

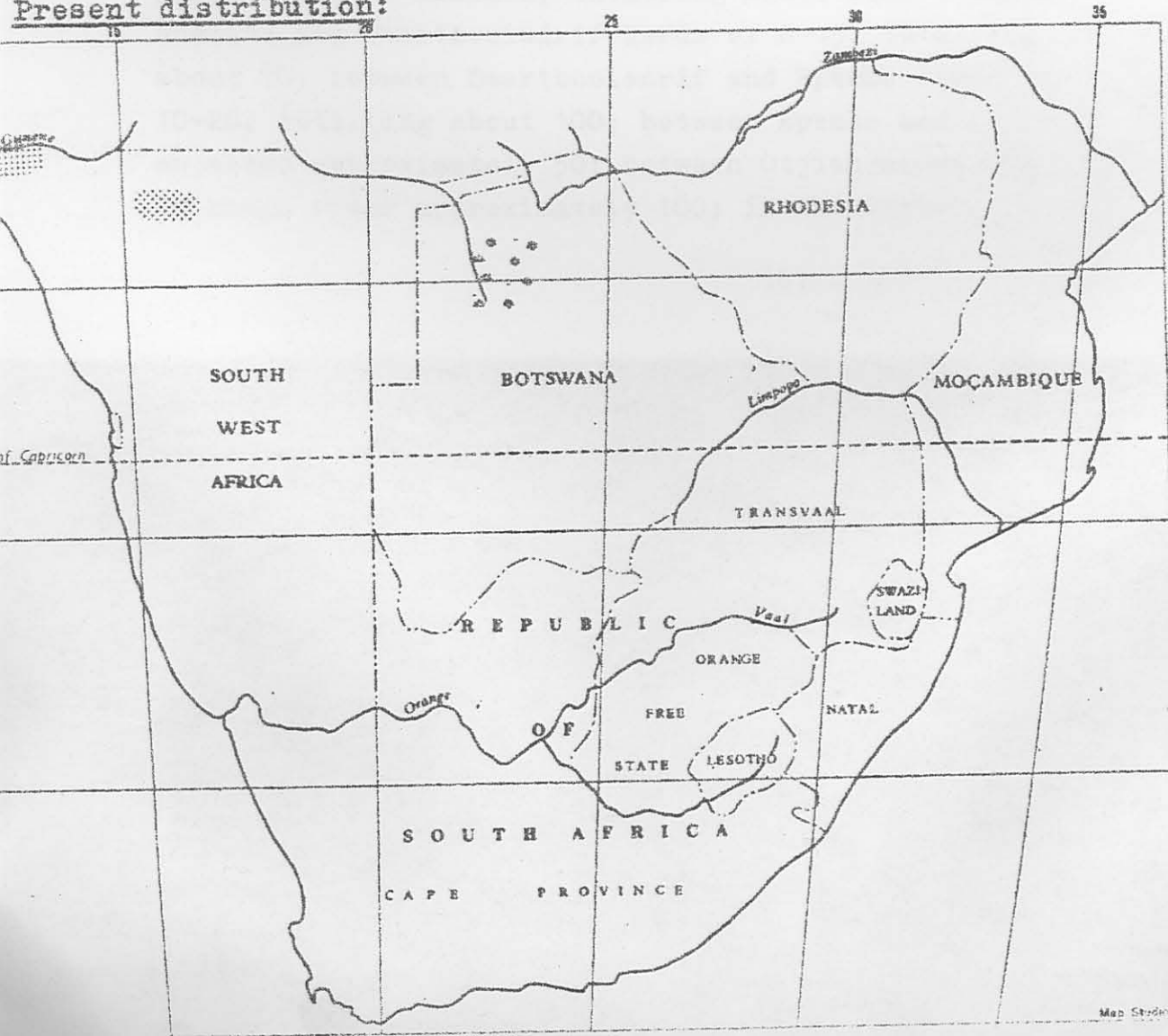


Map Studio

Past distribution:

Aepyceros petersi (Black-faced impala)

Present distribution:



Map Studio

Aepyceros petersi (Black faced impala):

Although regarded as a subspecies of A.melampus by many, the classification of Meester et al. (1964) recognises it as a separate species.

According to Shortridge (1934), the black-faced impala was discovered by Cookson in the Kaokoveld in 1889.

The very limited distribution of this antelope in the northwestern corner of South West Africa is reflected by the following:

Sclater and Thomas (1897-8): near the Cunene river in the Kaokoveld.

Bryden (1899): the Kaokoveld.

Lydekker (1908): the "Kakao-Veldt".

FitzSimons (1920): south of the Angolan border.

Shortridge (1934): "The Cunene watershed from about longitude 13° E to the western corner of the Ovambo-Angola Border, and a small area at the southern edge of the Etosha Pan."

Present distribution:

Lundholm (1951) and Ellerman et al. (1953): along the Cunene river in the Kaokoveld.

Knobel (1958): the northern Kaokoveld, particularly along the Cunene river where it is numerous; small herds on a very few farms in the Outjo district, and a small population in Game Reserve 2 south of the Etosha Pan.

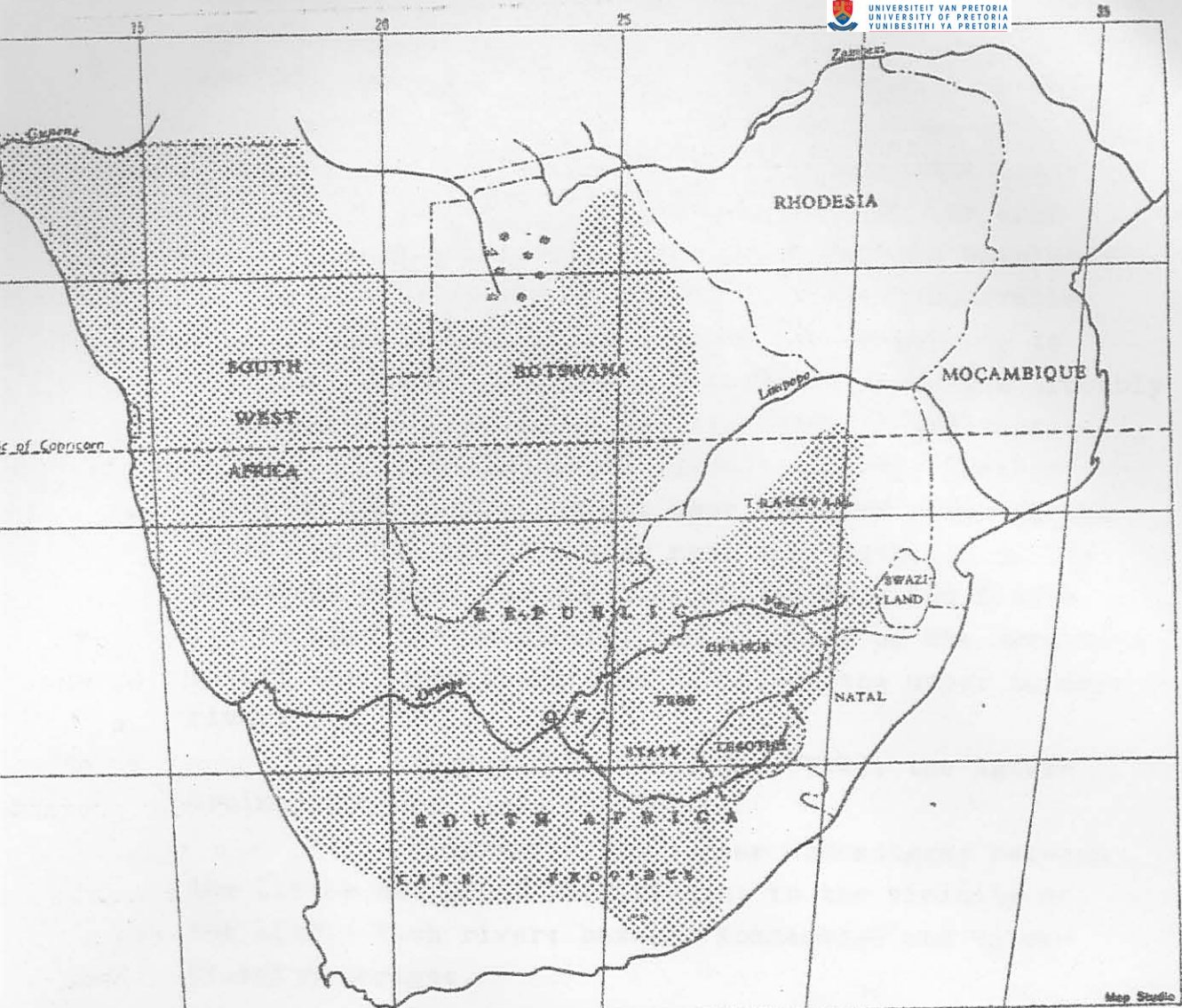
Gaerdes (1964): the northwestern districts of the Kaokoveld along the lower reaches of the Cunene and separated from A.melampus by the Oshimpoveld and Amboland where no impala occur.

