the following passage from Selous (1908): "...in the early 'seventies, throughout all the uninhabited portions of the territory now

known as Southern Rhodesia, rhinoceroses of both the black and the white species were very plentiful".

Millais (1893) in a letter to P.L.Sclater, dated 19th September 1893, writes that he tried to find the white rhino in eastern Mashonaland, but found none except for the tracks and droppings of a few individual animals. According to this letter the natives maintained that the species was still to be found in the vicinity, although very rarely.

Coryndon (1894), travelling from the Zambezi to Salisbury in the middle of the year 1892, saw three of the square-lipped species and travelling from Salisbury to the northeastern part of Mashonaland, encountered two more.

Ward (1896) states that it was virtually extinct in Rhodesia at the time of writing, excepting perhaps in the northeastern part of Mashonaland where one or two may have survived.

Bryden (1899), mainly quoting Selous, states that during 1871-2 the species was still numerous in Matabeleland and Mashonaland. In 1872 they were seen daily between the Gwelo and Umniati rivers. In 1873 they were encountered in fair numbers to the west of the Gwai river and to the south of the mountainous part that stretched eastward from the Victoria Falls to the confluence of the Gwai and Shangani rivers. To the northeast of Matabeleland, between the Sebakwe and Manyami rivers, they were still fairly numerous in 1878, but diminished greatly in numbers after 1880. Between 1880 and 1884 they decreased to such an extent that only a few were left between the Manyami and the lower Umfule rivers. By 1895, with the exception of a few in northern Mashonaland, Bryden believed the white rhinoceros to be extinct in South Africa. This was virtually true, but fortunately a few also survived in Zululand that he did not know of.

Capell (1901-42) in his shooting diary, records that in July 1928 he followed up a report of a white rhinoceros on a farm in the Sinoia district and of one near the Miami river, but he does not confirm that he found either of the two.

According to Bryden (1909), possibly half a dozen may have survived in the far corner of north-eastern Mashonaland until the time of his writing, whilst Shortridge (1934) quotes Flemming to the effect that

seven were seen along the Rhodesia-Mocambique border near Nuanetsi in 1931.

Botswana:

In the present-day Botswana data on the past distribution of C. simum is derived largely from hunting journals and the works of missionaries. Among the earliest are those of:

Bain (Lister, 1949): between Gaborones and Molepolole and in the Taung vicinity between 1816 and 1864.

Moffat (Wallis, 1945): near Kanye and in the vicinity of the Shashi, Ramaquabane and Matlokotlo rivers in 1829.

Methuen (1848): near the Notwani river and on the left bank of the Marico river.

Cumming (1850): near the Notwani and Marico rivers as well as on the left bank of the Limpopo river at about 23° south latitude.

Livingstone (1857): at Lake Ngami and near the Chobe marshes.

Baines (Wallis, 1941): the Lake Ngami and Ghanzi vicinities in 1820.

Wahlberg (Gyldenstolpe, 1934): on the Mabsbe Flats in 1854-5.

Baines (1864): between Ghanzi and Lake Ngami.

Leyland (1866): at Nchokotsa near the Zouga river.

Selous (1881): 20 years previous to writing very common in the western parts of southern Africa, but at the time of writing practically exterminated excepting possibly between the Okavango and the Cunene rivers. In 1874 fairly plentiful south of Linyanti along the Chobe river, but in 1877 the tracks of only two rhino were seen.

Noack (1889): quoting Schinz, mentions large numbers near Lake Ngami and in the vicinity of the Okavango and Cunene rivers.

Bryden (1893): occurred earlier on in Ngamiland and the northern Kalahari, but extinct there at the time of writing.

Baldwin (1894): near Kolobeng and along the Tamashaki and Zouga rivers.

Schultz and Hammar (1897): the tracks of a single white rhino found where the Sunta joins the Chobe river.

Bryden (1899): numerous during the years 1840-50 to the north and west of the Limpopo river between Sechele's country and Lake Ngami; large numbers were killed by Cumming, Oswell, Vardon and Andersson in this area. During 1874 it was fairly common along the south bank of the Chobe river, but extinct a few years later.

South West Africa:

Although reports of rhinoceroses in South West Africa date back to 1760, the early travellers were not aware of the differences between the two species since they were neither trained zoologists nor hunters, but soldiers or officials of the Dutch East India Company sent out to try and improve trade with the indigenous populations.

Brink and Rhenius (Mossop, 1947) mention unspecified rhinoceroses in Great Namaqualand after crossing the Orange river. Coetsé (Mossop, 1935) and Hop (Molsbergen, 1916) report the rhinoceros from the same area in 1760 and 1761 as do Van Reenen and Pienaar (Theale, 1964) east of Walvis Bay.

Duminy (Franken, 1938) who visited Walvis Bay in 1793, found large numbers of rhinoceroses in the vicinity. Van Reenen who accompanied Duminy, probably exaggerated when he wrote: "...three hundred or more rhinoceroses.....in a fertile valley....".

Meester (unpublished manuscript) contends that Le Vaillant (1796), after crossing the Orange river, presumably did not encounter the white rhino on his travels but only the black species which he illustrated.

Some of the rhinoceroses encountered were probably square-lipped since later records from the same areas refer to this species. The first definite reports of the white rhinoceros are probably those of Alexander (1838), Andersson (Wallis, 1936), Galton (1853), Andersson (1856), Anderson (1888) and Andersson (undated manuscript). They distinguished between the black and white species and recorded C. simum from the following areas:

Alexander (1838): near a hot spring shown on the map of Chapman (1852) near Windhoek; along the upper Kuiseb and the upper Fish rivers.

Andersson (1856): at Elephant Fountain

(present-day Gobabis) where he shot eight rhino in five hours; among these he mentions three distinct "species" since he recognised two black and two white.

Anderson (1888): between Barmen and Eikhams in the Windhoek district.

Andersson (Wallis, 1936): near Sandfontein between Twass and Elephants Kloof on the South West/Botswana border.

Andersson (undated manuscript, probably written just prior to his death): among the mammals indigenous to Damaraland and adjacent territories he mentions two black and two white "species", ie.

R.bicornis and R.keitloa (both black), and R.simus and R.oswelli (both white).

Tindall (Tindall, 1959): mentions unidentified rhinoceroses in Damaraland between the years 1839-55.

According to Shortridge (1934) the fact that the Nama Hottentots and local Bushmen have names for the two species of rhino proves that both occurred in the Namaqualand, Gobabis and Grootfontein districts in the past, as well as elsewhere in the more level parts of the country.

Brand (1964) quotes Shortridge as above and also Wilhelm (1933), who states that this species ranged on both sides of the Okavango until its extinction in 1870.

Ansell (1967) quotes Shortridge (1934).

Present distribution:

Cape Province:

Extinct.

Natal:

Knobel (1958): not more than 300 in the Natal Game Reserves.

Vincent (1962): confined to the Hluhluwe and Umfolozi Game Reserves in Zululand.

Brand(1964): discussing the present distribution and numerical status, recalls that in 1920 there were only about 20 in the Umfolozi Game Reserve. These increased to 200 by 1933 according to the annual report of the Parks Board of Natal for 1933.

This increase was maintained and in 1964 there were about 1000 in different parts of the world. Of these, the following numbers occurred in the Natal Game Reserves: Ndumu, 18; Hluhluwe, 3; Corridor, 40; Umfolozi, 730; Crown lands adjoining Umfolozi, 40; total for Natal, 881 plus an annual estimated increase of 81.

Bourquin (1966): introduced into the Ndumu Reserve in 1965; very rare in Mkuzi; about 75 in Hluhluwe and large numbers in the Umfolozi Reserve.

Simon (1966): approximately 800 in Zululand; 150 have been re-introduced into other National Parks and Reserves in Southern Africa.

Ansell (1967): quotes an approximate number of between five and six hundred in Zululand as given by Player and Feely (1960).

Transvaal:

Pienaar (1963): four were re-introduced into the Kruger National Park from the Umfolozi Game Reserve in 1961 with a further two added in 1962.

Brand (1964): 10 in the Loskop Dam Nature Reserve; four in the Krugersdorp Nature Reserve; three in the Pretoria Zoo.

De Graaff (in litt.): between 130-135 in the Kruger National Park in 1969.

