

NOTES ON THE MAPUTALAND EXPEDITION.

(27th May to 3rd July, 1914.)

By Dr. H. G. BREMER.

THE primary object of the expedition was to get specimens for the Transvaal Museum, Pretoria, and the Provincial Museum, Lourenço Marques, the second to investigate which animals were infected with trypanosomiasis parasites, and the third to get as much information as possible about bloodsucking Diptera, especially about Tabanidae and Stomoxyidae.

The results in connection with blood parasites were negative. None of the animals of which bloodsmears were taken showed signs of trypanosomiasis parasites, and none of the rabbits which were injected with blood from game animals showed infection.

No Tabanids were found. All the Diptera collected belonged to the Muscidae, Trypetidae, and Culicidae.

It was highly remarkable to find the game in general free from parasites. Whilst in the Transvaal most buck have a great number of intestinal worms, all the buck shot at this expedition were free from them and from external parasites. Mallophaga were absent as well. Even the game birds were not infested with them. Ticks were only found on elephant, rhinoceros, and hippopotamus. The elephant was host to a very great number of them, the rhinoceros had them only round the anus and in the inguinal region, whilst the hippopotamus only had a few on the ears. Unfortunately the ticks collected on the elephant and hippopotamus were lost during a heavy storm which blew the tent away. They looked very much the same as those found on the rhinoceros, i.e. *Rhipicephalus simus* (C. L. Koch), *Dermacentor rhinocerotis*, and *Amblyomma petersi* (Karsch). On a black mamba, *Dendraspis angusticeps*, a tick belonging to the *Ixodes* genus was found, which has not been identified and will probably be a new species.

Another remarkable point was the apparent absence of small carnivorous animals and rodents. During our journey large numbers of traps of various designs were set, but the result was always *nil*. Not even footprints of small cats, etc., were found, and one is almost forced to think that they are really absent in this part of Maputaland. Hyaenas and lions were never heard or seen; no traces of wild dogs or other big carnivora were found; and dead bodies of buck could be left in the bush or in the open veld without covering either during the night or day without any fear that carnivorous animals would spoil the skin. Even the practically ubiquitous vultures were absent—at least we saw none and never found our game attacked by them.

The only plausible reason for this scarcity in carnivorous life must be found, in my opinion, in the paucity of animals on which they could prey. In fact the parts visited by our party were not at all rich in game. There were elephants (perhaps fifty), several rhinoceroses, but, besides a few kudus, waterbucks, inyala's reed-buck (which were mostly met with in the vicinity of Motope, near

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water, which is quite undrinkable for man and beast. At the few places where sweet water is obtainable Kaffirs have settled down for years and years, and it is not at all improbable that their presence near the only sweet-water pools chased the animals away. Lake Manyene was reported to have salt water; to our pleasant surprise we found it sweet.

Birds of prey were equally rare. The only ones seen by me were a couple of *Helotarsus ecaudatus* in the vicinity of Inguenha's kraal and a pair of owls (*Glaucidium capense*), male and female, which were killed at Dhlebede. Their stomachs were full of caterpillars. Our boys caught two young *Melherax canorus*, which died during the journey. In general, there was little bird life. In the neighbourhood of Salamanga one *Otis ludwigi* was shot near Inguenha; the ordinary *Numida coronata* was abundant, and the crested guinea fowl (*Guttera cristata*) was also fairly plentiful, but Francolins were very scarce.

On the pans near this kraal we found numerous ducks (*Anas erythrorhyncha*) and also many *Jacanas* (*Actophilus africanus*). A single *Plotus* was perched on the branch of a dead tree, a few cormorants were on the wing, and these were all I noticed in water birds. At the Lake Manyene only a few cormorants were seen by me personally. The taxidermist, who arrived at the lake earlier than I, said that the southern shore of the lake was swarming with birds, apparently mostly pelicans.

In my diary there is not a single note about Passerine birds. Evidently they were not conspicuous. The only remark made was that at Dhlebede we heard for the first time the clamorous call of Jardine's babbler (*Crateropus jardiini*), and saw a few specimens of the long-tailed Shrike (*Urolestes melanolenca*).