Simon (1966): mainly limited to the banks of the Cunene river; seldom more than 20 miles south of this river; Otjinungua in South West Africa and Cafu in Angola respectively the most western and eastern points of its distribution; estimated numbers as follows: close to the Cunene around the Ruacana Falls several herds of 40-70 animals, totalling about 250; between Ruacana and Swartbooisdrif herds of 6-15, totalling about 70; between Swartbooisdrif and Epembe herds of 10-20, totalling about 100; between Epembe and Otjianjazemo approximately 50; between Otjianjazemo and Omuhonga river approximately 100; in the vicinity of the

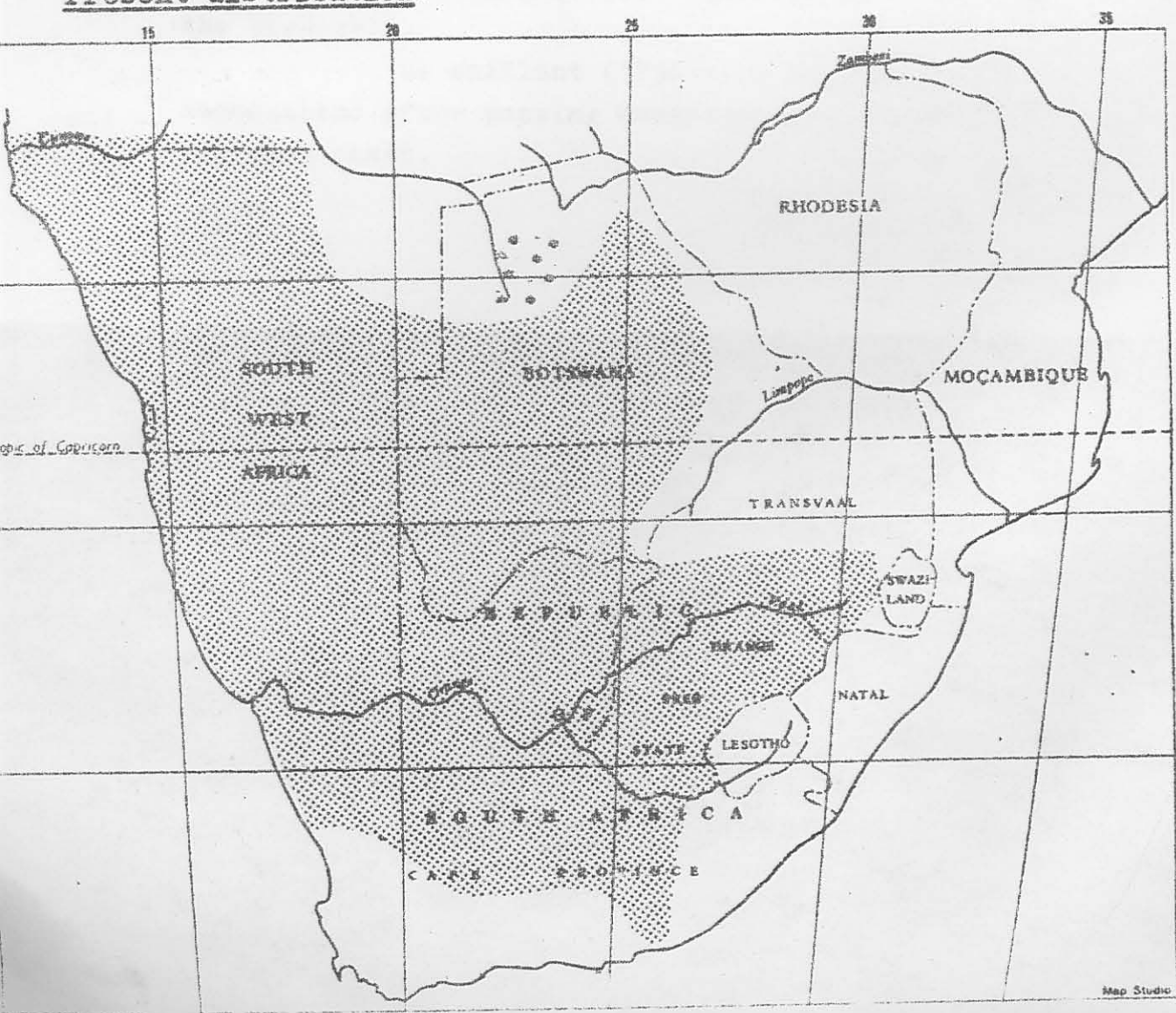
fountain at Ombombo West a single herd of 32; estimated total in South West Africa between 650-700.

Change in distribution:

The black-faced impala occurs in much the same area as in the past but its numbers have probably decreased since it was recorded for the first time.



Past distribution: Antidorcas marsupialis (Springbuck)
Present distribution:



Antidorcas marsupialis (Springbuck):

According to Bryden (1899), the springbuck in the past had a range from the Swartberg mountains in the southern Cape northwards through Botswana to Ngami-land; to the west up to the Cunene river and northeast through the Orange Free State to the plains of the southern and western Transvaal highveld. For a more detailed distribution the records for the different provinces or territories will be given separately.

Cape Province:

Although Shortridge (1934) contends that the springbuck was first mentioned by Masson (1776) who encountered this species near the Koue Bokkeveld in 1771-3, the record of Bergh (Mossop, 1931) might be an earlier one. When travelling from the Cape to the present Garies in 1682, Bergh wrote: "Des morgens met sons opganck weeder aen marseerde van de voornoemde crael ende quamen ten 2 uiren aen de Olyfants revier ende saagen onder weegen sooveel wilde bocken dat ontelbaar was ende schoot daar een aff....". These innumerable antelope were probably springbuck, and according to Mossop, the area where they were encountered was probably the present Vredendal in the Vanrhynsdorp district.

Swellengrebel (1776): near the Kariëga river in the Central Karoo; near the Brak river in the Karoo; on the grassy plains near the foothills of the Sneeu-berg range; the vicinity of the Melk and Platte rivers near the Sneeu-berg; the vicinity of the Heemraads river; the Bamboesberg area and along the upper Sundays river.

Mentzel (Mandelbrote, 1944): the Agter-bruintjieshoogte area in 1787.

Sparrman (1789): near Kommadagga; between the Little and Great Fish rivers; in the vicinity of the Little Fish river; between Kommadagga and Agter-bruintjieshoogte.

Paterson (1789): Sand Fleet (probably = Sandvliet or Sandflats) near the Great Fish river.

Thunberg (1795): the Koue Bokkeveld and the Roggeveld.

Le Vaillant (1796): on the way to Little Namaqualand after passing Koekenzap and Krakeelklip on the west coast.

VC.104, Cape Archives, 1796-98: the Onder Bokkeveld; the plains to the east of the Roggeveld mountains towards the Orange river; the vicinity of the Sneeuberg; Agterbruintjieshoogte; the Camdebo; the plains in the vicinity of the Seekoei river and the Renosterberg in the present-day Middelburg-Richmond-Hanover divisions.

Barrow (1801): the Karoo plains just north of the Swartberg range; the Camdebo; the Zuurveld (an area bound to the east and north by the Great Fish river, to the west by the Sundays river and to the south by the sea); the Karoo plains, especially along the Seekoei river north of the Sneeuberg range; the Onder Bokkeveld; the Voor, Middel and Agter Sneeuberg; never occurred in the Swellendam district and at the time of writing extinct in "Cafferland ", i.e. the territory east of the Kei river.

Van Reenen (Blommaert and Wiid, 1937): the vicinity of the "Bosjesmans rivier" (= Bushmans river) in 1803.

Lichtenstein (1812): he was probably referring to springbuck when, between the Sundays and Bushmans rivers, he wrote of "flocks of several thousands" of "red deer" that were "bounding along with such springs that they went almost as much through the air as along the ground"; immense numbers on the Quaggasplain near the Bushmans river; along the banks of the Fish river; near Agterbruintjieshoogte and on the banks of the Great Fish river.

Campbell (1815): from the Suurberg to Albany on the Sandflats; near the Kuruman hills and the Harts river in the northern Cape.

Burchell (1822): near the Asbestos mountains, near Klarwater (Griquatown) and near the Harts-Vaal junction in the Cape, north of the Orange river.

