THINGS YOU DON'T KNOW ABOUT CATS
By Charles Platt

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"Cat Superstitions," "Mummy Cats," "Intelligence In Animals," "Are Animals Immortal?" "Peculiarities Of The Cat World," "Why We Keep Pets," "Why Cats Purr," Etc.

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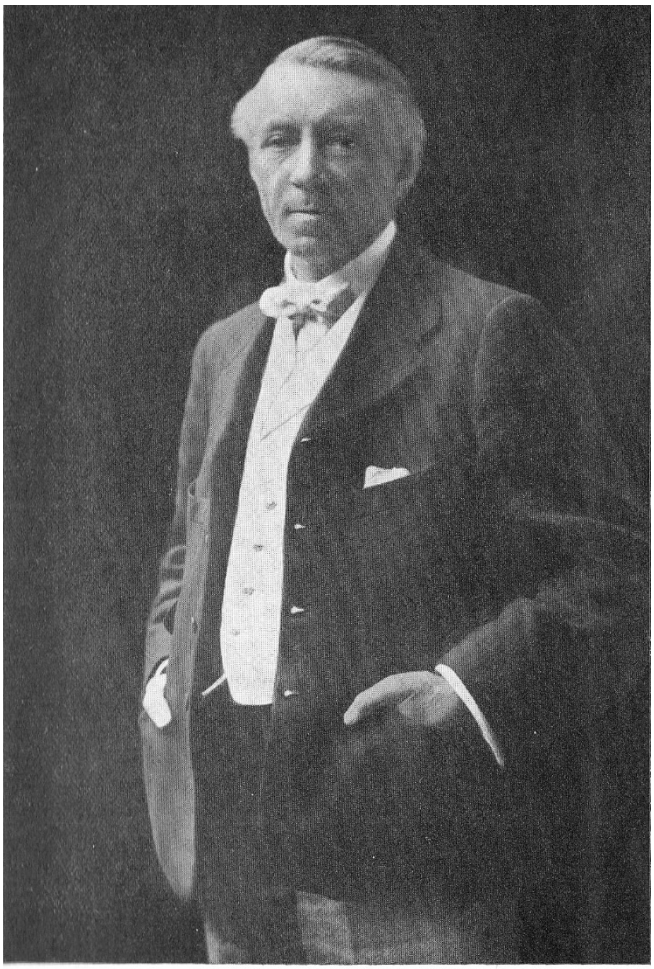

CHARLES PLATT
THE AUTHOR

Dedicated to that intelligent little friend my orange long-haired cat yclept Treckie.

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CHAPTER I – THE CAT'S UNIQUE POSITION

Do you know that Puss has five toes on each of her front paws, but only four each on the back ones?

The Cat holds a very uncommon position in the animal kingdom, and there are many interesting points about her that most people know nothing of. Puss has been a domestic pet and a companion of Man for many centuries, and it is impossible to get back historically to the time when this was not the case. We cannot, therefore, explain why Man first made a pet of

the Cat, unless it was because of its utility as a mouser. We are then faced with the natural query: How was it discovered that Puss was a useful vermin-killer?

It is the old problem again, in a new form: Which came first, the hen or the egg?

It is not generally realised that no savage race has ever made pets of Cats. Dogs are tamed into service for hunting or tracking; cows, goats, or similar animals for their milk; but our friend Puss demands civilisation. This is a very curious and interesting fact, and demonstrates the essential difference between Cats and dogs — Man's two principal animal companions.

Puss is an animal of higher physical organisation than the dog; she is more highly strung and less plastic, and often suffers unjustly by comparison. The domestic Cat is in many ways very similar to Man, though it is true that this may partly be due to their centuries of life in common.

It is not too much to say that, after Man, the Cat is the most independent of all animals. As a family, the Felidae (cat-shaped animals) live a solitary life, or at most have one companion of the opposite sex. Their sexual feelings are strong, and the mother-cat is notoriously devoted to her young. In Nature the Felidae have to fight their own battles, strive single-handed in the great struggle for existence. But the dog comes from a stock that has always lived in packs, dominated by a head and controlled by brute force.

You can strike a dog and it fawns at your feet; not so the Cat, who never fully forgets a blow. A trainer can quickly teach a dog to perform tricks quite foreign to its nature; but it is far more difficult to coerce Puss, not because her intelligence is less than that of the dog, but because she is an independent creature used to thinking for herself. She does not want to perform; she is keenly sensitive to ridicule; she acknowledges no master, but gives and expects friendship and equality.

