

THE ZOOLOGICAL GARDENS.

BY THE REV. J. G. WOOD, M.A., F.L.S.

THE CAT TRIBE.

THE large and important group of animals which now come before our notice are proverbial for the exceeding beauty of their form, and the never-failing grace of their action.

Whether we look at the stately and majestic lion, with his grand mass of tawny mane and tufted limbs; whether at the tiger, with its smooth, sleek fur and waving stripes; whether at the leopard, with its richly-spotted hide, or at the tiger-cat, its miniature, or even at our own domestic cat, we find that this one attribute of gracefulness is common to them all, however diverse their shape and colour. None of the *Felidæ* can be ungraceful, whatever position they may assume, and whether they haunt the desert, the jungle, the tree, or the hearth, they display in every movement an unconscious grace that baffles the pencil of the most accomplished draughtsman.

Watch the lion as he stalks about his narrow den, with his noiseless step and tossing mane, ever and anon raising his mighty voice in deep thunder notes that cause the whole building to shake and ring. Look at the tiger as it restlessly paces its wooden floor, impatient of restraint and glaring impotently into the open space beyond, and see how the striped and glossy skin slips backwards and forwards as the creature walks, how the shoulder-blades play at every step, and how the whole being is instinct with life and latent power. Or watch the leopards as they leap about their den in all the exuberance of their mercurial temperament, and see how essentially they are creatures of grace and beauty.

The leading characteristics by which the *Felidæ* are distinguished are few and easily detected, and may be seen to perfection in our domestic cat. Examine the teeth of a cat, and you see those of a lion, or tiger, or leopard; and the same may be said of its feet. All the *Felidæ* use their feet for the capture of their prey, and are thus distinguished from the dog tribe, which as invariably use the teeth. A lion or cat strikes with its paws, a dog snaps with its teeth, and never do we find that this rule is violated. The cat certainly uses her teeth when she wishes to tear up and devour her prey, but in catching it she invariably employs her paws. The whole structure of the limbs is different, so that the dog is not only unwilling, but positively unable, to strike a blow with his paws.

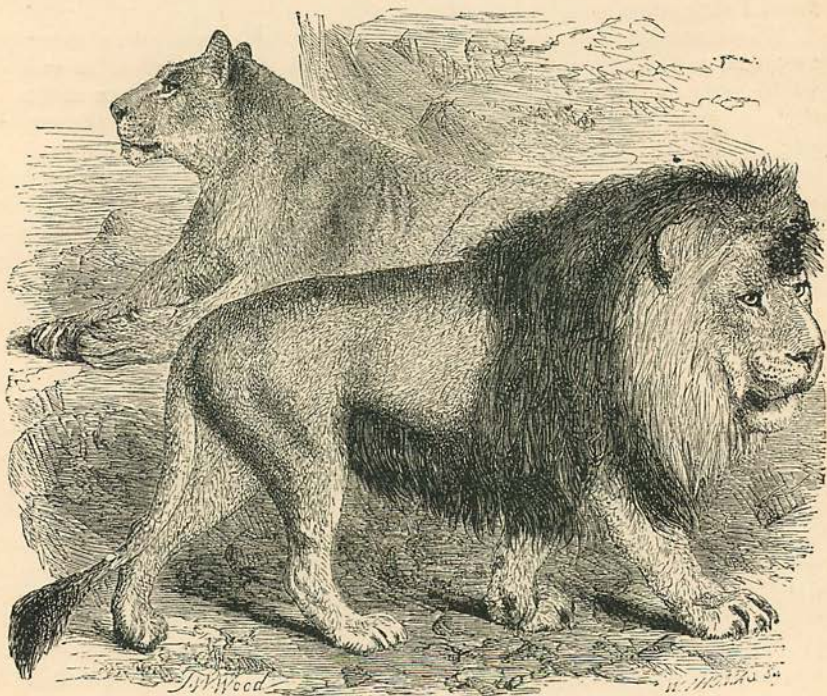
If possible, the reader should examine the limbs of a dead cat, and see how beautifully the claws of the fore feet are retracted into their sockets when the animal places its limbs in the walking attitude. When he has studied this part of the anatomy, he should strip off the skin, and notice the position of the claw, and the effective but simple arrangement of the tendons by which this end is achieved. The best plan of exhibiting the difference of the structure is by making skeleton preparations of the paws of a dog and a cat, taking care to retain the tendons in their places.

There are few animals respecting which there have been more contradictory

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accounts than the LION (*Leo barbarus*). Imagination, rather than fact, has so frequently been the source from which certain authors have drawn their inspiration, that a feeling of mistrust is always felt respecting any accounts of the Lion; and when we find that travellers who have undoubtedly had personal experience of the animal express contradictory opinions of it, we scarcely know how to reconcile such discrepant histories.

On reading the various accounts of the Lion, we sometimes wonder whether the authors are writing of the same animal, so radical are the differences in their



THE African Lion at the "Gardens."

statements. According to some writers the Lion is a magnificent and lordly animal, stalking majestically over the soil, which he feels to be his own, an acknowledged king among beasts, and terror of mankind.

He is represented as possessed of a chivalrous courage which urges him to attack the strong and spare the weak, to leap upon and kill the armed man, but to draw aside from the unarmed who asks his mercy. He will eat nothing which he has not killed, and, after satisfying his own appetite and that of his family, turns the rest of the prey over to the obsequious jackals by whom it was pointed out. In short, all the qualities which characterise the knight of ancient romance were attributed to the Lion, who was held up to admiration as a quadrupedal Bayard, *sans peur et sans reproche*.

Other writers take just the opposite view of the case, and can hardly speak

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badly enough of the animal, which they assert to be a sneaking, cowardly, and gluttonous beast, without a single good quality to redeem his character. See, for example, the account given of it by Dr. Livingstone, who is likely to know something about the animal in a state of freedom, having frequently met with it, and been once attacked, knocked down, bitten, and his arm broken by an angry Lion. Yet, though he experienced such forcible proofs of its strength and ferocity, he totally denies its majestic presence, and expresses considerable doubts of its courage. The false bravery of rage, hunger, or despair he grants to the animal, but flatly denies the existence of the many noble qualities which have been attributed to it.