Campbell (1822): the Karoo near the Gamka river; along the Brak river near the Orange; Beaufort West; between Old Lattakoo and Kurrichane (in the present-day Kuruman-Vryburg-Zeerust divisions); near the Mashowing river; Ramah on the Cape C.F.S. border; near the Seekoei river in the Colesberg-Hanover divisions.

Bain (Lister, 1949): near the Mashowing river in the northern Kuruman division in 1826.

Thompson (1827): between the Aughrabies Falls and Pella on the lower Orange river.

Moffat (Wallis, 1946): near the Setlagodi river in the northern Cape in 1829.

Smith (Kirby, 1939): the vicinity of Colesberg; near Kuruman; near Chue (Honing or Heuning Vlei): the junction of the Mashowing and Kgokgole rivers; the present-day Stella vicinity (all between 1834-5).

Steedman (1835): near the Leeu and Gamka rivers in the Central Karoo; from Salt river to Renosterkop in the present-day Victoria West-Beaufort West divisions.

Pringle (1835): between Somerset East and the Little Fish river.

Moodie (1835, 2): the Quagga Vlakte near the Bushmans river.

Lindley (Kotze, 1950): between Kuruman and the Matlaring river as well as east of Grahamstown between the years 1835-8.

Harris (1841): the Quagga Flats (= Quagga Vlakte); along the Sundays river between Bruintjieshoogte and Graaff Reinet.

Baines (Kennedy, 1961): the White Kei vicinity about 15 miles from its junction with the Black Kei river, the Burgersdorp area and near the Brak river and Tebus mountain, all during the years 1842-53.

Backhouse (1844): near the junction of the Baviaans and Great Fish rivers at Glen Lynden; the Cradock vicinity (where they had been sold on the market the previous day for 13½ pence each!); between Cradock and Colesberg.

Methuen (1848): after passing Fort Beaufort towards the Kaga mountains in the Bedford division; the Nu-Hantam north of the Suurberg range; the Tebusberg area; near Norvalspont on the Orange river; Campbellsdorp and Griqualand West; throughout the Karoo.

Bunbury (1848): the Quagga Flats near the Bushmans river and the Bontebok Flats northeast of the Winterberg range.

Cumming (1850): the vicinity of the Great Fish river; near Somerset East; Daggaboersnek on the way to Cradock; between Cradock and the Great Fish river; near the Tebusberg; along the Seekoei and Brak

rivers between Colesberg and the Orange river; near Beer Vlei in the Brak river; the Karoo plains in all these areas; Griqualand West; near Taung and Little Chooi in the present-day Vryburg district.

Stanford (Macquarrie, 1958): a few were still left in 1850 in the area bounded by Butterworth, Nqamakwe, Tsomo, St. Marks and Xalanga.

Hamelberg (Spies, 1952): near the Buffels river (present-day Laingsburg division); between Beaufort West and Renosterkop; near Richmond and Hanover, all in 1855.

Moffat (1858): near Skuitsdrif on the lower Orange.

Livingstone (1857): throughout the Karoo, to the Orange river.

Dobie (Hattersley, 1945): along the Kei river and the Kei river valley; the Cradock district; the vicinity of Mount Currie in East Griqualand during the years 1862-6.

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

Selous (1881): the northwestern parts of the Cape Province.

Parini (1886): near Campbellsdorp in Griqualand West.

Gillmore (1886): the vicinity of Kuruman.

Gillmore (1888): near Heuningvlei (the present-day Vryburg district).

Millais (1899): large numbers near Beaufort West.

Selous (1907): near Griqua Town; from Campbellsdorp to the Vaal river.

Findlay (1903): the Fraserburg vicinity.

Bryden (1909): from the Swartberg in the Cape to Angola.

Cronwright-Schreiner (1925): the interior after passing the southern mountain rampart, except mountains and forests, consisting of the Hottentots Holland, Hex river and other ranges. He writes: "They were found on the open flats towards Port Elizabeth and between Grahamstown and Port Alfred. I do not know that they were found, and do not think they swarmed on the open grass veld of what are called the "Native Territories " - beyond Queenstown, Kingwilliamstown,

Indwe, Cala and Xalanga - but elsewhere, throughout the vast territory whose boundaries would be roughly about $27\frac{1}{2}$ longitude and $27\frac{1}{2}$ latitude, and especially in the Karoo, they literally swarmed in millions and millions, in numbers so vast that they cease to convey any definite idea."

Natal:

Springbuck probably occurred in Natal in a limited area below the Drakensberg range in the western and northwestern parts of the province.

Anderson (1888) writes: ".....and in the open rolling plains, under the Drakensberg range of mountains, that flank the western and northern boundary of the colony, spring- and blesbok, quagga and gnu could be counted in thousands." He specifically mentions the head of one of the Tugela branches and also the area between between Colenso and Van Reenens Pass as vicinities where the springbuck was recorded by himself.

Orange Free State and Lesotho:

The springbuck formerly had a very wide distribution in this province and occurred practically throughout. The following records bear this out:

Smith (Kirby, 1939): in Lesotho after crossing the Caledon river in the present-day Boesmanskop and Mafeteng areas; near Thabanchu; near the upper Modder river; between the upper Modder river and the Riet river, all in 1835.

Arbousset and Daumas (1846): the Lesotho area of Butha Buthe and the valleys of the Maluti range; the present-day Ficksburg and Senekal districts, all in 1836.

Harris (1841): near the Vet river in the present-day Hoopstad district; between the Vet and Modder rivers; between the Modder and Orange rivers.

Backhouse (1844): near the Imperini river, a tributary of the Caledon in the Ficksburg district; between Thabanchu and Bethany in the Edenburg district.

Baines (Wallis, 1941): the O.F.S. plains after crossing the Orange river from the direction of Colesberg in 1848; between Harrismith and the Vaal river, all in 1867.

Cumming (1850): the vicinity of the Riet and Vet rivers and the Bloemfontein and Harrismith districts.

Hamelberg (Spies, 1952): near Phillipolis in 1855.

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

Buckley (1876): the Orange Free State.

Gillmore (1878): on the plains after passing Harrismith.

Aylward (1878): the districts of Harrismith, Kroonstad, Renosterspruit and Bethlehem.

Holub (1881): the Bultfontein district.

Holub (1890): the Phillipolis, Fauresmith, Jacobsdal and Boshof districts.

Leibbrandt (undated Verbatim Copy 281, Cape Archives, but probably between 1872 and 1877 since Leibbrandt was on his way to visit President Burgers of the Z.A.R.): from the Vals river to Koppie Alleen.

Collins (1907): Bains Vlei near Bloemfontein: throughout the province.

Brocklebank (1909): the farm Langkuil west of Ventersburg.

Capell (1901-1942): near Bloemfontein in 1906.

Selous (1881), Bryden (1899), Sclater (1900), Ward (1896), Lydekker (1908), FitzSimons (1920), Haagner (1920) and Shortridge (1934) all include the entire province as part of the range of the springbuck in the past.

Transvaal:

Although primarily limited to the open plains of the southern Transvaal highveld, records show that the springbuck also occurred in northwestern, northern and eastern Transvaal. It preferred open grassy plains or even light thorn bush, and older inhabitants remember it occurring in the bushveld around Northam and Thabazimbi in northwestern Transvaal on grassy flats amongst the bush.

Trigardt (Le Roux, 1966): between Pietersburg and the Soutpansberg range in 1837; both springbuck and impala are recorded from the vicinity of the Sand river in this area.

Buckley (1876): the highveld of Transvaal, not further east than the Drakensberg range.

Baines (1877): the Pietersburg district between Blouberg and Hangklip.

Roche (1878): the area from which she records springbuck is not clear, but it was probably somewhere between Pretoria and the Vaal river, i.e. on the southern highveld.

Gillmore (1878): the immediate vicinity of Klerksdorp and on the way from Hartebeesfontein to Marico.

Holub (1881): between Christiana and Bloemhof; from Bloemhof to Klerksdorp; near Klipspruit in the Klerksdorp district; between Klerksdorp and Potchefstroom; the Krugersdorp district; near Christiana.

Oates (1889): the Transvaal highveld; near the Crocodile river in northwestern Transvaal, towards the Thabazimbi district where springbuck occurred on the open plains and impala in the thornveld.

Hofmeyr (1890): after passing through Makapaanspoort in the Potgietersrust district, probably on the present-day Springbok Flats.

Baldwin (1894): the Potchefstroom district; near the Skoonspruit.

Haagner (1920), FitzSimons (1920) and Shortridge (1934) all mention large numbers on the Springbok Flats in the Waterberg-Potgietersrust districts.

Botswana:

The distribution of the springbuck extended from the Molopo river in the south throughout Botswana to the plains of the Nata in the east and to Ngamiland in the west. The following authors recorded springbuck in this territory:

Cumming (1850): between Boatlaname and Lepebe; northwest of the Limpopo river; the Makarikari pans; the vicinity of the Botletle river and Lake Ngami.

