

the throne. The older race, I was told, had *voluntarily* made over the kingdom to the "strangers." Anyhow, this quaternary system works well for the Asadu (of the older race), for he always enjoys the same level of power, whereas, according to his remote predecessor's clever policy, the power of the "strangers" rests always in their *minority*, and the four branches are ever mutually jealous.

My article contains a list of fifteen Atas, ending with Osejji¹ Onapa, whose "coronation"—a most thrilling pageant, finer even than his predecessor's weird midnight burial—I attended in February, 1902. The frontispiece shows him sitting outside his dilapidated palace, surrounded by his court. In the dexter corner, wearing a white turban, is his sister Akwina, an aged dame who, but for their Salic law, would have been Ata. On Osejji's left sits Ogbi, the huge head-eunuch, who thanked me for saving him from being sacrificed at Ata Am Aga's funeral. Osejji Onapa has since been gathered to his fathers, but without the hereditary pomp of an Ata.

C. PARTRIDGE.

¹ [Is this the same as the "Ata Amocheji" mentioned by Captain Byng-Hall (see p. 13, *infra*)? "Am(a)" would seem to be a title.—ED.]

ALEXANDER, B.
and others

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MR. SELOUS' LATEST WORK

I DO not think that I have ever read a more interesting record of a big-game hunter's experience and observations than this book.¹ It is freshly and simply written and contains the careful observations of many years.

The first two chapters are perhaps the most important, dealing as they do with the theories of protective coloration. Mr. Selous suggests that in addition to the three influences recognised by Darwin and Wallace—sexual selection, the necessity for protection, and (in the case of the carnivora), the need for approaching their prey unobserved—another cause has been at work in determining the coloration of animals—the influence of environment which, he maintains, plays a greater part than does the necessity for protection.

In support of this, Mr. Selous points out that no two countries could be more alike than the open karroos of Cape Colony and the plains in British East Africa. The former country was inhabited by the extinct zebra, *Equus Quagga*—a dull-coloured animal that harmonised extraordinarily well with its surroundings. On the other hand, its close congener, *Equus granti*, on the plains of East Africa, is brilliantly marked with jet black stripes on a pure white ground.

"When in East Africa, a few years ago, I took special note of the appearance of zebras at different distances on the open plains. . . . I found that in the bright African sunlight I could see with the naked eye the black and white striping of their coats—up to a distance of about 400 yards. . . . But at whatever distance they happened to be on the open plain between myself and the horizon, their forms showed up quite as distinctly as those of a herd of cattle or horses."

In both countries these two species of zebras have been hunted by lions and leopards from time immemorial and under precisely similar conditions, and yet, as Mr. Selous

¹ *African Nature Notes and Reminiscences*. By Frederick Courteney Selous, F.R.G.S., F.Z.S. (London: Macmillan & Co.)

No 1412

points out, each has developed a very different scheme of coloration, a scheme which, in his opinion, could only have been brought about by an influence of environment.

The same condition of things may be observed in the Giraffidæ. Both the northern and southern races of the giraffe (*G. camelopardalis*) harmonise well with their surroundings. On the other hand, the Somali giraffe (*G. reticulata*) is a most conspicuous object. Colonel Harrison, quoted by the author, says: "These handsome coloured giraffes are very striking when seen standing in the sun. Of a rich bright chestnut colour, with pure white rings, they stand out splendidly as compared with the dull grey colouring of the more southern giraffe." Remembering the fact that all giraffes are but little persecuted by lions and leopards, Mr. Selous finds himself forced to the conclusion that "there is a strong argument in favour of there being a law which, working through the ages, tends to bring the colours of all organic beings into harmony with their surroundings, irrespective of any special benefit they may receive in the way of protection from enemies by such harmonious coloration."

Now this contention is well stated, and Mr. Selous has certainly shown that the Darwin-Wallace explanations fail to cover the whole of the facts, but when he concludes that there is a law at work bringing the colour of all organic beings into harmony with their surroundings, irrespective of any special benefit they may receive, it makes us pause—for, surely this strikes at the very root of Darwin's law! If Mr. Selous' contention holds good surely animals do not need the power of carrying out the process by their own exertions, *i.e.*, race consciousness, for, according to his law, all living organisms must come under the influence of their environment. But why do we find exceptions such as the Musk Ox in its arctic surroundings, the African buffalo, and the bee-eaters—to mention a few of the many examples that come to mind? I would submit that these are difficult to reconcile with Mr. Selous' theory, while they form reasonable exceptions to Darwin's rule.

