No. 15306
SUBJECT CO 533/379

Lensus of bases of Sleeping
Suckness

De 4 Engel's Report.

De J. Enger's Report.

Previous

Governor Grigg 345 123 June 1938. The a copy of a report by It have on the conclusion of a very of the population around the shore of the Victoria hyange for the purpose of making a comme of cases of Steeping Sickness and treating all such teasts D. Slanton May we have your floors . please Viesumably when shit to to the Yes: the was Bureau & thygiene . Tropecal Redicine inentioned by rabo to the Tse to Ply Sublommittee Mouton at ga Towars of we hight as I for any disons. Today Enoller injecting. are Ind the meantine ack, Day (ofices here) represed to Those bodies. and (4 you agree) concur that I - Enger's You & work sho be complemented on his work, That I ? is being so informed. And wform him accordingly that color of our siets. acopy & his letter for on the fale. 120 10 B. H. 7. M. (He cron leave with 16 ang) 1.7.5.c. out Teel we aught also suggests 10 for that of it has not already been done, a colony S.W. besent to Other as anda for the of The Director The Dastitute. & Trypansonians Research ar Enlette Albinean (6)

DEATHOUSE SEPTEMBER OF Civil Research May May 1918 acknowledges host which will be considered at 3 In opysty- Fore will next meeting of Commettee of Civil Research to the Tretse Hy Sub Commettee Afeffic 207.28 Mr. ashworth acclaimmen ? put by alforden hearly all the places are marked H.T. Ashworth. 1:1.000.000 sup thick a good hier of work. The Sarkyrason Lewis of now min of 14 ang. Nothing for from Bruneau of Hyguene Krop biseases or Tactice. Hy Sul. 6 'lie. DESTROYED UNDER STATUTE --1750 1 C.C. R. will no donur MISTROYED UNDER STATUTE of the Man 1 400) THE HOVED UNDER STATUTE I we cope That I was to consider the at their woulding on 11'oct - 10 me can whit 5. " Sa. 566- 1 ans wo copy 2 No weed to remind B. Har. D. The UNION STATUTE tryque of for weeks before D. Bugahaw has opportunity of reading Please see above minutes. Willing. A Enge's report further yel precioed round fil loved for frother letter from Both of m. plus fecies 4 6 william h This was considered not an never no the the m Medica mering your fue cha he Mistal con

Committee of Civil Research 2 hor 24. States that Isets Hy Sub- Ctie cominer that D! hours's report would have been of atill quality value of it had been possible FUREAU OF HYCIENE & THOPICAL DISHASES. 23 LOV. Submits observations on Dr. Enzer's report and hopes to other statisties more nearly comparable that Dr. E. will be available to re-inve tigate the same area in a few years' time. Doubts whether or. will be able to furnish the comparable statistics with these of previous observers. ? to some civile to you refer ? now some dep: last on in nos sony wat he by S. g. l. han now beaut that the tolke for sub chie have commune Mysis 2 sand copy of 7 10 . 11 6 Trate of out Cost for absorber their · report a after (pull orsussion recomments as a para 2 . 2 . infle to copy of no 11 to ask t be cut metter in num 14 Bream of H & ED Can be made a make the & Eastward I think we may incorporate IT. Hemind Bureau ? Baghame's porar sit who he derp. It paid Trip biren so ref . 6. at without surveling the The Ise Play Scale has the scape time is 1155 for their wife Hispana 2 varily seems wiended tobe copy of 80 rayer. Lat myset to would his series communcate with the 9 m. whe. ence five Thethe fleg sub ( training he leel recommendations but before unling ? for mean his house 5 and 4, our thing with award the receipt of any As in the Bura you have to Alex

I am not sure that their should not have been a general ple as repairment is a general subject), but I amedin't alte is now. Copies of the himapal cores should known go on the general 50826/28 Gul file worst triple work gate in tal and no doubt outily a obtain copies already made for the C.C Speppies

Mr. Seel 129. 11. 1. Stanton 30 11 Mr. Parkinson 3 Mr. Bottomley. Sir E. Harding Sir J. Shuckburgh Sir G. Grindle. Sir C. Davis. Sir S. Wilson Mr. Ormsby-Gore Lord Lovat. Mr. Amery. dov. Grigg. greater value if it had been possi ie copies 1 9 10 this to obtain statistics more nearly p. c. e. a. my 8 a copy of the primes B. H. a 9. M. mf . 0

X.15306/26 Kenya

Downing Street.

