

having been favoured of late years but only on account of its more perennial character.

We have to thank Messrs. Temperley and Co. of Hexham and Newcastle-on-Tyne for placing seed of the Wild White variety of Clover at our disposal and also Prof. Gilchrist, Mr. C. T. Gimingham, Dr. Russell, Prof. Somerville and Dr. J. Voelcker for the trouble they have taken in assisting us to procure specimens.

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*The Trypanosomes found in the Blood of Wild Animals Living in the Sleeping-Sickness Area, Nyasaland.*

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(Received January 13,—Read March 6, 1913.)

(Scientific Commission of the Royal Society, Nyasaland, 1912.)

INTRODUCTION.

The chief object of this Commission in coming to Nyasaland was to inquire into the relation of the African fauna to the maintenance and spread of trypanosome disease.

The Commission arrived at their camp on Kasu Hill on January 12, 1912. As this was the rainy season the low country was covered with dense vegetation and much of it under water. Nothing could therefore be done in the study of the fauna until about the beginning of June, when the dry season was well established.

The camp at Kasu is situated on one of the hills (lat.  $13^{\circ} 40' S.$ , long.  $34^{\circ} 12' E.$ ) which rise on the western edge of the flat country adjoining Lake Nyasa. This low-lying lake-coast plain looks quite flat when viewed from the camp, and extends from the lake shore some 20 miles inland. The camp lies about 10 miles from the edge of this low country, and, therefore, some 30 miles from the lake. This plain is covered with thorn scrub, except near the lake, where there are large grassy plains, or "dambos," dotted over with palm trees. The thorn-scrub is the home of the tsetse-fly and also of numerous wild animals.

\* Dr. Davey resigned his membership of the Commission in October, before the completion of the work here recorded.

When an animal is shot in this fly-country by a member of the Commission a small quantity of the blood is taken in a bottle containing citrate of soda solution for inoculation purposes, and a thick and thin film of the blood spread on glass slides for microscopical examination. The blood is then sent to a point on one of the main paths, where a motor-cyclist is waiting to carry it to the camp. When the blood arrives it is at once injected into a goat, a monkey, and a dog.

WILD ANIMALS LIVING IN A FLY-AREA AS HOSTS OR RESERVOIRS OF  
TRYPANOSOME DISEASE.

The following table represents the result of the examination of 180 specimens of wild game or other animals shot in this fly-area. In one column is given the number of hours between the taking of the blood and its inoculation, in others the result of the microscopical examination of the thick and thin film, and of the inoculation of the blood. A plus sign means that trypanosomes are present, a minus sign that they are absent, and a blank space that a microscopical specimen was not available for examination, or an animal for inoculation, as the case may be.

Table I.—List of Wild Animals living in a Fly-area whose Blood has been  
Examined for Trypanosomes.

Date.	Expt. No.	Animal.	Age of blood, in hours.	By microscopical examination.		By inoculation.		
				Thick.	Thin.	Goat.	Monkey.	Dog.
1912.								
Jan. 20 ...	32	Hartebeeste ...		—	—	—		—
" 20 ...	33	" ...			—	—		—
" 20 ...	34	" ...			—	—		—
" 22 ...	40	" ...			—	—		—
" 22 ...	41	Eland ...			—	—		+
" 22 ...	44	" ...			—	+		—
" 23 ...	62	Sable ...		—	—	—		—
" 23 ...	63	" ...			—	—		—
" 26 ...	95	Eland ...		—	—	—		—
Feb. 6 ...	159	Warthog ...			—	—		—
" 6 ...	160	Sable ...			—	—		—
" 18 ...	246	Elephant ...			—	—		—
" 23 ...	283	Eland ...			—	—		—
" 28 ...	288	Lion ...			—	—		—
May 19 ...	615	Oribi ...	3	—	—	—		—
" 19 ...	616	Waterbuck ...	17		+	—		—
" 25 ...	583	Duiker ...			—	—		—
" 25 ...	584	Warthog ...			—	—	—	—
" 26 ...	589	" ...			—			—
" 26 ...	591	Reedbuck ...			+			—
" 26 ...	593	Duiker ...			—			—