Orange Free State:

Brand (1964): four introduced into the Willem Pretorius Nature Reserve. In 1968 the number of rhino in this Reserve has increased to 14.

Mocambique:

Dias (1961): extinct.

Sidney (1965): extinct, the last white rhino probably shot in 1935 in the foothills of the Gorongosa mountains.

Tinley (in litt.): extinct.

Rhodesia:

Fraser (1958): expresses the hope that it may still be found in the unexplored country between the Chewore and Angwa rivers in the Zambezi valley.

Child and Savory (1964): state that eight were re-introduced into Rhodesia from Zululand in 1962, four of these into the Matopos National Park and four into the Kyle Dam Game Reserve.

Botswana:

Smithers (1968): "With the introduction of the species to the Wankie National Park, Rhodesia, individuals have wandered westwards over the Botswana border, two to west of Nata (1966). Further wanderers may be expected and, in time, the species might well become feral".

South West Africa:

Bigalke (1958): does not occur in South West Africa any more.

Sidney (1965): quoting Bigalke, says that none are left in South West Africa but also mentions that Barnard (1952) alleges that it was encountered between Otjikuvare and Otjovathandu .

Ansell (1967): no confirmation of Barnard's claim from the Kaokoveld.

Change in distribution:

When comparing the past and present distribution of C. simum , a marked change in range as well as in numbers is evident.

It prefers a habitat with suitable short grass and a continuous water supply, combined with a certain amount of bush cover for resting and protection. In the past, such areas have included the northern Cape Province; Zululand; southern Mocambique; the northwestern, eastern and southeastern Transvaal; eastern, northeastern, northern and western Botswana; Mashonaland and Matabeleland in Rhodesia and practically the whole of South West Africa where suitable conditions prevailed. Ansell (1967), quotes Player and Feely (1960) as saying that all available evidence pointed to an original distribution in southern Africa corresponding to the "Bushveld" of Acocks (1953) and Wellington (1956).

Its numbers probably ran into hundreds of thousands. This figure may appear to be somewhat high, but Selous (1908) writes as follows: " In Southern Africa the black as well as the white rhinoceros has been almost absolutely exterminated during the last sixty years. During that period, thousands upon thousands of these animals have been killed," Selous also recalls the five hunting expeditions made by Oswell between the years 1844 and 1853. During these he shot great numbers of both the black and white species.

A sudden demand for rhinoceros horn about 1880, probably for its reputed aphrodisiac properties, caused a serious reduction in the numbers of these animals. Selous (1908) writes: "But whatever was the cause of it, this sudden rise in the value of small rhinoceros horns sounded the death-knell of these creatures in the interior of South Africa. By the year 1880, ivory had become very scarce in that portion of the continent, and the traders in Matabeleland then for the first time began to employ native hunters to shoot rhinoceroses for the sake of their horns - no matter of what length - and their hides, which later were made into waggon whips and sjamboks. One trader alone told me that he had supplied four hundred Matabele hunters with guns and ammunition, and between 1880 and 1884 his large store always contained great piles of rhinoceros horns - of all sorts and sizes, often the spoils of over a hundred of these animals at one time, although they were constantly being sold to other traders, and carried south to Kimberley on their way to Europe".

Simon (1966) finds four reasons for the decline in numbers of the white rhinoceros: "...it was easy to approach and kill, the flesh was highly esteemed for its tastiness, the skin was prized for the making of whips and the horns were of value overseas".

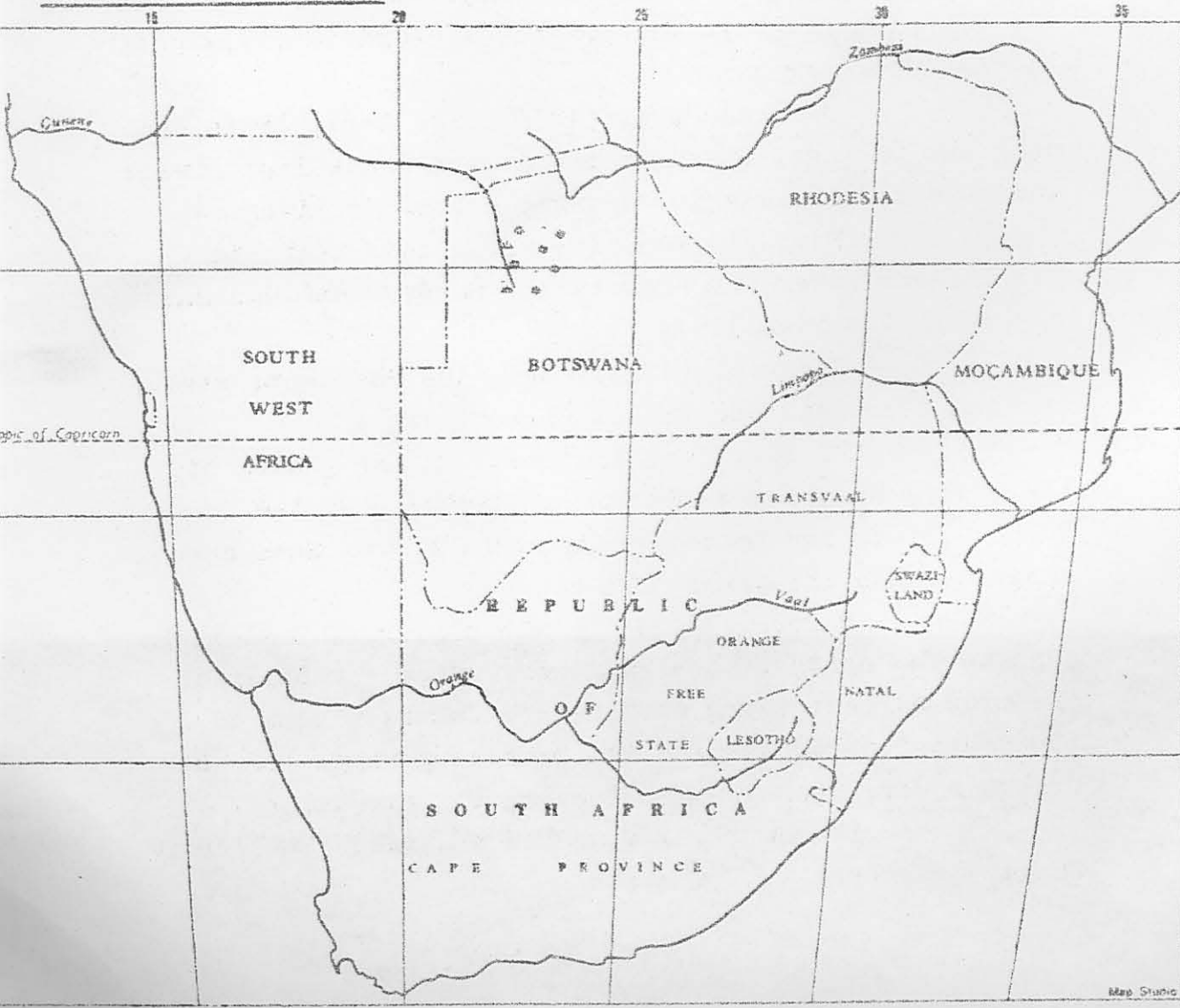
So great was the slaughter that at present it numbers a meager thousand after nearly forty years of rigid conservation. Its range too, has drastically decreased, with Zululand the last natural stronghold. Commendable efforts to re-establish it in regions long lost are however under way.



Past distribution:

Equus quagga (Extinct quagga)

Present distribution:



Equus quagga (extinct quagga):

According to Bryden (1899), the quagga had a well-defined distribution area, ie. the Cape Province west of the Kei river, parts of Griqualand West and the plains of the Orange Free State

Cape Province:

Van Meerhoff in 1661 and Cruijthoff in 1662 (Molsbergen, 1916): between the Fort at the Cape, Riebeeckskasteel and the Olifants river.

Cnoll (Botha, 1924): the Caledon vicinity in 1710. He writes : ".....wilde paarden, deselve waaren van een eguale hoogte, asgrauwe couleur, en nieuwers als op de bille, met witte streepen seer levendigh en schilderagtigh geteijkent en daarom waarlijk speculatief om te besigtigen,.....". Usually "wilde paarden" denoted the mountain zebra, but the above description stating that stripes only occurred on the haunches ('bille') and that the stripes were white on an ash-grey background, not black on white, favours the quagga.

