

up with
reimbursement

EAST AFR. PROT.
139666

C O
39666
18 NO 13

number 842
1913
October
previous Paper

MACA
Reports of the... We are
submit proposals to... Administration. Encloses
map, Report on Water... Mr G.K. White and Report
on search for... River. Mr R.H.
Woodman.

3 Dec
Prop for...
Appendix No 2 to...
28

Mr G. Fiddler Sir J. Anderson
para. 2. We were anxious that the
Sir 82^d see the country during the
dry season (see deep on Enc 1/2)
para. 9. Note the last sentence.
para. 11. We have had conversations
with the Co^y about this & they
are also satisfied with the new
arrangements.
para. 12. I think that the pro^{posed}
altitude is a reasonable one & that
we 82^d approve.
para. 13. This is a distinct step
towards... Express satisfaction?

subsequent Paper
2947

Jan. 20. Note with satisfaction the proposed construction of a bridge across the Juass Nyiro.

Jan. 22 + 23 ²⁵ Say that Mr. H. has been glad to receive the satisfactory account.

Jan. 24. Say that, as he is aware, Mr. H. attaches the greatest importance to the water question & that he is glad to observe that an examination of the whole of this side of the country is to be undertaken as soon as practicable.

Jan. 26. Approve of the Gov^r's action, especially in deferring the permanent occupation of the site until it has been sufficiently tested.

Jan. 29 Mr. Watts is a very competent irrigation expert. He was formerly in the P. W. Dept^t of India. See the marked passages in his report. Say that Mr. H. has read it with interest & satisfaction & is glad to see that good progress is being made with the provision of an adequate water supply for the district.

Jan. 32 + 33. Mr. Woomer's report is interesting & so far as it goes, reassuring (see pp. 10, 15, 17, 18) but the country will require more examination while of the Reserve.

June 20. Note with satisfaction the proposed construction of a bridge across the Guaso Nyiro.

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June 31³³. Mr. Wooman's report is interesting & so far as it goes, reassuring (see pp. 10, 15, 17, 18) but the ^{whole of the} Reserve ^{will require} more examination.

before we can be sent how we stand
with regard to the tea-tee. So please
refer to our despatch No. 695 of 22nd of Aug. in which
+ say that a copy of Mr. W.'s report
will be sent to the Tropical Diseases
Bureau + also to the Imperial Bureau of
Entomology - + when the despatch has
been printed, send copy of the Report
accordingly: the map^t to go to the
Bureau of Entomology + Dr. Nagelkerke to
be inf^d that the map has been sent to
Dr. Marshall.

para: 34. The latter part of this para:
answers the question last para: of
our despatch No. 473 of the 19th of
June 1853 on the
1853

para: 38 (latter part). I think that it
will be well to leave legislation alone
as far as possible, but it will be time
enough to consider this when the pro comes
the question again?

para: 40 etc. This is the garden of Eden
The pro makes out a fairly good case
but it is not the paradise we were led
to expect.

para: 45-49. Approve of the new
T. O.

It is
to send
right one.
y. h.

admission to arrangements, which will no
doubt have a beneficial effect in
enabling the fact to get into closer
touch with the masses.

June 51 - Say that Mr. St. is of opinion
that the time has not arrived when it
is either necessary or desirable to refuse
a cattle tax upon the masses - ^{which} ~~is~~
~~that, as a point of view, he is of opinion that~~
~~should not be considered as a tax of that~~
~~kind would have to be of general~~
~~application throughout the Empire?~~
or a consequence of the more
application throughout the Empire?

Thank the Genl for his interesting
report & express appreciation of the
 pains which he evidently took to
make himself acquainted as far as
possible with the Revenue during the
time at his disposal & invite with
reference to the various para: in the
course of the foregoing, & write to
the Tropical Diseases Bureau & Bureau of
Entomology as proposed?

H. J. R.
19/11/13
20.11.13 21.11.13

The report is very interesting. Wish
the Genl had been able to see more of
the extension. He only touched one corner
apparently.

21.11.13

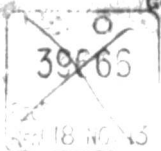
As proposed - see alteration opposite
A very interesting & satisfactory
report.

22.11.13



GOVERNMENT HOUSE,
~~MAIROST~~ NOMBASA,
 BRITISH EAST AFRICA.

EAST AFRICA PROTECTORATE.



30th October 1913.

(NO. 642)

Sir,

I have the honour to report that in consequence of the openly expressed disinclination of a certain section of the Masai tribe to migrate to the Southern Reserve, and of rumours circulated by these people and by those who sympathise with them to the effect that the selected area is unhealthy and wholly unsuitable for occupation either by men or cattle, I determined early in the present year to make a personal visit to the country in question with the object of studying its physical features and of examining its possibilities as an area for occupation by the people and as a grazing ground for their flocks and herds. The extent of the Reserve, which comprises in all an area of over nine millions of acres, is such that it was impracticable to spare the time to examine all parts of it. I therefore arranged to travel through it from end to end, by a somewhat devious route, visiting so far as possible those districts which are most usually and regularly occupied and in which it is therefore most necessary that the needs of the people and of their cattle should

THE RIGHT HONOURABLE

LEWIS HARCOURT, M.P.,

SECRETARY OF STATE FOR THE COLONIES,

DOWNING STREET,

LONDON, S.W.

1903-11-0

should be provided for.

2. I arranged to start on my tour at the commencement of the dry season, towards the end of June, selecting that period because it would have been difficult, if not impracticable, to follow the route selected if the rivers had been in flood, and also because I desired to see the grass lands and natural water supplies of the Reserve under as nearly normal conditions as possible. No good object would have been attained by extending my journey in a more southerly direction, towards the German border, because that portion of the Reserve is at present but sparsely occupied; moreover such variation of my route would have been attended with some risk to the transport mules and donkeys, as portions of that part of the country are understood to be infested by fly.

3. The particulars of the tour, and the gist of the impressions which I formed regarding the country and the people, will, I think, be most readily understood if I present this report to you in the form of a narrative descriptive of my journey stage by stage, recording observations made, matters brought up for consideration, and instructions given, in the order of time in which they occurred. The map which is attached to this report, and which has been specially prepared to illustrate the course of my route, will, I trust, sufficiently explain any points which may not be clearly presented by the text. You will

observe

3.

observe that the direction of each day's march and the situation of every camp is clearly indicated, but it is necessary to explain that far more ground was covered than is indicated by the line of march as shown on the map, as I invariably diverged from the direct line and traversed a large extent of country on either side of the straight route to the next camp.

4. The total area comprised in what is known as the Masai Reserve is divisible into three portions. The first is that which lies to the East of the Guaso Nyiro River, the northern portion of which, in the neighbourhood of Ngong, has long been the residence of the paramount chief of the tribe. The second portion comprises the country lying between the Guaso Nyiro and Amala Rivers, now occupied for the most part by the new arrivals from Laikipia. The third portion or Trans-Amala section, known as the 'Masai Reserve Extension,' includes the country to the South and West of the Chepalungu Forest and extends from the West bank of the Amala River to the boundary of the Kisii country. I have mentioned these divisions here because it will be necessary for me to refer to them in later portions of this report.

5. I selected the following officers to accompany me from headquarters :-

Mr J. W. T. McClellan, Provincial Commissioner of the Naivasha Province, in which the Reserve is situated;

Mr

Mr R. B. Woonam, the Game Warden, to whom I proposed to entrust certain special inquiries of a scientific nature which will be referred to later on;

Dr J. Owen Prichard, Medical Officer;
and my Private Secretary.

Additionally, I arranged that Mr E. L. Browne, the Acting District Commissioner in charge of the Eastern portion of the Reserve, should accompany me from his station at Ngong to the Amala River, being relieved at that post by Mr R. W. Hemsted, officer in charge of the Reserve, who had orders to accompany me from that point to Kisii.

6. As no description of food, except meat, is obtainable throughout the route to be followed, it was necessary to make preliminary preparations on a large scale. Depots for additional stores were established on the line of march, and the transport was divided among 9 pack mules, 60 donkeys, and 265 porters. A detachment of 20 men of the King's African Rifles, under the command of a native officer, also accompanied the party.

7. On June 27th we rode out from Nairobi 14 miles to Ngong, where we remained for two nights in order to complete transport arrangements and to give me time for a full discussion with the chiefs. This station, though occupying a position on the extreme edge of the Reserve, is conveniently situated for administrative purposes, being in proximity to the
villages

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villages occupied by the paramount chief and his people and within touch of the South-easterly portion of the tribal territory. The situation offers the additional advantage that it is the principal point of entry to and exit from this particular Reserve. Large numbers of Wakikuyu now come down from the adjoining country to trade in the Masai area under licences issued by the district officers. Also, the Masai are only permitted to leave their Reserve when provided with a pass by the same authority. The proximity of the station to the principal route therefore materially facilitates supervision of such movements. There is therefore no doubt as to the propriety of maintaining the station as the official headquarters of the Eastern portion of the Reserve. It has been occupied for a period of sufficient duration to set at rest any question regarding the healthiness of the locality, and I have made arrangements for the erection of the requisite permanent buildings, after personal examination and selection of the sites with the Provincial Commissioner and the Medical Officer.

8. On June 28th some hours were occupied in the discussion of local affairs with the paramount chief and his principal elders. Segi, son of Lenana, has just come of age, and was invested with the dignity and authority of 'Laibon' or principal chief of the tribe only a few weeks before I started on my tour. In meeting him therefore for the second time I was able to congratulate him on having attained this position

6.

position, at the same time impressing upon him the necessity of using his influence to ensure the orderly behaviour of his people, and, particularly, to effect the suppression of stock thefts.

9. Physically, Segi is by no means a worthy representative of his warrior tribe. He is under sized and pinched in appearance, and at the time of our meeting was manifestly suffering from pulmonary trouble. He was pronounced by Dr Prichard, to whom he readily submitted himself for examination, to be in a weak and unsatisfactory condition. I had seen him for the first time at Nakuru, in November last, and I have no doubt that he has become weaker in the interval. On this occasion I had far more opportunity of gauging his views on current questions than at our previous meeting, when his remarks were limited to curt expressions of dissent from the voluble representations of Legalishu and his friends. He and his uncle Ngoreya, who is probably the most influential of the Masai chiefs at the present time, now referred to the action of Legalishu and his friends in terms which left me in no doubt as to the grave objection which they hold to that chief's present proceedings. They expressed themselves in the plainest terms to the effect that it is good that the tribe should be again assembled together; that, although they have no personal knowledge of those portions of the Reserve which are situated at a distance from their villages, they have heard nothing in the nature of complaint

7.

complaint or criticism from those of their people who are settled there, and I am quite prepared to credit their assurance that, if cause of complaint were there, they would have been the first to hear of it.

