No. 2.] [Vol. I.

JOURNAL

OF THE

FEDERATED MALAY STATES MUSEUMS.

TAIPING & KUALA LUMPUR, APRIL, 1905.

CONTENTS.

	Page.
Description of a New Frog of the Genus *Ixalus* from Selangor, by G. A. Boulenger (with plate)	39
Notes on the Sugar Cane Rat, *Mus jalorensis*, by L. Wray	39
A Synopsis of the Birds at present known to inhabit the Malay Peninsula south of the Isthmus of Kra, by H. C. Robinson	45
On a Flying-Squirrel (*Pteromys*) from Perak, by F. W. Knocker... ...	57
A Rare Squirrel from Kuala Lumpur, by H. C. Robinson	60
A Sakai Counting-Stick or Tally, by F. W. Knocker (with plate) ...	60
Note on the Malay Sapi Utan, by R. Lydekker	61
Rhinoceros Trapping, by L. Wray	63
On a Squirrel New to the Fauna of the Malay Peninsula, by H. C. Robinson	65
Notes on Para Rubber Seed Oil, by L. Wray	66

KUALA LUMPUR:

PRINTED AT THE F.M.S. GOVERNMENT PRINTING OFFICE.

1905.

275/5-05.

cows, for in this respect it appears to connect the typical banting with the extinct *Bos etruscus* of the Upper Tertiary deposits of the Val d'Arno in which the cows are hornless. *Bos etruscus* was long ago regarded by the late Professor Rutimeyer as nearly related to *Bos sondaicus* and the relationship now seems to be made still closer. In fact, if my data are trustworthy, the Malay sapi utan would seem to be the primitive type of banting, connecting those races in which the cows have long horns with *B. etruscus*. This, of course, is quite in harmony with the accepted view that the Malay fauna includes several survivors of ancient types.

A word in conclusion with regard to the second skull sent from Selangor by Mr. Robinson. As already mentioned, the horns are of a gaur-like type, and quite unlike those of the banting; so that I cannot regard this specimen as representing the male of the form to which the short-horned skull belongs. From the condition of the teeth it indicates a sub-adult animal. The skull, however, shows no trace of the strongly developed intercornual crest of typical gaur.

Were it not for the fact that the young Malay gaur referred to above (which was probably younger than the animal to which the skull belonged) is represented with a strong intercornual ridge, I should have been inclined to consider that the sladang lacked this ridge. If, however, the figure of the Zoo sladang be trustworthy, this hypothesis is untenable. To suggest that there are two kinds of Malay gaur is obviously unreasonable. Unless, then, the Selangor skull indicates a gaur shading off towards the gayal (which Mr. Stuart Baker, and I am inclined to think rightly, regards as a domesticated derivation from the gaur) I am unable to come to any definite conclusion with regard to its real affinity.

[*Reprinted from the "Field," February, 1905.*]

RHINOCEROS TRAPPING.

IN and near the Dindings, the catching and exporting of rhinoceros has been, in the past, quite a regular trade. It is said by the local Malays that some fifty of these animals have been caught there altogether; and that formerly they were very plentiful, but have now become scarce and difficult to trap.

They are caught in pit-falls, made in the jungle tracks which they follow. The pits are rectangular holes 7 hasters long, 3 hasters wide and 5 hasters deep—*i.e.*, 10½ feet by 4½ feet by 8½ feet. These pits are dug out with perpendicular sides, then the sides and ends are lined with stakes of about 4 inches in diameter, driven into the bottom of the pit and of such a length that the upper ends are flush with the surface of the ground. At about one foot from the top are placed four horizontal pieces of wood, to hold the upright stakes in place. These horizontals are longer than the length and breadth of the pit and their ends are buried in the earth.

The heap or heaps of earth thrown out from the hole are carefully covered up with leaves. These heaps are thrown up on one side or on either side of the pit as may be most convenient, the length of the pit being in a line with the direction of the track which the animals are in the habit of following. The pit is covered with thin sticks, and leaves are laid on top of them. It is so well concealed that no one would notice a pit when walking through the jungle and they are most decidedly dangerous.

An animal having fallen into one, he is kept there by laying pieces of wood over the hole; these are laid lengthwise and the ends are retained by two cross pieces, which are themselves secured by eight stakes driven into the ground in a slanting direction, forming four Xs. These are lashed together with rattans where they cross and two other pieces of wood are laid on top of the crossings and also fastened down tight with rattan.

