REPÚBLICA DE MOÇAMBIQUE

Parque Nacional de Banhine

Wildlife census
November 2004

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Executive summary

The Parque Nacional de Banhine represents a very important wetland system with high conservation value. It has potential for tourism development that can significantly contribute to the local economy and well-being of the inhabitants.

A wildlife survey was undertaken to establish a baseline against which the effects of the involvement of the African Wildlife Foundation can be assessed in the future. Balancing the requirements for objectivity, repeatability and affordability, a partial census (sample count) was undertaken with a helicopter. A Global Positioning System with pre-determined census blocks and flight lines was used to accurately cover important habitats and landscapes. The position of wildlife that was observed was captured and integrated into the Geographic Information System for Banhine, thereby allowing adjustments that take into account the relative proportion of the different landscapes that were covered. A total of 448 km^2 (7.8% of Banhine) was covered by the 9 census blocks. In addition, the ferry lines that were flown increased the sampling percentage to 12% of the Park. The census technique that was used can be repeated as the census block and lines that were flown are spatially defined.

In terms of herbivores, the highest diversity and numbers of wildlife was found in the Wetland and Grassland landscapes with in particular ostrich, oribi and reedbuck. Kudu, grey duiker and steenbuck are widely distributed throughout the Park, particularly in the Sandveld and Mopane landscapes, albeit at relatively low densities. An interesting range of small to medium-sized carnivores was also observed. The total numbers physically observed on 12% of the Park were as follows: buffalo 1, bushpig 60, grey duiker 224, impala 156, kudu 173, nyala 9, oribi 51, ostrich 210, reedbuck 79, steenbuck 82 and warthog 29. Great care should be taken with any extrapolation for the whole Park as the wildlife densities vary markedly between the different landscapes.

Despite the relatively low proportion of the Park that was physically covered by the helicopter census, it can be safely stated that a viable nucleus of ostrich, oribi, reedbuck, grey duiker, steenbuck, kudu, impala and warthog exists. Other large species such as elephant, hippo, giraffe, zebra, wildebeest, roan, eland and Lichtenstein's hartebeest that were still found in the Park in the early 1970's have since been exterminated.

The current impact from hunting (and possibly other human activities such as subsistence farming) is certainly keeping the wildlife recovery back. Several times during the census, hunting dogs were observed far away from human settlements.

The recovery of species such as giraffe, zebra, wildebeest, sable and roan will only be possible through their physical re-introduction. Care should be taken that the unique populations of ostrich, oribi and reedbuck are not endangered by the indiscriminate growth in numbers of generally more common species such as impala, zebra and wildebeest. It is therefore recommended that a reintroduction programme be carefully formulated with emphasis on monitoring of changes in both habitat and wildlife populations. An appropriate vision will need to be formulated and implemented that achieves the right balance between conservation requirements and tourism development imperatives.

1. Objective

The African Wildlife Foundation (henceforth AWF) and the Mozambican Ministry of Tourism (MITUR) signed a Memorandum of Understanding (MOU) on 29 October 2004 that solidified and formalized their longstanding partnership to improve Mozambique's wildlife conservation.

Banhine National Park, located in the Limpopo Heartland, will be one of the top conservation priorities under this new partnership. Banhine National Park is an important wetland and hosts the endangered wattled cranes, a wide variety of migratory birds, large ungulates and killifish. Together, AWF and MITUR will work on restoring this park. Priority projects will include aerial surveys and the establishment of a scientific research center. AWF and MITUR will also be developing strategies to engage communities and the private sector in the management of Banhine National Park, with the goal of making the park self-sustainable through ecotourism and other activities that will help generate income from its natural resource base.

It is important to establish a baseline as a point of departure from the time that AWF becomes involved. The wildlife resource is one that is central to the proclamation and the conservation of the Banhine National Park. It is also a resource that potentially can show a rapid positive or negative response to improving or declining standards of protection and management.

The objective was therefore to conduct an assessment of the wildlife resource for the purpose of establishing a baseline.

2. Methodology

2.1. Approach

The assessment had to fit the criteria of objectivity, repeatability and affordability. A pre-determined quantitative method is required in terms of objectivity. Given the large size of the Park (in excess of 6,000 km^2), the lack of an extensive road network and the flat topography without vantage points, some form of aerial survey represented the only realistic approach. The criteria for repeatability requires a spatially-explicit assessment whereby a follow-up survey can be undertaken on the same area(s). Given the low expected densities of wildlife and the fact that some of the most important species are small-bodied (e.g. oribi) a helicopter was preferred to a fixed-wing aircraft. The high cost of flying required the adoption of a sampling approach rather than a full count.

A landscape map is available for Banhine (Stalmans 2003). The key feature of Banhine is the wetland found to the west of Pio Cabral. A large counting block was defined on the Geographical Information System (GIS) that covered most of the wetland. Another 8 blocks of 4,000 ha (40 km^2) were defined in such a way as to cover the different landscapes and geographical parts of Banhine within the available budget of 20 hours of flying.

2.2. Census technique

The specific equipment and technique are as follows:

> ➢ 4-seat Bell Jet Ranger helicopter;
> ➢ For the sake of maximum visibility, all doors of the helicopter are removed;
> ➢ Parallel strips of 500 m width are flown. This means that observers look for game in a strip of 250 m wide on each side of the helicopter;
> ➢ The helicopter is maintained at a constant height of 53m (160 feet) above the ground. Airspeed is maintained at around 96 km/h (60 knots). Where a large herd is observed (eg impala) the pilot will circle to enable an accurate count;
> ➢ Use is made of a GPS-based system (Global Positioning System) for accurate navigation. A grid is generated on a notebook computer that is linked to the helicopter's GPS. Every 2 seconds a flight co-ordinate is downloaded onto the hard disc. As a sighting is made the position together with the species code and number is stored. The flight path and the observations are visible on screen. This enables the pilot to keep the helicopter on the pre-determined line and avoids the risk of areas not being covered or being covered twice. The position on screen of the animals already spotted assists in preventing double counting or under counting;
> ➢ An east-west grid was flown;
> ➢ All observers wear yellow goggles that reduce shadows and enhance contrast,
> ➢ The closed *Androstachys* – landscape was not assessed. Visibility is very poor and it is known to have a very low suitability for grazers and browsers.

The census was flown by pilot Mike Pingo (Sunrise Aviation) with navigator/observer Marc Stalmans (International Conservation Services) and observers Mike Peel and.John Peel (Range and Forage Institute of the Agricultural Research Council). The warden of Banhine, Mr Armando Ngwenya, and Dr Simon Munthali of AWF took turns in accompanying the counting crew.

The census was undertaken from 25 till 29 October 2004. The Park Headquarters at Pio Cabral were used as a basis for refueling and resting.

2.3. Data analysis

The GPS positions of the flightlines as well as the GPS positions of the wildlife that was observed were integrated into the GIS information for Banhine. Each observation point was linked to a specific landscape. This information makes it possible to analyse wildlife presence and numbers in relation to specific landscapes and the Park in general. Care was taken to relate all figures and extrapolations to the proportional representation of the landscapes as mapped for Banhine and as covered during the census.

