

PUBLIC RECORD OFFICE

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VENEREAL DISEASE - MASAI PROVINCE

Table 15 Syphilis

Syphilis	Sections Masai					Total Masai
	Lodokilani	Kisongo	Kaputie	Purko	Loita	
Primary & Secondary	0.6%	0.6%	-	-	1%	0.3%
Tertiary	1%	4%	5%	3%	0.3%	3%

Table 16 Gonorrhoea

	Sections Masai										Total Masai	
	Lodokilani		Kisongo		Kaputie		Purko		Loita		G. +	G.H.
	G. +	G.H.	G. +	G.H.	G. +	G.H.	G. +	G.H.	G. +	G.H.		
Adult Males	9%	52%	12%	58%	5%	52%	11%	62%	0%	75%	9%	59%
Men	23%	17%	8%	35%	11%	22%	3%	21%	9%	51%	9%	30%
Adult Females	40%	18%	0.5%	1.5%	0.6%	8%	1%	24%	1%	28%	2.5%	20%

Note G. + indicates Active Gonorrhoea

G.H indicates history of Gonorrhoea in the past.

Gonorrhoea is the most common sterilizing disease of women and the Masai themselves knew that large numbers of their women-folk were sterile but did not know the cause. It has been the custom for many years to import wives from surrounding tribes and the Masai women more or less welcome them for the sake of the children they might bear for the Masai. However this progeny is but half Masai, though it is said the male Masai is very propotent. It will be seen from the table on Child Mortality that possibly 34% of the Masai women become sterile. It may actually be a higher percentage than this because a large number of women have but small families which may have been limited by sterility without previous abortion. As it is, it is a black outlook for the future if the Masai are to be preserved as Masai and not to be absorbed and become a mixed race.

Sterility and miscarriage must be accounting for the lives of very many unborn babes when it is noted that a certain number of Masai women are capable of having ten or more children.

There is also the possibility of blindness being the fate of a certain number of the babies through infection of the eyes at birth from gonorrhoea recently acquired by their mothers. Several such helpless creatures were seen. How many have succumbed through not being able to strive in the struggle for existence against the added affliction of the sightless?

There must be a number of male natives who are sterile through double orchitis following gonorrhoea; however most cases so far had been affected in one testicle. 20% of adult males and 13% of Moran revealed a history of gonorrhoeal orchitis and several acute cases were seen and treated.

Stricture of the male urethra and involvement of

Syphilis:

Only a very small number of cases of syphilis were seen in the Masai Reserve, 0.3% suffering from secondary and 3% from tertiary manifestations of the disease.

Masai have a great dread of the disease because of the miscarriages it causes. They have a very strict quarantine in operation throughout the reserve and it is apparently effective. Infected Masai are not allowed to enter other people's huts. Their food is put down where they can come and fetch it, they defaecate and micturate in a place set apart for their use and they are not allowed the privileges of strangers if they go to another manyatta.

A glance at the table showing child mortality will give an idea of the amount of syphilis in the Province. Women with multiple miscarriages of three and over are probably syphilitic and such multiple miscarriages were found in only 1.3% of the cases interrogated.

The Medical Officer has seen the quarantine mentioned above in operation. Quarantine is said to have been carried out since Lenana, their second "Paramount Chief", under the British, withdrew his people from Nairobi and put all the syphilitics in isolation.

Gonorrhoea.

As the survey progressed, it became more and more evident that the Masai were in danger of gradually exterminating themselves from disease through their ignorance of the diseases and conditions that were taking serious toll of the lives of the infants born and still unborn.

There are several diseases and conditions of race of life that are responsible for this state of affairs, and the most important of these is believed to be gonorrhoea.

A glance at the table showing the incidence of gonorrhoea and at that on Child Mortality, reveals the terrible fact that gonorrhoea and all its sequelae and complications is practically universal.

of altitude and drought are probably responsible for the freedom from this parasite.

The Masai make use of a vermifuge particularly for tapeworm, but, judging by the numbers requesting treatment, Carbon Tetrachloride and $Cl. Chenopodium$ was considered by them a much more efficacious remedy.

At the various barazas when discussing worm infestation and methods of control, it was found that the Masai believed that both meat and milk were responsible for tapeworm infection. On being informed that only the eating of underdone or raw beef was the cause, they seemed to see no difficulty in avoiding further infestation, and were to see that they cooked their meat more. However, it is doubtful if such a course can be successfully carried out in the near future because they have to contend with a taste for underdone meat and perhaps an appetite that is impatient of delay over a cooking fire.

The question of latrines in Masailand will have to await the anchoring of the population and the adoption of manual labour by the male Masai. Their abodes are mostly too temporary and in many parts the soil too thin over rock to expect that they would readily undertake to dig pits at their Manyatta. However, around ~~and~~ ~~at~~ ~~the~~ ~~places~~ where Masai are taking to permanent abodes and agriculture, the people would quickly fall in with such sanitary measures for the control of helminths.

"POT-BELLIES" MASAI CHILDREN NOT SPLENOMEGALIC.Table 14.

Sections Masai

	Lodokilani	Kisongo	Kaputie	Purko	Loita
Pot Bellies children	5%	15%	24%	13%	11%

"POT BELLYS" MASAI CHILDREN NOT SPLENOMEGALIC.

Table 14.

Sections Masai

	Lodokilani	Kisongo	Kaputia	Purko	Loita
Pot Bellies children	5%	15%	24%	13%	11%

"Pot Bellies" in children not due to splenomegaly.

This condition was found much less common amongst Masai than has been found the case in certain ^{other} African tribes. In the large majority of cases with abdominal enlargement, where specimens of faeces could be got, *Ascaris* infection was found. — see table 14. However it is considered that there is a fairly heavy *Ascaris* infestation amongst the Masai. A diet containing much less carbohydrate and more of certain vitamins may have some bearing on the comparative freedom from this condition of abdominal enlargement.

Herniae.

Umbilical hernia in children, so common in certain African races was not found at all frequent only 0.6% being found with this abnormality. Inguinal hernia was also very uncommon with an incidence of 0.7% of male adults. No children were seen thus affected.

Helminths.

Except at schools it was found impossible to carry out routine examination of specimens of faeces. Masai adults are particularly shy with regard to the bringing in of specimens and also there was not enough of time available to examine large numbers. However, 341 specimens of faeces, the great majority from children were examined during the course of the survey.

