BOMBAY NATURAL HISTORY SOCIETY'S MAMMAL SURVEY OF INDIA, BURMA AND CEYLON.

REPORT No. 29, PEGU.

By R. C. Wroughton and Winifred M. Davidson.

Collection ... No. 29.

Locality ... Pegu.

Date .. November, 1915; May, 1916.

EARLIER REPORTS .. No. 1, East Khandesh, Vol. XXI, p. 392, 1912; No. 2, Berars, Vol. XXI, p. 820, 1912; No. 3, Cutch, Vol. XXI, p. 826, 1912; No. 4, Nimar, Vol. XXI, p. 844, 1912; No. 5, Dharwar, Vol. XXI, p. 1170, 1912; No. 6, Kanara, Vol. XXII, p. 29, 1913; No. 7, Central Provinces, Vol. XXII, p. 45, 1913; No. 8, Bellary, Vol. XXII, p. 58, 1913; No. 9, Mysore, Vol. XXII, p. 283, 1913; No. 10, Kathiawar, Vol. XXII, p. 464, 1913; No. 11, Coorg, Vol. XXII, p. 486, 1913; No. 12, Palanpur, Vol. XXII, p. 684, 1913; No. 13, South Ceylon, Vol. XXII, p. 700, 1913; No. 14, Shan States, Vol. XXII, p. 710, 1913; No. 15, Kumaon, Vol. XXIII, p. 282, 1914; No. 16, Dry Zone, Central Burma and Mt. Popa, Vol. XXIII, p. 460, 1915; No. 17, Tenasserim, Vol. XXIII, p. 695, 1915; No. 18, Ceylon, Vol. XXIV, p. 79, 1915; No. 19, Bengal, Vol. XXIV, p. 96, 1915; No. 20, Chindwin, Vol. XXIV, p. 291, 1916; No. 21, Gwalior, Vol. XXIV, p. 309, 1916; No. 22, Koyna Valley, Vol. XXIV, p. 311, 1916; No. 23, Sikkim, Vol. XXIV, p. 468, 1916; No. 24, Sind, Vol. XXIV, p. 749, 1916; No. 25, Chin Hills, Vol. XXIV, p. 758, 1916; No. 26, Darjiling, Vol. XXIV, p. 773, 1916; No. 27, Bhotan Duars, Vol. XXV, p. 63, 1917; No. 28, Kalimpong, Vol. XXV, p. 19.

This Collection, made by Mr. J. M. D. Mackenzie, I.F.S., represents the fauna of the Pegu Forest Division (except for No. 663, Capricornis sumatrensis milne-edwardsi, which is from close by), not the Pegu civil district. This area is peculiarly full of species made by Blyth on specimens from the collections of Phayre, Berdmore, Barbe, &c., &c. More representatives of these will be most welcome, and it would be especially interesting to examine series of Scotophilus fulvidus, Hylomys pequensis, Mus robustulus (Rattus), M. concolor (Rattus), M. badius (Vandeleuria), M. pequensis (Chiropodomys), Hapalomys longicaudatus, and Lepus pequensis from this, the type, locality. Very interesting meanwhile are the series of Tupaia belangeri, Tomeutes pygerythrus, Menetes berdmorei and Mus nitidulus, which are topotypes of Blyth's species.

The collection contains 237 specimens belonging to 29 species and subspecies in 28 genera. Tomeutes pygerythrus has been obtained for the first time under the Survey, having been hitherto re-

presented only by the subspecific form janetta. Petaurista cineraceus, Paradoxurus ravus and Mungos birmanicus are also recorded for the first time.

