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Abstract: Currently, the only area in Zambia where cheetah occur in reasonable numbers is the Kafue National Park. A few may also exist in the Western Province, notably the Liuwa Plain National Park. The only other area likely to contain cheetah is the Luangwa Valley in eastern Zambia. The paper details cheetah sightings that have been reported from the Valley.

THE CHEETAH IN THE LUANGWA VALLEY

By P.S.M. Berry

Throughout its range in Africa the cheetah *Acinonyx jubatus* is a seriously endangered species. Its distribution limits continue to contract and its numbers diminish due to competition with expanding human populations.

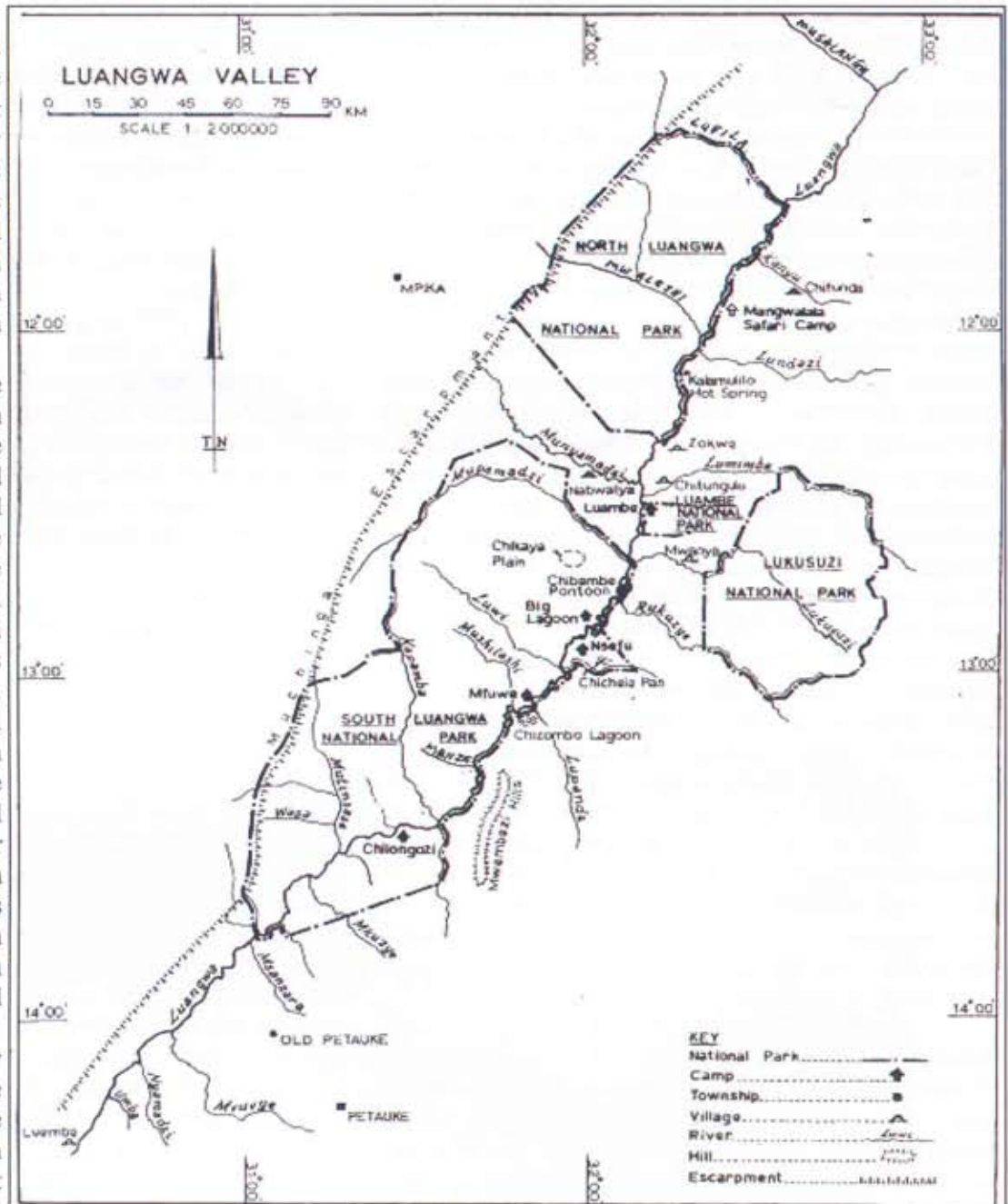
The status of the cheetah in Zambia up to the late 1970s was documented by Ansell (1978) and updated by Purchase (2007). Currently, the only area in Zambia where cheetah occur in reasonable numbers is the Kafue National Park. A few may also still exist in the Western Province, notably the Liuwa Plain National Park. The only other area likely to contain remnant individuals is the Luangwa Valley in eastern Zambia, though none has been recorded there since 1997.