10. It had been my intention to ask Segi to accompany me through so much of the Reserve as he might feel inclined to traverse, both with the object of letting him see for himself the nature of the country on which his people have recently entered and of giving him opportunity of hearing at first hand their opinions regarding their new surroundings. His state of health, however, was such that it was clear that the journey might be attended with some risk to himself, so, much to his disappointment, he agreed on Dr Prichard's advice to abandon the trip.

11. Among a variety of subjects which were discussed between us, the following questions brought up by the chiefs themselves were noted by me as being of particular interest. In the first instance they asked me to give them full particulars of the rights which the Magadi Company are acquiring in the water from the Ngong Hills. Notwithstanding the assurance given to them from time to time by the District Commissioner that the needs of their people would be provided for, they seemed anxious to obtain confirmation of the statement from myself - being perhaps rendered rather more uneasy by the fact that the Company were then commencing to deposit their plant. The question being at that time under discussion with

8.

the Company. I was able to give the chiefs particulars of the latest proposals, describing the streams to be tapped by the Company and the approximate number and situation of the troughs to be provided for the use of their cattle. They expressed themselves as being entirely satisfied with the nature of the arrangements indicated to them.

12. It was with some surprise that I heard their next request, which was to the effect that Government should provide a dip for the use of their cattle and give them instruction in the method of working it. They appeared to be convinced of the value of dipping as a preventive of disease, having presumably obtained their information from members of the tribe who have been employed as herdsmen by settlers and have had opportunity of seeing the process and its results. It is much to be desired that such precautionary measures should be adopted wherever possible, consequently I told the chiefs that I would endeavour to arrange that their request be complied with, and I have caused it to be referred to the Agricultural Department. I, however, made it clear to them that, while Government was prepared to bear the cost of certain works of improvement in order to render the Reserve in all respects suitable to the needs of the people, and to show them by example the advantages obtainable by judicious expenditure, they are not to expect that such works will always be carried out free of cost to the people, and that later on, when their better understanding of the utility of such works and their

more

more intimate acquaintance with the possibilities of their Reserve have disclosed to them the desirability of carrying out additional improvements of a similar nature, I shall require that the cost be defrayed by themselves.

13. The last request which was preferred to me was also of a wholly unexpected nature. The chiefs began by explaining that many of their people are now beginning to interest themselves in trade, in the course of which they are coming into possession of cash; that their custom has hitherto been to place such money for safe custody in the hands of Indian traders - an expedient which it will be readily understood has proved unsatisfactory and not infrequently productive of loss. To obviate this I was asked that a branch of the Government Savings Bank might be opened in the station, the request being supported by the assurance that cash transactions would rapidly take the place of barter if convenience and security of deposit ~~is~~ arranged for. I was much impressed at hearing a request of this nature emanating from so conservative a native as a Masai, and I welcomed the suggestion as an indication that a beneficial change of much importance is gradually coming over those members of the tribe who are most commonly in touch with persons other than those of their own nationality. The Masai, up to the present time, has lived a most self-contained life. His cattle and sheep have supplied most of his needs, and the few articles

articles which it has been necessary for him to procure from outside sources - such as iron and wire for his weapons and ornaments - have been secured by barter. It is now apparent that a change for the better is gradually spreading among these people. The appearance of traders in their midst is encouraging a desire to secure for themselves articles the existence of which was unknown to them a few years ago. It is not long before such articles, originally purchased as novelties and luxuries, begin to partake of the nature of necessities. The Masai is able without inconvenience to meet the cost of any trade goods which may take his fancy - there is no need for him to practise economy - and there is ample evidence in the Reserve to show that the demand for articles of foreign manufacture is steadily spreading. The larger number of these transactions is still effected by process of barter, sheep being the usual medium of exchange, but it seems clear that the use of cash is on the increase, and this should be encouraged as the necessity for acquiring it may later on become a potent factor in persuading him to place on the market some portion of his jealously-guarded stock and lead him eventually to a conviction that the accumulation of cattle is not the beginning and the end of life's ambition.

As I write this paragraph I have just received information that a branch Savings Bank was established at Ngong on September 29th, on which day 19 accounts were opened and deposits were made amounting to

Rs. 265.

11.

14. On June 29th our party left Ngong, accompanied by three relatives of Segi sent by the chief as some amends for his personal inability to be with us. These gentlemen, however, took no apparent interest in our examination of the country, possibly because that part of it was already known to themselves, and having followed us as far as the Guaso Nyiro River, which forms the limit of the country with which they are familiar, they returned with all speed to the domesticity of their village homes.

15. The first two days' march took us for some 20 miles over undulating country, at an elevation of 6,200 ft., ending with an abrupt descent of a steep escarpment to the valley of the Kedong River at 4,600 ft. Notwithstanding the rocky nature of the soil, there was plenty of grass on the slopes, and the growth in the valleys was luxuriant. This country is, however, as a rule available for grazing purposes only during the period immediately following the rains, water not being procurable during the dry season. The water courses indicate the presence of an ample supply when the rains are on, but practically the whole of it runs to waste. The retention of a serviceable supply by means of dams is practicable, and may be considered when more urgent demands in other parts of the Reserve have been complied with. At present the cattle are moved to alternative grazing grounds when the water supply runs out.

16. The succeeding three days' journey from the

Kedong

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Kedong Valley to Kolong took us through what was, to my mind, the most unpromising area traversed during the tour. This country is cut up by steep escarpments and studded with iron-stone hills intersected by jagged edged dongas, all of a volcanic nature. The soil is for the most part a sandy orange dust, of uninviting appearance, and it is surprising that it should be sufficiently productive to carry the vegetation which it supports. The hill sides are covered with rough thorn bushes and miscosa, amongst which a considerable amount of good grass is apparent, and a few herds of cattle were seen feeding amongst the scrub. Water is the problem over the whole of this country, and it was matter of difficulty to secure the quantity necessary for the requirements of our party. Two months later there would have been none obtainable. Here also the presence of large bodies of surface water during the rains is indicated by the appearance of the water courses, but its conservation would be a very expensive undertaking on account of the rock formation and deep broken nature of the country; moreover the land is not, in my opinion, of sufficiently productive value as a grazing area to warrant any substantial outlay in an endeavour to transform it into permanent pasturage.

17. I was impressed with a suggestion made by the Game Warden, who informed me that he has recently introduced into a waterless area in the Southern Game Reserve the wild water melon of the Kalahari Desert.

13.

Desert in South Africa. He states that it grows and fruits freely on similar soil to that which I have been attempting to describe, and that it is eaten with avidity by all descriptions of herbivorous game. If it can be induced to spread with similar rapidity over the open areas of this arid country, it may go some way to mitigate the deficiency of water. At all events the scheme is inexpensive and well worth trying, and the Game Warden has arranged to supply the District Commissioner with seeds for experiment.

18. Leaving Kalong on July 4th, a short march of seven miles across level grass country brought us to the Guase Nyiro River, at the crossing known as Van de Weyer's Drift. This part of the country affords permanent grazing for large herds of cattle all the year round on account of the proximity of the river and the consequent regular water supply. The periodical migrations of the Masai to and from different parts of the Reserve are not, I think, prompted by desire to place their cattle on new grazing grounds so much as by the necessity of being within reach of water. During and after the rainy season, when every spring and water course provides a supply, they are spread over a wide area of country. Later, as the dry season advances, they are concentrated in the neighbourhood of the permanent streams.

19. The river at the drift was rather higher than we expected to find it, and the crossing of our party was a tedious and troublesome business, which was not completed

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completed until after seven hours of really hard work. No mishaps occurred, but I think that it was with a sense of relief that we found everybody and everything safely on the other side. This river, which runs nearly due South from the mountains of the Mau to the German Border, forms the Western boundary of the original Southern Reserve, and the Masai who have long been settled on its Eastern side have little personal knowledge concerning the country farther to the West. A principal reason for this has been that the river forms a barrier which they are not anxious to cross. It is fordable only for a few months in the year, and nothing short of the gravest necessity will induce a Masai who has no aquatic tendencies or experience to risk an attempt to put himself or his cattle on the other side. The chiefs who had accompanied me from Ngong, on arriving at the river, took one apprehensive look at the depth of the water in the stream and forthwith announced their intention of retracing their steps to Ngong.

20. The stream in the drift is ^{twenty} some 20 yards wide, running with a strong current between fairly high banks, and at the time of our crossing was from 3 ft. to 4 ft. in depth. It is used by all persons having occasion to enter the country lying on the Western side. It is the only route for waggons and pack animals transporting traders' stock, to whom much inconvenience is frequently caused by inability to cross for weeks at a time. The need of a bridge is obvious, and I am arranging to have one put there.

But, apart from the advantage which a bridge will offer to traders and travellers, I am of opinion that great benefit will accrue to the Reserve and to the people from its existence. The river now imposes a barrier between the sections of the tribe situated upon either side of it. When a bridge is there, the people from both sides will cross freely to and fro with their families and cattle. This will not only enlarge the area at their disposal but will tend to effect fusion of the various divisions of the tribe, which cannot be accomplished so long as they occupy different portions of their territory with no means of access to adjoining divisions.

21. From our camp at the drift we proceeded on the following day to the Narek Sura, a tributary of the larger stream, where we camped for three nights, in a bend of the river situated at the base of a steep and thickly bushed mountain, in order to give men and animals a much needed rest after seven days rough and continuous marching. I took advantage of the halt to explore the country for two days to a distance of about 10 miles on either side of the line of route. The whole country to the North of the Camp is very steep and rocky, and densely covered with thorn scrub, but, in other directions, miles on miles of spacious valleys watered by permanent streams and knee deep in an infinite variety of nutritious grasses affording some of the most perfect pasturage that was met with during the tour. At a distance of some 8 miles to

16.

the West of the camp, I found myself at the brink of a precipitous escarpment, with a sheer drop of well over 1,000 ft. to the Guaso Nyiro River, commanding a view of an enormous tract of country, in which Lake Magadi was a conspicuous object in a S.E. direction, and the northern extremity of Lake Natron could be discerned towards the South-West.

