

thus spoiling a good stalk which promised to be successful; great care and caution are therefore absolutely necessary. Inspect frequently with telescope or field-glasses all the mountain sides, plains and large snow-fields, distant or near. Do not loiter too long near a herd if you cannot approach within shot, for fear that eddying gusts of wind may proclaim your presence, but retire to a safe distance to watch, and when you do get a chance take advantage of it in your best style, and as quickly as possible according to circumstances. Never shoot at deer lying on the ground or snow, unless close above them; it is best to wait until they rise. Be careful to calculate distances, which are most deceptive on the fjelds, especially on the snow braes. Take care before descending very steep, snowy ravines, to ascertain if the snow be hard or soft; launch a rounded boulder on the surface and watch its progress. If the snow is soft, the stone will make a small furrow and glide gradually down to the bottom, and the descent is safe, but if it descends in skips and bounds, it is too dangerous to attempt, if very steep. Be careful, if you do so, to balance yourself properly; take out your cartridges, keep the butt-end of your rifle stock in the snow to steady you and act as a brake, and look out that there is not a precipice at the bottom. Have your cartridges ready to load again quickly, in case you come suddenly on a solitary buck round a corner. Do not press a wounded buck too hard, unless you have a fast, powerful reindeer hound with you, which you can let slip, but keep him in sight and let him lie down; then stalk him *up-wind* very cautiously.

A good reindeer-dog is usually taken in harness to find the game, in which case you have two followers, the second holding the dog whilst you are stalking the quarry with the hunter, unless you prefer and are competent to stalk without him, in which case one man is sufficient. A .450 Express, with half expanding bullet, is quite large enough. A ridgepole-tent, the size according to requirements, made of strong material, with a horse-cloth inner lining, is preferable to a bell tent. The guy rope pegs should be pointed with iron, the others need not. Plenty of warm clothing is required, in the event of remaining late in the season; snow often falls heavily in August. Thick woollen gloves and scarf should be taken when hunting the higher snow fjelds.

A license is required for reindeer hunting in Norway, price 200 kroner (£11).

GERARD FERRAND.

RHINOCEROS—SOUTH AFRICA—

Habitat—From twelve to sixteen years ago, both species of rhinoceros were common in the country lying between the foothills of the Drakensberg Range in the Eastern Transvaal

and the Libombo Mountains. The range of the **Black** or prehensile-lipped species extended throughout the Drakensberg foothills, the dense thorn thickets between the Oliphants, Letaba, and Limpopo, and the Sabi and Crocodile Rivers. At the present day, a few only linger in the Matamiri Bush near the Sabi Poort in the Libombo Range, and in the dense forests on the eastern slopes of the Libombo in the neighbourhood of the Singwetsi River.

The now almost extinct square-mouthed species, erroneously termed "**White**," was common enough in the open bush country along the courses of the Malumbakwane and other south-easterly flowing tributaries of the Crocodile River, and in the neighbourhood of the Sabi, but, since 1885, the writer has heard of no authenticated instance of its having been seen at all in those parts. A few specimens of the "white" variety undoubtedly roamed also about the slopes of the Libombo, for in 1893 I found two skulls of these animals near the Rooi Rand.

I have reason to believe that there are three "white" rhinoceroses still living in the Matamiri Bush, to the east of the Matawamba; and these creatures would appear to have thoroughly adapted themselves to their circumstances, and, fearing molestation in the open country, to have taken refuge in the dense thickets, where, amongst the occasional grass-covered clearings, one can suppose they eke out a bare subsistence. In 1893 I came across a cow and calf high up on the Matawamba, and notified the Transvaal Government of the fact, and, although no steps were taken to prevent their being shot either by the swarms of Portuguese Kaffirs who hunt there throughout the year, or by the gangs of impala-slayers which visit that district in the dry season, yet I again saw their spoor—that of a big bull and cow—so lately as May of 1897.