Due to its rarity and elusiveness in the Luangwa Valley, the cheetah has always been an enigma in that region. For these reasons and for the historical record, it is perhaps of interest to detail cheetah sightings that have been reported from the Valley. The mystery of the Luangwa cheetah has long been of particular interest to me. For several decades, beginning when I was a member of the Game and Fisheries Department (a forerunner of the present-day Zambia Wildlife Authority) I have collated information on the species in Luangwa. These data are from various sources, principally old Game Department reports, published records, and observations relayed to me by safari guides and professional hunters.

The first published reference to cheetah in the Luangwa Valley was made by Captain C. R. S. Pitman,

Game Warden of Uganda. He was seconded by the British Colonial Office to carry out a faunal survey of Northern Rhodesia (Zambia) in 1931 and 1932. In his comprehensive report on the survey Pitman (1934) remarked that the cheetah "...apparently does not occur in the Valley ...". This statement was based on information gleaned from hunters and administrators who were familiar with the Luangwa region.

Cheetah were first recorded in the Valley in 1955 when game officers saw single animals twice (in June and August) in the Nsefu Game Reserve and once (in August) outside its northern boundary. Almost certainly the same animal was seen on each of these



Map of the Luangwa Valley showing localities from where cheetah have been recorded.

occasions. Another cheetah was also seen in June of that same year (1955) drinking from the Luangwa River on the west bank opposite Nsefu Camp. All these records are from Attwell (1955). It is even possible that the cheetah observed on the west bank could have crossed the Luangwa River and might have been the same animal seen in the Nsefu Game Reserve.

The next report was also from the Nsefu Game Reserve where R.I.G. Attwell recorded the first pair of cheetahs (a male and a female) in the Valley. These were seen in August 1957 on the Mtanda Plain. Subsequently, there was an interlude of five years in which no cheetah were reported, followed by a comparative spate of many sightings during the period 1962-1975 with observations in every year. It is, however, difficult to accurately quantify some of these records. In the three years 1964-1966 visitors to the self-catering Big Lagoon and Lion Camps recorded numerous sightings of cheetah. Their observations were subsequently published in the annual reports of the Department of Game and Fisheries which noted that: "Cheetah were observed on at least twenty occasions...." (1964); "Cheetah were again observed on several occasions...." (1965) and "... several sightings were recorded" (1966). Most of these were visitors' observations made in the Big Lagoon/Chikaya Plain/Lion Camp region and a few by Game Department personnel in the vicinity of the Luwi River. In the absence of exact details I have assumed "several" to mean three (though possibly more) and that most of these sightings were of single animals. (Though, according to A.E.P. Schultz who was camp manager at Big Lagoon and who submitted the information, visitors there saw a pair of cheetahs on at least two occasions.) The inexact figures mentioned above are shown as "estimated" in the Table.

Most of the 1962-1975 records, however, were definitely of single cheetahs and almost certainly many of these were the same few animals seen repeatedly. Apart from single animals, there were also reports during the same period of thirteen pairs, four trios and two groups of four cheetah. It is evident, from so many

records in numerous widely spaced localities, that a small population of cheetahs then existed in the Valley.

Regrettably two of the foregoing records were of dead cheetah. One was shot in October 1963 by A.E.P. Schultz on his farm on the Mwangazi River near Msoro. It was killed in error for a stock-killing leopard. The skin was subsequently deposited in the National Museum, Bulawayo (register number NM 22791) (Ansell, 1982). The second cheetah was found dead by W. Illingworth in July 1975 on the Lukusuzi River near its confluence with the Luangwa River. It was an old male and freshly-deceased from a bullet wound inflicted by persons unknown.

After 1975 records are very sparse. The next sightings were in 1978 (one trio and two singles) followed by one cheetah seen by C.S.P. Harvey in October/November 1980 south of the Lufila River in the North Luangwa National Park. This is the second of only two records of cheetah from the North Park. The first was of a pair seen in June 1972 by D. Skinner four km up the Mwaleshi River from its confluence with the Luangwa.

In January 1981, one young cheetah was observed by J. Schultz at the old Mfuwe airfield in the South Park. The next report was of an adult male seen in December 1983 by P.D.H. Ansell on the Luwi River near its confluence with the Luangwa. In June and September 1985 I personally saw two different single cheetahs, one in each month. The first was an adult on the edge of Lion Plain upstream from the Mwamba/Luangwa confluence. The second was a much bigger adult, probably a male, seen on two consecutive days on the Chinzombo peninsula directly opposite the Mushilashi/Luangwa confluence. This cheetah was clearly visible both times on a large open sandbank and by the second day had moved only a short distance back from its original position. R.C.V. Jeffery also saw the same animal later in the same locality.

