

THE ZOOLOGICAL SOCIETY.

The Death of Two Rhinoceroses.

WITHIN THE LAST TWO MONTHS the Society has lost two of its finest show animals, namely, a nearly (perhaps) adult female East African rhinoceros, purchased in 1906, and an old male Indian rhinoceros, presented by the late Maharajah of Cooh Behar in 1885. In neither case was the age known, but the former was probably about seven years old, while the latter, I judge, from information as to his age on arrival given to me by the keeper, to have been about thirty-one or thirty-two. Although for three months after her



LEFT HIND FOOTPRINT OF INDIAN RHINOCEROS.

readily classified both by external, dental, skeletal, and anatomical characters into three well-marked, easily definable groups, one containing the two two-horned African species, a second the one two-horned Asiatic species (*R. sumatrensis*), and a third the two one-horned Asiatic species (*R. unicornis* and *sondaicus*). Nevertheless, most zoologists who give full generic value to the differences between the gorilla, chimpanzee, and orang-utan most illogically evade the same course with the rhinoceroses on the plea that there are so few species involved.

On geographical grounds one would expect the Sumatran species to be more nearly related to the other Asiatic than to the African types. And this is the case. The better-known distinguishing points between the two categories of Asiatic species are supplied by the number of horns, the development of skin-folds, and the structure of the intestines; but these are supplemented by a negative character discovered by Messrs Beddard and Treves, namely, the absence in the Sumatran rhinoceros of the foot gland which was originally discovered by Owen in the Indian species, and was subsequently found in the Javan animal. This gland opens by a small orifice on a low eminence a little way above the heel in the middle of the back of the foot. The orifice leads into a comparatively narrow and short duct, which soon expands into an irregularly oval sac directed obliquely upwards and lying just beneath the skin. The gland and duct together do not measure more than about 2in. in length, and they are invested in thick skin. In the Indian specimen which has just died, and which supplied the material for the annexed drawings, the sac of the gland contained some greenish waxy secretion with an unpleasant acid, cheesy smell. The position of the orifice of these glands on all four feet suggests that their secretion oozes on the surface of the soil, and enables one individual to track another by scent.

The orifice of this gland is placed suggestively near the spot corresponding to that occupied by the ergot in horses, and, despite the accepted view that the ergot is a sole of the foot, the possibility of its representing an aborted gland may be wisely borne in mind. Its general resemblance to the warts or chestnuts on the legs of horses, which most authorities regard as degenerated glandular structures, is quite in keeping with this suggestion.

It has often been remarked that the anterior hoofs of horses, asses, and zebras are, as a rule at all events, markedly wider than

present information, contains representatives of most of the large mammals of the country, as well as many rare birds, especially of the pheasant kind. Amongst the mammals may be mentioned a young rhinoceros, a young elephant, tigers, leopards, a snow leopard, deer of several species, wild boars, bharal, tahrs, scrows, and gorals. The young rhinoceros will help to fill the gap caused in the Society's collection by the death of the old male Indian rhinoceros, recorded in this issue of the *Field*. The snow leopard also will be a particularly welcome addition, since it is many years since one of these handsome animals was exhibited in the Gardens. Of great interest, too, will be the scrows and gorals, two species of goat-antelopes, remotely related to the chamois, which are exceedingly rare in collections of living animals, the one example of each species the Society at present possesses being apparently the only one in captivity in Europe. Unfortunately these mountain species, as well as the bharal, or blue sheep, the snow leopard, and the pheasants are intolerant of the heat and suffocating atmosphere of Calcutta and of the tropical conditions they may be exposed to in the Indian Ocean and the Red Sea. There will probably, therefore, be some losses amongst them, and mortality is especially to be feared in the case of the pheasants.

Since every cage and enclosure in the Gardens allotted to deer, antelopes, and sheep is already occupied, it is impossible to see at present how the newcomers are to be ultimately accommodated, unless additional space is granted to the Society for the purpose.

Mr D. Seth Smith has contributed the following notes on birds:

A Rare Amazon Parrot.