Thunberg (1795): Krakakamma near the Swartkops river.

Sparrman (1775): near Swellendam; near the Swartkops river in the Uitenhage vicinity; near the Bushmans river in the present Alexandria division; in the Kommadagga area.

Swellengrebel (1776): the Tarka division; near the Kariega, Brak, Heemraads and Great Fish rivers and more to the interior along the Sundays river.

Mentzel (Mandelbrote, 1944): near the Van Stadens river and between the Sundays and Bushmans rivers in the year 1787.

Sparrman (1789): near the Swartkops river; between the Great and Little Fish rivers .

VC.104, Cape Archives: on the plains of the Great, Middle and Little Roggeveld; near the Seekoei river and Renosterberg north of the Sneeu-berg range between the years 1796-8.

Barrow (1801): on the plains of Geel-beck just to the north of the Swartberg range (probably in the present Laingsburg division); on the plains of the Seekoei river between the Sneeu-berg range and the Orange river; near the Khamiesberg in Namaqualand.

Barrow (1804): on the plains of Swellendam, Cango, Swartberg and Tarka.

Van Reenen (Blommaert and Wiid, 1937): near the Bushmans river, Alexandria in 1803.

Barrow (1806): on the Karroo plains and north of the Orange river in Griqualand West.

Paterson (1789): between the Van Stadens and Swartkops rivers; along the south bank of the lower Orange river.

Lichtenstein (1812): to the west of the Kei river; between the Sundays and Bushmans rivers; along the Great Fish river; through the Karoo and near Towerfontein; in the vicinity of the Kareeberg range; at Witwater in Griqualand West; Koossi ; the Brak river vicinity in the Karoo and also near the Speelmans river in the Swartberg area.

Campbell (1815): along the Buffalo river in the present-day King William's Town division near Assegaibos. Campbell (1822) mentions quagga north of the Orange river in Griqualand West, but whether he means zebra or quagga is not clear.

Burchell (1822): north of the Orange river near Klaarwater and Leeufontein as well as between Klaarwater and the Vaal river; south of the Orange river in the Karoo near Quakka Station, Karoo Poort, Renoster Poort and Groot Tafelberg, all to the north of or in the Sneeu-berg range.

Smith (Kirby, 1939): in the vicinity of Boetsap, Chue, Stella, the Mareetsane and Molopo rivers and the present-day Mafeking in the year 1835.

Steedman (1835): on the plains in the vicinity of the Seekoei river north of the Sneeu-berg range.

Moodie (1835): the Uitenhage district.

Pringle (1835): the junction of the Bavlaans and Great Fish rivers; Glen Lynden; the Suurberg and Winterberg vicinities.

Lindley (Kotze, 1950): between Kuruman and the Matlaring river in 1836.

Harris (1841): the Kuruman vicinity and Chooi desert.

Baines (Kennedy, 1961): near the junction of the White and Black Kei rivers along the Cacadou river in 1848.

Backhouse (1844): near Shiloh in the Queenstown division; in the Karoo near Colesberg.

Bunbury (1848): on the Bontebok Flats to the northeast of the Winterberg.

Cumming (1850): near the Thebus mountains;

on the Karoo plains; Beer Vlei along the Brak river in the Colesberg vicinity.

Holub (1881): the plains in the vicinity of Colesberg and near Newport (Noupoort?).

Anderson (1888): near the Great Chue Pan.

Thompson (1927): on the plains in the vicinity of the Seekoei river in the Karoo.

Renshaw (1935): "The quagga inhabited Cape Colony, the Orange River Colony, and Griqualand West: southward it extended to the Albany district of Cape Colony, northward it reached the Vaal river". He adds that by 1820 it had almost totally disappeared from Albany; by 1836 it only occurred on the borders of the Cape Province, and that the last two were shot in the Great Karoo in 1865. (According to Bryden (1899) the quagga survived in the Cape until 1865-70 and in the Orange Free State until 1870-73.)

Orange Free State:

Smith (Kirby, 1939): in Lesotho and the eastern Free State in the vicinities of Boesmankop, Mafeteng and the upper Modder river.

Arbousset and Daumas (Liebenberg, 1964): in the present-day Ficksburg district in 1836.

Harris (1841): on the plains of the Orange Free State in large numbers.

Baines (Wallis, 1941): on the plains of the Orange Free State in 1848.

Merriman (Varley and Matthew, 1957): mentions 'quaggas' on the plains, but does not specify if the zebra or quagga is intended (1848-55).

Sanderson (1860): near the Vals river and Vegkop in the northern Free State in 1851-2, although again only 'quaggas' are mentioned and no definite identification is possible.

Chapman (1868): 'quaggas' in the vicinity of Vegkop during 1849-64.

Drummond (1875): the plains of the Free State, 1867-72.

Bisset (1875): near Bloemfontein, 1834-67.

Aylward (1878): in the Harrismith district, 1850-60.

Anderson (1888): north of Harrismith, 1860.

Collins (1907): throughout the Orange Free State; between Bloemfontein and the Modder river, 1850-62.

Shortridge (1934), quoting Sclater (1900), states that the quagga may have survived in the Orange Free State as late as 1878. Meester (unpublished manuscript), is of the same opinion. According to Bryden (1899) the quagga became extinct in the Orange Free State before the zebra, therefore it could be that some of the above records refer to the latter.

South West Africa:

Shortridge (1934) is doubtful if the quagga ever occurred in South West Africa, stating that rumours of this species, when investigated, were found to refer to either E.z.hartmannae or E.burchelli.

Meester (unpublished manuscript) quotes Roberts (1951) and Sargent (1954) who both mention Le Vaillant having seen it in Great Namaqualand. Other possible records of quagga in this territory are those of:

Hop (Molsbergen, 1916 and Axelson, 1954): north of the Orange river. He writes, "...ook sagen wij in de vlaktens groote troupes van verscheidene soorten van wild gedierte, als Renosters, Cameleopardalis, Buffels, witte wilde Paarden, Ezels, Quachas, Coedoes, Gemsbocken, Hartebeesten, mitsgaders Auerossen,"

Alexander (1838): in the Karas mountains, mentions both quagga and zebra.

Baines (1864): near Elephant Kloof records half striped quaggas. (Elephant Kloof, according to his map, lies between Gobabis and Sandfontein on the Botswana border).

M 2 a.3, Windhoek Archives: in reply to a query from Carl Hagenbeck, Hamburg, Germany in 1913, the German Government in South West Africa, through its Police Force, tried its utmost to find any living quagga in the territory, but failed to do so.

Present distribution:

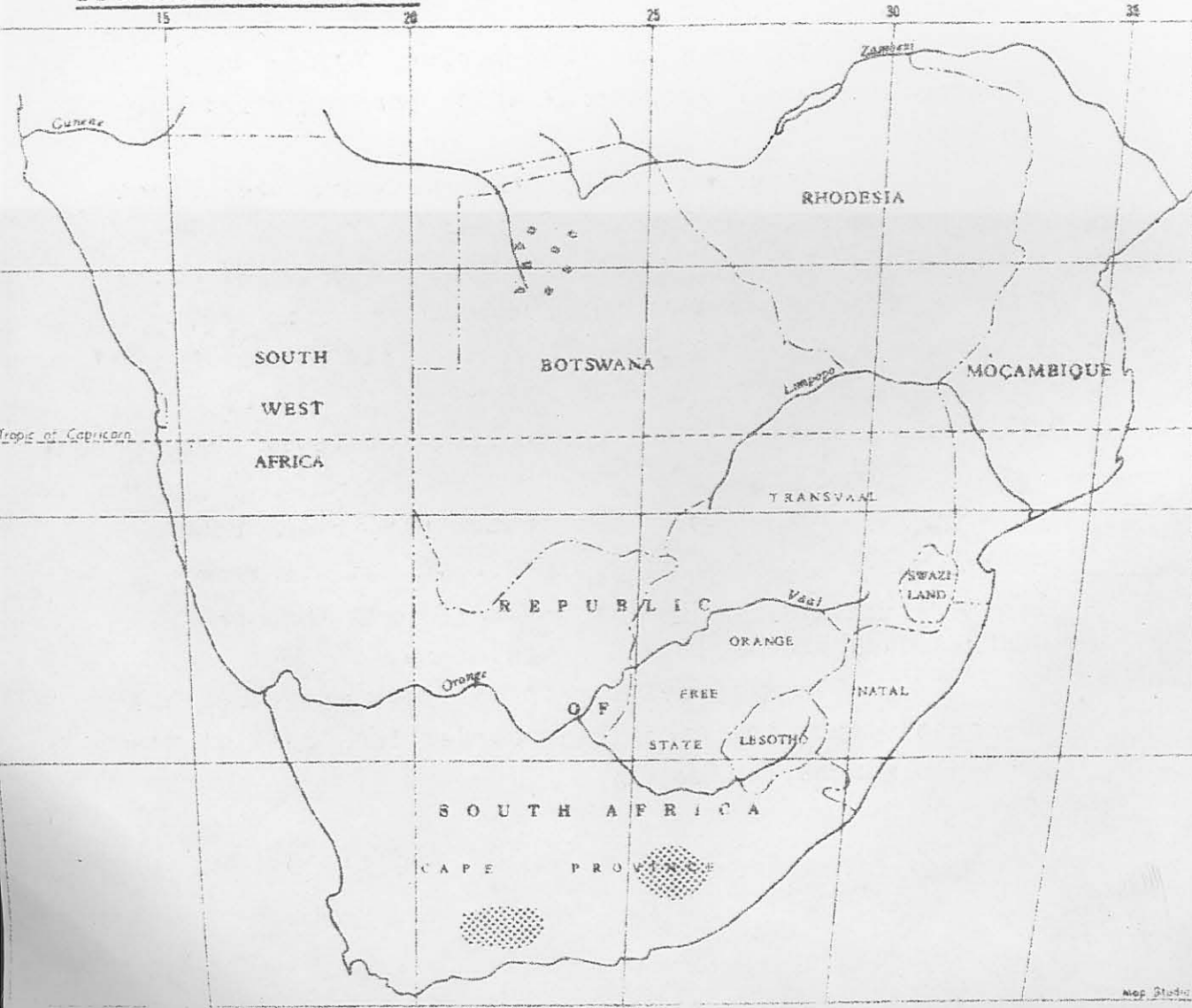
Extinct, and according to Bryden (1899) and others, probably survived in the Cape until the years 1865-70 and in the Orange Free State until 1870-3. In various overseas zoos it survived a few years longer than in the wild state.



Past distribution:

Equus zebra zebra (Mountain zebra)

Present distribution:



Equus zebra zebra (Mountain zebra):

Cape Province:

Meester (unpublished manuscript) suggests an intergradation of E.zebra zebra and E.zebra hartmannae across the Orange river in the past, but owing to incomplete records or insufficient descriptions, the precise range limits of the two subspecies cannot be ascertained to any satisfactory degree. The following records, however, show that such an intergradation was possible:

Van Haerwarden (Molsbergen, 1916): in the vicinity of the Great Berg river and on the Twenty Four Rivers mountains near Fransch Hoek in 1658.

Meerhoff (Molsbergen, 1916 and Thom, 1958): Riebeeck Kasteel and the Little Berg river in 1660.

Craijenhoff (Molsbergen, 1916 and Thom, 1958): Riebeeck Kasteel and Little Berg river in 1661.

De Smit (VC.37, Cape Archives): on his way to the Namaquas in 1662-1663.

Waagenaar (Molsbergen, 1916): on the way to the Namaquas in 1662-1663.

De la Guerre (Molsbergen, 1916): Marmerberg (Meerhofskasteel) and the mountainous parts of Little Namaqualand in 1663.

Van der Stel (Molsbergen, 1916): at Mineraalbergen and Hoogekraal after passing Piketberg in 1685-6.

Paterson (1789): the mountains near Piketberg and near the Orange river mouth.

Barrow (1804): the Kamiesberg in Namaqualand, where Broadbent(1865) also records it in 1822.

Le Vaillant (1796): near the Twenty Four Rivers; near the Green (= Groen) river in Little Namaqualand and at Zebrafontein near the lower Orange river.

It is obviously impossible to say how many, if any, of the above records in reality were those of E.z.hartmannae, especially near the lower Orange river and in Little Namaqualand.

In the vicinity of the Cape and along the southeast coast the zebra is recorded from most of the mountain ranges, including:

Schrijver (Mossop, 1931): in the kloof between the Lange and Attaqua mountains in 1689. Since he describes it as being striped brown and grey, identification as a mountain zebra is rather uncertain and it might have been a quagga.

Sparrman (Brink, 1955): in the Hottentots Holland mountains; Grabouw; the Botriver vicinity and near Caledon in 1775.

Cloppenburg (1768): in the mountains near Swellendam.

Thunberg (1772): Tygerhoek.

Sparrman (1789): between the Bot river and Caledon.

Paterson (1789): from Tygerhoek eastward along the south bank of the Sonderend river; the Reed Valley near Swellendam; between the Van Stadens and Swartkops rivers.

Thunberg (1795): Krakakamma near the Swartkops river.

VC.104, Cape Archives: in the divisions of Tarka, Swartberg and Cango in the years 1796-8.

Barrow (1804): Cape Agulhas, Cango, Swartberg and Trada (= Tarka?).

Lichtenstein (1812): valley of the Gourits river.

Burchell (1822): contends that the Paardeberg (present-day Malmesbury division) was named after the wild horses that once inhabited it but that they were extinct there at the time of writing.

Pringle (1835): from the Suurberg range.

Buckley (1876): the mountainous parts of George.

Schönland (Millar, 1968): fairly plentiful on the rugged hills west of Cradock in 1892.

Slater (1900): in the Cedarberg (Piketberg); Roggeveld mountains (Sutherland); Swartberg (between Prince Albert and Oudtshoorn); Sneeuwberg (Graaff Reinet); Great Winterhoek mountains (Uitenhage) and the ranges of the Cradock and Cathcart divisions.

Agricultural Correspondence Files, 1898-1908: the lowest and highest number for these years in the following divisions were: Cradock, 228 and 240 (on the farms Gannahoek, Orange Grove, Groenhoek, Rooipoort, Craiglans, Doornhoek, Boscheskloof, Karreebosch,

Garstlandskloof); George , 160 and 220 (on the farms Mount Hope, Groot Doorn River, Wagenboomskraal); Oudtshoorn, 95 and 200; Prince Albert, 7 (on the farms Elandskloof, Boesmanspoort and Grootfontein); Uniondale, 13 and 20 (on the farms Zandfontein and Diepkloof); Uitenhage, 7. The numbers given for Little Namaqualand (Steinkopf Mission Reserve and Springbokfontein) where 30 occurred, probably referred to E.z.hartmannae although no mention is made of the subspecies.

Hornaday and Haagner (1922) , according to Millar (1968): approximately 400 surviving in the Union of South Africa, occurring in four Cape divisions, ie. 330 in George; 50 in Oudtshoorn; 20 in Sutherland and 27 in the mountains of the Cradock division.

Haagner (1925): the mountainous parts of the Cape, ie. the Oudtshoorn, George, Sutherland and Cradock divisions where a total of about 300 animals occurred.

Shortridge (1934): quotes Bryden as stating that small herds were still to be found in the Sneeuwberg, Witteberg, Tandyiesberg, Swartberg, Winterhoek and one or two other ranges.

Bryden (1936): "...its habitat is restricted to certain ranges in Cape Colony, notably in the Cradock and Cathcart divisions, on the Zwarteberg between Prince Albert and Oudtshoorn, the Sneeuwberg, near Graaff Reinet , the Winterhoek and their offshoot the Witteberg, in the Uitenhage division, one or two ranges in Western Cape Colony, and the Roggeveld, near Sutherland. Here and there along the Drakensberg it is occasionally found , its range extending a few years ago as far as the Lebombo Mountains - a continuation of the great Drakensberg chain - in Swaziland".

Present distribution:

The following records indicate a very much contracted range at present:

Bigalke (1951): according to a survey carried out in December 1949, two zebra used to occur in the Mountain Zebra National Park, but these were destroyed in August 1950; 21 occurred on the farm Doornhoek in Cradock; 11 on the farm Waterval in Cradock; 20-25 along the northern slopes of the Outeniqua range and adjacent farms; 15 in the Kamanassie area, with

the possibility of a few on other farms along the northern slopes of the Outeniqua mountains - an overall total of between 70 and 80 animals.