Livingstone (1857): between Kolobeng and Lake Ngami near the Boatlaname wells.

Holub (1881): the Makarikari salt pans.

Gillmore (1886): the Kalahari and its eastern limits.

Holub (1890): the Makarikari pans; Soa pan and the vicinity of the Nata river. (Holub mentions a

lone springbuck ewe shot at the Zambezi shortly before his arrival).

Baldwin (1894): just south of the Botletle river; between Lake Ngami and Sechele (=Molepolole); along the Zouga (= Botletle) river; near Massouey; between Letloche and Labotani.

Donat (1899): near Lake Ngami.

Selous (1907): along the Botletle river.

Schultze (1907): the southern Kalahari sandveld.

Hedson (1912): Kooipan, Ngoatle, Polanchow, Metsibothloko, Matemabi, Mpse, Kumakum and the Makari-kari pans.

Bryden (1934): as far north as southern Ngamiland, but in the east its northern range is bound by thick forests south of the Mababe river.

South West Africa:

Occurred throughout in the past, except in northeastern Ovamboland and the Caprivi.

Duminy (Franken, 1938): the vicinity of Walvis Bay in the 1790's.

Andersson (Wallis, 1936): between the Olifants and Nossob rivers and the Omaruru area between 1827 and 1867.

Alexander (1838): throughout Great Namaqualand; near Warmbad.

Andersson (1856): Schmelens Hope ; the Otjikoto vicinity.

Hahn and Rath (Petermann, 1859): in the vicinity of the Etosha pan in 1857.

Behm (Petermann, 1858): near Walvis Bay and Scheppmansdorf.

Baines (Wallis, 1941): near the Olifants river in 1861.

Baines (1864): between Walvis Bay and Otjimbingue; Tinkas Drif.

Green (Petermann, 1867): the vicinity of the Cunene river in 1865.

McKiernan (Serton, 1954): near Usakos; Okakahana, east of Etosha; near Otjimarongo(= Otjiwarongo ?), all between 1874-5.

Palgrave (1877): the vicinity of Numtsas on the way from Awasab to Grootfontein.

Schinz (1890): Great Namaqualand.

Donat (1899): near the Omaruru river;
Okokoja; between Okokoja and Namutoni.

Schultz (1907): Great Namaqualand.

M 2 a2., Windhoek Archives: large numbers
in the Warmbad district in 1912.

Zukowsky (Steinhardt, 1924): the coastal
area south of the Cunene river; the Grootfontein
vicinity and the Kaoko-Otavi area; the Kaokoveld.

Shortridge (1934): throughout South West
Africa except northeastern Ovamboland, the Grootfontein
district and the Caprivi.

Present distribution :

Cape Province:

Power (1954): protected on the De Beers
farms in the Kimberley district; fairly plentiful in
the Hay division, northern Cape.

Rand (1955): estimates the Cape provincial
population as approximately 14,280.

Knabel (1958): the Kalahari Gemsbok Park;
re-introduced into the Mountain Zebra Park and the
Addo Elephant National Park.

Eloff (1959): the Kalahari Gemsbok Park.

Bigalke and Bateman (1962): on farms in
the Aberdeen, Adelaide, Albany, Alexandria, Aliwal North,
Barkly West, Bedford, Britstown, Burgersdorp, Cathcart,
Colesberg, Cradock, De Aar, Dordrecht, Fort Beaufort,
Gordonia, Graaff Reinet, Hanover, Hay, Herbert, Hofmeyr,
Hopetown, Jansenville, Kimberley, Lady Grey, Middelburg,
Molteno, Pearston, Phillipstown, Port Elizabeth, Postmas-
burg, Queenstown, Somerset East, Sterkstroom, Steyns-
burg, Steytlerville, Tarkastad, Venterstad, Victoria
East, Vryburg and Willowmore divisions, giving an
approximate total of 95,833 for the eastern and northern
Cape Province.

Orange Free State:

Van Ee (1962): herds of 200 or more in
the western, southwestern and central Free State, with
a total population of more than 10,000.

Roberts (1963): approximately 1,100 in the
Willem Pretorius Game Reserve.

Transvaal:

Meester (1955): about 300 in the S.A. Lombard Nature Reserve in the western Transvaal.

Kettlitz (1955): approximately 20,000 on highveld farms in the western, southern and eastern Transvaal.

Kettlitz (1962): the same area as given by Kettlitz (1955), but numbers have declined to about 15,000.

Botswana:

Hill (1942): the vicinity of Matabe pan, Tololamoro, N'Kate and the Makarikari pans.

Kay (1962): Nyie pan near Kanye.

Van Eyssen (1964): the Makarikari pans and Lake Ngami vicinities.

Kirsten (1966): the Moremi Game Reserve.

Child (1968): the Makarikari plains; no records north of about 19° 45'S.

Smithers (1968): widely distributed in the central and southwestern Kalahari; in western Botswana as far north as the Patlana Flats; in the Makarikari area to Nyai pan and in the northern extensions of the pan area to Ramatamusa; in the east to Nata; absent from the eastern sector.

Campbell (1968): the Central Kalahari Game Reserves where smaller resident herds occur, but larger migratory herds enter from the southern Kalahari during the rainy season.

Von Richter (1969): the southwestern Kalahari as follows: rare in the northern Ghanzi Block and the Makunda area; numerous in the Kalkfontein, Nojane, Kuli, Ukwe, Tshane, Monong, Kang, Motokwe, Mabutshane, Sekhoma, Khakhea, Dutlwe, Takatokwane, Lethlakeng, Salajwe, Gakhibane, Khuis, Bogogobo, Kolongwaneng, Khisa, Malish, Makopong, Omawepeneno and Werda areas.

South West Africa:

Bigalke (1958): more widely distributed in the southern than in the northern parts of the territory; do not occur in the Grootfontein district or northeastward to the Okavango; occur only on a few farms in the Tsumeb, Otjiwarongo and Okahandja districts;

widespread in the rest of the country, being abundant in the Kaokoveld and the adjoining parts of Ovamboland and Game Reserve 2; throughout the Namib to the sea.

Van der Spuy (1962): occurs between longitude $13^{\circ} 48'$ and 20° E, and latitude $18^{\circ} 30'$ and $28^{\circ} 54'S$; but practically absent between longitude 16° and 20° E and latitude $18^{\circ} 30'$ and 21° S; approximately 73.5% occurring south of latitude 22° S; total farm population approximately 37,280.

Moon (1964): the Etosha Pan Game Reserve.

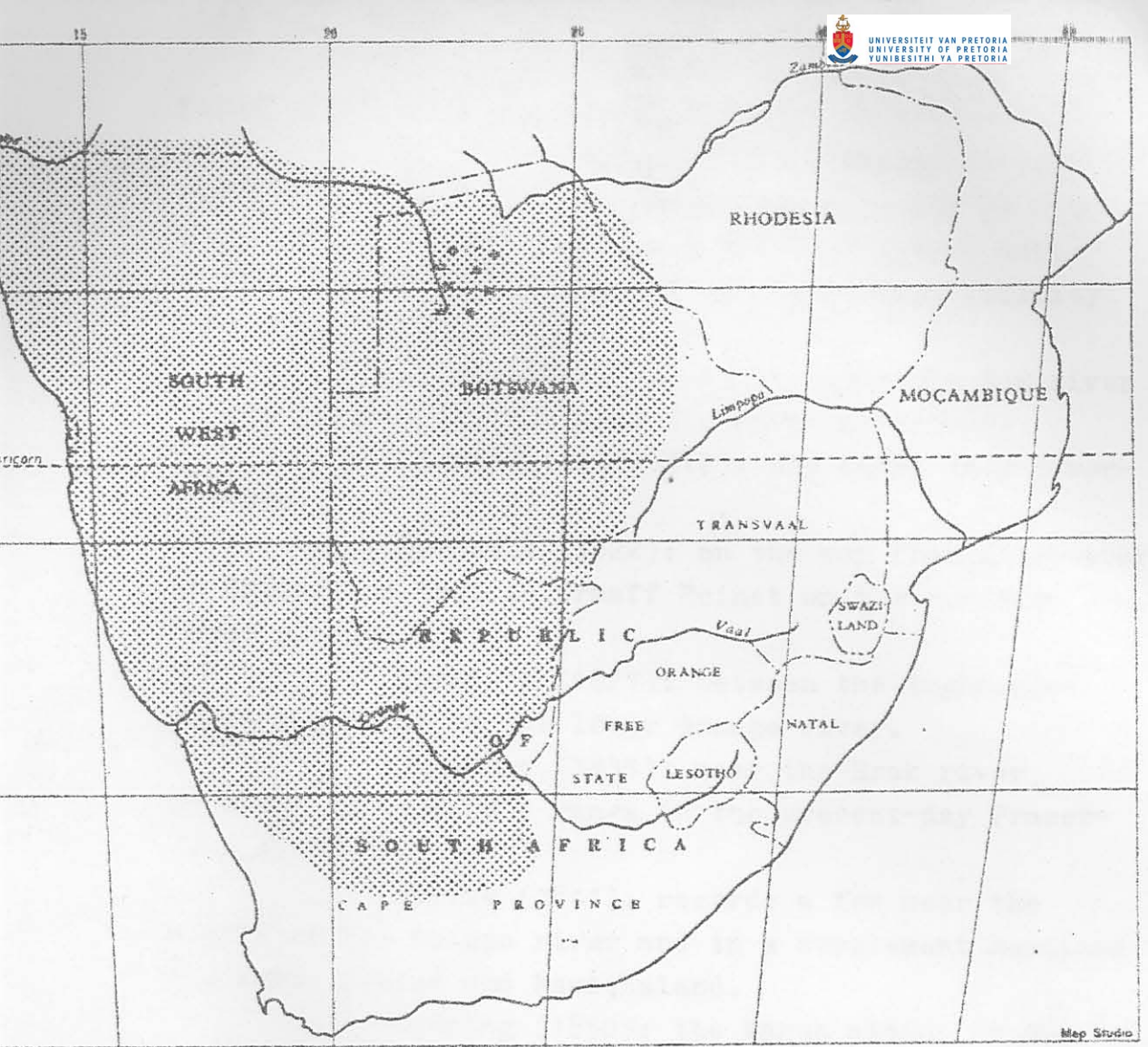
Baxter (1967): large herds in the Etosha Pan Game Reserve.

