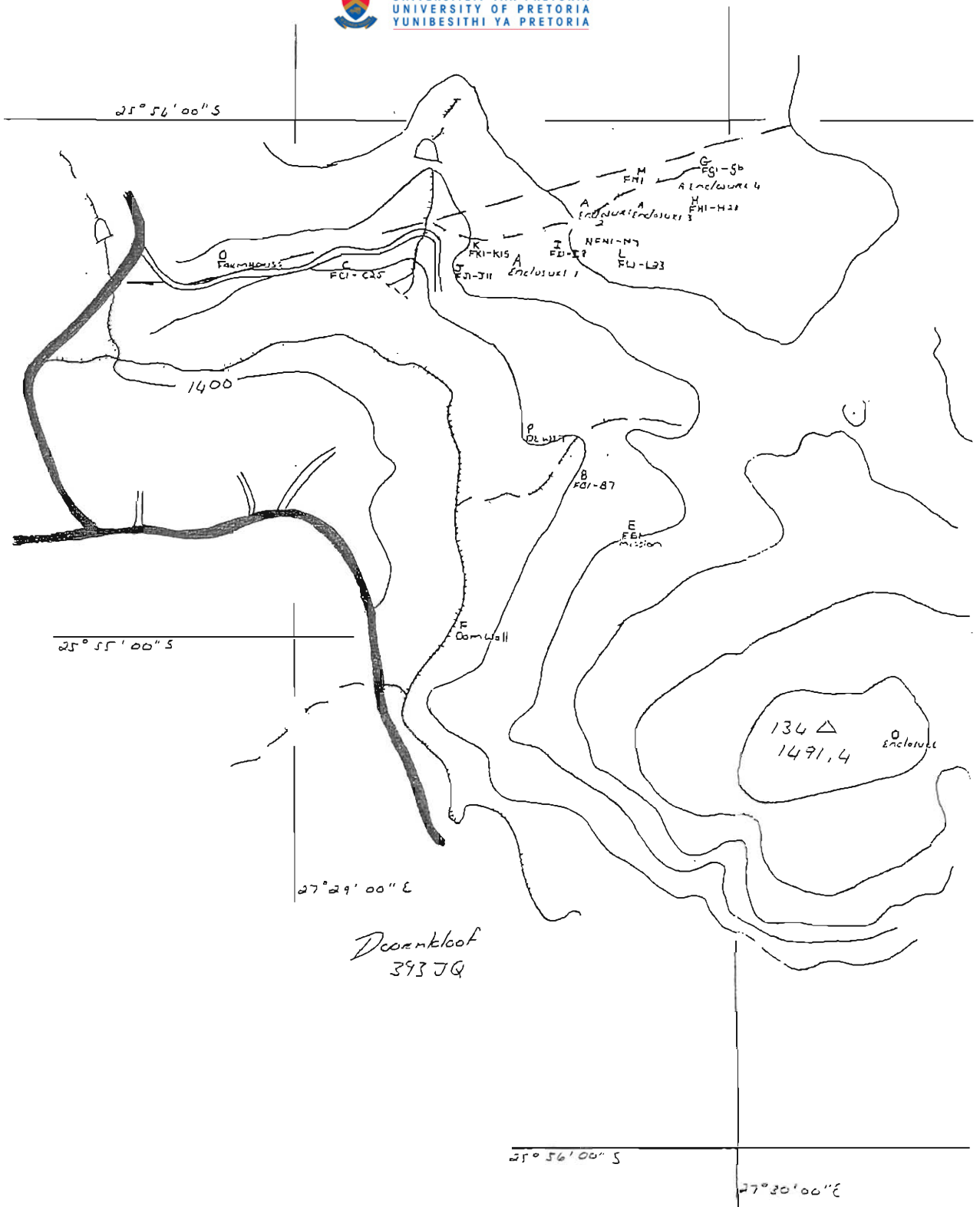


## CHAPTER 4 GENERAL SITE AND ENGRAVED SUBJECT INFORMATION

### GENERAL LIST OF SITES

The number of sites identified on the research area total 16 and each site has been classified alphabetically from A to P. The sites are further classified according to whether they are rock engraving sites, iron age ruins, Boer war ruins, mission station ruins, or a combination of the above. This gives a general overview of the research area, (Map 1). Here follows a listing of the sites:

- A- Iron Age Stone Walled Site ( Sotho-Tswana origin )
- B- Rock Engraving Site ( Various Animals )
- C- Rock Engraving Site ( Various Animal and Linear Motif )
- D- Iron Age Stone Walled Site ( Matabele origin )
- E- Probable Mission Station, Stone Walled Site and Singular Rock Engraving  
( Human Figure )
- F- Remains of an Old Dam Wall
- G- Rock Engraving Site ( Various Animal and Linear Motif )
- H- Rock Engraving Site ( Various Animal and Linear Motif )
- I - Rock Engraving Site ( Various Animal and Linear Motif )
- J - Rock Engraving Site ( Various Animal and Linear Motif )
- K - Rock Engraving Site ( Various Animal and Linear Motif )
- L - Rock Engraving Site ( Various Animal and Linear Motif )
- M- Rock Engraving Site ( Linear Motif )
- N - Rock Engraving Site ( Various Animal and Linear Motif )
- O - Old Boer Farm House
- P - Boer War Site Remains ( General De Wet' s camp )



(Map 1: The research area, detailing the site locations. This and all site maps that follow are based on a design utilised by Cox et al. (1990))

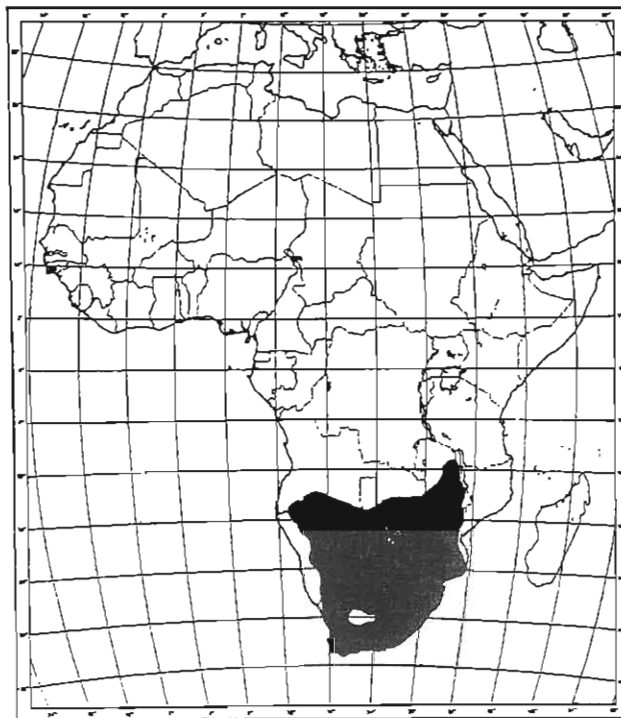
## INVENTORY LIST AND BACKGROUND

The following is a list of the subject matter engraved in the research area. Listed next to the various subjects are the number of engravings featuring the specific subject. Engravings depicting various animals can be used to confirm or challenge the distribution patterns of the various animals. The engravings also depict the behaviour and unique characteristics of the various animals, which helps in the understanding of the animals and in the recreation of the bushmen way of life. In order however to be able to identify the distinguishing characteristics of the animals and to be able to clarify what aspect of the animals behaviour the artist is trying to convey, a in-depth study into the behaviour and characteristics of the animal must be undertaken. For this purpose, the background of each animal is included, so as to enhance the study of the engravings. All the subject matter on the characteristics and distribution of the animals was obtained from Skinner *et al.* (1990), unless otherwise stated.

### **BABOON** (*Papio ursinus*) -- 3

- There are vast variations of colour in individuals depending on the age, sex and geographical areas. The length of the tail is about the same as that of the head and the body. The males reach a body length of 1,1m with tails of 0,7m, with a mass of approximately 32kg, females weigh half that.