22. The country upon which we were now entering is that in which most of the Masai from Laikipia have been located. I therefore took opportunity to get into communication with the more elderly and responsible of those we met on our route. The extremely good condition of the large herds of cattle which were to be seen on all sides was particularly noticeable, and it was difficult to realise that less than three months had elapsed since they had emerged from the difficulties and exertions of their strenuous march from Laikipia. From all the people with whom I spoke I received practically the same reply - to the effect that being new comers to the country their knowledge at present extended only to the neighbourhood of the district in which they were then settled, but so far as they could judge it is a good country, with ample feed for their stock, and they are entirely satisfied with it. Sometimes there was a hint of apprehension that water might be scarce in the dry season, but this was usually allayed when it was explained to them that Government is taking steps to conserve it for them in the drier portions of the country.

17.

23. Proceeding out of the Narok Sura camp on July 8th in a southerly direction, in order to clear the mountainous country bordering on the river, we camped at our nearest point of approach to the German Border, there distant about 26 miles. Thence our route turned to the North in the direction of the Loita Plains. On this march and that of the following day the same fine grazing country was traversed as met with on the Narok Sura plains. Undulating slopes, carrying heavy crops of grass, were thickly covered with herds of Masai cattle, while what is almost certainly permanent water is obtainable at almost regular intervals from streams which eventually become tributaries of the Narok Sura River. I should be inclined to select the stretch of country extending from the Guaso Nyiro River to the head waters of the Narok Sura, and thence to the southern extremity of the Loita Plains, as being the finest area for stock which I observed during my tour.

24. Entering the Loita Plains at Engorinito (camp No. 11), the country traversed during the next two days also carried a large head of stock. The grazing is probably in no way inferior to that provided by the country to the southward, but there is at present a deficiency of permanent water. The water courses are there, and springs are occasionally discernible which would probably be serviceable if opened out and looked after. It will be no difficult matter to hold up water in these shallow dongas, and an examination

of

18.

of the whole of this side of the country will be made with that object as soon as the works now in hand in the Lemek Valley have been completed.

25. The extensive area comprised in the North Eastern portion of the Loita Plains consists of very open and bleak country, swept by cold winds which send the temperature at night down to well below 40° F. and carrying a short close grass which is more suitable for sheep than for cattle. That this is known to the Masai is clear from the fact that comparatively little horned stock is met with here, its place being taken by large flocks of native sheep.

26. Having now reached a central position in the Reserve, the question arose for decision as to the site to be selected for the headquarters of the administration of the territory. Two or three alternative areas in the neighbourhood of the Guaso Nyiro and Narok Rivers had been suggested, and the eventual selection was made by myself after a careful personal examination of the whole of the ground.

The site chosen is situated on the Narok River, at an altitude of 5,900 ft., and consists of an extensive elevated plateau, the edge of which is some 50 ft. immediately above the stream. There is an abundance of timber and stone in the neighbourhood, and the river furnishes a permanent and plentiful supply of excellent water. The wagon track from Kijabe Station on the Uganda Railway to the Anjala River crosses the

Narok

Narok by a permanent bridge which was in course of erection at the time of my visit. The site of the new station is barely half a mile from the bridge, so that it is adjacent to one of the principal thoroughfares in this part of the country. Kijabe Railway Station is distant about 60 miles from the Narok bridge. Lying between the edge of the plateau and the road, and overlooked by the site of the station, is a level stretch of ground affording an admirable position for the native bazaar and village which will come into existence as soon as the station has been established.

I was accompanied in the course of my examination by the Provincial Commissioner and the Medical Officer, who are fully agreed as to the propriety of the selection.

Final decision as to the permanent occupation of the site will be deferred until a sufficient time has elapsed to prove its suitability from all points of view. In the meantime temporary buildings will be erected at once for the occupation of the administrative staff.

27. Proceeding from the Narok River in a westerly direction our route followed the waggon track mentioned in the preceding paragraph as far as the Guaso Nyiro River, which was crossed by a permanent bridge the construction of which had been completed very shortly prior to the date of our arrival. At our camp at Aggett's store I had a long interview with Masekondi,

one of the four principal Masai chiefs, who has settled in that neighbourhood. This individual has not taken any prominent part in the controversy regarding the move from Laikipia and has been careful to avoid expressing any definite views one way or the other. He has been watching the trend of events, but had apparently made up his mind at the time we met to favour the move to the Southern Reserve. He expressed himself as being entirely satisfied with his surroundings, and informed me that, being now an elderly man and disinclined to continue a nomadic existence, he proposed to build himself a house and to live for the future under more comfortable conditions than is possible in a native hut. As his people are among those who have come down from Laikipia, I am hopeful that this attitude on the part of their chief will influence them to a state of contentment with their new surroundings.

28. Our journey across the northern portion of the Loita Plains, from the Guase Nyiro bridge to Kaitong, needs no very detailed description. A vast area of open grass country, either level or slightly undulating, intersected with small water courses - mostly dry at this time but holding water in the deeper cavities and in the neighbourhood of occasional springs - and dotted at intervals with copses of bush and scattered clumps of mimosa, constitutes what appeared to be a limitless grazing area as far as the eye could see. The numerous Masai villages are located

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located according to the requirements of the herds. In the lower and more sheltered portions of the valley cattle were numerous, while the short grass of the uplands was being fed off by immense flocks of sheep. The whole area impressed me with the appearance of a prosperous and settled pastoral country, and a few minor improvements in the water supply should enable these plains to carry, if necessary, a far larger head of stock than occupied it at the time of my visit.

29. Our camp at Kaitong, which was reached on July 24th, was situated at the base of a range of hills where the Lemek Valley debouches on to the Loita Plains. Here I met by arrangement Mr G. K. Watts, lately Commissioner of Public Works of the Protectorate, who is carrying out a scheme of water conservation at the head of the Valley, which is the first step in our programme for improving the supply of the Reserve. Mr Watts explained to me fully the nature of the work that he had in hand, and is very sanguine as to its success. The water which will be stored by the main dam which was already 28 ft. in height at the time of our meeting, together with that which will be accumulated by two subsidiary structures farther down the valley, will be sufficient in Mr Watts' estimation to furnish a continuous supply over 100 square miles of country. I attach hereto, for your information, a copy of the interim report prepared by Mr Watts for submission to me at our meeting. He anticipated that the work will be completed during the present month, and as construction

work

work elsewhere would be continued with difficulty during the rains, which may be expected to commence in November, I instructed him to utilise the next two or three months after the completion of the Lemek Valley works in an examination of the water courses and springs on the Loita Plains with the view of conserving water over as much of that area as possible.

I am of opinion that Mr Watts' work will prove to be of immense value to the Masai, and I esteem myself fortunate that I should have been able to secure the services of so experienced an engineer for these special and urgent works at a time when the attenuated condition of the Public Works establishment rendered it impracticable to detail a Government engineer to undertake the duty.

30. On July 25th we reached the Amala Post, the station at present occupied by the officer in charge of the Reserve. Here we were met by Mr Hemsted and by Mr Horne, Acting Provincial Commissioner of the Nyanza Province, into which territory we entered on crossing the boundary of the Reserve.

The site of the post is well chosen. It stands on the bank of the river, and occupies a position from which all parts of the grazing area of the Amala Valley are easily accessible. The officer in charge and the station staff are for the time being housed in grass huts, but, as the station has now been proved to be healthy and convenient, I have definitely selected

23.

selected it as the headquarters of the officer who will directly supervise the western areas of the Reserve.

The permanent bridge, which was erected in 1912, crosses the river at a point some two miles below the Post, so that the country on both sides is accessible at all times of the year.

31. On the following day camp was moved down river to a point about four miles below the bridge. We remained here for three days, both to give men and animals a rest before commencing the final stage of the journey and also to allow time for Mr Woosnam to proceed down the river to make some examination regarding the presence of fly on the lower reaches.

32. I have stated in para. 5 above that I arranged for the Game Warden to accompany me, because it appeared to me that investigations carried out in a systematic and intelligent manner along a line of country of which not very much is known might be productive of some discovery which would prove to be of value. With this object Mr Woosnam took blood slides from the various descriptions of game which were shot on the way and secured specimens of ticks, insects, and parasites found on their bodies. It is possible that examination of these specimens, all of which are in Mr Woosnam's possession, may be productive of evidence bearing on the question of the carrying of diseases by game animals. But I was more particularly anxious that he should have opportunity to examine

24.

examine the western bank of the Amala River and its tributaries in the country lying to the South of our camp in portions of which the presence of fly has been from time to time reported. An examination of this district was, as you are aware, made earlier in the year by the Government Entomologist, but the results were not as convincing as could have been desired, principally owing to the fact that Mr Anderson's trip was confined to the eastern side of the river. I therefore considered that an examination by Mr Woosnam of the farther side of the stream would be a useful supplement to Mr Anderson's work.

Appendix 2

33. A copy of Mr Woosnam's report on this trip is attached, together with a list of the blood-sucking insects secured during our journey and a table showing the altitude and the maximum and minimum temperatures recorded at our various camps. An interesting feature of the latter table is the remarkable variation of temperature during each period of 24 hours, the greatest being that recorded at the Amala Bridge on July 30th.

The Game Warden has asked that a copy of his paper on the Amala fly area may be sent to Dr Bagshaw, Director of the Tropical Diseases Bulletin. If you see no objection, you will no doubt arrange that this shall be done.

34. On July 30th I proceeded early in the morning to the Amala Bridge, and there I held a meeting with all the Masai chiefs residing in that part of the

Reserve.