Ova of helminths were found in 65% of the specimens. Apart from *Taenia saginata*, which must be practically universal *Ascaris* infestation was found to be very common being 39% of the specimens examined. *Taenia saginata* were found present in only 29% of the cases but microscopic examination of faeces by no means always reveals the presence of tapeworm. *Trichuris* was found in 21%. *Strongyloides* in 0.8% and *S. Mansoni* in 0.8%. *Ancylostoma* eggs were found in 2% of the specimens but each case was in some way connected with the coast. Hookworm so far is not a problem, if it ever will be one amongst the Masai. Climatic conditions

TABLE 11 CONSTIPATION POPULATION MASAI PROVINCE.

Percentage-affected

Sections Masai	Adults	Moran	Children	
Lodokilani	8%	-	7%	} Complained of or history given voluntarily
Kisongo	9%	3%	7%	
Kaputei	24%	14%	25%	} History on interrogation
Purko	45%	23%	26%	
Leita	60%	19%	22%	

TABLE 12 HEPATIC ENLARGEMENT AND HEPATITIS POPULATION MASAI PROVINCE

Sections Masai	Adults		Moran		Children	
	Liver enlargement	Hepatitis	Liver enlargement	Hepatitis	Liver enlargement	Hepatitis
Lodokilani	-	-	-	-	-	-
Kisongo	0.7%	-	-	-	-	-
Kaputei	2.8%	1.4%	-	-	-	0.45%
Purko	1%	1%	1.5%	-	2.8%	0.4%
Leita	1%	1.6%	-	-	1%	0.8%
						2%

TABLE 13 DYSENTERY MASAI PROVINCE.

Percentages of people with history of diarrhoea with blood.

Sections Masai	Adults	Moran	Children
Lodokilani	4.5%	3%	-
Kisongo	3.6%	-	0.2%
Kaputei	7%	-	-
Purko	10%	4.5%	6%
Leita	9%	-	5%
Masai Province	7%	2%	2%

All over percentage 4.6%.

Abdominal Disorders.

A very common complaint was found to be epigastric pain with or without "heart-burn". To begin with when this condition was complained of voluntarily, it was found amongst from 5 to 13% adults, 1 to 3% Moran and 0.5 to 1% children. Amongst the Purko and Loita, where each case was interrogated, the complaint was found to be very common as will be seen on the table of analysis (table 10). No definite relationship could be made out between this pain and the taking of food and very seldom was rigidity or resistance to palpation found in the epigastrium. Amongst the Purko and Loita only 0.3% of cases were found with a history of haematemesis. It is considered that the complaint is possibly due in many cases to tapeworm infestation and digestive upset.

Constipation was also found on individual interrogation to be very common, as will be seen on the table shewing incidence. A diet made up largely of milk with a certain amount of meat and no vegetables predisposes rather to this complaint. Masai have recourse to their own purgative medicines, but, next to medicine to relieve their eyes, the most common request is for a dose of an aperient.

Hepatic enlargement was not commonly found as will be seen on table 12. Two cases were found with marked hepatic enlargement that was believed to be due to secondary deposits following abdominal neoplasm. Hepatitis with or without hepatic enlargement was found up to 2%.

Dysentery.

Only four cases of dysentery were seen in which were found Entamoeba histolytica. On interrogation it was found that there is a form of dysentery amongst the Masai which may or may not be Amoebic. Histories of diarrhoea with blood were obtained ranging from 4 to 10% amongst adults and up to 6% amongst children. Dysenteric complaints were not so common as would be expected.

TABLE 9

RESPIRATORY DISEASES MASAI PROVINCE

Percentage affected.

Sections Masai	Adults				Meran				Children			
	Bronchial Catarrh	Bronch- itis	T.B.	? T.B.	Bronchial Catarrh	Bronch- itis	T.B.	? T.B.	Bronchial Catarrh	Bronch- itis	T.B.	? T.B.
Lodokilani	11%	7%	2%	8%	10%	-	-	-	5%	5%	-	-
Kisengo	27%	3%	3%	2%	33%	1%	7%	3%	26%	3%	3%	3%
Kaputio	33%	2%	3%	5%	46%	3%	-	3%	35%	4%	1%	4%
Purko	30%	1%	2%	1.5%	20%	-	-	-	32%	3%	1%	2%
Loita	40%	4%	0.4%	0.8%	23%	-	-	-	30%	-	-	1%

TABLE 10

EPIGASTRIC PAIN MASAI POPULATION.

Percentage affected

Sections Masai	Adults	Meran	Children	Remarks
Lodokilani	8%	-	1%	} Complained of voluntarily.
Kisengo	5%	1%	0.5%	
Kaputio	13%	5%	-	
Purko	44%	23%	7%	} elicited on interrogation
Loita	59%	35%	10%	

Condition of Hearts.

Cardiac bruits with or without cardiac enlargement were not very common as will be seen on table 8 and only occasionally were cases found with presystolic murmurs. However, a few cases of auricular fibrillation with mitral stenosis were seen. In a number of children and adults who had bruits there was a history of rheumatic pains in joints but no cases were seen of acute rheumatism with swelling of joints, apart from those with gonorrhoeal arthritis. However, it is considered that certain of the affected hearts are rheumatic in origin. Five cases of definite mitral stenosis three of them with auricular fibrillation were seen during the course of the survey.

The Kisongo and Kaputse children were rather more affected as to heart bruits. This may be the result of Malaria which was found more common in these sections.

Respiratory Diseases.

Many of the Masai in all age groups were affected with colds and coughs as will be seen by the percentages found suffering from bronchial catarrh in the various sections. Bronchitis was occasionally found in old men and women and young children.

Pulmonary Tuberculosis was found definitely active in no more than 3% of cases examined. Physical signs of fibrosis without moist sounds were found as shown under ? T.B. on table 9. So far pulmonary tuberculosis is not a serious problem amongst the Masai, but intermarriage with other tribes like the Wachagga and Wakikuyu may accelerate the introduction of the disease. The incidence is higher in the sections in the Kajiodo District than in the Purko and Loita of the Narok District.

Two cases of broncho-pneumonia and 5 cases of lobar pneumonia and one case of asthma were seen during the course of the survey. Six cases of whooping cough were seen at Kajiodo, where there was the tail end of an epidemic.

three months of pregnancy. Teeth cleaning, if it has any influence on the incidence of pyorrhoea, is fashionable amongst Moran only.

ENLARGED TONSILS AND TONSILITIS.

Amongst 550 children examined for this condition 14% were found to have enlarged tonsils in varying degrees.

Follicular tonsillitis was encountered in 0.27% of the recorded cases.

OTITIS MEDIA.

