

The Minister of Agriculture and Lands

## Tsetse Fly Operations, 1942.

SHORT SURVEY OF THE OPERATIONS BY DISTRICTS  
FOR THE YEAR ENDING DECEMBER, 1942.

By J. K. CHOMLEY, Acting Chief Entomologist.

[Extracted from the Annual Report of the Chief Entomologist.]

**Tsetse Fly Operations.**—Two important discoveries were made during reconnaissance patrol work carried out during the year, both of which may seriously effect our operations in the future.

On the Eastern Border, east of Chipinga, a very heavy concentration of *G. morsitans* was located in Portuguese East Africa on the Busi River about six miles over the border, while a number of individual specimens were taken within half a mile of the border. This is a very serious development, though not unexpected, as the steady westward spread of this fly towards our border has been under careful observation for the past six years. It must be assumed that we have now to deal with three species of tsetse on this front, viz., *G. morsitans*, *G. pallidipes* and *G. brevipalpis*, and extensive widening of the border clearing, together with other auxiliary measures will become necessary to provide protection to the rich stock farming area threatened by this new advance. Although there is little game, with the exception of small buck and pig, on the Rhodesian side of the border, there is a large cattle population running under semi-ranch conditions which will assist the spread of the fly, at least until the herds have become decimated, by trypanosomiasis or removed. Either of these two possible eventualities would mean a complete economic disaster for the district, entailing serious repercussions.

At my request the Trypanosomiasis Committee, which had not met for several years, was reconvened to consider the many aspects of this problem which involve several Departments, chiefly the Veterinary and Native Affairs Departments. A valuable report has been submitted, which is still under consideration.

During the visit to Salisbury of the Portuguese Minister for the Colonies, the opportunity was taken to present a Memorandum on the subject of Tsetse Fly in Portuguese East Africa and the serious problem which it constituted for Southern Rhodesia, for the consideration of the Portuguese Government.

The other matter of importance was the altogether unexpected discovery of *G. pallidipes* by Mr. H. Bond, Ranger I/c on the Sebungwe River, the Maseme River, the Matibi River, in the north-eastern portion of the Wankie district, and also on the Nagupandi River in the south-western corner of the Sebungwe district. Up to the date of this discovery, we had always considered that *G. morsitans* was the only species of tsetse infesting our northern fly belt. The extent of the infestation by this species of tsetse is not known. The area at present known to be involved covers several hundred square miles, but as this part of the Colony is rarely visited by Europeans and has not been visited by an Entomologist since 1911, it must be assumed that a far greater area is infested. It may be that much of the dry thicket country west of the Sijilia Hills is infested with both *G. pallidipes* and *G. morsitans*. The southern limit at present is on the Nagupandi River in the Pasha Reserve. There is a recent history of fairly heavy losses of stock in this portion of the Wankie district which may be possibly attributed to the spread of *G. pallidipes*.

Two cases of human trypanosomiasis were discovered near Chirundu on the Zambezi River in the Lomagundi district. These are the first cases of sleeping sickness recorded from the Lomagundi fly belt. As it is considered very desirable to clear of tsetse the main road to the north, our operations in the Urungwe district were extended from the escarpment to Chirundu, covering a belt approximately five miles wide on each side of the main road.

There has been a considerable increase in the number of native cattle in the Doma area, while the cleared area along the Gwani and Shangani Rivers is being extensively used by the Cold Storage Commission for cattle purchased in the drought stricken areas in Western Matabeleland.

An important decision was made regarding anti-tsetse operations on the northern fly belt. Our operations are to be consolidated on the present advanced line for the next three years, no new extensive reclamation measures being undertaken.

All our game fences have now been dismantled and sold. Owing to the drought, game and tsetse were very much more concentrated than usual, making hunting easier. A total of 25,143 head of game were destroyed for an expenditure of 38,912 rounds of ammunition, an average of 2.1 rounds per head.

**Darwin.**—A very considerable increase has occurred in fly densities over the whole area east of the Umsengedzi River. Several foci of high density have been broken up and the fly reduced to a few stragglers over a considerable portion of the area. A few head of cattle have been taken to a mission station near Mt. Umsengedzi, west of the Umsengedzi River. No cattle have been in this area since about 1912. Elephant and rhinoceros are present in some numbers close under the escarpment, and the final eradication of fly in this area may take some considerable time.

**Urungwe.**—North and west of Miami the fly has been driven back well beyond the point where it might be said to constitute a threat to the Karoo block now being surveyed for post-war settlement. West of the Urungwe Native Reserve the fly has receded further west towards the Sanuyati River, where it persists in very low densities. The movement of natives into the western portion of the Reserve has commenced. The whole of this Reserve will in all probability be made safe for cattle within the next few years. Only one case of animal trypanosomiasis was diagnosed from the area during the year.