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Reserve. There was a large attendance, the concourse comprising 10 or 12 chiefs - including Legalishu - and probably some 200 of their people, most of whom displayed considerable interest in the proceedings. I addressed the chiefs at some length, dealing amongst other matters with the following topics :

I reminded them that when I had met them at Nakuru in November last they had complained that the country was bad, the people sick, and the stock dead and dying. I informed them that I had now travelled through the Reserve from Ngong to the Amala, that I had met a uniformly contented people, thousands of head of fine cattle in grand condition, and ample and abundant pasturage. Challenging them to justify their condemnation of the country by quoting any instance of misfortune, I told them that, having seen for myself, I was now satisfied that their statements were devoid of foundation. The bearing of the chiefs as I made these remarks led me to think that they were not anxious to be personally associated with the expressions of opinion and the inaccurate statements for which Legalishu is responsible. No reply was made to my observations, except by Legalishu himself who burst into a rather intemperate tirade, insisting that my opinion of the country was of no value, that it was a bad country and would always remain a bad country, that he intended to get Laikipia back and would never cease his agitation until that had been accomplished. I heard him without comment until he had tired himself out, and then informed

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all those assembled that it had come to your notice that certain persons had been spreading improper and untrue stories to the effect that the cattle which were being collected by Legalishu from the villages of his people were being handed over to the Government as payment for the re-purchase of Laikipia. I assured them that that was an untruth in which they should place no credence and that the only payment that was being made was to the lawyers employed by Legalishu and his friends.

36. I then discussed the improvements which were being made and contemplated to enhance the natural resources of the Reserve, referring more particularly to bridges and water supplies. I gave them to understand that the works now in hand are intended to provide for immediate necessities, and to illustrate the manner in which the country can be improved, and that, if their future requirements demand additional facilities of a similar nature, the funds for further works will have to be provided by themselves.

37. The opportunity offered to the chiefs for observations in reply elicited no remarks. They had apparently assembled to listen and not to talk. The only request made was preferred by the representatives of certain divisions of the people who, having come from Laikipia in association with the members of the 'Purko' clan, were now desirous of permission to join their people settled in other portions of the Reserve. I told them that it was open to all sections of the
tribe

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to the case of a communal fine, the infliction of which was reported to you in Mr Rewring's despatch No. 557 of July 16th* and approved by your despatch No. 662 of August 15th.† Legalism, when called upon by the officer in charge to assist in collecting the cattle, declined to have anything to do with the matter, saying that the Government had imposed a fine and that it was no business of his.

Pending a final decision in the matter of the Laikipia litigation, I incline to the opinion that it would be impolitic to take any drastic action with regard to this chief so long as his attitude is limited to that of passive obstruction. Later on I believe that it will become necessary to consider his position as a salaried officer of the Government, and to decide whether it is conducive to the best interests of all concerned that he should retain that position.

39. On crossing the Amala River we entered upon what is known as the extension of the Southern Reserve. At this stage Mr Browne parted company and returned to Ngong, his place with our party being taken by Mr Hemsted.

Immediately after leaving the river we encountered more hilly country than we had met since leaving the Narok Sura. Continuous hills and precipitous slopes were the predominant features of the whole of the district lying between the Amala and Kisii station. We skirted the southern end of the Chapalungu Forest,

* No 27670
 † No 27670

a densely wooded area which is retained as a buffer space between the Masai and the territories of the Lumbwa and Sotik tribes, and reached the boundary of the Reserve at Galegele on August 1st.

40. The time at my disposal did not permit of my deviating to any distance to the South of the route arranged in order to penetrate farther into the interior of the extended Reserve. My inspection was therefore confined to the northern portion, and the reports of officers who had previously visited the extension made me aware of the fact that I was seeing the worst part of it.

There is a marked difference between the appearance of this country and that on the Eastern side of the Amala. It is covered with large areas of heavy bush, and the grass is for the most part very long and exceedingly coarse. This, however, is merely due to the fact that it has never been regularly occupied. Whenever the people find it worth while to bring it into order by clearing the bush and burning the grass it will fully provide for their needs. Its general appearance is undoubtedly rather that of an agricultural than a grazing country. The rich peaty soil in the well watered valleys is more valuable to the planter than to the stock owner, and to that extent it is probably less suited to the requirements of the Masai than the eastern areas of their territory.

41. I do not anticipate that the people will make any general use of this extension for some time to

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come. Although unimportant and numerically insignificant sections of the tribe have been settled in the South of the district for many years, the country is not known to the tribe as a whole, and the open areas are not at present sufficiently extensive to appeal to the stock owner. Its principal asset is probably its regular supply of water, and this will doubtless attract the people from across the river in dry seasons. Thus we may expect that a clearance of the present coarse growth will be gradually effected, and that each year will see something done towards increasing its utility to the tribe.

42. Four days' march from the boundary of the Reserve through Kisii-territory, where for the first time since leaving Ngong we passed through land devoted to primitive native agriculture, brought us to the station of Kisii. This very prettily laid out and remarkably well kept settlement is known to comparatively few of the Protectorate officers, and I was informed that no Governor had been there before. I remained there one night and inspected all public buildings. I also interviewed the elders of the Kisii and Kavirondo, and endeavoured to impress on them the necessity of inducing their people to open up the country by roads and paths in accordance with the advice of their officers, pointing out that this would bring to them the advantage of facilitating the movements of traders through the country who would purchase their produce and supply their gradually increasing requirements.

43. Leaving Kisii on the afternoon of August 8th, we arrived at Homa Bay early on the morning of the 10th, and, embarking at once on the s.s. 'Sybil', concluded my tour at Kisumu on the evening of the same day, having traversed on mule or on foot a distance which may be approximately estimated at 350 miles.

44. The tour was effected under most favorable conditions, and the health of the whole party was generally excellent throughout. A few days after our departure one porter developed cerebro-spinal meningitis, evidently contracted in Nairobi, from which he died. This was the only death or case of serious illness which occurred. The medical officer was unremitting in his attentions to all, and his tent was generally surrounded by applicants for treatment in respect of minor ailments, who appeared to look upon these interviews as an unusual and pleasing diversion. In addition to the requirements of the camp, the assistance of the medical officer was not infrequently requisitioned by the Masai. Among such cases treated were the successful reduction, without anaesthetic, of the dislocated shoulder of a Masai woman, which was said to have been in that condition for two months. Another case was that of a man whose arm had been ripped open as the result of an attack on a lion with a knife.

It was observable that the general health of the porters and camp followers was far better at the end

of the trip than it was at the commencement. In particular the Kikuyu porters, whose physique left much to be desired when we first made their acquaintance, so filled out on the way that their condition on return must have been a surprise to their friends.

45. Having completed this tour, I am now in a position to indicate the manner in which I propose to divide the Reserve for administrative purposes and the strength and location of the staff which is to control it. My proposals will be clearly understood if reference is made to the map which accompanies this report.

46. The Reserve will be divided into two districts, the division being effected by a line drawn from the source of the Sokotich River on the mountains of the Mau to the junction of the Rivers Guaso Nyiro and Narok, and thence following the river to the German Boundary - the portion to the East of the boundary being known as the Ngong District, and that to the West, including the extension area, as the Trans-Nyiro District. Communication between the two districts will be practicable at all seasons by means of the bridges over the Narok and Nyiro to the North of their junction, and by the bridge which is to be constructed at Van de Weyer's drift.

47. The strength and distribution of the administrative staff will be as follows :

The newly selected station on the Narok will become

the

tribe to select the district in which they desire to reside, subject to the discretion of the officer in charge, and that arrangement in accordance with their wishes would no doubt be made on representation to him.

38. A few words seem necessary here regarding the demeanour and attitude of Legalishu. He has never been at pains to disguise his disgust at his removal from Laikipia, and I think it probable that his discontent is now being accentuated by the fact that the people are settling down in their new country and that their ardour for return to their old quarters is steadily abating. I am in agreement with the opinion held by the local officers that the number of real adherents to Legalishu's proclaimed policy is now relatively small, but that he, having announced his intention of recovering Laikipia and reinstating his people there, is compelled to [continual] effort to make good his promise in order to maintain his reputation among his followers. Of his attitude of passive resistance to the Government and all its works I may quote two instances. His village is situated in the Lemek Valley, within two or three miles of the dams now being constructed by Mr. Watts, but he has never visited them or taken the slightest interest in what is going on. This, however, did not prevent him from proclaiming to me that the reservoirs would never be any good to anybody, and that they are the futile and useless works of ignorant people.

Another matter recently reported to me has reference

to the case of a communal fine, the infliction of which was reported to you in Mr Bewring's despatch No. 557 of July 16th and approved by your despatch No. 662 of August 13th. Legalishu, when called upon by the officer in charge to assist in collecting the cattle, declined to have anything to do with the matter, saying that the Government had imposed a fine and that it was no business of his.

Pending a final decision in the matter of the Laikipia litigation, I incline to the opinion that it would be impolitic to take any drastic action with regard to this chief so long as his attitude is limited to that of passive obstruction. Later on I believe that it will become necessary to consider his position as a salaried officer of the Government, and to decide whether it is conducive to the best interests of all concerned that he should retain that position.

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47. The strength and distribution of the administrative staff will be as follows :

The newly selected station on the Narok will become

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the headquarters of the officer in charge. Here also will be stationed the District Commissioner of the Trans-Nyiro District, while the District Commissioner of the Ngong District will continue to reside as at present at that station.

Three Assistant District Commissioners will be required. One will be stationed at the Narok headquarters, with duties relating more particularly to that part of the Reserve which lies to the North of the Loita Plains; another will be at Ngong; while the third, at the Amala Post, will deal with the extended Reserve, the Amala Valley, and the areas adjacent thereto. The spheres of work of the Assistant District Commissioners are only approximately indicated. The details will be matter of arrangements by the officer in charge when he has all his men on the spot.

48. The whole of the Reserve is at present divided in the province of Maitasha, and it will be readily understood that it is impracticable for any officer to give personal and periodical attention to a tract of country which extends from Baringo to the neighbourhood of Mount Kilimanjaro. It was therefore my intention to recommend that the Reserve be excluded from that province and be dealt with as a separate territory under the control of the officer in charge. I find, however, that there are legal impediments to this arrangement inasmuch as it is provided by certain ordinances that acts to be performed in accordance with

with their provisions shall be done by the 'Provincial Commissioner.' Unless therefore such prescription be relaxed by special legislation, which I do not consider desirable, the Reserve must continue for the present to form part of the province and to remain under the nominal jurisdiction of the Provincial Commissioner. It will, however, be possible to relieve this officer of most of the administrative work connected with the Reserve by giving to the officer in charge authority to communicate direct with headquarters. Later on it is possible that it may be found desirable to constitute the Reserve a separate province.

