Veterinary pathology in Kenya: creatures charismatic and not so charismatic

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In terms of scope and geography, veterinary pathology in the field is an activity of wide horizons. In this review of a visit to Kenya at the beginning of this year, the authors describe how they are committed to training the next generation.

Background

As many readers of the Bulletin know, we are a husband and wife veterinary pathologist/animal lawyer team. We have lived and worked in a number of countries. We have spent over ten years in Africa, including a period in Rwanda with the mountain gorillas.

In 2009, we returned from nearly seven years in Trinidad, where John was Professor of Pathology at the University of the West Indies. Now based again in the UK, we continue on a voluntary basis to teach and train people overseas, especially in East Africa. This is carried out in collaboration with local colleagues and academic institutions. We specialise in organising training workshops on a wide range of topics, including animal diseases, pathology, health and safety, legislation and zoonoses.

In our teaching we cover species ranging from domestic livestock to primates, crocodiles and invertebrates – that is, both charismatic and non-charismatic animals. A strong emphasis in our instruction is the demonstration that adequate diagnostic work can be carried out in the field with minimal equipment and limited finances (our own visits are essentially self-funded but we receive small grants for specific activities).

We display and use portable equipment that can provide results beneficial to people – as well as to animals – that are living in circumstances which are very different from our own.

Tortoises at the coast

Throughout our recent four-week visit to Kenya, it was dry and very hot. Water was scarce and most vegetation – so essential to both domesticated and wild (free-living) animals – was parched, mainly a pale yellow colour. Temperatures in Mombasa reached the mid-30°Cs and it was extremely humid. Our period at the coast was dominated by work with reptiles. We have a grant for studies on East African tortoises, which are declining in the wild as competition for land – largely a result of human population growth – puts pressure on their foraging and breeding. Tortoises and other reptiles are kept for display and education in many small collections on the Kenyan coast, but standards of care and absence of access to veterinary attention means that health and welfare are poor. We try to address this by providing advice, training indigenous veterinary surgeons and students and running workshops for local people.

On this occasion, we organised health monitoring of tortoises at an extensive collection, accumulated over many years and maintained voluntarily on a small budget. Our team included a number of African children and, in addition to health checks and investigation of shell (keratinous) and soft tissue lesions, we were able to make it an interactive teaching session, showing these young people how to handle and examine these tortoises with care and sensitivity.

Go-away-birds

After two weeks we moved on, via Nairobi, to Mpala Research Centre (MRC). This is part of an extensive ranch in Laikipia, an enormous expanse of bush and ranch land just north of Mount Kenya on the equator. There is limited internet and mobile phone access at Mpala – it is wonderfully isolated.

Figure 1: Professor John Cooper and Dr Maureen Kamau perform a post-mortem examination on a 'go-away-bird' (Corythaixoides leucogaster).

Our five days at Mpala were busy, planning a forthcoming workshop. We stayed in our own 'banda' (chalet) with a view each morning of Mount Kenya. Despite the drought, we were visited by various wild animals, among them a lesser kudu (a forest antelope) that appeared one afternoon just outside our kitchen window while we were making tea. Further from our banda, near the MRC's campsite adjacent to the river, animals sought refuge from the drought – elephants, reticulated giraffe, Grevy's and Burchell's zebra, and impala.

Birds abounded at Mpala. Although a tranquil location, the bush around our banda was rarely silent. The noisiest of our visitors were the go-away-birds, almost invariably arriving in pairs, that landed clumsily in the slender branches of a small tree and regaled us with their raucous cries. An interesting finding on our second day was a dead go-away bird near the MRC offices. John arranged to perform a 'field' post-mortem examination of this bird on our veranda. He was assisted by Dr Maureen Kamau, a new veterinary surgeon on the staff of the MRC and 2016 Kenyan graduate from the University of Nairobi (Figure 1). With Margaret Cooper as both scribe and photographer, they ascertained that the bird was a female, in poor condition, dehydrated, with probable early egg peritonitis. It must have died suddenly as there were two large fruits in its gizzard. Three tapeworms were found in the bird's intestine and a live hippoboscid fly appeared during the necropsy; these parasites are now in the MRC collection awaiting identification.