This disease was found active in varying amount amongst the different sections of Masai ranging from 2 to 6% of children, up to 2% of Moran and from 0.5 to 2% adults. History of having had the disease in the past was obtained as shown in the table, but it is not considered very reliable.

Table 6.

CONDITION OF TEETH AND GUMS POPULATION MASAI PROVINCE.

Sections Masai	Adults		Moran		Children	
	Caries	Pyorrhoea	Caries	Pyorrhoea	Caries	Pyorrhoea
Lodokilani	4%	59%	-	30%	1%	10%
Kisongc	7%	65%	-	23%	0.5%	18%
Kaputie	1.4%	69%	-	35%	-	18%
Purko	1.5%	64%	-	17%	0.2%	10%
Loita	-	60%	-	16%	-	8%

Table 7.

OTITIS MEDIA POPULATION MASAI PROVINCE.

Sections Masai	Adults		Moran		Children	
	Otitis	Media	Otitis	Media	Otitis	Media
	Active	History	Active	History	Active	History
Lodokilani	0.8%	1.5%	-	-	2%	2%
Kisongc	1%	0.7%	-	1%	3%	1.4%
Kaputie	0.5%	1.4%	-	3%	6%	0.4%
Purko	2%	3%	1.5%	4.5%	3%	4.5%
Loita	0.8%	3%	2%	-	2%	2%

Table 8.

CONDITION OF HEARTS MASAI POPULATION

Sections Masai	Adults		Moran		Children	
	Bruits		Bruits		Bruits	
	Systolic	Presyst.	Systolic	Presyst.	Systolic	Presyst.
Lodokilani	8%	2%			6%	
Kisongc	12%		6%		13%	
Kaputie	7%		14%		13%	
Purko	6%		4.5%		8%	0.6%
Loita	5%	0.8%	5%		1%	

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nature in keeping birds out of their villages, demonstrating by pointing out the use of tick birds on cattle which they understood, a certain number agreed that they would tolerate hens in their villages, but they were rather worried as to how the fowls could be transported when the time came to move on to pastures new. It is felt that such a difficulty could be got over.

So long as the Masai have to protect their cattle from the ravages of carnivorous animals, so long will they have to be penned up in small spaces at night and there will be the problem of manure disposal. Until they can be anchored and encouraged to build good homesteads where fly breeding can be minimised, and to take up agriculture where possible, the control of flies and fly borne disease is a very difficult problem.

It is considered that the keeping of hens should be encouraged in the near future as being the only mode of control possibly feasible at this time. Much could be done in relieving certain of the bad eye cases by treatment on safari and in a hospital a Medical Officer could do much to save eyesight by operation on the lids in cases of entropion.

DENTAL CARIES AND PYORRHOEA. See table 6.

On the whole the teeth of the Masai were found good, the amount of caries being practically negligible.

Pyorrhoea on the other hand was found very common amongst adults other than Moran, the incidence ranging between 60 and 70% in the various sections. It was found present in 8 to 18% of children and 16 to 35% of Moran.

Of the various predisposing causes of pyorrhoea discussed in literature, that of deficiency in certain vitamins during intra-uterine life would fit in in the case of the Masai whose mothers literally starve themselves during the last

virulent blindness would have been much more common than was found the case.

Moran were found the least affected from conjunctivitis and corneal ulceration. This is due possibly to their being more fit and in their wanderings from place to place, not constantly associated with cattle, they are not so liable to be pestered by flies. Corneal ulceration in Moran was most commonly gonococcal and often self infected.

SUGGESTIONS FOR CONTROL.

Eye disease amongst the Masai is such an affliction that something must be done to attempt to control it. Control of fly breeding and of gonorrhoea at once suggest themselves. The latter will be dealt with under venereal disease.

Comparing the Wadaruma and the Wakamba of the coast with the Masai, all stock keeping people and all keeping their stock confined at night in an enclosure close to their huts, it would be expected that all would be equally plagued by flies. This is not the case, for neither are flies nor eye affections rife amongst the Wadaruma nor the Wakamba. The numbers of stock usually much greater amongst the Masai, would not seem to materially affect the numbers of flies because smaller villages seem equally plagued. It is suggested that the entire absence of fowls in Masai villages may have a great deal to do with the amount of fly breeding. Of an afternoon the surface of the dung strewn ground in a Masai village is literally white with millions of newly hatched maggots, food for fowls, but not a fowl for the repast. Birds and eggs are taboo from the dietary of the Masai and so hens are not kept by them. They are, in fact, rather scorned as being but poor kind of stock that other tribes condescend to keep. However, when it was pointed out to the Masai that eye and other diseases were caused to a certain extent by their upsetting the balance of

nature/

TABLE 5
EYE SMEARS.

Analysis of bacterial findings returned by Research Laboratory.

<u>Number of smears examined</u>	<u>91</u>
<u>Number found positive to bacteria</u>	<u>89 93%</u>

The following bacteria were reported present in the smears:-

1. Morax Axenfeld	46 cases	48%
2. Koch Weeks bacilli	35 "	38%
3. Gonococci	12 "	12.5%
4. Gram negative diplococci intracellular resembling gonococci.	2 "	2%
5. Gram negative bacilli of Haemophilus form	9 "	9%
6. Gram negative diplococci of unknown type	5 "	5%
7. Diplo streptococci	4 "	4%
8. Haemophilus intermediate between Morax and Koch Weeks bacilli	3 "	3%
9. Pneumococci	3 "	3%
10. Gram positive diplococci resembling pneumococci	3 "	3%
11. Gram positive diplococci	2 "	2%
12. Gram negative cocco bacilli of unknown type	2 "	2%
13. Gram negative bacilli of unknown type	2 "	2%
14. B.Xeroses	2 "	2%
15. Gram positive capsulated diplococci of unknown type	1 "	1%
16. Diptheroids	1 "	1%
17. Large bacilli doubtful type	1 "	1%
18. Short small streptococci	1 "	1%
19. Adventitious bacteria	1 "	1%

15%
5%

from the general population while others were selected. All taken at random in the general population were returned positive to bacteria. Smears returned negative to pus and bacteria were from school boys who were living under different conditions. A glance at table 5, the analysis of the bacterial findings to hand, shows Morax Axenfeld the commonest infection affecting 48% of the cases, and Koch Weeks bacillus next at 38%. Gonococci were found in 15% and other gram negative diplococci of unknown type in 5%. Gram positive diplococci of varying type were found in 9%. Of the remainder the more common are Gram Negative bacilli of Haemophilus from 9% and Diplostreptococci 4%. Most of the infections were mixed.

