

and were therefore not very promising. Camp, was therefore moved back to Katima Mulilo where the rest of the time was spent in the guest house of the W.N.L.A. which was put at our disposal by the Manager, Mr R. Japp. This area with dense woodland and riverine forest was particularly favourable for ornithological work and other animal groups were also reasonably common.

One great advantage of this site was that the Zambezi is relatively swift flowing at this point without swampy banks and the guest house was usually exposed to a cool breeze which caused a total absence of mosquitoes. These insects proved to be extremely troublesome at the first three camp sites, where they used to descend on everybody as soon as the sun had disappeared. They appeared to be unusually large and successfully penetrated thick khaki shirts and trousers with their proboscis and managed to enter mosquito nets through any opening that might exist. Most members of the group suffered from "knobbly-elbow" disease. When sleeping on the back with the hands under the head the elbows usually touched the sides of the nets, exposing them to the attacks of swarms of these insects. As a result the elbows of those men with narrow nets were swollen and lumpy.

While at Katima one vehicle was sent to the lower parts of the Chobe River to explore that area and in particular to try to find puku. This antelope which has the appearance of a hybrid between lechwe and impala, prefers a wooded habitat near water. Specimens had been seen along the Chobe in previous years and this species occurs on the south bank in the Chobe Game Reserve. All attempts to locate this species in the Caprivi were unsuccessful and in general it appeared to be relatively unknown to the natives. Only on the last day before departure an old man, who knows the area very well, mentioned a site where he used to encounter this animal.

Although, under more favourable conditions, more specimens could have been accumulated, this trip can still be regarded as a success since material was acquired which will certainly be difficult to obtain in future. The game has now become the property of the natives, and as the numbers of several game species are very low, it is doubted whether tribal chiefs will give permission to future collecting. Unfortunately the South West African Administration refused permission to do a faunal and botanical survey and to collect in the Western Caprivi Strip. This

area has never been visited by any museum expedition and is thus still unsampled. Since the collecting of game specimens was of minor importance, all other subjects of study had to suffer the same setback.

After five weeks in the field, which passed without any breakdowns or other upsetting incidents, the convoy returned to Pretoria via the Chobe Game Reserve in Botswana, the Victoria Falls and Beitbridge.

Observations on Mammals of the Eastern Caprivi Strip

by I. L. Rautenbach

3640

INTRODUCTION

The Caprivi strip is the area of South West Africa that more closely resembles tropical central Africa than any other part of it and of the Republic. Several mammals occur here that are not found in any other part of our country. Because of increasing land use of the local bantu tribes, it was thought desirable to collect in this area, especially the rarer antelope species peculiar to the area such as puku, chobe bushbuck, lechwe and sitatunga.

The topography of the area in general and that of the main collecting sites, as well as our itinerary are discussed by A. C. Kemp and W. D. Haacke elsewhere in this issue.

All aspects of mammal collecting were extremely difficult. The area was very dry at that time before the onset of the annual rains, with the result that rodent populations were very low. We were consequently forced to offer the local tribesmen small cash rewards for any rodent brought to us to supplement the meagre trapping results.

Although the drought conditions made hunting easier, we had a lot of difficulty in obtaining antelope specimens at first. It soon became apparent however, that antelope are very

wary of vehicles, most probably because they are frequently hunted in this way, and therefore were often seen to hastily retreat into the bush when the noise of a vehicle engine became audible. This necessitated a lot of footwork, time and patience to obtain specimens. At Sangwali and Linyanti we also hired local bantu trackers who proved themselves a great asset in obtaining the required specimens.

Apart from the normal data usually recorded from specimens for Museum collections, reproductive and stomach content data, unusual parasites and measurements for taxidermy purposes were also taken. For instance, Mr J. C. Taylor collected several specimens of the liver fluke, *Fasciola tragalaphi*, apparently specific to sitatunga, from the three animals we collected. All the larger mammals were skinned and prepared in such a way that they can later be used for exhibition purposes.

Foot and mouth disease is endemic in areas adjoining the Caprivi strip. All antelope collected were consequently carefully examined by Mr J. C. Taylor for old or new lesions which are indications of the disease. Although no animal collected showed any signs of infection, all the skins, skulls and skeletons were twice treated with salt and sodium-fluossilicate in accordance with the specifications of the Department of Veterinary Services, because it was realized that foot and mouth disease could be carried by virtually all animals, including beasts which are not cloven-hoofed, and that the absence of lesions could not be accepted as proof that the animal was free of the disease.

