

inhabitants is always a species which is well known to be very distasteful and is invariably a dominant species found in immense numbers. I do not wish to be understood as putting forward these considerations in any dogmatic spirit, but I must own that the evidence which has been accumulated for many years in favour of these theories seems to be conclusive.

ON THE SMALLER FAUNA OF MOUNT ELGON

By R. KEMP.

Having recently spent five months on Mount Elgon and in its vicinity, a few notes on my experience there and remarks on the smaller animals and birds which were met with may perhaps be of some interest to those who read these pages.

It was on the 20th August 1909 that I left Kisumu, northward bound, and on the 21st January 1910 I reached the railway again at Kibigori, having collected during that time four hundred and sixty nine small mammals and two hundred and fifty small birds, for Mr. C. D. Rudd of South Africa.

Of the birds which I obtained and noted I do not propose to write much, partly because birds have already been so thoroughly studied and collected that little new can be expected, and partly because the specimens have not yet been worked out, so that a detailed examination of them yet remains to be gone through.

However, I was pleased to find fan-tailed grass-warblers (*Cisticola*) and their near relations much in evidence, from the grass plains at the foot of the escarpment right up to the great cave at about 10,000 feet on the south face of the mountain.

Engabuni or the Elgon escarpment, where there are such a great number of caves, is distant from the Kirui's villages only some five or six miles, and yet the bird lists of these two places is almost entirely different. Apart from the forms which sleep on the escarpment, but which feed on the plains below, such as most of the pigeons and doves, the hawks, the pied raven and a few others, my records show only one species which really lives in both places, and that is the Bulbul with a

yellow vent (*Pycnonotus*). This active bird is quite common at both localities and also ranges several miles up the mountain, becoming however less numerous towards 9000 feet.

Probably a fuller investigation of the bird world than I was able to make would reveal other forms common to both plains and escarpment. One cannot hope to do more than touch the surface of the bird list in the space of five or six weeks in any one locality. The Starlings (*Onycognathus*) made the bright sunny mornings on the escarpment seem still brighter with their cheerful notes, and their parties in joyful flight from tree to tree or rock to rock, up and down the ravine where I lived, were indeed worth going far to see. Their handsome black plumage contrasted with the chestnut colour of their wings; when flying in a party they are very pretty. They appeared to roost in couples on a shelf or in a cleft of the great rock face. As a rendezvous in the early morning they chose an enormous tree close to the cliff face, and different pairs arrived from time to time till a party was formed of twenty to thirty individuals. But it has been amongst the rats and bats, the mice, lemurs, squirrels, moles and so forth that the chief interest of my work has lain.

The secrets as to its smaller mammals which old Elgon has so long held have now in great part been divulged and show a lengthy list of new species and subspecies, and also one new genus.

The 'Annals and Magazine of Natural History' for December 1909 and February 1910 contain the report of most of the new forms from Elgon, and referring to it I find described the one new genus *Uranomys* and no fewer than nine new species of bats, shrews, rats, mice and dassies, besides eight new subspecies of various other small animals. This includes most of the forms obtained up to reaching Mumias on the return journey. There are still some further new forms to be described from Kakamega and the Nandi forest.

How rich Elgon seems to be in its smaller mammals! As my last advices from home state, there seems to be no end of them. When the complete list of old and fresh forms from Elgon and district is made up, it will, I think, prove to be one of exceptional length.

The new genus *Uranomys*, closely allied to *Lophuromys*, is a large mouse or small rat of a dark chestnut colour and fur of a springy texture. It has a delicate skin which breaks on the least provocation in skinning.