How are we to reconcile these opposite statements? Perhaps we need not reconcile them at all, nor fancy that one set of writers have invented "travellers' tales," and that the other set have told the truth. Each may have told the exact truth of the animal, but have seen it under different aspects and in different conditions. A hungry Lion, for example, behaves in a very different manner from one which has just satisfied the cravings of its appetite: the one being alert, active, and watchful, and the other sluggish, apathetic, and somnolent.

Locality has much to do with the disposition of the Lion. When a new route has been struck out, passing through Lion-haunted spots, the few first travellers are generally amazed by the Lions which have had no experience of man as a fighting animal, and are totally ignorant of fire-arms. Such travellers, therefore, would write of the Lion as a fierce and courageous beast, that would attack a whole host of men, and bravely wage the unequal combat. Even when fire-arms are carried, and used inefficiently, the Lion learns to disdain them and their bearers, and cares nothing for the sight or report of a gun. But when the road is traversed by the cool-headed European, who carries his loaded rifle in readiness, and hits when he fires, the Lion conceives a deep respect for man, and declines to face so formidable a foe, unless inspired by the false courage already mentioned.

This suggestion will explain the remarkable difference of behaviour observed in the Lion by various travellers. M. Jules Gérard gives an account of the Lion of Algeria which shows it to be a most formidable animal, having the heartiest contempt for the natives and their guns, and attacking without hesitation a large party of armed men.

The reason for this behaviour is to be found in the context. M. Gérard describes the manner in which some thirty or forty Arabs will stand with their backs against a wall, and their guns pointed at, or rather *towards*, a solitary Lion. The aspect of the animal frightens them so much, that out of the whole volley not a single shot will strike the animal in a fatal place, and in all probability he will be missed by every bullet. No one can wonder that the Lion despises his assailants, and that he will attack those from whom he feels that he can receive no injury. Any coward can do that, and would be the more likely to act in such a manner, simply because he *was* a coward.

Before describing the different kinds of Lion, I will mention the chief peculiarities in its structure, as well as a few of the habits which are common to Lions all over the world.

In the first place, the systematic zoologists of the present day have separated the Lions from the genus *Felis*, and formed them into a new genus, under the title of *Leo*. The chief and most obvious distinction between the two genera lies in the

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tail, the tip of which is tufted in the genus *Leo*. Moreover, at the very extremity of the tail, and hidden by the long hair, is a small claw-like projection, which is very loosely attached, and falls off if subjected to violence. As to the rest of the structure, the difference between a lion and tiger is very trifling. Take off the skin, and you can scarcely distinguish the one animal from the other, while the skeletons are so similar that none but a good comparative anatomist can determine their identity.

The general habits of the Lion are so well known that I need not recapitulate them, and will only make one or two observations. The animal is popularly reported to leap upon the back of the giraffe, and there to cling, tearing and gnawing at the flesh, while the tortured victim speeds onwards, until it at last sinks from loss of blood, and permits its conqueror to destroy the last quiverings of life. The Lion's ride over the Desert has been the subject of many poems and no few pictures, but neither poet nor artist would now dare to illustrate such a theme. In the first place, the Lion does not range very far from home, but prowls around his den, issuing forth by night, and returning by day to his lair, where he may be found by those who are accustomed to Lions and their habits. In the next place, a single Lion would not attack so large a beast as a giraffe, the hide of which is nearly an inch in thickness. Several Lions have been seen to do so, and Mr. Andersson, in his well-known and beautiful work, "*Lake Ngami*," mentions that he saw a party of Lions attack a giraffe and pull it down, several leaping on the animal, and literally overbalancing it by their weight, and so bringing the throat within reach of their claws.

The Lion by no means disdains, as is said by many of the older writers, to feed upon animals which it has not killed. On the contrary, it is only too glad if it can meet with a dead animal, and will feed upon it greedily. It is by employing dead animals as baits that the Lion can be drawn within reach of the hunter's bullet. Any animal will answer for this purpose, and the Lion will feed freely on the body of an antelope, rhinoceros, hippopotamus, jackal, horse, or buffalo, always giving the preference to the largest animal.

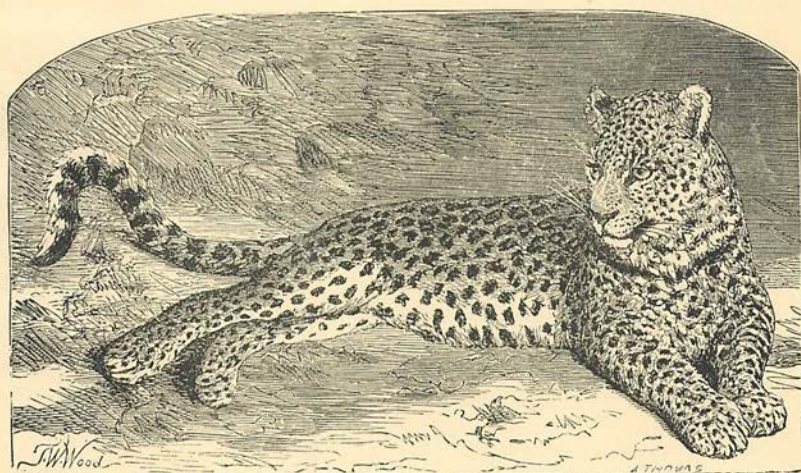
It is a monogamous animal—that is, keeps to the same mate year after year, but, if it should lose its consort, it speedily consoles itself by a second marriage. Generally the Lioness is a fiercer animal than her mate, and when she is burdened by the care of a young family she becomes more than ordinarily savage.

There are several specimens of the Lion in the Zoological Gardens, some of which have resided within their dens for a considerable period. In one cage may be seen a fine example of the African Lion, which has a habit of parading his den at regular hours. This peculiarity is most fortunate, as it gives to those who are acquainted with it an opportunity of watching the splendid animal as it stalks to and fro in the narrow bounds within which its walks are circumscribed. The illustration which accompanies this account was sketched at several intervals, the artist taking advantage of the regular habits of the animal.