Several cultures made from eye smears were sent to the Laboratory, but it is not yet known if they survived the journey to Nairobi. Results have not yet come to hand.

As to the cause of this widespread conjunctivitis with its sequelae of ulceration, scarring, entropion and blindness, there is evidence of a great variety of bacterial infection and the common vector is undoubtedly the house-fly. Flies bred in the cowdung and filth of the villages feed at the eyes of the people all day long. Flies accompany the herds of cattle when they go grazing so that there is no freedom for the herders. Children seem so accustomed to the attentions of flies that they do not worry much about brushing them away.

Predisposing causes affecting the bacteriocidal action of lacrymal secretions are possibly factors in those cases where conjunctivitis and ulceration are not due to gonococci. Suggested predisposing causes are irritation from smoke which fills the huts; and in certain cases possibly the effects of deficiency diet. Gonococcal eye infections are not considered to be so virulent as is the case in Great Britain, because possibly gonorrhoea being so widespread amongst the Masai, the strain may have become somewhat attenuated. Were the bacteria

virulent/

TABLE 4.

EYE AFFECTIONS MASAI PROVINCE.

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Eye Affections	Lodokilani			Kisongo			Kaputie			Purko			Loita			All Masai		
	Adults	Moran	Children	Adults	Moran	Children	Adults	Moran	Children	Adults	Moran	Children	Adults	Moran	Children	Adults	Moran	Children
Conjunctivitis	79%	47%	91%	78%	49%	87%	50%	38%	78%	64%	32%	81%	76%	35%	87%	68%	40%	84%
Corneal Scars	27%	3%	10%	28%	4%	7%	30%	19%	2%	27%	8%	8%	25%	7%	6%	27%	8%	6%
Corneal Ulcer	5%	3%	2%	12%	6%	8%	12%	5%	7%	15%	2%	6%	8%	-	5%	12%	3%	7%
Entropion	2%	-	-	5%	1%	-	11%	-	-	12%	-	1%	8%	2%	2%	9%	3%	7%
Blind one eye	12%	-	1%	6%	1%	3%	11%	-	-	11%	6%	3%	10%	-	1%	9%	0.8%	0.6%
Blind both	0.75%	-	-	-	-	0.2%	10.5%	-	-	1%	-	0.2%	1%	2%	4%	10%	2%	2%
Cataract	18%	-	-	4%	-	0.2%	2%	-	-	7%	2%	0.2%	9%	-	-	0.7%	0.4%	0.37%
Squint	3%	3%	4%	-	-	1%	2%	3%	3%	2%	2%	3%	1%	-	2%	7%	0.4%	0.15%
Pterigium	-	-	-	-	-	-	-	-	-	-	-	-	-	2%	-	0.17%	1%	2.4%
																86%	84%	26%

DISEASES OF EYES.

Eye affections amongst the Masai were found practically universal. Records were kept of the eye affections as seen on table 4. 68% adults and 84% of children were found suffering from varying degrees of conjunctivitis, much of it of the granular type. Moran with 40% were the least affected of the age groups.

Corneal scarring, the result of past ulceration was found in 27% adults, 8% Moran and 6% children, while active ulceration of the cornea was present in 12% adults, 3% Moran and 7% children. Much of the ulceration amongst the adults is to be attributed to entropion, 9% adults being thus affected. Entropion amongst Moran and children is negligible.

Blindness of one eye as a result of ulceration going on to staphyloma and rupture of the anterior chamber was found in 2% Moran and 2% children. Amongst adults 10% were found blind of one eye, but in the majority of cases blindness resulted from complete opacity of the cornea brought about by entropion ulceration. Quite a number of old people affected by entropion attempt to alleviate their suffering by the use of a kind of iron forceps for extraction of the ingrowing eyelashes. Total blindness of both eyes was noted amongst 0.7% adults, 0.4% Moran and 0.37% children. It is considered that there must have been many more totally blind people who were not brought along to the examination centres.

Cataract of varying degrees was found in 7% adults. Squints were not very common, being noted in 1% Moran and 2.4% children. Ptergium in all stages was very common amongst the grown-up. Where records were taken of those showing this condition, it was found in 86% adults, 84% Moran and 26% children.

Numerous eye smears were sent to the Research Laboratory for bacteriological examination. Many were taken at random.

hand 46% adult males (including Moran), 38% adult females 17% male children and 24% female children have haemoglobin percentages of over 80 while there are no babies in this category.

There is more definite anaemia amongst children than amongst adults and slightly more amongst females than amongst males.

HAEMOGLOBIN ESTIMATION MASAI PROVINCE

SECTIONS MASAI.

Hb	LODOPILA H.						KISONGO						KAPUTEI.						PURKO						LOITA						ALL SECTIONS					MASAI						
	M	MN	F	MT	FT	B	M	MN	F	MT	FT	B	M	MN	F	MT	FT	B	M	MN	F	MT	FT	B	M	MN	F	MT	FT	B	M	MN	No.	No.	FT	B						
100	10	14	15			1	1	36	12	7	12		2	1					11	1	9	1	5		7	7					11	70	36	16								
95	12	8	6	2	2		4	30	17	7	15		12	10				1	18	8	16	16			16	12					23	85	55	16								
90	10	18	15	4	2		9	28	40	15	28		19	27	4			5	10	15	10	10			11	11					21	21	321	16								
85	37	15	35	9	9		23	15	89	29	30		4	70	34	31		1	19	55	51	16			13	11	1	2			96	94	142	40								
80	37	15	35	9	9		23	15	89	29	30		4	70	34	31		1	19	55	51	16			13	11	1	2			96	94	142	40								
75	60	11	35	31	30		46	16	107	140	123		25	5	68	121	83	1	21	90	166	32			11	23	17	1			244	55	329	281								
70	47	1	42	36	22		33	3	87	88	64	4	19	38	63	36	36	1	48	1	62	41	32	1	23	32	26	17	5	3	165	36	299	484								
65	2	1	36	28	12	1	18	1	46	89	46	4	7	5	9	9	16	3	22	1	63	4	9	7	4	13	2	1	3	10	72	2	234	281								
60	4	1	1				1		5	26	24	16	2	5	1	9	14	1	1	10	10	11	11	1	12	2	43	182			4	1	55	58								
55									1	13	8	32		1		9	10	1																								
50																																										
45																																										
40																																										
TOTAL.	209	67	195	127	90	15	135	129	404	414	353	63	61	47	248	268	197	19	187	55	383	387	331	19	56	50	230	59	30	19	648	348	1460	1255			1001	133				

ALL SECTIONS

MASAI

Not definitely Anaemic having % Haemoglobin over 80.