They are omnivores generally living in troops of up to 130 individuals and are found in Savannah and Arid zones (Map2).



( Map2: Baboon Distribution patterns)

### **BIRD** (*Unidentifiable*) – 1

- All birds have a preferred habitat, with specific needs and many will disappear entirely if their habitat is destroyed or degraded, as they are unable to adapt to different living conditions, (Newman, 1991). Probably the richest habitat in Southern Africa is the bushveld. It is comprised of various types of woodland and mixed bush varieties and in its various forms, covers a great part of the afro-tropical region and approximately three-quarters of Southern Africa, (Newman, 1991).

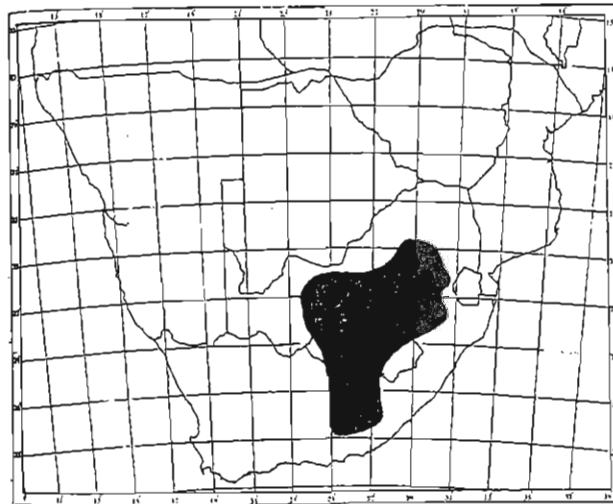
When attempting to identify birds, one needs to look at their relative size, the beak shape and colour, the length and colour of the legs, plumage colours and distinguishable marking, the habitat of the bird and what the bird is doing, (Newman, 1991).

### **BLESBOK** (*Damaliscus dorcas phillipsi*) – 1

- Are a medium sized antelope, measuring approximately 0,9m at the shoulder. Adult males have an average mass of 61.0kg, while females are lighter and smaller. Females have a more slender horn that hardly thickens at the base and males are generally darker in colour. Their long faces, high withers and sloping hindquarters give them a characteristic outline, reminiscent of their close relative the wildebeest and hartebeest. Their horns curve backwards and outwards and then slightly forwards towards the un-ridged tips .

The Blesbok is so called due to the markings on its face. They are endemic to the subregion, but their present distribution is artificial due to widespread introductions and reintroduction's. They only occur in protected herds on farms and reserves now. Because of the above-mentioned translocations, they have a wider distribution today than in the past. The Magaliesberg represented their northern most limits in the past. Blesbok were hunted relentlessly in the past for their meat and hides, as far back as 1893. Even when they roamed the land in their thousands they were seldom seen. They were common in the eastern Cape, Orange Free State, along the Molopo River and grassland, the former southern Transvaal and marginally in Kwazulu-Natal and west of the Maluti Mountains (Map3).

They are gregarious, diurnal grazers, with their height of activity in the early morning and late evening, preferring to lie under a shady tree during the heat of the day. This is due to the fact that they are susceptible to heat. During the summer months, males become soporific and can be approached closely with ease. They rest together in small groups and walk in single file, forming distinct paths. They have a characteristic habit of standing in oriented groups with their heads facing the sun, with their faces close to the ground. They will then frequently indulge in violent head shaking or stamping of their feet, followed by running in a small circle to only resume their place in the group. They have large bachelor groups, reaching a peak during the rut, harem herds consist of 2 - 25 females attended by one territorial male.



(Map3: Blesbok distribution patterns)

They are predominantly grazers, but will browse occasionally. They are partial to sprouting grasses, which appear after a burn. During winter minimal activity takes place, grazing lightly and selectively. They avoid grass with more than one season's growth.

**BUCK** (*Unidentified, artiodactyla*) – 13

- Ungulates are even toed, characterised by the fact that the main mass of the body is borne by the third and fourth toes on the feet equipped with keratinous hooves, (Fransen, 1992). Ungulates are herbivores and ruminant, (Fransen, 1992).

**CAMEL** (*Camelus dromedarius*) – 1

- According to Hufnagl, (1972), the camel is not only holding its own, but has actually increased in number over the years. Its importance to man has shifted over the years from being predominantly a beast of burden and producer of milk, to that of being a valuable source of meat. Fossil remains of a wild form of camel, *Camelius thomasi*, were found in Pleistocene strata of Morocco, at Taza, as well as at Ain ET Turk, in W. Algeria and at El Guettar, in Tunisia.

No rock-paintings of a wild camel have been discovered in Africa so far, therefore it appears, they became extinct in North Africa before it could be portrayed or domesticated. Engravings of domesticated one humped camels, however date back to the first millennium B. C.

The average life expectancy of a working camel is approximately 25 years and in zoological gardens 30 to 40 years. They breed every second year and the gestation period is about 12 months.

They are a living example of the maximum adaptation to life in a hot and waterless milieu, and have even developed a double row of close-growing eyelashes, to keep out sand and sun from their eyes. Their nostrils can be tightly closed to keep the sand out. The camel can lose as much as 25% of its weight, in the form of body fluids, without dying or even suffering ill effects. Camels bite their drivers and herders during the mating-season. These bites are vicious, twisting the soft tissue, tearing and crushing bones that are often fractured.

#### **CAMELION (*Chamaeleo dilepis*) – 1**

-The Chameleon has a length of approximately 20 -24 cm, with a maximum of 35 cm, with a prehensile tail that is as long as its body and occipital flaps, (Branch, 1988). Coloration varies from pale yellow to green shades to brown, (Branch, 1988). This particular species under discussion is common as long as the area is suitable, (Branch, 1988).

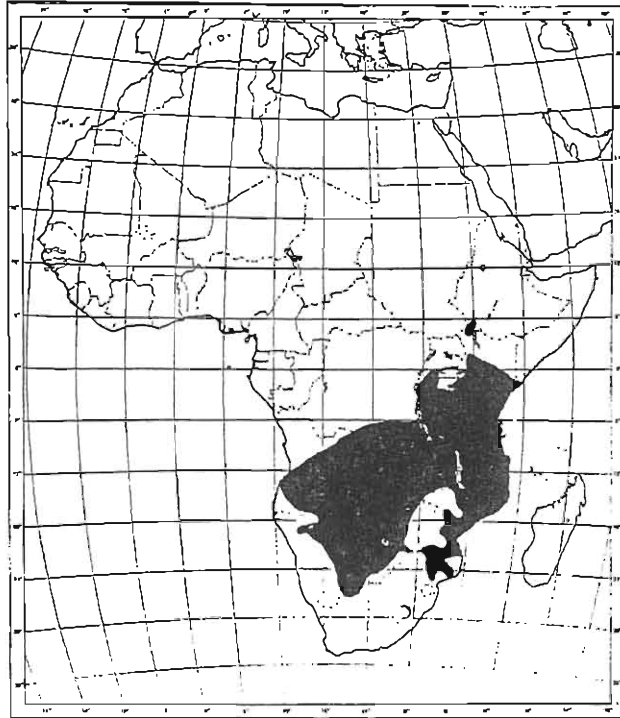
Their diet consists of various insects including grasshoppers and beetles, (Branch, 1988). They are greatly feared by most tribes, due to the fact that they can change colour, look in two directions at once and bite readily, these characteristics are the subject of much folklore and contrary to popular belief they are not poisonous, (Branch, 1988).

Their predators include snakes, monkeys and birds, (Branch, 1988). Their habitat is that of Savannah woodland and enters the coastal forest of Zululand, (Branch, 1988). Their range includes Tropical Africa, south to Natal, the area formally known as Transvaal, north and eastern parts of Botswana, northern Cape and Namibia, (Branch, 1988).