No sophisticated statistical analysis was undertaken. This is mainly because many of the assumptions required for such analysis were violated. This relates in particular to the requirement for the wildlife to be uniformly and independently distributed throughout the survey region in relation to randomly placed sample lines (Buckland *et al.* 2001). This is definitely not the case for Banhine. Furthermore, efficiency may be poor if wildlife density is highly variable as a function of habitat type. This does certainly apply to Banhine. Therefore, to improve the efficiency of the technique it is necessary that areas with marked variation in densities should either be sampled with appropriate variation in technique or at least be subjected to data analysis that considers those variations. The areas must however remain large enough to provide the minimum number of observations that are required by the much-used program DISTANCE to conduct analysis. Some 60 to 80 observations per species are required. Low wildlife densities on Banhine precluded attaining this number of observations for most species.

A conservative, commonsense approach was taken to infer possible numbers and distribution patterns of wildlife throughout Banhine. The raw data however remain available for more sophisticated analysis and comparison with the results of surveys that are undertaken in the future.

The GPS points are linked to the flight path and not necessarily to the actual position of the animal(s) observed. A strict approach was followed whereby any GPS point that fell outside a pre-determined block was not used for the density calculations, even though the observation may reflect an occurrence just within the boundary. This stricter approach prevents a gradual 'creep' in the size of the block that is flown in each successive survey. It also yields a more conservative number for the wildlife that is likely to be present.

3. Results

3.1. Area covered

The total area covered by the blocks was 488 km^2 which represents 7.8% of the Park (Fig, 1). The blocks each have a different make-up in terms of landscape composition (Table 1). The Wetland and Grassland landscapes are proportionally best covered (Table 2).

 If one considers the 250 m observation distance along the flight line, a total of 752 km^2 were covered by the blocks and connecting ferry lines (Fig. 2). This represents 12% of the Park. A greater proportion of Sandveld and Mopane landscapes are covered by these ferry lines, thereby compensating somewhat for the low sampling intensity of these landscapes in the census blocks (Table 2).

An area of 42.4 km^2 has been covered per flying hour. This is relatively high for this type of exercise. It reflects the low density of wildife in general and the open nature of the area.

Legend

Census blocks
Tracks
Landscapes
wetland
grassland
sandveld
mopane
androstachys

Pio Cabral
base & fuel

SAMPLING INTENSITY

Wetlands   79.5 %

Grasslands   25.5 %

Sandveld   4.8%

Mopane   3.6%

20   0   20   40   Kilometers
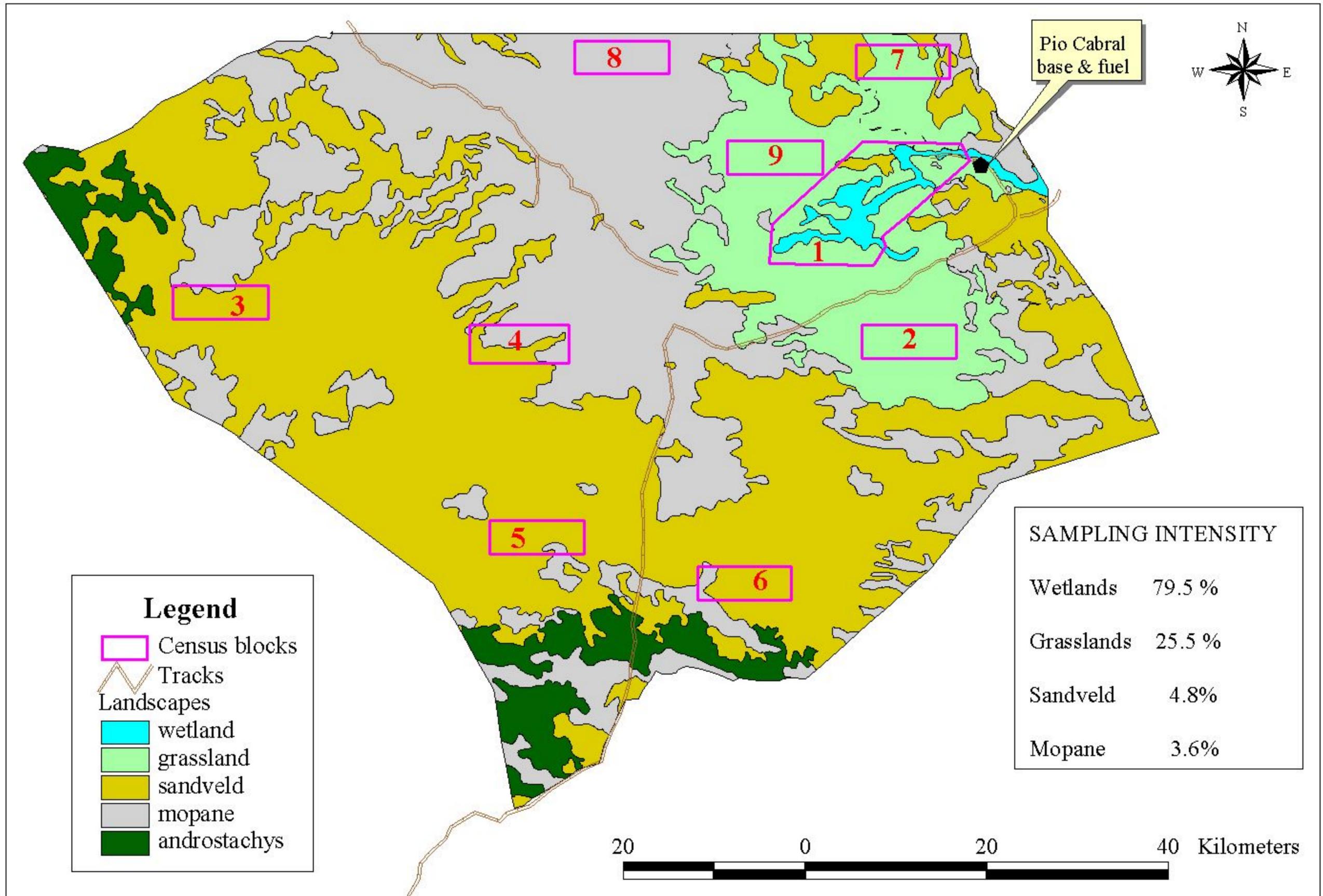
Fig. 1: Census blocks in Parque Nacional de Banhine (2004).   8

Table 1: Size and make-up of the blocks.

Block no.	Total size (km^2)	Landscapes (extent in % of total Park)			
		Wetland	Grassland	Sandveld	Mopane
1	176.1	29.8	65.2	4.5	0.6
2	37.7	0.0	100.0	0.0	0.0
3	38.0	0.0	0.0	92.2	7.8
4	45.5	0.0	0.0	43.6	56.4
5	38.3	0.0	0.0	93.6	6.4
6	37.2	0.0	0.0	86.1	13.9
7	38.2	0.0	66.0	27.8	6.3
8	37.5	0.0	0.0	0.0	100.0
9	39.3	0.0	100.0	0.0	0.0
Total	**488.0**				

Table 2: Total size and proportional landscape representation of census blocks and ferry lines.