Mr. J. M. D. Mackenzie has kindly furnished the following notes on the area over which he collected :-

"The country lies mostly within, and includes about half of the Pegu civil district; in the extreme North it goes into Tharawaddy, and in the South into Hanthawaddy. It is a somewhat miscellaneous agglomeration of country, round the town of Pegu. To the North it extends to the Pegu Yomas, and consists of the drainage of the Pegu River. Twenty-five miles North of Pegu, the Eastern boundary crosses to the Sittang River, meeting it at the mouth of the Pegu-Sittang Canal. From there to the sea-coast, the Sittang River is the boundary. On the West, the boundary runs down the Pegu Yomas from the North, up to some 20 miles North of Pegu. From there it follows a stream until it comes into the Pegu River some 15 miles below Pegu; thence along the Pegu and Rangoon Rivers to the mouth of the latter, excluding the town of Rangoon. From the mouth of the Rangoon River to the mouth of the Sittang River it follows the sea-coast, including the Western part of the Gulf of Martaban. The area is roughly 140 miles from North to South, and 25 miles from East to West, going to a point in the North and being slightly wider in the South, and represents, partially at any rate, the fauna of Central Burma, connecting up S. Tenasserim with the three areas worked by Shortridge in the North.

"The area admits of division into two distinct types, with an intermediate area between. From 30 miles North of Pegu to the Northern limit, the country consists of nothing but forest reserves, that is, jungle containing large trees, e.g., teak and ironwood, with considerable areas of bamboo, more or less pure. There is practically no permanent cultivation or level land in this area, which is inhabited by only a few Karens (about 1,000), practising 'Taungya,' or shifting cultivation, within specified areas. (See Report No. 25). It consists of steep, broken hills of no great height (the highest is some 2,000), thickly wooded.

"From 30 miles North of Pegu to the level of Pegu, there is scrub jungle, sometimes replaced by reserves containing big trees in some parts, and permanent (wet) paddy cultivation in others. This area contains a considerable population, and there is very little more mom for cultivation. A good deal of Taungya cutting

is done by men who cannot get fields.

South of Pegu to the sea, the country is one vast paddy plain. On it everything is subordinated to paddy. There is no fuel or timber, and only such grazing as is enforced. The only trees are those round villages (rain-trees generally) and a few plantations made by the Forest Depot. On such lands nothing lives but bandicoots, rats and mice. This flat Delta land covered with paddy continues up to the sea-coast—or to within a few miles of it, where it is replaced by scrub jungle. In this belt there are considerable areas of reserves where tidal or coastal forests were originally

protected.

"Every year the Sittang River continues the process of extending the Indian Empire, increasing it by silting up about another mile of sea. In the first year, this grows a crop of a coarse grass called 'Pinle Saba' (sea paddy) which is replaced next year by tidal shrubs, which are in turn gradually, and by fairly definite stages, replaced by scrub jungle. This is grazed down and cut for fuel by villagers until it has taken the salt out of the soil, and can be replaced by paddy fields.

"The annual extension seawards is about half a mile to a mile, and, when the scrub jungle has disappeared, it produces some of the

finest paddy land in the world.

"The whole area is inundated throughout the rains (travelling is done by sampan), and the seaward part of the scrub jungle belt is covered with salt water every high tide. This brings up mud, fills in all cracks, and gradually raises the level of the land until it is above tide level. After that a deposit of mud is laid down every year in the rains, and in this way the salt is washed out of the soil and the level raised until it becomes paddy land. The tidal forest belt is from four to ten miles wide, and consist of dense thickets of

various bushes which will grow in salt swampy localities.

"The above somewhat lengthy dissertation is required to understand the distribution of species in the district. In the North the usual fauna is found. That in the South consists, apart from bats, which are not common, of rats and mice (the terms are not used scientifically), which live in the paddy-fields while they are dry, and presumably in villages in the rains, and of the animals living in the coastal jungle belts, e,g., Viverriculæ, and cats of various descriptions, thamin (brow-antlered deer), hogdeer, and pig, I have seen the last two, but cannot vouch for thamin. . . One spot is called 'Singyum' (Elephant Island), and various 'oldest inhabitants' say that 60 or 70 years ago elephants were not rare down there. There are no squirrels, bamboo rats, or tupaias, and I was unable to hear of any monkeys."

