PART II.

NOTES ON THE MAMMALS OF THE SIJU CAVE, GARO HILLS, ASSAM.

By STANLEY KEMP, *Sc. D., Superintendent, Zoological Survey of India.*

Five species of Mammal frequent the cave and of these we obtained specimens of four : three bats and a rat. Two of the bats (the *Cynopterus* and the *Rhinolophus*) have kindly been determined by Mr. H. C. Robinson of the Federated Malay States Museums and the rat and the remaining bat (*Hipposideros*) by Mr. Martin A. C. Hinton of the British Museum. Mr. Hinton has contributed a note on the *Hipposideros*, which had not previously been recorded outside Ceylon.

CARNIVORA.

Family FELIDAE.

Felis sp.

Footmarks of a small cat were seen at various points in the cave up to a distance of 3,800 ft. from the entrance, but we did not succeed in obtaining any specimens. On one occasion in the tunnel at about 3,400 ft. we disturbed a comparatively large animal which went splashing off in the water ahead of us. It was probably the cat, but it kept beyond the range of our lights and we were unable to get even a glimpse of it.

RODENTIA.

Family MURIDAE.

Rattus nitidus nitidus (Hodgson).[1]

This rat is common in the cave and its footmarks were frequently seen in places where mud or fine sand had been deposited by the floods. The species ranges to the extreme inner end of the cave. We trapped a specimen at 1,400 ft. and found two other recently killed individuals in the narrow side-tunnel at 375 ft. from the entrance. The latter were both fresh and in excellent condition and we were unable to discover how they had come by their end.

Rattus nitidus was described from Nepal and is known also from Sikkim and Kumaon. A subspecies, *R. nitidus obsoletus* Hinton, is described from the Chin Hills in Burma.

---

[1] For synonymy and references see Hinton, *Journ. Bombay Nat. Hist. Soc.* XXVIII, p. 1063 (1922).

CHIROPTERA.

Family PTEROPODIDAE.

Cynopterus sphinx gangeticus K. Andersen.[1]

This bat inhabits the cavern between 400 and 500 ft. from the entrance and occurs there in very great numbers; once the colony is disturbed it is possible to bring down specimens by almost any chance shot fired towards the roof. In former times, as we learn from Mr. La Touche's note (p. 9), the species inhabited the entrance hall, but few if any individuals now live there.

In Part I of this report we have drawn attention to the abundance of the fauna in the cavern which these bats inhabit and have pointed out that this is almost certainly due to the deposits of bat-guano. The guano was exploited commercially by a Calcutta firm some time ago and the accumulations of many years were then removed. The deposits were again being worked in a desultory fashion at the time of our visit, but we learnt that the quality had greatly deteriorated owing to the admixture of sand and gravel and that the enterprise was being abandoned; it is only on projecting shelves of rock and at other points difficult of access that any reasonably pure supplies can now be obtained. What effect the removal of the guano may have had on the fauna of the cavern we do not know, but fresh deposits are, of course, slowly accumulating and the whole soil is impregnated with guano, so that it seems probable that the food-supply for the fauna is still more than sufficient.

Cynopterus sphinx in its typical form occurs over the greater part of India and in Burma. The subspecies *gangeticus* was described from Lucknow.

On specimens of this bat we obtained large numbers of parasitic Diptera, consisting of an undetermined Streblid and of two species of Nycteribiid which have been identified by Major W S. Patton, I.M.S., as *Nycteribia* (*Acrocholidia*) *euxesta* (Speiser) and *Eucampsipoda hyrtli* Kolenati.

Family RHINOLOPHIDAE.

Rhinolophus subbadius Blyth.

This bat appears to be rare in the Siju Cave and seems to be solitary in habit. On several occasions we noticed a small bat flying in the main tunnel and side-passages within 600 ft. from the entrance, but the only specimen we obtained was shot at dusk at the entrance. Parasitic diptera from this specimen have been determined by Major Patton as *Nycteribia* (*Acrocholidia*) *euxesta* (Speiser).

Rhinolophus subbadius was described from Nepal and has been recorded from Mussoorie in the United Provinces and the Garo Hills.

Hipposideros lankadiva Kelaart.

Mr. Martin Hinton, who has kindly identified this species for us, writes as follows :—" I can find nothing in the skull nor in the skin to

[1] K. Andersen, *Cat. Chiropt. Brit. Mus.* (2nd ed.) I, p. 604 (1912).

distinguish these bats from *H. lankadiva* Kel., a species otherwise known to occur only in Ceylon. On the Indian mainland the place of *H. lankadiva* is supposed to be taken by *H. indus* and its subspecies, which are all considerably smaller forms.[1] It would seem, therefore, that Dr. Kemp's discovery in the Siju Cave affords us with an interesting case of discontinuous distribution; but, of course, *H. lankadiva* may in future be discovered in the Peninsula."

"The Bombay Natural History Society's Mammal Survey also obtained many large bats of the genus *Hipposideros* from caves in the Garo Hills and the other hill ranges of Assam. I have gone through all the Mammal Survey material and find all the specimens to be referable to *H. armiger*, which, as is well known, is a large species belonging to a very different group."

Hipposideros lankadiva is the only bat we found in the cave at distances exceeding 500 ft. from the mouth. On our first visit we found a number hanging over the water at various points in the tunnel between 600 and 1,400 ft., but our passage disturbed them and as we proceeded further day by day we found that the bat had retreated before us. When we first reached the end of the straight tunnel at 3,550 ft. the species was found in incredible numbers, closely covering the entire walls and the roof. The bats appeared to be dazed with our lights and many fell into the water or on to our backs and shoulders, the former swimming vigorously with fully-spread wings until they found some object — possibly a human leg — up which to climb. On our subsequent visits we were glad to find the numbers greatly reduced and we imagine that most of them must have moved to the unexplored section of river-tunnel lying between 1,400 and 3,200 ft.

On one occasion we waited till dark at the cave-mouth to watch the bats emerge. Two *Rhinolophus* were seen as daylight was fading, followed shortly after by many hundreds of a larger species. Several of these were shot but all proved to be *Cynopterus*. It would be interesting to know whether the *Hipposideros* at 3,550 ft. find their way out by the complicated route shown in our plan or whether they have discovered another and easier exit which escaped our notice.

In our experience *H. lankadiva* now inhabits the tunnel through which the main water-channel flows and most of the guano is consequently washed away by the stream. The scanty deposits in the cavern at 3,600 ft. are no doubt due to this species. In our account of the topography (p. 7) we have alluded to the very dense deposits which exist in the cavern between 2,100 and 2,200 ft. Very few bats now live there; we saw only a few individuals and were unable to obtain specimens. We think, however, that the guano is that of *Hipposideros* and that the cavern in former times was inhabited by this species.

---

[1] These, as in Wroughton's Summary,' *Journ. Bombay Nat. Hist. Soc.* XXV, p. 579 (1918), were formerly referred to *H. lankadiva*; but Dr. K. Andersen, *Ann. Mag. Nat. Hist.* (9) II, p. 382 (1918), revising the whole group, regards the small mainland forms as a distinct species, his *H. indus*.