		% landscape make-up			
		Wetland	Grassland	Sandveld	Mopane
Landscape make-up of Banhine		1.1	13.6	46.7	33.9
Total block size surveyed	488 km^2	52.4	217.1	141.2	77.1
Block size as % of Banhine	7.8%	0.8	3.5	2.3	1.2
Landscape in blocks as % of total landscape		79.5	25.5	4.8	3.6
Total block and ferry lines size surveyed	752 km^2	54.3	307.6	239.7	150.5
Block and ferry line size as % of Banhine	12.0%	0.9	4.9	3.8	2.4
Landscape in blocks and ferry lines as % of total landscape		82.4	36.1	8.2	7.1

* Androstachys landscape covers 4.7% of Banhine, but was mot assessed.
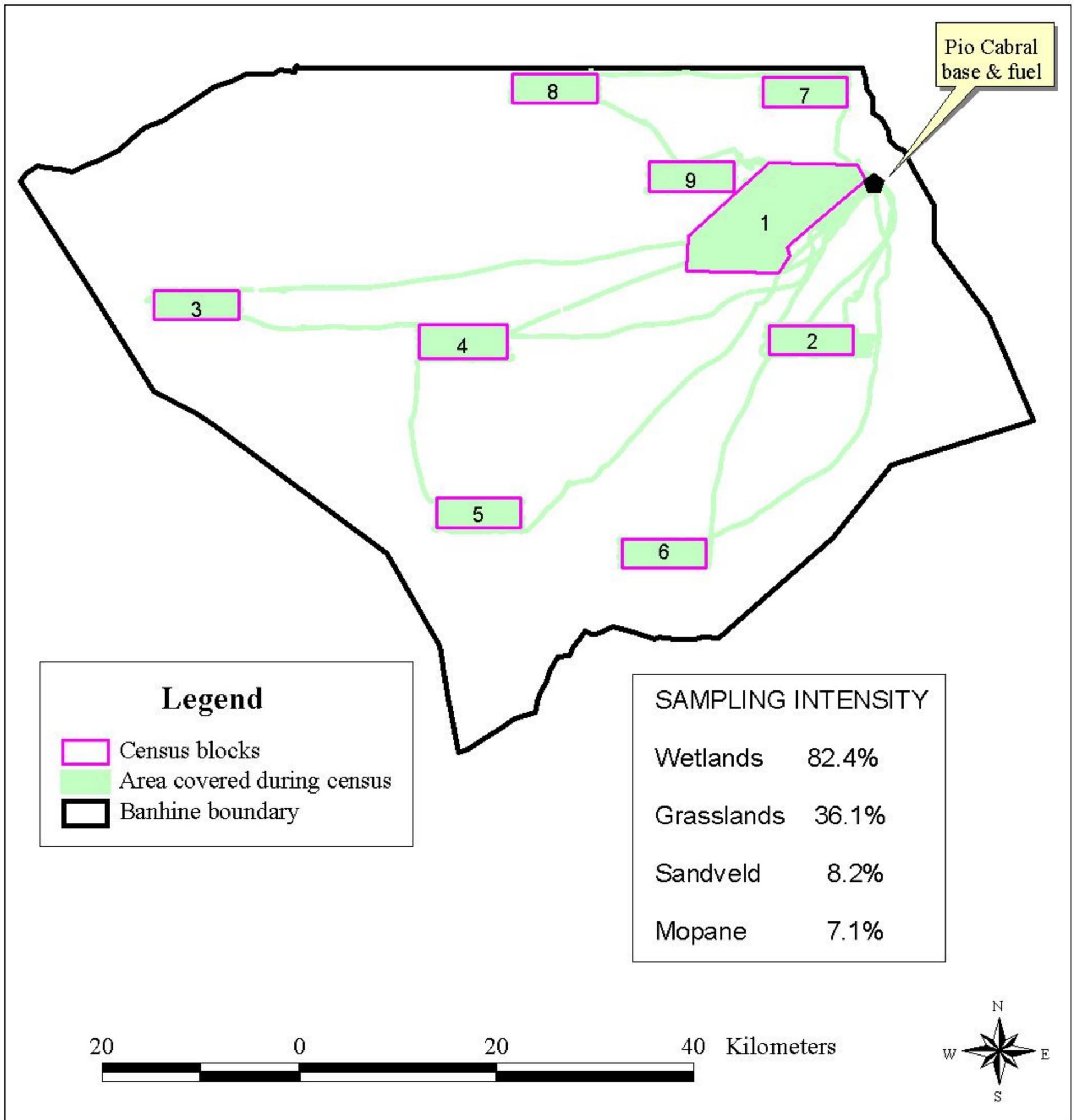
Fig. 2: Area covered by the census blocks and ferry lines in between blocks (2004).

3.2. Species observed

A total of 23 wildlife species were recorded in the different blocks and along the ferry lines. Goats and cattle were also observed (Table 3) (see Appendix A for English, Portugese and scientific names). Not surprisingly, the wetland block is most diverse as it covers an area five times larger than the other census blocks. Grey duiker and steenbuck were observed in every single block. Porcupine was only absent from block 7. In addition, two large pythons were observed as well as a large mongoose species which may be Meller's Mongoose.

Table 3: Animal species encountered during the 2004 census.

Species	Area									
	Block 1 (wetland)	Block 2	Block 3	Block 4	Block 5	Block 6	Block 7	Block 8	Block 9	Ferry lines
African Wild Cat		✔						✔		
Blackbacked jackal								✔		
Buffalo										✔
Bushpig	✔						✔		✔	✔
Chacma baboon										✔
Grey duiker	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Ground Hornbill	✔		✔	✔	✔	✔				✔
Honey badger	✔							✔	✔	
Impala	✔								✔	✔
Kudu	✔		✔	✔	✔	✔	✔	✔		✔
Largespotted genet	✔									✔
Nyala				✔						✔
Oribi	✔	✔					✔		✔	✔
Ostrich	✔	✔				✔	✔			✔
Porcupine	✔	✔	✔	✔	✔	✔		✔	✔	✔
Reedbuck	✔								✔	✔
Saddle Bill Stork	✔					✔				✔
Serval	✔									
Spotted hyena	✔									
Steenbuck	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Vervet monkey				✔						
Warthog	✔		✔	✔	✔			✔	✔	✔
Wattled crane	✔									
Cattle	✔									✔
Goat	✔									✔

3.3. Numbers observed

A total of 1,074 ostriches and ungulates were recorded in the blocks and ferry lines (Table 4).

The porcupines were not plotted but an estimated 20 individuals were counted. The carnivores numbered only a few individuals: spotted hyena 1, serval 1, honey badger 3, wild cat 2, jackal 1.

A total of three Wattled cranes were observed including one immature bird. Ground hornbill numbered 29 and Saddle-bill storks 23.

The ostriches were sexed and aged. The breakdown in the population is females 49%, males 32.9% and chicks 18.1%. The breakdown for kudu is cows 77.5% and bulls 22.5%.