As the Lion paces to and fro, the reader is advised to watch the method of its walk, which is something like that of the elephant, described at page 199, except that it is easier and lighter, and that the fore paws are picked up in a curiously quick manner as soon as the hind feet touch the ground. The splendid mass of hair with which its head and neck are covered should be noticed, as well as the long, thick fringe on each side of the abdomen, and the tufts on the limbs. The yak, which



THE BENGAL TIGER.



THE AFRICAN LEOPARD.

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may be seen at a little distance from the Lion's house, is notable for a similar fringe of long, dark hair.

This Lion has a fine talent for roaring, and at various times of the day exercises his powers right willingly. After listening to the terrible voice of the Lion, it is easy to understand how the strongest nerves may give way for a moment when the animal follows up its angry roar with a charge, and how deep must be the respect with which the natives regard this animal. Often have I seen a whole bevy of visitors flee in affright when the Lion has roared angrily and dashed at the bars, and, indeed, no one can view unmoved those fury-flashing eyes and those out-stretched paws, horrent with their curved and trenchant talons. Strange, then, must be the courage of the South African savage, and great his devotion to his chief, when, at the simple word of their tyrant, a chosen band of warriors has been known to surround a Lion and take him prisoner, without inflicting a single wound.

How variously the same events strike different people, according to the constitution of their minds! While talking to Mr. T. W. Wood, the illustrator of these papers, the Lion began his usual series of roars, and, although we had often heard the sound, we could but be struck with admiration at the terrific grandeur of the notes as they reverberated through the building in a heart-quaking thunder. Others, however, seemed to be differently constituted, for, just after I had walked away, a woman began to pity the animal, and said to her friend, "Poor Lion—he wants his tea!" *Apropos* of tea, I may mention that a large proportion of visitors, actuated by mistaken benevolence, will throw nuts and biscuits into the Lion's cage.

Another den contains a pair of Lions, both of them playful animals, their gambols having a strange appearance when their dimensions are taken into consideration. The Lioness from Babylon was presented to the Society, in 1856, by Mr. Alderman Finnis. The Lion, her companion, is unfortunately dead. Altogether, the specimens of the Lion now in this collection are well worthy of a visit, and should be seen about an hour before their feeding-time—i.e., at 3 P.M.—as then they are all awake and lively, looking out anxiously for their food, and displaying the beauty of their form and the tone of their voice to the best advantage. When they have received their food, they generally hide as far as possible from public gaze, poking their heads into the darkest corner, and turning their tails to their disappointed visitors.

Next in order comes the TIGER (*Tigris regalis*), that magnificent animal which is only seen in perfection in the jungles of India. The Tiger is exclusively an Asiatic animal, although the name has been wrongly applied to the great carnivora of other countries. In Southern America, for example, the title of Tiger is applied to the jaguar, of which we shall presently treat; and in Africa a large leopard is not unfrequently called by that name.

There is, perhaps, scarcely a handsomer quadruped in existence than the Tiger, with its richly-coloured fur and the easy grace of its movements. The Tiger can assume many aspects. Never desirous of fighting, especially when mankind are likely to be its foes, it endeavours to slink away from the hunter, making itself wonderfully small, crouching low upon the ground, and creeping under the grass so stealthily that its striped fur can hardly be distinguished from the coarse reed-like grass among which it lurks.

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This similitude between the colour of the animal and the locality in which it lives is seen in many creatures, and it is curious how even the huge bulk of one animal and the bright colours of another can harmonise so perfectly with surrounding objects that the former can scarcely be distinguished. An elephant is a beast of prodigious magnitude, and yet the largest elephant that ever ranged the forest can stand within a few feet of the hunter and remain perfectly undistinguishable among the deep shades that surround it.

The giraffe is a gigantic and conspicuous animal, its lofty head and mottled colours rendering it so unlike every other quadruped, that, if an inexperienced person were desired to select a quadruped which should be less capable of concealment than any other, he would probably fix on the giraffe; yet, when the animal is standing among the scattered mimosa-trees on which it feeds, its long legs and neck standing out boldly against the sky, its general outline so strangely resembles that of the surrounding trees that even the quick and practised eye of the native hunter is sometimes at fault, and the powers of the telescope must be called upon before the question can be fully decided. All South African hunters have mentioned this singular characteristic of the giraffe.

The Lion, which haunts the open country, and wanders about by night, is clothed with a mantle of dun-coloured fur that effectually conceals him as he prowls after his prey. Even when a Lion has been lying close to a hunter—so close, indeed, that three paces would have brought the foes into contact—and every breath of the Lion was plainly audible, its form was so totally indiscernible that the rifle could not be levelled even by the aid of the experienced eye of its bearer.

The puma, a tree-haunting animal, lies flattened on the horizontal branches, and can scarcely be distinguished from them, and the spotted skins of the leopard and jaguar harmonise so well with the light and shade of thick leafage that they may lie hidden among the boughs without fear of detection.

Even the domestic cat exhibits in perfection this capability of concealment. My own cat, which is a large and boldly-striped animal, has appropriated a series of hiding-places which he frequents, always lying under shelter of a shrub or beneath some foliage. Of course, he knows not the reason for choosing such localities, and is not aware that the broken lines of the shrub, or the broken shadows of the foliage, are able to conceal him effectually from all ordinary eyes. Yet his instinct always leads him to such places, and, accustomed as I am to his peculiarities, and knowing all his hiding-places, I often pass by without seeing him. In the wild state this faculty is of the greatest use, enabling the creature to hide itself from the gaze of the swift-footed animals or ready-winged birds on which it feeds, and so to obtain by stratagem what it could never achieve by speed.

Any one who has seen a cat lie in wait for a bird can understand how a leopard would act under similar circumstances; crouching flatly to the earth, with pricked ears and eager gaze, waiting patiently until its prey comes unwittingly within reach of its leap, and then springing with outstretched claws upon the hapless prey. Thus does the Tiger crouch in the jungle, awaiting the approach of some animal which is quietly feeding, unconscious of its impending fate, and which will speedily be struck senseless with a blow of the mighty paw, and be presently torn to pieces and devoured.

One of the splendid Tigers in the collection was presented by Major Marston, and another by Michael H. Scott, Esq. Both of these animals were brought from

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India. The larger Tiger, which is represented in the act of cleaning his face, is called "Bill;" the Tigress is named "Bessy."