In continuation of my despa

sir,

No.566 of the 6th of August, I hav the nonour to inform you that the Tastse Fly Sub-Committee of the state that the Committee of Civil Research to who have received with wherest D. a copy of br. J. Enzer's Report on Enger's valuable Report on fleeping sickness on the snores of 2 The Sub-Committee Lake Victoria van communicated, havesuggested that parts of the Keport would have been of still

comparable with those of previous observers. The

Research have accordingly quired whether it possible for the statistics in Dr. Enzer's report to be re-examined from this point of view. I understand it to be the view of the Director of the dureau of lygiene and Propical Diseases (wno, as you are aware, is a member of the Asetse Fly Sub-Committee but who was not/ present at the meeting when Dr. dazer's report was considered) that it is souttful whether such comparable statistics could furnished since no observer has nisherso . Jatematlou... j exam-

of Ayriene and Tropical Diseases has also expressed the hope that Dr.

Anner will be available to investigate this area again in a few years' time, since re-investigation by the same observer of a disease of this kind in the recognition of which the personality as well as the acumen!

Secount for much, is of decided by creater value than any fresh enquiry is likely to be.

You will no doubt arrange

for the view expressed in this

lesigtah to be dommunicated to

Geleb

the Director of the Institute

Human

of Pry. panosomiasis nesearch

at Encebbe for the information. The Kept wormed & any

I have, etc.,

further work which may be undertaken as a result I him despatch in connection with luger's Observation

C.M.G., M.B., D.P.H.

Assistant Director ; J. P. C. HANLAM, M.C., M.D., D.P.H. M.R.C.P.E.

> Secretary and Librarian ; M. L. SHEPPARD.

> > Telephone No. MUSEUM: 3326.

BUREAU OF HYGIENE AND TROPICAL DISEASES

(formerly Tropical Diseases Burrau),

23. Endsleigh Gardens,

LONDON, W.C.1.

23rd November, 1928

Sir.

I have the honour to acknowledge the receipt of your No. 3 letters of August 8 and November 13 (15306/28) on the subject To g of the Report of Dr. A.J. Enzer on the investigation of the sleeping sickness position on the Kenya shores of Lake Victoria, and to express regret for the late date of my reply. I have looked up the past records of trypanosomiasis in 2. this area from Dr. Christy's Reports of 1902 and 1903 onwards. with a view to seeing whether any conclusions could be usefully drawn as to the natural history of the disease in an area in which, for various reasons, preventive measures have never been systematically applied; but partly for the reason given in the recommendations of the Tsetse Fly Sub-Committee, and partly from the want of detail in the records one cannot come to any useful conclusion.

> 3. I hope Dr. Enzer will be available to investigate this area again in a few years' time, since reinvestigation by the same observer of a disease of this kind, in the recognition

of which the personality as well as the acumen count for much is of decidedly greater value than any fresh enquiry is likely to be.

4. I donot whether Dr. Enger will be able to furnish the compared le statistics asked for, because no-one, as far as I am sware, has systematically examined even a large proportion of the natives in this area, whereas his figures exceed 200,000. The value of his work in this respect is much area than that of any of his predecessors.

I have the honour to be,

Sir,

Your obedient servant,

The Under Secretary of State for the Calonies, Colonial Office,

S. W. 1.

Any further communication on this subject should be addressed to :- .

THE SECRETARY.

COMMITTEE OF CIVIL RESEARCH,

2. WHITEHALL GARDENS, S.W.1,

and the following number quoted.

H. G./12.

COMMITTEE OF CIVIL RESEARCH.

2, WHITEHALL GARDENS,

LONDON, S.W.1.

2nd November 1928.

Sir,

I am directed by the Committee of Civil Research to request you to inform Mr. Secretary Amery that at their meeting held on October 11th, 1928, the Tsetse Fly Subcommittee had before them your letter of August 8th, 1928, (15306/28) transmitting copies of correspondence with the Governor of Kenya in regard to a Report by Dr. A.J. Enzer, Medical Officer, on an investigation of the position as regards sleeping sickness on the shores of Lake Victoria.

After full discussion the Sub-Committee agreed to racomend: -

- (a) That the Committee of Civil Research should inform the Secretary of State for the Colonies
  - that they had received with interest Dr. Enzer's valuable Report on the position in regard to sleeping sickness on the shores of Lake Vidoria;
  - (ii) that they considered that parts of this Report would have been of still greater value if it had been possible to obtain statistics more nearly comparable with those of previous observers;
- (b) That he Committee of Civil Research should suggest to the Secretary of State for the Colonies that he should inquire from the Governor of Kenya whether it would be possible for the statistics in Dr. Enzer's Report to be re-examined from the point of view of recommendation (a)(ii) above.
- Lord Balfour concurs in the recommendation of the Sub-Committee, and I am to express his Lordship's hope that the Secretary of State will communicate with the Governor of Kenya in regard to the point dealt with in recommendation (a)(ii) above of the Sub-Committee.