Table 4: Number of ostriches and ungulates observed during the 2004 census of Banhine.

| Species | Areas | | | | | | | | | | Total |
	Block 1 (wetland)	Block 2	Block 3	Block 4	Block 5	Block 6	Block 7	Block 8	Block 9	Ferry lines	
Buffalo										1	**1**
Bushpig	46						2		2	10	**60**
Grey duiker	44	5	25	17	14	4	25	14	1	75	**224**
Impala	70								38	48	**156**
Kudu	28		1	26	19	47	7	1		44	**173**
Nyala				7						2	**9**
Oribi	27	6					1		5	12	**51**
Ostrich	17	22				13	32			126*	**210**
Reedbuck	53								14	12	**79**
Steenbuck	2	6	5	6	3	8	10	10	1	31	**82**
Warthog	12		2	1	2			4	4	4	**29**

Cattle	41									47	**88**
Goat	69									51	**120**

* There could be a maximum of 17 ostriches that were counted in Block 1 included in the 126 counted in the ferry lines.

4. Discussion

4.1. Landscape and area preferences

Wildlife species and their numbers are unevenly distributed across Banhine (Fig. 3).

The stronghold of ostriches is to the north-west of the wetland. The same pattern was observed during separate fixed-wing and microlight flights during 2002. However, lower densities of ostriches are found in the woodlands far to the south and west of Pio Cabral (Fig. 4).

A number of species are clearly associated with the open areas (wetlands and grasslands). These are oribi and reedbuck that were almost exclusively found in block 1, 2, 7 and 9. These blocks are mostly covered by grasslands and wetlands (Table 1). The reedbuck generally are found closer to the water whereas the oribi occupy slightly higher ground covered in grassland (Fig. 5).

It is of interest to note that impala were mostly found in the wetland block (Fig. 6). They are water dependent species. Within the wetland block, they were mostly found on the 'baobab-islands' which are very xeric patches of elevated ground surrounded by wetlands and grasslands. This illustrates that the landscape map is too coarse to derive fine-scale patterns of wildlife habitat selection. In contrast, kudu are much more concentrated in the blocks covered by woodland (Fig. 6).

The distribution of birds of conservation importance (wattled crane, ground hornbill and saddle bill storks) is plotted in Fig. 7.

Block 2 had a relatively low species diversity and numbers. This may reflect the significant expanse of a dried pan (that offers no grazing whatsoever) as well as the presence of fallow lands (which may reflect relatively high levels of human impact). Block 7 had a high species diversity and numbers. This block is characterised by a fine-scale mosaic of grasslands, mopane and sandveld communities. This gives rise to extensive ecotones and offers a variety of habitats that are close to each other.

Generally, despite the bias in area covered, it appears that the area around the wetland and in particular the grasslands to the north-west carry the highest densities of wildlife. It is speculated that this is the result of higher habitat diversity, abundance of water as well as open terrain that allows early detection of hunters and their dogs.

Of great interest was the habitat and area selection that was observed of species such as reedbuck and oribi in the absence of larger, more competitive species such as wildebeest and zebra. Reedbuck occupy the wettest parts of the grassland going into the wetland, with oribi on the margins where it becomes slightly drier. These selection patterns in the absence of much competition offer interesting research opportunities.