Shooting—The rhinoceros is perhaps the most easily killed of all great game. A bullet from an ordinary "sporting Martini" will drop them instantly either with the neck or head shot. In the former case, the spot to be aimed for is about halfway along and five inches above an imaginary line drawn along the middle of the neck from head to shoulder, while for the head shot the bullet must enter about three inches in front of the base of the ear. The latter is a certainty if the beast is standing motionless, but they frequently shift their heads about uneasily, which makes the shot difficult. The shoulder shot should not be attempted, unless one is carrying a large bore rifle. The beast succumbs quickly if shot through both lungs; if through one, it will often spin rapidly round, kicking up the hind legs, uttering loud vicious snorts, and generally behaving in a manner which is very trying to the nerves of a tiro. In fact, though I do not believe the rhinoceros to be as danger-

ous a beast as he is often depicted, yet his behaviour on most occasions when wounded, his blind furious charges, and loud snorts are likely to cause considerable embarrassment to any one whose acquaintance with these animals is small. If shot through one lung only, a rhinoceros of either species will travel till Doomsday, even though throwing blood copiously from mouth and nose; indeed, it is almost as unsatisfactory work as following up a wounded elephant when once he has got clear away.

Stalking—I do not consider the rhinoceros at all an easy beast to stalk, for it is almost invariably accompanied by "rhinoceros-birds" which follow it for the sake of the parasites which infest its hide, and give immediate warning of the sportsman's approach. When unaccompanied thus, however, the rhinoceros is a piggishly stupid beast, of very small intelligence, and will permit of a very near approach,—up-wind, of course, for if the attempt were made down-wind he would be away before one was within half a mile of him, so extraordinary is his sense of smell. When roused by the rhinoceros-birds, he jumps up and makes off at once, up-wind, without asking questions; when alarmed or wounded, he often starts off down-wind, but very soon comes round into the wind again, and so continues.

Habits—Rhinoceroses drink about an hour after sundown, often going and returning great distances; they seldom feed anywhere near their drinking places, but strike a bee-line through the forest for several miles before commencing. They then feed throughout the night, making their way again at earliest dawn to the water, where they drink and wallow, and afterwards retire to their mid-day retreat, so that they are seldom to be found moving about after 10 A.M. During the rains, however, the animals have been seen by the writer feeding at mid-day.

The dung of the prehensile-lipped rhinoceros is dark red-brown in colour, full of small chips of wood, sometimes taking a greenish tinge from the young sprouts upon which the beast has fed; it is deposited in a heap under a tree or in a hollow scooped out by the beast's horn and nose. These heaps are visited regularly on subsequent occasions, and the rhinoceros scatters the dung about in all directions, ploughing up great furrows in the ground with its horn. Similar furrows, semicircular in shape and on alternate sides, are often made by them as they walk along through the bush, the anterior portion of the horn frequently being thus much worn down. When disturbed, they move away at a slinging trot, but if alarmed suddenly, or closely pursued, they break into a quick gallop, a pace which in rough country gives a horse all he can do to hold his own, and which the rhinoceros can keep up for a great distance. They are extremely active beasts in rough hill country,

clambering up and down the most precipitous places as expeditiously as elephants.

I have had some exciting experiences from time to time with these beasts, and, in proof of the contention that, though usually easily killed, the black rhinoceros often proves a very tough customer, only last year I wounded a big bull and followed it up, knocking it over in its charge with the right barrel of a double 12-bore rifle; it regained its feet, and again fell to the left barrel,—then, once more recovering itself, it charged down on the writer, who, with an empty rifle, had to make a bolt for it, and only escaped annihilation by running round a friendly boulder.

The so-called **White** rhinoceros is as easily killed as his smaller brother; but, though often spoken of as an inoffensive beast, is quite as prone to charge. In 1884 my friend, the late Mr. J. W. Glynn, was most determinedly charged by a cow in the Matamiri bush. It was wounded, and had retreated to a dense thicket with its calf, where my friend found himself entangled in the terrible "wait-a-bit" thorns, with a jammed cartridge in the breech of his rifle.

It is somewhat difficult to understand how this beast—which is of a dull brown-black colour, exactly similar to the black rhinoceros—ever came to be called "white," unless it was owing to the poverty of the Boer vocabulary (for the name has been adopted from the Boer "witrhenoster"), or because it was first seen after emerging from its mud bath. The square-mouthed rhinoceros is essentially a grass-feeder, hence its range is far more limited than that of the black, which finds subsistence over a vast extent of rough hill country covered with thorny bush, but where no grass is found.