Adult Males	151	or 23%	of the total
Moran	304	" 87%	" " " "
Adult Male & Moran	455	" 46%	" " " "
Adult Female	552	" 38%	" " " "
Male children	209	" 17%	" " " "
Female children	213	" 21%	" " " "
Babies	0	" 0	" " " "

Definitely Anaemic having % Haemoglobin under 70.

Adult Males	16	or 2.5%	of the total
Moran	1	" 0.3%	" " " "
Adult Male & Moran	17	" 1.7%	" " " "
Adult Female	46	" 3%	" " " "
Male children	99	" 8%	" " " "
Female children	94	" 9%	" " " "
Babies	92	" 6%	" " " "

NOTE. No. = Number of
M = Adult males
MN = Moran
F = Adult Female
MT = Male children
FT = Female children
B = Babies.

TABLE 2.

HAEMOGLOBIN ESTIMATION MASAI PROVINCE.

21

Sections Masai	Numbers examined			Average percentage haemoglobin of various age and sex groups.							
	Adults	Children	Total	Adults	Children	Adult Males	Adult Females	Men	Male Children	Female Children	Babies
Lodokilani	471	230	701	81%	75%	80%	80%	89%	75%	77%	63%
Kisengo	608	830	1498	82.5%	76%	79%	81%	92%	76.5%	78.5%	63%
Kaputei	356	484	840	82%	76%	78%	81%	90%	77%	77%	62%
Purko	625	737	1362	80%	78%	78%	79%	93%	79%	78.5%	63%
Meita	336	108	444	80%	77%	79%	78%	91%	78%	79%	69%
Masai Province TOTAL	2456	2389	4845	81%	77%	79%	80%	91%	77%	78%	64%

become unhealthily obese, but the majority of old men are spare to thinness. The younger adult females on the whole have a well nourished appearance but after the menopause and in old age very few are fat and most are but fairly nourished.

HAEMOGLOBIN ESTIMATION.

As will be seen by the table (No. 2.) the average percentage of haemoglobin in the Masai population does not vary very much in the various sections. There is some difference however in the age groups. The Moran have an average of 91% which is a very high average for African natives. On the other hand the haemoglobin average of babies is 64%. Such anaemia is not of malarial origin because there is very little malaria amongst the Purko where the haemoglobin average for babies is 53%. It is not considered that it is entirely due to helminthiasis. The cause is not clear but two factors probably contributory are (a), the deficiency experienced during the last three months of intrauterine life and (b), possibly the lack of sufficient sunlight during the first few months after birth. Masai babies when out of doors, until they can crawl or walk are carried on their mother's backs practically completely covered up by the thickish leather cloak worn by Masai women.

For the rest, adult males and females and children other than babies have an average haemoglobin range of 77% to 80% represents a certain degree of Anaemia the cause of which is difficult to explain. Taking under 70% of haemoglobin as indicating definite anaemia, it will be noted that the percentages of the various age groups with average percentage of haemoglobin under 70 are 1.7% for adult males including Moran, 3% for adult females and 8 and 9% respectively for male and female children other than babies, while 6% of babies are under 70% of haemoglobin. On the other hand

See Table 8.

much if not more drastic than amongst the Wakikuyu because Masai women are said to often point the finger of scorn at imported Kikuyu wives saying that they have not been properly circumcised. The deathrate from malnourishment in new born babies must be excessively high and even the survivors must suffer in certain ways in after life through the deficiency "diet" they had during the last three months of intrauterine life.

Young boys up to about the Moran age are on the whole spare. The younger ones are mostly in the good category, the older ones but fair and poor. The latter are probably not so well fed. A drink of milk in the morning before going out to herd serves them for the day. On the return to the village with the cattle at night they have another meal of soured milk and a bit of meat to chew if there is any going.

Female children are on the whole better nourished than boys of all ages. A point is made of giving them more food and they are more about the village than the boys with more opportunities for the partaking of food.

Moran taken all over are fine specimens of humanity, well nourished though slimly built and not heavily muscled. They usually feed well on meat and milk and a certain amount of blood is drunk. They partake of their meat lightly cooked in special places away from the eyes of women, for it is their custom that women must not see them eating meat. On special ceremonial occasions they may gorge themselves with meat, but they can yet indulge in dances of a strenuous nature. They have still a certain amount of pride in keeping fit and to a certain extent vie with each other in feats of endurance. Adult males from the married age onwards gradually lose their fit appearance, some

become

TABLE 1.

NOURISHMENT POPULATION MASAI PROVINCE.

Sections Masai	Nourishment %	Various age and sex groups						
		Adult Males	Moran	Adult Males and Moran	Adult Females	Male Children	Female Children	Babies
Lokoriani	Good	61%	97%	72%	70%	68%	80%	100%
	Fair	35%	3%	25%	25%	29%	20%	-
	Poor	4%	0%	3%	2%	3%	-	-
Kisumu	Good	46%	72%	59%	67%	46%	72%	79%
	Fair	53%	25%	39%	31%	50%	27%	21%
	Poor	1%	3%	2%	2%	4%	1%	-
Kaputei	Good	44%	95%	62%	60%	50%	73%	78%
	Fair	48%	5%	33%	37%	47%	25%	14%
	Poor	8%	-	5%	3%	3%	2%	8%
Purke	Good	51%	86%	60%	56%	47%	71%	88%
	Fair	46%	2%	37%	39%	50%	28%	12%
	Poor	3%	-	3%	5%	3%	1%	-
Loita	Good	49%	79%	66%	60%	45%	88%	100%
	Fair	45%	21%	31%	37%	52%	12%	-
	Poor	6%	-	3%	3%	3%	-	-
Masai Province	Good	50%	84.5%	63%	61%	49%	73%	86%
	Fair	46%	14%	34%	35%	48%	25%	13%
	Poor	4%	1.5%	3%	4%	3%	2%	1%

NOURISHMENT.