Generally, the landscape was flat; here and there a small rise broke the monotony of the river. Fortunately the vegetation was rather varied. On the road from Inguenha to Gadhlia one comes at first across a very sandy patch of ground, covered with long grass and small trees, whilst every now and then gigantic mahogany trees (*Azelia quanensis*) made their appearance. But after having passed Begabe's kraal one crosses patches of the Likuani Forest, a long stretch of very dense vegetation. The trees here are not at all high, and with the exception of a few really large trees I should prefer to call this forest a dense bush. In many places large lichens, very much like Usnas, are hanging from the branches and give the idea of a sub-tropical rain forest, or give at least the impression that the atmosphere is generally wet. But during our visit, which lasted about six weeks, no rain fell and the soil was absolutely dry. Still it must not be forgotten that the sea is not far off (20 miles at the utmost), and at Inguenha we felt its effects in the atmosphere and the guns had to be cleansed from rust every day. In these patches of high shrub Lories (*Gallirex porphyreolopha*) were found, and two of them were captured by our natives. As there was no proper food for them at hand they died in a few days.

Once at Inguenha our camp was visited by a small swarm of hornbills (*Lophoceros nasutus*). They made a great noise and soon disappeared in a northerly direction.

Reptiles were rare. Near Inguenha at one of the pans a *Python sebae* 10 feet 6 inches in length, but very thick, was shot (not preserved), as well as a *Thelothornis kirtlandi*.

On the road to Begabe's kraal a *Naja haje* was captured, and a *Tarbophis semiannulatus*. In the vicinity of Gadhla I shot a black mamba (*Dendraspis angusticeps*), but damaged it so much that only the head and neck were preserved. It was a large specimen, 12 feet 3 inches in length.

The only further catches in reptiles were two *Homopholis wahlbergi*. Undoubtedly snakes will be plentiful in summer time, but, in my opinion, this country will be poor in lizards all the year round. The soil is too sandy and there are no stony kopjes.

Amphibians and fishes were not caught.

Fishing is very difficult in Maputa River so near its mouth, as the tidal motion is very strong and the banks are not easily accessible. Lake Manyene should prove a good fishing ground. The pans at Inguenha and near Gabene contained a good many Kurpers belonging to the genus *Tilapia*.

My attention was chiefly directed towards the insects. Of these the Lepidoptera were better represented than any other order. A detailed description of the species caught is given by Mr. Swierstra in the preceding article.

At Inguenha most of the collecting was done in the old mealie lands. These were excellent places for small Teracoli and Acraeids.

In June only one species of tree was in flower, i.e. the *Brachylaena discolor*, belonging to the Compositae, and the specimens of this tree were swarming with acraeas, nearly all *A. encedon* and *A. burtoni*. *Callidryas florella* was common, *Eronia leda* rather rare, *Melanites leda* rare, *Eurytela dryope* rather rare, *Mycalesis perspicua* common.

At our first visit *Pieris spilleri* began to appear. *Teracolus auxo* and *topha* were absent. On our return in the beginning of July these two species were very common, whilst nearly all the other species had disappeared.

During our stay at Gadhla the majority of *Eronia cleodora*, a good many *Teracolus regina*, *T. annae*, *Acraea oncaea*, and *Charaxes brutus* were captured.

At Lake Manyene the majority of the butterflies were caught.

On the northern shore of this lake are high banks, thickly wooded. On the margin of the forest were three trees absolutely covered with the Asclepiad creeper (*Sarcostemma viminalis*), which was in full flower, and these thousands of flowers—clustered together in a small space, free from thorns—offered the best collecting spot imaginable.

Pieris mesentina, *P. severina*, *Teracolus eris*, *T. mutans*, *T. regina*, *T. ione*, *T. auxo*, *T. topha*, *Callidryas florella*, *Precis clelia* were swarming, a few *Papilio demoleus*, *Herpaenia eriphia* came accidentally, and once a fine *Amauris* was seen. The orange-tipped Teracoli did not settle on the flowers, but were plentiful in the vicinity and mostly alighted on the ground. Quite near to this place three *Melanites leda* and a *Charaxes jahlusa* were captured. Contrary to my expectations this *Charaxes* settled on the dead flower head of a Composite, and the *Melanites* showed themselves much more in open spaces than they generally do.

Another good collecting ground was found in the lands at Gadhla in the neighbourhood of the water holes. A few *Pedaliaceae* (*Sesamum alatum* and *indicum*), some *Cucurbitaceae*, and several *Hibiscus* were flowering, and more specially these last ones attracted butterflies, beetles belonging to the Mylabrinae (*Ceroctis marshalli*),

and large numbers of Tripetidae. Occasionally Vernonias were flowering, but they did not attract insects; the Lippias were the favourite resort of the few Lycaenids which I caught.

Quite near the water holes, in the reeds, was a large vegetation of a Melastomacea (*Dissotis incana*, Triana) in full blossom. It was avoided by insects.

A good many *Charaxes brutus* and *Ch. aethalion* were on the wing practically at every camping place, and also in the middle of June *Crenis natalensis* was fairly common, but very difficult to catch.