#### **ELAND (*Tragelaphus oryx*) – 32**

-The Eland is the largest of the African antelope, reaching up to 1,7m at the shoulder and clocking in at approximately 700kg for males and 460 kg for females.

Eland are widely distributed in Africa south of Uganda and Kenya. In South Africa it-self they were once found over vast areas, but since settlement their natural occurrence areas have been restricted to the extreme north of the Cape Province, Transvaal and Southern Botswana (Map4). They are versatile in their habitat requirements, but are most commonly found in Arid and Savannah areas where they are able to browse. Where water is readily available they drink regularly, but can obtain their moisture requirements from plants if needs be.



(Map4: Eland distribution patterns)

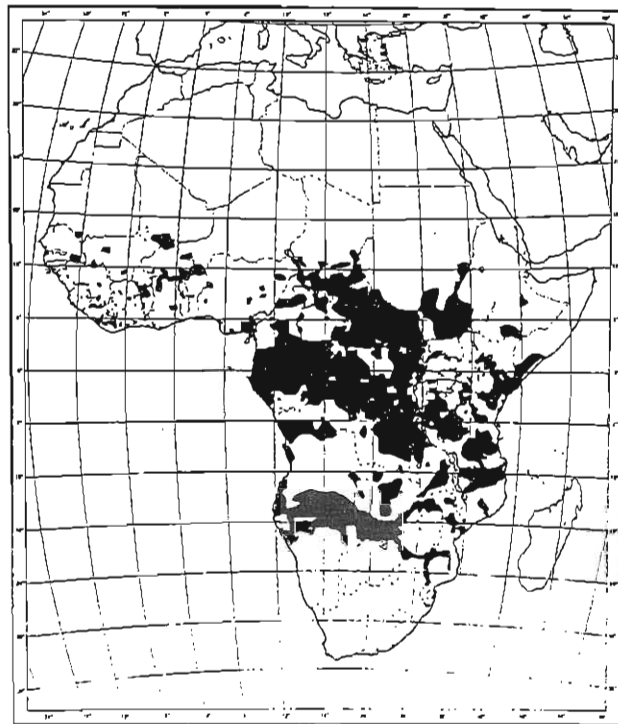
### **ELEPHANT (*Loxodonta africana*) – 2**

- They are the largest land mammal, and only cease growing at the age of 20 - 25 years. The males have an average high of 2,35m, while females reach 2,10m, but males can reach 3m and females 2,50m. Their ears have a well-developed triangular lobe, with the apex directed downward. Elephants don't require description being unique and well known. The tusks, which grow throughout life, are enlarged upper incisors, which replace tiny milk tusks, which only reach a size of 40mm and are shed at one year. These tusks are composed entirely of "dentine" or ivory.

By 1903 elephants practically ceased to exist in the subregion, in the space of 60 - 70 years, at that time 1200 000lbs of ivory were being imported to England, that equals approximately 50 000 elephants slain. Thankfully elephants everywhere in the subregion showed a remarkable capacity for recovery, to such an extent that populations have to be managed carefully and controlled, to prevent permanent damage to their habitat, making it one of the truly great conservation achievements. They occur in the South African subregion, in north and north-east Namibia, Northeast Botswana. In Zimbabwe they are located on the Limpopo and Zambezi

valley, in Mozambique they are located south of the Zambezi and in South Africa they are located in the Kruger National Park and other reserves and the Knysna forest (Map5). Elephants are catholic in their habitat requirements and are located everywhere where trees and water are present. A fresh supply of water is essential as they consume 160 litres per day per animal, also shade is a necessity for shelter and food in the form of grasses and browse plants.

Elephants are gregarious and are both diurnal and nocturnal especially in hot environments and live in family groups of an adult female and her offspring and her offspring and a number of closely related females and their offspring. At puberty males leave the group of their own accord and form herds. Bulls form with the family herds only when the females are in oestrus. Very old bulls live solitary lives. They have no territorial behaviour, but have home ranges, which vary greatly in size between various habitats. Elephants are peaceful by nature, but become aggressive if very sick and injured, also females with kids are unpredictable. Fights between males are rare. Elephants bathe, spray themselves and lay in water. They move at a steady walk, meandering over large distances. Their eyesight is not good, but their hearing and sense of smell are excellent. They vocalise in the form of trumpeting and screaming.



(Map5: Elephant distribution patterns)

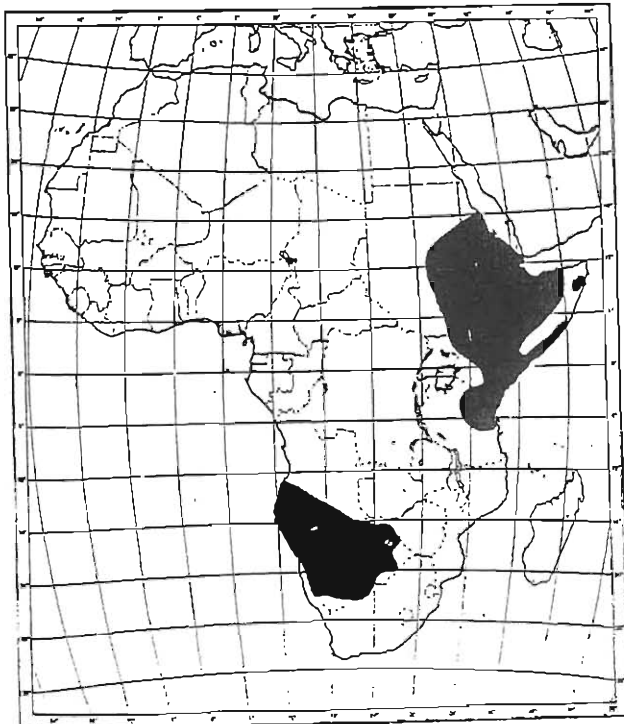


Elephants both browse and graze, utilising a wide range of species. The ratio of the amount of food to the type depends on the availability and season. They love Mopane and re-growth from previously damaged trees. Elephants can be very destructive in their feeding habits, often uprooting trees.

### **GEMSBOK (*Oryx gazella*) – 5**

-Dubbed one of the most handsome antelope, it has long straight horns, a distinctly marked face and body, with a long flowing black tail. Males stand approximately 1,2m at the shoulder and weigh about 240kg, females weigh about 210kg, all have a distinct dewlap on the throat.

As far as distribution is concerned they are found in two discreet areas separated by 1000km, they are south of the Orange River (Namaqualand), Northwest Cape and the Karoo and then in Namibia and Botswana (Map6). They are found in arid terrain, open grassland, open bush savannah and light open woodland. Their diet consists of a great diversity of plant communities, including dry region roughage, they are grazers. Drinking water is not essential as they dig for succulent subterranean roots, rhizomes and bulbs. Gemsboks are gregarious, occurring in herds of about 300, small herds of approximately 30 and solitary males also occur.

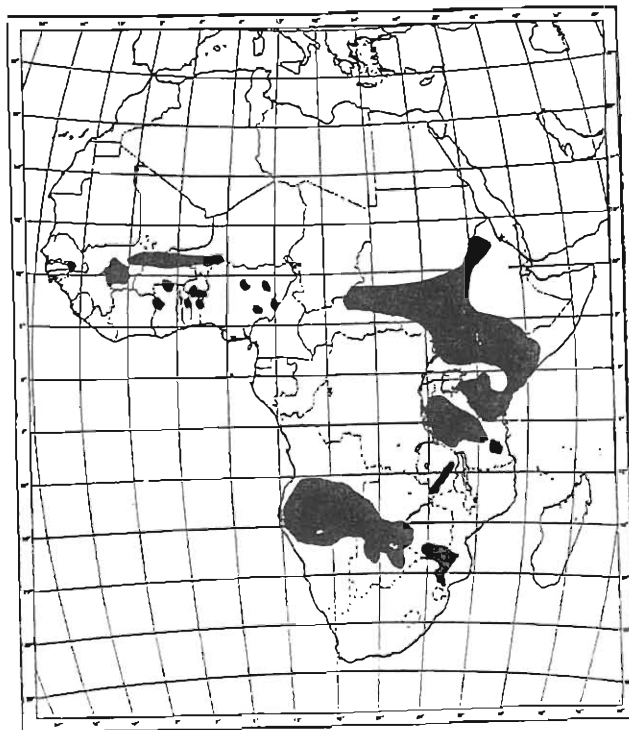


(Map6: Gemsbok distribution patterns)

### GIRAFFE (*Giraffa camelopardalis*) – 7

- The giraffe has a very characteristic long neck, and is the tallest animal in the world today approximately 4.9 m - 5.2 m in males and 4.3 m - 4.6 m in females. Their mass ranges around 1191 kg for males and 828 kg for females.