Our main purpose in visiting Mpala was to plan with Kenyan colleagues a teaching programme for later in 2019. This will be our third training workshop there (see www.mpala.org and visit the section entitled 'Livestock, Wildlife, and Public Health Workshop'). We shall be focusing on livestock and hoping to reach out to local communities by providing guidance on the cattle, sheep, goats and chickens that are so important to their survival. Laikipia has been unsettled in recent years, with incursions by tribesmen stealing animals and, two years ago, an invasion by people trying to occupy land, leading to killings. Thankfully the situation is now improving and any unrest is confined to incidents of cattle rustling, but on our visit in February there was heightened security throughout Kenya following the terrorist attack in Nairobi the previous month.

On our first morning we had a meeting about our workshop in September. Then a report came in of a Grevy's zebra with an injury to its right hind leg, presumed to be the result of a snare. We went out with Dr Kamau and the MRC team to try to locate the animal. We clambered into an all-terrain vehicle and set off through the bush. First, we had to meet up with a ranger on a motorcycle who was

Professor John E Cooper with colleagues at the Nairobi Snake Park.

following the zebra. He headed it off to an open area where we could watch the animal, which had a youngster with her, at fairly close range. With the aid of binoculars and magnified photos we identified an annular lesion, with swelling and skin loss, on the affected limb. The zebra was lame and unable to keep up with the rest of the herd – not a happy situation in a location where there are both lions and hyenas. Later in the week, the Kenya Wildlife Service veterinary officer came out from his headquarters in Nanyuki town, immobilised the animal and removed a wire snare from its leg. We were sorry not to be part of this exercise because John had planned to take cytological (possibly also bacteriological and histological) samples from the wound for laboratory examination. Such investigations can help assess the age and extent of the wound and, in some cases, determine the probable origin of the snare material. The findings assist in wildlife crime investigation and subsequently provide valuable evidence in court.

Snakes and other reptiles in Nairobi

We returned to Nairobi for our last three busy days in Kenya and to more work on reptiles. We organised a training session for veterinary students and reptile keepers at the Nairobi Snake Park (Figure 2). The students are an enterprising group of young people who call themselves 'The Snake Charmers' and they are working with the Nairobi Snake Park to study and promote the health and welfare of reptiles. This is an exciting development. It was five decades ago that we were invited to give (voluntary) help to the Nairobi Snake Park and for four years John served as its honorary veterinary surgeon. During his time there, John produced many scientific papers and wrote a book (*Diseases of the Reptilia*, Academic Press, 1981). Very little systematic work has been done on the health and welfare of reptiles at the Snake Park since John's studies so we are keen to encourage the students.

About 30 people attended our training session. We examined sick reptiles, took diagnostic samples, inspected cages, discussed legal issues (including safety), displayed herpetological literature and demonstrated health monitoring of tortoises. In the evening a group of us convened for drinks and 'bitings' (snacks) at the United Kenya Club. It was a busy, lively and enjoyable day, and for us, a very poignant occasion.

Important anniversaries

We flew back to the UK on Tuesday 5 March. The four weeks away had been something of an anniversary as it was 50 years ago that we, as a recently married couple, first went out to Kenya to live and work. 2019 also marks the 25th anniversary of the Rwanda genocide, from which we were evacuated to Kenya in April 1994. We then made Nairobi our base. Our local taxi driver there still drives for us a quarter of a century later – now as a friend as well as a chauffeur. Our links with Kenya remain strong, despite all the changes and challenges, and we are proud to refer to it as our 'nyumba ya pili' (second home) because it and its peoples remain close to our hearts.

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