49. What is known as the 'Magadi' area cannot be conveniently administered in conjunction with the native reserve. It will be desirable that the existing arrangement be continued, whereby the control is entrusted to an officer specially deputed for the purpose who resides on the spot, and that the Magadi zone be excluded from the Reserve for executive purposes. Forming as it does a portion of the Reserve, it is now a part of the Naivasha Province, but it will make for convenience of administration to detach it from that division and to incorporate it with Ukamba. I propose, with your approval, to effect this alteration.

50. The impression which has been left on my mind by some six weeks' intercourse with different sections of the Masai tribe is that, now the difficulties and discomforts

discomforts of the move from Laikipia have been overcome and they find themselves in a country of which they previously knew nothing but which they now recognise as being suited to their requirements, any general desire for return which may have previously pervaded the tribe has abated; and it is my belief that we should now experience great difficulty in persuading them to go back, which difficulty will increase as time affords them opportunity of wider acquaintance with their present location and lessens their appreciation of the country which they have vacated.

51. I estimate that the Reserve affords ample pasturage even for the enormous head of stock which is now owned by the tribe, but of course, if the natural increase of the stock continues unimpeded by any outbreak of disease and no action is taken which will have the effect of inducing the people to reduce the numbers by sale, the time must come when the space at their disposal will become insufficient. I hold the view that it is desirable to discourage by all legitimate methods the pastoral proclivities of native tribes and to lead them gradually to agricultural and industrial enterprise. No such change can of course be effected in the case of the Masai for years to come, but it is possible to damp their ambition to increase their herds and to bring some pressure to bear on them to put a portion of their stock on the market by exacting from them a contribution in respect

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respect of their cattle. I think therefore that, when the present uncertainty as to their final destination has been removed and they have settled down to peaceful possession of the territory allotted to them, we should levy on them an annual tax in respect of all cattle over and above a certain number per head and exclusive also of cattle used for industrial purposes. It would be useful to me to receive from you an intimation whether you will be prepared to consider with favour the principle which is embodied in this proposition.

52. In conclusion I would say that it will be helpful to me if I may receive from you in due course an indication of the extent to which you find yourself in agreement with the arrangements which I propose to make, and, should it be the case that you are compelled to take exception to any action contemplated, I shall be grateful if I may be placed in possession of your views at as early a date as possible.

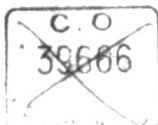
de
I have the honour to be,

Sir,

Your most obedient humble servant,

H. G. G. B. B. B.

GOVERNOR.



Appendix 1
 E.P.P. No. 842
 D 28 13

THE SOUTHERN MASAI RESERVE WATER SUPPLY.

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The works I am constructing in the Lemek Valley comprise three Dams, viz. :-

1. A dam on a stream which was not dammed by Mr Catchpole.
2. Raising and improving Mr Catchpole's dam which I found nearly destroyed by the trampling of cattle when I returned here on the 2nd May.
3. A dam below Mr Catchpole's on the same stream as the one he dammed.

The first dam will be by far the highest one, viz. at least 40 feet high, and is designed to store water high up the Valley above the other two dams. This high dam is located in a very deep narrow ravine densely shaded. The surplus water from it and 'seepage' will flow down the bed of the stream across which it is built and then into a catchwater drain, originally cut by Mr Catchpole, which I am widening and deepening. This catchwater drain is connected with Mr Catchpole's dam and will act as a feeder to it. The surplus water from Mr Catchpole's dam will flow into the one below, and that from this lower dam into the one below it. The advantage of having a high dam far above the bottom of the Valley is that in years to come the water by seepage probably through the dam itself, round the ends of the dam, and through fissures in the soil, will appear at the surface and probably run as a permanent stream, thus tending to keep the two lower dams full throughout the year. It

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is due to this fact that I am only going to make the two lower ones 15 feet high. The seepage through the dam itself should be almost a negligible quantity, but I have never yet seen a stone and earth dam in which seepage to a certain extent did not take place, so I assume that the same will be the case in the dams here. The cross section shows the nature of the construction of this dam, and so far it has been built to a height of 28 feet, and there is a depth of 25 feet in the water spread behind it. The portions hatched in the section have not yet been constructed. The lake will be 450 feet long, 150 feet wide in the widest part, and 40 feet in the deepest part. It will contain at least 600,000 cubic feet of water; and, as it is in such a deep ravine and so well shaded, the evaporation should be small. I estimate that it will cost £500, but I have no undersluices, and do not know the angle at which the earth is lying in the water - as the lake is now so muddy owing to earth being thrown into it daily - I cannot be certain as to the actual cost. The flatter the angle the greater the expense. This lake is fed by a stream which is said to run for 8 months in the year. Its source is in springs which appear to the surface not far above the end of the lake. In the monsoon the stream is sometimes a mountain torrent, and on this account I am making provision for a cut 12 feet wide and 5 feet deep to communicate with a natural waste weir close at hand. As pipes, cement or lime masonry, or extensive timber work are out of the question on

the

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the score of expense, I have merely used stone and earth which are plentiful and not far off. I have been hung up for want of labour, and also because the white contractors did not appear with their dam scoops, ploughs, and sledges for carrying stone as soon as I expected them. I have now 60 or 70 men working departmentally, and the contractors have one waggon, two sledges, and 4 dam scoops. One sledge is not working for want of oxen. I have asked the District Commissioner, Kisii, to send me 30 men to replace the gang which went away last Monday week.

The second Dam (Catchpole's) and the third below.

The longitudinal and cross sections of these Dams explain their construction. Both dams are in their infancy, and it is hard to say what they will cost to construct, but so far I hope to do them for £250 each. This will contain about 800,000 cubic feet each. They are shallow ones, but as they are fed throughout the year by one stream - the one Major Carnegie used - and probably for that time by the one which I have mentioned in writing about dam No.1, I hope they will never dry. They are made shallow on purpose so as to be suitable for cattle to drink from. I think they will take two months from now to complete.

I have made no elaborate plans and estimates and have till now written no reports since I started work here on the 3rd May, simply because I have had no

time

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time to spare. This is so on account of the absence of a headman, and therefore I have had to watch my men hourly, to attend the sick - very few men have been ill but petty cuts, sores, &c., &c. are very common - and to give the men their posho daily. I have also been engaged in a very difficult operation, viz. in making a high earthen dam - without under-sluices - against a rising head of water. This requires constant attention and often change of design due to new features appearing as construction proceeds. The cost of working here is very great, but the Lemek Valley is, so far as I am aware, the only place I could work in in the rainy season. Moreover as rapid construction is, I understand, the thing expected of me, so as to show the Masai what can be done towards ensuring permanent water supplies, I do not regret having worked here. When the dams are complete they should suffice for supplying the Masai and their flocks and herds living within an area of 100 square miles.

I think dam No. 1 will fill during this next month, but I doubt if dams Nos. 1 and 2 will do so before the next small rains, as the streams are not running strong now, and their flow will daily diminish unless more rain falls.

The cost of food for the natives is very high, viz. Rs. 7/50 for a load of 60 lbs, and it has been very difficult to get flour at all owing to the heavy state of communications during the rains. Luckily

lately

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lately Mr Hemsted had 100 loads too many and kindly
lst me have them.

(Signed) G. F. WAITS,
Temporary Engineer, P.W.D.,
Southern Masai Reserve Water
Supply.

The Lemek Valley,

23.7.13.

REPORT OF A SEARCH FOR GLOSSINA
ON THE AMALA (ENGABEI) RIVER.

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Leaving the Government post on the Amala River at an altitude of 5,500 ft. on 25th July I moved down the West bank of the river and camped at a spring known as Ol-etu-lomot at an altitude of 5,200 ft. (see attached sketch map). The next day I moved further down the river in search of an old Masai native by name Ol-botor-ol-joni who was reported to be familiar with the places in which tsetse fly (Enderbe of the Masai) was to be found. I found this old man at the place marked on the map and camped there at an altitude of 5,100 ft.

Mr R. W. Hemsted, the District Commissioner at the Amala Post, had visited this area some time previously and had actually caught flies, which he took to be Glossina, on the Enderrit River (see map), a tiny stream coming down from the Escarpment. The flies were put into an empty match box but unfortunately all escaped later. The old man Ol-botor-ol-joni had acted as guide to Mr Hemsted and at his advice I sought him out again to act as guide to the places where tsetse fly were known to exist by the Masai. Ol-botor-ol-joni's manyatta (village) was placed near two small streams and about 300 yards away from the bush which grows along the channels of all the little streams coming down from the escarpment. He owned about 500 cows and oxen and about 500 sheep and goats.

goats and he stated that he and his family with their cattle had resided in this district for many years and had come from the Loieta Plains to the East of the Amala River. He told me that he knew the tsetse fly (Endorobo) well and that he and the other Masai who lived there knew that it sometimes killed the cattle (cows and oxen) but he said it did no harm to the sheep and goats and that they knew very well the places where the fly was, as it had always been there, and that they did not take the cattle to those places. In very dry seasons if they were obliged to take the cattle to water at places where there was fly, several men went on ahead and made fires on each side of the track which the cattle would have to use in the fly area, and set fire to as much of the bush and grass as possible as they said the fly would not bite the cattle among the smoke or when much of the bush had been burnt and dried up. I afterwards saw the remains of numbers of these fires in the fly areas. The Masai also told me that sometimes when they wished to move cattle through a fly area they did so at night; this I doubt because lions are very numerous throughout these districts and I have never heard of Masai letting their cattle out of the manyatta at night. Besides this it so happens that in the present case the precaution would not appear likely to be successful. The Glossina in question appears to be G. brevipalpis or at any rate to belong to the Brevipalpis group. I have no previous personal experience of G. brevipalpis but it is stated in

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Austen's Handbook of the Tsetse Flies that *G. brevipalpis* is one of those tsetse flies which bites only in the early morning before 8 o'clock and in the evening after 4 p.m. continuing after dark but not throughout the night. However it is probable that this tsetse fly on the Amala River is an undescribed species (both Mr T. J. Anderson, Government Entomologist and Dr J. O. Shircore are of this opinion) and in this case it is possible that this fly may continue its activities throughout the night in the same manner as *G. pallidipes* does in the Coast regions of British East Africa. From personal experience I can testify to the fact that *G. pallidipes* feeds greedily during the whole night but in my experience not during the day time. The possibility that the tsetse fly on the Amala River feeds principally during the night is borne out by my own experience, for I failed to capture a single specimen during a whole day's search, as I shall describe later, but I was unable to search at night.