During historical times the limits of distribution have shrunk dramatically and are patchy and discontinuous. In the late seventeenth century and early eighteenth century they were recorded in areas ranging from the Orange River to Morocco and parts of the Sahara (Map7). Range shrinkage is due to rinderpest, poaching and settlement. They are generally found in Arid and Dry Savannah areas, ranging from scrub to woodland, they are browsers but graze on occasion. They drink water where it is available but are not dependent on it as they can obtain all the moisture they need from the plants they eat. They are diurnal, generally docile and have a home range of approximately 24,6 km squared.

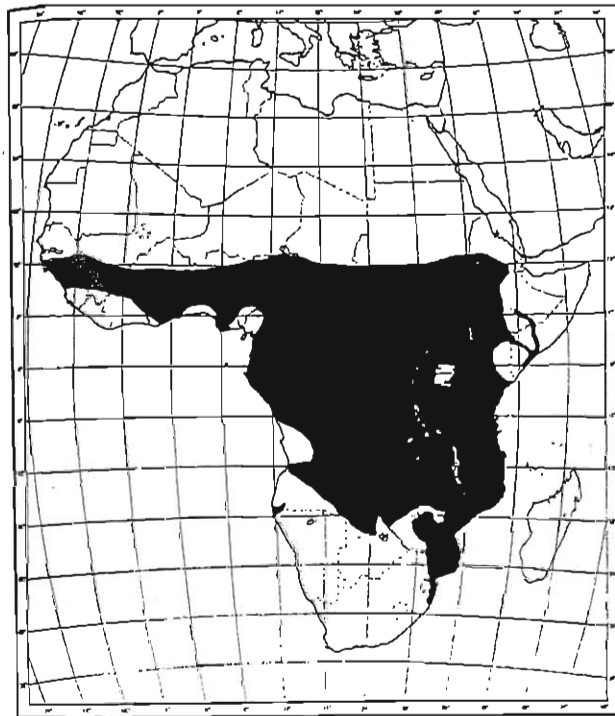


(Map7: Giraffe distribution patterns)

## HIPPOPOTAMUS (*Hippopotamus amphibius*) – 2

-Characteristics include its great size, short barrel-shaped body, smooth snake like skin and short stout legs. They have broad heavy heads with eyes and nostrils mounted on top. They have large wide mouths, armed with tusk-like canines and incisors. According to the proportion of the head the ears are small and stand up. They have a short tail that is flattened with sears bristles on the end. Males are larger than females.

They occur widely south of the Sahara and were once found in the lower Nile, but have been extinct there since 1815 (Map8). Due to being amphibious they are confined to adequate aquatic habitats, this brings about a discontinuous and patchy distribution.



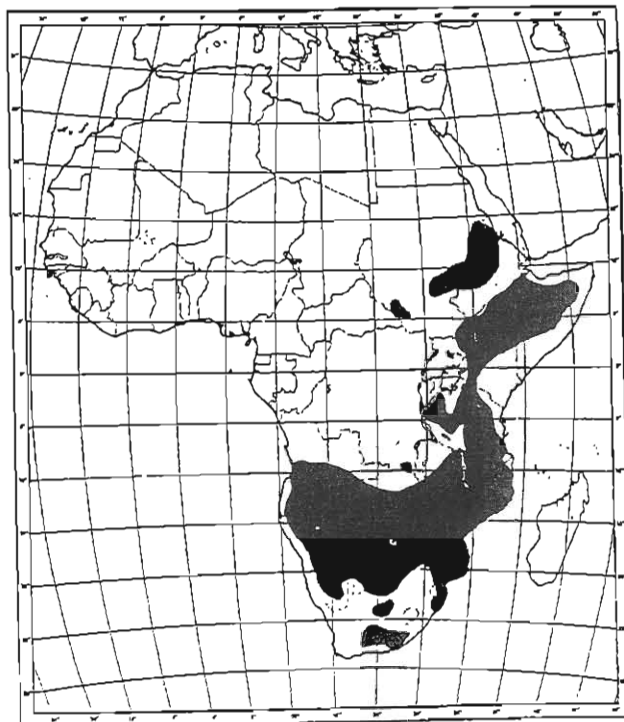
(Map8: Hippopotamus distribution patterns)

They are great wanderers that prefer shallow standing water near sandy banks on which to bask. They feed nocturnally and lie in water during the day. Adults can remain under water for five to six minutes at one time and swim in a jumping action. They eat up to 40kg of grass at night and are territorial.

### **KUDU ( *Tragelaphus strepsiceros* ) – 1**

-The kudu has been described as “ acme of nature's efforts to attain perfection of type” (Skinner and Smithers, 1990). Adults stand approximately 1,4m at the shoulder, with a mass of 250kg, females on the other hand measure 1,25m and weigh 200kg. They have a series of stripes of 5-14 , which are unevenly spaced. The ears in both sexes are large and broad for the size of their heads. Their horns grow for the duration of their lives, but only males have horns.

As far as distribution is concerned they are one of the most resilient of the large mammal species, surviving both hunting and settlement, but even so their range has shrunk. They are a savannah woodland species and are partial to broken rocky terrain where they have the cover of the woodland and a water supply , and plenty of browse (Map9). Seventeen Kudu still roam the farmland of Doornkloof today, under supervision of the farmers, whose conservation measures have led to a steady increase in their numbers over the years.



( Map9: Kudu distribution patterns)

### LION (*Panthera Leo*) – 1

-The Lion is the largest of the African carnivores, measuring 1,25m at the shoulder, with an average weight of 190kg for males and 126kg for females.

Its distribution has shrunk dramatically over the years, today apart from areas in which they have been reintroduced they are only found national parks and reserves in south- Africa (Map10). They have a wide habitat tolerance, finding only forests intolerable. Where water is available they drink regularly after meals, but can survive on the moisture they obtain from their prey. They are generally found in Sub-Saharan Africa or wherever medium to large herbivores are encountered.



(Map10: Lion distribution patterns)

### OSTRICH (*Struthio camelus*) – 3

- The Ostrich is well known as being the flightless bird, it is also a common resident, being utilised for farming purposes, (Newman, 1991). They are usually found in pairs or groups, with numerous children, (Newman, 1991).

In the wild they occur in isolated areas and also in game parks, (Newman, 1991). Their habitat includes woodland and wooded grassland in the east and thornveld or grassland in the arid

western regions, (Newman, 1991). The tail colour of the adults varies according to region, from white to grey to cinnamon- brown, (Newman, 1991).