Change in distribution:

Exterminated in large parts of the Cape, Orange Free State and Transvaal, but its adaptability to protection on farms has brought about its re-introduction into areas from which it had disappeared. This results in the fact that the springbuck is to be found today in much the same area as in the past, although not in natural herds and in much smaller numbers under strict protection.

It no longer occurs on the Springbok Flats or the Pietersburg area in northern Transvaal.

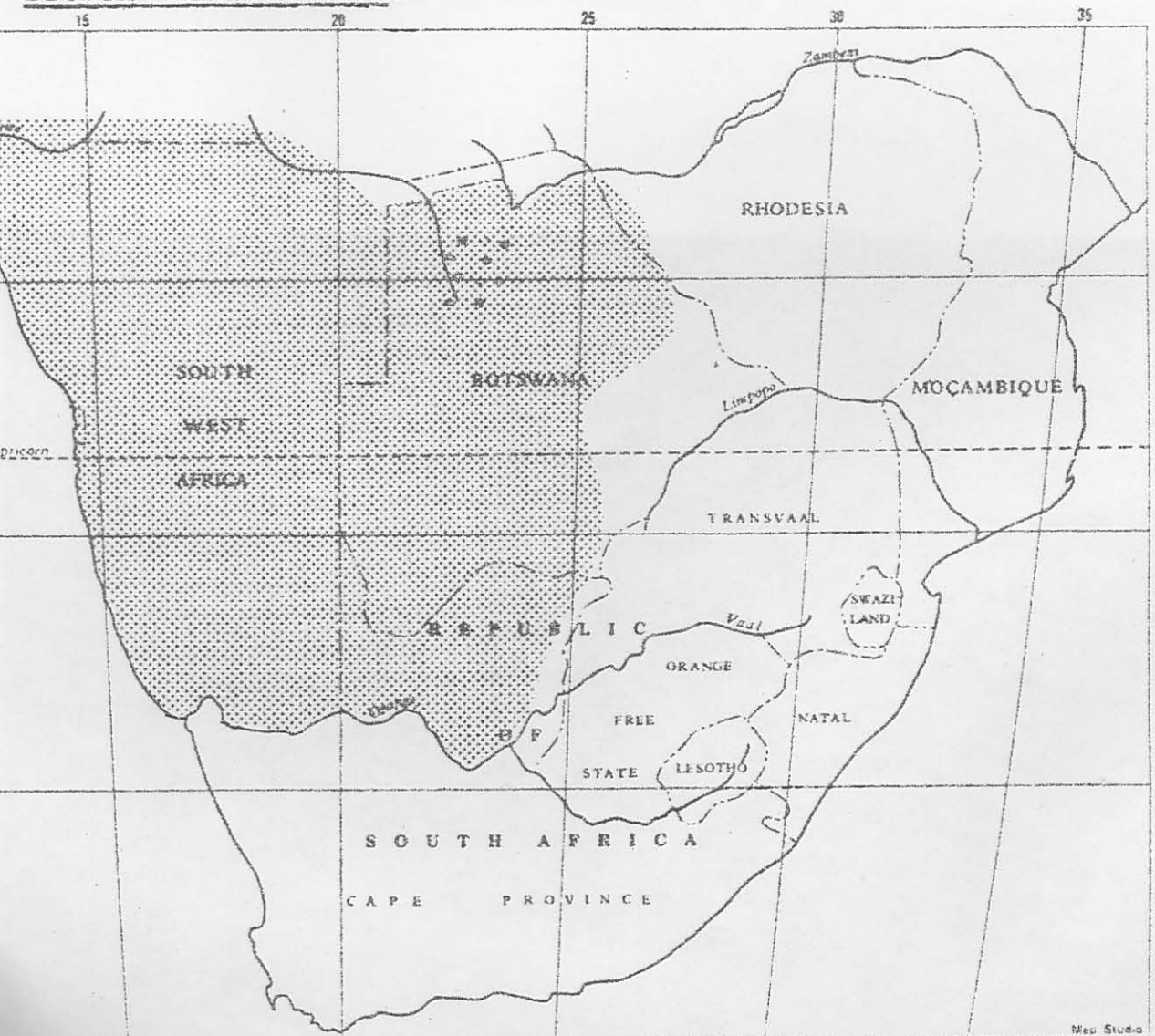
Fences have curtailed migration of larger herds, except in the northern Cape and Botswana where it still occurs but nowhere on the grand scale of the great "treks" of the past such as described by Cronwright-Schreiner (1925). These periodic migrations, eg. that of 1896 as described by Cronwright-Schreiner, in which hundreds of thousands of springbuck were involved, probably did not affect the range of the species as such, but only resulted in the transfer of large numbers from one area within the range to another.



Past distribution:

Oryx gazella (Gemsbok)

Present distribution:



Oryx gazella (Gemsbuck):

This animal has always been confined to the more arid regions of southern Africa and it occurred principally in the central, northwestern and northern Cape, as well as in Botswana and South West Africa. The following records give a more circumscribed distribution pattern:

Cape Province:

The gemsbuck used to occur south as well as north of the Orange river in northwestern, central and northern Cape.

Wikar (Mossop, 1935): Zeekoeisteek on the lower Orange river in 1779.

Paterson (1789): after passing the Bokkeveld range on his way to Little Namaqualand.

VC.104, Cape Archives: the parts of the Karoo surrounding the Bokkeveld range in 1796-8.

Barrow (1801): the Karoo plains in the vicinity of the Bokkeveld range; the vicinity of the Sneeuberg; near Beervlei along the Brak river, north of the present-day Britstown; the Kamiesberg vicinity on the Cape west coast.

Gordon (Barnard, 1950): near the Sak river in the present-day Kenhardt division in 1779-80.

Lichtenstein (1812): the Karoo near Towerfontein.

Burchell (1822): on the way from Klaarwater in Griqualand West to Graaff Reinet on the northern Karoo plains.

Thompson (1827): between the Aughrabies Falls and Pella on the lower Orange river.

Steedman (1835): near the Brak river north of the Nuweveld range in the present-day Fraserburg division.

Harris (1841): records a few near the source of the Molopo river and in a supplement mentions the Karoo plains and Namaqualand.

Cumming (1850): the Karoo plains in the Colesberg vicinity; near Beervlei in the Brak river; between Beervlei and the Orange river; near Kruit (or Stink-) fontein in the vicinity of the Orange river.

Selous (1881): Griqualand West and Kuruman.

Bryden (1893): between Mosito and Morokweng in what was then known as British Bechuanaland, but at present forms part of the northern Cape.

Sclater (1900): the Namaqualand, Kenhardt, Gordonia and Prieska divisions.

Various Agricultural Correspondence Files, 1896-1908, Cape Archives: during the period 1902-1908 the following are the minimum and maximum numbers in the different divisions mentioned, Barkly West, 2-77; Calvinia, 100-150; Gordonia, no census figures available, but large numbers mentioned; Hay, as for Gordonia, but numbers fluctuating considerably due to influx from across the Botswana border; Kenhardt, 82-250; Kuruman, 650 (only available figure); Mafeking, 320-585; Namaqualand (Bushmanland), 2,000; Vryburg, 2776-3500.