I regret to say that the magnificent fighting Tiger, "Jungla," who had won so many battles in his native land, and whose enormous dimensions and double stripes excited so much admiration, has died while on a tour. His portrait may be seen in Vol. I. of my "Illustrated Natural History;" and, though he never belonged to the Zoological Society, I mention him as being the finest specimen that I have seen.

Pass we now to the LEOPARD (*Leopardus varius*), several specimens of which are in the Gardens, some having been brought from Africa, and others from Asia. A remarkably fine specimen of the African Leopard may be seen in the cage close to the bear-pit. This animal is called "Jumbo" by his keeper, and is rather an old inhabitant of the place. It is noticeable that nearly all these large Felidæ possess eyes of similar hue, namely, very pale topaz yellow.

The Leopard is a notable tree-climber, and cannot be seen to advantage unless furnished with a rude gymnastic apparatus on which it may show its skill. The largest branches of forest trees afford excellent appliances for this purpose, and upon them the animal can disport itself at pleasure.

When a little party of Leopards are furnished with such an apparatus, and are in a playful humour, they afford a charming sight.

Sometimes the visitor can hardly see whether there is a leopard in the cage, so closely do the animals lie among the branches. Perhaps one will be clinging tightly to the trunk of the tree, with its head lodged snugly in a fork, its ears depressed, and its eyes closed; another will be curled up on the ground, close to the branch; another will be stretched at full length on a horizontal bough, and another will be ensconced in the sleeping-trough. But when they become lively they are marvellously beautiful creatures, chasing each other up and down the tree, leaping from bough to bough with conscious security, and passing so rapidly from one spot to another that the eye can scarcely follow their movements; they are as gamesome as kittens, and they look as harmless, and the spectator can hardly bring himself to believe that they are in reality as fierce and bloodthirsty as the tiger itself.

All, however, depends on their training. If brought up from a very early age, before they have tasted blood or experienced the fierce joys of the chase, they are throughout life as gentle as any domestic cat, and quite as amenable to discipline. In the East, the Leopard—I do not mean the hunting Leopard, or Chetah—is often tamed, and will follow its owner about as obediently as a dog. Even the Tiger can be trained in a like manner, and in the towns of India a tame Tiger led about by a cord round his neck is no uncommon sight. Europeans have often kept tame Leopards, and many of my readers will remember Mrs. Lee's interesting account of her Leopard "Sai," of his education, mode of living, and lamented death.

"Jumbo" has been in the Gardens for several years, and seems to be in sufficiently good health to warrant a hope of a long sojourn. He came from Morocco, and was presented by Drummond Hay, Esq. Another African Leopard was presented by the King of Portugal, rather more than a year ago. Of the Asiatic Leopard there are several specimens, one of which was presented by the Queen, and the others by the late King of Portugal in 1856. By some zoologists the

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African and Asiatic animals are thought to be different species; but I am inclined to believe that they are mere varieties of a single species.

Perhaps the most magnificent of the Leopards is the JAGUAR (*Leopardus Onca*) of Southern America.

This splendid animal is popularly called the Tiger by the colonists—a name which has given rise to no small perplexity in the minds of zoological novices. It is spotted and generally coloured like the Leopard, but is easily to be distinguished from that animal by the greater whiteness about the face and throat, and the character of the spots, which are arranged in circles like a great number of rosettes, each with a single black spot in the centre. When full-grown it attains to a larger size than the Leopard, and is a formidable animal—the most formidable, indeed, as well as the handsomest, of the South American fauna.

The Jaguar feeds on rather large animals, and takes them in various ways. Sometimes it catches the active monkeys, chasing them into the branches and seizing them, in spite of their wonderful agility. Sometimes it lies in wait for the tapir, knocks it over with a blow of its paw, and drags it off into the dense vegetation of the river-bank, where it eats its quarry in peace. Sometimes it turns fisherman, goes to the sea-shore and catches the turtle, scooping out the flesh with its lithe paw; and sometimes it lies by the river-side and adroitly knocks passing fish out of the water.

The peccary often falls a victim to the Jaguar; but there are frequent instances where it has suffered signal retribution from its intended victims. The common peccary it can mostly catch and devour without difficulty; but the white-lipped species does not submit so easily. A Jaguar that has leaped into a herd of these animals has been set on by the determined warriors, and fairly cut to pieces with their tusks. On one occasion, when some travellers were passing through the forests, they found the dead body of a Jaguar hanging by the hind legs from a branch, its head, shoulders, and fore legs being torn to pieces. The footmarks of a herd of peccaries, and the mangled body of one of their number, showed how the event had happened. Seeing a peccary passing beneath the tree, the Jaguar had slung himself down and seized it. At the cry of the terrified victim, the herd came rushing to the help of their comrade, attacked the Jaguar before he could recover his position, and killed him summarily.

The strength of this animal is enormous. A Jaguar has been known to leap on a pair of oxen yoked together, to kill one of them, and to drag them both to a considerable distance, carrying the dead ox in his mouth and pulling the survivor after him, notwithstanding the resistance which the animal had made. The living ox, which was quite unhurt, had made several fierce struggles, as was proved by the trail; but, in spite of his efforts, he had been dragged for at least half-a-mile up the side of a steep hill.

The Jaguar is generally killed by certain professional hunters called "*tigeros*," who sell the skins at a good price. Most of the hides are exported to Europe, where they are in great demand as saddle-housings for cavalry regiments.

The *tigeros* set to work in a very systematic manner. They make a couple of spears, mostly of wood, sharpened at one end, and the point hardened by fire, one being ten feet, and the other seven feet, in length. They hunt in pairs, and beside the spears, each man has his cutlass and his gun or bow and arrows

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When they have hunted down a Jaguar, one of the tigreros kneels down, and, placing both spears together and setting their butts in the ground, he directs the points towards the spotted foe, just in the attitude of a soldier when kneeling to resist cavalry.

When all is ready, the second hunter irritates the animal so as to make it spring at him, and, just as it does so, he sends a bullet or an arrow at its head, and not unfrequently kills or stuns it at once. Should the shot miss, the animal



The Jaguar (*Leopardus Onca*).

leaps forward with its paws spread apart in order to deliver a fierce stroke, and is transfixd by one or both of the spears. The hunters are then sure of their prey, for the animal is encumbered with the shaft of the spear, and cannot charge or escape, and is sure to die very soon of its wounds. Sometimes, but very rarely, it happens that the Jaguar holds his paws together or crosses them as he leaps, and in that case it strikes the spears aside, and will kill or maim the hunter that holds them, unless his companion be very ready with his weapons.