Make a friend of a Cat, and she is far and away more faithful than a human friend. Many people, ignorant of the truth, state that a Cat is more attached to a place than to a person. This is quite a false idea, though Puss, from the nature of her prehistoric wild life and instincts, hates a disturbance or a removal to new surroundings.

But this dislike to a removal has nothing to do with the question, and merely serves to hide or obscure the real faithfulness of the Cat's nature. This independence of nature makes Puss resent any ill-treatment that she does not understand; but, as a rule, she is very gentle when children (whom she knows) pull her about in unintentional rough ways that must often be very painful.

So in her very independence the Cat comes nearer to Man than almost any other animal. No wandering people have ever gained her sweet companionship; she cares little for the world at large, greatly dislikes the discomforts of travel, and is a true home-lover. She is the friend of those who are too happy — or too wise — for restlessness!

"However mysterious and informal may have been her birth," writes Agnes Repplier, "Pussy's first appearance in veracious history is a splendid

one. More than three thousand years ago she dwelt serenely by the Nile, and the great nation of antiquity paid her respectful homage. Sleek and beautiful, she drowsed in the shadow of mighty temples, or sat blinking and washing her face with contemptuous disregard alike of priest and people."

As a matter of fact, the earliest known record of a Cat dates back to about 1800 B.C. At that time Puss was a recognised domestic pet, so we can only wonder as to the dim and distant date when first she was rescued from the rough vicissitudes of wild, uncared-for life. Yet even today, after forty centuries of (more or less) peaceful domestic life, Puss still carefully washes her jaws and forepaws directly after a meal, an instinct passed down through countless generations from the wild days when any dripping blood from mouth or claws would have betrayed her lair and sleeping-place to prowling enemies!

Many attempts have been made to define the exact meaning of the word "instinct." Dr. Murray's Oxford Dictionary gives the following:- "Instinct — an innate propensity in organised beings manifesting itself in acts which appear to be rational but are performed without conscious design or intentional adaptation of means to ends."

Herbert Spencer holds a somewhat singular view - i.e., that instinct was a higher development of reason, which it has replaced, owing to the more perfect adjustment of inner relations to outer than exists where mere reason is concerned.

One can hardly accept this view. Reason may often car, but so does instinct. Take, as an example, the dread of the dark so common among human young. This curious instinct dates back to the time when night was really a time of stress and danger to primitive Man. In the same way a Cat will generally turn round and round in its bed — or even on the open floor — before it settles down, just as its primeval ancestor did in the long undergrowths when it sought to conceal its resting-place from prying enemies. In this way the wild-cat made a comfortable hollow space for itself, and, at the same time, brought together the tops of the long grasses so as to hide the sleeping animal.

Perhaps a simple and useful definition of the word "instinct" would be: an inherited memory of useful actions.

Mr. Douglas Spalding found kittens to be imbued with an instinctive horror of the dog before they were able to see it. He tells us: "One day last month, after fondling my dog, I put my hand into a basket containing four blind kittens three days old. The smell my hand carried with it set them puffing and spitting in the most comical fashion." (Nature, October 7, 1875, p. 507)

This typical example of "instinct" was clearly an inherited memory carried forward for countless generations; yet a few weeks later those same kittens would, by the exercise of reason, be quite friendly with that particular animal, but would retain the strong protective dislike for dogs in general.

Yes, Puss holds a very uncommon position in the animal world: from its peculiar independence of nature which resists subjection to Man, in striking opposition to all other animals; the very large vocabulary of the Cat, which at times will "chatter" quite obviously in its anxiety to

tell its news or thoughts; the strong feeling of “home” love (shown by no other animal); the structural resemblance in many ways of brain and vocal cords of Man and Puss; and the uncommon “purring” sound made by the Cat when pleasurably excited.

No animal sings but Man — except, of course, birds, whose case is different — although the purring of the Cat can best be described as monotone singing. The peculiar sound very closely resembles a pedal note on the organ, or the vibrating undertone of the bagpipes. It has been maintained that the purring of the Cat arose from the fact that the animal is carnivorous, that it killed its prey by the powerful grip of the teeth, and that the monotone purring was caused by the exhaling of the breath through the incoming rush of blood from the newly killed “food.” In other words, that a Cat purrs in the same way as a man gargles.

