

# ASPECTS OF GAME CAPTURE

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MINISTRY OF INFORMATION

The capture of wild animals goes back in history to Biblical times and beyond with gladiators and persecuted people thrown into the arena to do battle with wild beasts. Until comparatively recently, capture methods have been virtually a question of man against animal in a test of brute strength and cunning. However, advances in recent years have resulted in developments which have aided and simplified capture operations.

This does not mean that anyone can go out and buy an Instant Capture Kit and set out to capture himself some animals. Capture operations have become the field of specialists, who have at their disposal methods and equipment developed as a result of intensive scientific research and practical experience in the field of capturing animals. Equipment such as helicopters, specialised vehicles and expensive drugs are today regarded as normal requirements, in addition to knowledge of pharmacology, physiology and animal behaviour.

Why do we capture animals? We capture for a variety of reasons. The most important are for the translocation of threatened wild life colonies for their own protection or for their re-location of species into areas where they once lived but have since disappeared. Here are a few other reasons:

1. Since 1600 A.D. some 350 species and sub-species of animals have become extinct. Currently over 650 mammals and bird species are listed as being in danger of extinction. Of this number, 123 are on the African Continent.
2. To obtain species for the study of disease mainly in connection with those diseases directly affecting domestic animals and man.
3. For population control, i.e. to reduce numbers in a given area to restock another.
4. For the treatment of sick and injured animals.
5. To study animals habits, feeding and physiology by attaching markings and other tracking devices to enable extended monitoring to be carried out.

**A CAPTURE OPERATION** — Let's break this down as we would when planning an operation. Firstly what species are we going to capture? Secondly, how many animals are involved? Having settled these two aspects, we move on to: How are we going to do it?