### **QUAGGA (*Equus quagga*) – 1**

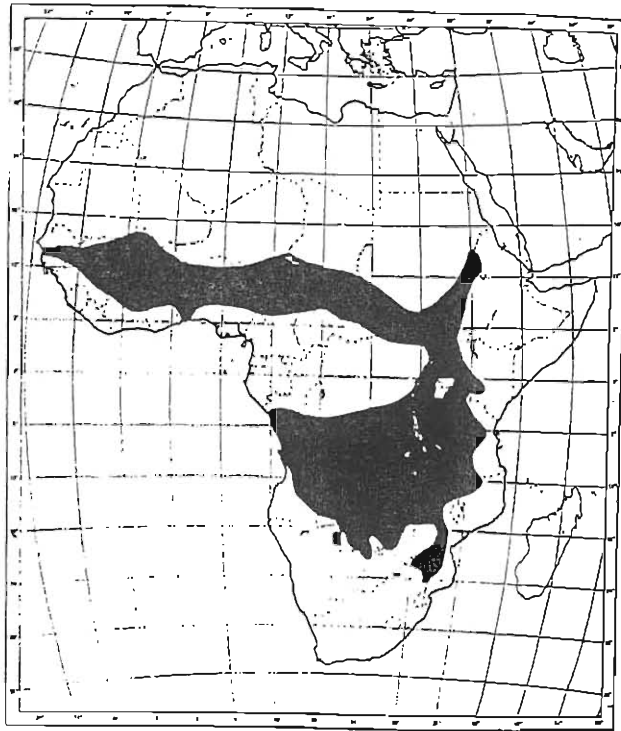
- They have narrow stripes on the forehead, which is noted as an important characteristic. They stand between 1,25 and 1,35m, with a total body length of approximately 2,57m. Only the foreparts of the body are striped. they had a broad dark band extending down the mid-back, the bands are broader and more regular on the neck and extending to include the erect mane and becoming lost in a series of spots and blotches about half way along the body. The legs, tail and under parts were white.

From all accounts the quagga was a species which grazed open country, in its known historical range. The existence of the quagga is debated today still, with the belief that it was nearly the result of a recessive gene, (Meltzer, pers. com 2000).

### **ROAN ANTELOPE (*Hippotragus equinus*) – 5**

- They are a large antelope, surpassed only in size by the eland. Males stand 1,4m at the shoulder and have a mass of approximately 270kg, while females are slightly smaller and lighter. Both sexes carry horns, but females are more lightly built. The horns rise from the top of the head in an even backward curve and are strongly ridged with a smooth point.

They are considered an endangered species in South Africa. In 1969 a capture operation established a breeding herd of 21 antelope on a provincial reserve and by 1983 numbers had increased to 181 animals. From this group translocation occurred. Numbers have steadily risen, except in 1984 when numbers dropped due to an outbreak of anthrax. At one time they occurred as far west as Gambia and east to Nigeria to the former Transvaal in the Kruger National Park, which was their southern boarder (Map 11). Since those historical times, their limits have shrunk dramatically.



(Map 1: Roan antelope distribution patterns)

Roan are sensitive to change in their habitat, either an increase in the woody vegetation or a reduction of the grass cover. Habitat requirements are critical, their occurrence is thus confined to lightly wooded savannah with extensive open areas of medium to tall grasses, where water is available. They avoid areas of short grass. As a result of their requirements their distribution is patchy and discontinuous.

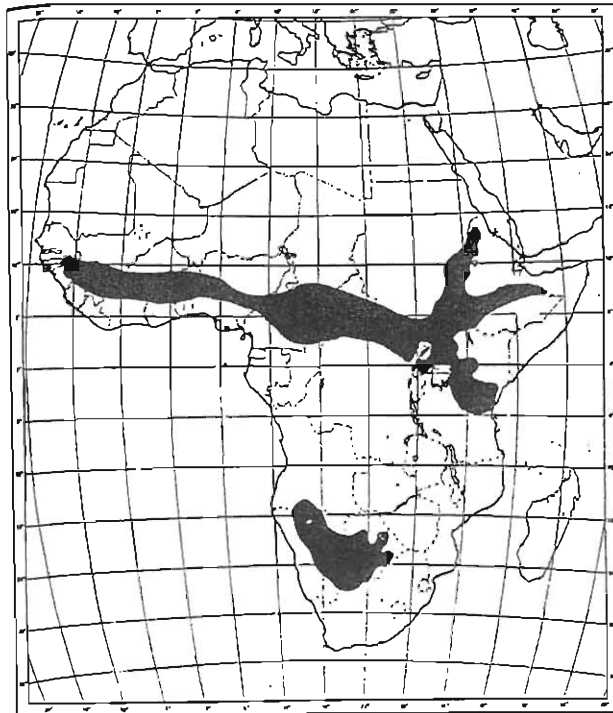
Roan are gregarious and found in small herds of 5 - 12 individuals. Social organisation consists of nursery herds, bachelor groups and solitary bulls. Herds are stable units and remain in one area for long periods. They are predominantly grazers and browse constitutes only a small proportion of their diet. They feed on medium to long grass, avoiding areas where the grass is short. The availability of the species of grass plays an important role in their selection of food. Roans have two peaks of grazing activity, early morning and late afternoon. They are delicate feeders and don't close crop the grass and will switch to browse in critical periods.

### **RED HARTEBEEST (*Alcelaphus buselaphus*) – 1**

-The adult male stands approximately 1,25m at the shoulder with a mass of 150kg, females weigh in at 120kg. They have a characteristically shaped body, head and high humped shoulders, sloping backs and elongated heads on upright necks. Sexes have horns, but the males are heavier and set closely together at the base, the shape of the horns form a characteristic heart shape.

They have a wide but discontinuous distribution south of the Sahara (Map 12). Distribution has shrunk dramatically during historical times. Their habitat is associated mainly with open country, grassland of various types, vleis, semi-desert bush savannah and to a lesser extent open

woodland. They are gregarious, occurring in small herds of up to 20 and larger and are predominantly grazers.



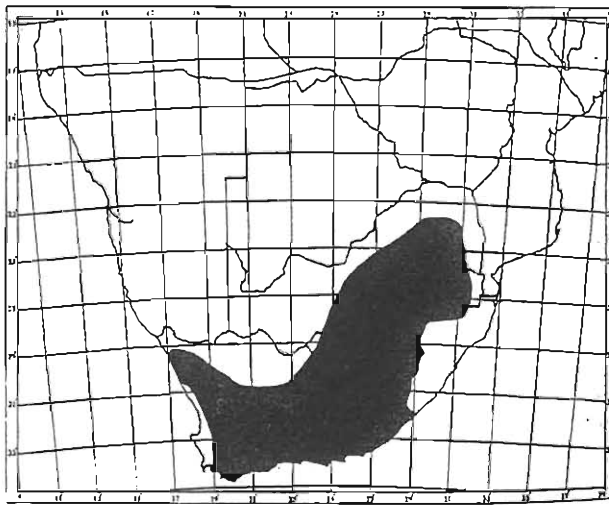
(Map12: Red hartebeest distribution patterns)

### **RHEBUCK (*Pelea capreolus*) – 3**

-Rhebuck are slender and graceful standing about 0,75m and weighing only 20kg. They have a long slender neck and very long narrow, pointed ears.

They are confined in their distribution as they like rocky areas with good grass cover and are dependent on water, they are only found in South- Africa in Mountainous grasslands above 3300ft (Map13).