This suggestion will hardly bear keen examination. In the first place, the incoming rush of arterial blood would be too great and would almost certainly cause suffocation; in the second place, it is well known that a Cat will purr while licking its young, sucking the tip of its own tail, or caressing the hand of the friend who owns it. None of these actions could be performed by the tongue if the Cat were maintaining a film of moisture in the throat in order to “purr.”

The explanation is an ingenious one, but needlessly far-fetched. The vocal cords of a Cat more nearly resemble those of Man than in the case of any other animal, and it is only natural to assume that purring is a simplified and primitive song. In the Cat there are two kinds of vocal cords — true and false, so-called. The upper or false vocal cords are said to be used in purring, and, indeed, appear to have no other purpose. By means of the muscles attached to the lower or true vocal cords the tenseness is regulated and the various pitches of voice are produced.

It is by the use of this muscular tension on the vocal cords that Man is enabled to sing. Puss uses the less flexible “false” vocal cords and can only produce a monotone singing note. But except for the birds, Man and Puss alone are singers, and this surely should be a bond of union between ourselves and our faithful (though very independent) furred friends.

CHAPTER II - MUMMY CATS

According to the chronicles, there was no Cat in the Garden of Eden; and Charles Lamb wondered how far this loss was responsible for Eve’s lapse into sin. Had our renowned ancestors made a pet of the Cat instead of the Serpent - But it is impossible to follow such a speculation very far!

The earliest historical records of our four-footed friends are found in Egypt, where, some four thousand years ago, Puss was not only petted, but venerated, having her place in the temples, guarded alike by priests and people. Egypt then was the great granary of the world; but it does not therefore follow that Cats were kept to keep down the mice and other vermin. It is quite probable that this was an “acquired” art, developed after Puss became associated with Man. The Cat family, by natural habit and instinct, are tree-climbing creatures, and one part of their natural prey would lie birds. In addition to this, the Felidae prey upon warm-blooded animals, frequently of greater size than themselves, and in order to capture these, they hide in the long grass or undergrowth and spring unexpectedly upon their victims.

None of the Cat tribe are built for long-distance hunting, as are the dogs and wolves, and all their habits point to the open for their night work, and warm caves or lairs for their sleeping daylight hours. If we think this over carefully, we shall see how extremely doubtful it is that the Cat should be, by nature, a mouser. And, in Egypt, Puss was certainly venerated and held sacred, and that would hardly have been the case had she merely been introduced to protect the grain stores.

In this connection, we must also remember that Puss is a very dainty creature, fussy over her food, and therefore hardly likely to select rats or mice or any other vermin. The Cat has a very marked dislike for any strong or unpleasant smell, though certain delicate scents attract her very quickly.

Basil Hall relates that tigers are afraid of mice, and it is well known that lions in captivity will allow rats to play about in their cages. In face of these facts we must conclude that Puss is not, by instinct, a mouser; but probably developed the habit, in civilised homes, by springing after the quick-moving grey shadow which she mistook for a bird.

The goddess Pasht (or Bubastis) was represented with a Cat’s head. A temple at Beni-Hasan, dedicated to Puss, is as old as Thothmes IV., of the eighteenth dynasty, about 1500 B.C. She is mentioned in the seventeenth chapter of the Ritual, and the coffins of the eleventh dynasty are inscribed with that chapter, which (according to Lepsius) would carry us back to about 2400 B.C. Behind this temple (at Beni-Hasan) are pits containing a multitude of Cat-mummies. Indeed, so great was the number of these little mummied pets of the ancient Egyptians that they were actually broken up and sold by the ton as manure for the fields!

Poor little Puss! How different from her treatment a thousand years or more before the birth of the great Christ! It is true that the great veneration in which she was then held provoked bitter jests from travellers from other lands, but then, as now, the saying was only too true: “Other people, other gods.”

There was the enforced mourning, the shaving of eyebrows, and other symbols of woe, which followed the death of even the smallest kitten; there was the law which forbade the sinful slaying of a Cat. So great was this latter peril that an Egyptian who chanced to witness Pussy's death would stand trembling and bathed in tears, protesting to the world at large that he was not responsible, that he “didn’t do it.”

