

NOTES ON THE TSETSE POSITION RELATIVE TO CHIKWIZO
AND FUNGWE NATIVE RESERVES

- H. E. Hornby

By courtesy of the Director of Veterinary Services, who put at my disposal not only a Chevrolet truck but also the services of a Cattle Inspector who knew the district very well, I was able to spend four days from September 5th in the Native Reserves now affected or threatened by the tsetse invasion that has already wiped out the cattle of Mkota. I hope the impressions set down here will allow the Trypanosomiasis Committee as a whole to visualise more clearly the problems involved. Although I visited Chikwizo after I had seen the other reserves I think I should commence the descriptions by describing the day I spent studying the position there, as it opened my eyes to the probably importance of a factor frequently mentioned but possibly under-rated in our discussions: the factor the part played by treated cattle in favouring fly advance.

On September 8th Mr. Nell and I left Mtoko township and followed the Makaha road for 29 miles, to arrive at the four-strand fence with iron standards that runs from a point a long way to the south and is already being pushed forward to its northern terminal on the Mazoe river very far to the north; across a difficult country of stony hills; the laborious implementation of a well-conceived idea.

Almost as far as the fence we passed through a part of the Mtoko reserve that is well populated, and heavily stocked with cattle still in fair to good condition. Only near the reserve's eastern boundary have there been more than occasional cases of trypanosomiasis, and these can be attributed to the herds grazing on Crown Land east of the reserve. The presence of the fence, adequately patrolled, and with the road gap provided with a cattle grid and a locked gate, should prove adequate to control this illicit movement, and after game has been eliminated from near the eastern side of the fence all danger of spread of infection into Mtoko Reserve should be removed.

Both in Mtoko Reserve and near the mines beyond its eastern boundary the vegetation is secondary and much mutilated, but as our road turned northward the unoccupied country was seen to be clothed with fairly open Pseudoberlinia globiflora - Brachystegia boehmii woodland of a type well suited to morsitans.

This continued throughout the remainder of the eleven miles of road that separates the cattle fence from the fly chamber where during August only two tsetse were caught; one on the eastward and one on the westward traffic. Still through the same woodland for another four miles to the ill-defined boundary of Chikwizo Reserve, and another two miles to the Game Ranger's house, and the eight-strand fence with pole standards beyond; i.e. a belt of woodland about 17 miles wide, well suited to be a habitat of G. morsitans lies between the fences.

Erection of the two fences is a formidable task, but when accomplished it will be one that was worth while. I talked with the ranger, Mr. Gillett, and he said that even now the inter fence area has very little game, so there is every likelihood of its becoming fly-free with a very short time. Its value as a protection to the Mtoko Reserve is obvious; we shall consider in a minute its value to Chikwizo.

After passing the game fence the road continued to descend gradually, and by the time we reached the first Chikwizo village a hotter drier climate was revealed by the replacement of much of the Pseudoberlinia - Brachystegia woodland by a woodland of the same dry type that I saw two years ago near Fombi in Inyanga North Reserve on the other side of the Ruhanya river; a woodland of many genera: Combretum, Terminalia, Lennea, Burkea, Diplorhynchus, Bauhinia, Strychnos and many others; mostly leafless; There were small patches of Mopane, while conspicuous in their fresh foliage were isolated Azalia (pod mahogany), Kigelia (sausage tree) and Lonchocarpus.

When eventually we reached the villages of Zano I found conditions closely resembling those of many parts of East Africa where, in pre-dimidium days, any extensive mortality from morsitans would have been considered most unlikely. I found a large area of cultivation steppe, equivalent to a circle with a radius of two miles

and, before the erection of the game fence, westward for considerable distances would cattle be able to make contact with established morsitans. That they did not, with appalling results to the cattle, we know, and that is why I say I think it was the medicinal treatment of infected animals which made the holocaust possible. In pre-dimidium days, the early and limited mortality would soon have effected a break between the still uninfected herds on the south side of the cultivation steppe and the fly bush to the north, but as a result of treatment the flies were provided with regular food to an extent that permitted their multiplication and spread during the rainy season of leafiness to every part of the occupied land. By the time the leaves fell and the flies retreated the damage was done.

The main cause of the extensive trekking was shortage of watering places, coupled with extensive cultivation which made no allowance for cattle grazing during the crop growing season within the cultivation steppe itself.

I saw a few domestic animals, but all of these, notably one herd of 10 cattle and 2 donkeys, and another of 3 oxen, 5 donkeys and some fat-tailed sheep, appeared healthy and in excellent condition. Now that the animals are so few in number there appears to be a good chance for their survival and increase if it be recognised that grazing between the cultivation steppe and the game fence is now fly-free, and if the animals can be confined to the cultivation steppe and this four-mile-wide strip of woodland on its western side - and on no account enter the woodland to the north. To effect this, attention will have to be paid to the watering places. I may add, though, that according to Mr. Nell the cattle owners are unco-operative.

Fungwe Reserve, like Chimwizo, is very short of natural watering places between its boundary rivers, the Mazoe and the Nyaderi. It is uncertain to what extent the fly advance from the east has proceeded along these rivers, though the flat alluvial banks of the Mazoe, at least, would appear to favour the passage of fly through the Deciduous bushland which is the prevailing vegetation type of this warm semi-arid area. But there are other passages as well, and at the present time the tsetse position at the eastern end of the reserve resembles that of the northern part of Inyanga North Reserve, and the remarks I made two years ago about this reserve apply to day to Fungwe, viz. (1) Tsetse are to some extent established, (2) there is no vegetation barrier to stop their spreading further west, (3) the scattered distribution of villages east of Kafura makes their cultivated lands "feeding grounds" for tsetse rather than a protection against flies, (4) there is no obvious practical measure for preventing further infection of these herds so long as the villages are scattered, and cattle graze or water in the sparsely populated hilly country where infection has been contracted in the past and is still being contracted to some extent.

The reason why the infection rate is not as bad as it was is that a number of very useful dams have been constructed recently, and many long journeys formerly made by cattle to the Mazoe and Nyaderi rivers are no longer necessary. I inspected two or three of these dams, and saw that if there be a few morsitans in their vicinities these can be got rid of by simply discriminative clearing.

The cattle fence that I saw on the road to Chikwizo is far from arriving at Fungwe Reserve, but I saw the final portion of the trace cut for this fence, and this seems to be well sited. It cuts off comparatively few villages, and all of these come into the category just mentioned of villages too scattered for adequate protective measures to be instituted. If they are moved to the west side of the fence, where there is still a great deal of unoccupied useful agricultural and grazing land served by the new dams, then I see every hope of a check to the fly's further advance. A few miles may already be established on the west side of the fence by closer settlement, discriminative clearing, systematic treatment, and spraying with insecticides. To my mind the obvious urgent need is to get the fence completed, its patrol organised, and all cattle moved from its eastern side. I saw many cattle near our camp at Kafura, and although there were a good many clinical cases of trypanosomiasis, the disease appears to be controlled by treatment of clinical cases as these are observed, and the majority of the animals, which include a number of large oxen, are in fairly good condition.

I wish to thank Mr. Nell for making easy my task of seeing as much as I did in a short time.