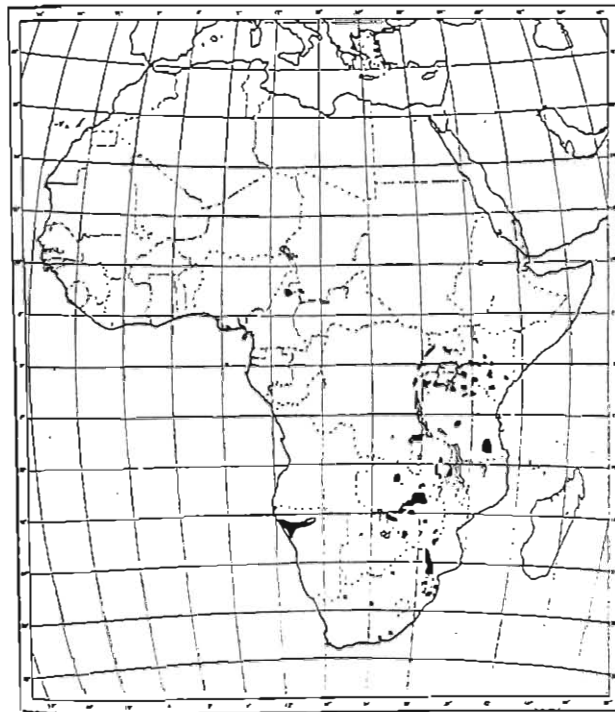
(Map13: Rhebuck distribution patterns)

### **BLACK RHINOCEROS (*Diceros bicornis*) – 1**

- Adults stand 1.6m at the shoulder with a mass of 1000kg. Characteristics include a prehensile upper lip, used for grasping twigs of woody plants they eat. They have a shorter head and a longer neck with small rounded ears. The Black Rhino lacks the nuchal hump on its back, carries its head higher than the white rhino and are a darker grey. The shape of the horns depend on the habitat of the rhino, maximum horn length measured was 1,20m. Their front feet are larger than their back feet.

Distribution has shrunk dramatically over historical times from 100 000 in 1960 to 3000 in 1990. Today they are only found in National Parks were they are offered protection from poachers (Map14). Their horns are sort after for medicinal uses by Asian traditional healers. Their desired habitat must contain sufficient shrubs and trees up to 4m in length and well-developed woodland with thickets in which to hide and utilise for shelter. They need water for drinking and in which

to bath and a mud-wallow is important. They are always within a 10km radius of water and are solitary animals.



(Map14: Black rhinoceros distribution patterns)

### **WHITE RHINOCEROS** (*Ceratotherium simum*) – 3

-A shoulder height of approximately 1,8m is found in males and 1,77m in females with an average mass of between 2000 and 2300kg for males and 1600kg for females. Africa's third largest land mammal has a barrel-shaped body and short, thick limbs. It has a characteristic long head with long continually growing horns, pointed ears, wide squared-off lips, a distinct hump on the neck and a hump on its back, with a relatively short tail. The shape of its mouth allows the animal to eat cropped grass to within 10mm of the ground.

The distribution of the animal is evident from skeletal remains and Rock Art on the coasts of Morocco, Algeria and Tunisia through the Sahara and East Africa to South- Africa (Map15). In 1960 only 700 were still found in South Africa but through successful reproduction projects the numbers climbed to 2199 by 1989. White Rhino's have four basic habitat requirements :

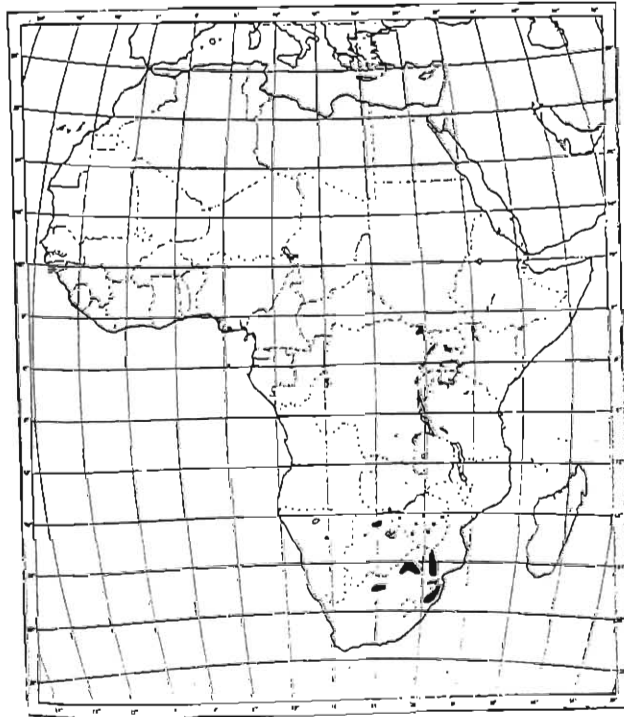
1- Short Grass ( preferred food )

2- Water for drinking and wallowing

3- adequate bush cover

4- Relatively flat terrain

They are found in wooded grasslands, in small groups with a single dominant bull, having clearly defined territories.

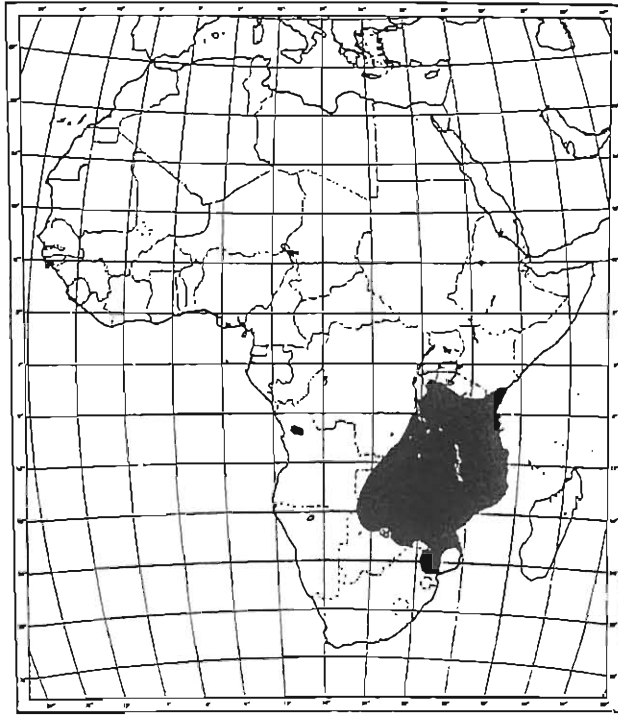


(Map15: White rhinoceros distribution patterns)

**SABLE** (*Hippotragus Niger*) – 1

- They are less robust and lighter in mass than their close relative the roan, reaching 1,35m at the shoulder and weighing 230kg.

They were first encountered west of Pretoria, but are extinct to the area today. Generally found in Savannah woodland areas around water on which they are dependent (Map16).



(Map16: Sable distribution patterns)

### **TERRAPIN** (*Pelomedusa subrufa*) – 1

- The shield reptiles all have a characteristic shell, whether it be soft, leathery, hard, flat, knobbed, or hinged, (Branch, 1988). The first fossil records were found in Germany and date back to approximately 210 million years ago. (Similar fossil records have been recorded for South Africa), (Branch, 1988). Early tortoise had teeth, but these are absent in all forms today, (Branch, 1988).

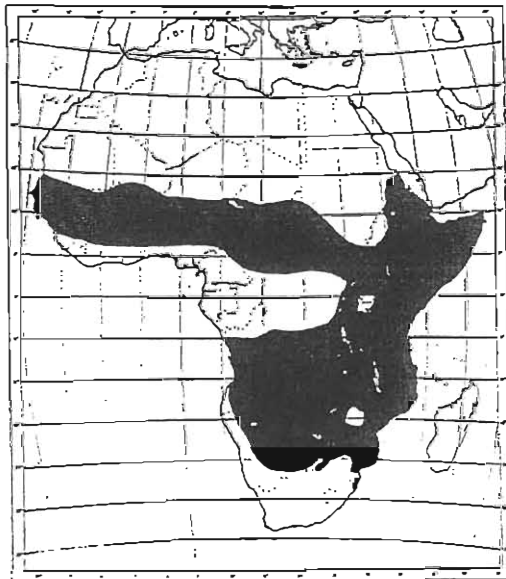
The terrapin belongs to the tortoise family, (Branch, 1988). The species under discussion is the Marsh or Helmeted Terrapin, (Branch, 1988). They reach a length of 20-30 cm, with a maximum of 32 cm, (Branch, 1988). They are a common species to the temporal planes, (Branch, 1988). Being omnivores they eat anything, favourites include, water weed, insects and frogs, (Branch, 1988). Their habitats include, slow moving or still water, (Branch, 1988). Their range is large,

almost everywhere where water is present, including the Central Karoo, Etosha, Sub-Saharan Africa and Madagascar, (Branch, 1988).