Livestock numbers are low at present. The human settlements that were observed have been combined with the coordinates of villages recorded during the survey of the vegetation (Stalmans 2003) (Fig 8). Not surprisingly, human activities are concentrated on the edge of the wetland because of greater resource availability.
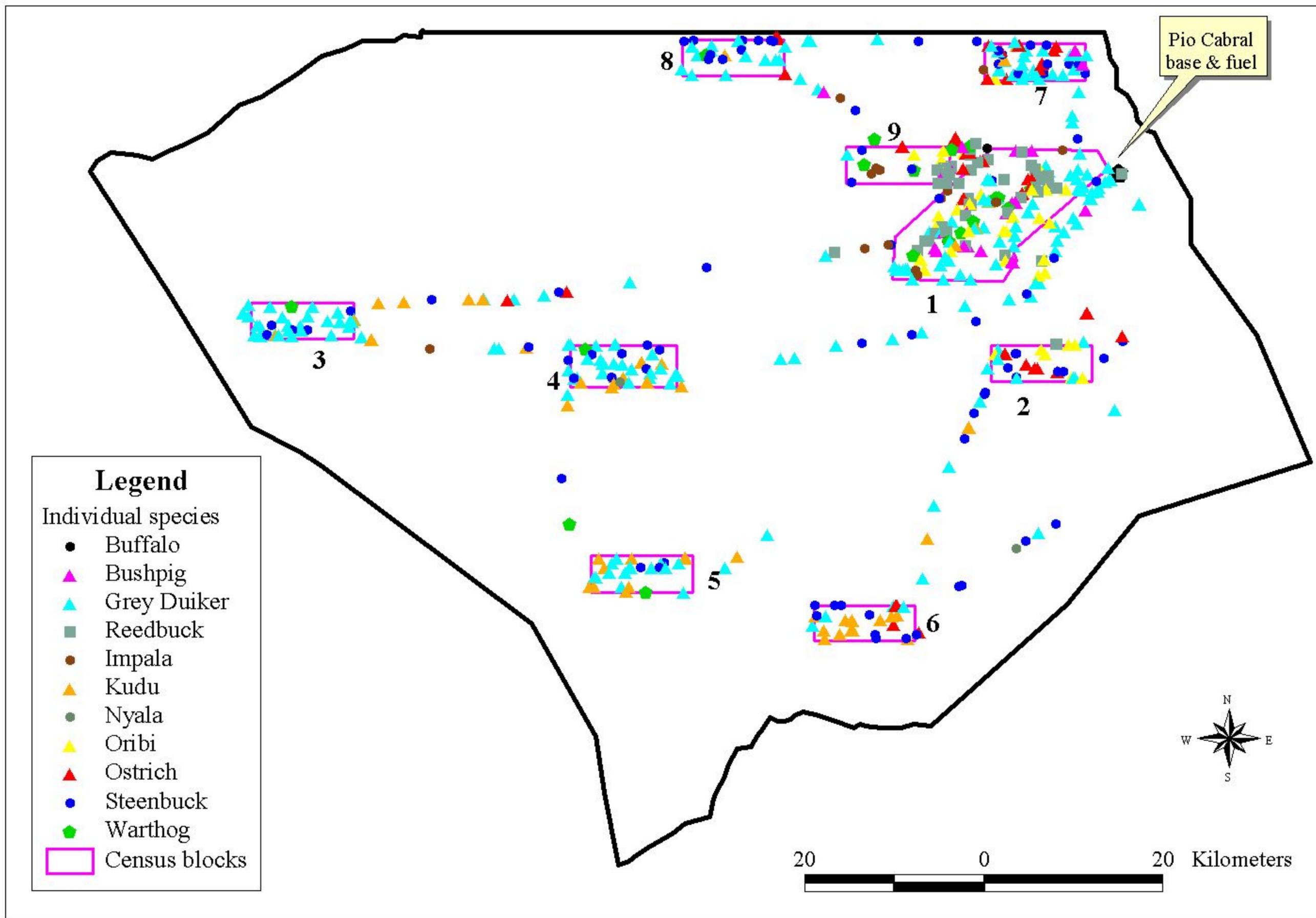
Fig. 3: Distribution of ostriches and ungulate species during the 2004 willdife census.   14
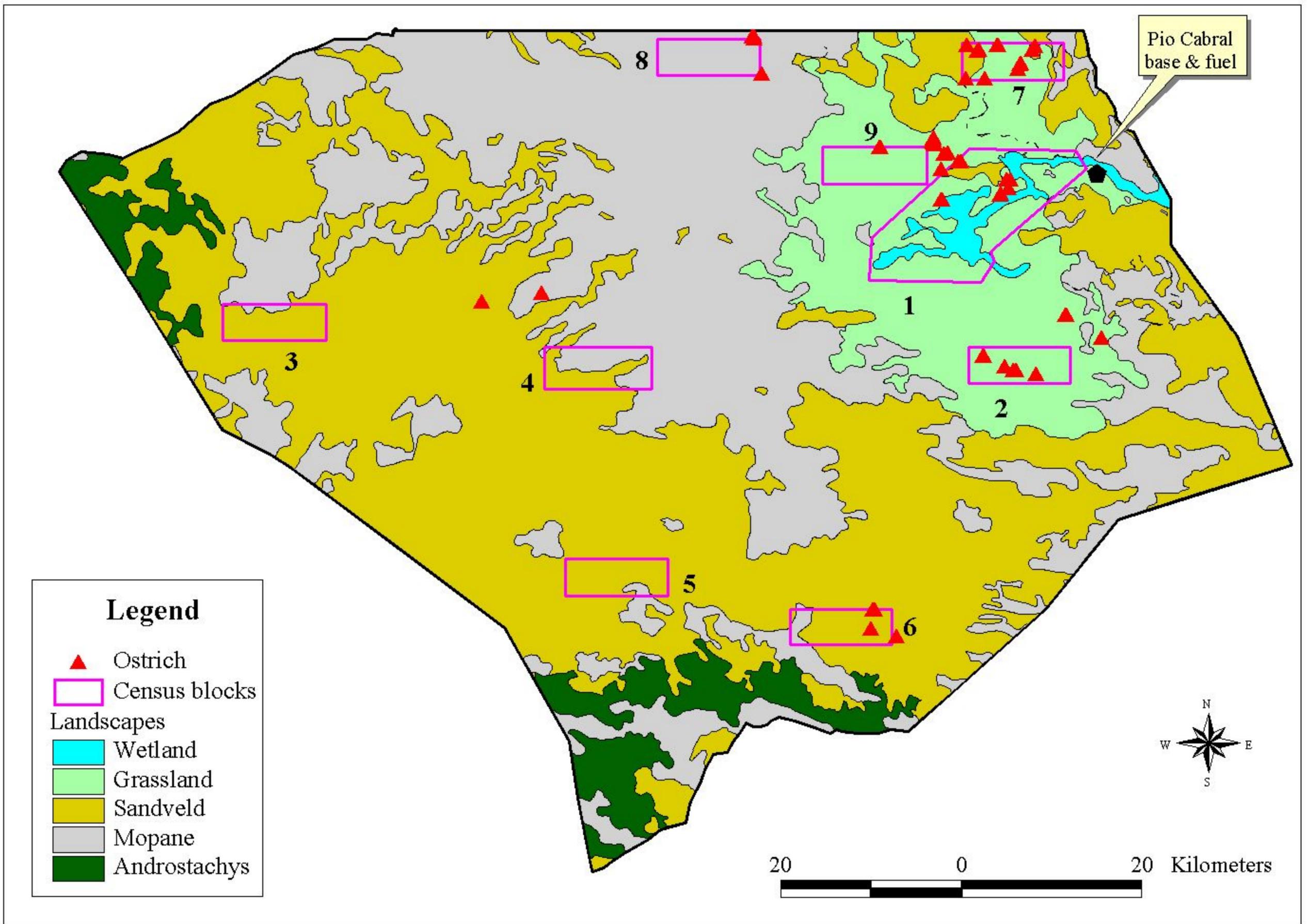
Fig. 4: Distribution of ostriches during the 2004 willdife census.
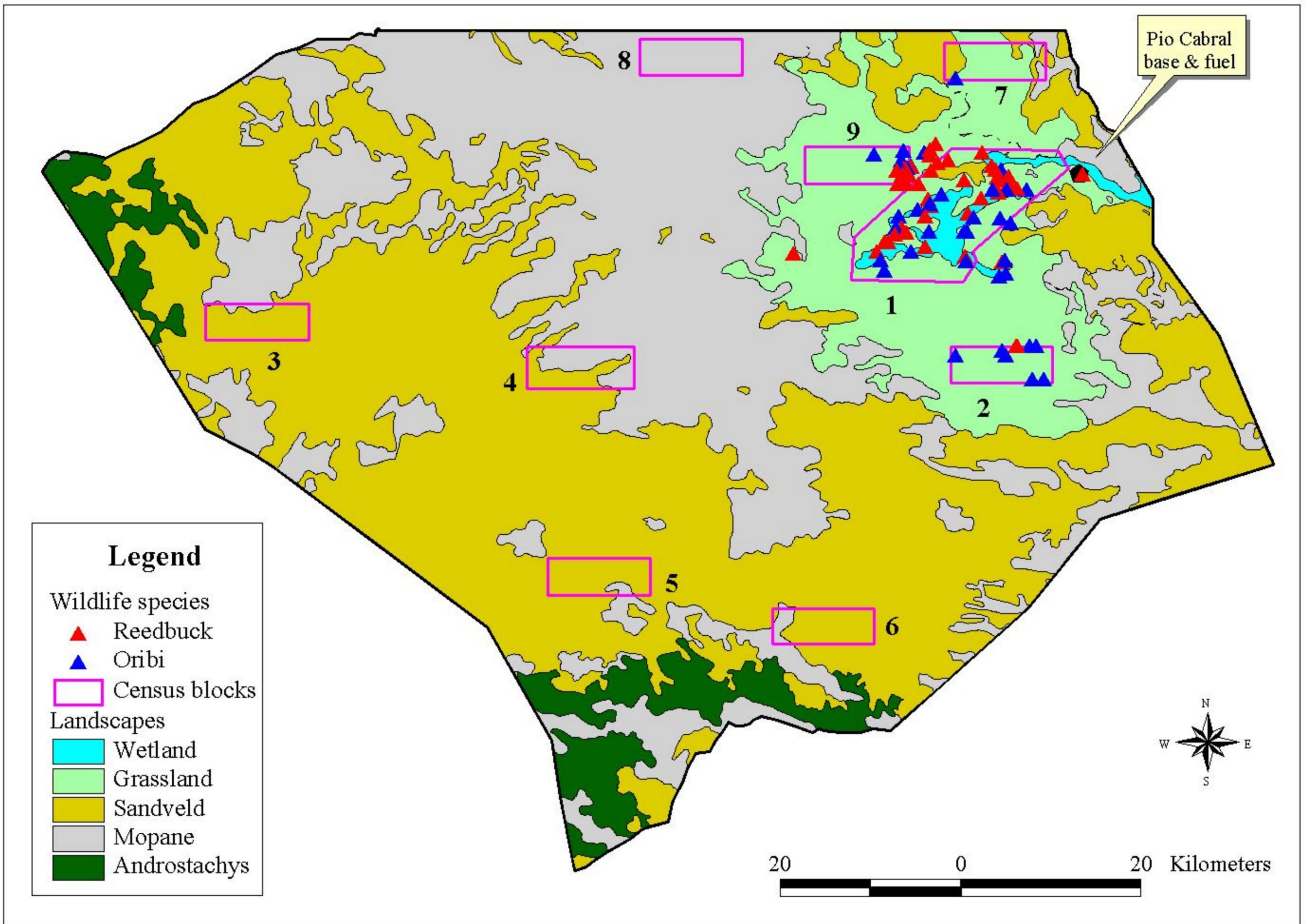
Fig. 5: Distribution of oribi and reedbuck during the 2004 willdife census.
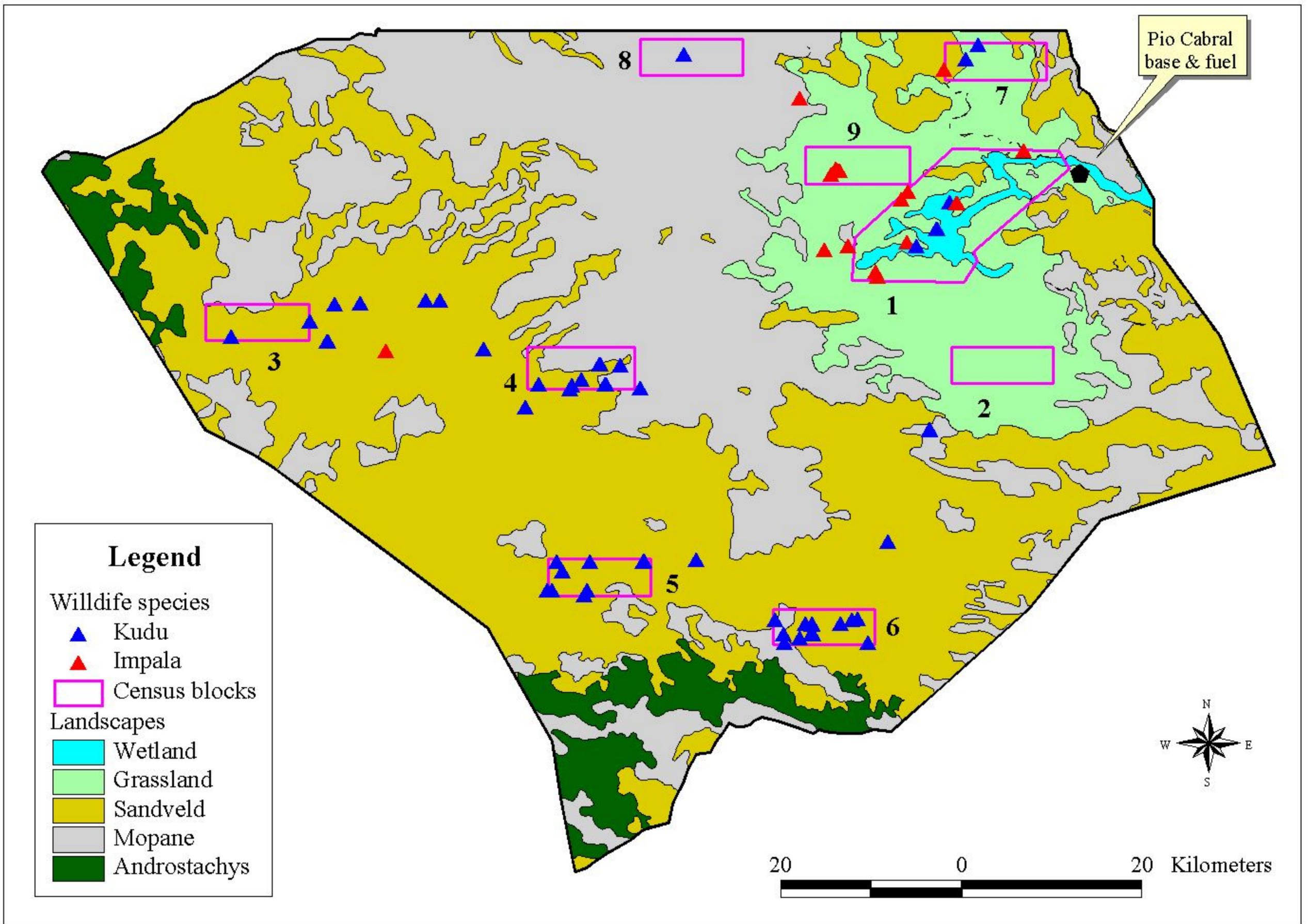
Fig. 6: Distribution of kudu and impala during the 2004 willdife census.

