

view the whole way, and was rewarded for my perseverance by perceiving that he was making straight for the nullah.

When I arrived there, a most interesting sight presented itself. A small stream ran along the bottom of the nullah, which widened as it reached the middle into a broad basin. On the edge of this stood the rhinoceroses I had followed, drinking eagerly of the refreshing fluid, while by his side stood one much smaller, evidently the female, gazing upon her lord with eyes of rapt affection; and surrounding both, and gambling in sportive play, were some eight or ten young rhinoceroses.

It was a perfect picture of domestic felicity, and would have formed an admirable subject for the pencil of a Landseer or an Ansell. I looked for some moments upon the pretty group, hesitating to disturb so much happiness. But such sentimental feelings befit not the true sportsman. My project was soon formed. It was no less than this: to kill the two parents, and capture alive one or more of the young ones. I remembered to have seen, when on a visit to the English Resident at Rubbadubdub, in the Jugglepore district, a tame rhinoceros which had been taken when quite young, and had become so domesticated that the servants were accustomed to make use of it in carrying weights, such as buckets of water, coalboxes, etc., which were hung over his horn, the powerful muscles of the neck admirably fitting it to perform such work. The Resident told me himself that it saved him the labour of three servants; and while I was there it brought into the drawing-room a coal-box full of coal that must have weighed nearly two tons. In the summer-time they made it useful in digging up potatoes with its long and sharp horn.

My present position was not unattended with danger. If I merely wounded with my first shot, I should have to sustain the attack of one animal maddened with pain, and of the other infuriated by the injury done to its mate;—while if I was so fortunate as to kill with my first barrel, the chances were that I should not be equally lucky with my second. I saw with half an eye that the only plan I could pursue with safety and success would be, if possible, to wound both animals with the same shot. But there were still difficulties in the way. The hide of the rhinoceros is very thick; and even should the shell pass through two thicknesses of hide in its passage through the body of one rhinoceros, its penetrating power would probably be so much weakened, as to render the injury it might inflict on the second comparatively trivial. But again, were this not so; were the penetrating power of the projectile not to be diminished in the degree I anticipated, its peculiarly deadly effect would be felt only by the second rhinoceros, in whose body it would burst, while the first would feel merely as if an ordinary bullet had passed through it, which, unless some vital part had been pierced, would not much affect it. Revolving these considerations in my mind, I came at last to the conclusion, that if I could send a shot through the eye of the male when it was alongside of the female, it would pass through the eyes of both animals, and if it failed to kill them, would at least render them incapable of doing any mischief. I say the shot must first pierce the eyes of the male because I was on high ground, and the female being lower than the male, the downward tendency of the missile would favour its transfixing her eye as well as the male's. To ensure greater accuracy, however, I took out a pocket theodolite, which I invariably carry with me, and found, on calculating the angle which the shell's trajectory would make with a horizontal line, that, as I could not move without being discovered, the female would have to be exactly two yards and a half distant from the male, and that he would have to incline his head to her side, so as to make an angle of $20^{\circ} 27' .543''$ with a line perpendicular to the earth's parallax.* If circumstances should prove thus

* For the benefit of those who are not familiar with the more intricate processes of Mathematics, I will give a slight sketch of the means which I adopted for calculating this most important angle. Had I possessed paper, I might easily have solved the problem geometrically, by drawing a chord, besides, of course, the Harmonic pencil for this purpose. But having nothing whatever to write upon, I was obliged to have recourse to analysis. My data, besides the longitude of the Moon's descending Node, and the specific gravity of the trajectory corresponding to a value μ_{-1} of the index of refraction from myself to the rhinoceros—two quantities were, of course, from the nature of the case, known—were the following:—

(i) the value of θ in the $r + 1$ th term of the expansion of $\sin x$.

(ii) the value of π^{16-12} , calculated to $n + 1$ places of decimals.

(iii) the n th differential coefficient of friction in the plane of the paper.

With these data to assist my operations I first extracted the $(-1)^{th}$ root of the logarithm of the square of the distance, and multiplied this by the sesquiquate ratio of the power to the weight. I then observed that if I collected all the terms involving $\log \cot \beta$, the remaining terms would form a geometrical series, of which the n th term was $\sqrt{-1} \log (-2)$, and the $r + 1$ th term was $e^x \sqrt{(A+B)}$, where

$A =$ irrationality of dispersion,
 $B =$ the eccentric aberration.