The temples of Bubastis (a city of Lower Egypt, now called Tel Basta), of Beni-Hasan (commenced by Thouthmosis IV.), and of Helipolus were the most sacred haunts of our soft-coated friend. There her little corpse was lovingly embalmed and buried in a gilded mummy case, with elaborate ceremonial.

The actual reason for embalming dead bodies, man or animal, is somewhat doubtful. The general feeling seems to have been that the animal body was essential as a tie or connection line between the soul (or Ego) and the earth interests of the deceased. They did not expect the resurrection of the actual physical body. This is proved by the removal of the vital organs before the body was embalmed. And we know that the Romans burnt their dead in order to free the soul more quickly from the lower ties of

earth. So, for some reason, it would appear as if the early Egyptians deemed it an advantage that the Ego should never be freed, but should be able to keep in touch with earthly human affairs.

Apparently this could only have been from selfish motives, for the benefit it brought to living generations of men and women. In the reign of Asychis, money circulating very slowly, a law was enacted that a man might borrow money if he gave his father's body as a pledge. If he failed to refund, he lost the right of personal burial anywhere, nor could he entomb any of his relations who might depart this life during the continuance of the loan.

The principal aromatic substances used for embalming were bitumen, balsam, cedar, honey, wax, and resin. But for our little Cat friends, a bath of bitumen was the usual method, the dead animal being plunged in bodily. Undoubtedly this would affect the colour of the fur, and in the only unwrapped specimen at the British Museum the coat is of a deep orange.

It is somewhat difficult therefore to say, offhand, if this is the natural colour of the Egyptian Cat, or whether the colour is due to the use of bitumen, which would, undoubtedly, stain orange. We may, perhaps, assume that the bath would be a weak one, not powerful enough to absolutely dye, or disguise, the original shade of the fur. And the natural colour of the Cat tribe is a tawny one, as in the lion, tiger, etc. There are no signs of marks or bars on this (British Museum) specimen, which probably was a shaded, but not tabby, sable.

When we come to consider (in a later chapter) the question of colour in Cats, we shall find some very curious and interesting points. How can we explain the entire absence of tortoiseshell male Cats, though a few tortoise-and-white have been reared? Why should the Introduction of the white patches in the colour of the affect the question of sex?

We shall also find another curious colour problem. Until a few years ago, all our orange Cats were males, and all had white chins. Fanciers set to work to breed out the white and thus produce a pure self-orange, and, in doing so, they successfully bred females! How can we explain this, when we know that white Cats are freely produced, male and female, in the same litters? Yet the introduction of white patches in tortoise-shell Cats has led to the much-wished-for toms; while the elimination of the white in orange Cats has correspondingly led to the breeding of queens.

These curiosities of colour in our soft-footed little friend obviously show that the Cats of to-day are not directly descended from the early Egyptian Puss.

The mummy-cat that we have been examining has rather long fur, though not so heavy as that of the cultivated modern "Persian" Cat. In build, also, the animal is different, being longer in body and in tail, as well as of a slighter build. The rib capacity is shallow, conclusively proving that Puss is not a true hunter. The upper leg is long and the foot broad; the neck and head are also long, though the mask is not foxy, a defect often seen in the modern short-hair Cats, though breeders of to-day are correcting it.

The ears are small, so are the mouth and nostrils (corresponding with the shallow lung capacity); the eyes are long and slanting. Nowadays our Cats

have perfect round eyes, a feature of great beauty in a well-kept pet. One mummy-cat in the British Museum (No. 35858) has an artificial eye - according to the label, “inlaid obsidian eyes” — made from volcanic glass. The colour chosen is a deep orange or copper, as nearly as possible the same as the ideal colour of to-day!

SACRED EGYPTIAN MUMMY CAT

The collar-bone is somewhat large, the tail much longer than in our modern Cats.

Although Puss was thus reverenced — and mummied -in ancient Egypt, she was seldom buried with humans, except among the lower classes. A few exceptions to this rule have been found, but as a general practice the mummied Cats were buried in their own special sepulchres in various parts of the country. This marked and deliberate separation of Cats from their masters, after death, is rather difficult to explain when we remember that during the famines that afflicted Egypt from time to time, though the people themselves were driven to eat human flesh, the sacred animals were invariably respected, being fed principally upon fish.