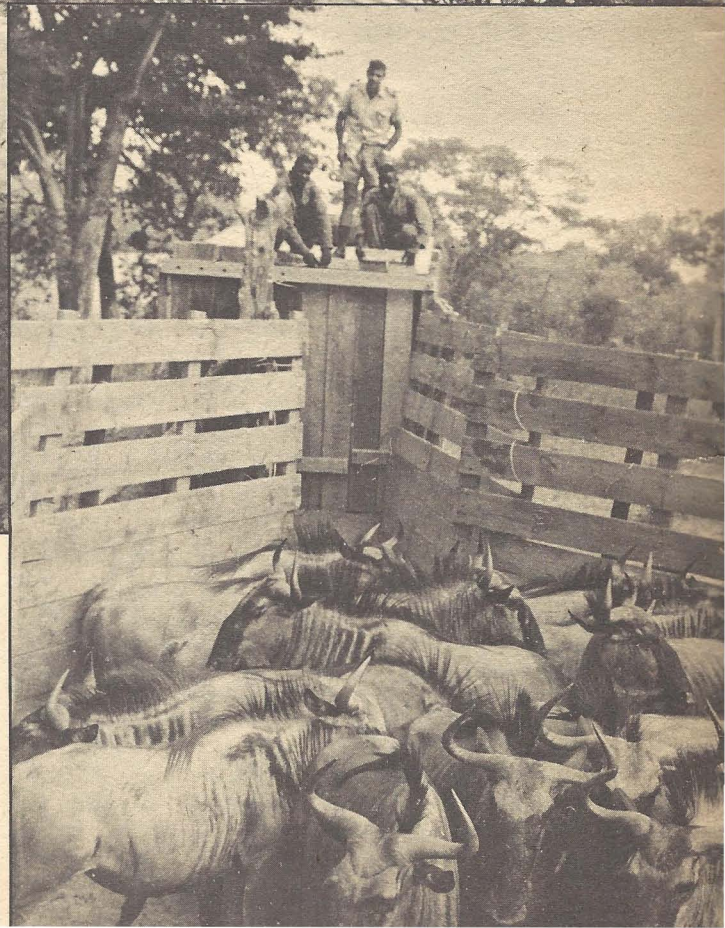
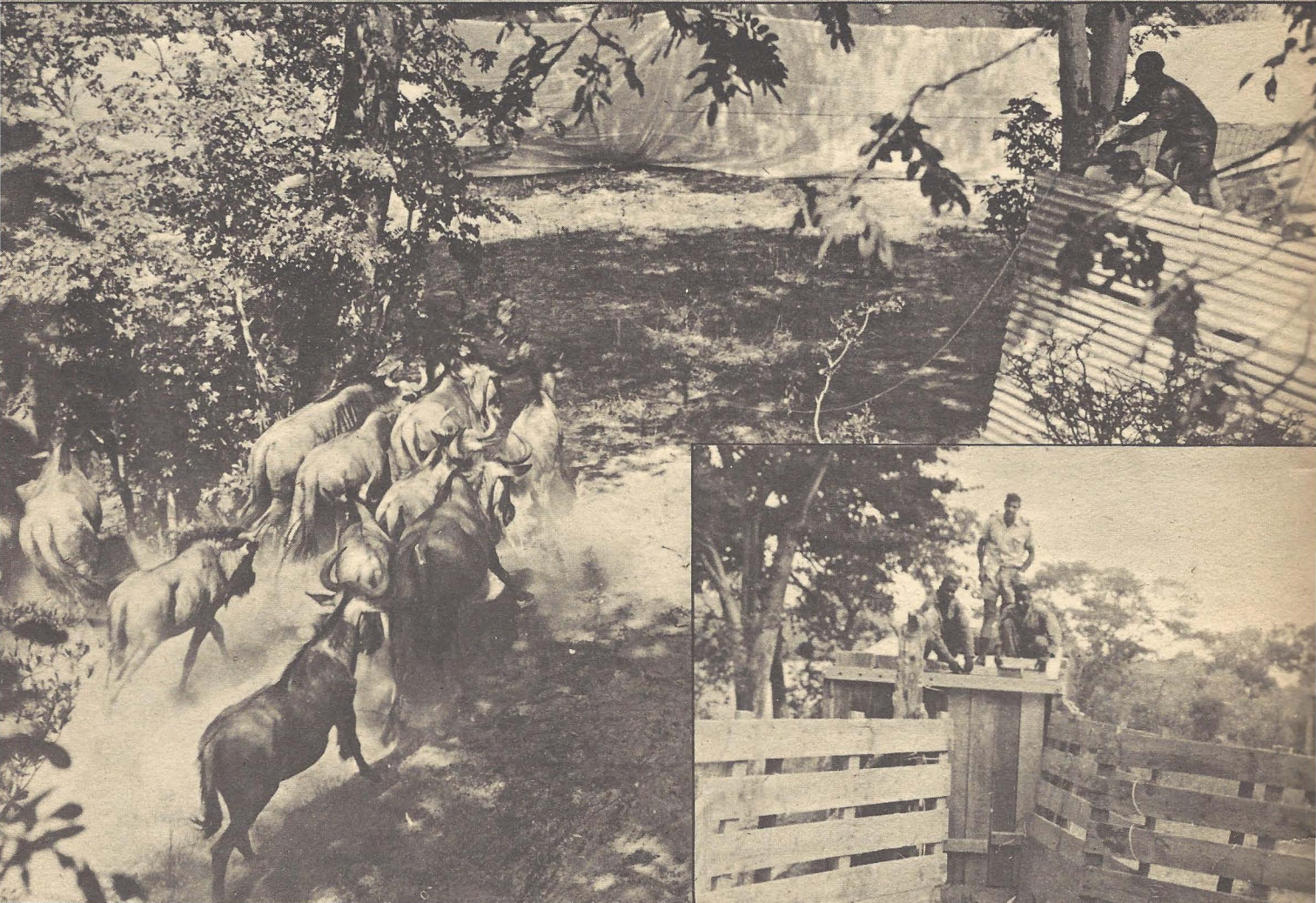
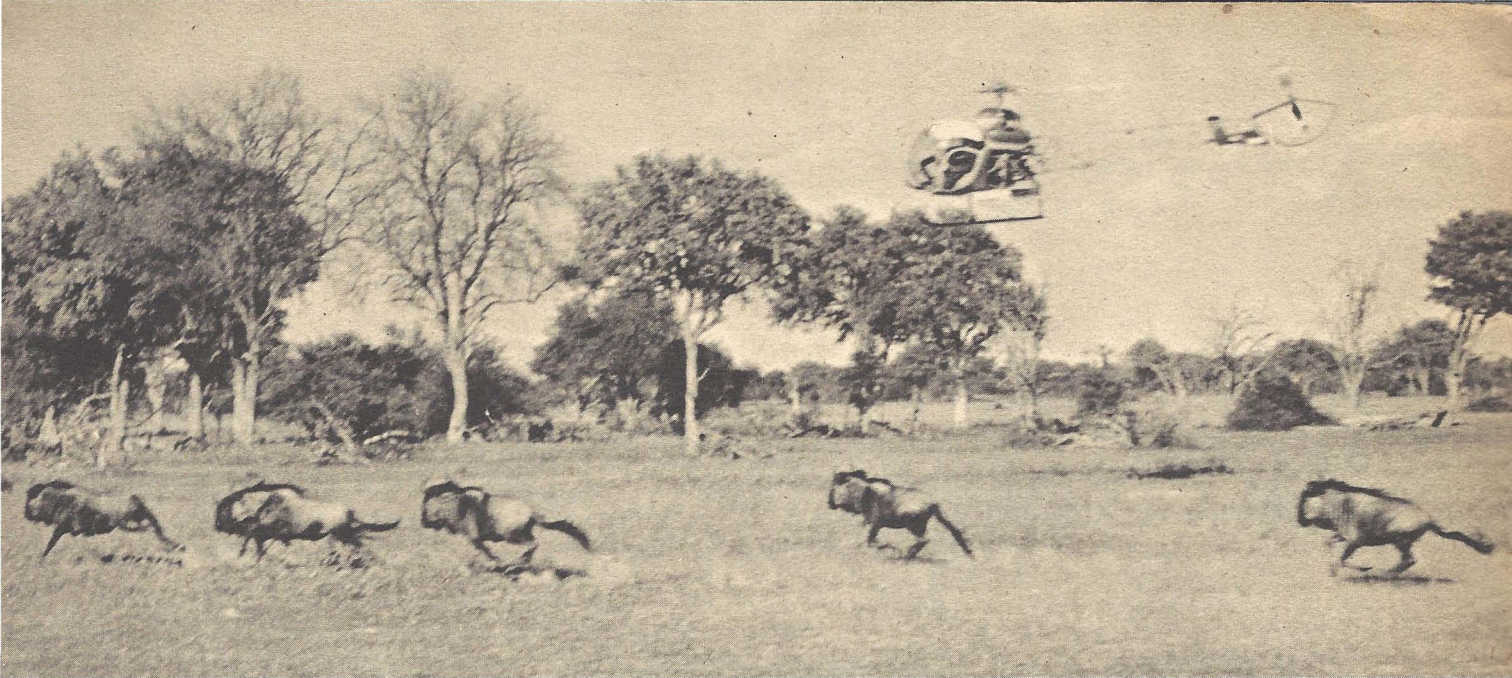
Different species require different equipment and techniques. Sometimes this may be governed by the locality in which the animals occur. Where will they be housed? Sufficient to say, arrangements must be made beforehand for holding pens, transport, if required, and adequate feed and water.