Table I—*continued.*

Date.	Expt. No.	Animal.	Age of blood, in hours.	By microscopical examination.		By inoculation.		
				Thick.	Thin.	Goat.	Monkey.	Dog.
1912.								
June 2 ...	611	Buffalo .....	9	—	—	—	—	—
" 2 ...	612	" .....	9	—	—	—	—	—
" 2 ...	613	" .....	9	+	—	—	—	—
" 2 ...	614	" .....	9	—	—	—	—	—
" 15 ...	686	Warthog .....	9½	—	—	—	—	—
" 15 ...	687	Oribi .....	9½	—	—	—	—	—
" 16 ...	692	Reedbuck .....	8½	—	—	—	—	—
" 16 ...	695	Sable .....	5	—	—	—	—	—
" 23 ...	742	Warthog .....	9	—	—	—	—	—
" 23 ...	742a	" .....	9	—	—	—	—	—
" 23 ...	743	Oribi .....	9	+	—	—	—	—
" 23 ...	743a	" .....	9	—	—	—	—	—
" 25 ...	744	Duiker .....	7½	—	—	—	—	—
" 27 ...	755	Bushbuck .....	11	—	—	—	—	—
" 29 ...	768	Hartebeeste ...	6½	—	—	—	—	—
" 29 ...	769	Reedbuck .....	5½	—	—	—	—	—
" 29 ...	780	" .....	2	—	—	—	—	—
" 30 ...	783	" .....	¼	+	+	—	+	+
July 1 ...	777	Hartebeeste ...	7	—	—	—	—	—
" 1 ...	778	" .....	7	—	—	—	—	—
" 1 ...	779	" .....	7	—	—	+	+	+
" 2 ...	820	Oribi .....	7½	—	—	—	—	—
" 3 ...	801	" .....	7½	—	—	—	—	—
" 3 ...	818	Warthog .....	11½	—	—	—	—	—
" 4 ...	813	Hartebeeste ...	8	—	—	—	—	—
" 4 ...	814	" .....	8	—	—	—	—	—
" 4 ...	815	" .....	8	—	—	—	—	—
" 4 ...	816	" .....	8	—	—	—	—	—
" 4 ...	817	" .....	8	—	—	—	—	—
" 5 ...	828	Reedbuck .....	—	+	—	—	—	—
" 6 ...	825	Hartebeeste ...	8	—	—	—	—	—
" 6 ...	826	Warthog .....	7¾	+	+	—	—	—
" 6 ...	827	Oribi .....	7¼	—	—	—	—	—
" 8 ...	844	Hartebeeste ...	4¾	—	—	—	—	—
" 8 ...	863	Oribi .....	1¼	—	—	—	+	—
" 10 ...	859	Hartebeeste ...	9¾	—	—	—	—	—
" 10 ...	860	Oribi .....	5¾	—	+	—	—	—
" 10 ...	861	Warthog .....	6¾	—	—	—	—	—
" 10 ...	862	Oribi .....	5¼	—	—	—	—	—
" 11 ...	866	" .....	7½	—	—	—	—	—
" 11 ...	869	Warthog .....	8½	—	—	—	—	—
" 11 ...	872	" .....	7½	—	—	—	—	—
" 11 ...	875	Hartebeeste ...	5¾	—	—	—	—	—
" 20 ...	912	Reedbuck .....	7¼	—	—	+	—	—
" 21 ...	918	Hartebeeste ...	8	—	—	—	—	—
" 21 ...	919	Oribi .....	7	—	—	—	—	—
" 21 ...	920	Warthog .....	5	—	—	—	—	—
" 21 ...	920a	" .....	5	—	—	—	—	—
" 21 ...	920b	" .....	5	—	—	—	—	—
" 21 ...	921	Oribi .....	8	—	—	—	—	—
" 21 ...	923	Warthog .....	10	—	—	—	—	—
" 21 ...	925	Bushbuck .....	10	—	—	—	—	—
" 22 ...	927	Hartebeeste ...	7¾	—	—	—	—	—
" 22 ...	929	Warthog .....	5¾	—	—	—	—	—
" 22 ...	931	" .....	5¾	—	—	—	—	—

Table I—continued.