Table 1 shows that the state of Nourishment is fairly consistent for all sections with the exception of the Lodokilani where the percentage showing good nourishment is higher than the average for the Masai especially in the case of male children. Babies up to two years of age show the best average of good nourishment. The most of these babies however were over six months of age and on the whole were rather too fat. Babies are all stuffed with food which includes mother's milk, soured cow's milk that has been kept for several days and as much cooked fat as can be crammed into them. On the other hand, new born babies, and up to about a month if they survive are on the whole rather poorly nourished in appearance. Not many such babies were seen because Masai women are not allowed about for some time after the birth of the child. A Masai custom gives the child a very bad start in life. During the last three months of pregnancy all Masai women have to go on starvation diet. No milk is allowed them and but a minimum of meat. No vegetables are eaten by the Masai. When maize is available these women are allowed to partake of some as a gruel. Water is allowed ad lib. If secret eating is found out, or if the woman's appearance suggests rather a large foetus, female relatives are put on guard over the unfortunate woman to see that she sticks to the restricted diet. This is done to avoid trouble at birth with a big child, and the custom must have evolved through attempting to obviate the difficulties of labour through a contracted vagina the result of scarring from severe female circumcision. The operation amongst the Masai is probably as

/much

limited by the number of cattle they can afford to give in the marriage settlement.

Of such were the people who were examined during the survey:

Results of findings on medical examination of the Masai population of whom detailed records were kept.

There are several sections of the Masai amongst whom the Province is more or less divided up. Of these all were visited at several centres in each/except the sections in the Trans Mara area where rains made safari impossible. Those sections dealt with comprised the Lodokilani around Kajiado and Turoka, the Kisongo around Loitokitok and Rombo, the Kaputie around Limba Kiu and Bissil, the Purko around Narok, Lemek, Barakitabuk etc. and the Loita in the Loita Hills. In the returns the findings are grouped according to these sections.

Records were kept of 4,845 Masai comprising 648 adult males, 348 Moran, 1460 adult females, 1255 male children, 1001 female children and 133 babies.

The various morbid conditions and diseases found amongst these will be dealt with in turn and will be discussed under their respective headings giving percentage of incidence, probable cause and suggestions for methods of eradication or control.

goats, sheep and calves. During the rains the central area becomes a quagmire of mud and dung in which the cattle may flounder belly deep. In the dry season there is more dung deposited at night than can be thoroughly dried out by the sun during the day and miriads of flies are bred therein.

A Masai Manyatta is a very busy place of an evening when the lowing herds come home. As the herds enter the women take charge and the various animals to the accompaniment of tinkling cow bells and long drawn out whistling in various keys, are sorted out counted and driven to their respective places. Young calves impatient and bawling are released to their anxious mothers and one-handed milking is performed while the calves suck. By dark the gaps are closed against the already prowling beasts of prey.

Although many years have passed since the Masai warriors terrorised the whole of East Africa, the tribe has not been able to adjust itself to the changed times and still clings to most of its old customs. Manual labour except that to do with cattle is scorned by the Masai. Youths on circumcision enter the warrior or Moran class and now, shorn of glory though not entirely bereft of pomp, Moran apart from doing some cattle herding and lion killing in defence of stock, have not a lot of useful work to do.

The life of the women is much as it has been in the long past. Practically all the manual labour is done by them as well as struggling to bring up as many children as possible against fearful odds.

Young boys at an early age are out herding all day and young girls "Ndito" become the lovers of Moran at warrior Manyatta. When these girls are ready to enter the marriage market they are circumcised.

Masai men are polygamists, the number of wives being

with gaps at intervals for the convenience of the various owners of stock. Moveable thorn tree branches barricade these gaps at night. Inside this defence is a circle of crude huts constructed of interlaced branches of saplings covered with cow dung. The huts are roughly rectangular in shape with rounded corners and the roof is so slightly domed as to be practically flat. A very narrow low gap serves as a door giving entrance to a passage-way between screened off compartments to a common room with a fire on the floor. The roof is much too low to allow of standing upright but the smoke pall clinging to the roof and reaching down to about 3 or 4 ft. from the floor makes standing an impossibility at any rate. A very small slit in the wall admits but little air and light. Other ventilation there is none and the smoke has to find its way out by means of the door. Partitions made of woven reeds make compartments used for sleeping quarters and for the housing of very young calves.

The wench are the house builders and when not otherwise employed are often seen hand smearing fresh cow dung on the walls and roofs filling in the cracks to prevent leakage in the event of rain. Such houses are easily erected and may be used only for a few months when a shift has to be made to pastures new. Donkeys and the more docile of the cows serve as a mode of transport for goods and chattle. A village may be so situated in the midst of plenty of water and pasture that it remains occupied for a long period; but often in such cases, when they become too verminous, such villages are abandoned and new ones built on nearby sites the old ones being burned on the completion of the new.

Inside the circle of huts the stock is driven at night. Different owners may have separate little thorn "bomas" for their

epidemics depleting their stock. Many thus have far more animals than are necessary for their existence so that should pestilence come they may at least have left a sufficient number to provide them with milk and meat.

Before the advent of the British and the making of boundaries, the Masai with their large herds could roam about anywhere, and in times of drought they possibly found pastures near sufficient for their herds. Nowadays, inhabiting as they do a vast stretch of country, seemingly far more than sufficient for their needs, they are yet in time of drought hard put to find for their herds sufficient pasture within range of water and recently many animals died from famine.

Thus semi-nomadic for their very existence, living practically entirely on their cattle, the Masai are not of very great economic value to the Colony, with markets closed to them except for hides and some ghee produced in time of plenty. Apart from the above mentioned areas practically no agriculture is done. The Masai have remained rather a primitive people living under conditions probably much the same if not worse than they did hundreds of years ago while other African tribes have responded more to the civilising influences of the presence of a white race in their midst. For various reasons this unprogressive though very intelligent people have been very conservative and suspicious of innovations, but it is believed that they are awakening to the fact that they cannot remain as they are and an upward movement is under way.

The Masai live in family communities in villages which are called "Manyatta". These vary in size from about a hundred huts downwards depending upon the size of the family and the number of relatives. Living as they do in the midst of carnivores ready to prey on their stock, they have their Manyatta encircled by a high barrier formed of piled up branches of thorn trees

7

12

shape. The base occupies a large extent of the Tanganyika border from near Taneta and Kiliminjaro to the Kisii boundary and the apex approaches the outskirts of Nairobi. The physical features of this stretch of country are of great variety with wide ranges in altitude. There are mountains and hills and valleys and wide rolling upland plains. Certain parts in the vicinity of permanent streams and swamps are well watered and fertile but great stretches are semi-desert, covered with thorn scrub and without permanent water supplies.

Throughout this tract of land innumerable wild animals, of almost all varieties known in East Africa, abound and compete with the natives in the struggle for existence, against drought and disease.

The Masai population is estimated at about 50,000 people and the large majority of them are semi-nomadic living by and on their large herds of cattle, sheep and goats, following the water and grazing from place to place. A certain number at Rombo, around the lower slopes of Kiliminjaro, in Trans Mara and near Nairobi are taking to agriculture and have become more or less permanently settled.

