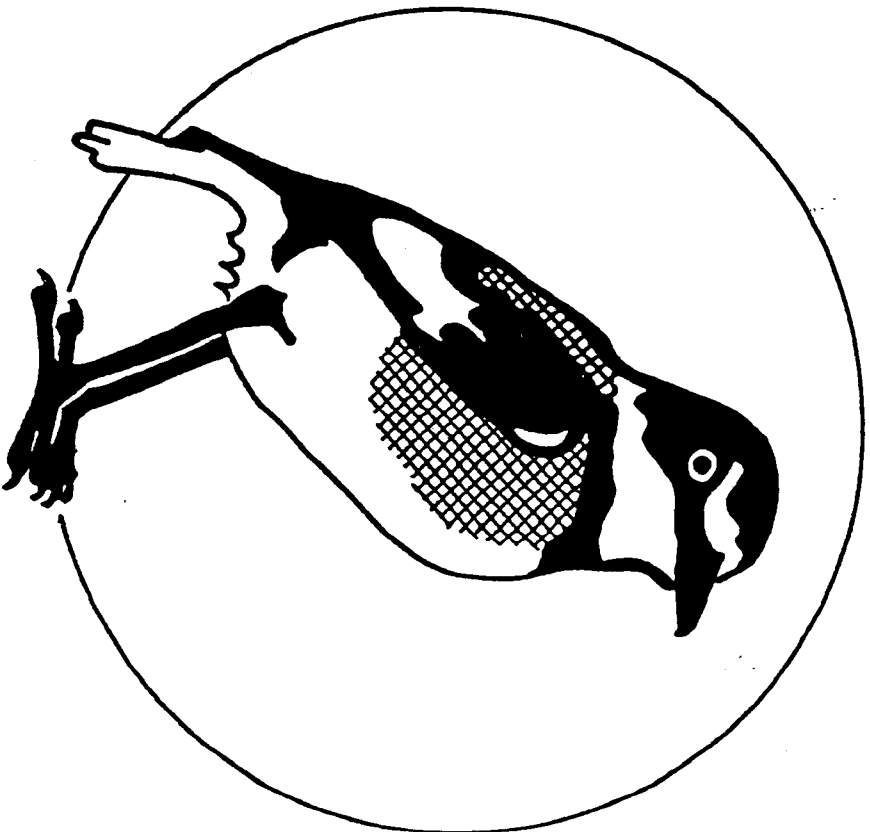


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METHODS

Road counts of oxpeckers were conducted throughout Eastern Caprivi recording the following: (i) species and numbers of oxpeckers, (ii) species and herd sizes of mammalian host animals (symbionts), (iii) locality, (iv) habitat and (v) time.

RESULTS AND DISCUSSION

A total of 1625 host animals were inspected for oxpeckers (Table 1), distributed per quarter-degree square as shown in Figure 1. Cattle were by far the most numerous host animal encountered, game animals being relatively scarce. A total of 206 oxpeckers were recorded, comprising 72 Yellowbilled Oxpeckers and 137 Redbilled Oxpeckers, giving a ratio of 1 : 1.9. The oxpecker : symbiont ratio was 1 : 22.6 for Redbilled Oxpeckers and 1 : 11.9 for Yellowbilled Oxpeckers. Oxpecker : symbiont ratios determined by other workers (Table 2) shows that Eastern Caprivi supports a higher Yellowbilled Oxpecker to symbiont ratio than does the Moremi Game Reserve in Botswana. Very similar figures to those reported here were obtained for Eastern Caprivi in April (Stutterheim & Panagis 1985b).

TABLE 1. The oxpecker/mammal relationship in Eastern Caprivi as calculated from counts during September 1983.

Mammal species	Mammal numbers	No. of oxpeckers			Mammals per oxpecker	
		YBO	RBO	Total	YBO	RBO
Cattle	1563	72	132	204	21,71	11,84
Elephant	21	-	-	-	-	-
Tsaesebe	12	-	2	2	-	6,00
Impala	4	-	-	-	-	-
Roan	6	-	3	3	-	2,00
Letchwe	19	-	-	-	-	-
Total	1625	72	137	209	22,57	11,86
						7,78

Redbilled Oxpecker : symbiont ratios in Eastern Caprivi were similar to those obtained in most other areas (Table 2), but the birds were almost twice as abundant during September (this survey) than they were in April (Stutterheim & Panagis 1985a). This may be related to the dry conditions in September, as compared with April when much of the area is flooded. The open, grassy areas, which support larger numbers of Redbilled than Yellowbilled Oxpeckers, are usually inaccessible by road when flooded, and therefore cannot be extensively sampled. This may result in an under-estimation of Redbilled Oxpeckers during the wet season.

