

R66,000.00 if the price remained stable at R2/kg.

With the full co-operation of Dr Gavin Thomson from the Foot and Mouth Disease Laboratory, we set out to establish if swine fever was being carried in the warthog population in the Pilanesberg National Park. Serum from 12 warthog culled at various locations in the park was collected. The animals were shot, blood was obtained from the heart, and after an hour the blood was centrifuged and sera collected and frozen. All these sera were negative on the ELISA Test. The Elisa (Enzyme Linked Immunosorbent Assay) test is a sensitive test used to determine the antibody levels in the warthog sera.

Since there is a correlation between swine fever in warthogs and the presence of *Ornithodoros* tampan ticks in the burrows, a number of burrows were examined for the presence of this tampan. Nineteen warthog burrows from five different localities in the reserve were found to be free of Tampan ticks. The burrows were examined by Dr Thomson, and the procedure involved visual inspection for white urate deposits on the wall of the burrow, followed by a thorough sifting of dirt removed from the floor and walls of the burrow. All burrows were checked to be sure they were being inhabited. No sera antibody titres and the absence of *Ornithodoros* tampan ticks leads us to conclude that African Swine Fever is not present in the Reserve.

This means that warthog meat can now be sold to the public from the Pilanesberg abattoir provided that, as a final safety precaution, the carcass has been tested and found seronegative prior to sale. Any warthog found seropositive would of necessity result in the immediate stoppage of warthog meat entering the abattoir or leaving the reserve.

Dr R.H. Keffen.
State Veterinarian: Mogwase.

HEALTHY OUTLET

When operating an abattoir and/or butchery in a game reserve, every effort must be made to maintain a high level of hygiene, and to comply fully with veterinary regulations, to prevent the risk of spreading disease. To this end, we are fortunate in having a local State Vet, Dr Bob Keffen, who is particularly interested in wildlife and concerned about its efficient and proper utilization. Herewith an indication of the lengths Dr Keffen goes to in order to ensure that we maintain a healthy outlet.

During the earlier part of this year, when blood sampling of warthog for swine fever was in full swing, an autopsy of a female warthog revealed a large abscess in her spleen. Tissues were collected for examination, and a swab of the abscess was taken for culture and tests of antibiotic sensitivity of the organisms present. The results of the analyses revealed a collection of small pus nodules (a focal pyogranulomatous splenitis) which indicated that the infection was of long standing duration and isolated in small pockets of pus throughout the spleen. The bacteria responsible for the infection consisted of three different species:

1. *E. coli*

2. *Streptococcus viridans*

3. *Pseudomonas* sp.

E. coli and *Streptococcus* occur in nature and are normal bacteria found in the intestines of pigs. They were sensitive to all the antibiotics tested. *Pseudomonas* also occurs widely in nature and is a potential pathogen for man and animals. Of the 15 antibiotics this organism was tested against, only one was capable of killing it viz. gentamycin. Gentamycin is the last resort the medical field has in combatting infection, and this is not without its own side effects. The concern does not lie with the specific organism, but with the possible chance of its spread into the public food chain. Had this abscess accidentally opened, and subsequently contaminated the meat during the processing, a potential source of infection occurs for both consumers and workers in the abattoir. Proper hygiene and cooking of the meat would render this bacteria harmless, but we don't know what happens to the product beyond the park boundaries.

Cognisance should therefore be taken of the fact that potential sources of infection are already present. The level of workmanship and hygiene in the abattoir is good and should be maintained. It is only through disease monitoring, proper hygiene and meat inspection that an early warning system can be established and appropriate and timeous measures taken to provide disease-free protein for our consumers.

Dr R.H. Keffen.
State Veterinarian: Mogwase

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RHINO CAPTURE

With the completion of the fence at Kareelaagte (Botsalano) National Park during October last year, no time was lost in introducing a population of white rhino to Botsalano from Pilanesberg. It was decided by our Research Section that 30 animals (11 males and 19 females) should be translocated. The Field Management Section had been preparing for this exercise for some months and had all the necessary equipment on standby.

The capture was to be conducted in such a way as to eliminate or minimise disturbance, both for the benefit of the rhinos and other animals, and also, naturally for the benefit of visitors to the park. Consequently the operation was conducted without helicopters or capture vehicles racing across the veld. Rhino to be captured were approached on foot and quietly darted with a .500 calibre gun equipped with a silencer. The result of this quiet "hunting" procedure was that the animals did not run more than one kilometre. Several were darted and ran only 200 metres, and two moved a mere 50 metres from the time of darting to the time of succumbing to the drugs (usually eight to 12 minutes).

As Botsalano is only 3½ hours drive away from Pilanesberg, animals are transported individually in a crate on a low-bed trailer specially constructed for the difficult terrain at Pilanesberg. On average, the exercise starts at 06h00 and is over by 09h00 each morning. Costs are kept to an absolute minimum as economic viability is the secondary objective of the exercise - the first being the correct management of the species and its environment.