I am, Sir, your obedient Servant,

Secretary, Committee of Civil Research.

ty to bureau of tyg & Llook Des

x.15306/28 Kenya.

Mr. Bestwood 3/19 Mr. Alexand 3/17.28

Me. Bottomleys

Str E. Harding.

Sir J. Shuckburgh.

Sir G. Grindle.

Sir C. Davis.

Sir S. Wilson.

Mr. Ormsby-Gore.

Lord Lovat.

Mr. Amery.

### DRAFT.

KENYA

No. 568

Gov. Grigg.

(alliane and )

Months Street.

8 Abgust , 1928.

Sir,

I have etc., to acknowledge the

receipt of your despatch No.343 of the 22nd June transmitting a copy of

A. a report by Dr. J. Enzer on an alection

sickness investigation of the hopora in an agando scepus sickness

population on the shores of

Lake Victoria Byense 2 Copies of

have been

Dr. Enzer's report are being referred

Director I be to the Bureau of Hygiene and Tropical

Medicine and to the Tsetse Fly Sub-

Committee of the Committee of Civil

Research for their observations.

would sugar- that if I should also be glad, if this has

not already been done. Es copy

be sent to the C.A.G. of Ugande for

the information of the Director of

the s

the Institute of Trypanosomies

Research at Antebbe.

hay add that I have read the report

with great interest, and/I concur

in your suggestion that Dr.Enzer's

work deserves an expression of approbation

Aletter han been sent to his hich I have accordingly caused to

D. Enger has been so wformed is a be conveyed to him.

letter And has been sent I have, etc.,

Jumich I andose a copy for your aformation.

(Staned)

No. 343



GOVERNMENT HOUSE.

KENYA

16 JUL 1938

22" June 1928

Sir.

I have the honour to transmit herewith, for information, a copy of a report furnished by Dr. J. Enzer on the conclusion of a survey of the population around the shore of the Victoria Nyanza for the purpose of making a census of cases of Sleeping Sickness and treating all such cases.

- 2. The report is of considerable interest and value. For the first time a correct appreciation can be made of the position with regard to Sleeping Sickness in the Colony.
- 3. In regard to the most seriously affected areas the measures advocated with regard to Kaniadoto have been put into force while attempts are being made to carry out the procedure indicated for Seme and Uyoma. As opportunity occurs further inspections will take place.
- 4. I consider that Dr. Enzer has performed a most creditable piece of work which, from the nature of the country, had to be carried out under conditions of considerable personal discomfort. The results could only have been attained by the

-cxercise-

THE RIGHT HOME MALLE

LIEUTENANT COLONEL L.C.M.S.AMERY.P.C.,M.P.
SECRETARY OF STATE FOR THE COLONIES,
DOWNING STREET,
LONDON, S.W.1

5. I would suggest that Dr. Enzer's work deserves an expression of appropation from yourself.

I have the honour to be,

Sir.

Your most obedient, humble servant,

Edward Srigg.

GOVERNOR

## REPORT ON A SLEEPING SICKNESS INVESTIGATION IN KENYA.

1926 - 1927

#### Object.

To carry out a census of the lake shore and riparian population with a view to ascertaining the present position as regards sleeping sickness in the infected areas.

The census was commenced in July1926 and completed in November 1927 and a total number of 209,528 examined.

the following locations were visited and a census carried out:-

#### Central Kavirondo.

Samya

1		
Kadimu		
Sakwa		
Uyoma		
Asembo	Population examined	128,147
Seme	Trypanesomiasis	253
Alego (certain areas)		
Kibigori		
Kano Plains		
Nyakatch		

#### Worth Kawirondo.

Bunyori (certain areas) Population examined 2,934

Trypanosomiasis

South Kavirondo.			1
Krachonya	1 1	1. 1- 1.	
Kochia C	the state of	A CONTRACTOR OF THE PARTY OF TH	A
Kaniada	,	a de	1.
Kaniadoto	)	,	. 13.41
Kabwoch	)	4	
Kabwai			
Kaniamoi (certain ar	eas) )		4.24
Kaniamkago	<b>y</b>	Population examined	78,447
Mohoru	7	rrypanosomiasis	134
Kadem	)		
Sunu	)		
Gwassi	) -		Ý
Kasogunga	)		
Kaksingiri	)		

#### Method of Carrying Out of Census.

At first each village was written down with the total number of men, women and children, as ascertained by interrogation of the people themselves, and as each individual came along to be examined his village was turned up in the list and marked off. This proved too laborious and uncertain as many of the people were not possessed of sufficient intelligence to know the name of their own village.