How do we capture? This basically falls into 3 categories and the exercise may utilise one, two or a combination of all three.

**PHYSICAL CAPTURE** — This is basically the old story of man against beast and includes the use of ropes, throw nets or bare hands. This method can be dangerous to animals and operators alike and has its limitations. It is effective for animals such as Impala caught at night with dazzling lights and for the young of certain other species.

**MECHANICAL CAPTURE** — Here we use funnel traps, plastic bomas or corrals and drop nets. The animals are driven into these by means of horses, vehicles or by helicopter. The latter is the most expensive but the most efficient in the long run and is the most effective method for capturing large numbers of animals in a short space of time. It is basically a refinement of the method used in America in the Wild West to capture





*Top: The helicopter . . . most expensive but most efficient.*

*Above: The Plastic Boma.*

*Right: The animals need not be handled at any stage of the exercise.*



## GAME CAPTURE

herds of wild horses for taming. It was perfected by Jan Oelofse when capturing for the Natal Parks Board and has been adopted since by most operators as it has the advantage of minimising mortality and the animals need not be physically handled at any stage of the exercise.

**CHEMICAL CAPTURE** — This is the most complex method. It is simply the immobilisation of animals by the use of drugs, by injection of a single or a multiple chemical compound. There are upwards of 50 drugs commonly used in this field today. They are not available for general use and may only be administered by qualified persons such as veterinary surgeons.

This method is ideal where a few selected animals are required, or it can be used in conjunction with one or both of the methods of capture just mentioned, e.g. to subdue animals for transportation or handling after capture or to remove selected animals from a herd in a boma either for transportation or marking.

It is not something new. The Bushmen of the Kalahari use a coagulant made from a plant called *Acokanthera* on their arrows to kill game; the Orinoco Indians in South America used Curare for the same purpose. Chemical capture has in recent years been the subject of intensive scientific investigation, an ongoing exercise. The difference in tolerance to a given drug varies enormously between species and is one of the reasons for the wide range of drugs used. These are constantly being refined and modified. The ideal would be one drug for use on all animals in varying doses.

It is expensive. To drug a single animal the cost of a syringe or dart filled with the relevant drug would start at





## GAME CAPTURE

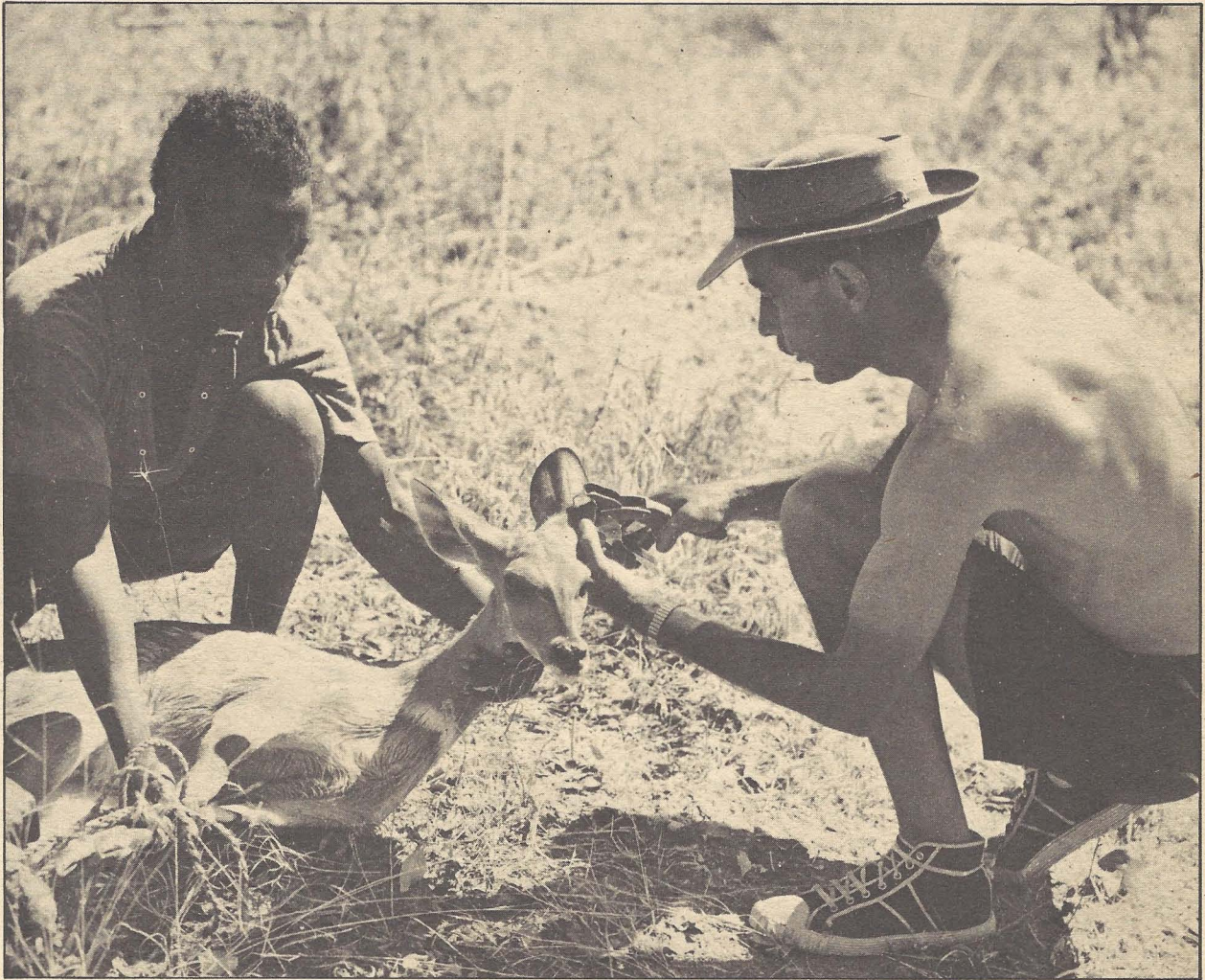
roughly \$20. M99, a derivative of morphine, was one of the first of a series of widely used drugs for the capture of animals. It has a potency, depending on individual species tolerance, of 100 times that of morphine used on human patients. It costs in the region of \$4 per milligram, or if you like, \$4 000 000 per kilogramme. On the other hand, 6 milligrammes of the powder, which you would hardly see in the bottom of a bottle will put an elephant to sleep for about an hour.