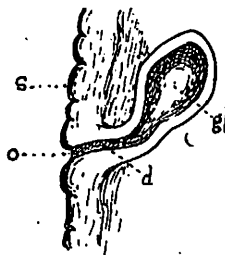
"The so-called Amazon parrots of the genus *Chrysotis* constitute a very large group, containing more than forty species ranging over practically the whole of Central and South America and the West Indies. Some of the commoner species are perhaps the best known of the various kinds of parrots kept as pets. They are not quite such good talkers as the African grey parrot, but, on the other hand, they are, as a rule, much hardier. A fair number of species of *Chrysotis* are always represented at the Zoological Gardens, and within the past week a valuable addition has been made by the purchase of a fine specimen of one of the smallest and most brilliantly coloured of the genus, the yellow-lored Amazon (*C. xantholora*), which is confined to Yucantan, Cozumel Island, and British Honduras. It belongs to a small group of some half-dozen Amazons, all of which have the forehead white, the best known being the Cuban Amazon (*C. leucocephala*). The Yellow-lored Amazon is only about 10 inches in length, green, with the feathers edged with black. The crown is white, the bill and feathers on the lores yellow, while the eyes are surrounded by a large patch of bright red, the ear coverts being black; there is also red on the wings and tail.

The first example of this rare parrot possessed by the Society was received in February, 1875, and a coloured plate of it by Mr J. Smit appeared in the *Proceedings* for that year, accompanying which was a note by Dr Sclater calling attention to its rarity.

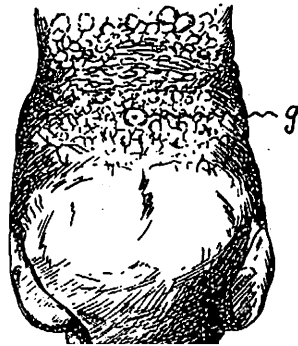
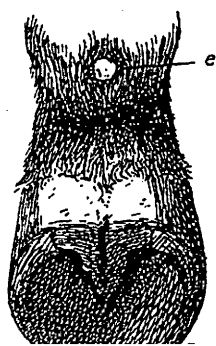
The Blue-rumped Parakeet.

"Another great rarity is the blue-rumped parakeet (*Psittinus incensus*) from the Malayan Peninsula, a pair of which has been acquired by exchange. It is the sole representative of its genus, and belongs to the short-tailed group of parakeets which have been termed parrotets by some to distinguish them from the better-known pointed-tailed parakeets. It is somewhat allied to the love birds.

These are quite young birds, of a dull green colour, with bright red under wing coverts. In the adult male the head is pale lavender blue, and the lower back and central upper tail coverts bright blue, while the female has the head reddish



Vertical section of the dissected foot gland of Indian rhinoceros. O, orifice of gland; d, duct; s, surface of the skin.



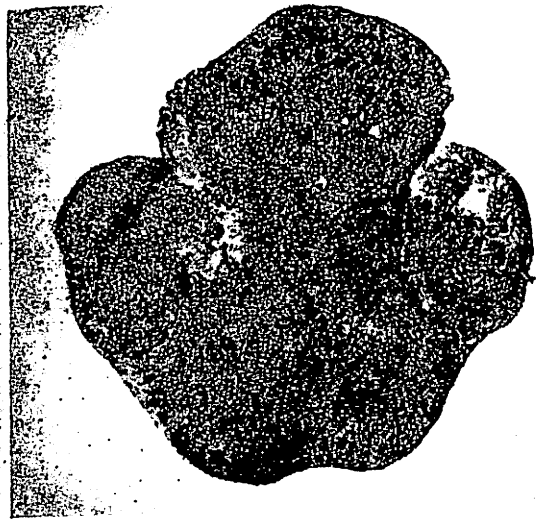
Measurements of Indian Rhinoceroses.

