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DESPATCH.

EAST AFR. PROT.
No. 22239

22239
20 JUN 08

No.
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129

(Subject.)

Sleeping sickness
in S. Kavirondo

Sends report by Dr. Paulac with sketch
map - also covering letter from P.O.s

(Minutes)

The despatch should be printed &
the map reproduced - & then copy sent
to the Director of the Sleeping Sickness
Bureau & the usual number of
copies to the Royal Society.

at mee.
H. J. R.
23/6

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ous Paper.



Governor's Office,
Mombasa,

May 28th 1908.

AFRICA PROTECTORATE.

No. 262

(Incl. 3.)

22239
REC
FILE 20 JUN 08

My Lord,

21409

In continuation of my despatch No. 252 of the 25th instant on the subject of Sleeping Sickness on the Eastern shore of the Victoria Nyansa I have the honour to submit Dr. Milne's report on his tour in Southern Kavirondo, with sketch map, and the letter of the Principal Medical Officer giving cover thereto.

Report by Dr. Milne
Map
18/1908.

I have the honour to be,
With the highest respect,

My Lord,

Your Lordship's most obedient,
humble servant,

Principal Secretary of State
for the Colonies,
Downing Street,
LONDON, S. W.

2-50

Copy.

18/1908.

P.M. Office,

Nairobi

6th March 1908.

Recd

20 JUN 08

Sir,

I have the honour to forward for the information of His Excellency the Governor a report by Dr. A. D. Milne on Sleeping Sickness in South Kavirondo.

The disease exists along the whole of the lake shore almost from Kisumu to and beyond the Anglo-German boundary, and extends for a variable distance along the river banks. The worst affected areas appear to be in the vicinity of the Magori, Kuja, Angotchi and Myunyo Rivers.

The banks of these rivers harbour innumerable Tsetse fly, but with very few exceptions the inhabitants have their villages well outside the fly areas.

The whole of the population living in the area shown in the map the limits of which are shaded brown, are greatly addicted to fishing, and men, women and children will walk for miles to one of the above named rivers and will spend the whole day wading in the water engaged in their favourite pursuit.

The disease was reported to exist at the mouth of the Kuja river by Dr. Christie in 1902, and since then has gradually extended some 25 miles up the river, the chief, if not the only, factor in its spread being the fishing industry.

Although it does not necessarily follow that everyone with enlarged lymphatic glands is suffering from Sleeping Sickness there is no doubt that the percentage

percentage infected with Trypanosomes is very high, and the question arises, what can be done to stay the disease?

Dr. Milne alludes to the establishment of a Segregation Camp, cutting down vegetation in the fly infested areas, and removal of the people from the source of infection. These are in the present state of our knowledge the only measures that can be adopted, either separately or combined.

I do not think that a Segregation Camp alone would do much good, because, unless situated well away from the fly infested rivers and their branches nothing will keep the people from their favourite pastime. They will readily enough go to a Camp when ill, but as soon as ^{and go} ~~imp~~ ^{it} takes place will return to their former ^{learning} ~~learning~~ ^{occupations.} ~~occupations.~~ homes.

Clearing, on account of its expense and the length of the river banks infested, appears to be out of the question. The crossings are all at shallow places and are said to be at present fly-free. It might be necessary to clear at some of the crossings to ensure this.

Removal of the population to a non-infected area - This I consider would be the most effective and satisfactory means of dealing with the disease, and should be combined with the establishment of a segregation camp for treatment, the camp to be situated near the district to which the people are to be removed. There

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there

There appears to be ample land available of good quality and well watered, but before any new district is decided on it must be thoroughly inspected with a view to being certain that it fly-free.

I have &c., &c.,

Sd/- J. W. L. L.

Per M. O. L. L.

PROCESSED
In Despatch No. 261 May 27, 1908

Nairobi,

February 1908.

22239

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20 JUN 08

I have the honour to submit the following report on my tour through the Uaya (Karungu) District of the Kavirondo Province to investigate Sleeping Sickness.