The method eventually used was to make each mnypara bring all his people on one day, together with a list of those left behind to guard villages and cattle or those away from the locations. By checking these figures with the administration's hut tax census remarkable accurate results were obtained. A final discrepancy of 8.10% was noticed, this being due to men engaged in work outside their location.

Approximately 92% of the population were examined.

#### Methods of Investigation.

the people were drawn up in long lines and examined by neth palpation and in some locations axillary palpation, and any with enlarged glands selected for microscopic examination irrespective as to whather the clands were those typical of trypanoscomissis. Again any cases with typical facies or those complaining of persistent headaches were selected.

At first thick films stained with a fresh mixture of Azur ii and Eosin were used but this method proved too laborious and uncertain.

Afterwards examination of fresh gland juice, followed by centrifuged citrated blood in negative cases and by lumbar puncture and subsequent examination of the cerebro spinal fluid was found to be both rapid accurate.

In over 80% of positive cases trypanosomes were found in the fresh gland juice at the first examination, and in under ten minutes search.

The examination of centrifuged blood does not appear very reliable as a method of investigation as compared with fresh gland juice. In many cases where trypanosomes were easily demonstrable in the gland juice they were not found in the centrifuged blood.

Palpation of axillary glands is labour in vain. In nearly every native palpable axillary glands are present as a result of injuries, scables, etc., and in those natives in which trypanosomes were found in cervical glands, axillary glands were not always palpable and in one were they pronounced or typical.

Cerebro spinal fluid cell counts were carried out
for all cases to ascertain the progress of the disease and
-to estimate-

estimate the effects of treatment.

Cerebro spinal fluid cell counts of 200 or over have been regarded as diagnostic of sleeping sickness in a sleeping sickness area even where trypanosomes have not been demonstrated in blood or glands. Other diseases producing a high cell count having been eliminated.

The following figures give some idea of the number of people examined microscopically as compared with the number of cases.

Karachonya		101	suspicious	cases	examined	6 positive
Kaniadoto		188	. 4	12	10	109 ₩
Kabwoch	, .	42	, v	19	н	2
Bunyori		83		и	и	None "

# The present position in the various locations as revealed by the Census.

Samya. 50 cases found. These are scattered along the whole coast line. The infection is relatively unimportant except for its proximity to the Uganda border. Nothing can be done by bushclearing as the operation would entail an enormous amount of work and with so few cases not worth while. census at intervals with subsequent treatment would appear the best way of dealing with the disease here.

Kadimu. 13 cases found. This location can be disregarded as cases are so few and bush so scattered.

Sakwa. Il cases found. The infection is negligible. The few cases appearing to come from any and every part of the coast line and Yala River.

Uyoma. 113 cases found. This is the most highlinfected location in Central Kavirondo. Cases were for the

most part recently infected and the chief atatas about one hundred people dre yearly from the disease. Much can be done by cutting waterways, etc. A census should be taken at intervals followed by treatment of cases.

Asembo. 2 cases found. These apparently contracted the disease in Uyoma. Nothing need be done here.

Seme. 38 cases found. The infection in this location is confined to a very small area in which however the infection is intense. Half the cases found were in an advanced stage and had had the infection to their knowledge from varying periods of 6 months to two years. The disease appears to be mild in this location. Twenty people are stated to die yearly. This appears an exaggeration.

The disease can be eliminated by bush clearing.

Alego. 19 cases found. These were contracted on the Yala River over a large area. Can be disregarded.

<u>Kibigori</u>. 4 cases found. Contracted on branch of the Nyando River. Negligible.

Kano Plains. No cases found.

Nyakatch. 3 cases found. The natives state the disease has died out. On the other side of the Miriu River a totally different opinion exists. Probably through the constant influx of experts sleeping sickness is so firmly established in the native mind that nearly all diseases from scabies to pneumonia are regarded as being due to trypanosomiasis. Steps have already been taken to eradicate the disease by clearing the Miriu River.

Active cultivation of the cleared areas is present.

APP

Morth Covirondo. 1 case discovered. The disease was contracted at Seme, Central Kavirondo.

#### South Kavirondo.

Karachonya. 6 cases discovered. As the coast line in this location is over 40 miles in extent and bush exists for a very large part, with so few cases the location may be disregarded.

Kochia. 3 cases discovered. All contracted an Aloach River. Of the three cases only one shewed trypanosomes. The other two were doubtful, shewing clinical symptoms and an increased cerebro spinal cell count.

As only ten villages lie in close proximity to the river this location may be ignored.