Rhodesia:

The gemsbuck probably just entered the western portion of Matabeleland. This distribution is mentioned by Bryden (1899), Sclater (1900) and Shortridge (1934). Haagner (1920) mentions its occurrence from western Matabeleland to the Chobe river.

Botswana:

The gemsbuck formerly occurred throughout Botswana as far as Lake Ngami and the Mababe flats. The following authors mention gemsbuck in this territory:

Livingstone (1857): after passing the Boatlaname wells.

Leyland (1866): near Siglagolay (this could be the Setlagodi river, a tributary of the Molopo, at the time of writing in British Bechuanaland, but now part of the northern Cape).

Selous (1881): the Kalahari west of Griqualand West; the country of the Bamangwato and from there to Tati; a few at Palachwe, Seruli and Goqui; occasionally along the upper Maklautsi, Shashi and Tati rivers; seldom from Tati to the Zambezi or in the vicinity of the Thamassenka and Thamasetjie rivers; in greater numbers in the area between the Makarikari salt pans and the Botletle river; westwards from the Botletle river to Damaraland, in large numbers.

Gillmore (1888): the Kalahari and northern Botswana.

Holub (1890): near the Nata river and the Klamaklenja wells.

Selous (1893): Soda Garra; Hornsvlei; between Panda na Tenga and the Zambezi river.

Baldwin (1894): the vicinity of the Botletle river; after passing Sechele (= Molepolole); near the Shua river and the Makarikari salt pans.

Sclater and Thomas (1894-5): the arid deserts of Botswana.

Sclater (1900): large numbers in the Kalahari to Ngamiland.

Selous (1907): between the Bamangwato and the Matabele territories; the Serule vicinity; between the Botletle river and the Mababe flats.

Selous (1908): the desert between the lower course of the Nata river and the northern extremity of the Makarikari salt pan as well as near the Botletle river.

Passarge (1908): the Kalahari.

Hodson (1912): in a foreword to this work, Selous writes : "..... the gemsbok has extended its range in the Bechuanaland Protectorate, since it is now to be found between Pandamatenka and the Mababe, where it never used to exist." Hodson records gemsbuck from Okwe to the Damaraland border; near the Nossob river; in the Polanchow vicinity; near Kokong (Kang Noir), Metsibothloko, Kumakum, Makarikari and Gwecko.

Baines (1877): near the Maklautei river in the vicinity of the Limpopo.

South West Africa:

According to Shortridge (1934), gemsbuck have been recorded from every part of South West Africa except the Caprivi. Other records include those of:

Hop (Molsbergen, 1916): near the Gammo river, Great Namaqualand in 1761.

Duminy (Franken, 1938): to the interior from Walvis Bay at the end of the 18th century.

Andersson (Wallis, 1936): the Omaruru vicinity in 1827-67.

Alexander (1838): Damaraland.

Galton (1853): near Omanbonde.

Andersson (1856): near Scheppmansdorf in the bed of the Swakop river; near Onanis; the vicinity of the Swakop river; Schmelens Hope; Ondonga; Tincas and the vicinity of the Otjiombinde river.

Behm (Petermann, 1858): the Walvis Bay vicinity and near Scheppmansdorf in 1858.

Green (Petermann, 1867): along the Cunene.

McKiernan (Serton, 1954): near Ombakaha, Biib, Naidaus, Etosha Pan, Shoshongo and Okahakana west of the Etosha pan between 1874-79.

Bryden (1893): Damaraland and Ovamboland.

Donat (1899): the Grootfontein district; between Okakoja and Namutoni.

Schultz (1907): the semi-desert border area between the Namib and the interior.

Jaäger (1921): south of the Etosha pan in the Karstfeld.

Shortridge (1934): practically throughout the territory, particularly in the Grootfontein, Outjo, Otjiwarongo, Okahandja, Karibib, Swakopmund, Gobabis, Windhoek, Rehoboth, Gibeon, Aroab, Maltahöhe, Bethanie, Keetmanshoop, Warmbad and Luderitz districts. It does not occur in the Caprivi east of the Okavango river.

Present distribution:

Cape Province:

Ellerman *et al.* (1953): the Vryburg division.

Power (1954): rare outside the Kalahari Gemsbok Park; occasionally found in the Gordonia division.

Eloff (1959): the Kalahari Gemsbok National Park, where in the Auob and Nossob river areas he counted 1307 in 1957 and 2305 in 1958.

Bigalke and Bateman (1962): the Kalahari Gemsbok National Park as well as the Gordonia, Hay, Herbert, Kimberley, Kuruman and Postmasburg divisions in small numbers.

De Graaff (*in litt.*): 43 in the Mountain Zebra National Park during March, 1969.

Orange Free State:

Roberts (1963): 9 gemsbuck introduced into the Willem Pretorius Game Reserve.

According to the 1968 census figures of the Willem Pretorius Game Reserve, these have increased to 31.

Transvaal:

Kettilitz (1955): only found on the farm Langjan in the Soutpansberg district where 28 were protected.

Kettilitz (1962): Langjan farm, but numbers have declined to only 15.

Bigalke (1968): Langjan farm, number has increased to 36.

Rhodesia:

Fraser (1958): confined to the Wankie National Park.

Child and Savory (1964): the northwestern corner of the Wankie National Park.

Botswana:

Hill (1942): southwestern and northern Botswana in the vicinities of Kuke pan, Matape pan, Damara pan, the Mababe Flats and N'Kate.

Kay (1962): near Kanye at the Nyie pan; Tsetserogha (= Tsotsoroga) pans in the Mababe Flats area; the Mababe Flats; between Kanye and Panda ma Tenga.

Kirsten (1966): the Moremi Game Reserve.

Knobel (1967): the Chobe Game Reserve.

Child (1968): northeastern Botswana in the vicinity of Nyai pan; the Kakulwani plain; the mopane and Kalahari woodland; not common north of 20° S in the northeast.

Campbell (1968): according to this author, the numbers of gemsbuck in the Central Kalahari Game Reserves have diminished to a large extent during the past ten years. He quotes Silberbauer who, in 1959, estimated 1,500 during three hours driving along the length of the Passarge pan. Campbell notes declining numbers in 1962 when he mentions small numbers on the Piper pans; in 1964 and 1966 he saw none. This he attributes to the cordon fences erected across the northern boundary of the game reserves, which cut off herds from watering on the Botletle, so that they in turn destroy the available tubers and other succulents in the Kalahari Game Reserves, causing habitat deterioration and decrease in population size. In 1967 he

encountered small herds, circulating amongst the pans.

Smithers (1968): widely distributed; does not occur in the central part of the Bamangwato Reserve or in eastern Botswana from the northern part of the Tati Concession south to the Barolong Farms, except where specially protected on farms in the northern Tuli Block.

Von Richter (1969): rare in all the areas of the southwestern Kalahari.

South West Africa:

Bigalke (1958): occur widely, even in the Namib desert; small numbers in the Warmbad, Bethanie and Keetmanshoop districts; a little more widespread in the Gibeon, Rehoboth and Gobabis districts; common and widely distributed in the central, southern and north-western parts of the territory, especially in the "Sperrgebiet", Game Reserve 3, western Maltahöhe, Omaruru, Kari-bib, Windhoek, Okahandja, Otjiwarongo, Outjo, throughout the Ksockoveld, parts of Ovamboland and the southern and western parts of Game Reserve 2.