Date.	Expt. No.	Animal.	Age of blood, in hours.	By microscopical examination.		By inoculation.		
				Thick.	Thin.	Goat.	Monkey.	Dog.
1912.								
July 22 ...	933	Warthog .....	4½	+	+	—	—	—
" 22 ...	935	" .....	4½	—	—	—	—	—
" 23 ...	955	Hyæna .....	8	—	—	+	—	—
" 23 ...	956	" .....	8	+	—	—	—	—
" 23 ...	957	Hartebeeste ...	5	—	—	+	+	+
" 23 ...	958	" .....	3½	+	+	—	—	—
" 25 ...	988	Reedbuck .....	6¾	+	+	+	—	—
" 26 ...	993	Duiker .....	5½	—	—	—	—	—
" 27 ...	1000	Hartebeeste ...	3½	+	—	+	+	+
" 29 ...	1004	" .....	5¼	—	—	—	—	—
" 29 ...	1007	Duiker .....	4	+	—	—	—	—
" 30 ...	1010	Hartebeeste ...	4	—	—	—	—	—
" 30 ...	1013	Eland .....	4	+	+	+	+	+
Aug. 1 ...	1017	Oribi .....	8¼	—	—	—	—	—
" 2 ...	1024	Sable .....	7¼	—	—	—	—	—
" 2 ...	1027	Duiker .....	5¼	+	—	—	—	—
" 4 ...	1044	Eland .....	6½	—	—	+	—	—
" 5 ...	1045	Duiker .....	6¾	—	—	—	—	—
" 5 ...	1048	Wild cat .....	3	—	—	—	—	—
" 7 ...	1052	Warthog .....	5¾	—	—	—	—	—
" 7 ...	1055	Wild cat .....	2¾	—	—	—	—	—
" 11 ...	1058	Koodoo .....	3½	+	+	—	—	—
" 11 ...	1061	Waterbuck ...	2¾	+	—	+	—	—
" 11 ...	1064	Warthog .....	2¾	+	+	—	—	—
" 12 ...	1067	Hyæna .....	4	—	—	—	—	—
" 18 ...	1075	Waterbuck ...	5	—	—	—	—	—
" 18 ...	1078	Bushbuck .....	3	+	+	+	—	—
" 18 ...	1081	" .....	3	+	—	—	—	—
" 18 ...	1084	" .....	3	+	+	+	+	+
" 18 ...	1087	" .....	3	+	+	+	—	—
" 19 ...	1090	Oribi .....	7	—	—	—	—	—
" 19 ...	1093	" .....	7	—	—	—	—	—
" 19 ...	1096	" .....	7	—	—	+	—	—
" 19 ...	1099	" .....	7	—	—	—	—	—
" 19 ...	1102	" .....	7	—	—	—	—	—
" 21 ...	1136	Warthog .....	5¾	—	—	—	—	—
" 21 ...	1139	" .....	5	+	+	+	—	—
" 21 ...	1142	Hartebeeste ...	7½	—	—	+	—	+
" 21 ...	1145	" .....	6¾	—	—	—	—	—
" 22 ...	1150	Reedbuck .....	8½	+	+	+	—	—
" 22 ...	1153	" .....	8½	+	—	+	—	—
" 22 ...	1156	" .....	7	+	—	+	—	—
" 22 ...	1159	" .....	7	—	—	—	—	—
" 22 ...	1162	" .....	6	+	—	+	—	—
" 22 ...	1165	" .....	6	—	—	—	—	—
" 23 ...	1168	Warthog .....	7¾	—	—	—	—	—
" 23 ...	1171	Wild cat .....	6¾	—	—	—	—	—
" 23 ...	1174	Waterbuck ...	7	—	—	—	—	—
" 24 ...	1177	" .....	5	—	—	—	—	—
" 24 ...	1180	" .....	5	+	—	+	+	+
" 24 ...	1183	Warthog .....	7½	—	—	—	—	—
" 24 ...	1186	" .....	6	+	—	+	—	—
" 24 ...	1189	" .....	6	+	—	—	—	—
" 24 ...	1192	Oribi .....	7¼	—	—	—	—	—
" 24 ...	1195	" .....	7¼	—	—	—	—	—