Kaniada. 1 case found. This patient came from Kaniadoto and contracted the disease there.

Chief states no sleeping sickness since the epidemic.

Kaniadoto. 109 cases found. These all came from Kaniakela, a subdivision of this location with a total population seen of 845. In addition nearly all the other cases found in South Kavirondo contracted the disease here wither by passing through on safari or by cutting timber in the bush.

This is the only location in South Kavirondo that merits attention. Bush clearing is impracticable owing to the enormous extent of the bush and to the scarcity of population.

Arrangements have been made with the Administration to evacuate the area.

the local maypara states that fifty people die

yearly in his subdivision of sleeping sickness.

Of the 109 cases found only 29 should any variation from normal in the cerebro spinal fluid, thus suggesting they were recently infected and that the old cases are dying quickly.

Kabwoch. 2 cases found - both contracted the disease in Kaniadoto.

 $K_{\rm B}$  bwai. 3 cases. found: Two contracted disease at Kaniadoto and 1 at Kasigunga.

Maniamwa. 4 cases. All contracted at Kaniadoti.

Kaniamkago. No cases discovered. Case reported by Dr. Madgewick, Gendia Mission, said possibly to have contracted disease in this location. Case diagnosed on clinical grounds.

Mohoru. No cases.

Kadin. No cases.

Sunu. No cases.

Gwassi. No cases.

Kasigunga. 6 cases discovered. Population so small and contact with fly so loose that no steps need be taken other than treating existing cases.

#### Kaksingiri.No cases.

From evidence obtained from the natives , from reports of various Medical Officers in the past, although

records of exact microscopical findings are unfortunately not available and from observations during the investigation, it is evident that sleeping sickness is becoming less and less a menace to the maintenance of health war in the native reserves.

Even now, provided a few elementary precautions are taken an kept up, it may be regarded as a comparatively negligible factor and there seems no reason to doubt that in a few years time, if prophylactic measures are carried out, it will be a matter of considerable difficulty to find even one case of sleeping sickness.

#### Virulence of the Disease.

The type of disease met with in Kenya is undoubtedly mild. Generally speaking with the exception of cases at Maniadoto the disease appears to persist for a year to eighteen months before it invades the cerebro spinal system as shewn by the increased cell count and even when this has occurred another year elapses before the patients are unable to fend for themselves.

The advanced cases linger on for months before death.

#### Treatment.

At first treatment was of a very haphazard order, due to two factors, an attempt to run treatment in one location concurrently with the census in another, and to the supplies of Bayer 205 and tryparsamide being irregular.

The line of treatment adopted was 1 gm Bayer 205 given intravenously on the first, eight and thirtieth days followed by three weekly injections of 2gms tryparsamide,

Actually owing to irregular treatment many of the --patients--

patients received a far greater number of injections than this. Eventually on the completion of the census in Central Kavirondo a tour of treatment was made and all patients received the full course.

In South Kavirondo owing to lack of time the cases have so far only received a sterilising dose of Bayer 205. Arrangements have been made to ensure their obtaining the full treatment.

With such a disease treatment in a hospital is impossible. The natives refuse to stay in for the two or three months necessary for cure as they in many cases feel perfectly well. It is essential to visit them in their locations.

#### Prophylaxis.

In most places in Kenya the recognised methods, the bush clearing, cutting of waterways and evacuation of areas are not feasible propositions, as the disease is so scattered that it would mean clearing the whole coast line from the Uganda to the Tanganyika border and secondly the percentage of infection is so small that it would be mere waste of time and money.

In three places however these methods should be adopted:-

At Seme where bush clearing would effectually eradicate the disease.

At Uyoma where the cutting of waterways would materially lessen the chances of infection, and

At Kaniadoto where evacuation of the area conserned would stamp out the infection.

Apart from these prophylactic measures a Medical

Officer should tour the infected locations every eighteen months and carry out a rapid census. Treatment of the few cases found could easily be carried out by a trained dresser. This would establish a twofold object - diminish the risk of infection by eliminating the human carrier of the trypanosome and prevent any possible recurrence of the epidemic by obtaining timely warning.

Sleeping sickness in Kenya does not merit the full time work of a Medical Officer. Two to three months every eighteen months would be ample time to devote to this disease.

#### Administration.

Great assistance has been rendered by Mr. Charles Tomkinson, District Commissioner, Central Kavirondo, and Mr. S.O.V.Hodge, District Commissioner, South Kavirondo, in the carrying out of the census.

#### General Disease.

During the progress of the census general diseases, were tracted in a tent used as a dispensary. 52, 074 patients received treatment including 16,400 injections for yaws and syphilis.