SOME OBSERVATIONS ON OXPECKERS IN EASTERN CAPRIVI, SWA/NAMIBIA

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INTRODUCTION

The Yellowbilled Oxpecker *Buphagus africanus* and the Redbilled Oxpecker *B. erythrorhynchus* have suffered extensive reductions in both their range and numbers in southern Africa. In South Africa, prior to a re-introduction programme in 1985-1986, the Yellowbilled Oxpecker was classified as an extinct breeding species (Brooke 1984), and the Redbilled Oxpecker is confined mainly to conservation areas (Stutterheim 1980). The decline of oxpecker populations has been ascribed to the extirpation of large ungulates over most of the subcontinent, the rapid decrease in cattle numbers during the Rinderpest outbreak and the extensive use of arsenical dips to control ticks, the principal food of oxpeckers (Stutterheim & Brooke 1981, Stutterheim 1982, Brooke 1984).

In SWA/Namibia both oxpecker species still occur, but are mainly confined to the northeastern areas of the country (Kavango and Caprivi), where populations of more than 2 000 birds of each species have been estimated (Stutterheim & Panagis 1985a). This paper reports on sightings of oxpeckers in Eastern Caprivi during the period 17 to 23 September 1983.

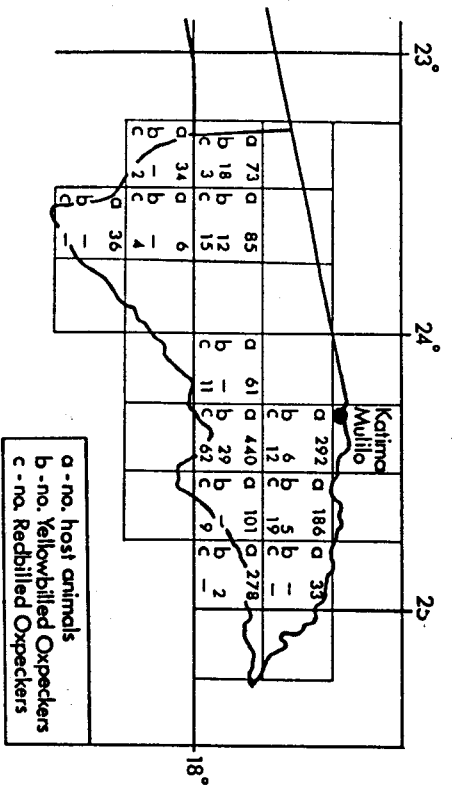


FIGURE 1. Eastern Caprivi, showing the quarter degree squares sampled, the numbers of host animals inspected and the numbers of Yellowbilled and Redbilled Oxpeckers seen per square.

TABLE 2. Ratio of oxpeckers to mammalian hosts calculated from studies in different regions of southern Africa.

Locality	Oxpecker: host ratios		Source
	YBO	RBO	
E. Caprivi	1:22,6	1:11,9	This study
E. Caprivi	1:21,3	1:20,1	Stutterheim & Panagis 1985a
Moremi G.R.	1:61,4	1:18,8	Stutterheim & Panagis 1985b
Hluhluwe-Umfolozi G.R.	-	1:14,0	Stutterheim 1980
Mkuzi G.R.	-	1:103,0	Stutterheim & Stutterheim 1981a
Kruger N.P.	-	1:13,5	Stutterheim 1979
Pilansberg Complex	-	1:8,3	Stutterheim & Stutterheim 1981b

The numbers of oxpeckers increased with increased host herd size (Figure 2), but no particular herd size was favoured (Figure 3). Although the sample size for herds of less than five animals was small (n = five herds), no oxpeckers were recorded on animals in these herds, which suggests that larger symbiont groups may be favoured.

Oxpeckers were not seen near human habitation and in areas of human disturbance. Dense mopane forests were avoided, as were extensive, open areas of short grasslands (Table 3). Yellowbilled Oxpeckers were most abundant in the transition zones between Terminalia-Acacia woodland and grassland, and

mopane woodland and grassland. Redbilled Oxpeckers favoured similar areas, but were also common in long grasslands and in open Terminalia-Acacia woodland.