Since then until the present day there have only been two additional reports of cheetah from the Luangwa Valley. One adult was seen by R.J. Pope in 1994 on the left bank of the Mupamadzi River near the

TABLE

(Total of reported sightings)

Period	Singles	Pairs	Trios	Fours	Totals
1955 and 1957	4	1	0	0	5
1962-1975 (every year)	38 (exact) 27 (estimated)	13	4	2	84
1978-1985 (sporadic)	8	0	1	0	9
1994 and 1997	1	1	0	0	2
Grand totals:	78	15	5	2	100

eastern edge of the Chifungwe Plain. And finally, the last record is of a pair of cheetahs seen by A. Frylinck on 9 September 1997. These cheetah were on the edge of the Chinyika cha Mpande Plain north of the Munyamadzi River in the corridor between the North and South Luangwa National Parks.

I have been extremely fortunate to see cheetahs in the Luangwa Valley on eleven occasions. Ten of these sightings were of single animals including repeat observations of several individuals and one was of three adult cheetahs together.

To sum up, at least 100 sightings of cheetah have been recorded from the Luangwa Valley as detailed below:

The mystery of the cheetah in Luangwa stems from three unanswered questions: did the species exist in the Valley prior to 1955 when the first records began, why was there a surge in sightings in the 1960s and 1970s and why have the cheetah now apparently vanished? Perhaps, in answer to the second query, the increase in reports can be attributed to wanderers coming into the Valley from adjacent regions, especially the Eastern Province plateau. I was informed by R.P.Kidson (pers. comm.), who lived and later farmed in the Katete/Chadiza area south of Chipata near the Mozambique border, that during the years 1948 to 1962 cheetah were very common there. In 1962 Kidson

the Valley. Attwell (1955) reported that two cheetah were killed in the Lundazi District and Wilson (1981) witnessed a troop of baboons killing a cheetah in the Lukusuzi Game Reserve. Furthermore, in January 1962, a group of three adult cheetahs was encountered by P.L. Hankin lying in the main Chipata road 32 km south of Lundazi Boma. Perhaps, with expanding human populations and land cultivation on the eastern plateau the surviving cheetah were displaced from there and sought refuge in the Luangwa Valley. This, however, does not explain why so many more cheetah were reported from the west bank of the Luangwa River. It is quite feasible, though, that some cheetahs from the eastern side crossed the Luangwa when the river was particularly shallow or even stopped flowing in certain sections as happened in 1966. Possibly some may also have come from the plateau west of the Valley though historically there are very few records of cheetah in that region.

It is not clear why cheetah have failed to become established in viable numbers in the Luangwa Valley. Although many of the Valley habitats may not be ideal for cheetah there are some areas particularly the Mwaleshi, Mupamadzi and Mwamba river systems that seem perfect for them. It is therefore not surprising that nearly fifty percent of all sightings in the Valley were in the Mupamadzi/Mwamba region. The next most



A rare sight in the Luangwa Valley. Three adult cheetahs two km south of the Mwamba River near its confluence with the Luangwa River, South Luangwa National Park, May 1973.

Photograph by P.S.M. Berry

saw five together (a female with four cubs) in this area. He also shot a big male cheetah there in 1959 that was regularly killing sheep. N.J. Carr also confirmed (pers. comm.) that when he was a game ranger in the Eastern Province in the late 1940s cheetah were very common in the Katete region. Other records from the eastern plateau affirm the former presence of cheetah bordering

productive area with slightly more than twenty-five percent of sightings was along the west bank of the Luangwa between the Mwamba and Manze tributaries. All these records are from the South Luangwa National Park. Elsewhere in the South Park there were the following sightings (numbers in parentheses): Nsefu Sector (7), lower Kapamba River (4) and one cheetah

seen in 1975 by H. Hudson near the western boundary north of Kasweta. The Kapamba River (and Msoro by the eastern escarpment) are the southmost points at which cheetah have been recorded in the Valley. Most of the remaining records are from Game Management Areas (GMAs) peripheral to the South Park, namely the Munyamadzi GMA (6), Lumimba GMA (Mwanya area) (5) and Lupande GMA (3). Surprisingly, there are only two records from the North Luangwa National Park and only one from the Musalangu GMA. The latter area is where, in August 1966, P.L. Hankin saw a pair of cheetah on the east bank of the Luangwa River near the Kawondo stream which is below the Lundazi confluence (Dowsett, 1969; and pers. comm. by PLH to PSMB). There are no records of any cheetah from the upper Luangwa Valley beyond the Lufila River which delineates the northern boundary of the North Park.