The dimensions of this animal after death were as follows: Length from nose to root of tail, 10ft. 6in.; greatest girth, 12ft.; height at withers, 5ft. 10in.; at ear tip, 6ft. 6in.; the height being taken between two upright broomsticks tangential to the spine and the soles of the feet. In Ward's *Records of Big Game* the

arrival, the African rhinoceros probably from being taken from her dam long before weaning, did not thrive well, and once or twice since showed signs of illness, her death was quite unexpected. Even in the month preceding the night of her death she was moving about her enclosure and feeding just as usual. She succumbed, however, to bronchopneumonia, and post-mortem examination showed several of her organs to be unhealthy, her liver in particular showing the character which has inspired the expression 'drunkard's liver' from its common ascription to alcoholism in man.

The Indian rhinoceros died of old age, and in this connection it is interesting to recall that the last example of this species that died in the Gardens from this cause was known to have been well over forty years of age. Hence, in rhinoceroses, as in man and other mammals, senile changes may prove fatal at very varying periods of the individual's life.

and the soles of the feet. In Ward's *Records of Zoo Game* the height of four specimens shot by the Maharajah of Cooh Behar, and presumably measured in the same way, are given as 6ft. 6in., 6ft. 4in., 6ft. 1in., and 6ft. 3in. Thus our specimen was somewhat below the average. But I am quite convinced he never stood that height when alive. By the scale on the central bar of his cage I formerly judged him to be roughly about 5ft. 6in., and I think the difference may be easily accounted for by the



LEFT FRONT FOOTPRINT OF AFRICAN RHINOCEROS.
× $\frac{1}{3}$ LINEAR.

"sagging" of the joints of his legs and the flattening of the soles of his feet under his great weight when standing. If this be so, it shows that post-mortem measurements of these huge beasts may give quite an exaggerated idea of their height when alive.

It was impossible to weigh him entire, but all that could be collected of his cut-up remains, including the food contents of the intestines, scaled 3612lb. avoirdupois—that is to say, nearly 1400lb. less than one that died in the Gardens in 1854, whose weight, computed in the same way, was recorded by Owen as about 5000lb. It must be remembered, however, that the animal we have just lost had eaten very little during the week preceding his death, and was considerably wasted at the time. Nevertheless, the difference is very surprising, and makes one suspect some error in the computation published by Owen. It is amusing, however, to compare the weights of these two animals with Rowland Ward's record of 1010lb., barely the weight of a carriage horse, for a living animal. Since there is no comment as to the size of the specimen in question, the compiler presumably supposed this weight to be that of an adult animal. Obviously it must have been quite young.

Some Characters of Rhinoceroses.

It is generally agreed that there are five, and only five, existing species of rhinoceroses, two, the so-called black rhinoceros (*R. bicornis*) and the white rhinoceros (*R. simus*), being confined to tropical and South Africa, and three, the so-called Indian rhinoceros (*R. unicornis*), Javan rhinoceros (*R. sondaicus*), and Sumatran rhinoceros (*R. sumatrensis*) being restricted to India and Further India. The trivial names of these species are not inappropriate. The "black" and the "white" species are not distinguishable by colour; the "Javan" species occurs in India and Malacca as well as in Java; while the "Sumatran" species ranges from Assam southwards to Sumatra and eastwards to Borneo. The scientific names are open to similar criticisms, the Javan being one-horned like the Indian (*unicornis*), and the Sumatran and white rhinoceroses having two horns like the black form (*bicornis*).

But to consider the existing rhinoceroses merely as "species" conveys no idea of their true inter-relationships. They can be

Back view of the hind hoof of a horse to show the ergot.

Back view of hind foot of Indian rhinoceros to show the excrescence with the orifice of the gland (g).

the posterior, and in both the African and Indian rhinoceroses, whose footprints I took after death, the fore feet considerably exceeded the hind feet in width, owing to the larger size of the three hoofs, the middle one of the three corresponding, of course, to the single hoof of the horse. It is the relationship known to exist on other grounds between horses and rhinoceroses that gives an interest to this fact.

In the pages of the *Field* and elsewhere I have alluded to the importance of physiological resemblances, such as are found in voice, odour, behaviour, and the like, between animals structurally akin to one another, and in connection with horses and rhinoceroses I noticed that, incredible as it may seem, the light trot and swinging canter of our apparently unwieldy Indian rhinoceros when moving round his yard irresistibly recalled the same actions in a running horse.