I might here suggest that in many cases, where protection from the persecution of other animals does not offer a good reason for the coloration of certain species, another cause has

been at work, which is not incompatible with the theory of Protective Colouring—I mean the necessity for animals to protect themselves against heat and cold.

In the case of the bee-eaters, both sexes are alike in their brilliant colouring, which therefore cannot have anything to do with sexual selection, so we must seek another cause. It seems to me more reasonable to suppose that as the females of these birds nest in deep holes, they have no necessity to put on protective colouring. In the case of arctic animals surely the fact that they can change from dark to light and back in a season shows that the agency at work is not the surroundings in themselves, but the compelling necessity of protection against cold, for it is well known that a white covering prevents the radiation of the body heat. Otherwise, why should the Musk Ox be an exception to the rule of harmonious colouring? Is it not more likely that this animal, owing to its peculiar vigour, is not stimulated into precautionary measures against the severity of the climate?

Mr. Selous wonders why, if there is any help in protective colouring, the conspicuous Cape Buffalo, a most persecuted animal, has not taken advantage of it. My theory is that the race instinct for preservation is bound to be very much less strong in herding animals; besides, as they move in large numbers, the advantage of protective colouring is greatly lessened, and as it is more frequently the sickly animals that are brought down by lions the well-being of the herd is not affected to any appreciable extent.

Some objectors to the theory of protective colouring ask pertinently why the animals which are the most perfect examples of assimilative colouring are rarer than those which do not show such decided similarity with their surroundings. My answer is that the greater the struggle for existence, the more highly have their powers of self-preservation been developed. For instance, the okapi is one of the most perfect examples of an animal adapted to its needs. From its remarkably timid nature it is difficult to believe that this animal, which lacks the means of self-defence, has not at some time or other had to struggle hard for survival.

In the cases of the Quagga, East African zebra and giraffe,

which Mr. Selous regards as irreconcilable with the theory of protective colouring, we might perhaps look to climatic conditions for the cause. It is generally agreed that the ancestors of *Equus Quagga* were boldly and brilliantly marked. Now, an animal of neutral colour is affected less by heat than any other, and so we find that the conditions of the climate have made the Quagga adapt itself more and more to the arid and sun-scorched plains of Cape Colony. And, doubtless, it is not unreasonable to suppose that in time to come the descendants of the East African zebra will do the same, and that the striped markings of this zebra already point to a breaking up of a more brilliant colouring. But it would probably never reach the same pale shade as the Quagga, since the plains in East Africa being surrounded by well-wooded hills, the rainfall is heavy and consequently there is more relief from the sun.

Against the theory that carnivora take on the colour of their surroundings in order to approach their prey, Mr. Selous marshals a number of instances based on actual experience, and writes: "Nothing is more certain than that all carnivorous animals hunt almost entirely by scent until they have closely approached their quarry, and usually by night, when all the animals on which they prey must look very much alike as far as colour is concerned."

To my mind, this is not altogether satisfactory, and I would submit the example of the cat, which, cut off by domestication from developing its instincts, must surely, when they have play, exhibit them in a more original form than the lion and leopard, which have adapted their natures to changing circumstances. The leopard's extraordinary similarity to its surroundings seems so reasonable when we compare its crouching, pouncing instincts with the methods of the cat. And surely if the Felidæ had always depended on scent and the cover of night for their livelihood we should find their vision more adapted to the darkness, but I do not think it can be contradicted that they see equally well by day.

Mr. Selous gives a remarkable instance of lions lying in wait for some approaching cattle (p. 70) as an extraordinary case, but though it may have been exceptional in the hunter's experience, I cannot think it was exceptional to the lions, for

it is inconceivable that animals should suddenly use a method unpractised before by themselves or their ancestors.