**WARTHOG** (*Phacochoerus aethiopicus*) – 1

-They have been described as “incarnations of hideous dreams”, “the most astonishing objects that have disgraced nature”(Skinner pers. com 1999.). Adult boars stand approximately 0,7m at the shoulder and weigh about 100kg, while females stand about 0,6m and weigh about 70kg. Characteristic features include an elongated head that slopes forward to the snout, they have distinctive facial “warts”, with canine teeth that grow out sideways from the jaws like tusks, which are used for protection and to dig up roots and tubers.

They are found all over except in forest and desert areas. They are found in Namibia, Botswana, Zimbabwe, Mozambique, in South- Africa they are found in the area formally known as the Transvaal, the Cape Province and Natal (Map17). They prefer habitats like open ground, grassland, floodplains, vleis and open areas around water holes and pans. They love burnt ground where grass starts sprouting and are normally found near water although they are not dependent on it. They are diurnal, and use their forefeet for digging, live in holes in the ground and have social groups made-up of families.



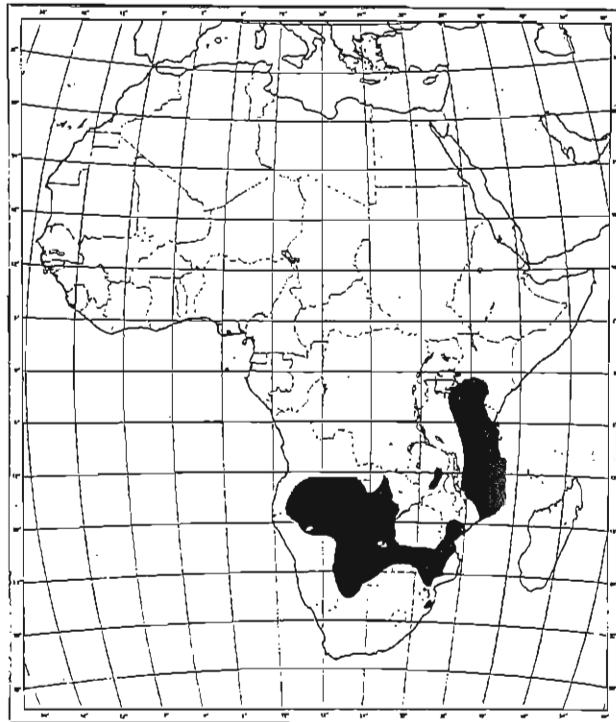
(Map17: Warthog distribution patterns)

## **BLUE WILDEBEEST** (*Connochaetes taurinus*) – 1

- Adult males stand about 1,5m at the shoulder and have a mass of 250kg, while the females are smaller standing at 1,35m, with a mass of 180kg. The humped shoulders and deep necks contrast with the more lightly built hindquarters with slender legs. The slope from shoulder to hindquarters is more pronounced. Their heads are massive and elongated broadening at the nostrils. Both sexes carry unridged horns, arising from swollen bases, sweep outwards and slightly downward and then rise upward to the inwardly pointed tips, directed slightly backward.

Today they occur in two main, widely separated areas. They are located in Southwest Kenya to Northwest Mozambique and south from Zambia, into South Africa, with an isolated patch in the Luangwa valley in Zambia. In South Africa they were widespread in the area formally known as Transvaal and occurred as far south as the Orange and Vaal rivers (Map18). They occur in savannah woodland with the availability of shade and drinking water an essential habitat requirement. They utilise Acacia and Tamboti and have seasonal movements in the dry season to short grass areas on sandy riverbanks.

They are gregarious, occurring in herds of 20 or 30 or even up to thousands. Their social organisation consists of territorial males, female herds, which include their offspring for that year and bachelor herd. Territorial males will drop to their knees and horn spar, butting their heads to chase of the intruder. Sexually active bulls employ ritual displays directed to individual situations. They have a home range of approximately 2,5km<sup>2</sup>. They are grazers, preferring to feed on areas of short, green lawn-like grassland. They are partial to fresh sprouting grass on burnt areas or after rain. They don't eat grass more than 100 - 150mm high. They have a well-adapted snout for short grass as it is widened at the base.



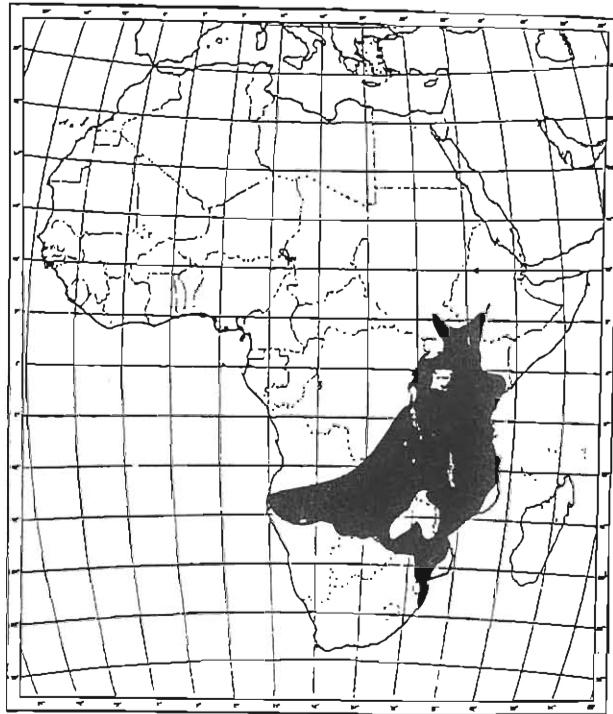
(Map18: Blue wildebeest distribution patterns)

#### **ZEBRA (*Equus burchelli*) -- 4**

-They have a characteristic body patterning made-up of irregular waved mosaic patterns along the entire length of the body, they are characteristic striped pelages. Zebra's are always in prime condition with well-rounded bodies and shiny coats. Adult zebra's stand about 1,36m at the shoulder and weigh 320kg, there is no difference between males and females.

Their present day distribution shows marked shrinkage, naturally occurring groups are only found in game parks (Map19). They prefer savannah plains and are partial to open areas of woodland, open scrub and grassland where water is available. They are dependent on water for

survival. They are gregarious (live in-groups), whose size depends on their habitat. They are predominantly grazers, but occasionally browse and feed on herbs. (Table 1)



(Map19: Zebra distribution patterns)

### **LINEAR WORK – 15**

Linear work constitutes engravings comprising of geometric shapes or lines, which do not appear to constitute a specific shape or object.

### **PATTERN WORK – 41**

Geometric work also forms part of pattern work, but in this case, they formulate a specific shape, object or concept.

### **WEAPONS – 4**



## WEAPONS -- 4

According to (Hone,1972) weapons utilised by the Bushmen include:

- A bow (kiesha), is 2cm in diameter and 1 meter long, with the strung rope being 2mm thick, which is made from the tendons connecting the back and neck of a gemsbok.
- The arrows (kxaosha), are 7-10mm thick, 50cm long and made of the stalk of a cultivated plant, while the arrowheads were made of wire of a 2mm diameter, all these products were obtained through trade. The arrows do not have feathers on the end; thus they are not all that accurate, with a maximum shooting range of approximately 20 meters.
- The poisons (g! ain), are made of the larva of a small beetle called the *Diamphidia simplex*, which lives underground, appearing in the rainy season to feed on shrub leaves. These larva are gathered and crushed and stored in a poison jar. When needed they are dissolved in juice from the root of *indigofera*. It is painted on the arrow head except it's tip, it is very effective, but takes approximately 10- 20 hours to take effect.
- A spear ( kxao), shaft is peeled from the *Grewia flava* stalk, the point is manufactured from an iron rod obtained through trade. It is rarely used as a throwing spear, but is used as a secondary weapon administered on dying game.
- A snare (g! UI), is a strong rope of two meters twisted from the fibres of the *sansevieria aethiopica*, a small branch fastened to one end of the rope serves as a pin.
- A snare (tsipi) is a steel trap obtained through trade.
- A springhare pole (g! an), is a one meter long pole, with a springbok horn tied to its tip.
- A knife (kxacho) is made in the same way that a spear point is made.
- An axe (n / ubi *or* bosha), was obtained through trade.
- A club (n / ua), is made from the swollen section of the root of the *Rhigozum brevispinosum*.
- A dog (aba) was the only domesticated animal the Bushmen owned and was used during the hunting process, to track the wounded game.