(To be continued.)

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A FINE Leopard of the New World is the well-known PUMA (*Leopardus concolor*), an animal which is called by a great variety of names.

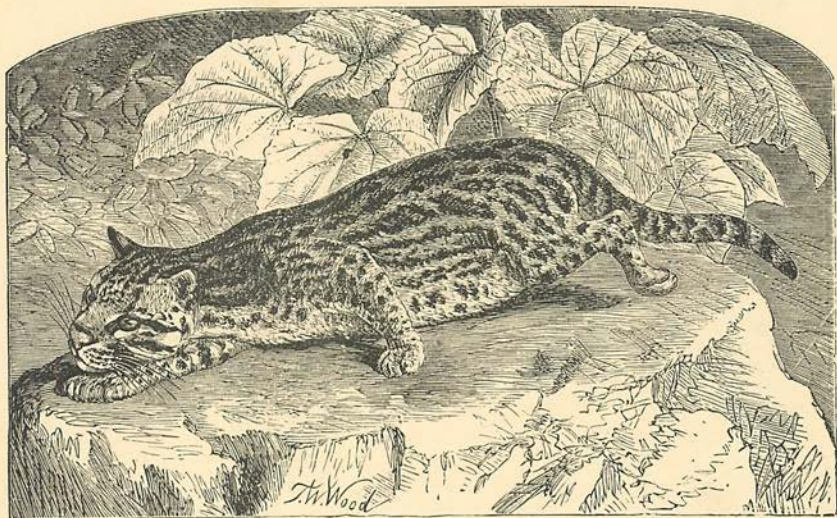
Emigrants to a comparatively unknown country are apt to give to the animals, vegetables, and other objects in their new dwelling-place the same titles to which they were accustomed in their old home. Thus we find the words "apple," "pear," "fig," "rose," "cabbage," "bean," &c., applied in the most indiscriminate manner to any fruit, flower, or edible vegetable, the names of lion and tiger to any predaceous beast, and the titles of eagle, hawk, and vulture to any predaceous bird. Accordingly, the jaguar, as has already been mentioned, is called the tiger, and the Puma is dignified with the title of lion, probably on account of its tawny fur, which in colour resembles that of the lion. The animal has a wide range, and is found in South as well as in North America, where it is known by the name of "Painter," a word which is evidently a corruption of Panther.

Many accounts of the Puma are extant, but, although the animal is so common, there is no history of it which is really trustworthy. The received descriptions of its habits—*e. g.*, the tracking travellers from day to day, the dropping on its prey from branches, &c., &c.—are denounced by a gentleman of great experience in South American forests as only fit to be relegated to the musty shelves of his grandmother's library. Therefore, I restrict myself to the results of my own observation of the animals in the Zoological Gardens, and a few remarks by Mr. Byam.

According to Mr. Byam, the track of the Puma is easily distinguishable from that of the jaguar, even when the two animals are of the same size. The foot-prints of the latter animal are clear and neat, but those of the Puma are known by the little lump of earth which it flings behind at every step. The Puma is not so powerful an animal as the jaguar, and does not attack full-grown oxen as long as they are in health and capable of resistance. Calves, however, often fall victims to its attack, and so do deer, while the horse is more frequently attacked than any animal of the same dimensions.

The natives of Southern America do not seem greatly to fear the Puma. They dislike the animal because it kills their horses and occasionally slaughters a human being; but they appear to look upon it more as an objectionable nuisance than a dreaded enemy, and do not speak of it with that respect which they always accord to the jaguar.

The skin of the Puma is valuable, for it can be used for many purposes, and in some parts of the country a reward is given for each scalp. A Puma scalp is a strip of skin taken from the top of the head and comprising both ears. The flesh, too, is considered a great delicacy, and is said to bear some resemblance to very white and tender veal. The voice of the Puma is rather peculiar, and is well described by Mr. Byam:—"The cry is not like the roar of the true lion nor the roar of the panther; it is what a person might conceive to issue from an en-



THE OCELOT (*Leopardus pardalis*).



THE PUMA (*Leopardus concolor*) AND BOA CONSTRICTOR.

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nously overgrown tom-cat with several extra pairs of lungs." I may mention that when animals are in captivity they do not employ all their vocabulary, so that many of their most characteristic cries cannot be heard except by those who travel among their haunts. The jaguar, for instance, has a most remarkable series of cries which are never heard while the animal is shut up in a cage, without opportunities for indulging its natural instincts. There is its exulting yell as it leaps upon the monkeys it has surprised among the branches; there is the deep, sonorous howl with which it accompanies its nightly prowlings; the fierce double roar, like two sharp claps of thunder, with which it precedes a charge; and the strange, wailing cry with which, when wounded, it calls to its mate for help. Of all these varied cries we hear but very few when the animal is in captivity, and even those which we do hear are very inferior in effect to the same sounds in the forests, being deprived of all surrounding accessories. The roar of a lion, for example, is a very magnificent sound, and so is that of the jaguar, even when the animals are safely caged behind iron bars, and the hearers are in perfect safety. But if one of the very same hearers were forced to spend the night in some large forest, say the New Forest, suspended from some trees in a hammock, with nothing but a fire as a protection against wild beasts, and a few lions and jaguars were turned loose into the wood, their cries would have a very different effect upon him, and strike him with more awe than under the former conditions.

Many specimens of the Puma have been kept in the Zoological Gardens, and several cubs have been born and reared in the cages. The colour of the Puma is always uniform, but its tint is rather variable; some specimens being of a tawny red, not unlike the colour of the lion's fur, and others of a silvery grey. The latter colour is mostly found in the Pumas of Southern America. Mr. Sclater mentions that the Society once possessed a specimen which was entirely white, with the exception of the tail. This animal, however, was evidently an albino.