Of rats and mice it is of course difficult to give an interesting account as to their life history ; and descriptions of form, size and coloration and near relations would be still more difficult in such a superficial account as this is meant to be. The large series of forty mole-rats or *Tachyoryctes* (means 'swift digger') in this, the Rudd collection, which I sent home has enabled Mr. Oldfield Thomas to distinguish no fewer than six new species of this genus and one new subspecies, which were hitherto undeterminable. With the large series of skulls and skins one can get a sort of foundation which greatly helps in judging isolated specimens from other localities. Mr. Oldfield Thomas describes the mole-rats from this part of the world as follows :—

<i>Tachyoryctes ankolicæ</i>	of Uganda.
„ <i>daemon</i>	of Kilimanjaro.
„ <i>ruddi</i>	of Elgon.
„ <i>storeyi</i>	of Elmenteita.
„ <i>naivashæ</i>	of Naivasha.
„ <i>spalacinus</i>	of Kenya.

and a subspecies of *T. ruddi* from Eldoma ravine. These mole-rats are much alike externally but their cranial or skull characteristics differ considerably. In size, also, they show a great difference.

Two specimens of *Cricetomys*, an exceedingly large rat, were obtained at the unusually high altitude of 8000 to 10,000 feet. They prove to be a new subspecies allied most nearly to the Ruwenzori form. Family groups of three to six individuals travel through the forest in Indian file and will climb the very large trees of which there are some real monsters on Elgon at 9000 to 10,000 feet. My measurements of this animal are recorded as 380 mm. for the length of the head and body and 440 mm. the length of the tail, making a total of 820 mm. Expressed in our English terms the total length is, therefore, 32¼ inches, quite a double handful to pick up. And a nasty, disagreeable animal it is to skin. Its naked tail flops round

your wrists, and as this animal is the host of many parasites, these latter busy themselves by crawling up your arms and tickle you everywhere. You are often perplexed to decide whether to finish a cut you are making or to stop and scratch yourself. For unpleasantness of skinning it comes a good second to the Apteryx of New Zealand. That bird may be described as a saturated solution of lice. One becomes accustomed to a good many disagreeables in collecting work, but I never again want to skin an Apteryx. The tickling and creeping sensation of the Apteryx lice remained with me no less than four days afterwards, in spite of many baths and washes.

A Buganda boy, whom I had, volunteered the information that he knew of the existence of a 'small white animal' on the western summit of Elgon. He pointed to white paper or cotton-sheeting and said, 'the same as that.' He furthermore indicated the size of trap necessary for them. From which I concluded that a white mouse or rat or perhaps a weasel or stoat does exist on the summit of Elgon. I was sorry to leave the mountain without being able to investigate this point; but it must be for some future worker better equipped with reliable carriers.

But the chief prize of the expedition so far has come from the Kakamega or Nandi Forest. It is the *Potto*, a lemur-like animal of a genus hitherto only known as inhabiting West Africa. This is a fine new species and a good specimen. Messrs. Maturin and Brett of Mumias very kindly gave it to me for the collection, and a right welcome gift it proves to be. Mr. Brett obtained it at Kakamega and sent it through alive to Mr. Maturin at Mumias, carefully imprisoned in a box. Maturin tied a string to it and let it climb up a gum-tree to sleep. On the following morning it was quite out of reach. Then Maturin very kindly gave me leave to take possession. I had to get it down somehow. I was in rather a hurry because a force of twenty porters was waiting ready with loads to take me through to Nandi and the sun was getting well up. In the end we had to shoot the poor little *Potto*. I skinned him that night half-way between Mumias and the place he originally came from, Kakamega. Now he reposes as a dry specimen

labelled 'Maturin and Brett—presented,' and will be described with much technicality in the forthcoming number of the 'Annals and Magazine of Natural History.'

Such are the items which help us to link up relationship with other zoo-geographical regions. In the case of this *Potto* we get a connexion with West Africa ; in other forms we find connexions with South Africa, Madagascar, Ruwenzori, Kenya, &c. At what period must the common origin of these two forms of *Potto* have existed, and where ? There is still an enormous work to be done among fossil and semi-fossil remains.

Also on Elgon at 9000 feet I found an ear-shaped leathery fungus of the auricula group, which is closely related to a fungus known to New Zealand and to Madagascar. It grows principally on decaying timber of certain sorts. Quantities of this fungus are exported from New Zealand to China, where it is used for soup or for edible purposes of some sort.