There is one more point. I have never seen it recorded, although it may be known to sportsmen, that the horn of a rhinoceros is not tightly fixed like the tusk of an elephant or the horn of a buffalo, but can be moved backwards and forwards to a certain extent upon its root, like a loose tooth. I noticed this in the African rhinoceros, that has just died, when it first reached the Gardens five years ago, and I verified it on the dead



CAST OF HIND FOOTPRINT OF INDIAN RHINOCEROS.

animal. That the looseness of the horn was not an individual peculiarity is shown by its occurrence also in our young living specimen from Uganda, forming part of the King's collection. In the Indian animal the horn was worn to a mere stump, giving no grip or leverage whereby its mobility could be tested.

The King's Collection of Indian Animals.

In the late spring the Zoological Society will receive from India a large and valuable consignment of animals, the gift of his Majesty King George. Two keepers will shortly be sent to Calcutta to bring home the collection which, according to

back.
In *Straw Feathers* (Vol. VI. p. 120) Mr W. Davison gives some interesting notes on this little parrot. According to him its usual note is a sharp whistle not unlike that of the glossy starling (*Calornis*), and it has also a series of pleasant warbling notes. It has, he states, a rapid flight, and is often seen in small parties flying round and round over the tops of trees, now settling for a moment, then off again, whirling round and round, apparently for fun or exercise, and all the time whistling at the top of its voice. ♀

The Abyssinian Love-bird.

There are eight species of true love birds (*Agapornis*) known to exist, all of which inhabit the Ethiopian region, but, so far as I know, only five of these have been kept in captivity. The best known is the grey-headed love bird, *Agapornis cana*, from Madagascar, while the red-faced *A. pullaria* from West Africa is almost equally common as a cage bird, and, in fact, some years ago it was imported in very large numbers. The third species, which is now a somewhat rare bird in captivity, is the peach-faced or rosy-faced love bird (*A. roseicollis*), of South Africa, a very beautiful bird, the grass-green body colour being relieved by brilliant crimson on the forehead, which shades into delicate pink on the cheeks. The black-checked love bird (*A. nigrigenis*), from Rhodesia, was only discovered so recently as 1906, but a fair number were subsequently brought alive to Europe, and it has bred so freely in captivity that at the present time it is probably the commonest of all in his country.



TRACK OF FOREFOOT OF INDIAN RHINOCEROS, × $\frac{1}{3}$ LINEAR.

Quite recently a fifth species has been imported, the Abyssinian love bird (*A. taranta*), of which a female has just been received by the society on deposit. It is the largest of the love birds, bright green in colour, with a red bill and some black on the wings. The male has the forehead bright red, an ornamentation that is wanting in the female. A coloured plate of the species appeared in the *Agricultural Magazine* for 1909, the drawing having been made from a pair belonging to Mr H. D. Astley, the female of which is the bird that has now reached the Zoological Gardens, and added one more to the long list of species in the Society's aviary." R. I. Pocock.

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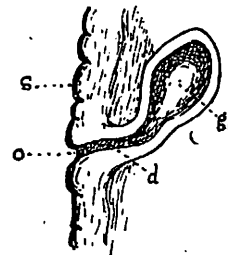
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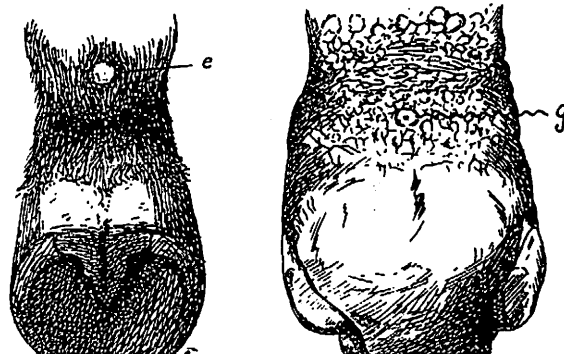
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