Table I—*continued.*

Date.	Expt. No.	Animal.	Age of blood, in hours.	By microscopical examination.		By inoculation.		
				Thick.	Thin.	Goat.	Monkey.	Dog.
1912.								
Aug. 24 ...	1198	Porcupine .....	8½	—	—	—	—	—
" 28 ...	1202	Eland .....	4	+	+	+	—	+
" 28 ...	1203	Bushbuck .....	5	+	+	—	—	—
" 28 ...	1205	Eland .....	4	—	—	—	—	—
" 28 ...	1210	Waterbuck ...	4	+	—	+	+	+
" 30 ...	1216	Bushbuck .....	8	+	—	—	—	—
Sept. 6 ...	1250	Koodoo .....	2	—	—	—	—	—
" 6 ...	1254	Oribi .....	6¾	—	—	—	—	—
" 7 ...	1261	Bushbuck .....	4½	—	—	+	—	—
" 7 ...	1264	Waterbuck ...	3½	+	+	—	+	+
" 7 ...	1268	Buffalo .....	6½	—	—	—	—	—
" 7 ...	1272	Hartebeeste ...	5½	—	—	—	—	—
" 7 ...	1276	Warthog .....	4	—	—	—	—	—
" 7 ...	1281	Buffalo .....	9	—	—	—	—	—
" 10 ...	1285	" .....	5	—	—	—	—	—
" 10 ...	1289	Eland .....	8½	—	—	—	—	—
" 10 ...	1293	Warthog .....	12½	—	—	—	—	—
" 10 ...	1298	Buffalo .....	5	—	—	—	—	—
" 11 ...	1304	" .....	3½	—	—	+	—	—
" 12 ...	1308	Warthog .....	6	—	—	+	—	—
" 13 ...	1339	Waterbuck ...	6½	—	—	+	—	—
" 13 ...	1343	Bushbuck .....	7	—	—	—	—	—
" 13 ...	1347	Reedbuck .....	6	+	—	—	+	+
" 13 ...	1351	" .....	5¾	—	—	—	—	—
" 14 ...	1355	Hartebeeste ...	7½	—	—	—	—	—
" 14 ...	1359	" .....	7½	—	—	—	—	—
" 14 ...	1363	Reedbuck .....	6	—	—	+	—	—
" 16 ...	1368	Oribi .....	7¼	—	—	—	—	—
" 16 ...	1372	" .....	7¼	—	—	—	—	—
" 16 ...	1376	Elephant .....	20	—	—	—	—	—
" 17 ...	1380	Koodoo .....	2½	—	—	+	—	—
" 17 ...	1384	Warthog .....	6½	—	—	—	—	—
" 18 ...	1388	Waterbuck ...	8	+	+	+	—	—
" 18 ...	1392	Hartebeeste ...	5	—	—	—	—	—
" 18 ...	1396	" .....	5	—	—	—	—	—
" 18 ...	1400	Oribi .....	4½	—	—	—	—	—
" 20 ...	1406	Waterbuck ...	9	—	—	+	—	—
" 20 ...	1410	" .....	9	—	+	—	—	—
" 20 ...	1414	Warthog .....	6¼	—	—	—	—	—
" 20 ...	1418	Hartebeeste ...	—	—	—	—	—	—
" 20 ...	1422	" .....	9	—	—	—	—	—
" 20 ...	1426	" .....	7	—	—	—	—	—
" 20 ...	1435	Reedbuck .....	9	—	—	—	+	+
" 20 ...	1439	" .....	8½	—	—	—	—	—
" 20 ...	1443	Oribi .....	7¾	—	—	—	—	—
" 24 ...	1447	Waterbuck ...	14	—	—	—	—	—
" 25 ...	1453	Hartebeeste ...	10½	+	—	—	—	+
Oct. 6 ...	1471	Eland .....	2	+	—	+	—	—
Nov. 10 ...	1577	Warthog .....	3½	—	—	—	—	—

Total 180. Infected with pathogenic trypanosomes 57 = 31·7 per cent.

In the above table an account is given of the examination of 180 wild animals shot in the fly-area adjoining the Commission's camp at Kasu.

This part of the country is situated in the proclaimed Sleeping-Sickness Area of Nyasaland, which extends from the Chirua river (lat.  $13^{\circ} 20' S.$ , long.  $34^{\circ} E.$ ) in the north to the Lintipe river (lat.  $13^{\circ} 50' S.$ , long.  $34^{\circ} 30' E.$ ) in the south. It is bounded on the east by the Lake and on the west by the foot-hills. The area is about 50 miles from north to south and 25 from east to west. These figures are only approximate, as the available maps are far from correct. This is the only part of this country in which cases of the human trypanosome disease of Nyasaland, up to the present, have been found. It will be seen, then, that these animals were procured from the very heart of the Sleeping-Sickness Area.

Among the 180 animals, 57 were found to harbour pathogenic trypanosomes—31·7 per cent.

Table II gives the species of trypanosomes found in the 180 animals. Here a difficulty is encountered—the classification. The tendency in this branch of natural history, as in all others, is to multiply species.

