M. A. Lupin's L'Erèbe, 8st 111b

20 to 1 each agst Rames and Darbek, 700 to 1 each agst St annes or the The running was made for some distance by Baro do Schickler's two colts and Diarbek, with Courlis and Rueil bringing up the rear. Diarbek, whose jockey could not hold bin, went on in advance of the field for some little distance, but Othen Royal and Fra Angelico Held of the could have a state of the could have been the field for some little distance, but Othen Royal and Fra Angelico hald good Junes. Philip, and Amadis III, and Bucentare both held good Junes. Philip and Amadis III, and Bucentare both held good Junes. Philip and Amadis III, and and the held held held promised the hill and canned down the incline at Roulogue Baron de Schickler's two lockes had adopted were telling their tale, and, as the carried while Rueil appeared to be ridden by Toma Lona and control the hill while Rueil appeared to be ridden by Toma Lona and control the hill while Rueil appeared to be ridden by Toma Lona and control the straight was reached. Fra Angelloo collapsed, his stable companion was a state of the state of the straight was reached. Fra Angelloo collapsed, his stable companion with a good lead, seemed to have the race at his merey. But Rueil, who had made up a lot of ground in most extraordinary style, gradually gated top on him, and, catching him in the last few strides, and the state of the stable of the state o

QUICK TRAYELLING.—The distance between Glasgow and Belfast in 6 miles, and it is now daily being done by the Caledonian Balleay between language and Ardrosan, and by Mears Burns' R.M.S. Adder between refresson and Belfast, in 300 minutes; and it ten minutes is allowed for maniference at Ardrosan, it will be found the journey is done at the rate [Advertisement.]—CHICKEY AND FRIENDAY COOPS AND RENS. The best of those made by the White Star Manufacturing Co., Lid., IT, Gorze, verpool. See advertisement, page XXI.
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## THE NATURALIST.

NOTES ON RHINOCEROSES, ANCIENT AND MODERN.

NOTES ON RHINOCEROSES, ANCIENT AND MODERN.

T 18 NOT UNCOMMON, in works devoted to the sporting rather than to the strictly scientific aspects of natural history, still to find rilinoceroses alluded to as pachyderms, or members of the Pachydermata. Now, although, as being, in every sense of the word, thick-skinned, these animals are undoubtedly entitled to the appellation Pachydermatous, yet the use of this term implies zoological relationships which do not exist. The pachyderms of Cuvier included elephants, hippopotami, swine, rhinoceroses, and tapirs; and, although all these animals belong to the great order of Ungulata, or hoofed mammals, a more miscellaneous assemblage could not well have been got together. As a matter of fact, while elephants represent a distinct group by themselves, the hippopotami and swine are now affiliated with the deer, antelopes, camels, &c., to constitute a second primary group, a third group being formed by rhinoceroses, tapirs, and horses, all of which agree in having the toe corresponding to our middle finger, symmetrical in itself. For these reasons we hope—although we searcely venture to expect—that the term pachyderm may, for the future, be allowed to drop into the oblivion it morits. To those who have not made an especial study of natural history and comparative anatomy, it may seem that there is little in common between such clumy ill-shapen brutes as the rhinoceroses and neat smart-looking animals like horses and zebras. Paleontology teaches us, however, that the single toe of the horse and its modern allies is but a comparatively recently acquired character; and that, as we go like animals, with feet so like those of tapirs and rhinoceroom of the three can be no sort of question as to the near relationship of all these three families of animals. Moreover, the whole of them agree in having molar teeth constructed on the same peculiar general plan; this type of tooth (Fig. 1) consisting of an outer wall (which may, as in



Fig. 1. A left upper molar tooth of a rhinoceros, in a half-worn co

the figure, be entire, or may be divided into two columns), from which two oblique transverse ridges run towards the inner border of the crown, where they generally terminate in more or less expanded columns. A comparison of an upner moint tooth of a horse with between the two, although a more careful camination will show a general uniformity of plan. Much of the difference between the two is, however, due to the great elevation of the crown of the tooth of the modern horse, and also to the filling up of the hollows which occur in that of the ridnercen by the comparatively soft substance occur in that of the ridnercen by the comparatively soft substance ancestral horses were very like those of rhimoceroses in their general structure.

of the modern horse, and also to the filling up of the hollows which corn in that of the hinkoers by the comparatively soft substance known as cement. And it will be found that the molar teeth of the known as cement. And it will be found that the molar teeth of the known as cement. And it will be found that the molar teeth of the structure.