Legend

Important bird species

- ▲ Watted Crane
- ▲ Ground Hornbill
- ▲ Saddle Bill Stork
- ▢ Census blocks

Landscapes

- Wetland
- Grassland
- Sandveld
- Mopane
- Androstachys

Pio Cabral base & fuel

N
W E
S

20   0   20   Kilometers
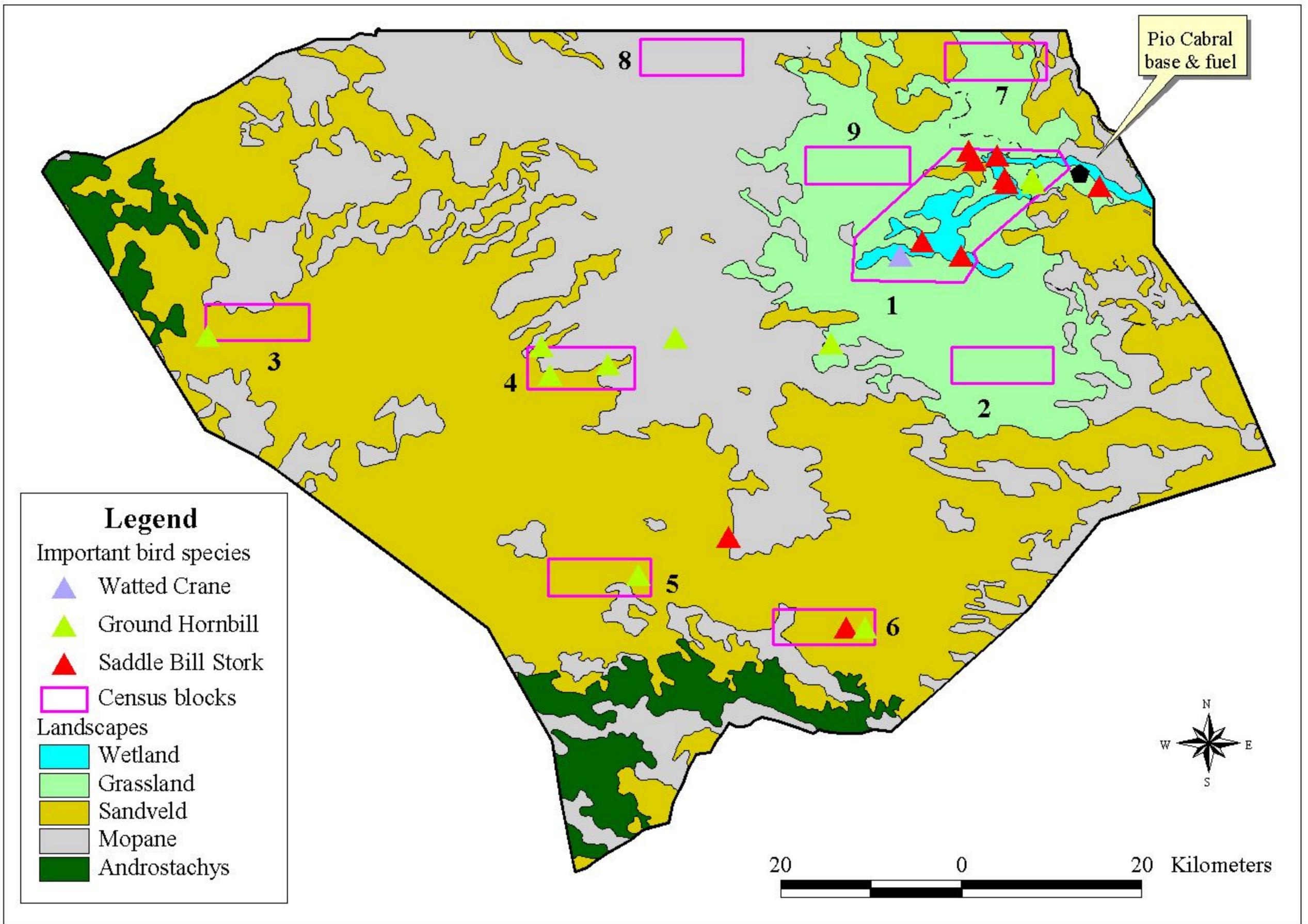
Fig. 7: Distribution of wattled crane, ground hornbills and saddlebill storks during the 2004 willdife census.   18