In a previous paper\* the trypanosome causing human trypanosome disease in Nyasaland was called *Trypanosoma rhodesiense*, on account of the presence of posterior-nuclear forms. This trypanosome agreed in all other respects with *Trypanosoma brucei*, the common trypanosome of wild animals in South Africa, and the cause of the tsetse-fly disease, or Nagana. In order to compare the two species of trypanosomes more closely, the Commission procured, by the kindness of Dr. A. Theiler, C.M.G., Pretoria, a strain of Nagana from the same spot in Zululand where it was first discovered in 1894. Much to the surprise of the Commission it was found that *T. brucei* has quite as large a proportion of posterior-nuclear forms as *T. rhodesiense*, and that the blunt-ended character is common to both species. The Commission is therefore driven to the conclusion that *T. rhodesiense* is neither more nor less than *T. brucei*, and that the human trypanosome disease of Nyasaland is Nagana.

To this it may be objected that Nagana has never been known to attack human beings. This has probably been due to faulty diagnosis, cases in man being returned as malaria.

The pathogenic trypanosomes then, found in the blood of wild animals in Nyasaland, up to the present, by the Commission are *T. brucei* (Plimmer and Bradford) vel *rhodesiense* (Stephens and Fantham), *T. pecorum*, *T. simiae*, and *T. capræ* (Kleine). *T. ingens* is also found, but this trypanosome cannot, with our present knowledge, be considered a pathogenic species to man or domestic animals.

In Table II the plus sign means that the trypanosome named at the top of the column was present in the blood. The other plus signs signify that

\* 'Roy. Soc. Proc.' 1912, B, vol. 85, p. 423.

Table II.—Species of Trypanosomes found in the Blood of Wild Animals living in the Sleeping-Sickness Area, Nyasaland.

Date.	Expt. No.	Animal.	<i>T. brucei</i> vel <i>rhodesiense</i> .	<i>T.</i> <i>pecorum</i> .	<i>T.</i> <i>simice</i> .	<i>T.</i> <i>caprae</i> .	<i>T.</i> <i>ingens</i> .	Thick film.	Thin film.	Inocu- lation.
1912.										
Jan. 22	41	Eland.....		+						+
" 22	41	" .....		+						+
May 19	616	Waterbuck				+			+	
" 26	591	Reedbuck ...				+			+	
June 2	613	Buffalo ...		+				+		
" 23	743	Oribi .....					+	+		
" 30	783	Reedbuck ...	+			+		+	+	+
July 1	779	Hartebeeste	+							+
" 5	828	Reedbuck ...				+	+	+		
" 6	826	Warthog ...		+				+	+	
" 8	863	Oribi .....	+							+
" 10	860	" .....				+			+	
" 20	912	Reedbuck ...		+						+
" 22	933	Warthog ...		+				+	+	
" 23	955	Hyæna .....		+						+
" 23	956	" .....		+				+		
" 23	957	Hartebeeste	+							+
" 23	958	" .....	+					+	+	
" 25	988	Reedbuck ...				+		+	+	+
" 27	1000	Hartebeeste	+					+		+
" 29	1007	Duiker .....	+					+		
" 30	1013	Eland.....		+		+		+	+	+
Aug. 2	1027	Duiker .....					+	+		
" 4	1044	Eland.....		+						+
" 11	1058	Koodoo .....		+				+	+	
" 11	1061	Waterbuck		+		+		+		+
" 11	1064	Warthog ...	+					+	+	
" 18	1078	Bushbuck ...		+				+	+	+
" 18	1081	" .....		+				+		
" 18	1084	" .....		+				+	+	+
" 18	1087	" .....		+		+		+	+	+
" 19	1096	Oribi .....		+						+
" 21	1139	Warthog ...			+			+	+	+
" 21	1142	Hartebeeste	+							+
" 22	1150	Reedbuck ...				+		+	+	+
" 22	1153	" .....				+		+		+
" 22	1156	" .....				+		+		+
" 22	1162	" .....				+		+		+
" 24	1180	Waterbuck	+			+		+		+
" 24	1186	Warthog ...			+			+		+
" 24	1189	" .....		+				+		
" 28	1202	Eland.....		+				+	+	+
" 28	1203	Bushbuck ...		+				+	+	
" 28	1210	Waterbuck	+			+		+		+
" 30	1216	Bushbuck ...		+				+		
Sept. 7	1261	" .....		+						+
" 7	1264	Waterbuck	+					+	+	+
" 11	1304	Buffalo .....		+						+
" 12	1308	Warthog ...			+					+
" 13	1339	Waterbuck				+				+
" 13	1347	Reedbuck ...	+					+		+
" 14	1363	" .....				+				+
" 17	1380	Koodoo ...		+						+
" 18	1388	Waterbuck				+		+	+	+
" 20	1406	" .....				+				+
" 20	1410	" .....				+			+	
" 23	1435	Reedbuck ...	+							+
" 25	1453	Hartebeeste		+				+		+
Oct. 6	1471	Eland.....		+				+		+

the trypanosome was found in a thick or thin film or by inoculation of a quantity of blood from the wild animal into healthy experimental animals.

