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Tsetse Fly Operations, 1941

SHORT SURVEY OF THE OPERATIONS BY DISTRICTS
FOR THE YEAR ENDING DECEMBER, 1941.

By J. K. CHORLEY, Entomologist.

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

During the year 1940 the zones covered by our operations were pushed forward over most of the northern front with a twofold object in view, firstly to give additional protection to the ground—totalling over 6,000 square miles—already recovered from the tsetse, and secondly to create, as time went on, another cleared belt along the whole front. The year under review can be described as one of quiet, but effective consolidation of the newly occupied advanced positions. Road communications have been improved, hunting posts re-distributed as our local knowledge of the area increased as a result of continuous reconnaissance and density surveys. In one area alone a considerable increase was made in the number of native hunters employed. This was in the Urungwe sub-district, where an intensive effort is being made to render the whole of the Urungwe Native Reserve safe for cattle in the immediate future. A large scheme of native settlement is to be carried out during 1942 in the eastern portion of the Reserve rendered safe for cattle as a result of these operations. An officer of the Native Department has spent several months in the reserve surveying the land, demarcating pastoral and agricultural areas, siting dip tanks, soil and water conservation works, etc., and generally preparing the way for the incoming natives in a well-planned scheme of centralised native settlement. A site for a native clinic has been selected near our main camp. Owing to the low density of the present native population and the absence of cattle over most of the area, little soil erosion has occurred in the past, the land is virgin and fertile compared with most native areas, and with the development of water supplies, capable of holding a fairly dense native population. This is the first planned scheme of native settlement to be undertaken on land reclaimed from the tsetse in this Colony. A large scheme for post-war European settlement is also being planned in this area, and to protect it our hunting posts have been pushed forward to the escarpment.

Native cattle have continued to increase in all areas previously cleared of tsetse, particularly in the Darwin district (Kandaya Reserve), the Doma area and in the Bubi District west of the Shangani Reserve. In this last area, so urgent is the demand for new grazing that the native cattle are pushed forward behind the retreating fly with an embarrassing precipitancy. Almost as soon as an area has been cleared and before we are sure that

it is safe to introduce cattle, requests are received from the native people to be allowed to introduce cattle or to be permitted to move into the area.

On the Eastern Border (Melsetter District) there was an increase in the number of cases of animal trypanosomiasis compared with the previous year, and the incidence of the disease was far more widespread. Further extensive clearing operations were carried out in the Inyamadzi Valley—the main channel along which the two species of tsetse involved enter the Colony—and the old clearings were maintained by periodical slashing back of re-growth and late burning.

The steady spread of *Glossina morsitans* from Portuguese East Africa towards our border in the lower Melsetter District was again confirmed, one specimen being caught within a mile of the border. Inside the Colony some eleven cases of trypanosomiasis were diagnosed from the area served by the Honde Dip, thirty-two deaths occurring.

The game fences created in 1926 in the Gatooma area were taken down and utilised by the Public Works Department; the southern fence, in the Doma area erected in 1925, was sold and the fences in the Lomagundi S.W. area erected in 1930 were being dismantled at the end of the year.

One native hunter was killed and one seriously injured by rhinoceros.

The number of animals destroyed during the year was 20,512 for an expenditure of 43,286 rounds of ammunition, or 2.1 rounds per head.

A more detailed account of the operation in each district follows.

Darwin.—The operations in this district, which have been moved westwards as the fly has been driven back, now cover an area approximately twenty miles wide lying north of the escarpment from the Hoya River in the Darwin District to the Kadzi River in the Sipolilo sub-district. Game of most species is abundant throughout the greater part of the area and the operations, which have only been in progress in the new area about eighteen months, have up to date had little effect either on the game population or the density of tsetse. An odd fly has been caught south of the escarpment, invariably near a traffic route leading from the Zambesi Valley over the escarpment and most probably brought up on travelling natives. The number of native cattle in the Kandaya Native Reserve continues to increase. In 1930 there were approximately 300 head, to-day there are over 2,900.

Doma Area.—This is an extension of the Darwin area and runs north of the escarpment from the Kadzi River to the Angwa River. The position as regards game and tsetse is the same as described above for Darwin District. No tsetse were seen south of the escarpment during the year. The old base camp at Doma was utilised by the Lands Department as temporary headquarters for their Lands Inspector, who spent several months in the area cutting it up into farms for post-war European settlement.

Urungwe.—In view of the post-war plans for European settlement and the consequent large-scale movement of natives now living on Crown land into the Reserves, special efforts are being made to render all these areas safe for cattle. Extra hunters were placed west of the Urungwe Native Reserve and also north of Vuti tsetse fly chamber up to the escarpment. No tsetse were seen inside the Native Reserve, and the density of fly west of the Reserve has greatly diminished. Native cattle are being introduced into a number of areas previously infested.

Fourteen deaths from suspected animal trypanosomiasis occurred inside the Reserve, 10 being definitely diagnosed as such. A few suspected cases also occurred amongst cattle belonging to the Roads Department, which has been working close to Vuti chamber. With the help of the Assistant Native Commissioner, Miami, two new roads were cut, one to the junction of the Sanyati and Tengwe Rivers, the other running west through the Reserve towards the Sanyati River. These roads will be completed during the coming year.

An increase in the density of the fly below the escarpment along the main road to Chirundu was noticed. Game also appears to be on the increase in this area compared with two or three years ago. This area lies outside the zone of our present operations.