While I was discussing the distribution of tsetse fly with Ol-botor-ol-joni and several other Masai from his village, one of my porters, who had all been instructed to catch any flies which bite them, brought me a large ^{7A} *Tebanus* (probably *T. ustus*) which he had caught biting his leg. I showed the fly to the Masai and Ol-botor-ol-joni at once said that it was not a tsetse fly (Enderobe); some of the Masai present agreed with him but others insisted that it was a tsetse fly. However one of them, in order to

settle

settle the dispute volunteered to go and catch a tsetse fly. He went away and within half an hour returned with a leaf folded up and tied with grass, in which he said there was a tsetse fly. I put the leaf into a killing bottle and in due course opened it and found inside it the only tsetse fly which I obtained during the expedition. This fly was caught at about 3.30 p.m. (I was only able to spend one whole day in the fly areas as I was obliged to return to meet His Excellency the Governor at a certain time).

As soon as I saw this one tsetse fly I asked its captor if he could show me any more, which he said he was confident he could do. So I at once got out with him and took with me a donkey and a very dark coloured mule. We proceeded to the bush along the course of one of the little streams near by, where I was assured there were always tsetse fly to be found and where the one specimen I obtained had been caught. I remained there from 4.30 p.m. until dark, moving the mule and donkey slowly about among the bush and down the bed of the stream, remaining stationary now and then for ten minutes. Not a biting fly of any kind was to be seen except Naematopota, Stomoxys, and Hyperosia.

The next morning I started at about 8 a.m. with the mule and donkey and most carefully hunted several of the places where the Masai told me tsetse fly were always to be found. I failed to obtain a single specimen although I remained there until 4 p.m. when I was obliged to return to camp which I had sent 10 miles

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miles back up the river. Several other genera of blood-sucking flies were seen. A large *Tabanus*, which I believe is *T. ustus*, was numerous, and *Haematopota*, *Stomoxys*, and *Lyperosia* were seen and captured. A few specimens of *Tabanus maculatissimus* were seen, but they were very shy and only one was captured. One specimen of the genus *Chrysops* was seen but escaped. These blood-sucking flies all appeared after 11 a.m. and at about 12.30 p.m. one single *Glossina* appeared and settled low down on the mule's leg, but did not feed and disappeared instantly although I made no movement to catch it, as I was anxious to allow the mule or donkey to be infected, if possible, in order to take the strain of *Trypanosome* back to the Government Laboratory at Nairobi.

The Masai showed me all the areas where they knew from experience tsetse fly existed. These I have marked in red on the accompanying sketch map but there are probably more streams than are shown on the map. After discussing the subject carefully with the local Masai, I came to the conclusion that, although they knew tsetse fly to exist on some of the small water courses coming down from the escarpment and on the Amala River, they nevertheless wisely treated all these small water courses with suspicion, except in the case of sheep and goats, and only approached them with their cattle if compelled to do so for want of water. They told me that tsetse fly was to be found all down the Amala River from this point into German territory and that although it was

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far more numerous during the rains it was always present all the year round. Some of the Masai insisted that they fly only existed on the West bank of the river, others said it was to be found on both banks. This is a very interesting point in view of the fact that two previous attempts to find this tsetse fly on the Amala River had failed and also because the phenomenon of tsetse fly existing on one bank of a river and not on the other has been reported from other parts of Africa.

In October 1912 I visited this area of the Amala River for the first time and travelled down the East bank as far as the bend in the river where "Judd's old store" is shown on the map. Knowing that tsetse fly were said to exist here I searched carefully all down the East bank of the river from the Government post to the lower store. I failed to find any trace of tsetse fly, and six mules and a pony and two dogs which I took with me all down the edge of the river were not infected and are still alive and well. I did not cross to the West side of the river. Both my visits to the Amala River were made during the dry season (which extends from about the middle of June or end of May till November or December or in bad years till March) and on the West bank tsetse fly in small numbers were discovered, while on the East bank none could be found. Of course it is quite possible that owing to the dry season and there being few flies about tsetse may have been on the East bank of the river without being detected on

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the occasion of my first visit. However there is other evidence which makes this unlikely.

In May 1913 during the rainy season Mr. J. Anderson, Government Entomologist, visited the Amala River with the object of investigating the reported presence of Glossina. He approached the river from the East and followed that bank from near the Anglo-German border up to the Government Post above Judd's stores. He found no signs of tsetse fly at any part of the Amala River which he visited, and I attribute this to the fact that he was unable to cross to the West bank owing to the river being in high flood. Mr Anderson's visit was made at a season when tsetse fly should have been numerous and in evidence if they exist on the East bank of the river.

Further than this there is the evidence to be drawn from the case of the storekeeper Judd who had a trading station at the bend of the river marked on the map. He occupied and used this store for 18 months, dealing in sheep, goats, and cattle from the natives and also had mules and ponies from time to time at the store.

In March 1911 during the rains 2 mules and 4 horses were kept at the lower store and were used on both sides of the river hunting lions for 15 days. None of these animals died.

In May 1911 five mules were taken to the lower store and used on a hunting expedition down the river

8.

on the East side only. It is noted in Mr Judd's diary that several kinds of biting flies were very troublesome but no tsetse flies were seen and Mr Judd is thoroughly familiar with tsetse flies. However one of these mules became ill and upon its return to Nairobi in June it was examined at the Government Laboratory and found to be infected with trypanosomes and died later.

In June and July two teams of ten mules were doing transport work between Nairobi and the lower store. None of these animals are said to have crossed the river but they drank daily at a ford near the store where the river is not more than 30 yards wide. Five of these mules became ill and died. They were not examined for trypanosomiasis. They used to remain 4 or 5 days at the store before returning to Nairobi. After this mules were no longer used and a team of 18 oxen was tried under similar circumstances. 7 of them became ill and 5 died. They were not examined for trypanosomiasis. They were said never to have crossed the river but drank at the ford daily.

In November 1912 Judd moved his store some 15 miles higher up the river, this was done on account of having lost so many animals from suspected trypanosomiasis.

All this evidence tends to show that the tsetse fly in the area under discussion is either confined to the West bank of the river or to that bank and the East bank in the immediate vicinity of the river, and this theory

theory is strengthened and explained when the physical features and conditions of vegetation in this area are taken into consideration, which I shall describe later.

When I was obliged to return and leave this district I told the old Masai who had acted as guide that if he would catch some more tsetse flies and would bring them up to the Government post he would receive five rupees and I left him a box in which to put them. I am glad to say that about ten days later he brought in 3 flies which were sent in to Mr Anderson according to my instructions. They proved to be *Glossina* apparently of the same species as the one first obtained and they were sent by Mr Anderson at once to Mr Guy Marshall in London.

The old Masai Ol-boter-ol-jeni who had lived in this area for some years and who undoubtedly knew a tsetse fly at once by sight when he saw one, and also knew a good deal about them and their distribution, told me that there was another species of tsetse fly to be found in this area which was much smaller and a lighter brown colour but was not so numerous and was very shy. I shall endeavour to obtain this fly, which of course may not be a *Glossina*. However I showed the old man several *Haematopota* and *Stomoxys* which he said were not at all like it.

When I arrived first at Ol-boter-ol-jeni's village I found that he was said to be ill and he was unable to accompany me as guide on this account.

As he had evidently spent a good deal of his time in the fly areas I thought it worth while taking some smears of his blood. I had some difficulty in persuading him to submit to this; however eventually he allowed me to draw a little blood from his finger. I examined this while fresh under cover slip and also in stained preparations but could find no Trypanosomes after spending two hours over each of the stained slides. He said he had been ill for about 10 months. He complained of pain in his head and stomach and back. He showed marked oedema in the feet and ankles, I could find no trace of enlarged cervical glands and he showed no signs of emaciation. He was a man past middle age and had a little gray in his hair but I believe he was suffering from nothing more than advancing old age. On enquiring as to whether these Masai knew or suspected the tsetse fly of producing disease or death in human beings I could find no evidence of any idea of the kind. They knew and admitted that they occasionally lost cattle (cows or oxen) as a result of their being bitten by tsetse fly but they said this very seldom happened and that they had no cattle sick at the time. I saw the cattle and could find none showing signs of disease. Among the sheep and goats I found two, one sheep and one goat, which were diseased and much emaciated and were said to have been ill for three months. I examined the blood of both these animals but could find no Trypanosomes.

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PHYSICAL FEATURES OF THE FLY AREA.

The Amala River from the Government Post at 5,500 ft. flows with considerable current as far as the point on the map marked 'rapids'. There is no dense bush or forest on this part of the river, only a very narrow fringe of trees and bush actually on the banks of the river. At the point where the rapids are, the escarpment of 6,000 ft. altitude, which runs all along the West bank of the river into German territory, approaches the river within 200 yards. Above this point tsetse fly do not occur.

Immediately below this point the escarpment bends away from the river, as can be seen from the map, and the West bank opens out into a broad plain of park like country, fine grazing land studded with occasional yellow bark acacia trees. At the lowest point I reached just below the Enderrit River there was a distance of at least seven miles from the Amala River across the plain to the foot of the escarpment with a fall of about 200 ft. from the foot of the escarpment to the river and below this point the distance between the river and the escarpment is much greater.

This plain is intersected by numerous small water courses coming down from the escarpment, some of which contain a little running water all the year round from springs, while others dry up, except for a few pools, towards the end of the dry season. The banks of all these water courses are overgrown with

dense

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dense bush and forest, at the sources extending for perhaps only 30 to 50 yards on each bank but gradually widening out as the streams approach the Amala River to as much as 250 or 300 yards. This bush is very similar to bush in which I have seen *G. palpalis* in Uganda and the Congo and is in every way suitable for tsetse fly. It consists of some large forest trees with smaller ones in between with quantities of creepers growing up and among the trees affording excellent shade. In some places very dark shade, in others shade mottled with sunlight. This bush or forest is not full of dense undergrowth but is comparatively open so that it is possible to walk about and even lead a mule without much difficulty. There is no grass growing beneath the trees, in some places there is a thin growth of low herbaceous plants but more usually the ground is covered with dry leaves and composed of leaf-mould. The temperature in this bush taken only upon one occasion registered max. 80 min. 58 Fahrenheit at an altitude of 5,100 ft. The soil underneath these belts of bush apparently never becomes very dry and in some places is quite sodden so that there is ample moisture combined with the shade.