Table III.—Species of Trypanosomes found in the Blood of Wild Animals in the Sleeping-Sickness Area, Nyasaland, and the Number of Times each was found.

Number of animals.	<i>T. brucei</i> vel <i>rhodesiense</i> .	<i>T. pecorum</i> .	<i>T. simia</i> .	<i>T. capræ</i> .	<i>T. ingens</i> .
180	14	26	3	20	3

In every 100 wild animals living in the Sleeping-Sickness Area, Nyasaland, taken at random, the following numbers may be expected to be found infected with these species of trypanosomes.

Table IV.—Percentage of Animals infected by the different Species of Trypanosomes.

<i>T. brucei</i> vel <i>rhodesiense</i> .	<i>T. pecorum</i> .	<i>T. simia</i> .	<i>T. capræ</i> .	<i>T. ingens</i> .
7·8	14·4	1·7	11·1	1·7

Table V.—The Species of Animals dealt with, the Total Number examined, the Number found Infected, and the Species of Trypanosomes by which they were Infected.

Animal.	Total No. examined.	No. found infected.	<i>T. brucei</i> vel <i>rhodesiense</i> .	<i>T. pecorum</i> .	<i>T. simia</i> .	<i>T. capræ</i> .	<i>T. ingens</i> .
Eland .....	10	6		6		1	
Sable .....	5	0					
Waterbuck	13	9	3	1		8	
Koodoo .....	3	2		2			
Bushbuck ...	10	7		7		1	
Hartebeeste	35	6	5	1			
Reedbuck ...	19	12	3	1		9	1
Oribi .....	26	4	1	1		1	1
Duiker .....	7	2	1				1
Buffalo .....	9	2		2			
Lion .....	1	0					
Hyæna .....	3	2		2			
Elephant	2	0					
Warthog ...	33	7	1	3	3		
Wild cat ...	3	0					
Porcupine...	1	0					
Total ...	180	59	14	26	3	20	3



The next table gives the percentages of the different trypanosomes occurring in the wild animals. The numbers are too small to be taken literally, but it is interesting to learn that in this fly-district the waterbuck, hartebeeste, reedbuck and duiker are dangerous neighbours to man; the eland, koodoo, bushbuck and buffalo to cattle, goats and sheep; and that the warthog is the only animal which harbours *T. simia*, the lightning destroyer of the domestic pig.

Table VI.—Percentages of Different Species of Trypanosomes harboured by Wild Animals in the Fly-area.

Animal.	No. examined.	<i>T. brucei</i> vel <i>rhodesiense</i> .	<i>T. pecorum</i> .	<i>T. simia</i> .	<i>T. capræ</i> .	<i>T. ingens</i> .
		per cent.	per cent.	per cent.	per cent.	per cent.
Eland .....	10		60		10	
Sable .....	5					
Waterbuck .....	13	23	8		61	
Koodoo .....	3		66			
Bushbuck .....	10		70		10	
Hartebeeste .....	35	14	3			
Reedbuck .....	19	16	5		47	5
Oribi .....	26	4	4		4	4
Duiker .....	7	14				14
Buffalo .....	9		22			
Lion .....	1					
Hyæna .....	3		66			
Elephant .....	2					
Warthog .....	33	3	9	9		
Wild cat .....	3					
Porcupine .....	1					

#### CONCLUSIONS.

1. 31·7 per cent. of the wild game in the fly-country below Kasu Hill harbour pathogenic trypanosomes.

2. The species of trypanosomes found are *T. brucei* vel *rhodesiense* 7·8 per cent., *T. pecorum* 14·4, *T. simia* 1·7, *T. capræ* 11·1, and *T. ingens* 1·7.

3. It is self-evident that these wild animals should not be allowed to live in "fly-country," where they constitute a standing danger to the native inhabitants and the domestic animals. It would be as reasonable to allow mad dogs to live and be protected by law in our English towns and villages. Not only should all game laws restricting their destruction in "fly-country" be removed, but active measures should be taken for their early and complete blotting out.

4. It must be strictly borne in mind that this only refers to wild animals living in fly-areas. No pathogenic trypanosomes have, up to the present, been found by the Commission in the blood of animals living in fly-free areas.