It has been said of the Masai that they are potentially the wealthiest uncivilised tribe in the world because of the vast herds of cattle they own, but a non-marketable commodity can scarcely be called wealth. The presence of Rinderpest and Pleuro Pneumonia limits the sale of stock, but it is doubtful if the local market could absorb large numbers should disease be controlled and quarantine raised and there is the question whether Masai cattle could compete in the world market for beef.

The habit of amassing large herds of stock probably engendered away back in the days of cattle raiding when Masai believed that only they had any right to possess cattle, is still inherent amongst them. Another factor is the dread of periodic epidemics.

C.O.533

418

ALL WITHOUT PERMISSION OF THE
PUBLIC RECORD OFFICE, LONDON

all at the end of the preliminary baraza. People who had come farthest were dealt with first, regulating being left to the headmen and elders. To avoid congestion, unpleasantness and fatigue, a train of small groups was brought along by attending tribal retainers to the examination area while those awaiting rested in the shade.

Going first to the Native Laboratory Assistant each had a blood slide taken with thin smear and thick drop to be forwarded to the Research Laboratory for examination for Malaria and other parasites, had haemoglobin estimated by Taliquist's Scale, and was given a slip of paper on which was written the name, serial number and estimated percentage of haemoglobin of the individual. Passing on to the vaccinators, two dressers specially trained, those requiring vaccination were dealt with and sat in the shade until the lymph on the scarifications dried up when they came to the examination tent where the Medical Officer with an interpreter carried out the routine medical examination and the native clerk made the records of the findings in various columns prepared for the purpose. Any treatment deemed necessary was prescribed on the slip of paper brought by the individual who then proceeded to the other end of the tent where a trained native dresser dispensed the medicines etc. required.

The routine medical examination covered the same ground in each case and interrogations as to past history of disease etc. were made in the appropriate cases. Records were kept of the state of nourishment, the condition of eyes, ears, teeth, and gums. Hearts were examined for enlargement and the presence of bruits and lungs for pulmonary complaints. Records were kept of splenic and hepatic enlargement and other obvious abdominal abnormalities. Venereal disease was searched for in males and histories asked of women. The presence or history of Yaws was investigated

the co-ordinated efforts of the officials of various Government departments and of the Masai themselves through their recognised native Councils and individually. In pointing out how interdependent were advancement and health, the Medical Officer was introduced to give a talk on the common diseases and morbid conditions afflicting the people and how such might be eradicated or controlled. Methods of control of disease were discussed with the natives themselves in order to find out which were feasible at the moment and in how far they would be conflicting with their customs and present mode of life. Gradually in this way there could be evolved a policy that could be adopted in the near future and, by not being too revolutionary, and having been widely discussed with the people, would have more chance of success in its application.

The large majority of the people attending had come to be vaccinated but when they were told that the Medical Officer would like to examine as many as possible, apparently healthy people as well as sick, in order to get a proper measure of the disease etc., all were usually quite willing to come forward for examination.

The Moran, (Masai warriors) at first were usually more shy and retiring, and fancied themselves in the pink of condition, scorning the idea of Medical examination. Being very keen on feats of strength and agility, an evening's impromptu sports gathering conquered their shyness and revealed to many that they were not so fit as they might be when the owner of grey hair out-distanced youth. The competitive spirit aroused rivalry as to the possession of the highest percentage of haemoglobin and linked sports with Medical examination, the full examination following as a matter of course. There was much less difficulty when they were by themselves and women folk not about.

The routine vaccination, examination and treatment usually proceeded quite smoothly, the procedure being

measure of the morbidity amongst the Masai. Arrangements were accordingly made with the Laboratory to have weekly supplies of calf lymph sent out to various centres that would be specified from time to time.

The staff got together comprised one Native Laboratory Assistant, one Entomological boy, one native clerk, three dressers and a lorry driver. Ordinary safari equipment, tentage etc. for the Medical Officer and Native staff, sufficient Medical equipment and a varied supply of Medical stores mostly in compressed and tabloid form, left room on the lorry for the balance of the staff that could not be accommodated in the Medical Officer's motor car.

It had been arranged to commence activities in the Kajiado District where the District Commissioner had worked out a programme so that he could accompany the Medical Officer on safari throughout his District. Everything being in readiness Kajiado was reached on the 5th November, 1950.

Mode of Procedure:

At the various centres that were visited timely warning was given of the arrival of the safari and usually on the first day quite a number of natives of both sexes and all ages attended. On that and subsequent days there were usually as many natives attending as could be successfully dealt with. The number of days stay in any one centre was governed by the density of the population and the distance that had to be travelled.

Before medical examination was proceeded with, the awaiting natives were gathered together under a shady tree where a "baraza" was held. In the Kajiado District, the District Commissioner, who accompanied the Medical Officer on safari, opened the discussion with a talk outlining how advancement of the Masai could gradually be brought about through

MEDICAL SURVEY, MASAI PROVINCE

Introductory

Purpose of the Medical Survey.

The Medical Survey that has been carried out in the Masai Province was undertaken in order to measure the amount of disease amongst the Masai population, to determine whether there was urgent need of a Medical Officer for the Province, whether a hospital was necessary, and if so, of what size and where it should be situated, and to define a policy for future Medical and Sanitary activities for the control of disease and the development of the Masai.

Preliminary Arrangements.

The Provincial Commissioner, Masai, at Ngong was interviewed to arrange for a programme of work with the District Commissioners of Narok and Kajiado districts and flying visits were made to Narok and Kajiado to meet the respective District Commissioners to find how best the work of the Medical Survey could be fitted in with their "Safari" programmes.

A Local Native Council meeting was in session at Kajiado when the visit was made, and afforded an opportunity of gleanng information regarding the various diseases prevalent, and of gathering how the Masai might respond to the proposed survey.

Meanwhile at Nairobi the necessary staff, equipment, medical stores etc. were being got together and a motor lorry equipped for transport. It having transpired that the Masai were greatly in favour of vaccination from a particular dread of small-pox which decimated them in the past, it was considered that coupling vaccination with the Survey would greatly facilitate the bringing in of the people and give ample opportunities of getting plenty of material as unselected samples of the general population. They would not necessarily be coming to the doctor because they were ill so there could be got a fair

MEDICAL SURVEY MAGAI PROVINCE

DURATION 5th NOVEMBER, 1930 UNTIL 28th APRIL, 1931

AMONGST THE VARIOUS SECTIONS AT THE CENTRES SHEWN BELOW

Ebdokilani

Kajitado

Turoka

Kiloneto

Kisongo

Loitokitok

Engoitokitok

Ol Sinet

Loisoto

Loliponge

Rombo

Churia

Ol Dukai

Kaputie

Katatema

Limba

Kiu

Bisail

Lanerau

Purko

Norok

Lyobei

Alalunga

Ngorigorori

Lemek

Ol Tony o Rasha

Barakitabuk

Embouget

Naigarra

Loita

Sarara

Olul Tenayu

Ol Motio

Sendeu

Merijo

Narogona

Mr Eastwood,
COLONIAL OFFICE.