The word “mummy” is, nowadays, used in connection with the actual embalmed body, yet it should apply to the essences used in the process. It would appear to be derived from the Arabic “Mum” (wax) or “Amomum” (a kind of perfume), or perhaps (and more probably, in our opinion) from the Persian “Mumiya” (bitumen, the actual drug used). Mummy, as a medicine, is recorded as early as A.D. 1100, and in the sixteenth and seventeenth centuries it formed one of the ordinary everyday drugs, and was obtainable from any of the apothecaries’ shops. Tombs were searched and the dead bodies were broken into pieces and sold as mummy, the drug being an especial favourite in France!

Lord Bacon ("Sylva Sylvarum," Cant. X., S 980) says: "Mummy hath great force in staunching of blood which . . . may be ascribed to the mixture of balmes that are glutinous."

But poor little Puss, as we said before, was broken up by the thousand and used as manure for the fields at thirty shillings the ton!

CHAPTER III – COLOUR IN CATS

Variation in colour is a subject about which there will always be much controversy. The generally accepted theory of colour in Nature is that it is "protective" — that is to say, that certain colourings help the animal in its struggle for existence. To a great extent, no doubt, this is true, but it remains very difficult to explain variation in colour if we accept the above theory in full. If Nature has been struggling for centuries, by means of the survival of the fittest, to fix certain valuable colourings and markings, why is it so easy to produce variation in this protective quality?

For Instance, albino strains frequently arise in nearly all races. We have white cattle, horses, sheep, pigs, dogs, cats, birds, trees, plants, deer, bears, wolves, rabbits, mice, rats, etc. In a few cases the albino strain has been established by man in preference to the natural stock, as, for instance, with sheep and pigs.

In dealing with this question of colour, as with all matters of heredity, we must remember that all domestic animals have developed a variety of favourite strains, which, in time, are recognised as breeds; and the individuals of such distinct strains are spoken of as "purebred." The word "thoroughbred" is sometimes erroneously used to designate such animals, but this term is properly the breed name of the English running horse. So we can have a pure-bred cow, but a thoroughbred is a horse, and a particular type of horse at that.

It is interesting to note that colour does not always blend in life as it does on the artist's palette. If we breed from white and black in Man, we get a mulatto, but this is not the case in (for instance) the pig, where we get black, or white, or spotted, never roan or mulatto. In horses the colours sometimes blend as in roan or grey animals, but not always, black horses with white points being common. This curious anomaly is also seen in Cats, where we find numberless black and white specimens — as well as many that are more truly described as white and black — while, in addition, as the result of blending, we have the beautiful soft grey, known as silver or chinchilla, as well as the very popular blue, which is really a pleasant slate colour.

Yet in the case of the domestic sheep, we have either white or black, a very curious preference on the part of the breeder, retaining the albino strains and the melanistic (excess of colouring matter) strain, with no intermediate colour.

Melanism signifies a darkness of colour resulting from abnormal development of black or dark pigment in the skin and hair. It is far rarer than albinism, due to an absence of colouring pigment. It is interesting to note that the Siamese Cat is the only animal known to us that shows both melanism and albinism in the same animal as the recognised character of the species! The blue eyes and the white body colour are clearly due to albinism, while the dark "points" are only too

obviously due to excess of colour pigment in certain characteristic parts of the animal anatomy.

As the Siamese Cat grows old, these tendencies merge into each other, more or less, the white body colour deepens, while the dark points become lighter, until the whole animal becomes more or less a pale chocolate or deep biscuit colour. No explanation has ever been offered for this curious change, and one fails to see what possible “protective” or other use it can be.

Undoubtedly “tabby”-bred Cats have a marked tendency both ways. In many specimens the black bars almost obliterate the original body colour, while in others the markings are very narrow and faint, often degenerating into spots. And, until quite recent years, all tabby-cats had white chins, chest, tail-tip, or other similar albino points.

Poulton (“Colour of Animals”) puts forward the sensible suggestion that all animal colouring must have originally been non-significant, because colour pigment occurs abundantly in the internal organs and tissues. We must also bear in mind that, apparently, the uter colourings of skin and fur conform to the skeleton of the animal, as in the well-known case of the dark mark along the donkey’s spine. And in the tabby-cat we again find this dark spinal mark, with bars down the ribs and round the limbs at (or near) the joints.