Having decided which method is going to be used for the exercise, the next question is . . . When does it begin? Whenever it is feasible, capture and transport of animals should be planned to avoid excessively hot weather conditions, the time of the year when the animals are in poor condition or the females heavily pregnant. The rutting season for the strong seasonal breeders like impala and wildebeest should be avoided if at all possible.

Having caught our animals, what is the next step? The most important one! The welfare of the beast. It is no use going to all the time, trouble and expense of capture only to

have the animal die and have to start again. Any wounds, abrasions or dart punctures should be treated to prevent infection and if required, the animals can be dosed for internal and external parasites. One important aspect of post chemical capture treatment which is often overlooked is the care of the eyes. When an animal is subjected to complete immobilisation, even for a relatively short period, the cornea of the eye is likely to dry out. An anti-biotic eye ointment or spray should be administered, as dust, grass particles or other foreign bodies may cause infection at a later date. Some drugs cause the pupil of the eye to dilate and direct sunlight through a wide open pupil can cause internal damage. The eye should be shaded or the animal blindfolded.

All animals subjected to capture operations are affected by varying degrees of stress. Depending on the capture method and subsequent handling, as well as the condition of the animal, stress can precipitate events which sometimes result in the death of the animal or animals concerned.



*Top left: . . . dangerous to animals and operators alike . . .*

*Above: Attaching a marking device to study animal habits.*

*Left: . . . Administering the antidote.*



## GAME CAPTURE

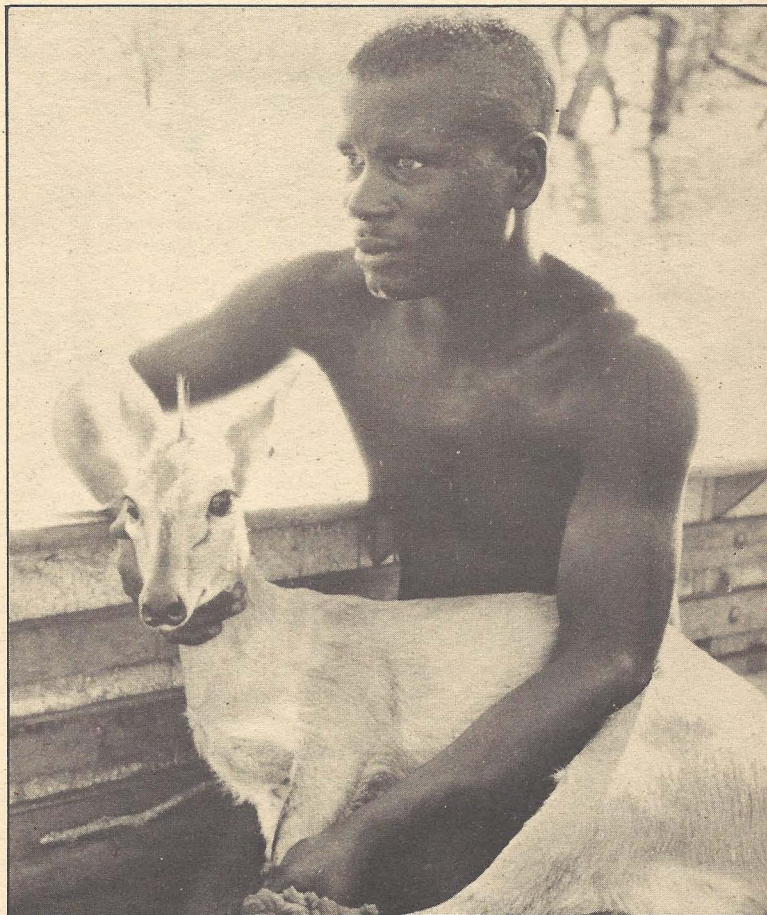
Next comes transport. This can be considered as one of the most important aspects of the exercise because it is recognised that this period is critical for losses after capture. Many individuals or organisations have specific preferences regarding methods of transporting animals. However, these methods are basically governed by the species to be moved, the distances involved and the nature of the roads. The two methods usually considered are (i) individual, i.e. each animal in a separate crate or compartment, or (ii) collective, i.e. a number of animals in one large enclosure or a vehicle.

Whenever possible, animals should be moved in the early morning or late afternoon. Shade should be provided especially where vehicles moving individually crated animals are stationary for any length of time. One cause of mortality which is quite common is heatstroke, which can be caused by chasing animals excessively during capture, high temperature and humidity, the use of certain types of tranquillizers and badly ventilated vehicles or crates during transport. It must be remembered that spraying water over the animals will only increase the humidity unless there is enough ventilation for evaporation to have a cooling effect. The floor of the crate or vehicle should be covered with earth or non-slip matting to prevent animals from falling while in transit. It is not usually necessary to feed and water animals on a journey. Unless they have been pre-tamed, they will not take feed and drink anyway.