On page 8 the author cites the butterfly, *Precis artaxia* (a wonderful species which exactly resembles a fallen leaf), in support of his argument, because, as he says, although "upon hundreds of different occasions I have ridden and walked through forests where *Precis artaxia* was numerous . . . never once did I see a bird attempting to catch one of them." Surely this argument cuts both ways? A little further on he says, "I have never once seen a bird feeding on butterflies in Africa." Now this is contrary to my own experience, for on many occasions I have killed bee-eaters and flycatchers (*Alseonax*) with their mouths so stuffed with butterflies that it was a wonder to me that they had not choked..

One cannot read these two chapters without feeling that the author has in certain cases upset the explanations that former naturalists have given for the various colouring in animals, but when he advances a theory that disclaims on the part of the animals all responsibility for these changes, I do not find myself in accord, for I cannot believe in the face of the many examples that Nature affords that an animal will change its character to suit the surroundings, unless it is a necessity to its existence to do so.

The pages that immediately follow these two chapters are full of interest. Perhaps no more complete life history of the lion has ever been written. Mr. Selous has the good fortune to have lived in those golden days when South Africa teemed with big game on whose track followed troops of lions and other carnivora. What hunter would not give his eyes to witness the following:—

"I once saw a lion chasing four Koodoos in broad daylight, though on a cold, cloudy morning. It was galloping after them flat along the ground as hard as it could go and looked like an enormous mastiff, especially as though a male it had but little mane."

It was a common thing in those days, as he describes, to have one's camp attacked at night by five or more hungry lions—a follower carried off, and then to find in the vicinity of the camp the next morning nothing left but his head.

"How often has not the single word 'Sumba' . . . when whispered or screamed in the darkness of the night in a native village or encampment brought terror to the hearts of dark-skinned men and women."

The stories of man-eaters that the writer has to tell are indeed tragic and terrible—of the dragging away of men from the camp fires into the darkness to a cruel death. At other times he has listened to the long-drawn bellowing of buffaloes being mauled to death. On one occasion he saw a lion and two lionesses lying in wait for some of his cattle which were feeding towards them.

The lengths to which a hungry man-eater will go to secure its victim seem hardly credible. For sheer boldness and audacity the following instance would be hard to beat.

"In April, 1878, a lion entered a small Banyai village in Northern Matabeleland, and not being able to make its way into any of the huts, all of which had been very carefully barricaded, climbed on the roof of one of them, and, tearing away the grass thatching, forced its way in from the top. There were three or four women inside the hut, and it killed them all, but having gorged itself was apparently unable to make its escape through the roof again, and was speared to death by the men of the village the next morning."

All the lion stories are graphically told—especially the one where poor "Ponto," a pointer dog, was seized and eaten by a man-eater. Although these stories are tragic enough, yet the writer has not told them for the mere love of sensation. Each incident brings out some trait in the character of the lion, illustrating amongst other things its method of approaching a camp, its various ways of killing game, its mode of eating the victims, and again its great strength. It is not difficult even for the casual reader to discern in these modestly written pages the extreme risks which the writer has run. On one occasion he describes how he found himself face to face with four male lions, one of which had been previously wounded.

"They all stood fairly facing me . . . their fierce, yellow eyes gleaming, and their ears laid flat like the ears of an angry cat or leopard. All the time they kept up a constant succession of loud, rumbling growls, and flicked their tails continually from side to side, throwing them suddenly into the air before charging with louder, hoarser growls . . . two of them charged before I fired at them, and the other two I fired at and killed before they could make up their minds to charge."

On the distribution of the lion, Mr. Selous makes some interesting observations, and I agree with him that it is difficult to accept the theory that the black-maned and the tawny-maned specimens belong to distinct local races—for he has

killed both in the same area of country in South Africa. Whether in the case of birds or of beasts, it is an accepted fact that local races of a species to be distinct must have a separate geographical distribution.¹

Mr. Selous also points out that between these so-called varieties of the lion every possible intermediate type may be found. He believes that the influence of climate may explain why the mane is so well developed in some and not in others. It has been his wide experience to find that lions with really fine manes are never found except in the elevated regions of Africa, such as the Athi plains and the Haud of Somaliland, where the nights are cold during the winter months.