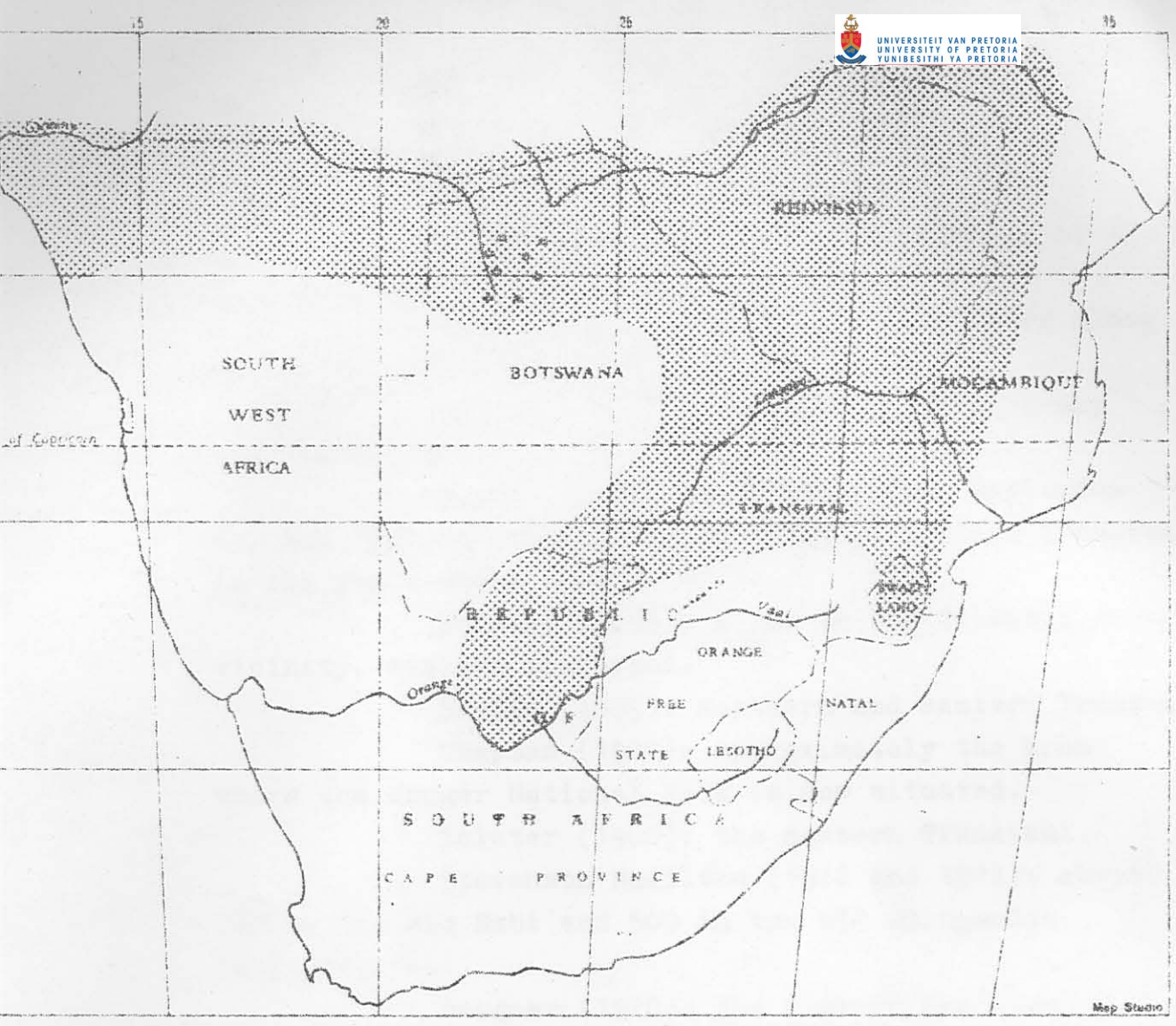
Van der Spuy (1962): occur widely between longitude $13^{\circ} 48'$ and 20° E, and latitude $18^{\circ} 30'$ and $28^{\circ} 54'$ S but not evenly distributed south of latitude 22° S; approximately 58.2% of the population occurring between latitude 20° and 24° E; approximately 24,429 occur on private farms.

Change in distribution:

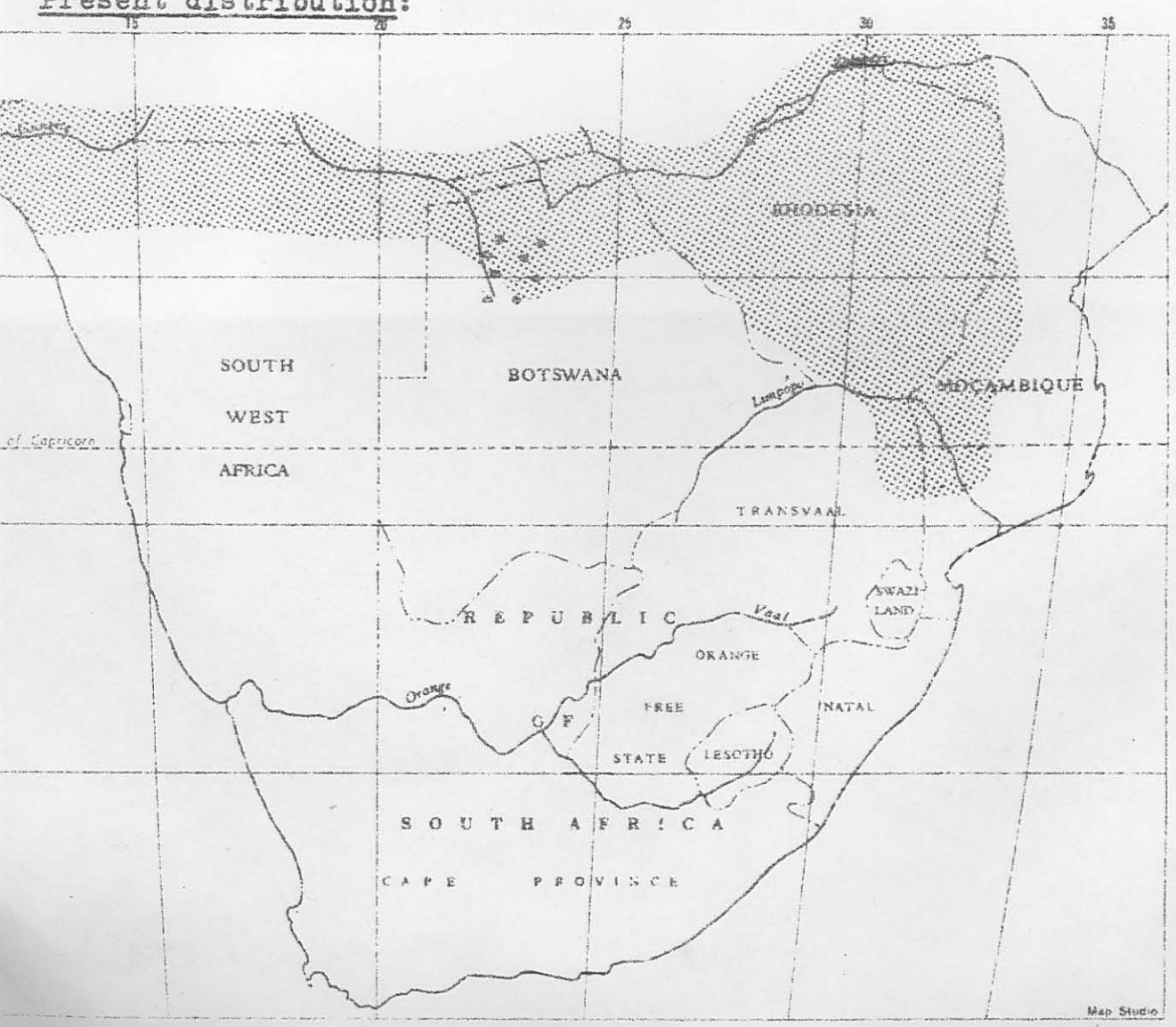
The gemsbuck seems to have disappeared from the whole of the Karoo south of the Orange river in the Cape; it only occurs in the northern Cape divisions, i.e. Gordonia, Hay, Herbert, Kimberley, Kuruman and Postmasburg, and then only in small numbers. Its only stronghold in the Cape is the Kalahari Gemsbok National Park, whilst a number have been introduced into the Mountain Zebra National Park.

Its distribution in the rest of its traditional habitat, i.e. the arid parts of Botswana and South West Africa, still seems to be the same to a large extent, although no doubt, as is the case with most species, its numbers have decreased considerably.

Introduction into areas where it did not occur in the past, were also made. Herds have been established in the S.A. Lombard Nature Reserve and the farm Langjan in the Transvaal, the Willem Pretorius Game Reserve in the Free State and the Mountain Zebra National Park in the Cape.



Past distribution:
Present distribution: Hippotragus equinus (Roan)



Hippotragus equinus (Roan antelope):

Cape Province:

Barrow (1806): when reviewing the journey of Truter and Somerville in 1801, in an appendix mentions roan in the vicinity of the present-day Kuruman.

Daniell (1805): mentions the "Tackhaitse" from the latitude of Leettakoo, ie. between the present-day Kuruman and Vryburg.

Smith (Kirby, 1939): the Molopo river near the present-day Mafeking in 1835.

Smith (1849): still to be found within the northern boundaries of the Cape Province, not many years prior to his writing.

Cumming (1850): the junction of the Riet and Vaal rivers in Griqualand West.

Bryden (1899) and Sclater (1900): Griqualand West.

Transvaal:

Smith (Kirby, 1940): the confluence of the Little and Great Marico rivers in 1835.

Harris (1841): near the Magaliesberg along the upper Crocodile river.

Methuen (1848): the Mosega (present-day Zeerust) area.