SOL. 0. 10-1

has note

With reference to your minute of the 11th August, we have, as arranged verbally, had 33 copies of Dr Philip's Report on a Survey of the Masai Reserve prepared.

The original Report and one copy was sent to the Colonial Secretary, Kenya, by the Air Mail of the 15th August 24 copies are being sent to him by the ordinary mail closing on the 20th August, 5 copies have been despatched to Dr Philip and 2 copies are attached herewith for use in the Colonial Office.

2

copy below
it

Recd. 7 - SEP 1931

We have informed the Colonial Government and Dr Philip that some of the place names and medical terms were not decipherable and that, as there was not time to refer to the latter, we have requested the Colonial Government to arrange for any necessary amendments to be made locally.

The cost of the work, made up of typists time (82 hours) was £7. 10/-, plus £1 for special stencils and £1.10. 1. Air Mail postage a total of £10. -. 1. and we are, as requested, charging it to Kenya funds. We should like an official letter from you authorising us to make the charge.

DEPUTY CHIEF CLERK,
CROWN AGENTS' OFFICE,
20th August 1931.

17315/31 King

150

C. O.

Mr. *Looney 4/11/31*
Mr. *Halliday*
Mr. *4/11/31*

Mr. Tomlinson.
Sir C. Bottomley.
Sir J. Shuckburgh.
Sir G. Grindle.
Permt. U.S. of S.
Parly. U.S. of S.
Secretary of State.

C. D.
R 4 SEP
D 6 1

7th Sept 1931

DRAFT.

*drawn against
for the balance*

(No. 1)

J. S. Bottomley

*with reference to
your minute, of Dec. 22/30,
of the 20th inst. ^{reference}
~~to the amount of £100~~
~~to the amount of £100~~
~~to the amount of £100~~
in the Report of the
Commission of Enquiry into
the Finance of the
Government of the
Province of Ontario,
and to inform you that he approves of the
provision of ~~£100~~ of
the Report to be made
therein on the part, being charges
to be made to the Treasury.*

17315/31 Kemp

188

C. O.

Mr. Posey ^{4/19}

Mr. Hatfield ^{4/19}

Mr. Tomlinson ^{4/19}

Sir C. Bottomley

Sir J. Shuckburgh

Sir G. Grindle

Permt. U.S. of S.

Party. U.S. of S.

Secretary of State.

C.D.
R 45EP
D 61

7th Sept. 1931

DRAFT.

~~to~~ ~~Mr. Tomlinson~~

from ~~Mr. Tomlinson~~
for the balance

(1701)

with reference to
your minute, of March 22nd 1931,
of the 20th August, ^{reply to} I have
~~to be satisfied with~~
~~about the sum of £1000~~
~~to be paid from the~~
~~provision of the~~
preparation of the Report
upon the Report
on the Annual Survey
of the Home Revenue, and
to inform you that the approval of the
the passing of a Bill of
June 2nd 1931, the substance
the Report to be made by
enquiries on the part, being charged
to the Home Revenue.

necessity for the extension of the
medical department's activities amongst
the Masai.

③

Unfortunately, owing to the financial
situation this will probably be
postponed but it is quite evident
that an medical officer with the
understanding and ability of Dr
Philip would be able to achieve
a great deal in helping the
tribe to control their diseases.

A. R. K. M. W.

24.9.31.

~~W. J. M. W.~~

Let Dr. Stanton see this to

Heims & note as at "A"

in the Eastwood's minute

J. W. M. W.

24/9

stave

been a most interesting
and valuable report. I had
already heard from Dr. Philip
the general results of his

Dr Philip called ^{to} on the ^{Friday} ~~before~~ before
I went on leave with the rest of his
report. He said he had had a
wire from Kenya that it was ^{of}
urgency required. He wanted
it therefore to send it off ^{by}
an mail of the following Friday.
On the other hand he did not
want to trust his only copy
to the air mail. Clearly
the report is to have to be copied
at some time: could we arrange
for it to be copied before Friday?

After speaking to Mr Allen I
arranged for the CA. to do this
at the expense of Kenya.

The report is most
interesting & valuable. It shows
the very great need for medical
work in the Reserve. The
practice of female circumcision,
syphilis & gonorrhoea seem
to be the three objects ~~targeted~~ against
which the medical Dept - &
the Dept. for - should direct
their energies.

I notice mention of an ~~infant~~ ^{infant}
mortality rate of 447 per thousand
(1942). In Kavirondo I believe it is
estimated at 550.

It will be interesting to see how
much mention this report gets in the
Native Affairs Dept report for 1951.
Perhaps this file might be, as a matter of
interest, to be brought up when that
report is received. It is ^{of} ^{great} ^{value} ^{as} ^{reference}
administrative material for the new chapter
on vital statistics etc which we have
suggested.

Dr O'Brien & Dr Stanton to see.
otherwise this may be put off.

G. Ratford
23. 9. 51.

This should be brought up for Dr Stanton
to see on his return.

Dr Philip has written a most valuable
report and I hope he will duly receive
some recognition for it.

The information regarding gonorrhoea,
syphilis and infantile mortality
is alarming and shows the urgent

1 Brown Agents _____ 20 August 2
Enclose two copies of Dr. Philip's medical survey
of Masai Reserve; 25 copies have been forwarded to
Kenya Legation authority to charge sum of £10.0.1 to
Kenya funds, for cost of copying etc.

The minute was apparently a
note etc by Mr. Eastwood and I am
unable to find out in what circumstances
the report was made or the copying authorized.
Perhaps Mr. Eastwood could enlighten us when
he returns from here.

D.H. The report is very interesting and
obviously useful so in the meantime?
minutes to the C.A. approving the
charge of £10 against Kenya funds.

R. B. Humberlain 29/8

Authorize payment by official
letter

a receipt to Mr. Eastwood (on return)

R. B. Humberlain
31/8 etc

2. To C.A. (1 Pmo)

7 - SEP 1931