Remarkable as is this uniformity of hue among the many-spotted Leopard race, it is only found in the adult animal. When very young the Puma is covered with well-defined spots, so dark and so thickly clustered that the animal might easily be taken for a rather pale specimen of the Indian leopard. As it increases in size the spots fade away, and when it has attained adult age they have wholly disappeared. Some slight traces of their presence are, however, left, and even on the sleek hide of the full-grown Puma may be seen, in certain lights, the faint remains of the vanished spots. The reader may, perhaps, have noticed that many other animals exhibit a similar phenomenon. The lion, for example, which possesses a uniformly-coloured coat, is, when very young, covered with dark markings like the cub of the tiger or leopard. Several deer, also, are notable for the remarkable difference between their uniform colour when adult and their dark and spotted coats when young; and the brown-coloured tapirs are, when young, adorned with rich yellow spots and stripes upon a dark brown-black ground.

A fine specimen of the Puma now in the Zoological Gardens was presented by W. D. Christie, Esq., the Minister to the Argentine Confederation.

Passing to the Small Mammalia (No. 27 in the authorised map), we come upon the CLOUDED TIGER (*Leopardus macroscelis*), a creature which is unrivalled for beauty.

It is a native of Assam, and is probably the same species that is so well

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described by Sir Stamford Raffles under the name of Rimau-Dahan. It is not very common, and is generally found upon or near the banks of rivers, delighting to ascend the trees and lie among the branches. Although a very powerful animal, with fore-limbs of extraordinary volume, and a formidable set of teeth, the Clouded Tiger is not much feared by the natives, who chiefly dislike the animal because it is very destructive to the poultry.

The colour of the Clouded Tiger is of singular beauty. The general hue of the body is rich warm tawny, upon which are traced a multitude of irregular black rings of considerable size. These rings are remarkable for the fact that one side is



"Dick," the Clouded Tiger at the "Gardens."

always much wider than the other. The black rings have a peculiar velvety tone, which is also observable in the black stripes which are drawn over the face, and the ring-like patches upon the long and full-formed tail.

According to Sir S. Raffles, this animal is easily tamed if taken while young, and his assertion is perfectly carried out by the character of the larger specimen now in the Gardens. This animal is on most affectionate terms with his keeper, coming at his command, and answering by a kind of short, satisfied whine whenever called by his name. "Dick" is a most gentle creature, and soon learns to know those who frequent the house, and are accustomed to talk to him. I never look at this splendid animal without wanting to take him home and keep him as a pet. He is quite an old friend of mine, and I seldom leave the Gardens without looking into the Small Mammalian House and exchanging a greeting with Dick. He will mostly leave his warm corner behind the straw, and come to me when I call him, and comes to have his chin rubbed and to be made much of. If, however, the keeper should be in sight he pays no attention to me, and I must wait until he has left the house before Dick will take the least notice of me.

There is another specimen of the Clouded Tiger in the house, but it is not nearly

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so docile as Dick, and will not permit liberties to be taken with it. Dick has been in the Gardens for more than nine years, having been purchased in May, 1854.

It is rather unfortunate that the Felidæ should be scattered about the Gardens, but at present there is no help for it, no single erection uniting the qualifications necessary for animals of such varied idiosyncrasies. We must now leave the house which we have just visited, pass by the large carnivora, and proceed a few paces down the left-hand path, where we shall find the house containing the Small Carnivora (marked 7 in the map). Large alterations are now being made in the Gardens in order to procure extended accommodation for the increasing stock of animals, and in a short time a new map will be needed.

In the house which we have now reached are to be found several interesting members of the cat tribe, the first of which is the SERVAL (*Leopardus serval*).

This little leopard is a native of South Africa, and is tolerably common. It is a pretty, though rather curious, animal, standing very high on its legs, having a small head and a pair of remarkably wide ears, the bases of which nearly meet on the top of its head. The specimen now in the Gardens is rather lazy during the daytime, and cannot easily be induced by gentle means to leave its snug box and show its fair proportions. Force should never be used by those who wish to study the animals as they really are, for, putting aside the manifest cruelty of violence, the animal can never be seen rightly under such circumstances. When roused from repose, and forced to leave the hiding-place wherein its instinct teaches it to conceal itself from the unwelcome light, it is animated by fear or anger, and in neither case does it show itself in its true colours. Moreover, it is a cowardly act to assault a poor beast that is deprived of the power of retaliation; and I very sincerely believe that those who are most fond of irritating or inflicting pain upon a wild beast that is safely penned behind iron bars would be the first to take to their heels if they met with it in its native haunts.

Like most of the Felidæ, the Serval can be tamed without difficulty, if taken when young, and properly treated. It is a playful creature, and will gambol about with its master like a kitten. The colour of the animal is rather variable, but that of the specimen now in the Zoological Gardens is a good example of the ordinary hues. The ground colour of the fur is tawny, with a dash of red, and upon its back are a number of jetty black spots. Towards the head the spots fall into regular lines, and at last run into each other, so that they form bold longitudinal stripes upon the neck.

In a neighbouring compartment there is a very fine specimen of the EGYPTIAN CAT (*Chaus Lybicus*).

This animal is spread over rather a wide range of country, specimens in the British Museum having been found in various parts of Asia and Africa. It is rather variable in colouring. The usual tint is a pale grey, with a yellowish tinge, but in some individuals the ears are black, and in some they are red with black tips; in others, the limbs are waved tiger-wise on the exterior, and in others the colour of the body is dark dun. The specimen in the Zoological Gardens has some faint and indistinct stripes on the hind-quarters, and some black about the ears. It is rather a pretty animal, about the size of the serval, but with a rounder and pleasanter-looking head.

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This is the species which is so often found embalmed in the Egyptian tombs, and by some zoologists is thought to be the original stock from which the domestic cat was derived. I do not think, however, that there are any grounds for such an assumption, for the two animals seem so radically distinct that they certainly belong to different species, and probably to different genera.

Here I must warn the reader not to look upon the divisions of animals into families and genera as something inherent in their nature, but merely as a convenient mode of arrangement by which naturalists are enabled to group together certain animals which agree in certain characteristics. In the present state of zoological science all arrangement is but arbitrary, and those who look deepest into nature are the most ready to admit the necessary imperfection of the artificial systems which are at present in use. Our reason tells us that the Creator of this universe has made all things in perfect order, but up to the present time our imperfect intellects have been unable to discover that order, and all our arrangements can only be considered as temporary and provisional.