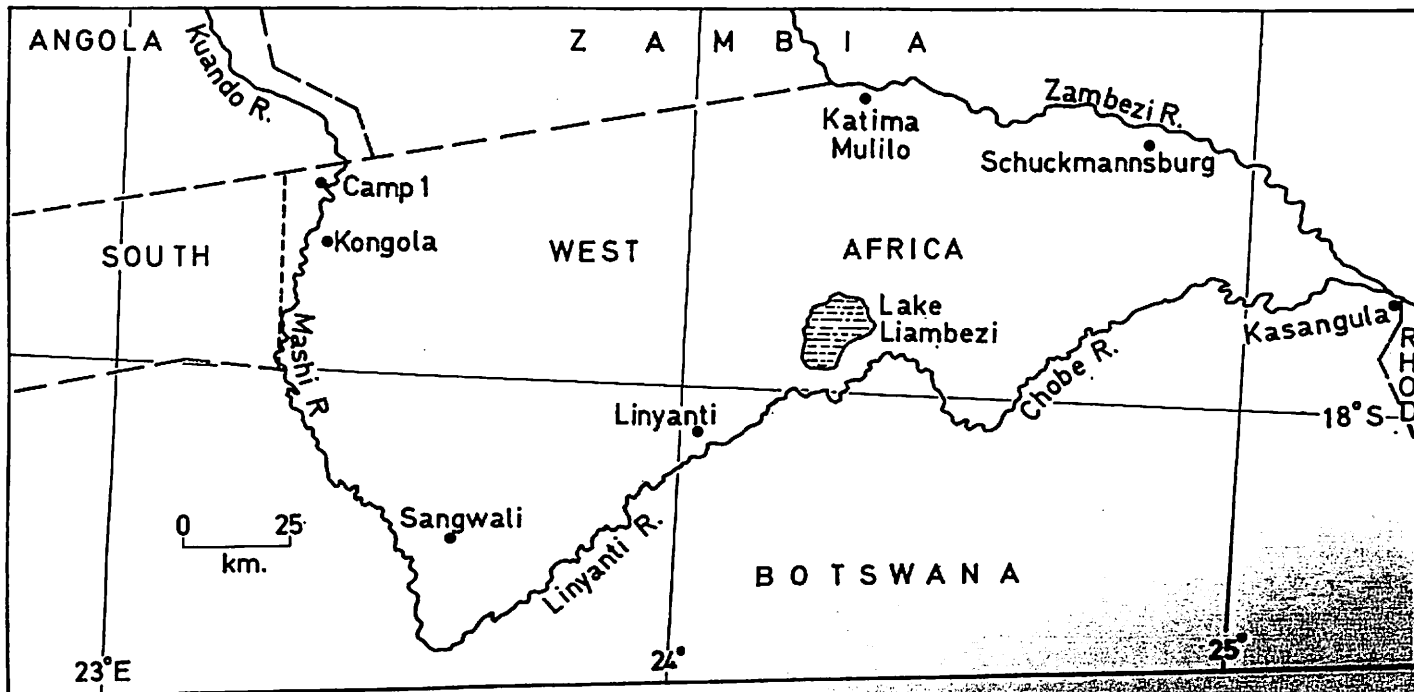
SPECIES RECORDED

In table I, the species recorded during the expedition are listed, and the areas where they were found, indicated.

Locality records of a few mammals are not given in table I. The presence of these animals in the Caprivi was confirmed by their skins in the karosses prepared for trading by the local tribesmen. It was, however, not always possible to obtain a clear picture of where the animals in question had been precisely collected, and their exact localities could consequently not be documented.

No attempt was made to assess the relative abundance of big game animals in the area, since it would have been an enormous task that would have required much more time than we had at our disposal. However, we did get the

Map of the Eastern Caprivi Strip to show camp sites used during the Taansvaal Museum expedition:



impression that game was a little more abundant than was generally believed by the local officials. It is unfortunately obvious that big game is under tremendous hunting pressure, and if game conservation is to be instituted in the area, immediate drastic measures will have to be taken.

Elephant and buffalo appeared to be abundant as we encountered several large herds. Hippopotami were also frequently encountered, although not in sizeable herds. The populations of tsesabce, impala, duiker, steenbuck, zebra and reedbuck did not appear to be very high, but are, in my opinion, not in immediate danger.

Not much can be said about sitatunga, because of their inaccessible habitat. Kudu were only rarely encountered. Lechwe and oribi were rarely seen at Sangwali and Linyanti, but surprisingly enough large herds of lechwe and a fair number of oribi pairs were encountered at Batobaje. Sable and roan were rarely seen, while only the spoor of a solitary eland was found approximately 25 miles SE of Katima Mulilo. All three of the last species are believed to be scarce in the area.