Glynn (1926): the White River, Pretorius Kop and Logogot (=Legogot) Kop areas of eastern Transvaal in the years subsequent to 1873.

Rendall (1893): a few in the Olifants river vicinity, eastern Transvaal.

Bryden (1899): northern and eastern Transvaal.

Chapman (1900): approximately the area where the Kruger National Park is now situated.

Sclater (1900): the eastern Transvaal.

Stevenson-Hamilton (1912 and 1913): about 300 in the old Sabi and 500 in the old Shingwedzi Game Reserves.

Haagner (1920): the eastern Transvaal.

Stevenson -Hamilton (1934): open country in the eastern Transvaal lowveld.

Shortridge (1934): eastern Transvaal.

Swaziland:

Buckley (1876), Bryden (1899), Selater (1900) and Bryden (1936) all mention roan from Swaziland, but give no detailed distribution.

Mocambique:

Kirby (1899): the Gorongosa area; west of the Zangwe and Urema rivers, where common; nowhere else very plentiful, occurring in small scattered herds, usually on the fringes of its congener, the sable.

Bryden (1899): never seemed to be common in Mocambique since it was seldom to be found in low-lying country under 3,000 feet above sea level.

Ward (1896): Mocambique.

Vasse (1909): near the Mavuzi, a branch of the Pungwe river; the vicinity of the Busi tributaries.

Shortridge (1934): parts of Mocambique.

Rhodesia:

The roan had a wider distribution in Rhodesia than elsewhere in southern Africa, according to the following records:

Baines (1854): near the Matetsi river in the Wankie area.

Stabb (Tabler, 1967): along the Ramaquabane and Gwai rivers in 1875.

Selous (1881): from the Tati to the Zambezi rivers in western Rhodesia, but not in large numbers; more numerous in Mashonaland.

Oates (1889): between the Tamasanka and the Tlhamaganyana rivers.

Holub (1890): between Panda na Tenga in Botswana and the Victoria Falls.

Selous (1893): near the Umfule river in the Umniati highlands of Mashonaland; near the Umsengaisi and the Ruwa rivers; hilly country along the Sabi river.

Baldwin (1894): near the Shashi river and the Victoria Falls.

Ward (1896): eastern Mashonaland and southwestern Matabeleland.

Millais (1899): near the Kuanetsi river; between the Nuanetsi and the Bube rivers.

Bryden (1899): the area between the Buzi and the Zambezi rivers; western and southern Matabeleland; Mashonaland.

Selous (1907): the angle between the confluence of the Gwai and the Zambezi rivers; south-eastern Matabeleland at the junction of the Ingesi and Lundi rivers; the vicinity of the Sewhoi-woi, Gwazan, Umfule and Gwenia rivers.

Chubb (1909): near Mangwe in Matabeleland.

Haagner (1920): Rhodesia and Mashonaland.

Shortridge (1934): Matabeleland, Mashonaland and Manicaland.

Bryden (1936): Mashonaland and Matabeleland.

Botswana:

Leyland (1866): the vicinity of Kolobeng.

Stabb (Tabler, 1967): along the Maklautsi, Shashi and Ramaquabane rivers in 1875.

Selous (1881): along the Notwani and Limpopo rivers; the vicinity of Tati; near the Chobe river in small numbers; scarce on the Mababe flats.

Anderson (1888): near Tati station.

Holub (1890): between Shoshong and Mamarutse Spruit; near the Nata river; the Klamaklenja waterholes; the vicinity of Panda ma Tenga.

Bryden (1893): Palachwe to the Zambezi.

Bryden (1899): along the Notwani and the upper Limpopo; the confluence of the Marico and the Limpopo rivers; between the Limpopo and the Zambezi rivers as far west as between Sode Garre and the Mababe flats; between the Mababe flats and Goha hills; along the Chobe river.

Sclater (1900): southern Botswana.

Selous (1907): along the Chobe river.

Hodson (1912): between Gat Garra and the Chobe river.

Shortridge (1934): Ngamiland; along the Botletle and Chobe rivers.

Bryden (1936): gives the Nata river as the southern boundary of the distribution of the roan in Botswana; states that it occurs near the Botletle river, the Makarikari salt pan, Panda ma Tenga, Gazuma Vlei, the Nata river and the area from there along the old Hunters Road to the Zambezi.

South West Africa:

Livingstone (1857): records the "takaetsi" in the present-day Caprivi when he journeyed from Linyanti to Sesheke.

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

McKiernan (Serton, 1954): mentions a "baastaed eland" near Otavi in 1874; records the same animal at the confluence of the Shoshongo and the Okavango rivers in 1878.

Anderson (undated manuscript): large numbers of "A. equina" near Omanbonde.

Donat (1899): the Omuramba Omatako between Grootfontein and the Okavango river.

Bryden (1899): along the Chobe river in the present-day Caprivi.

Shortridge (1934): northern and eastern Ovamboland; Grootfontein district up to 150-200 miles south of the Okavango river; the Caprivi Strip.

Bryden (1936): along the Okavango river and in northern South West Africa.

Present distribution:

Transvaal:

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

Knobel (1958): the Kruger National Park and adjoining private reserves.

Kettlitz (1962): small herds lingering in the New Belgium Block (Waterberg district); small numbers on farms in the Pilgrims Rest district; disappeared from the Barberton district since his earlier survey in 1955; estimated number outside the Kruger National Park about 100.

Pienaar (1963): most of the roan population of the Kruger National Park is to be found on the grassland plains and open mopani or mixed mopani-Combretum woodland and tree savannas north of the Olifants river; three herds occur in the Batavia and Munweni areas of the central part and around the headwaters of the Mbyamiti and Mtsawu rivers in the southern part of the Park; approximately 200-220 occur in the northern district, 31 in the central district and 35 in the area south of the Sabi river.

De Graaff (in litt.): 250+ in the entire Kruger National Park in March, 1969.

Swaziland :

Kirk (1966): writes, ".....Roan antelope disappeared as recently as 1961,....."

Mocambique:

Ellerman et al.(1953): southern Mocambique.

Tinley(in litt): near Tete; on the Save; along the Changane, a tributary of the Limpopo; the vicinity of the Limpopo; has never been recorded in Gorongosa.

Rhodesia:

Game Section of the Department of Mines, Lands and Surveys (1954-57): scarce except in the Wankie Native district.

Fraser (1958): with the exception of the Wankie Native district, the roan is scarce throughout Rhodesia.

Division of Irrigation and Lands, Annual Reports, 1958-61: the Matusiadona Non-Hunting Reserve and the Chizarira Non-Hunting Reserve.

Federal National Parks Board, Annual Reports, 1959-63: the Wankie National Park, the Victoria Falls National Park and other game reserves.

Child and Savory (1964): generally absent along the Rhodesian watershed and having a reduced distribution elsewhere.

Botswana:

Hill (1942): the Nababe flats and Tsotseroga pan.

Kay (1962): near the Kwaai river.

Knobel (1967): the Chobe Game Reserve.

Tinley (1966): on the Kwaai Flood Plain, Moremi Wildlife Reserve, in small numbers.

Child (1968): northeastern Botswana in the Chobe Game Reserve; western Makarikari; the southwestern fringes of the Okavango and along the Chobe river.

Winchester-Gould (1968): the Moremi and Chobe Game Reserves.

Smithers (1968): the fringes of the Okavango delta; the Chobe river area as far south as approximately 10 miles north of Toten, the Botletle river and the Rhodesian border at latitude 19° 45' S.

South West Africa:

Bigalke (1958): the northeastern corner of South West Africa, extending from Tsumeb and Grootfontein farms to the Okavango valley and the Caprivi; does not occur in eastern Ovamboland or the Etosha Pan area as stated by Shortridge (1934); occurs in the northern Kaokoveld.

Gaerdes (1966): still occurs in the northern Kaokoveld in small isolated groups west of the Ehombo mountains; occurs along the southern bank of the Okavango, east of Andara; fairly common in the Caprivi Strip; was still to be seen in the Kaukouveld near the Gautscha pan during 1962.

Change in distribution:

The limits of the range of the roan have contracted to a large extent, resulting in its disappearance in large areas where in the past it had been fairly common.

It has completely disappeared from the northern Cape, southern Botswana, western and north-western Transvaal and to a large extent from northern and eastern Transvaal. In the Transvaal it is considered for all practical purposes to be extinct except in the Kruger National Park.

In southern Mocambique, Rhodesia, north-eastern Botswana and South West Africa it survives in approximately the same area as in the past, but local changes are apparent, as suggested by Child and Savory (1964) for Rhodesia and by Child (1968) for northeastern Botswana. In South West Africa it previously occurred as far south as the Waterberg area (Bigalke, 1958) and in the Kaukouveld (Gaerdes, 1966), while now it is recorded only more to the northeast.