

DEPARTMENT OF VETERINARY SERVICES,
TSETSE AND TRYPANOSOMIASIS CONTROL BRANCH,
P. O. Box 8100, Causeway,
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THE NAGUPANDE RIVER SHOOTING OPERATION
RESEARCH PROJECTS.

Certain species of game are to be driven from or destroyed in an area of some 200 square miles covering the headwaters of the Nagupande River (18°15'S and 27°40'E, 3750 ft. approximately, above sea level) in Binga District, Southern Rhodesia.

From June to the end of September the area has been opened to private hunters, under license, under a Controlled Hunting Area scheme operated by the Department of Wild Life Conservation. These hunting parties will, no doubt, go for the larger antelope, buffalo and elephant. Records of game shot will be available from the Wild Life Conservation Department. It is hoped that by the end of September most, if not all, the elephant and buffalo will be out of the area. The area is already fenced along its southern boundary and the Veterinary Department maintains an organization to discourage attempts by larger game to break through this fence. Meanwhile another fence is under construction, which will be closed at the end of September. If, at this time, elephant and buffalo still remain in the area it is intended to call on the Department of Wild Life Conservation and the National Parks Department to assist in clearing out the remaining animals. At the same time an attempt will be made to capture such rhinoceroses as are in the area (perhaps two or three only) and convey them elsewhere. After the closure of the fence, intensive hunting of warthog, bushpig, kudu and bushbuck will be undertaken, using 50 African hunters armed with .303 rifles.

We are most anxious to concentrate as much scientific effort as possible in the Nagupande, so that the maximum information may be obtained, whether or not it is directly related to the tsetse-fly problem. Projects so far envisaged are :-

- (1) An attempt to assess the population density of the four species to be shot in the fenced area by Veterinary Department staff.
- (2) The collection of skulls, measurements, etc. of animals shot. The Director of National Museums is prepared to send a collecting team into the area.
- (3) The collaboration in (2) of the British Museum Expedition at present collecting in Northern Rhodesia is to be invited. This Expedition is already associated with the National Museum.

(4) The Veterinary/.....

- (4) The Veterinary Department is at present carrying out a survey on animals rescued from Kariba. Sampling includes collection of whole blood; blood serum and plasma; blood slides and inoculation of blood into white rats. It is proposed to extend this work to cover as much as possible of the Nagupande material.

Somewhat similar work is being carried out by Mr. I.F. Keymer who is attached to the Expedition mentioned in (3) above. Mr. Keymer has expressed his willingness to collaborate in the collection of blood material when the Northern Rhodesian work is over.

There is plenty of scope for two organizations in this work. One valid criticism of the technique of inoculation into rats is that (a) certain trypanosomes are not infective to rats and (b) maintenance of strains in rats by needle passage alters their properties. It occurs to me that we might be able to preserve some of the Nagupande bloods at low temperatures. There is an airstrip at Lusulu, about half-an-hour's drive from the centre of the Nagupande area and we can probably arrange to have the use of a field-type deep freeze at the Lusulu Research Station. Dry ice could be flown out (1½ hours flight) to Lusulu. At suitable intervals material could be flown back for storage in the large deep freeze in the Veterinary Research Laboratory in Salisbury and/or for inoculation into sheep and cattle.

- (5) Arrangements will be made to collect blood meals of tsetse flies in the shooting area during operations. A collection which will serve as a control is already being made in the neighbouring Lusulu area. The collaboration of Dr. B. Weitz at the Lister Institute is being sought for serological testing of these samples.
- (6) Changes in size, fat content and age of tsetse flies in the Nagupande area may be expected as host species are eliminated. Dr. Bursell of the Zoology Department, University College of Rhodesia and Nyasaland, has expressed his interest in undertaking appropriate observations presumably in conjunction with the Agricultural Research Council Tsetse-Fly Research Team.
- (7) Detailed maps of the area and aerial photographs are available with the Department of Veterinary Services.

Costs:

Apart from transport costs in getting workers into the area, which would be a charge on organizations involved, there might be a need for some extra money for aircraft hire. A single engined three-seater costs about £38 if it returns the same day. Dry ice might also require a few pounds. There are already roads and camps in the area.

I would be glad of comments on the above and suggest that at a not too distant date a meeting of interested persons should be held to discuss a detailed programme.



(J. Ford)

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