At their destination, it is preferable to release animals into closed pens until they settle down. Once they have become accustomed to their pens and people moving about, they should be let out into a small exercise area to get then used to their new surroundings before being finally released.

A couple of points on feeding. Lucerne, hay and concentrates are ideal feeds for most herbivores. When animals are kept on a highly concentrated diet for any length of time it is advisable to supplement this with natural feed from the area where they are to be released and gradually reverse the proportions to give them a chance to adapt to their natural feed. A diet of only concentrate feed may alter the composition of their digestive organisms to such an extent they will not be able to cope with the sudden change back to natural feeding conditions.

A final word about an aspect of tending animals which is most important. **HYGIENE.** Feed and water contaminated by droppings, urine and dirty bedding material etc, encourages parasites and diseases and cannot be expected to support healthy animals. This must be constantly supervised and is well worth the trouble as it can mean the difference between life or death for the animals.



## LETTER TO THE EDITOR

### UNNECESSARY CRUELTY

Sir,

It makes us sad to see the aerial pictures which appear now and then in some wild life magazines of terrified game being buzzed by low flying aircraft for no apparent reason than for the sake of having a photograph of them, which is, in itself, evidence indeed.

For instance take "African Wildlife" volume 34, No. 6 page 25 where frantic wildebeest are being driven towards a game fence; tell me please what do you expect happened when the animals reached the fence?

Then there is the question of the panic stricken mothers with their young who are unable to keep pace. Emotionally and physically they would be upset, evidence loose bowel action, effected milk for the young, etc.

Unfortunately it is not unusual to see photographs of the Lord of Beasts with his herd in undignified flight.

Have you ever been buzzed by low swooping aircraft? Remember their sense of hearing and sense of smell are much more acute than ours.

If necessary animals can be herded humanely without low buzzing.

Please help to have this unwarranted practice made illegal — pilots responsible for it are obviously no game lovers.

**S. J. S. Stokes,**  
*Port Alfred.*

I trust the article above will answer some of your points but I agree that unnecessary chasing of animals purely for photographic purposes should be strongly condemned.  
— Editor.