Having arrived at this satisfactory result, I investigated, by means of the True Anomaly and the Hydrostatic Paradox, formulae for obtaining the n th term in the expression for the reciprocal of the Moon's radial Vector; whence, employing first approximations, and resolving forces parallel and perpendicular to the rhinoceros, I found the equation of motion to be of the form $\cot^{-1}(\sin D) = D \{ \sqrt{(2xy)} \}^{\frac{1}{2}}$, which of course I immediately recognized as the equation to Cassini's

favourable, I could certainly pierce both eyes of the male and one eye of the female, and probably seriously injure the other. To insure the perfect destruction of both her eyes, it would be necessary that she also should incline her head at the same angle as the male inclined his, and at the same time.

By a fortuitous concurrence of events, I had waited but a few minutes when the animals took up the required position, and bringing my rifle to the shoulder, I fired my right-hand barrel. To my great delight, both rhinoceroses fell at once and died without a struggle. It was touching in the extreme to witness the grief and astonishment of the orphans. With plaintive grunts they ran hither and thither, uncertain what to do or where to go, and ended by crouching close to the bodies of their deceased parents.

The difficulty now was to catch one of them alive. I took out my silk pocket-handkerchief, and managed, with the aid of my necktie, bootlaces, and watchguard, to make a pretty good substitute for a rope. But this was not sufficient. How was I to get near enough to place the extempore rope round the neck of one? The open space between me and them was so bare of vegetation, that it would be impossible for me to crawl over it, even on my hands and knees, unperceived; and the first sight they caught of me would probably send them off scampering into the impenetrable jungle. To lose the chance of catching one was not to be endured. I had indeed killed two of the finest full-grown animals that had ever fallen to the rifle of the keenest sportsman; but I remembered the old proverb, which says that a live donkey is better than a dead lion, and adapting it to the present case, I could not but admit that one young rhinoceros alive was better than two old ones dead.

While I was hesitating what to do, I called to mind the well-known influence of the human eye over the brute creation, and coupling this with the fact that I was myself a mesmerist of no mean power, I resolved to put forth all my strength of will. Why, I argued, should that mysterious influence which one man may exercise over another be confined only to the human race? Why should not man be able to render the brute as well as his fellow-man subservient to his will?

At all events I resolved to try; so fixing my eyes steadfastly upon the group of young rhinoceroses, I exerted my will to the utmost, so as, if possible, to bring them into a state of coma. I remained in this position without flinching for six hours, without producing any apparent effect, which may be partially accounted for by my being at least a mile and a-half distant from the animals. At the end of that time, however, I detected evident signs of drowsiness among the juveniles, and in a few minutes more one after another fell on its side wrapt, so far as I could judge, in deep slumber. I deemed it expedient, however, to continue operations for some time longer, before I ventured to approach them. When I did so, I discovered to my great joy, that I had succeeded beyond my most sanguine expectations. All of the ten young rhinoceroses lay inanimate, in a state of coma.

It was with mingled feelings of gratification and sorrow that I beheld this picture of still life; of gratification, when I considered that I was now so near the attainment of my dearest wishes; of sorrow, when I thought of the consternation which would seize the innocent young when they awoke from their involuntary slumber.

There was, however, no time to be lost. Already did the biggest of the ten evince signs of approaching reanimation. Hastily making a few passes to secure the immobility of my subjects, I drew out of my pocket a large gimlet, my constant companion, and taking it out of its case, bored a hole in a transverse direction through each of their horns, and inserting the rope in these, I tied the ends together, and thus made certain of my prey. But it was impossible for me to carry such a dead weight, I was obliged partially to restore animation, at the same time taking care so to maintain my power over them as to compel them to follow close at my heels. Holding the rope in one hand, I retraced my steps leading the semi-somnolent rhinoceroses, and in a few hours reached the spot where I had killed the tiger and the elephant; where I found the Major with a train of natives in a state of great anxiety as to my probable fate. He was much delighted at seeing me alive and well, and betrayed considerable astonishment when he beheld my little followers.

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grain's Telescope. Integrating, therefore, with respect to the direction-cosine of the required angle, I obtained the equation to the hyperboloid of two sheets. Neglecting powers of θ above the 27^{th} as practically useless, I differentiated the equation, and then integrated; differentiated again, and so on. I thus obtained a series of equations from which (by employing the method of Infinitesimal Parallelograms, that of Least Squares being inapplicable) the complement of the angle I was investigating became known. Having found this, I began to employ Bernoulli's numbers and the Catenary to obtain the required angle. But finding that this would be somewhat laborious, as it would involve the extraction of the n th root of infinity, and the integration of the base of an infinite cylinder, I adopted the shorter, and I fear less scientific mode of proceeding; namely, to investigate by means of Euler's Proof and the curvilinear asymptotes

of the Common Pump, the excess of $\frac{\sqrt{(-1)} \pi}{\text{vers}}$ over the angle which I had already obtained.—AUTHOR.