I arrived at Karungu on February 3rd and found that the District Commissioner, Mr. R. W. Hemsted, was away on duty at Kisii; I was therefore unable to glean much preliminary knowledge concerning the district. However, I am indebted to the Station Clerk, Mr. J. de Souza for organizing my safari, and for a certain amount of information of the country to be traversed.

February 4th at Karungu. The prisoners in gaol, 20 in number, were examined for signs of Sleeping Sickness; 2 were found with enlarged cervical glands. 11 Police gave negative results. 5 natives living in villages round about were brought up in marked stages of Sleeping Sickness, all with enlarged cervical glands. A 6th case, unable to walk, was visited at his village, and found to be in an apathetic state, mentally affected, also with enlarged glands.

February 5th and 6th. Owunda's village (6½ miles). As only three people were brought up, a second day was spent here, when 10 more were seen. Of these 8 were obvious cases with enlarged glands; three had been treated by injections between the shoulder blades at Sherati and announced themselves cured (one woman had still easily demonstrable glands in the neck, the other

two

5

two had no enlargement) and in the remaining two, no increase in the glands could be made out.

February 7th. Crossed the Kuja River and camped at Marera's village (6 miles). 19 people were brought up for Sleeping Sickness. All were marked cases, 4 of them practically moribund. In two cases the glands could not be demonstrated.

February 8th. Camped at the foot of Kibabo hill amongst three or four villages belonging to Owunda (9 miles). This spot was reported as being badly infected. I examined here 79 individuals - nearly all the population - many of them showing unmistakable signs of Sleeping Sickness and found 62 with cervical glandular enlargement.

February 9th & 10th. Camped at Chacho's village on the Magori River (13 miles). 67 individuals were brought up for examination (or diagnosis) almost all showing signs of Sleeping Sickness. Of these no glandular enlargement could be felt in 12.

February 11th. Camped near Guruibi hill at Sultan Gurajo's village (9 miles). No Sleeping Sickness reported here nor could any enlarged glands be found. Fly not found and stated to be not known.

February 12th. Camped on top of Butende hill (10 miles), inhabited by the Wa-tende - a tribe probably of the same stock as the Sotik, Lumbwa &c., generally known to the surrounding Kavirondo as "Masai". No Sleeping Sickness nor glands to be made out.

February 13th. Returned to Chacho's village (13 miles) and inspected all the people dwelling in one

zariba, 28 presented themselves:-

Number Inspected	No. with enlarged glands.
Women 24	14
Children ... 28	15
Men 6	3

approximately 55% infected. (Note. Several of these cases were counted in the numbers given on 9th and 10th

February 14th. Crossed the Magori River and climbed up into mountainous country, leaving on my right Makarao hill, said to be every bit as bad as Onacho's. This locality I did not inspect. Camped at Kenyankago (nine miles), and inspected the inhabitants of 3 zaribas totalling 111 individuals.

No. Inspected.	No. with enlarged glands.
Women 50	37
Children ... 43	20
Men 18	11

or over 60% infected. 12 more cases of Sleeping Sickness all with enlarged glands were also seen.

February 15th. Camped on Dedi Hill at Sakwa (13 miles). No Sleeping Sickness nor enlarged glands to be made out nor any knowledge of fly (I could find none) in the Sari river draining the valleys.

February 16th. From Dedi I dropped over the mountains on to the rolling treeless plain that runs North and South from Home Bay to Karungu. This plain is absolutely bare, and is dotted endlessly with villages; on the level of the plain from one spot I counted over 90 zaribas. At the foot of the hills I crossed the

Kuja at the point where the mamosa and scrub thorn jungle of the Kadem flats absolutely ends, and camped at Okuthi's village (in the Kibcoatch Sultanate) in the fork formed by the Riana River with the Kuja (5 miles). Here I was informed that outside this locality, higher up the Kuja and the Riana Sleeping Sickness did not exist; that 4 years ago, Okuthi's people inhabited the district Niakary 8 or 10 miles further down the Kuja, and, owing to the mortality from Sleeping Sickness they had deserted their former homesteads and settled here on the open plain. 18 cases of Sleeping Sickness were produced for inspection everyone of whom had enlarged glands in the neck. Of 53 individuals taken at random round the tent door, 24 had enlarged glands - 45% infected.