Ellerman et al. (1953): small numbers on private properties near Cradock and Oudtshoorn.

Rand (1955): a provincial population of approximately 130.

Skead (1956): Kamanassie area, 30; Kouga Mountains, Willowmore district, 10; Cradock Park, 16; Outeniquas, 35; Michaus, Cradock, 35; total number surviving, 126.

Knobel (1958): 17 in the Mountain Zebra National Park; 40 on adjacent farms and about 25 in the mountainous regions near Oudtshoorn.

Bigalke and Bateman (1962): in the divisions of Adelaide and Cradock.

Sidney (1965): 11 moved from the farm Waterval (Cradock) to the Mountain Zebra National Park in 1950 have increased to 25; 43 on the farm Doornhoek and approximately 35 in the Outeniquas.

Simon (1966): estimated numbers, September 1965, 58 in the Mountain Zebra National Park and 75 in the whole of South Africa.

Millar (1968): Gamka Mountains near Oudtshoorn, 12; Mountain Zebra National Park, Cradock, 93; Kamanassie Mountains Range, 7; Outeniqua Mountains near Zebra and Perdeboud, 3; Kouga Mountains near Studtis, 7; Provincial Game Farm "De Hoop", 3; total population in the Republic, 125.

Change in distribution:

The mountain zebra has practically disappeared from all the western and southern Cape ranges, from near the lower Orange river in the west to the Suurberg range in the east as well as from the mountains more to the interior, eg. the Roggeveld, Sneeuberge, Tandjiesberg and others.

Today the mountain zebra occupies a very small area of its former range and practically occurs only in the Mountain Zebra National Park in the Cradock division, with a few specimens occurring in the Outeniqua range of the Oudtshoorn division.

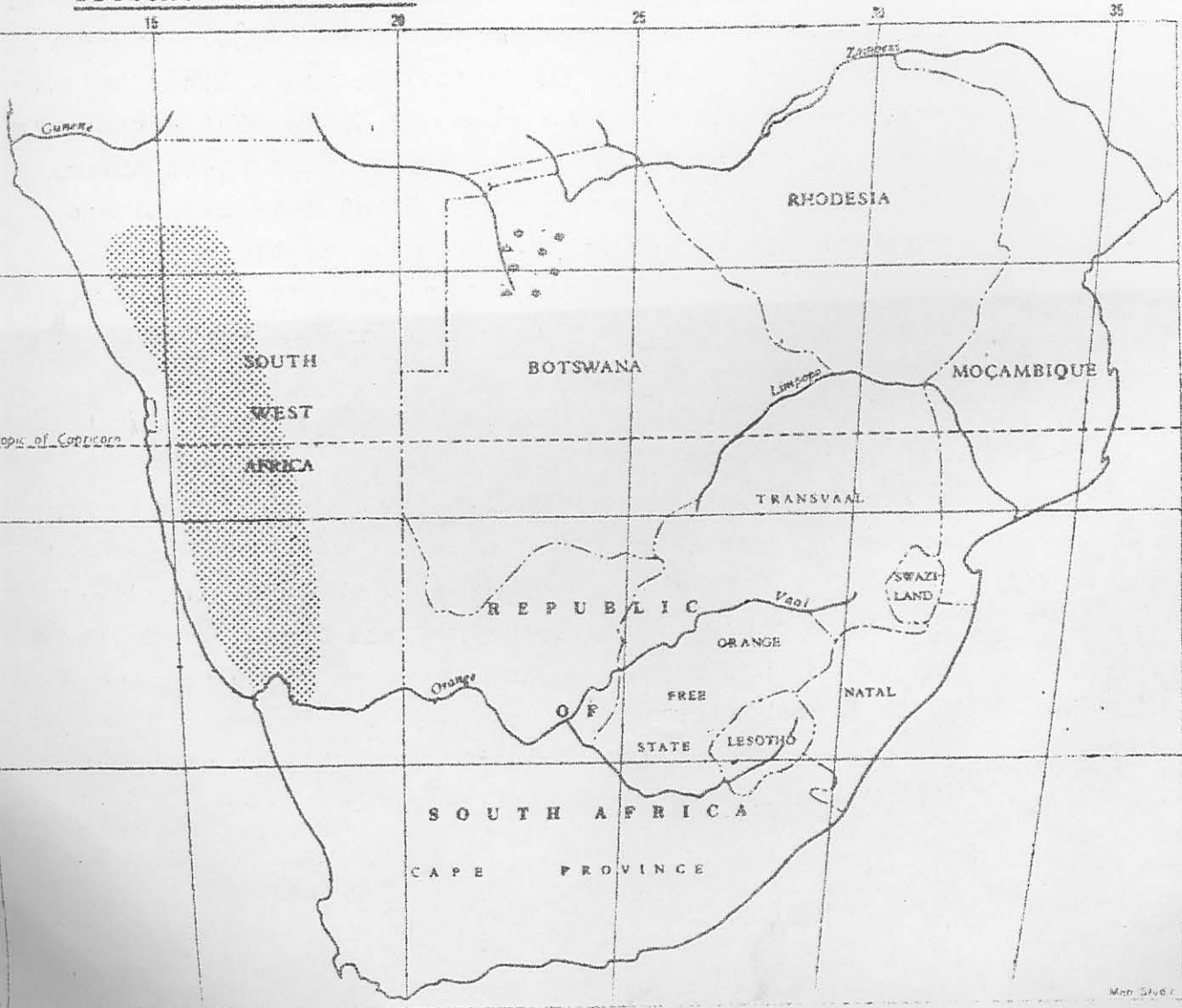
According to Simon (1966) the reasons for decline in numbers include the fact that it never occurred in large numbers and settlement resulted in ousting the zebra from its habitat into unsuitable habitat.



Past distribution:

Equus zebra hartmannae (Mountain zebra)

Present distribution:



Equus zebra hartmannae (Mountain zebra):

According to Shortridge (1934), the Kamiesberg south of the lower Orange river in Little Namaqualand may have formed a southern extension of the range of this subspecies. Meester (unpublished manuscript) also suggests an intergradation between E.z.zebra and E.z.hartmannae towards the Orange river. The exact limits of the ranges of the two subspecies cannot however be exactly determined and it is quite possible that E.z.zebra might have extended to the Orange river.

To the north of this river E.z.hartmannae previously occurred in the mountain range that forms the eastern border of the Namib desert, northwards to the Cunene river and possibly beyond. The following records elaborate on this broad distribution:

Brink and Rhenius (Mossop, 1947) : near the present-day Grundorn on Braus, Keetmanshoop district, in 1761.

Duminy (Franken, 1938): mentions striped asses, five days on horseback into the interior from Walvis Bay in the year 1811.

Thompson (1827): near the junction of the Hartbees and Gariep (= Orange) rivers in the present-day Kenhardt division sebras occurred in fair numbers. Millar (1968) states that since this is a stony karroid semi-desert without mountains, it shows that Hartmann's zebra to the south was not a strictly mountain animal.

Alexander (1838): Great Namaqualand and southern Dararaland in the vicinity of the Karas mountain range; the Kuis river; Bethanie; Bull Mouth Pass near the Chuntop river; the Tansberg and the Numsep river.

Tindall (Tindall, 1959): in Damaraland during the years 1839-55.

Andersson (Wallis, 1936): near the Otjimbingue Springs in the 1850's.

Galton (1853): the Otjimbingue vicinity; the Canna river (a tributary of the Swakop); on the way to Omanbonde Lake (=Pan); between the Black and White Nossob rivers.

Wahlberg (Gyldenstolpe, 1934): near Scheppmansdorf on the Kuiseb river in 1854-5.

Andersson (1856): along the bed of the Swakop river; Tjobis Fountain; near the Richtersfeld Mission Station; Onanis; between the Richtersfeld and Barmen in the vicinity of the Swakop river; from Schmelens Hope to the Omatako mountains (near to the latter); Kotjiamkombe; at Omatjamatunda Fountain and near Tunobis.

Andersson (1861): Ombolofontein on the Omaruru river.

Baines (1864): Tincasdrif.