Legend

Villages

Livestock
- Cattle
- Goat
- Census blocks

Landscapes
- Wetland
- Grassland
- Sandveld
- Mopane
- Androstachys

Pio Cabral base & fuel
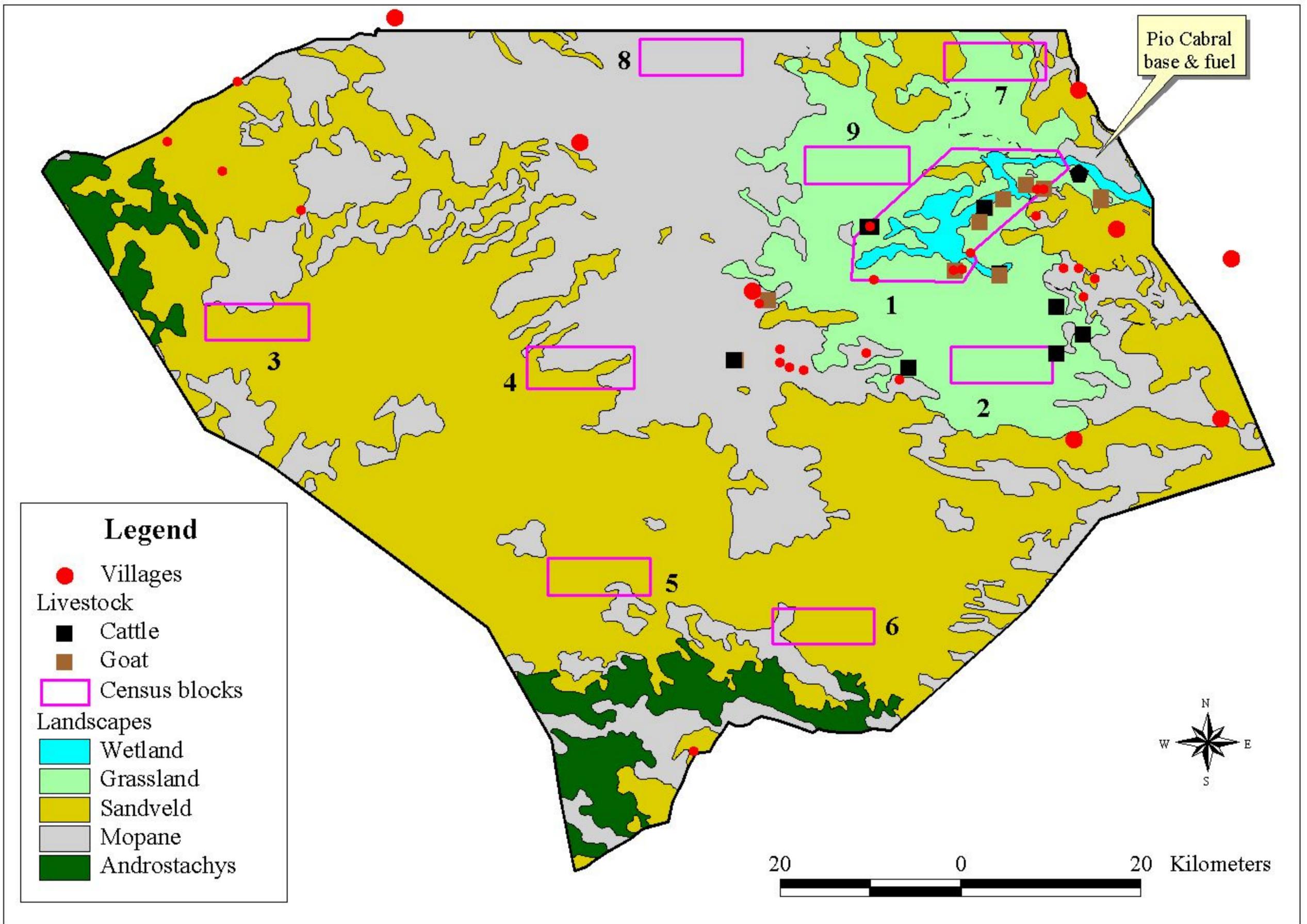
Fig. 8: Distribution of cattle and goats during the 2004 willdife census.
The observed human settlements were combined with known data from previous surveys.

4.2. Extrapolation for the Park

The census did not cover the landscapes in the same proportion as expected from the map. Proportionally, more of the wetlands and grasslands were surveyed (Table 5). These proportions were used to adjust the count figures for each species in each landscape. A weighted total was then calculated for the Park.

The extrapolation was done separately for the census blocks only and for the total area flown (blocks and ferry lines). Generally, the extrapolation based on the larger area flown (blocks and ferry lines) is lower than that obtained from the blocks only. The extrapolated figure for reedbuck and oribi appears very low compared to the numbers physically observed.

These figures should be treated with caution, particularly as they rely on a landscape map that was produced with limited resources.

Table 5: Proportional landscape make-up of Banhine, the census blocks and the total area flown during 2004.

Landscape	Landscape proportion		
	Banhine map*	**Census blocks**	**Blocks & ferry lines**
Wetland	1.1	10.7	7.2
Grassland	14.3	44.5	40.9
Sandveld	49.0	28.9	31.9
Mopane	35.6	15.8	20.0

* adjusted for the absence of the Androstachys landscape in the census.