It seems tolerably certain that the lion was first evolved in a cold climate—in the woods and plains of Western Europe—and gradually in course of ages spread south into Africa before the two continents were separated by the sea.

Most of us will be surprised to find that the hyæna is not the cowardly animal we have hitherto supposed. The writer compares it with the wolf of North America in its dangerous and destructive character. It will often kill full-grown cows and donkeys, and so powerful are its jaws that it can break the leg-bones of buffaloes and giraffes.

Mr. Selous gives some interesting notes on the cheetah, but it is disappointing to find that he has nothing to say about its close congener, the leopard. Although so well distributed throughout Africa, less has been written, I believe, on this animal than on any other. On our journey through Africa only once did I come across one of these animals in the bush, though occasionally we had evidences of their being killed by natives in the villages at night. In our collections every species of big game to be found in the countries traversed was represented with the sole exception of the leopard. Apparently, he kills his victim in much the same way as the lion, attacking it either in the head or neck. I remember on one occasion at a small village we stopped at, on the Welle, a leopard took a native as he was about to crawl into his hut for the night. He attacked and bit him in the neck, killing him instantly.

¹ A sub-species of a species is never found living side by side with it in the same locality.

Mr. Selous is one of the few big-game hunters now living who can conjure up to our minds the plains of South Africa as they were in the early seventies when game was plentiful. It must have been a wonderful sight.

"Below us, as far as one could see down the valley, the open ground became presently alive with game. One after another great herds of buffaloes emerged from the forest on either side of the valley and fed slowly down to the water. One of these herds was preceded by about fifty zebras and another by a large herd of sable antelope . . . whilst rhinoceroses, both of the black and white species, were scattered amongst the other game . . . all down the valley. . . . It is sad to think that of all those buffaloes and rhinoceroses I saw on that October evening, less than five-and-thirty years ago, not one single one nor any of their descendants are left alive to-day."

Hunters, both black and white, were the first to commence their destruction, and then came the rinderpest in 1896 to complete the work. That two such interesting and unique animals should have been swept off the face of the land is deplorable enough, but the way in which it has been brought about forms an ugly blot in the annals of big-game hunting.

I hold Mr. Selous' opinion that the rhinoceros is not the dangerous animal to warrant such wholesale destruction, and the fact that thousands of these animals have been destroyed with impunity by hunters speaks for itself.

When on the subject of the buffalo, the writer has much to say about the tsetse-fly (*Glossina morsitans*), and dates the disappearance of the *nagana* disease in South Africa from the time when the buffalo practically ceased to exist in that country. In support of this the writer gives many instances which it would be unreasonable to regard as mere coincidence. Besides, it would be difficult to overthrow this theory in the face of the discovery made by Colonel Bruce in 1895 that the cause of the disease known as *nagana*, which is fatal to all domesticated animals, is a trypanosome (*T. brucei*) carried by the bite of the tsetse-fly from the blood of wild game, such as buffalo and antelope, themselves immune from the parasite.

One of the most remarkable facts about the "fly-belts" is their local distribution. The "fly" is seldom found far away from the forest tracts which usually line the banks of

African rivers. Dr. Livingstone in 1853 found the south bank of the Chobi swarming with tsetse-flies, but his oxen were perfectly safe on the northern bank, which was open grassland. Now buffalo frequent the vicinity of rivers more than any other game, and all flies are more attracted to animals of the bovine race; therefore it is conceivable that this attraction has gradually developed till the existence of the tsetse became more dependent on the buffalo than on the antelope, which is an altogether cleaner animal and inhabits the open country rather than the neighbourhood of rivers.

In the case of the fly *Glossina palpalis*, which carries the germs of sleeping sickness, it is invariably the dirtiest natives who are attacked by it, and I venture to think that if the natives in the infected areas could be made to keep cleaner it would go a long way towards stamping out the disease. This chapter on the tsetse-fly and buffalo is extremely interesting and well worthy of serious consideration.