The rich forests of tropical America conceal and nourish mammals, birds, and insects of wondrous beauty, among which the lovely Tiger Cats are not the least conspicuous.

There are many species of Tiger Cats, which are popularly divided into Ocelots, Margays, and Chatis. Several fine specimens of the Ocelot are now in the Zoological Gardens, and are worthy of a close examination. These animals are leopards in miniature, scarcely exceeding in dimensions a large tom-cat, but marked with stripes and spots of wonderful richness. The OCELOT (*Leopardus pardalis*) is of a pale, warm grey colour, covered with irregular tawny stripes, deeply bordered with black on each edge, and presenting a forcible contrast of colours. Towards the head and neck the stripes deepen in colour, lose their tawny centre, and become wholly black. The ears are velvet black, and upon the back of each is a round spot of pure white. The eyes are very like those of the domestic cat—namely, pale grey—and have a very friendly look about them.

The visitor to the Zoological Gardens has little opportunity of seeing these beautiful animals to proper advantage. Their cages are certainly larger in proportion than those of the lion or tiger, but an active tree-climbing creature like the Ocelot requires plenty of space and proper appliances before it can display its true beauties. Moreover, like the generality of the cats, it is nocturnal in its habits, and in the daytime is always more inclined to sleep than to play. Towards feeding-time it becomes very lively, but all its energies are taken up in listening for the coming wheelbarrow which contains the meat, and in glaring eagerly upon the food when in sight. Then, as soon as it receives its food, it retreats to the darkest corner of the cage, and there munches, and snarls, and growls until it has finished its meal. As soon as that consummation has been attained, the creature gets into its sleeping-trough, flattens itself into a wonderfully small compass, and yields itself to repose.

If taken young and kindly treated, the Ocelot becomes quite tame, and can be allowed to run about the house like a domestic cat. The keeper at the Zoological Gardens is very incredulous on this point, and says that when the Ocelot has passed its third or fourth year it becomes cross and tetchy in temper, and is an unsafe

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inmate for a house. One of the specimens now in the Gardens was originally brought up in a house, and was sent away because it could not be trusted. I cannot but think, however, that whenever this is the case the fault lies with the owner rather than with the animal. I know of several instances where Tiger Cats have been inmates of houses, and have been perfectly gentle throughout their whole lives; and I do not think that these cases are merely exceptions to a general rule.

Another of the Ocelots now in the Gardens has been my very good friend for some time, and has always come to me to be caressed. The keeper, however, when I mentioned this fact, expressed great disapprobation, saying that even he was afraid to put his hand on the animal, and that if I continued to do so I should one day find myself injured. As my hand is too valuable to be risked, I shall take the keeper's advice, but with some regret, as I never like to pass by a caged animal without giving it some tangible proofs of sympathy, and trying to lighten in some little way the burden of its prisoned life.

In order to see the last member of the true Felidæ we must pass through the tunnel and enter the building marked 51. This is called the Python House, and in one compartment of it are a couple of beautiful CHETAHS (*Gueparda jubata*).

The Chetah is a native of Africa and Asia, and, as is well known, is trained in the latter country to the task of catching deer. The whole process of hunting deer by means of the Chetah is wonderfully like the system employed in falconry, except that the chase is conducted upon the ground, and not in the air. When a party is about to hunt the deer, a trained Chetah is placed upon a small cart constructed for the purpose, and its eyes are covered with a hood. The procession moves on until the quick eyes of the native hunters descrie deer in the distance. The bandage is then taken off the Chetah's eyes, and the prey pointed out to him.

Animated by the wonderful instinct of the cat tribe, the Chetah immediately slips off the cart, on the *opposite side* to the deer, creeps to the nearest shelter, and then "stalks" towards his prey, availing himself of every cover, crawling flatly on the ground from bush to bush, slipping round every prominent grass tussock, halting if the deer seem alarmed, and pushing on again when they begin to feed. In this manner he creeps onwards until he is sufficiently near his prey, when he makes three or four tremendous bounds, alights on his destined victim, and drags it to the ground, eagerly lapping up the flowing blood as it wells from the torn neck.

As soon as the keeper sees that the animal has seized the deer, he runs forward, and detaches the Chetah from his prey by substituting a ladleful of the blood or a joint of the leg for the neck of the dead animal, and then replaces the hood and leads the Chetah back to the cart. Should the Chetah be unfortunate enough to miss his aim, he looks sulkily after the retreating deer, but does not attempt to chase them, for their speed is infinitely superior to his own, and it is only by taking advantage of the confusion caused by their surprise that the leopard can seize the agile creatures. At the call of the keeper, the Chetah slowly returns to the cart, submits to be again blinded, and waits for another opportunity. A well-taught Chetah costs about 40*l.*, the cart being included.

In Africa, the Chetah has not yet been trained for hunting purposes, though

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it is undoubtedly of the same species as the Indian animal. There is certainly a slight variety of colours, and the fur is rougher and thicker in African than in Asiatic specimens. As, however, a decided variation is seen even in Chetahs from the same parts of the same country, we can only look upon such differences as mere accidents.

It seems strange that so many Asiatic animals should be trained to the service of mankind, while the same or allied species should be neglected by the dwellers in Africa, whether natives or colonists. In Asia, hawks of various kinds are taught to chase prey in the air, and will return to their owner at his call. Hawks of equal powers are plentiful in Africa, but no one seems to comprehend the valuable uses to which they can be put. The elephant of Asia is captured and trained to perform various tasks which require both mental and bodily powers; but the African animal is permitted to wander untamed in the forests, and is only hunted for the sake of the ivory and the flesh.

That the Chetah departs in some degree from the characteristics of the true leopard has long been known; and it has been generally reported that the claws possess so little retractile power that they are worn away by friction against the ground, and that the animal is unable to climb trees. During my last visit to Walton Hall, Mr. Waterton happened to mention the Chetah, and said that he had long suspected that the animal was more of a true cat than was generally supposed. He saw it run up a tree; and, in order to ascertain the nature of their claws, he entered the den and examined the feet of the animal.