McKiernan (Serton, 1954): it is not always clear whether hartmannae or burchelli is indicated, but records of zebra are given from the following vicinities: Usakos, Biib, Otavi, the Omatako mountain, Hykomkop in the Omaruru vicinity, Okahakana and Otjim(w?)arongo west of the Etosha Pan (all between the years 1874 and 1876); One Thorn near Gobabis in 1877.

Donat (1899): near Fransfontein; the Otjitambi-Okokoja vicinity.

M 2 a3. (letter from A. Goerz & Co. to the German Government in 1902): in the area bound by the Swakop river in the north, the Kuisip river in the south, the British Walvis Bay area in the west and in the east by a line five German miles to the west of the 16th degree of latitude, occurring in very large numbers.

M 2 a3. (letter from Carl Hagenbeck, Hamburg, Germany to the German Governor in Windhoek in 1913, requesting the confirmation of the occurrence of the true quagga in South West Africa): mountain zebra reported from Karibib (Onanis - Blohmatal), Rehoboth, Luderitzbucht, Swakopmund (Tinkasdrif), Büllsport (in the Namib), Hornkranz and Donkersand.

Schultze (1907): the mountain ranges of the Namib desert in Great Namaqualand.

Lydekker (1908): Damaraland.

Shortridge (1934): from the Orange river in the south to the Cunene river in the north, but nowhere inland from the Namib for much more than a hundred miles; in the Kaokoveld the eastern range is limited by the hills around Otjitundua and Kovares; Outjo district near Fransfontein; Otjiwarongo district in the southwestern corner; Omaruru district, especially near the Ugab river; Windhoek and Swakopmund districts,

but only in the western mountainous parts and on a few farms bordering on the Namib desert, especially along the Kuiseb and Swakop rivers; near the western border of the Rehoboth district; the western and north-western parts of the Maltahöhe district; in the north and south of the Bethanie district; throughout the Luderitz district; the far west of the Warmbad district, but on both sides of the Fish river where it joins the Orange river.

Present distribution:

This coincides to a large extent with its past distribution as shown by the following:

Lundholm (1951): still numerous in the Kaokoveld.

Steyn (1951): over practically the whole mountainous coastal region of South West Africa west of the Namib from the Orange in the south to the Cunene in the north.

Ellerman et al. (1953): the arid mountain chain forming the eastern boundary of the Namib from Great Namaqualand to Angola.

Bigalke (1958): widespread in the districts of Outjo, Karibib, Windhoek, Luderitz and Maltahöhe, common in the Native Reserves in the Omaruru district and the eastern part of Game Reserve 2; does not occur in the Tsumeb, Grootfontein, Gobabis or other remaining districts; its range overlaps that of burchelli in the Kaokoveld.

Van der Spuy (1962): distributed between longitude $13^{\circ}48'$ and $17^{\circ}36'E$ and latitude $19^{\circ}18'$ and $28^{\circ}24' S$, with approximately 83.2% of the population north of latitude $24^{\circ} S$; the total farm population being approximately 10,520.

Sidney (1965): in the Karibib, Windhoek, Luderitz and Maltahöhe districts and in the Omaruru Native Reserve.

Simon (1966): total population for the whole of South West Africa approximately 7,000.

Baxter (1967): on the farm Naukluft situated between Maltahöhe and Solitaire, about 150 miles southwest of Windhoek; approximately 500 hartmannae on the Naukluft plateau.

Millar (1968): the coastal strip and sub-continuous chain of arid mountains from the Orange river

in the south to Angola in the north.

Change in distribution:

With the exception of its disappearance immediately south of the Orange river, Hartmann's zebra still occupies virtually the same range as it did in the past, although local changes have taken place.

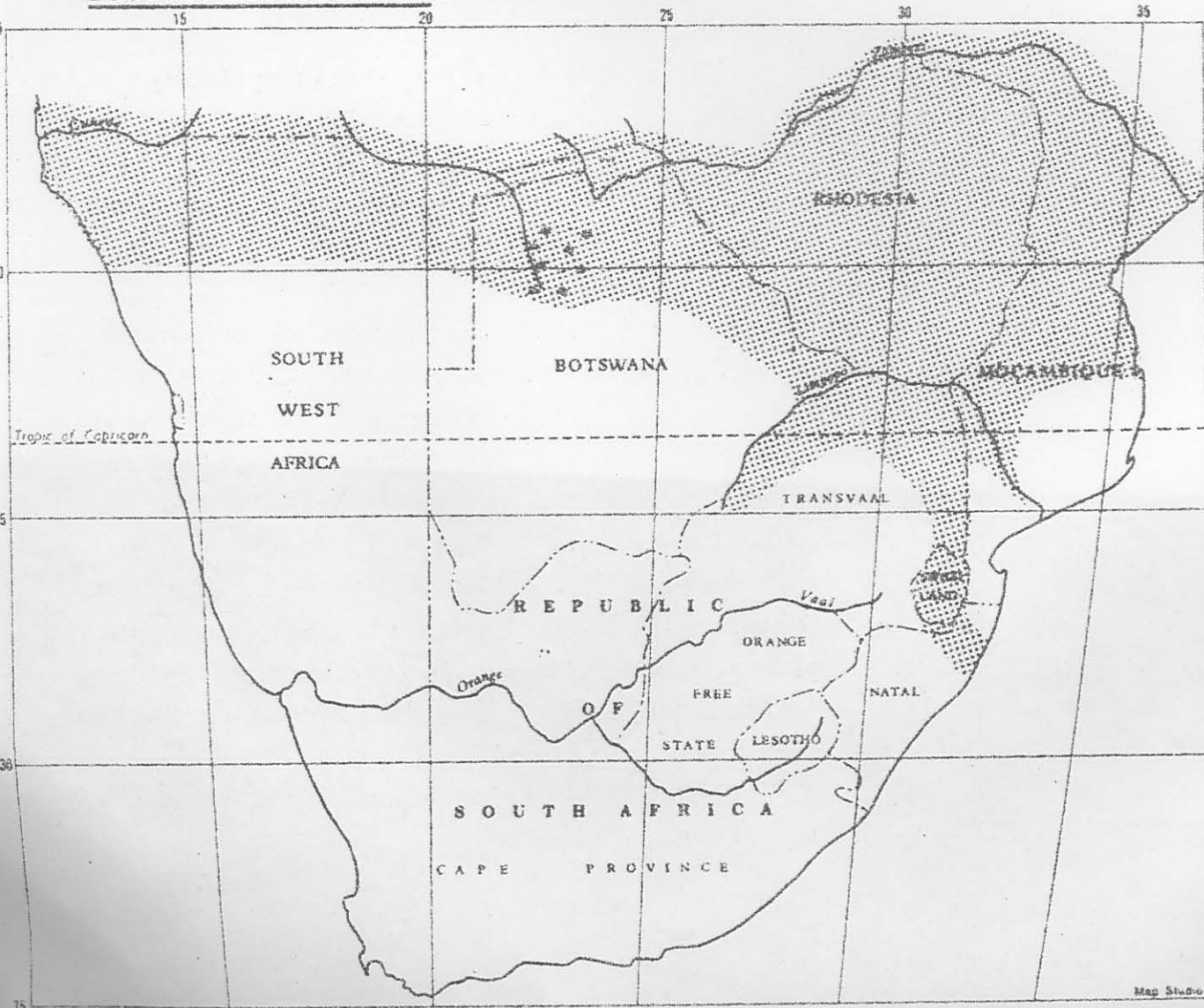
Millar (1968) writes: "About the only change has been the isolation or semi-isolation of the Southern populations in the Bethanie, Warmbad and Fish River areas, which were linked up with the populations further north not so long ago."



Past distribution:

Equus burchelli (Burchell's zebra)

Present distribution:



Equus burchelli (Burchell's zebra):

This species probably did not occur very far south of the Orange river, but ranged northwards through the northern Cape, Botswana, Transvaal, the Orange Free State, Mocambique, Zululand and parts of South West Africa.

The following authors record burchelli from the above areas:

Cape Province:

Gordon (Barnard, 1950): mentions "zebraas" in 1779-80 near the Aughrabies Falls on the south bank of the Orange river.

Burchell (1822): near the Ky Gariep (=Vaal river) and near Litakun (or Lattakoo) in Griqualand West.