Both bird and animal life were particularly abundant on the Elgon escarpment at 7000 feet, and the five or six weeks which I spent there, living in one of the large caves, was the most pleasant period of the trip. The cave I found a first-rate dwelling-place. There was plenty of room for skinning and drying specimens, there was plenty of light, the mouth being very wide and high. It was very dry and yet there was a good water-supply at one end, it was cool in the daytime and not too cold at night, and there was also plenty of room for the boys and cooking, and still enough left for a few hundred more. Firewood was also easily obtained there. Altogether I may safely say it was the most comfortable place I have ever lived in, the one great drawback was that, to get to the greater world beyond, it was necessary either to carefully descend some steeply sloping rocks or else to climb a break-neck cliff to the grassy slopes above. My few near neighbours, the Masai, who dwelt in adjacent caves, were perfectly honest, and the cave and contents could be left with boxes open and impedimenta lying about without fear of their being meddled with. The Masai never even touched the empty cartridge-cases which were dropped upon the paths. Long may they remain honest. Though they never helped me in the least, except to bring an occasional animal or bird, they never interfered with things.

A different experience was mine at Kisumu, where, on the very first night of tent-life in this Protectorate, two new hurricane lamps were the forfeit for the night's rest. I had the greatest difficulty to get even to 10,000 feet on Elgon. The Kavirondo stoutly refused to move up beyond the escarpment at 7000 feet. I had up twenty-four carriers from Mumias to the escarpment cave. They refused to move a single load up the mountain, although I knew the track and had located the next camp. Eventually I had to make my four boys and cook take up only the absolute necessaries, carrying half a load myself.

The cave at 9000 or 10,000 feet, where I lived for a short time, was not so pleasant as the escarpment cave ten or fifteen miles lower down the mountain. To begin with it was distinctly cold at that elevation. The cave was what can only be described as immense. There was a whole Masai village in just one corner of it. The huts remained, but the Masai had gone. A large waterfall, which poured its volumes in front of the cave, made an unceasing deafening noise, and was very annoying until one became used to it. This cave and waterfall have much similarity to the salt cave and waterfall on the escarpment, described by Sir H. H. Johnston. It is the home of myriads of bats. I made a great onslaught upon them. There are enormous ramifications of this cave. One ends in unfathomable water, another seemed to end in the roof, and others twist and turn in bewildering confusion. But I did not explore the whole of it. I had become nauseated with exploring caves. More than twenty down on the escarpment had completely taken the first excitement away.

Perhaps a few words on my method of collecting may be of interest. When the tents are pitched on a fresh camping ground, I get out from forty to eighty traps of varying sizes and sorts. Traps for mice, for rats, for moles and for larger beasties, baited with porridge, bread or aniseed, I put them in different kinds of places, some in grass, some in the tree forest or bamboo forest, under rocks or amongst stones, by a swamp or stream or up a hill, at the base of a large tree or under a fallen tree, in the heather, amongst the flowering plants or in the thorny desert; anywhere in fact that looks likely and where I can

perceive signs of animal existence. Rat, mouse and birds' nests are also looked for. They often yield a good supply of fleas which are saved in tubes of vinegar for Mr. Rothschild. I also hunt around for haunts of bats and lemurs and look out for runs and droppings, foot-marks and bitten leaves and grass. A supply of animals soon turns up and I get to work on them.

With birds it is not so easy to use traps. The .410 shot gun is a more useful instrument, though birdlime and snares will get many a specimen for which the gun is of little use.

The mammal skin must in each case be accompanied by its skull. The label on the skin must record the following data :—

Collector's number.	Locality.
Date.	Altitude.
Sex.	Collector's name.
The dimensions in millimetres of	
Tail.	Hindfoot.
Head and body.	Ear.

And in the case of bats the length of forearm.

In conclusion I must say that I have experienced the greatest help and kindness from the Protectorate officials and would particularly mention those at Mumias.

RIVER CAMP, VOL, 24 April 1910.

SPITTING COBRA

BY C. W. HOBLEY.

It has been well known for some years that one of the colubrine snakes of East Africa when disturbed possesses the unpleasant habit of spitting a venomous saliva into the face of its assailant, in fact cases have been recorded in Nairobi itself. In Portuguese East Africa the name given to these snakes with reference to this habit is *Cobras cuspidairas*.

In the Soudan the spitting cobra has been definitely identi-