An enclosure is next built at the end of the pit where the animal's head is. It is made of wooden stakes securely lashed together with rattans and rather larger than the pit-fall. A fence on either side connects it with the pit and extends about a third of the length of the pit, so as to prevent the rhinoceros escaping sideways. There is a space left at the end of the enclosure next to the pit for the insertion of pieces of wood so as to close the open end.

All being ready, the longitudinal pieces of wood covering the mouth of the pit are withdrawn and earth is thrown into the hole at the end where the animal's head is, and he mounts on it and walks into the enclosure. Another method is to throw in pieces of wood on which he also mounts. Ropes often have to be employed to help him out. Having got him into the enclosure, the bars before mentioned are slipped into place to prevent him backing into the pit again.

A cleared track has now to be cut through the jungle from the pit-fall to the nearest river. This done, ropes are passed round the body of the rhinoceros, one just behind the shoulders and another in front of the hind legs. To each of these ropes are attached two others, two on either side of the animal. This being done, five men take hold of each of the ropes, that is, twenty men in all, while others demolish the enclosure. The rhinoceros is then made to walk along the previously cleared track to the nearest river. At night an enclosure is constructed round the animal and the men sleep in shelters close to it. It is said that they can take one a distance of ten miles in three days.

Arrived at the river, a cage is constructed of round wood poles and the animal put into it. The cage is then put on to a raft or boat. A place being chosen where a large tree can be used as a derrick to lift the cage. It can then be conveyed to a port and shipped to Penang or Singapore for sale.

The species inhabiting this district is the two-horned Sumatran rhinoceros (*Rhinoceros sumatrensis*). These notes were made in 1901, when an attempt was made to procure a specimen of *Rhinoceros sondaicus* for the British Museum. It, however, was discovered that this species did not occur near the Dindings. Three animals were caught, and as the Perak Museum was in want of a specimen, one of

them, a fine male, was taken for that Institution: another died, apparently from an old wound, and the third was shipped to Singapore.

It may be of interest to give here a brief account of how such a large, thick-skinned specimen was successfully treated in a climate which is so detrimental to this class of work. It was caught as previously described, and got out of the pit into an enclosure. It was then shot and skinned in the jungle. As it was computed to weigh about two tons, this was something of an undertaking. A medium sized tree was felled and made to fall across two other trees. These were then lashed together and used as shears, and with the aid of a pair of two-ton differential pulleys and two smaller pairs of blocks, the body was slung up and handled with ease. The animal was killed by a shot in the neck from a Police carbine, at about 8 a.m., and by the evening the skinning was completed. Some Chinese woodcutters begged for the flesh, and removed practically the whole of it. They also took other parts of the body for medicinal purposes.

The skin having been removed, it and the bones were dressed with 5 gallons of common salt, and one 2 lb tin of carbolic powder was used to keep off the flies. It was then done up in a bundle and left for the night. The next morning it was opened out and the salt well rubbed in, and then it was tied up in some old sacking, slung on a pole and carried some eight miles to the landing place, and then by boat to Sitiawan, which we reached that evening, after having spent two nights in an atap shed built in the jungle near the pit-fall.

On arrival at Sitiawan, the skin was put into a large tub with 3 gallons of water containing 2 lbs. of alum, 2 gallons of salt and 1 lb of dry alum. Three days afterwards it was put into a new solution composed of 2 gallons of water, 2 gallons of salt and 6 ounces of carbolic acid. It arrived in Taiping five days later rolled up in a bundle in sacking, and was put into a new solution of the same composition as the last. The skin was kept in this solution until it had all been thinned down and was ready for mounting, when the salt was washed out of it, by soaking for some days in constantly changed water. It was then poisoned and placed on the mannikin, which had been prepared to receive it. It may be added that the skin did not "slip" anywhere and at no time had any offensive odour. When first taken off it was fully $1\frac{1}{2}$ inches in thickness, in places.

L. WRAY.

ON A SQUIRREL NEW TO THE FAUNA OF THE MALAY PENINSULA.

SCIURUS RUFIGENIS, *BLANFORD.*

Sciurus rufigenis, *Blanford, J. A. S. B.* xlvii, pt. 2, p. 156, pls. vii, viii (1878); *Thomas, P. Z. S.* 1886, p. 71, *Blanford, Faun. Brit. Ind. Mamm.* p. 376 (1891); *Bonhote, P. Z. S.* 1900, p. 194.

A SMALL but extremely valuable collection has recently been made by the Museum staff on the Selangor mountains in the neighbourhood of Ulu Gombak at elevations of between 4,000 and 5,500 feet. The series of birds includes a species of Peacock Pheasant