Campbell (1822): in the northern Cape near Choo-y-ing (= Chue or Chooi); between Old Lattakoo and Meribowhey; between the Mareetsane and Molopo rivers; near Kurreechane (or Kurrichane) in the present-day Zeerust district; between Kurreechane and Mashow (Mashowing) near Philipfontein as well as near Hankey's Fountain.

Bain (Lister, 1949): in the northern Cape near Heuning Vlei (= Chue) in 1826; between the Harts river and Taung and near the Molopo river in the present-day Mafeking vicinity.

Thompson (1827): near the King George Cataract (probably the Aughrabies Falls) in the lower Orange river.

Harris (1841): along the Mareetsane river.

Methuen (1848): near Campbells Dorp and Danielskuil in Griqualand West.

Cumming (1850): just north of the Orange river in Griqualand West; Stink- (or Kruit-) fontein about 25 miles from the Vaal river; Little Chue; near Loharon on the way to Great Chue (present-day Vryburg district); near the Mareetsane river; between the Harts, Vaal and Mareetsane rivers.

Holub (1881): Kunana (present-day Mafeking district); between the upper Harts river in the east, the Mareetsane in the north and Mamusa in the south.

Anderson (1888): the Kuruman-Taung-Marico vicinity.

Lydekker (1908): the Cape Province north of the Orange river.

Natal:

This zebra probably only occurred in Zululand and northwards.

Baldwin (1863): in the Amatonga country (north of the Mkuzi river).

Drummond (1875): in Tongaland (the area between Zululand and Mocambique) between the Usutu and Pongola rivers; northern Zululand.

Baldwin (1894): near the St. Lucia river in Amatongaland.

Bryden (1899): from Zululand northwards.

Lydekker (1908): Zululand.

Shortridge (1934): Zululand.

Orange Free State:

The past range of Burchell's zebra in the Orange Free State is rather uncertain. There is a possibility that it only occurred in the northern and northeastern parts of the province in spite of the fact that some authors mention the whole province. Nomenclatural confusion between the zebra and quagga may have led to incorrect distribution records, especially by authors who had not personally visited the area. The following records are in some cases rather vague:

Arbousset and Daumas (Liebenberg, 1964): near the junction of the Wilge and Vaal rivers in 1836.

Harris (1841): "Inhabits the plains of the interior beyond the Gareep in immense herds".

Wahlberg (Brinck, 1955): southwest of Harrismith along the Elands river and near Klerkspruit, a tributary of the Wilge river in 1841.

Leyland (1866): between the Riet and Orange rivers.

Bisset (1875): near Bloemfontein and between Bloemfontein and Winburg.

Aylward (1878) and Collins (1907): both mention only quagga as occurring earlier in the province. Collins records large numbers as far back as 1850 and Aylward mentions that when he first crossed the Drakensberg in 1850, the districts of Harrismith, Kroonstad, Renosterspruit and Bethlehem, together forming an area of about 6,000 square miles, harboured large numbers of quaggas. Since the true quagga was not yet extinct at that time and the zebra not mentioned, the question

arises if Burchell's zebra ever ranged in the southern or eastern parts of the Free State.

Bryden (1899): the Orange Free State.

Lydekker (1908): the Orange Free State.

G.Eloff (1966): inhabited the northern Orange Free State and became extinct in about 1910.

Transvaal:

Records from the northwestern, northern and eastern Transvaal include:

Trigardt (Le Roux, 1966): the Soutpansberg vicinity and along the Sand river in the present-day Messina district in 1836-7.

Harris (1841): near the Crocodile river in northwestern Transvaal.

Wangemann (Grosskopf, 1957): near the Spekboom river in the Lydenburg vicinity during the years 1866-84.

Erskine (1869): the Lydenburg district and near the Sorgobiti river.

Mauch (Petermann, 1870): the vicinity of the Olifants river in the eastern Transvaal in 1868.

Elton (1873): the south bank of the Limpopo river .

Baines (1877): near the Magalakwen river in the Blouberg area (present-day Waterberg district).

Das Neves (1879): the Soutpansberg district.

Holub (1881): near the Dwarsberg in northwestern Transvaal.

Gillmore (1888): Pilansberg vicinity north of the Crocodile river, northwestern Transvaal.

Hofmeyr (1890): the Soutpansberg district.

Van Oordt (1894-5): the old Pongola Game Reserve.

Bryden (1899): western Transvaal.

Chapman (1900): the eastern Transvaal lowveld.

Lydekker (1908): Transvaal.

Stevenson-Hamilton (1911): 2000 in the Sabi and about half of that number in the Shingwedzi Game Reserves (Annual Report, 1911).

TP.6/7, Report of the Game Reserves Commission, 1918: 2000 in the Sabi and 1500 in the Shingwedzi Game Reserves.

Glynn (1926): near Pretorius Kop in 1873 and later.

Shortridge (1934): northern and eastern Transvaal.

Mocambique:

Burchell's zebra occurred widely throughout Mocambique as illustrated by the following:

Livingstone (Schapera, 1963): along the Zambezi river in 1856.

Peters (1852): Quellimane, Sena, Tete, Macuasprache and Sofala.

Erskine (1875): along the lower Limpopo in Mocambique.

Kirby (1899): near the Urema-Zangwe marshes; the vicinity of the Mwanza river; the Urema river area; the Cheringoma forest.

Findlay (1903): the Cheringoma area; the Madingue-dingue river vicinity; between the Mwanza and Mwardzi rivers; Gorongosa; near the Jungwe river.

Vasse (1909): Gorongosa; Pungwe (Nioronga); Sena.

Glynn (1926): near the Pungwe river.

Shortridge (1934): parts of Mocambique.

Rhodesia:

E. burchelli had a widespread distribution throughout Rhodesia as recorded by:

Livingstone (Schapera, 1963): along the Zambezi river in 1855.

Selous (1881): near Jomain in the vicinity of the Umniati river; approximately 80 miles east of the Victoria Falls in the angle between the Gwai and the Zambezi rivers; near the Victoria Falls; the Dett vicinity; the junction of the Ingesi and Lunti rivers; Daka in the Wankie area; near the Sewhoiwhoi river; near the Umfule, Umniati and Umsweswe rivers.

Oates (1889): between the Sakasusi and Semokwe rivers; along the upper Gwailo and Umgwanya rivers; near the Ramaquabane and the Semokwe rivers; between the Ramaquabane and Zambezi rivers; near the Maitengwe river; between Panda ma Tenka and the Victoria Falls.

Selous (1893): the vicinity of the Manyami river (near the present-day Salisbury); the Umfule river in the Umniati highlands; where the Luia joins the Mazoe;

near the Gwelo and the Umsengaisi rivers.

Millais (1899): near the Nuanetsi river.

Selous (1908): in the Dett Valley in 1873;
 near the Pungwe river in 1891.

Lydekker (1908): Matabeleland and Mashona-
 land.

Chubb (1909): a specimen in the Rhodesian
 Museum obtained from near Mangwe.

Shortridge (1934): Rhodesia.

Botswana:

Burchell's zebra occurred chiefly in the
 southern, eastern, northern and northeastern parts of
 the territory. Records include:

Bain (Lister, 1949): near Segutshane;
 Molepolole and between Molepolole and Gaberones in 1826.

Methuen (1848): in the vicinity of the
 Notwani river in the Bakgatla country; Sechela's Kraal
 (Molepolole); near the Molopo and Klein Marico rivers.

Cumming (1850): the Valley of the Bakgatla;
 Massoue (=Mashuwe ?) Fountain; between Boatlanama and
 Lepebe; the Bamangwato territory; the vicinity of the
 Limpopo river; the Lotlokane and Kolobeng vicinities.

Moffat (Wallis, 1945): between the
 Mahalapye and Shashi rivers; near the Ramaquabane river;
 near the Serule river and at Matlokotlo in 1854.

Price (Long, 1956): Mashuwe (about 20 miles
 south of Shoshong) in 1854.

Wahlberg (Gyldenstolpe, 1934): on the
 Mababe Flats in the vicinity of the Mababe river in
 1854-5.

Moffat (1856): near the Serule river.

Holden (1855, quoting McCabe): on the
 Mababe Depression.

Andersson (1856): the Ghanzi vicinity;
 between Ghanzi and Lake Ngami.

Baines (1864): east of Lake Ngami; near
 the Victoria Falls.

Leyland (1866): the Kolobeng vicinity and
 near the Zouga river.