February 17th. As I had received a letter from Mr. Hemsted that he had returned to Karungu for a few days stay only and wished to see me, and as I was anxious to discuss matters with him, I gave up my intention of examining the banks of the Kuja and then the Riana towards their sources, and proceeded instead to Kanyamwa, camping on the Merogi River (9 miles). No cases of Sleeping Sickness to be seen here, nor enlarged glands nor fly.

February 18th. Arrived back in Karungu (81 miles) after enquiring for cases of Sleeping Sickness or fly at Ojoe's Sultanate en route with negative results.

At Karungu I found Mr. Hemsted and Mr. D.R. Crampton, Assistant District Commissioner who had arrived to replace Mr. Hemsted. Mr. Hemsted and I arranged to proceed on February 20th back to the borders of the Kadem and Suna districts to choose a possible site for a segregation

segregation camp but unfortunately I was confined to the house for three days with an attack of malarial fever and this part of my tour fell through.

1. Extent of the fly areas.

The river Kuja is the source et origo of the spread of the disease. The fly belt runs from Karungu round the lake shores to Mohuru, in erratic scattered patches which sometime literally swarm with tsetse fly. From the Lake it would appear to be continuous up the whole course of the Kuja, to the foot of Segegi hill which was the highest point where specimens of the Glossina palpalis were obtained. The next most infected river is the Magori; in fact all the rivers - Angotchi, Myunyo &c., - flowing into the Kuja continue the infection in a greater or less degree. In the map attached the extent of the infection from these rivers is shown only it must be understood that the G. palpalis is closely confined to the river banks or seashore.

The fly would appear to be very closely restricted to a limited range on the banks of the river; and no examination of the native villages, especially in the thick euphorbia hedges which surround them or are adjacent to them, ever revealed a single specimen. I understand that the German authorities have cut down all these hedges.

2. Number of Cases of Sleeping Sickness.

(a) Imported.

Probably the cases in the vicinity of Karungu have been infected from fishing in the neighbourhood of the mouth of the Kuja, i.e., where the foreshore has not been cleared the only cover is umbatch trees.

(b)

9

(b) Locally infected.

Some 300 cases were in the course of, the tour, nearly all with enlarged cervical glands, and over 200 of which were defined cases of Sleeping Sickness. From the counts made, in the affected area of whole villages examined, the number of infected people may be taken as at least 50 to 60% of the population. Mr. Hemsted gives me that population as 12,700 souls some 6 or 7000 souls who are in the various stages of trypanosomiasis, ranging from three weeks to one year ill. The vast majority of the cases gave a history of 3 to 4 months sickness i.e. from the end of the last rains.

3. Question of a segregation camp.

I am certainly of opinion that a segregation camp for treatment by Atoxyl should be established. The natives have a full knowledge of the measures taken by the Germans at Sherati, and are everywhere eager for treatment.

As regards a site, almost any one of the Sultanates could be chosen at random from the point of view of patients. Each one of the Chiefs begged that it should be placed in his district; and wherever placed I am convinced there would be no difficulty in filling it with more patients than could be attended to.

The following is the distribution of the population:-

Owunda's)	Kadem	7000
Oboe's)		
Marera's)		
Chacho's)	Suna	2500
(Gurajo's)		
Migwe's)		
Eng'udi's)	Mohuru	400
Gkuthi's)	Kakarao	350
	Kenyamkago	2800
	Kibatch	750

I would propose, however, that the locality selected should be near the junction of the R. Angotchi with the River Kusa. This would be almost in neutral land between the Kadem and Suna districts, would tap both, and be within reach of the Kenyankago, and would only leave at a distance Kiboatch and Mohuru. The drawback to this place is that from the R. Angotchi to near Chacho's village a distance of 10 miles is practically uninhabited.