Both oxpecker species were recorded on symbionts more often in the afternoon than during the morning (Table 4). During the midday period oxpeckers appeared to move away from their mammalian hosts.

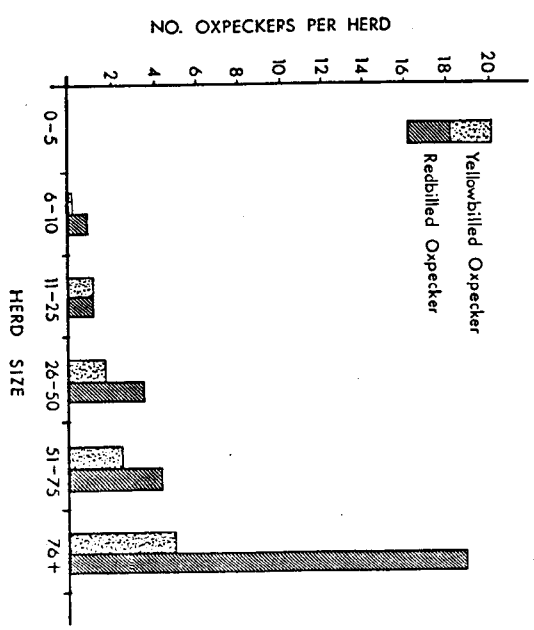


FIGURE 2. The numbers of Yellowbilled and Redbilled Oxpeckers seen per herd of host animals, for herds of differing sizes.

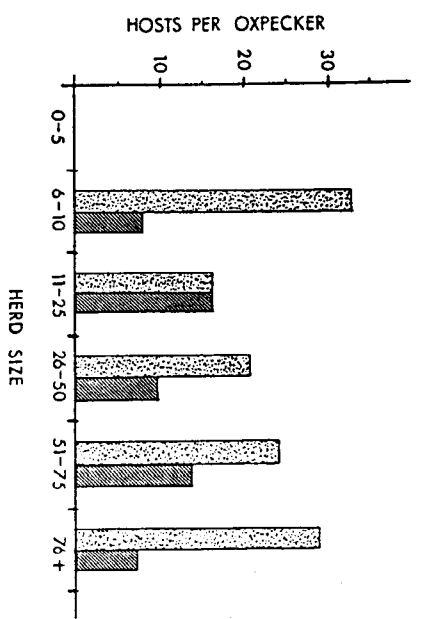


FIGURE 3. The numbers of host animals per oxpecker, for herds of differing sizes.

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TABLE 3. Habitat preferences of oxpeckers in Eastern Caprivi.

Habitat type	Host no.	No. oxpeckers		Hosts/oxpecker	
		YbO	RbO	YbO	RbO
<u>Terminalia-Acacia woodland</u>	184	-	16	-	11,5
Hopane woodland	80	-	-	-	-
<u>Terminalia-Acacia/grassland transition</u>	304	36	35	8,4	8,7
Hopane woodland/grassland transition	370	28	62	13,2	6,0
Open, long grassland	158	2	22	79,0	7,2
Open, short/burned grassland	422	6	2	70,3	211,0
Villages & roadways	107	-	-	-	-
Totals	1625	72	137	22,6	11,9

CONCLUSIONS

Eastern Caprivi supports healthy populations of both species of oxpeckers, which survive by feeding on the parasites of mainly domestic cattle. Redbilled Oxpeckers were found to be almost twice as abundant as Yellowbilled Oxpeckers. Redbilled Oxpeckers were found to be almost twice as abundant in September than reported in April (Stuttenheim & Panagis 1985a). This may be related to seasonal flooding of Eastern Caprivi, making large areas used by these birds inaccessible for sampling purposes.

Although the oxpecker populations in Eastern Caprivi currently appear to be stable, they should be monitored on a regular basis, at least once every five years. These species are known to be highly sensitive to environmental changes brought about by human activities, and care should be taken to prevent a repetition of the extinction that took place in South Africa.

TABLE 4. Periods of the day that oxpeckers were recorded on mammalian hosts in Eastern Caprivi.

Times	Host no.	No. oxpeckers		Hosts/oxpecker	
		YbO	RbO	YbO	RbO
< 11h00	658	12	55	54,8	12,0
11h00-15h00	366	-	5	-	73,2
> 15h00	601	60	77	10,0	7,8
Totals	1625	72	137	22,6	11,9

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