It is pleasant to read that in the writer's opinion the giraffe is not in any danger of extermination. There is not a doubt at the present time that the arch-enemy of this animal is the native with the firearm, and therefore we would do well to control the use of the gun when in the hands of the native. It is somewhat difficult to arrive at the exact extent of the distribution of the giraffe in Northern Africa, where many regions, such as Wadai and Darfur are still unknown to the white man. In the Shari region it is fairly plentiful, especially in the dry season, when I have often met with troops near the river, but as soon as the first rains had fallen and the inland pools were filled they disappeared into the interior. This may have been exceptional, since it certainly does not agree with the general belief that the giraffe can go months without drinking. In support of this the writer suggests that wild melons and tubers containing water enable the giraffe to be independent of drinking. This seems very likely when one remembers that in captivity giraffes thrive on mangolds and other roots.

A hunter who wishes to know all about that rare antelope, the inyala (*Tragelaphus angasi*) should read the two chapters describing the journey into Amatongaland in search of it.

which resulted in the "bagging" of a fine pair, now in the collection at the Natural History Museum.

The remaining chapters of the book are devoted to curious hunting experiences, with the exception of the closing one, which contains some interesting observations on the Masarwa Bushmen of South Africa. The author gives us an insight into the life of these curious primitive people, and though they are rude and uncultured, they are not, in his opinion, degraded savages lacking all moral codes and organisation. This testimony is borne out by Dr. Passarge in his "Die Buschmänner der Kalahari," lately published, and anyone wishing to obtain further enlightenment on these aborigines would do well to read that interesting monograph.

As a rule, hunting stories suffer from a peculiar sameness and are inclined to become tedious. But for a hunter like Mr. Selous, who has killed his thirty-one lions, to say nothing of other big game, it must be comparatively easy to select from his abundant store of experiences some first-rate stories, and he has done so. In reading them one gasps in amazement at his cool daring. Whether he is chasing lions on horseback or lions are chasing him, it is all the same to him. On one occasion, when face to face with a lion, his rifle refused to go off, and his mortification getting the better of his discretion, he caught his useless weapon by the barrel with both hands and threw it at the lion. "It clattered down amongst the stones close to him, causing him to throw up his tail with a loud purr and disappear into the long grass."

This book not only gives us many valuable additions to our knowledge of the life histories of African mammals, but in reading it we are reminded of the debt we owe the writer for having enriched our National Museum with so many incomparable specimens, witnesses which must recall to him many days of hard work and dangers run. And what hardships these must have been! One recalls that terrible march of over one hundred miles through the waterless desert of the Kalahari, when the tongues of the natives lolled out of their mouths from thirst and the oxen were almost at the point of death. It is a brave book, and reading it no traveller or hunter will fail to feel grateful to the author.

BOYD ALEXANDER.

NOTES ON THE BASSA KOMO TRIBE

1. THIS tribe originally occupied the territory to the North and West of Rumasha in the Nassarawa Province, and a small portion of the tribe is still in that part. When the Nupe raiders, about 40 years ago, entered Nassarawa, the greater portion of the Bassa Komos crossed the river Benue at Ogba, and, through the Akuba (their King), sent to the Ata of Idah for permission to settle on the south bank of the river. This permission was given by the Ata Amocheji of Idah, and the Bassa Komos occupied Oguma and the territory East and West of it for about 15 miles. Owing to the large increase in their numbers, by the addition of further detachments of refugees from Nupe raiders, together with their great agricultural instincts, they gradually spread over the limits granted them, and became a menace to the Okpotos. Ata Amocheji eventually ordered the Onifi of Iga to drive them out of the country so occupied, and, if possible, to force them back to the north bank of the Benue. The Bassa Komos were thus placed between two foes; the Nupes on the North, and the Okpotos on the South. The Akuba decided to fight the Okpotos, and, sending out all his men in detachments under various leaders, succeeded in driving the Okpotos out of much territory and several towns. This war lasted for nearly six months, when the Okpotos retired, leaving the Bassa Komos with a large strip of land, extending from Amara to Mozum on the Benue, and for about 15 miles inland. During this war the Igbira tribe who were a riverside people, and belonged to the north bank, had crossed over and established themselves also on the south bank, and have since been gradually moving inland amongst the Bassa Komo towns. After the war with the Okpotos the Bassa Komos having conquered the country threw off their allegiance to the Ata of Idah.

2. *Reigning Chiefs*.—The Akuba, who is a paramount chief, the Shashama and the Arashamashe. The two latter