If colouring is “protective” in character, these marks may serve to direct attack to the bony skeleton and thus preserve from injury the softer vital organs. On the other hand, we may reasonably suppose that colour development to a great extent depends upon the direct action of the sun’s rays upon the pigment in the hair and skin, and, if so, the underlying bone may easily turn back the light waves (as it does in the case of X-ray photographs) and thus intensify the colour. If this is accepted, we are forced to conclude that these body marks are not “protective”, but are merely natural chemical results due to light and heat.

Again, Grant Allen states that the white marks on the head of a tiger correspond to the distribution of the infra-orbital nerves, and claims that there must be some distinct connection between the nerve supply and the colouration of the animal. And all hunters of big game confirm the fact that the spots of the jaguar look like round patches of sunlight, such as would be seen through a screen of leaves, and that the stripes of the tiger closely resemble the tall grasses among which it moves. So even if the origin of the body and fur markings is a commonplace chemical one, we find it almost impossible to pass over the protective value of such colourings.

Our difficulties, however, do not end here. Mr. Gregson (Zoologist, p. 7903) gives the results of his experiments with moths, and shows that food undoubtedly affects the colour. A diet of heather darkened the colours, whereas elm produced quite dull tones, almost markless. Thorn, on the other hand, deepened the red tints and the moths were all well marked, while grass intensified the yellow pigment. Those fed on birch were all beautifully marked, but those fed on currant were invariably light. The, colour changes thus brought about are obviously due to the change of food, the deposit of pigment (both as regards quantity and quality) being a question of waste matter. This easily explains the darker colourings, the deepening of the reds or yellows, but why should a

diet of birch or thorn produce beautifully marked specimens, while those fed on elm were almost markless?

Another curious point to remember is that a state of albinism does not do away with the markings. For instance, the “eyes” on the fan (tail) feathers of a white peacock are quite distinctly seen and readily recognisable. It is impossible to connect these with any bony under-structure, and they are no doubt due to hereditary influence. The albinism is not quite so complete where racial markings have for centuries been displayed.

We get the same peculiarity in some of our self-coloured Cats. Blues and blacks, for instance, frequently show tabby markings. This is not noticeable in whites, though a cream tinge on the spine is often found, due to incomplete albinism. It is rather curious that the extreme tip of the tail should be so sensitive to colour changes, but it is hardly ever true to colour. In most Cats it is much paler than the body colour; in blacks it is often a dark brown; in orange Cats it is frequently cream; while in creams and tabbies it degenerates to white. On the other hand, it is often cream in white Cats where albinism is shaky.

MacCurdy, describing his experiments with rats and guinea-pigs, quotes the case of a wild grey male rat, mated to a black female, the litter of seven young being all grey, with a small patch of white on the chest. At first, we are inclined to blame the black female for this curious albino variation, as these white patches are so often, in Nature, associated with melanism (blackness). But the same wild grey male was afterwards mated with an albino female, and the litter of young were exactly the same, all grey with the small white patch on the chest! Obviously, therefore, it descended from the grey rat, and this makes it very difficult of explanation. MacCurdy, in a further experiment, mated a wild albino male rat and a wild grey female; but the young all bred grey for three generations. In this case, therefore, it was the female who transmitted the colouring.

Alfred Tylor, in his book upon the colouration of animals and plants, goes very fully into the origin of colour. Put briefly, his suggestions are as follows:

That the lowest forms of Protozoa — themselves the lowest members of the animal kingdom, simply masses of jelly-like protoplasm with no distinct organs — have no system of colouring, being merely a uni-tint, generally a dull brown. In the higher members of Protozoa, there is a tendency to development in the shape of a pulsating vesicle, an incipient “organ.” This vesicle is invariably tinged with a different colour. Here, therefore, we are brought into contact with the first trace of a system of colouration in the animal kingdom.

It is owing to this all-pervading natural principle that we find the extreme points of quadrupeds so universally decorated — the tips of the nose, ears, tail and feet. There is an all-powerful tendency in Nature to do again what she has once done.

Colour variation, therefore (he claims), depends upon the distinctive action of internal organs and bone (or other opaque matter) as against that of light. The physical cause of colour, as seen by the human eye, is due to the vibrations of light, chiefly from the sun. The mean speed of these vibrations is 185,000 miles per second. In that brief space of

time, could our eye nerves work quickly enough, we should recognise four hundred and fifty million million (450,000,000,000,000) tiny wavelets of colour pass (in a single second, remember), and as we looked upon the last of these, the first would already be 185,000 miles away!