The few remaining lion and leopard in the Caprivi are doomed. The leopard is much sought after by the natives because of the commercial value of their skins. Lions are hunted down by European officials because of their potential danger to the increasing numbers of domestic livestock of the natives.

A black rhino was recently shot West of the Kuando river. It is believed that this animal frequently crossed into the Caprivi from Botswana (Smithers, pers. comm.), as black rhino do not occur naturally between the Chobe and Zambezi rivers (Red Data Book, Vol. 1 - Mammalia. IUCN). Smithers (in "A Checklist and Atlas of the Mammals of Botswana", 1968. Published by the Trustees of the National Museums of Rhodesia.) estimates the total number of black rhino in Botswana to be less than 20. It is therefore obvious that the hunting of this rare species is absolutely unjustifiable.

Only once were bushbuck seen, namely a female on the bank of the Zambezi river near Katima Mulilo. The presence of puku in the area is very much doubted considering that it is relatively unknown to the natives in the north. Occasionally these animals might cross into the Caprivi from the Chobe National Park.

Table 1. A table of mammal species recorded in the eastern Caprivi strip at four different stations, from 26 September to 29 October, 1970. X = visually recorded; spec. = specimens collected.

	Kwando river	Sangwali	Linyanti	Katima Mulilo
Order Insectivora				
<i>Crocidura meriquensis</i>		spec.		
Order Chiroptera				
<i>Epomoplorus crypturus</i>	spec.	spec.		
Order Primates				
<i>Galago senegalensis</i>	spec.	X	spec.	
<i>Cercopithecus aethiops</i>	spec.		spec.	spec.
<i>Papio ursinus</i>		spec.	X	
Order Pholidota				
<i>Manis temmincki</i>			spec.	
Order Carnivora				
<i>Mellivora capensis</i>				X
<i>Aonyx capensis</i>				
<i>Viverra zibetha</i>	X			
<i>Herpestes ichneumon</i>			spec.	
<i>Ictonychia albigula</i>	X			
<i>Crocuta crocuta</i>	X			
<i>Panthera pardus</i>				
<i>Panthera leo</i>		X		
Order Proboscidea				
<i>Loxodonta africana</i>	X	X	X	X
Order Perissodactyla				
<i>Diceros bicornis</i>				
<i>Equus burchelli</i>	X	spec.		spec.
Order Artiodactyla				
<i>Hippopotamus amphibius</i>	X	X	X	

	Kwando river	Sangwali	Linyanti	Katima Mulilo
<i>Giraffa camelopardalis</i>	X			X
<i>Syrrhaptes grinnia</i>				spec.
<i>Rhiphiterus campestris</i>		spec.	spec.	
<i>Ourebia ourebi</i>		spec.	spec.	
<i>Redunca arundinum</i>	spec.	spec.		spec.
<i>Kobus leche</i>		spec.	spec.	X
<i>Aepypterus melampus</i>				X
<i>Hippotragus equinus</i>	spec.	spec.		
<i>Hippotragus uizer</i>	X	X		
<i>Damaliscus lunatus</i>	spec.	X	spec.	spec.
<i>Connochaetes taurinus</i>	X	X		
<i>Tragelaphus scriptus</i>				X
<i>Tragelaphus spekei</i>			spec.	
<i>Tragelaphus strepsiceros</i>		X	X	
<i>Taurotragus oryx</i>				X
<i>Syncerus caffer</i>	X	X		
Order Lagomorpha				
<i>Lepus saxatilis</i>			spec.	spec.
Order Rodentia				
<i>Cryptomys damarensis</i>		spec.	spec.	
<i>Thryonomys swinderianus</i>		spec.		
<i>Paraxerus cepapi</i>			spec.	spec.
<i>Pedetes capensis</i>	spec.			
<i>Mastomys natalensis</i>		spec.		spec.
<i>Rhabdomys pumilio</i>	spec.			
<i>Mus minutoides</i>	spec.	spec.		spec.
<i>Lemniscomys griselda</i>				spec.
<i>Sacrotomys campestris</i>	spec.	spec.	spec.	
<i>Deudromus melanotis</i>		spec.	spec.	
<i>Otomys angoniensis</i>		spec.	spec.	
<i>Tatera leucogaster</i>		spec.	spec.	
<i>Dozymys incomptus</i>		spec.	spec.	