In appearance, the square-mouthed rhinoceros is a far more ungainly beast than his congener. His bulk is enormous, and the huge head seems altogether out of proportion, and he has been known to attain a height of 6 feet 3 inches at the shoulder. His spoor is considerably larger than that of the black rhinoceros; that of the fore-foot of a bull of the latter, in damp sand, measures about 27 inches in circumference, while that of the white rhinoceros is 36 inches; and the difference in size between the spoor of the front and hind feet of the white rhinoceros is considerably less than between those of the black, while the hind feet leave a rounder spoor than those of the latter, which tend to an oval. Its habits are in many respects very similar to those of the black species; it feeds in the evening after visiting the water, and throughout the night and early morning, drinking again before lying up for the day. Its sight is equally dull, and its senses of hearing and smell as singularly acute. But it moves more sluggishly, and lacks the quick, nervous actions of the other. When alarmed, however, it can get away with surprising speed, at a swift trot, and only breaks into a

gallop if closely pursued. It is said that the white rhinoceros cannot travel with a broken hind leg, and this may be the case, but the writer has seen a black rhinoceros cow, with her leg broken above the knee, go at a pace that kept himself and his gun-carrier at a sharp run for over a mile to keep up with her; both beasts, however, will travel for over two miles without a halt with a broken shoulder. They are difficult to stop when charging, for, owing to the shortness of their legs, there is little chance of putting a bullet into the chest, especially if the grass is at all long. In the case of the white rhinoceros, the spine can be reached at the junction of the neck and shoulder, as he carries his head very low; but the black holds it high and jauntily. The square-mouthed species does not scatter its dung about, as is the custom of the prehensile-lipped, nor does it frequently revisit



G. S. Gilchrist 1897

WHITE RHINOCEROS.

Measurements—Av. height at shoulder, 66 in.; av. front horn meas., 36 in.; max. front horn meas., 56½ in.

these spots. It falls quickly to a bullet through the heart or both lungs, usually falling on its side, and not on its knees, as the other rhinoceros almost invariably does. The shot for the neck should be about 3 or 4 inches lower than in the case of the black rhinoceros.

Weapon and Ammunition—I have found a Metford rifle of .461 bore, carrying a 540 or 570 gr. hardened projectile, excellent for the rhinoceros, but these beasts take a lot of stopping at times, so that, although this is a perfect weapon for a head or neck shot when the beast is quiescent, something heavier is required for a quickly moving or especially a charging beast. I consider a good 12-bore double rifle, with 6 or 7 drams of powder and a hardened conical projectile of 2¼ oz., quite heavy enough to account for any rhinoceros, and have done my best work with this handy weapon.

By far the most certain method of bagging

rhinoceroses, and a much more sportsman-like and satisfactory one than watching for their return to their drinking places, is to be up at dawn, and walk up-wind along the course of any river at which they are accustomed to drink, and about a mile from it; water must be carried, and as soon as the spoor is cut the beast can be followed up. Even if disturbed once or twice, he will not go more than about two miles before halting again, when he will usually offer a broadside shot; but, if hunted about much, he is apt to become very petulant. If, on following a beast up, it is found that he has retreated into long grass or reeds, the hunter should post himself near the spot at which the rhinoceros entered the cover, a little to one side, and of course below wind, while the native attendants can be sent round in a wide circle above wind. The rhinoceros will soon move, and though there is a chance of his charging up-wind, he is far more likely to make his way out of the cover at the spot where he entered it, giving the hunter an easy shot. If possible, the latter should reserve his fire till the rhinoceros is broadside or a little past him. If the rhinoceros runs dead away from the rifle, unless the weapon be a heavy one, it is best to let him go, and follow up again leisurely, when he will surely be found again inside of two miles, probably halting under a tree, listening intently, and standing broadside at right angles to his spoor.

F. VAUGHAN KIRBY.

SOMALILAND—The common two-horned "black" rhinoceros (*R. bicornis*), which is very widely distributed over Africa, and seems to be in no immediate danger of becoming extinct, exists in moderate numbers, though nowhere so plentifully as in Equatorial Africa, in suitable country in parts of the Somali plateau, in the bush-covered wilderness of Ogaden, on the Webbe Shabeyli river, and in the Galla country beyond. So far, however, as the hinterland of the North Somali Coast has been up to the present explored, it has not been found to exist much nearer to the sea than a hundred and fifty to two hundred miles. Rhinoceroses may come nearer to the coast in the country to the east towards Cape Guardafui, but that portion of the horn of Africa has yet to be opened up.

This animal, although morose in disposition and sometimes capable of charging without provocation, to the confusion of caravans, when its hiding place is incautiously approached, does not seem to be gifted with great intelligence; having poor eye-sight, though keen powers of scent, it is not a difficult animal for the hunter to work up to if the wind is right. But in the course of a long hunt this condition of success cannot always be secured, and when the tracks lead down wind it is a very common experience to put up the same animal two or three times