The accuracy and penetration of that veteran naturalist are so patent to all who are acquainted with his works that I should have accepted his statement without hesitation had no opportunity of personal examination been offered. His remarks were, in many points, opposed to popular theory; but I thought it was likely that the historian of the sloth, the ant-bear, and the howler monkey would be as correct when treating of the Chetah as of other animals, and I determined to take the first opportunity of visiting the Chetahs, and seeing for myself.

Accordingly, I entered the cages, accompanied by the keeper, and, after spending a little time in making acquaintance with the animals, examined their feet with some care. The beautiful Chetah "Jenny," which Mr. Waterton had examined, had died shortly before my visit, and I was sorry for it, as she was perfectly tame, and would allow herself to be handled without thinking herself affronted. However, both the present animals were tolerably amiable, the male proving himself the gentler of the two. After a little time, during which he seemed to be considering me very attentively, he allowed the keeper to roll him over on his back, and to hold up his paw for examination. The female was not quite so obedient, and "fuffed" like an angry cat when her paw was held. She allowed me to pat her, and seemed rather pleased than otherwise, rubbing her head against my hand, and purring audibly. But she resented any liberties with her paws, and hissed and gave spiteful little slaps whenever her foot was lifted.

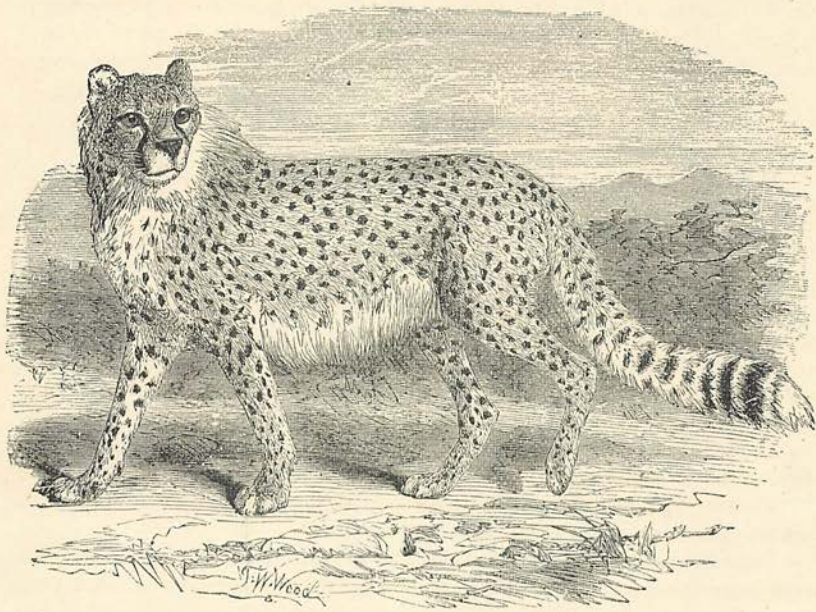
The claws are undoubtedly retractile, though they are not drawn so far back as those of the leopard, and are not so sharply hooked. From all appearances, I should say that they do not touch the ground while the animal is walking; and that they enable the animal to climb, the scars on the topmost branches of their trees afford a sufficient proof. The keeper tells me that the Chetahs are very fond of climbing the trees, and of lying on the boughs with their head in a fork of the

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branches. I have not seen them do so, but I have often seen them climb the wired sides of the cage as easily as any cat.

Another evidence of their structure is the mode of attack employed by the Chetah. The animal does not seize its prey with the mouth, after the fashion of the hyena, between which and the cat the Chetah is said to form a connecting link, but strikes with its paw after the manner of the true cat, and does not use its teeth until its victim is disabled.

Both the Chetahs are tame, and very obedient to their keeper. The male is called "Charley," and the female "Jenny." She was brought by the Prince of



"Charley," the Chetah at the "Gardens."

Wales from Syria after his Oriental tour in 1862, and was then called "Vic," as an abbreviation of a royal name. After she had been in the Gardens for a few months the original Jenny died, and the new-comer was consequently promoted to all the honours of the vacant title. "Charley" has inhabited the Gardens for more than five years, and was purchased by the Society. The eyes of the Chetah are rather darker than those of the leopard and tiger, and have a decidedly brown tint.

Just as this paper was going to press, I received the subjoined accounts from Mr. Waterton, who most kindly placed it at my disposal.

FIRST VISIT TO THE CHETAH ON THE 21ST OF JULY, 1862.

I went expressly to the Zoological Gardens in order to examine two fine living Chetahs, male and female. The keepers were remarkably obliging, and we

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examined the fore-feet of the male very minutely. But it would require to have the skeleton of the foot to be able to pronounce definitely upon the exact nature of the claws.

The dew-claw was easily examined, and I found it decidedly retractile. The animal mounted the tree in the den, and descended with surprising velocity and ease, just as a cat would have done. I found nothing in the fore-feet that bore resemblance to the feet of a dog.

Those who form a judgment of the fore-feet of this animal, as it paces backwards and forwards through the den, imagine that it is allied in some degree to the dog family. But they are in error. The Chetah, in its entire physiognomy, is feline, and not canine. Still more, it is an absolute cat in the use of its fore-paws, for when the keeper annoyed it too much by trying to let me have a good view of the toes, it struck at his hand after the manner of a cat, and then it rose on its legs (for it was lying on the ground at the time), and instantly sprang into the tree.

N.B. An animal with its fore-feet somewhat like those of a dog could never have performed such an evolution.

CHARLES WATERTON.

SECOND VISIT TO THE CHETAH, AUGUST 21, 1862.

During this visit, I had to thank the keepers for their courtesies in allowing me to enter the den of the Chetah.

I examined its fore-paws with great care, and was perfectly satisfied, by having actually taken them in my hand, that this animal is entirely of the cat family, without the smallest approach to that of the dog.

I was obliged to be on my guard, by always keeping my hand a little above his foot, so that when he struck at me I managed to keep my hand clear of the stroke.

The Chetah is no intermediate species betwixt the dog and the cat, but, on the contrary, he is a real cat, to all intents and purposes.

N.B. These two visits were made in order to prove to a friend of mine that he is in error when he fancies that the Chetah is a kind of middle species betwixt the dog and the cat.

CHARLES WATERTON

Walton Hall, near Wakefield,

Oct. 22nd, 1863.