Observations on birds of the Eastern Caprivi Strip

by A. C. Kemp

INTRODUCTION

During the Transvaal Museum's expedition to the Eastern Caprivi Strip, four camps were established in the area, and their positions are shown on the accompanying map. The objective of the ornithologist on the expedition was to collect birds for display at the museum, and therefore systematic collecting was not done. Those birds collected, and those recorded visually during the expedition are here reported upon, with notes on breeding and weights of specimens where applicable.

AREAS OBSERVED

The times spent in each camp, and the general habitat in which collecting and observations were carried out are here reported.

Katima Mulilo, 22-25 Sept. and 21-29 October.
In September no specimens were collected and the whole time was spent in the field recording birds visually. In October visual and specimen records were obtained. All observations were limited to within 15 km of the town. Habitats ranged from dense riparian forest along the Zambezi River and on islands in the river, to mixed *Copaifera mopane* - *Terminalia sericea* woodland further inland. The area around the town is very heavily wooded with mixed tree species, but *Pterocarpus* spp., *Baikaea plurijuga* and *Ricinodendron rautanenii* especially evident. Some areas of open grassland existed, especially surrounding the pans in the area. The pans either had the banks covered in grass and sedges, or else were trampled bare by cattle to give exposed mud flats. The patches of cultivated

ground also provided open areas in the woodland. Along the river, sandbanks and areas of eroded rock were available.

West bank of Kwando River, 26 Sept. - 2 October.

The camp was on the bank of the Kwando River, about 8 km north of the Botswana boundary. Observations were confined to the west bank of the river, as far north as the Kongola crossing. The river bank was clothed in dense reeds, and a strip of short grass existed between the river and the surrounding woodland. No pans or areas of cultivation were present, and the lack of habitation ensured large numbers of game mammals. The woodland bordering the river was large and dense, especially approaching Kongola, mostly of teak *Pterocarpus* spp. but with elements of *Copaifera mopane* and *Baikaea plurijuga* present. Stands of large *Acacia giraffae* trees occurred near the river at places including our camp site.

Sangwali, 2 - 9 October.

Here the Kwando River changes its name to the Mashi, and begins to spread out into extensive swamps. The camp on the east bank faced the extensive reedbeds of the swamps. To about 4 km inland from the river consisted of floodplains, dry at this time of the year. The floodplains were extensive areas of open grassland with scattered clumps of large trees confined to the points of high ground. Bordering the floodplains was a mixed medium-sized woodland, much of which in the vicinity of the camp was cultivated. Several large pans were present on the floodplains, all with the banks denuded of vegetation.

Linyanti, 9 - 17 October.

The river again changes name here from the Mashi to the Linyanti, and the swamps are at their most extensive before draining into Lake Liambezi further to the east. The reedbeds of the swamps are bordered here by a narrow floodplain, heavily grazed by cattle. Bordering the floodplain is a belt of large *Acacia* trees with very little undergrowth, and this then gives way to a well developed *Copaifera mopane* woodland. Observations were made up to 15 km inland, well into the mopane woodland.

On 19 and 20 October a trip was made across extensive, frequently treeless floodplains to Schuckmannsburg on the banks of the Zambezi River. A few bird species were seen here that were not recorded elsewhere on the expedition.

SPECIES RECORDED

In Table 1, the species recorded during the expedition are listed, and the areas in which they were found indicated. The systematic order follows the Check list of the birds of South Africa (S.A.O.S. List Committee, 1969).

No attempt has been made to comment on the relative abundance of birds in the area for this can only be superficial for stays of such short duration.

Two species were recorded that, while found close to the Caprivi Strip, do not appear to have been recorded from it. *Guttera edouardi* was seen once near the camp on the Kwando River, and Japp (pers. comm.) showed me a specimen collected 27 km west of Katima Mulilo on the South West Africa - Zambia boundary road. Two pairs of the generally uncommon *Aquila dubia* were found in the dense woodland surrounding Katima Mulilo.

The most unexpected find was a ♂ and ♀ *Mesopicus griseocephalus* collected on 26 and 23 October respectively. They were found on an island clothed in dense riparian forest, in the Zambezi River about 2 km downstream from Katima Mulilo. Previously they have been recorded on the same river system at Kalabo in Barotseland (Traylor and Hart, 1965) about 300 km north of the present record. Following Goodwin (1968) these two specimens belong to the subspecies *M. g. persimilis* Neumann, which has not previously been found in the Southern African region.

BREEDING RECORDS

The following are breeding records obtained during the expedition:

Leptoptilos crumeniferus. 15 October 1970. Seen nesting in small colonies in isolated clumps of