Livingstone (1857): near the Kolobeng
 Fountains; after passing the Boatlanama Wells; the
 vicinity of the Makarikari pans; near the Chobe marshes.

Chapman (1868): near the Notwani river.

Baines (1877): the Macloutsi river vicinity.

Gillmore (1878): near the Notwani river;

between the Macloutsi and Serule rivers; between the Macloutsi and Shashi rivers.

Holub (1881): the vicinity of the Makarikari pans; between the Soa (Shua) salt pan and the Nata river; Nata spruit; Tamafopa (Skeleton Springs); the Gashuma Flat; Panda ma Tenka; Tobane on the Macloutsi river.

Selous (1881): on the so called Pookoo Flats along the Chobe; the plains in the vicinity of the Chobe swamps; along the Botletle river; on the Mababe Flats.

Bradshaw (1881): near the Chobe river.

Oates (1889): between Mahalapye and the Tauani (=Towani ?) river.

Holub (1890): near the junction of the Marico and Limpopo rivers; near the Makarikari pans; the Nata river; Soa pan; Hornsvlei and Panda ma Tenka.

Bryden (1893): in earlier times from the Orange river northwards in Botswana, including the Kalahari, up to Ngamiland; at the time of writing from Palachwe northwards; along the Botletle, Mababe and Chobe rivers; near places with water holes between Palachwe and the Zambezi river.

Selous (1893): the edge of the Chobe marsh.

Baldwin (1894): from Boatlaname to Lopepes Vley near Sicomo; between Sechele (Molepolole) and Lake Ngami; the Massouey (Mashuwe?) salt pan; Great Namesa; Kanye; near the Tamashaki river.

Schultz and Hammar (1897): near the Makarikari pans and the Chobe river.

Hodson (1912): the northeastern edge of the Mababe Flats and in the vicinity of the Mababe river.

Shortridge (1934): northern Botswana and Ngamiland.

South West Africa:

Possibly from Great Namaqualand according to Shortridge (1934). Other records as follows:

Livingstone (1857): from Linyanti to Sesheke in the Caprivi.

Green (Petermann, 1867): near the Cunene river in 1866.

Selous (1881): near Linyanti in the Caprivi.

Lydekker (1908): Damaraland.

Shortridge (1934): north of 21°S latitude in the west and 19 or 20°S latitude in the east in northern Damaraland; the Etosha Pan area; the Kackoveld;

Ovamboland; the Okavango area and the Caprivi.

Present distribution:

Cape Province:

Extinct in all divisions north and south of the Orange river.

Natal:

Ellerman et al. (1953): Zululand.

Knobel (1958): Natal Game Reserves.

Vincent (1962): confined to the Mkuzi, Hluhluwe and Umfolozi game reserves, as well as the lands between the latter two.

Bourquin (1966): fairly common in the Mkuzi Game Reserve; approximately 2000 in the Hluhluwe Game Reserve; common in the Umfolozi Game Reserve; four introduced into the Loteni Nature Reserve.

Orange Free State:

Extinct, but re-introduced into Game Reserves; 23 occurred in the Willem Pretorius Reserve in 1965 and 11 in Golden Gate Park (De Graaff, in litt.)

Transvaal:

Still occurs in eastern, northern and northwestern Transvaal:

Ellerman et al. (1953): the Kruger National Park.

Ketttlitz (1955 and 1962): outside the confines of the Kruger National Park in small numbers in the Rustenburg, Waterberg, Potgietersrust and Pietersburg districts; more in the Pilgrims Rest and Letaba districts and on the borders of the Kruger National Park; a few on farms in the Barberton district; numbers declining sharply in the northwestern districts lately; approximate total in Transvaal 6000, with less than 1000 of these in the northwestern districts.

Pienaar (1963): throughout the Kruger National Park, numbering approximately 12,500-13,000 of which 9,000 inhabit the central portion and 1,000 the area south of the Sabi river.

Hirst (1964): Timbavati Private Nature Reserve.

Ketttlitz and Verschuur (1958): approximately 350 on the Hans Merensky Nature Reserve.

Meester (1960): the Loskop Dam Nature Reserve.

Mocambique:

Does not occur in southern Mocambique south of 23°S latitude, but in most districts to the north.

Fajardo (1953): large numbers in Gorongosa National Park.

Ellerman et al. (1953): parts of Mocambique.

Sidney (1965): extinct in some districts, but occurring in large numbers in the Manica e Sofala district; rare in the Chiçco district but occurring on the Rhodesian border; numerous in the Gorongosa Game Reserve; extinct south of latitude 23°S, but still occurring in the area south of the Save river and along the upper Limpopo.

Tinley (in litt.): agrees with the distribution of Burchell's zebra as given by Sidney (1965).

Rhodesia:

Occurs in most parts of the country:

Ellerman et al. (1953): Rhodesia.

Fraser (1958): widely distributed.

Child and Savory (1964): throughout the country, but generally absent along the watershed; introduced into the Matopos National Park and Robert McIlwaine National Park.

Sidney (1965): widespread throughout, with large numbers in the low veld; numerous in the Nuanetse, Ndanga and Bikita Native districts; common along the Zambezi valley; Wankie Game Reserve.

Reports of the Federal National Parks Board for the years 1959-1963: Wankie National Park; Victoria Falls National Park; Robert McIlwaine National Park (introduced); Matopos National Park (introduced); Ngesi National Park.

Botswana:

Still occurs in fair to large numbers in northern and northeastern Botswana. The following records indicate this distribution:

Hill (1942): near the Kwaai river and on the Mababe Flats.

Knobel (1958): Botswana.

Kay (1962): Nyie Pan near Kanye; the Kwaai river vicinity.

Van Eyssen (1964): Lake Ngami vicinity.

Sidney (1965): fairly common in northern, central and eastern Botswana; large numbers in Ngami-land and near the Chobe river; fairly plentiful on the Mababe Flats, Kgalagadi, the Bamangwato territory and northeastern and northern Ngwaketse area; occasionally in the Bakwena and Bangwaketse Reserves and in the Tuli region.

Kirsten (1966): Moremi Game Reserve.

Knobel (1967): Chobe Game Reserve.

Tinley (1966): throughout the Moremi Wildlife Reserve in small groups during the dry season but probably moving out of the Reserve during the wet season.

Smithers (1968): occurs throughout northern Botswana; as far south as Tsau on the western Okavango; along the Botletle river to near Rakops; the northern and eastern part of the Makarikari to Macloutsie; the extreme eastern part of the Bamangwato Reserve and the northern part of the Tuli Block Farms; on the South West African border not much further south than the Aha Hills at latitude 20°S; possibly a small population in the northern part of the Bushman Reserve, but this may have been exterminated; may still be preserved on some of the Tuli Block farms as far south as 24°S.

Campbell (1968): until approximately 1961 a small herd near the Passarge Pan in the Central Kalahari Game Reserve, but today due to cordon fences across the northern boundary of the Reserve, no longer to be found.

Winchester-Gould (1968): common in the Chobe National Park.

Child (1968): occur throughout most of northeastern Botswana with numbers fluctuating according to the amount of surface water available since numbers increase near permanent water during dry seasons but disperse during rains.

South West Africa:

Still has much the same distribution as given by Shortridge (1934). Other records include:

Lundholm (1951): in fair numbers on the flats of the Kaokoveld, even far out in the Namib desert.

Bigalke (1958): southern limit at approxi-

20°S latitude; largest numbers near the Etosha Pan; the Tsumeb, Grootfontein and Outjo districts; extends into Ovamboland; the Kaokoveld; Game Reserve 2; along the Okavango river to about 30 miles south of the river; in the Caprivi Strip; absent from northeastern Grootfontein district.

Moon (1964): Etosha Pan Game Reserve.

Sidney (1965): follows Shortridge (1934).

Change in distribution:

Burchell's zebra has disappeared from the northern Cape, the Orange Free State, central Botswana, the western Transvaal, southern Mocambique south of 23°S latitude and central South West Africa.

In other areas, such as northern and eastern Transvaal and Zululand, its range has also been curtailed to a large extent and it occurs mostly in Game Reserves.

It still occurs in fairly large numbers in northern and northeastern Botswana, Rhodesia, the central and northern parts of Mocambique as well as in northern South West Africa and the Caprivi.