Lomagundi S.W.—The position in this area remains more or less the same as last year, that is to say, that the northern bank of the Umfuli River and the eastern bank of the Sanyati River up to the Tengwe River, have remained free from tsetse. West of the Sanyati River there has been little change in either the density of distribution of fly. The Copper Queen area has remained free from infestation.

Gatooma.—There is little change to report from this area. The west bank of the Umniati River is almost clear of tsetse down to the Sakugwe River, only an odd fly being seen during the year in the vicinity of Gowe. North of the Sakugwe River fly still persist in small numbers, particularly on the Nyhondi River and at a few vleis draining into the Umfuli River as at Ruswinga and Waka. Two small herds of elephant remain more or less permanently in the vicinity of the Nyhondi River roaming at times several miles north of the Umfuli River, and also west of the Sanyati River.

Chief Neusu with some of his people have moved into the cleared area on the Sakugwe near the old western fence. More of his people will move in as soon as the restrictions on the movement of cattle due to East Coast Fever in the Mondoro Reserve are abolished. This is the beginning of what may become a general movement to repopulate the Sanyati Native Reserve, depopulated since 1913, when it was decided to remove the native people on account of sleeping sickness. In practice the Reserve was never completely uninhabited.

Sebungwe.—With the exception of two small localities on the Mzola River, namely, Cewali Pan and Kakula, the whole area south of the M'Kulugusi Forest has remained clear of tsetse. At these two points only an occasional fly is encountered. On the Gwaai River there has been an influx of native cattle, a dip has

been built at the Halfway Hotel, and a cattle buying business inaugurated. This is an area which until recent years was infested with fly. On the Shangani River more cattle have moved in and a large movement of cattle belonging to Chief Mbegwa is likely to occur during the coming year. The whole of the native area lying west of the Shangani Reserve is now ready for development and more intensive settlement. North of the M'Kulugusi Forest a notable decrease in the fly density has occurred in the area covered by our operations.

Melsetter (Eastern Border).—There was a considerable increase in the number of cases of trypanosomiasis reported, and the disease was more widespread, resembling in distribution the outbreak of 1939. One hundred and five (105) cases were definitely diagnosed by smears from twenty-four (24) farms with 105 deaths. The total number of suspected cases was 252 on 33 farms compared with 132 suspected cases with 24 deaths during 1940. Owing to the drought, severe frosts and consequent poor grazing, a number of these cases where probably relapses, and poverty was probably an accessory factor.

Further extensive clearing was carried out in the Inyamadzi Valley and regrowth was suppressed over most of the old clearing by slashing and organised late burning. A small portion of the clearing of "Farfell" burnt badly owing to erratic winds. The southern end of the clearing on "Jersey" was not slashed back owing to pressure of other work. This section will be cleared up early in January, 1942.

The total number of tsetse caught in or near the clearing was 35, comprising 14 *G. brevipalpis* (10 male, 4 female) and 21 *G. pallidipes* (11 male, 10 female). Of this total 22 flies were caught in Rhodesia, consisting of 10 *G. brevipalpis* (7 male, 3 female) and 12 *G. pallidipes* (4 male, 8 female). With the exception of one *G. brevipalpis* caught in the valley of the Rusitu River, the remainder were caught on "Pendragon," "Grampians" and "Farfell," all border farms within the basins of the Inyamadzi and Cheredza Rivers.

Only twelve tsetse were caught by trapping compared with 22 in the previous year. These comprised 9 *G. pallidipes* (4 male, 5 female) and 3 *G. brevipalpis* (1 male, 2 female). Extensive repairs were made to the traps as the cloth fabric quickly perishes when continuously exposed to wind, sun and rain. At the end of the year only 148 traps were in serviceable condition.

A short reconnaissance survey of the Haroni and Rusitu Rivers south-east of Melsetter Village was carried out.

Sabi Valley.—Operations against game were commenced in this area late in 1940 owing to the continued spread of *G. morsitans* through Portuguese Territory towards our border. This spreading movement continued throughout the year, and one *G. morsitans* has been taken within one mile of the border. Thirty-two (32) deaths from suspected trypanosomiasis occurred at the Honde Dip, of these eleven were positively diagnosed from smears.

There were very few native cattle left in Portuguese East Africa north of the Sabi River in this area in October, and probably the remainder will die during the coming year. South

of the Sabi River, in the vicinity of Massengena, the disease appears to have spread far south of the river towards the Transvaal border. By courtesy of the Portuguese authorities a rapid survey of the position in Portuguese East Africa was carried out by a party consisting of both Union and Rhodesian officials.

Traffic Control: Miami-Zambesi Road.—An increase in the number of motor cars using this road is recorded, also an increase in tsetse taken at Vuti Cleaning Chamber. The number of flies taken at Chirundu has decreased. The increase at Vuti was expected owing to the increased density of fly below the escarpment. The figures given do not include certain military convoys.

The following traffic was examined:—

(a) Vuti Chamber.—1,098 motor cars bringing 61 fly (30 male, 31 female); 2,944 pedestrians, 488 cyclists (1,027 parties), bringing 6 fly (4 male, 2 female); total 67 fly (34 male, 33 female).

Compared with: 1932 (106); 1933 (94); 1934 (178); 1935 (454); 1936 (519); 1937 (241); 1938 (162); 1939 (62); 1940 (25).

(b) Chirundu Bridge.—745 motor cars bringing 49 fly; 1,972 pedestrians, 419 cyclists (878 parties) bringing 70 fly; total 119 fly (sex unknown).

Compared with 1940: 360.