The Masai reported that tsetse fly existed upon some of these water courses from the foot of the escarpment all the way down to the Amala River but that upon others no fly existed. Owing to my only having been able to spend so short a time in the area I can neither prove nor disprove this statement, but I am

more inclined to the opinion that fly exists on all these little water courses but that it follows some of them nearer to the escarpment than others and that as the Masai avoid as far as possible taking their cattle down towards the Amala River they have only come in contact with fly on some of the water courses.

Immediately below the rapids of the Amala there is a considerable area of bush as shown on the map, which the Masai state is a fly area, and it is consequently interesting to note that a broad well-worn cattle track passes through the middle of this patch of bush.

Between the rapids and Judd's lowest store at the bend of the river, the Amala changes its character and becomes a very sluggish river running in a deep narrow channel between high banks. There is very little fall in this part of the River, the country is flat and there is a great deal more bush on this part of the East bank than upon any other part I visited, and it is quite possible that both banks of this part of the river are infested with tsetse fly. However I camped here in October 1912 and found no Glossina and Mr T. J. Anderson passed along this part of the river in May 1913 and found no Glossina. Throughout this section of the river the West bank has far the most extensive area of bush, which is continuous with the bush along the small water courses already described which run into this part of the river on the West side. On the East bank there are several small water courses running into the

river but they are quite dry except during the rains and are rocky and have no bush at all on their banks or only an occasional clump a few yards in diameter.

The whole character of the East side of this part of the river is different from the West. The ground is more rocky and arid, more undulating and rises higher and more abruptly above the river. The grass is less luxuriant, and the country is described as park like and is extensively covered with thinly scattered thorn scrub of several dark rough barked varieties of acacia and one or two yellow barked species.

At the bend of the river at Judd's lowest store or a little above this the Amala again becomes a fairly swift flowing river over a rocky bed and the banks particularly on the East side have little or no bush upon them only a fringe of trees along the water's edge and scattered thorn scrub further from the river. How far these conditions continue I cannot say as I have never been below Judd's lowest store. On the West side of the river at Judd's lowest store there is a considerable rocky ridge which causes the river to take the bend to the East and which appears to separate it at this point from the plains below the main escarpment.

The Amala River at this point is about 75 or 80 miles in a direct line from Lake Victoria and it must be 150 or 200 miles following the course of the river before it flows into the lake.

There are large numbers of game and other

animals

15.

animals on both sides of the Amala River between the Government Post and Judd's lowest store, the following species being represented :-

Rhinoceros	Oribi
Hippopotamus	Duiker
Giraffe	
Eland	Lion
Waterbuck	Leopard
Zebra	Cheetah
Roan Antelope	Serval Cat
Wildebeest	Wart-hog
Topi	Rabbits and other monkeys
Coke's hartebeest	Hare
Impalla	
Kudu	Numerous other small
Bushbuck	mammals and birds such
Steinbuck	as Guinea-fowl and
	francolin, but few large
	water-birds.

In the fly area blood smears were obtained from Topi (probably the most numerous game animal), Impalla, Zebra, Wart-hog, and a Hare. On examination later, none of these were found to contain Trypanosomes.

CONCLUSIONS.

The Tsetse fly area on the Amala River appears to present several points of interest.

- (i) The species of *Glossina* is probably a new one, certainly new to the East Africa Protectorate, if not an undescribed species.

- (ii) The altitude 5,200 ft. is the highest at which any species of *Glossina* has at present been found to exist permanently.
- (iii) The fly on the upper part of the river, the area under discussion, is apparently confined to the West bank of the river, or only occasionally strays to the East bank.
- (iv) Natives with their cattle, sheep, and goats have been living for many years practically in contact with the fly (I have myself seen large numbers of cattle grazing within 400 to 500 yards of belts of bush in which tsetse fly undoubtedly exist all the year round) in spite of the fact that several visiting sportsmen have lost mules and trek oxen as the result of an expedition down the Amala river, and that the natives themselves admit that they occasionally lose a few cattle from the bites of tsetse fly (Endorobo).
- (v) These appear to be two possible explanations of the phenomenon of natives with their cattle living among fly areas in which at least a percentage of the flies are known to be infected with a trypanosome pathogenic to cattle, mules, and horses.
- (a) It is possible that the natives in this district are so familiar with the distribution of the tsetse fly that they scarcely ever expose their cattle to infection. The fly certainly appear to be confined
- 57

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confined to very definite and distinct areas and it has been stated that if the natives are at time compelled to visit these areas for water, this only occurs during very dry weather when the fly is least numerous and active.

Where the escarpment on the West bank is within about two miles of the river the Masai have their villages and cattle kraals on top of the escarpment only bringing their cattle down to water. This however is above the fly areas.

- (b) It is possible that only a very small percentage of the tsetse flies present are infective.

This might be accounted for in two ways. Either the reservoir or source of infection is very limited, or owing to unfavourable climatic conditions (possibly the rather high altitude) the flies themselves have very little power of what Roubaud calls 'receptivity', that is to say numbers of flies may feed upon an infected animal and only a very small percentage of them become infective.

RECOMMENDATIONS.

The fact that a portion of the Trans-Amala area of the new extended Masai Reserve is inhabited by

tsetse.

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tsetse fly does not at present appear to be of any importance or a cause for alarm on account of the natives or their stock because there are already numbers of Masai who have lived in this area for many years without suffering any appreciable loss. Consequently no precautionary or protective measures appear either necessary or possible. It might perhaps be considerate and to some extent a precaution to clearly warn the newly arriving Masai that tsetse fly does exist in certain areas and that they must keep their cattle away from these places. However this information they will certainly obtain from the present inhabitants of the district, and it is unlikely to be received with much belief or appreciation when coming from a white man.

In view of the fact that *Glossina brevipalpis* is one of the species of tsetse fly to which some suspicion of transmitting a pathogenic human trypanosome has been attached, it does not appear advisable, if it can be avoided, to allow natives coming from the lake shores and possibly suffering from Trypanosomiasis in an early stage to visit the area in question, until more definite knowledge has been obtained about the tsetse fly (possibly two species) on the Amala River. There are apparently only two ways in which this might come about. The most probable way is that, owing to a road having been lately opened up from the Amala Post to Kisii, the District Officers will employ as porters natives from Kisii, Homa Bay, and South Kavirondo, among whom

whom it is just possible there might be an unsuspected case of Sleeping Sickness. If District Officers use such porters for journeys down the Amala River it might be worth while avoiding the fly area under discussion as far as possible.

The other way in which an unsuspected case of Sleeping Sickness might conceivably find its way into this fly area would be among the porters employed by shooting parties on which a few visit the Amala River annually. It appears difficult if not possible to prevent this and it must be remembered that these shooting parties with Kavirondo porters have been visiting the Amala River for years. However sportsmen who get into difficulties with tsetse fly on the Amala River do so from ignorance and not from any desire to enter a fly area. Up to the present it has never been clear where the fly existed on the Amala, if a copy of the attached map is allowed to be supplied to the agents in Nairobi who fit out shooting parties they will give the necessary warning with the result that this fly area will be avoided as far as possible by shooting parties and travellers to the advantage of all concerned.

(Signed) R. E. WOOSNAM,
Game Warden.

TABLE OF ALTITUDES AND TEMPERATURES OF CAMPS
DURING HIS EXCELLENCY'S JOURNEY FROM NGONG TO
KISII.

No	Name of Camp	Altitude	Max temp	Min temp Fahr
15				
28	Ngongo Bagas	6200 ft	84 tent shade	43 on grass
29	6 miles from Ngong	6200 "	82 " "	42 "
30	Kedeng River	4600 "	not taken	48 "
1	Soit Amurrt	4600 "	86 tent shade	56 "
2	Kaberr	4650 "	84 " "	52 "
3	Colong	4500 "	90 " "	56 "
4	Van de Weyer's Drift	4200 "	not taken	49 "
5	Narogara River	4700 "	78 under tree	51 "
6	" "	" "	90 tent shade	53 "
7	" "	" "	74 under tree	50 "
8	Engutabo	5200 "	84 tent shade	44 "
9	" "	" "	86 " "	50 "
10	Van de Weyer's store	6000 "	84 " "	48 "
11	Ngaria Nito	5600 "	86 " "	38 "
12	O'Lari Londuka	5600 "	88 " "	38 "
13	Junction salt marsh and Guaso Nyiro	5600 "	90 " "	34 "
14	" "	" "	80 " "	40 "
15	New bridge on Warok River	5900 "	72 " "	40 "
16	Aggett's store on Guaso Nyiro River	5900 "	74 " "	48 "
17	O'l Kaju Langereen	6000 "	72 " "	47 "
18	Kamelulu	6100 "	70 " "	44 "
19	" "	" "	68 " "	48 "
20	O'Lari Bemune	5800 "	92 " "	51 "
21	O'l Kaju Loabugei	5900 "	94 " "	49 "
22	Baradamatt	6000 "	90 " "	52 "
23	" "	" "	88 " "	52 "
24	Kaitong	5700 "	90 " "	57 "
25	Amala River Post	5500 "	86 " "	51 "

The open Loleta
Plains cold & windy
hence low max. temp.
warm sheltered
valleys hence high
max temp.

	Name of Camp	Altitude	Max temp	Min temp	Fahr
26	Ol-otu-lonet (R.B.W. alone)	5200 ft.	84 tent shade	50 on grass	
27	Enderrit River (R.B.W. alone)	4900 "	86 "	54 "	
28	Ol-otu-lonet (R.B.W. alone)	5200 "	90 "	48 "	
29	H.E.'s camp below Amala bridge	5300 "	88 "	41 "	
30	Amala bridge	5300 "	96 "	33 "	
31	First camp beyond Amala River	5900 "	88 "	46 "	
1	Gayli Gayli	6100 "	82 "	43 "	
2	Campi ya Fisi	6080 "	92 "	59 "	
3	6 miles from falls on Kuja River	6300 "	90 "	46 "	
4	Kuja River Falls	5550 "	88 "	44 "	
5	"	"	90 "	47 "	
6	"	"	89 "	45 "	
7	Kisii Post	5500 "	94 "	52 "	

LIST OF BLOOD-SUCKING INSECTS AND TICKS
OBTAINED DURING HIS EXCELLENCY'S JOURNEY
FROM NGONG TO KISUMU.