Having said this much as to the relationship of rhincocroses to the other odd-tood ungulates, we may proceed at once to our notes to the other odd-tood ungulates, we may proceed at once to our notes on the former animals, since, whatever may be the case when the control of the British Museum, considered that he had evidence of no less that the species of living rhincocroses, of which is were Asiation to the conclusion that there was another Asiatic species different from any of those described by Gray, while some other writers have the control of the contr

. Often improperly referred to as R. indicus

mainly a grinding motion, from back to front and from side to side after the manner of a horse; whereas, in the other species, the motion is move of a "champing" kind, like that we may observe in a maturalists call a more specialised and in Indian rhimocros is what the motion is move of a "champing" kind, like that we may observe in a naturalists call a more specialised and in Indian rhimocros have horse userly or quite as large as the males, the females of the Javain species are frequently or invariably hornless. A large male Indian rhimocros measured by Col. Kinloch, stood 5ft. 9in. at the withers, of the tail, was 10 lift. As not less; while its total length, exclaimed length, although specimens have been recorded slightly exceeding of the tail, was 10 lift. As not less; while its total length, exclaimed foot. This species is a grass-cating animal, now confined to the grass-jungles of the plains of Northern India. Within listoric times its range extended, however, into the Punjab; and fossilized teeth and the state of the part of the control of the control of the lift of the grass-jungles of the plains of Northern India. Within listoric times its range extended, however, into the Punjab; and fossilized teeth as Madras. Moreover, a nearly allied fossil species found in the Siwalik Hills of northern India, of which a tooth is represented in Fig. 1, indicates that this type of rhimocros has existed in India from a take when the country was peopled with a host of extinct mammals and the control of the property of the control of the lift of the property of the plain of the property of the plain of the property of the property of the property of the plain of the plain of the property of the plain of

upwards of 32th. along the curve, but anything like this length is very rare.

The Sumatran rinoceros is far more hairy than any other living member of the genus; but there is considerable individual variation in this respect, and also as to the colour of the body and hair, that of the former varying from an earthy brown to black, while that of the latter is some shade of brown or black. It was an unusually fringed with long hairs, which led Mr. with the edges of the ears fringed with long hairs, which led Mr. with the degree of the ears fringed with only nairs, which led Mr. with the degree of the ears proposed to distinguish the more hairy form, in which a rufous tind prevailed in the hair, as a distinct species, under the name of the hair, sared rhinoceros (R. lasiotis). In spite, however, of certain differences in the form of the skull, this new departure has not commended itself to the majority of naturalists, who prefer to regard the more hairy form merely in the light of a variety of the Sumatran species.

commended itself to the majority or measures, now the Sumatran species.

The Sumatran rhinoceros is a forest-dwelling animal, whose diet probably consists mainly of leaves and twigs. In this respect is probably consists mainly of leaves and twigs. In this respect is ame structure; this type of tools as made and teath of precisely the same structure; this type of tools be made and the first mainly associated with leaf and branch-sating labits, will a the type found in the Indian rhinoceron indicates grass-cating labits. The Sumatran rhinoceros is especially addicted to hilly districts, and has been found in Tenasserim at an elevation of 4000H. Mr E. Bartlett states that it is now becoming rare in most parts of Borneo. So far as our present information permits of judging, it would appear partially recent immigraty of the Sumatran species are comparatively recent immigraty of the Sumatran species are comparatively recent immigraty of the Sumatran species are comparatively recent immigraty of the Sumatran species found in the Lower Plicocene and Upper Micocene deposits of the Continent, such as Schleiermacher's rhinoceros (R. Schleiermacheri), attest, however, the antiquity of this group of the genus; and, taken in connection with other fossil animals, show that there has been an eastward migration in later times of types formerly inhabiting westerne Europe.

R. Luderker.

## THE WILD BIRDS PROTECTION ACT.

THE WILD BIRDS PROTECTION ACT.

Sig.—The usefulness which has characterised the working of the Wild Birds Act in many parts of the country has been so generally acknowledged, that Air Levett's complaint of its inellicency in a control of the country has been so generally acknowledged, that Air Levett's complaint of its inellicency in is verations to scientific collectors, and renders work at the world migration almost useless, so far as concerns some of the rare species. Only a few springs ago I met with a andpiper which I felt convinced was a Terek andpiper (Terekia cincrea). Hall I been free to carry a gun, this species would probably have been added to the British list. He effect of the Act upon moral opinion is, then cramthologies. But the country in favour of protecting birds. Mr Levett's regret that he did not shoot a skue is no doubt natural, but surely to see a rare bird escape destruction is a greater pleasure than the converting its sin into a specimen? I have seen Richardson's skues, and Pomstonia, the seen of the control of the

WEIGHT OF LIONS,—Mr Rowland Ward makes a mistake, in your issue of April 9, in skyling me president of the S.A. Sportament's Association. This knoone belongs to his Excellency the Governor. At the time of writing Mr Ward I was president of the Queenstown branch of the association, hence the mistake. The lion referred to as weighing 563lb, ought to have been 583lb, and was shot at Koppie Aleen, Orange Free State, in 1865, and put on scale about five hours after being shot. It was a large lion, in the prime of life, full of weights a little more, owing to better coulding the weights a little more, owing to better coulding the weights of the most better to the country double the weights of the weights a little more, owing to better coulding. I save applied to the wild animal.—P. McGILLEWIZ (Whittlesse, May 8).