Truly, Nature's doings are stupendous.

It is easy, therefore, to realise that self- coloured animals are non-existent. We may call them so for simplicity and convenience, but it is against every tendency of Nature. The so-called self-colour is made up of a multitude of shade variations, all closely approximating.

There is one general law of colour, universal in application, that colour is invariably most intense upon that surface on which the light falls. In most animals, obviously, this is the back. But colour, where diversified, follows the anatomy of the animal and changes at definite points (such as joints) where any special function changes. In tabby, or barred animals, repetition accounts for the "rib- marks" so often continued into the dorsal region, as Nature has a marked tendency to continue variation (of any kind) when once begun.

The hereditary continuance of definite colouration depends upon the varied combination of three natural laws:

(1) The law of heredity, by which the offspring would naturally resemble one or other of the parents; (2) the law of variation, by which the offspring has an individual character, differing from either parent, because due to a mixture of the characteristics of both parents; (3) the law of multiplication or survival of the fittest, by which more individuals are born than can possibly survive, thus automatically tending to weed out and eliminate the unfit.

Cats generally have dark stripes over the dental nerve and cheek bone, as also along the orbital nerve on the forehead; dark rings round the ears; and marks on the jugular vein. Colour variation, as already stated, appears to be primarily due to the great nerves and nerve centres, bones, or important vital organs, the stripes so common on the head (and so difficult to breed out for self-colours) falling into two lateral masses corresponding with the cerebral hemispheres, and separated by a straight line corresponding with the median fissure of the brain.

It is rather curious to note that, while the tabby (or barred) type is the most common among our domestic Cats, a self-tawny colour is more general among the big Cats. Beddard ("Animal Colouration") states that this tawny colour is due to a lack of moisture in desert animals; and without doubt we may assume that it is not due to a yellow pigment (as such), but to the uniform distribution of a small amount of dark pigment.

We know that the baby lion is more or less spotted (traces of spots can also be seen in the female), showing the descent from a spotted ancestry; but so also is the baby tiger, though in the latter case the spots develop into the well-known stripes. This forms an interesting proof of their original common ancestry, acted upon by the rigid laws governing the survival of the fittest, the lion and puma living in open country under the protection of their self-coloured skins, while the tiger with his stripes finds safety in the jungle. The leopard and jaguar living in forests retain the original spots.

According to Beddoe, dark-haired humans (in Britain) are far more prone to phthisis than the fair-haired. He thinks that this explains the elimination of dark people from cold climates; so apparently fair people are less fitted to survive, or become dominant, in hot countries. The pale tawny colour of our “big Cats” seems to contradict this.

Tylor, in his “Colouration of Animals”, suggests that all stripes and markings began as spots, due to some local disarrangement of the colour pigment. He quotes the ordinary rash, as seen in diseases such as measles, which begins as a set of minute red spots which run together and become bars. We have already drawn attention to the spots on the baby lion, and must not forget that the tawny adult has a very marked dark dorsal stripe, while the nose and other points are emphasised in colour.

Tylor’s theory of colour is an interesting one, and is well shown in the following brief reference to butterflies and moths, probably the most beautifully coloured creatures in the universe:

“The wings are moved by powerful muscles attached to the base of the wings close to the body and to the inside of the thorax, all the muscles being necessarily internal. There are two sets which depress the wings; firstly, a double dorsal muscle, running longitudinally upwards in the middle division of the thorax, and secondly, the dorso-ventral muscles of the hinder division of the thorax, which are attached to the articulations of the wings above and to the inside of the thorax beneath. Between these lie the muscles which raise the wings and which run from the inner side of the back of the thorax to the legs. When we consider the immense extent of wing as compared with the rest of the body, the small area of attachment, and the great leverage that has to be worked in moving the wings, it is clear that the area of articulation of the wing to the body is one in which the most violent movement takes place. It is here that the waste and repair of tissue must go on with greatest vigour, and we should, on our theory, expect it to be the seat of strong colour emphasis. We commonly find it adorned with hairs, and the general hue is darker than that of the rest of the wing and never lighter than the body of the wing. Even in the so-called whites, this part of the wing is dusky.”

Colour undoubtedly fails after death, which we should expect if we accept the theory that the deposit of pigment is due to waste elements caused by extreme physical effort and repair.