4. Question of food supply and willingness of Chiefs to provide.

There will be no difficulty about the supply of food (though at the present moment owing to the drought there is a shortage); only a matter of arranging beforehand with the various Chiefs for their people to bring in and continue to bring in their own supplies.

The land is rich in cattle, goats, sweet potatoes, native grain, fowls, eggs and milk &c.; in the rains there is a large consumption of dried fish.

Prices range as follows:-

Cattle (for slaughtering)	Rs. 15/- to Rs. 18/-
Goats and Sheep	Rs. 1/- to Rs. 2/-
Fowls	25 cents.
Eggs per 50	Rs. 1/-
Milk per bottle	4 cents
Mtama flour 60 lbs.	Rs. 1/-

Posho money in lieu of rations may be taken at 6 cents a day.

5. Question of erecting necessary buildings &c.

I think the Chiefs and people would all be quite willing to put up the requisite huts and bandas. Mr. Hemsted assures me there would be no difficulty on this point. In all the districts except Kiboatch there is a sufficiency of timber, and plenty of fuel.

6. Question of Clearing.

I do not think that this is practicable, at any rate it is too large a question for me to offer any suggestion on at present. What could be done is wide clearings at all the most used approaches to the fords across the rivers.

7. Removal of population from infected areas.

If this should be decided on, Mr. Hemsted informs me that there is plenty of available land up in the hills. This land is on the head waters of the Magori near and beyond Lutende along the border, about 60 miles from Karungu. It would mean the dispersal of some 4 or 5000 huts and their transference to 25 to 60 miles away.

Cause of the Spread of the disease.

Probably the main cause of the extension of the disease is the Kavirondo's devotion to fishing, and in this view I am confirmed by Mr. Hemsted. He tells me that it is nothing for a native to walk miles to spend a day fishing in the Kuja, wading about all day in the water. The women are just as eager as the men, and doubtless the children too. Some little time ago numbers of them brought up to him their dried fish and told him that was the cause of the epidemic. Most of the cultivated land is on the slopes of the ridges, and but little in the valleys, and the villages generally speaking are ideally situated well out of the fly range. In seeking for the fly I was invariably referred to the river. The river crossings cannot be very fertile sources of infection, as, judging from my own experience, only once I was bitten. I only succeeded in obtaining two species, constantly the *Glossina Palpalis*, and

and 11

and once the *Glossina Pallipedes* (Kuja).

MAP.

I have inserted in the map an inset showing the extent of the infection as mapped out by Dr. Christie in 1902 (Royal Soc. S. S. Reports Vol. III 1903) and a companion visit showing present extension for purposes of comparison. In order to complete the Sleeping Sickness picture of the whole Uganda district I have inserted the approximate extent and areas infected in the northern portion (which I did not visit) from information given to me by Mr. Hemsted.

Vocabulary (Compiled by Mr. Hemsted).

Tsetse fly - ma-ugo well known to the Kavirondo who probably recognise it best as the fly that bites their cattle when being watered.

Sleeping Sickness - Thonindo from the two words Otho - to die, and Nindo - to sleep; literally "the Sleeping death".

Sick (adj). - Otho

Mosquito. - Suna.

Conclusion. I think the most lamentable feature of whole year was the extraordinary number of young children from 2 years old upwards that either showed well marked symptoms of Sleeping Sickness or had enlargement of the cervical glands, varying in size from small shot to broad beans, all as described by Mr. Grey. (In Vol. VII Royal Soc. Reports on Sleeping Sickness.

Some 40 gland smears were taken from all the localities.

35 smears were examined in the laboratory, 20 showed trypanosomiasis, and in the remaining 15 none were detected.

A. D. M.

localities and reserved for examination.

Karungu was left on the afternoon of February
24th and Kisumu on the 25th.

I have &c., &c.,

Sd/- A.B.Milne