434

TICKS.

Genus.	
Repticephalus	4 species
Hyalomma	1 "
Amblyomma	3 "

FLEAS.

Pulex	3 species
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BLOOD-SUCKING FLIES.

Glossina	1 species
Tabanus	2 "
Haematopota	5 "
Stomoxys	2 "
Lyperosia	2 "
Simulium	1 "
Phlebotomus	1 "
Hippobosca	1 "

Total number of specimens 128. These will be taken
to the British Museum for identification.

150 blood and spleen smears from game and other animals
were also obtained.

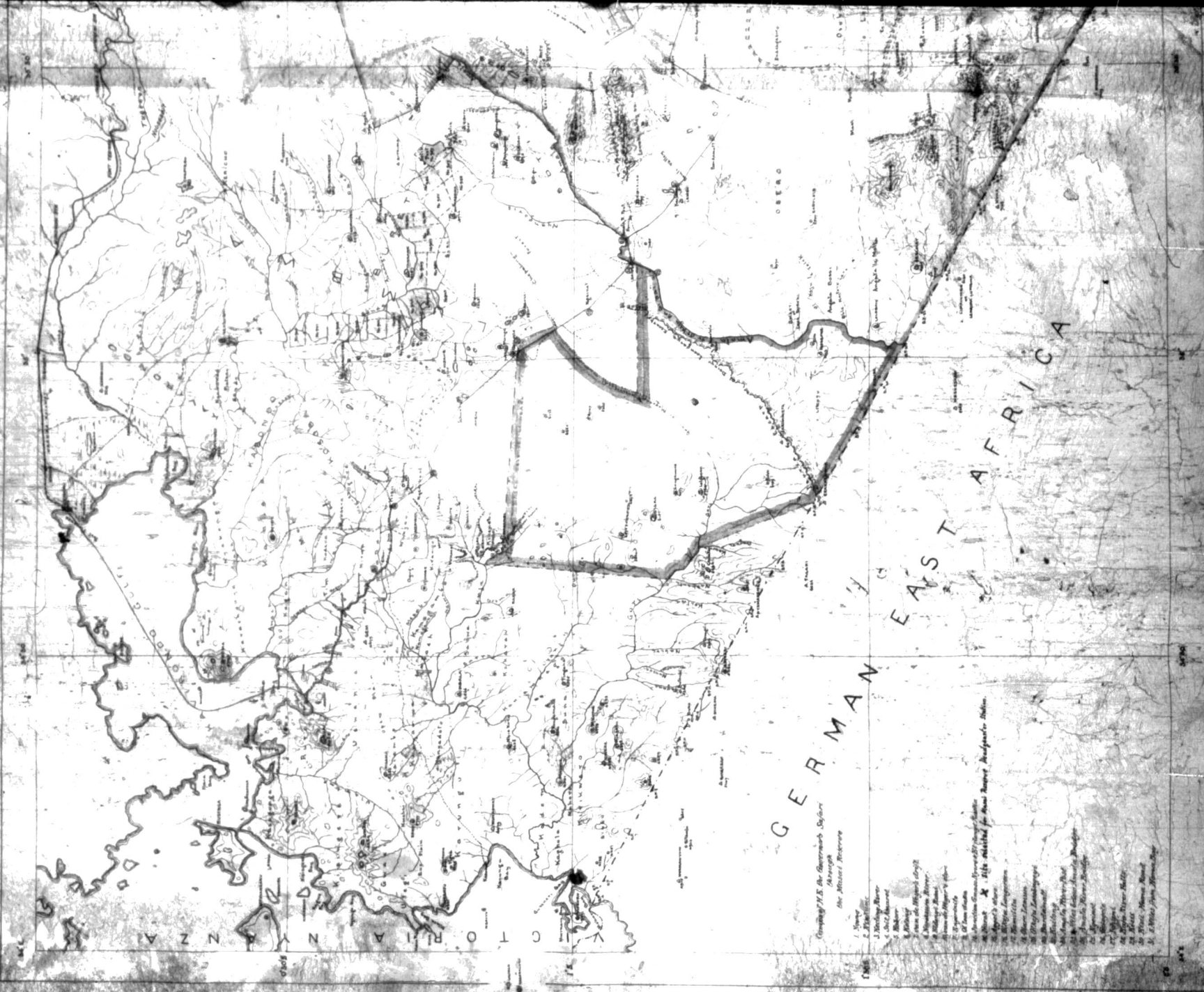
(Signed) R. B. WOOSNAM, Game Warden.

10.9.13.

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Ref: 19 JU '3

Exhibit E E.A.T. No 242 dated 2/2/21
 SKETCH MAP OF WESTERN PORTION OF NIASAI RESERVE
 SHOWING THE GOVERNOR'S TOUR



GERMAN EAST AFRICA

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- 1. Name
- 2. Description
- 3. Date of Issue
- 4. Author
- 5. Editor
- 6. Title
- 7. Subject
- 8. Place
- 9. Date
- 10. Price
- 11. Distribution
- 12. Remarks
- 13. Remarks
- 14. Remarks
- 15. Remarks
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- 50. Remarks

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Scale 1:50,000
 1:50,000

En/39666/Past Hq. Mt.

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3 Dec 1903

Sir,

I have ^{the honor} to ackn. the rec^d of
your dep. No 842 of the 30th of
Oct* with its enclosure, on the
subject of your ^{resub} ~~sub~~ ^{inquiry} ~~inquiry~~ to the
Portm^{or} in Mass. Residue,
and to inf. you that
I ~~have~~ ~~been~~ ~~unable~~ ~~to~~ ~~do~~ ~~so~~

DRAFT

P. D. (No 1033)

Mr. C. Balfour

MINUTE.

- Mr. Douglas 112.10
- Mr. J. G. ... 2
- Sir G. Fiddes 2
- Sir H. Just.
- Sir J. Anderson.
- Lord Emmott.
- Mr. Harcourt.

by the author for your interesting
report and to

I have read your
report with great interest
and have carefully considered
the various points of
importance which you have dealt with
in your various proposals. The
following points in the report have
I think to make the following minute
attached my personal observations.

8. Para 12. I approve of your
proposal to comply with the
request of the Mass. Port
The Gov^t should direct a
Hopper for their cattle and should

* No 39666

1903-12

should give them instructions
in the process of cattle
shipping. I also approve of your bearing
in mind that you did well to make
it clear to the applicants
that the Government will not
be prepared always to defray
the cost of such works.

Para 13. I note with satisfaction
the request of the chiefs that
a branch of the Post Savings
Bank should be opened in
the Reserve and the
subsequent establishment of
a branch Savings Bank at
Nyong on the 29th of September.

Para 20. I am glad
to note the importance of building a
bridge across the Suaso
at Van de Weyer's Drift
Nyiro River meets with
my approval.

Para 22, 23, 24. I am glad
to receive the debt factory
account which you give
of the condition of the herd.

of the Reserve and of the
nature of the land included
in the Reserve, which
referred to in the paragraph
would appear on the whole
to be very suited to the
requirements of a tribe
dependent on the rearing of
cattle.

Para 24. I attach the greatest
importance, as you are aware,
to the question of the
supply of and I am glad
to observe that an examination
of the whole of the side of the
country comprising the Lota
Plains, to be undertaken
as soon as practicable.

Para 26. I approve of your
action with regard to the
selection of a site for the
headquarters of the adminis-
tration of the Southern Reserve,
and especially of your decision
to have permanent occupation.

of the water in the reservoirs

has been sufficiently proved.

para 29. I have read ^{with great interest and satisfaction} Dr.

Waller's report on the works which he is constructing in the Lemek Valley, and I am glad to see that good progress is being made with the provision of an adequate water supply for the district.

para 32 and 33. Dr. Hogg's report on the presence of fly along the Amule River is interesting and, so far as it goes, reassuring, but the whole ^{of the Reserve} will require further examination before any certain conclusion can be reached with regard to

the existence and prevalence of the tsetse fly in the various districts of the Reserve. In this connection I would refer you

to para 2 of my despatch No. 695 (28641) of the 22nd of August, where

I have asked you to arrange for a further investigation of the tsetse fly to be made at the

convenient

convenient opportunity. A copy of Dr. Hogg's report will be sent to the Tropical Diseases Bureau, and a copy will also be sent to the Imperial Bureau of Entomology.

DRAFT.

para. 40-49. The arrangements for proposals outlined in your despatch for the administration of the

MINUTE.

- Mr.
- Mr.
- Sir G. Fiddes.
- Sir H. Just.
- Sir J. Anderson.
- Lord Emmott.
- Mr. Harcourt.

Reserve, which should, in my opinion, have a beneficial effect in bringing the Government into closer relations with the Marai tribe and Saballa's people.

I approve of your proposals para. 51. With regard to this para. I must observe that, in my opinion, the time has not arrived when it is either necessary or desirable to impose a cattle-tax upon the Marai.

~~which~~ might be thought
of them. To be the object
of a consequence of the move.

3. In conclusion I desire
to convey to you my thanks
for your interesting report,
and to express my ^{appreciation} ~~admiration~~
of the pains which you
evidently took to make
yourself acquainted as far
as possible with the Bureau
as far as was possible
during the time at your
disposal.

I have etc

(SIGNED) L. HARGREAVES

No 37666/1913
R.S.P.



A 440

8 January 1914

Sir,

I am to transmit

to you for the information

of the (1) Imperial Bureau of Entomology
(2) Tropical Oceanic Bureau

the accompanying copy

of a report by W. R. S.

Worsnam of a search

for Glossina on the

Amala (Engabai)

(1) River, together with the
map referred to therein

(2) River. The map referred
to therein has been forwarded

to the Scientific Secretary of the

Imperial Bureau of Entomology
for the Under Secretary of State

DRAFTS

The ~~Imperial~~ Scientific Secretary
Imperial Bureau of Entomology

Res Director
Tropical Oceanic Bureau

MINUTE

Mr. Harper 7/1/14

Mr. Cotton 7/1/14

Sir G. Fiddes.

Sir H. Just.

Sir J. Anderson.

Lord Emmott.

Mr. Harcourt.

Worsnam's report 10 Sept (with the map)
(number) 37666/13
with map: x

Worsnam's report 10 Sept (with the map)

The map on enclosure number
attached to 37666 - is the largest
one available - 5 1/2 x 3 1/2