Mr. Mackenzie adds the following notes on species of which he

failed to obtain specimens:-

" Macaca sp.—Vernacular name.—Каген—Та-u.
" Viverra sp.—Vernacular name.—Каген—Sнаw.

"Cervus porcinus and C. eldi.—Occur. See my note on the Delta area. Vernacular names.—Karen—Dachyeh and Thamarong.

[&]quot;Muntiacus grandicornis—Vernacular name.—Karen—Dаснон ст Таснев (ch soft.)

"Rhinoceros sp.—Have found absolutely fresh tracks, but have not shot one. Very local. I think it is always a local animal in the most restricted sense. It lives for a week, a month, or considerably longer in an area of, say, three to four square miles, then moves to a considerable distance, return ing, often after three or four moves, to the original locality. I know a small area in the PeguYomas where a Rhino has lived for at least eighteen months. Old and fresh tracks had been found at Christmas, 1914, and I found fresh tracks, and tracks from the 1915 rains, in January, 1916. With regard to Mr. Shortridge's notes, II, J., B. N. H. S. XXIII, No. 4, I have seen tracks of four Rhinos together, and have been told by a sahib that he has seen six of these animals together. So it seems that they are at times gregarious, though generally met with singly. (Any notes on this would be very interesting. The reason may be seasonal, connected with food or water, or possibly with visits to a salt lick)..... I have several times followed up tracks, and have never seen a case of a pair meeting during the night, as mentioned by Shortridge; nor have I ever heard of the habit from Chins or Burmans, some of whom are very close observers, especially of Rhino, which are worth from Rs. 1,000 to Rs. 1,500 to a native shikari. Every part of the animal is saleable. A good horn alone is worth from Rs. 800 to Rs. 1,000, and almost any horn is worth from Rs. 400 to Rs. 500.

Vernacular name.—Karen—Da DU CHAW.

Sus sp.—Vernacular name.—Karen—Тон (o short).

Elephants.—Fairly common in parts. That is, I suppose there are 60 to 80 wild elephants in the whole district, all North of Pegu. I walked up to a fine onmusth (tuskless male) which had been causing trouble among tame elephants. It was reported to be a tusker, and neither I nor the man who was with me, Mr. Roy of Messrs. Foucar and Co., fired at it We first met it about 300 yards from camp, on a narrow path, but it bolted without being properly seen. About two miles further on we saw it, and it came walking slowly down the path towards us. Apparently it had not seen us, for when it did, it turned and bolted.

Vernacular name.—Karen—Rhasaw.

Bibos gaurus.—Moderately common, but local.

Vernacular name.—Karen—Suerh or Bawkaw ('Yellow legs').

Bibos sondaicus (Saing).—Local. More common on the whole than the bison, but much shyer. It does considerable damage in teak plantations. Grass springs up after the first rains, as they are open. The Saing comes in considerable numbers to feed on this, and when bored with grass, barks the young teak.

Vernacular name.—Karen—BAWHUERH ('Yellow horns').

Felis tigris.—Vernacular name.—Karen—BAWTHOO.

F. pardus.—Vernacular name.—Karen—Ohay bwhay (ch soft).

Ursus torquatus.—Occurs.

Lepus peguensis.—Have been unable to hear of any round Pegu. The specific name was probably given to specimens from Burma—say, Rangoon -before that town became important, and when Pegu practically meant British Burma. (Cf. the 'Pegu Pirates' and 'Pegu Club' in Rangoon).

1. PITHECUS PHAYREI, Blyth.

Phayre's Leaf Monkey.

(Synonymy in No. 14.)

S. Zamayi Res. (60 miles N. of Pegu) & 1; Kadat (60 mi. N. of Pugu) & 1 (no skull) \mathcal{L} 1 (no skull).

(See also Reports Nos. 16, 20 and 25.)

Fairly common in the hills. Goes about in flocks. After a flock has been