## CULTURAL OBJECTS – 2

According to (Hone, 1972) the cultural objects the Bushmen utilised include:

- A digging stick ( n/ue), is made by peeling bark of *Rhigozum brevispinosum*, which is two meters in diameter and 80 - 110cm long and one end is cut diagonally (this is one of the Sans most important tools).
- A hunting bag (! komasha), is a sewn steenbok hide, of which the four legs are fastened together to form a sling for a bag. It contains the bow, arrow, spear, club, knife and fire stick of the hunters.
- A carry skin (N / au), is made from gemsbok, springbok, red hartebeest or wildebeest hide and used by women to carry gatherings. Both sexes use it for clothing or a sleep blanket.
- A carry net (/ ontsono), is made from the tendons of a gemsbok or other game that is twisted into thread and then woven into a net, which the men use to carry meat in.
- A small pouch (gyube), is a 30cm square tanned steenbok hide and was used to hold small articles and gathering berries.
- A container (dam) is used to carry cosmetics and medicines. They are made of a tortoise shell, with a beaded leather carry strap and leather lid.
- A water container (! kabi), is made of ostrich eggshell.

- A fire stick (le) is a rubbing stick made from *Catophrates alexandria*, which can produce a fire in approximately one minute.
- A pan (llkoe) is made of cast iron and obtained through trade.
- A bowl (xabasha) is made from enamel and obtained through trade.
- A cup (n / ubi), is made from enamel and obtained through trade.
- A spoon ( ! kam), is also a traded object, although a tortoise shell may also be used.
- A fire-rake stick (gure) is a 70cm long made by shaving a *Boscia albitrunca*'s trunk flat. It is used to rake-up embers, ashes and sand.
- A mortar (iika) & pestle (! koa), a mortar is a hollowed out section of an *Ochna* plusher trunk, while a pestle is a piece of branch 5cm in diameter.
- A sand sieve (/ aru), is a mat woven from grass and used to separate beans and seeds from the ashes and sand.

### **MISSION STATION (Ebenezer Mission) – 3**

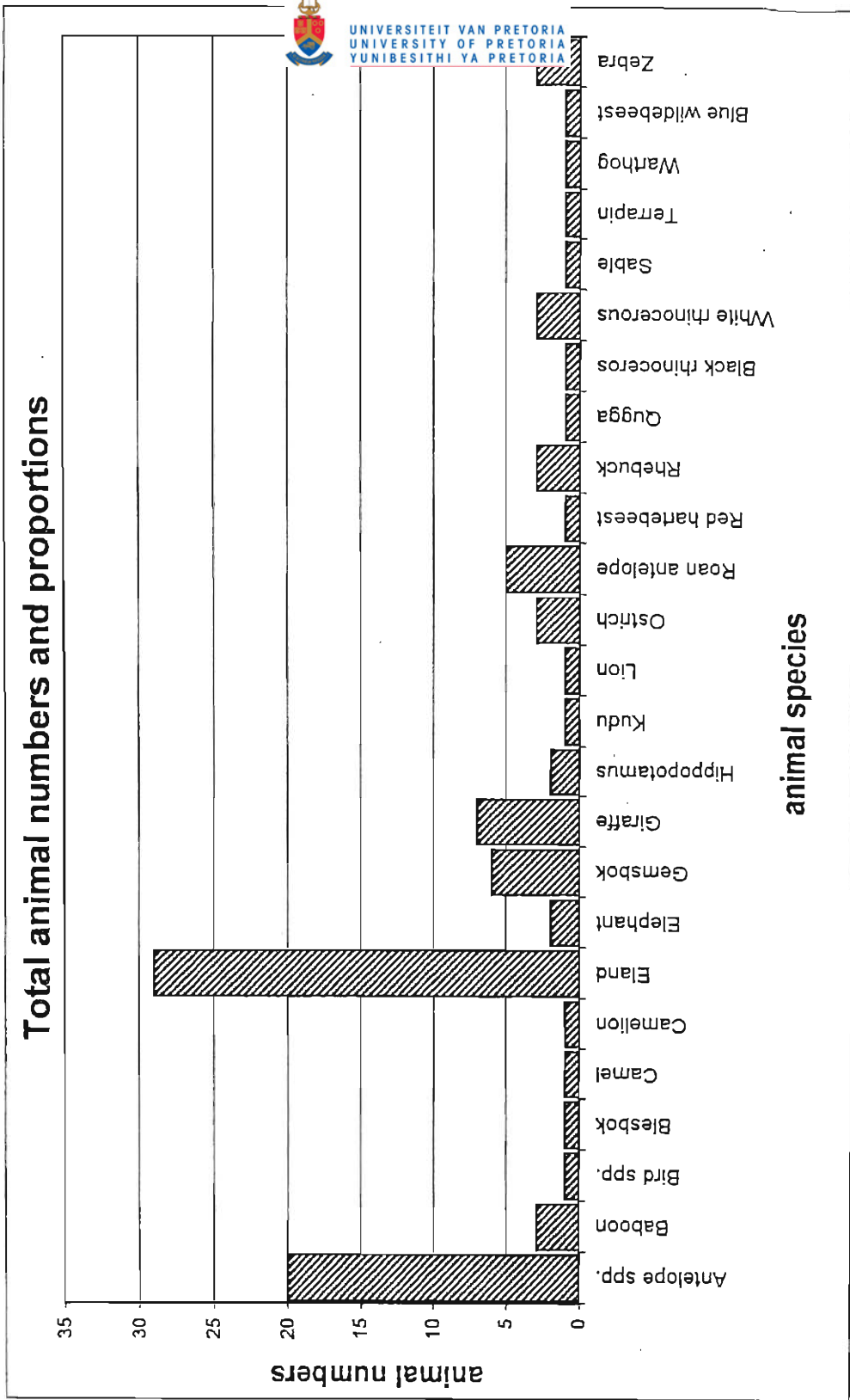
The Ebenezer mission station, originated in 1849 and formed part of Evangelisch - Lutherische Mission sansalt zu Hermannsburg”, Hermannsburg Evangelical Lutheran Missionary Society, (James et al. (1911)). The Lutherans enjoyed a 745 strong membership in South Africa, with missions in Natal and Bechuanaland (Bophuthatswana), it originated in the Hannover Province in Germany, (James et al. (1911)). The mission welcomed all non- Christian people. The mission comprised of two men and two wives, (James et al. (1911)).

### **HUMAN FIGURES (Homo sapien sapiens) – 4**

-All the figures are of Caucasian settlers and are female. This is verified by the fact that they are all portrayed wearing dresses. No engravings of Bushmen engraving images of themselves were located.

### **PIET (The recording of Piets death) – 3**

- Piet was a cattle herder in the Maanhaarrand area, who tragically died of a heart attack, in the fields he herded.



(Table 1: Engraved animal numbers)

(Table 1: Engraved animal numbers)- In tabulating the animal numbers, the frequency of the subject matter can be compared. This serves to correlate the animals engraved with the notion that the animals were engraved for the purpose of study and religion. Animals forming part of the diet of the bushmen are engraved more often, so to are the eland, which hold religious connotations.