Perhaps the scarcity or absence of cheetah can be attributed to competition from the more plentiful and successful predators namely lion, leopard and spotted hyena. Or possibly disease may have been the main reason for their disappearance. In the two years 1988 and 1989 a major outbreak of anthrax decimated thousands of animals especially hippo. While the scavenging carnivores (lion, leopard and hyena) thrived on the abundance of food as a result of the anthrax, a non-scavenger (the wild dog) appeared to have little resistance to the disease and many perished. Since cheetah are basically non-scavengers like wild dogs they may have been equally susceptible. Thus their already low numbers would limit or preclude any possible recovery from losses due to this or any other disease.

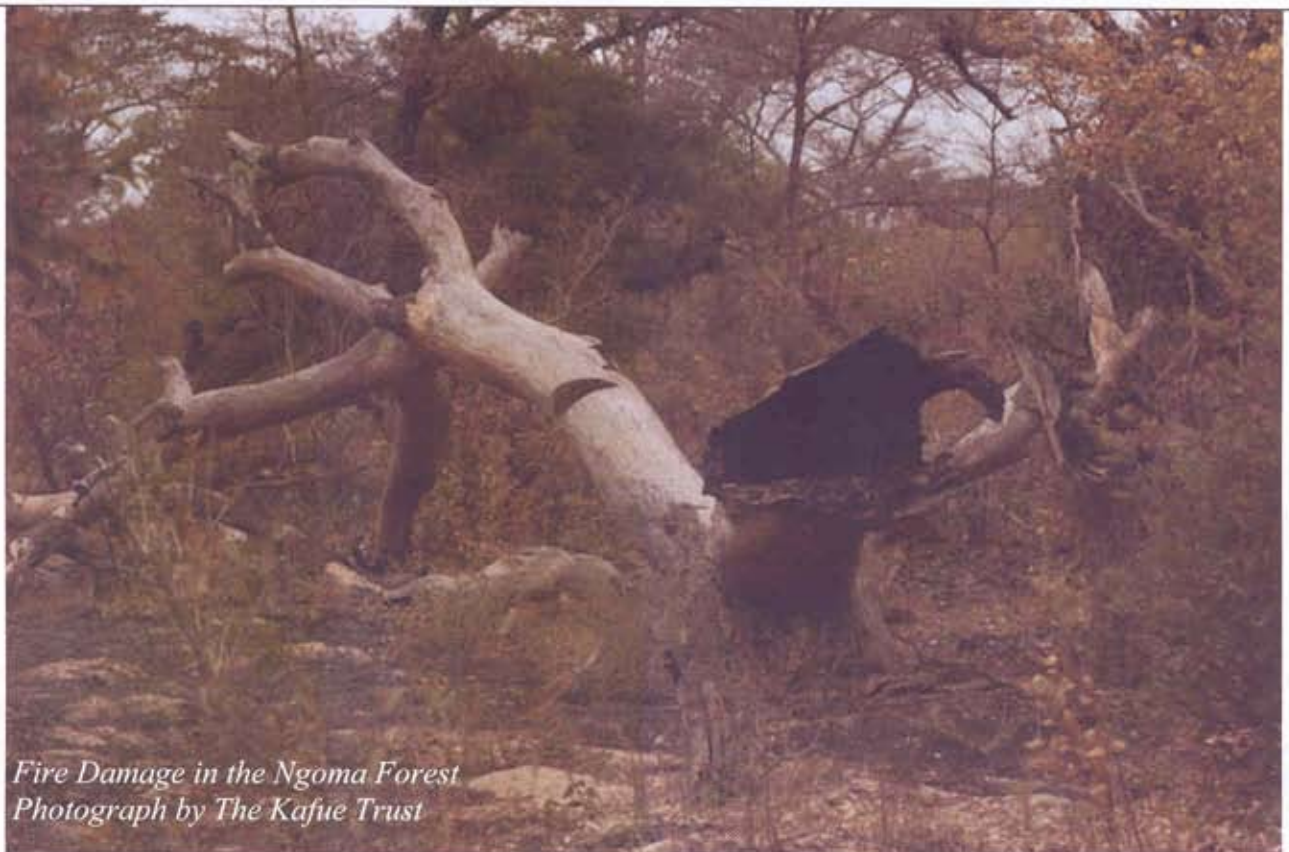
Although there have been no reports of cheetah in the Luangwa Valley for many years it is possible that a few may still exist in the more remote areas. If this supposition is correct, then it is quite feasible that this splendid but elusive feline may yet reappear in localities from where it has long been absent.

Acknowledgements

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*Fire Damage in the Ngoma Forest
Photograph by The Kafue Trust*