**Lomagundi, S.W.**—No change in the general position is reported from this area, no tsetse having been located east of the Sanuyati River or north of the Umhali River. West of the Sanuyati fly densities have been reduced over a wide area.

**Gatooma.**—The position remains much as in previous reports, fly still persisting in small numbers along the Sanuyati River below the junction with the Sakuzwe River. A considerable reduction in fly density was recorded from the Ruswingwa and Waka areas. A few more native families have settled in the triangle north of the Nyhondi River.

**Sabungwe.**—The fly position remains practically unchanged, old flies still being picked up at a few pans on the Mzota River. North of the Mkhungusi forest belt fly densities have been further reduced over the whole area covered by the operations. Over 3,000 head of cattle, chiefly belonging to the Cold Storage Commission, are now running along the Gwari and Shangani Rivers, and more native cattle have been pushed down the Shangani River on both banks of the river.

The motor road to our main camp at Muzana is now almost clear of fly. A notable discovery was the recording of *G. pallidipes* in what was previously taken to be a pure *morsitans* area.

**Melsetter (Eastern Border).**—More definite cases of animal trypanosomiasis occurred in the area than in any previous year: 329 cases being diagnosed by blood smears compared with 105 in 1941, 20 in 1940 and 311 in 1939. The disease was more widespread, 28 farms being involved compared with 24 in 1941, 6 in 1940 and 20 in 1939.

A total of 25 tsetse were caught on the Southern Rhodesia side of the border, comprising of 16 *G. pallidipes* (8 males, 8 females) and 9 *G. brevipalpis* (5 males, 4 females), while a further 40 tsetse were caught on the clearing in Portuguese East Africa comprising 31 *G. pallidipes* (16 males, 15 females) and 9 *G. brevipalpis* (5 males, 4 females). All these flies, except one caught on the Inzitu River, near Melsetter, were taken in the Inyamandzi and Choredza river systems. Of this total 20 flies were caught in traps, of which 150 were in service, made up of 19 *G. pallidipes* (9 males, 10 females) and 1 female of *G. brevipalpis*. The remainder were caught off man, screens or off the ground.

Fairly extensive additions were made to the main clearing on "Eastleigh," while a considerable area was partially cleared, leaving a number of tall shade trees on "Eastleigh," "Sherwood" and "Helvetia."

A subsidiary clearing was constructed from the common beacon of 'Pendragon,' 'Stirling' and Grampians along the Stirling boundary to the common beacon of Stirling, Grampians and Umzila, thence along the watershed dividing the Umselzwe and Cheredza River systems, joining up with the main clearing on Farfell. This clearing was designed to cut off a number of extremely heavily wooded mountain kloofs which are suspected of harbouring tsetse and which it will be almost impossible to cut out. This clearing runs through most difficult broken country.

During the last six months of the year a reconnaissance patrol was maintained in Portuguese East Africa which disclosed the very serious nature of the westerly spread of *G. morsitans*. This patrol was carried out with the consent of the Portuguese Commandante at Spangabera, to whom I am indebted for this and other favours.

Re-growth was slashed back on the main clearing and a good burn was obtained over most of the clearing.

**Sabi Valley.**—No tsetse were actually caught inside Southern Rhodesia, though 1 *G. morsitans* was taken within one mile of the border about 7 miles from the junction of the Sabi and Lundi Rivers. Sixty-seven deaths occurred at the Hondi Dip, though only eight were diagnosed as trypanosomiasis. No cases occurred amongst Chief Mahonya's cattle at the junction of the Sabi and Lundi Rivers. A number of deaths occurred amongst the few remaining cattle in Portuguese East Africa in this area. Regular reconnaissance surveys were carried out close to the border in Portuguese East.

**Traffic Control: Sinola-Chirundu Road.**—Apart from military convoys there was a sharp drop in the amount of traffic using this road. There was a decrease in the number of tsetse taken at Vuti Chamber and an increase in those taken at Chirundu.

The following traffic was examined:—

(a) Vuti Chamber.—711 motor cars bringing 37 fly (18 males, 19 females); 2,254 pedestrians and 526 cyclists (1,031 parties) bringing 12 fly (9 males, 3 females). Total 49 fly (27 males, 22 females).

Compared with 1932 (100); 1933 (94); 1934 (178); 1935 (454); 1936 (519); 1937 (241); 1938 (163); 1940 (25); 1941 (67).

(b) Chirundu Bridge.—376 motor cars bringing 32 fly; 1,220 pedestrians and 869 cyclists (543 parties) bringing 244 fly. Total 276 fly (sex unknown).

Compared with 1940 (390); 1941 (119).

SALISBURY:

PRINTED FOR THE GOVERNMENT STATIONERY OFFICE  
BY THE ART PRINTING WORKS, LTD., SALISBURY.