Table 6: Total numbers for main wildlife species using a weighted extrapolation to adjust for proportional differences in the landscapes covered.

Species	Actual number counted	Extrapolated number for Park	
		Weighted according to landscape proportion in blocks	**Weighted according to landscape proportion in blocks and ferry lines**
Bushpig	60	150	100
Grey duiker	224	2,278	997
Impala	156	434	418
Kudu	173	2,326	920
Nyala	9	152	52
Oribi	51	138	65
Ostrich	210	822	509
Reedbuck	79	198	88
Steenbuck	82	960	406
Warthog	29	91	295

4.3. Historical wildlife occurrence and abundance

How do the current wildlife numbers compare to the situation in historical times?

Numerous large herds of eland were a memorable feature of the open plains of Banhine in the 1950's (Pienaar pers. comm.) and even in the 1970's, there were still significant numbers in Banhine (Sparrow pers. comm.). Local residents living in the woodlands north of the Banhine plains, still remember herds of eland moving through their area (Anderson 2002).

Banhine was frequently referred to as 'The Serengeti of Mozambique' in view of its open plains and large herds on wildebeest and zebra. The Serengeti part only applies to this openness and concentration of game. No strong evidence for a migration of wildlife could be found (Anderson 2002). According to local inhabitants zebra occurred permanently in Banhine. Smither & Tello (1976) list blue wildebeest as being common in Banhine and Zinave National Parks. None remain today. A population of giraffe was permanently present (Tinley pers. comm..). Small groups of elephant, zebra, wildebeest and a lone roan were still reported in the early 1970's (Tinley 1972). Hippo appear to have been missing since the early 1970's (Dutton 1972).

Zebra, wildebeest, giraffe, roan, sable, Lichtenstein's hartebeest and probably eland have been exterminated. Elephant have put in an appearance from time to time. So have lion. Cheetah has disappeared.

The current diversity and numbers is therefore very low compared to that documented a few decades ago. The habitat appears imminently suitable for a wide range of herbivores. Competition with domestic livestock is very limited. Water and feed are not considered limiting factors at present.

4.4. Park rehabilitation and management issues

Even if only those animals that were physically seen during the census (which covered only 12% of the Park) are taken into account, there exists a viable nucleus of ostrich, oribi. reedbuck, grey duiker, impala, kudu and steenbuck. The ostrich in particular represent a unique population in terms of its pureness and size. It could be used to restock other depleted Parks (although increasing numbers of predators could impact negatively on this potential).

Nyala appear to occur at very low densities, but with protection they could probably recover. Warthog densities are low but they are well spread throughout the Park. With protection, they have the potential to quickly increase in numbers.

Eland and elephant may recolonise the Park over time, depending on land use patterns in the interstitial areas. Lion can also be expected to disperse to Banhine, particularly once wildlife numbers increase.

However, the restoration of zebra, wildebeest, giraffe, roan, sable and Lichtenstein's hartebeest will require the active re-introduction of these species.

The impact through hunting is certainly keeping the wildlife recovery back. Several times during the census, hunting dogs were observed times far away from human settlements.

Although this falls outside the brief for the present study, it is important that careful consideration be given to the nature of wildlife introductions and the management of numbers thereafter. Currently, a unique situation exists whereby relatively good numbers of traditionally low-density species such as oribi and reedbuck occur. This probably not only reflects the very suitable habitat (with a continuum of ideal habitat for different low density species), but also the lack of grazing competition. From a conservation point of view, the maintenance and growth of the unique ostrich population, as well as the oribi and reedbuck should rank very high for this Park.

It is therefore recommended that a reintroduction programme be carefully formulated with emphasis on monitoring of changes in both habitat and wildlife populations. An appropriate vision will need to be formulated and implemented that achieves the right balance between conservation requirements and tourism development imperatives.

5. Conclusion

The census technique that was used can be repeated as the census block and lines that were flown are spatially defined.

Despite the relatively low proportion of the park that was physically covered by the helicopter census, it can be safely stated that a viable nucleus of ostrich, oribi, reedbuck, grey duiker, steenbuck, kudu, impala and warthog exists. An interesting range of small to medium-sized carnivores was also observed.

The recovery of other species such as giraffe, zebra, wildebeest, sable and roan will only be possible through their physical re-introduction. Depending on the objectives set for the Park, care should be taken that the unique populations of ostrich, oribi and reedbuck are not endangered by the indiscriminate growth in numbers of generally more common species such as impala, zebra and wildebeest.

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Appendix A: Scientific, English and Portugese names of wildlife observed during the game census of Parque Nacional de Banhine during October 2004

(species listed alphabetically with English names first).

Common name (English)	Common name (Portugese)	Species (scientific name)
African Wild Cat	Gato bravo africana	Felis lybica
Blackbacked jackal	Chacal de Sela/Chacal de costas pretas	Canis mesomelas
Bushpig	Porco bravo	Potamochoerus porcus
Chacma baboon	Macaco-cão cinzento	Papio ursinus
Grey duiker	Cabrito tinvento	Sylvicapra grimmia
Honey badger	Ratel / Melivora	Mellivora capensis
Impala	Impala	Aepyceros melampus
Kudu	Cudo	Tragelaphus strepsiceros
Largespotted genet	Geneta / Simba de mahas grandes	Geneta tigrina
Nyala	Inhala	Tragelaphus angasi
Oribi	Oribi	Ourebia ourebi
Ostrich	Avestruz	Struthio camelus
Porcupine	Porco espinho	Hystrix africaeaustralis
Reedbuck	Chango	Redunca arundinum
Serval	Gato serval	Felis serval
Spotted hyena	Hiena malhada	Crocuta crocuta
Vervet monkey	Macaco de cara preta / Macaco azul	Cercopithecus aethiops
Warthog	Facocero	Phacochoerus africanus

(species listed alphabetically with Portugese names first).

Common name (Portugese)	Common name (English)	Species (scientific name)
Avestruz	Ostrich	Struthio camelus
Cabrito tinvento	Grey duiker	Sylvicapra grimmia
Chacal de Sela/Chacal de costas pretas	Blackbacked jackal	Canis mesomelas
Chango	Reedbuck	Redunca arundinum
Cudo	Kudu	Tragelaphus strepsiceros
Facocero	Warthog	Phacochoerus africanus
Gato bravo africana	African Wild Cat	Felis lybica
Gato serval	Serval	Felis serval
Geneta / Simba de mahas grandes	Largespotted genet	Geneta tigrina
Hiena malhada	Spotted hyena	Crocuta crocuta
Impala	Impala	Aepyceros melampus
Inhala	Nyala	Tragelaphus angasi
Macaco de cara preta /Macaco azul	Vervet monkey	Cercopithecus aethiops
Macaco-cão cinzento	Chacma baboon	Papio ursinus
Oribi	Oribi	Ourebia ourebi
Porco bravo	Bushpig	Potamochoerus porcus
Porco espinho	Porcupine	Hystrix africaeaustralis
Ratel / Melivora	Honey badger	Mellivora capensis