It is interesting to note that drug dosages have had to be higher than normally used, because the animals are in excellent condition and therefore heavier than normal. The "cocktail" used for an adult cow, for example, would be 2 milligrams M99 (Etorphine), 30 milligrams Fentanyl and 100 milligrams Azaperone - 250 milligrams Nalorphine is used for the reversal. The use of Azaperone has resulted in animals travelling very calmly and showing no aggression when being released.

To date, 27 of the 30 rhino have been translocated without major problems or mortalities. As usual, the minor problems have been small mechanical failures like dart needles breaking or barbs not holding into the skin.

An interesting aspect of the exercise has been that various Cabinet Ministers have accompanied the capture team. This exposure will give Ministers a better insight into what goes on in a park, and will assist communication between our National Parks Board and the Cabinet.

Reports from Botsalano are that all animals have settled down well - one group of 15 were seen grazing together. A few cows were heavily pregnant when translocated, so some calves can be expected in a few months time.

Ollie Coltman.

TRIALS & TRIBULATIONS

As part of an ongoing vegetation monitoring programme, two students from the University of the Witwatersrand, Ingrid van der Riet and Andrew Hart, spent December and January in the park discovering that there is more to wildlife management and research than meets the eye!

The more one discovers about a place, and the better one gets to know it, the more pleasure one gains from it. For us, this was certainly true of Pilanesberg.

We arrived in early December ready to tackle the infamous Walker transects. The transects are fixed areas scattered throughout the park, which are demarcated at their corners by concrete blocks or stone cairns, and which form part of a veld monitoring programme. Measurements of the herbaceous (grass) and woody components of the vegetation, as well as level of soil capping and erosion are taken within each area - the idea being to detect changes occurring in the veld over time.

Thanks to Hugh Patrickson, who is in charge of the Research Section at Pilanesberg, we were soon happily ensconced in our caravan and set about exploring our surroundings. Our little patch of bush attracted quite a variety of creatures such as the resident squirrels and elephant shrews, birds aplenty, insects of every description and reptiles ranging from tiny spotted geckoes to the large puff-adder which Andrew kindly caught for re-release in the park!

For the most part, the monitoring of the trees (in December) and the grasses and soils (in January) went really well. The major stumbling block hinged around identification of obscure little

bushes of unknown nature which raised their ugly heads in the deepest and thickest of thickets! Obscure little tufts of flowerless grasses also caused quite a few headaches.

Possibly the most infuriating thing was the quality of some of the transect directions - which left one sweating and scratching about on hot slopes and valley floors searching for "those little grey blocks". One soon starts to see square boulders everywhere, and scattered stones begin to assemble themselves into cairns, often with amazing results!

Yet we gained far more in experience than we ever lost in sweat and frustration. On our second day in the field we almost stumbled onto an Aardvark pottering about at the entrance to his burrow, a "first" for both of us. On another day we were able to watch as two of Pilanesberg's elephants browsed nearby. Possibly the highlight though was the occasion when we noticed four other elephants making their way down to a dam to drink. On spotting them, we retreated into the shade of an Acacia to watch - and what a delightful show they gave us! There was splashing and trumpeting as they waded deep into the cool brown water. Backs subsided and feet and trunks emerged as they splashed about. We were tempted to try it ourselves!

Of course we had our fair share of rhinos - one of which inquisitively sneaked up on us while we were distracted with the transects. On another occasion, after getting not one, but two, blow-outs on our vehicle, we had another meeting with a rhino. We were stranded some seven kilometres from the Pilanesberg Centre and the long walk didn't yield as much as a bicycle at the end. I decided to wait at the Centre while Andrew went on to Mankwe Camp. On sprinting optimistically towards a car's headlights (as it was by now dark) he unwittingly stumbled on a rhino - which charged down the road behind him! A mad scramble sideways up the verge (and a nearby telephone pole) transported him safely out of harm's way!

Another more frightening experience occurred later in January. On this occasion, both the directions to the particular transect and the weather were bad, so leaving our equipment in the car, we set off in a light drizzle in the direction in which we believed the transect to be. Soaking after a subsequent downpour we came across the transect at the base of a koppie. As the weather was easing up by then, we decided to climb the koppie to get a better view of the area. But, as we were nearing the top, the weather worsened again, and blissfully unaware of Pilanesberg's record lightning statistics (about 15 strikes per square kilometre per year) we pulled in under a rock overhang to take shelter. Beyond crouching there admiring the sheets of rain and the view, I remember almost nothing until we reached Manyane Gate again!

Lightning struck the rocks directly above us, and the resulting charges sent Andrew flying two metres and left me unconscious on my side. Luckily he recovered quickly and was able to start carrying me down. I "recovered" soon afterwards, and Andrew then led me as fast as was possible back to the vehicle. My memory was no longer functional and I apparently asked the same questions over and over again. It was only when we were recrossing a now-flooded donga that I started to register what had happened.

TSHOMARELO NEWS

NATURE CONSERVATION
IN BOPHUTHATSWANA

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