It has been urged that the constancy of animal colour indicates utility in the struggle for existence, and that the easy variability of domestic animals is due to the fact that Man has relieved them of this constant strain. This may well be the case, for, supposing a marked variety occurs in a wild species, there are many chances against its survival. It may not even reach maturity, its variation from type possibly setting the parents against it; or, again, it may not find a mate, and, if it should, the offspring might resemble the female, as there would always be such strong hereditary influences against the perpetuation of the variety.

If, however, the human fancier wishes to carry on this chance variation, special care is taken of the young animal and a suitable mate is found.

“The fact is [says Beddard] that not only is colouration, with a few exceptions, constant for a given species, but it is also, with a wider range of variation, constant to genera and to families. We find green to

be a very common colour among parrots, touracons, and other tree-frequenting birds, but this colour does not occur at all in plenty of other genera and families which equally live among trees."

Green, however, appears to be an impossible colour among mammals, though many of them, such as the Cat and monkey families, live among trees. A green Cat would be a distinct novelty, but is probably quite an impossibility.

It is, indeed, a remarkable fact in Nature that brilliant colours are absent in the Mammalia. To this rule there are no conspicuous exceptions; a few monkeys have red or blue patches, but there are no mammals which can be compared in point of brilliancy and variety of colour even with such a plain and unobtrusive bird as the common everyday chaffinch.

The colours of mammals are generally confined to dull shades of brown and orange, with black (melanism) and white (albinism). The Cape golden mole appears to be one of the few exceptions, and it is remarkable that it should be so in an animal that spends most of its time underground. It is very difficult to imagine that its bright colouration is of any protective value to the creature.

Many experiments have been made to test the effect of food upon colour pigments. It has, for instance, been proved that cayenne pepper will alter the yellow colour of canaries to an orange red. But this can only be done in very young birds whose feathers are not matured, or through the old birds while sitting on the nest, giving them food containing cayenne, with which, in their turn, they feed their offspring. But when carmine was introduced the yellow colour was destroyed and the birds became white. This unexpected result was due to the fact that a mixture of violet and yellow produces white.

Temperature and moisture also affect colour, and no doubt they act both directly and also indirectly through food. For instance, it is well known that albinism (or whiteness) is much more prevalent in northern districts. The colours become less sharply defined, then gradually blend with the surrounding tints; the red first disappears, then follows blue, while yellow remains the longest.

This seems to suggest that mammals, as a class, originated in the northern districts of the world, and birds in the warmer and more tropical parts. An objection may be urged that Alpine plants are usually very brilliant in colour, but of course, the pigment in mammals, birds, and butterflies is very different from that of the flowers, the animals being without chlorophyl, so that the same conditions may, physiologically, produce very different effects.

Mr. Wallace, however, points out that we must not rashly assume that heat and light are responsible for colour. It is true, he admits, that there are more brilliantly coloured animals in the tropics than elsewhere; but then it is equally true that there are more animals. Animal life is naturally at its maximum in the tropics.

Sexual difference of colouring is seldom seen among mammals, the only instance worth recording being in the lemur, a species of monkey or ape. In this animal (Lemur Macaco) the male is black and the female brown. But in another lemur (L. varius) there is so much individual variation of colour that scarcely any two appear to be coloured alike.

This undoubted animal characteristic destroys at once the old-fashioned idea that the original male Cat (of the type from which our modern domestic Cat is descended) was an orange and the original female a tortoise-shell, or tricolour. This belief was long held because all orange Cats were males and all tricolours were female. It was therefore only natural for non-scientific Cat lovers to conclude that they represented the male and female of the same original species.

Such an idea will not bear the slightest investigation, and in this connection we must bear in mind the stubborn fact that, beyond the slight essential structural differences, there are practically no sex variations among mammals, the flowing mane and heroic build of the lion being a striking and unusual exception.

In recent years, too, the sex-colour difficulty mentioned above has been overcome. Breeders now possess plenty of orange queen Cats on the one hand, while a few male tortoise-and-white can be seen at most of the important Cat shows, though they are still very rare.

But in overcoming this peculiarity in the Cat world, we have merely stumbled upon another: the old-fashioned orange male Cats all had white chins, and an endeavour was made to get rid of this blemish. It proved successful, and when we got rid of the white patch we got the orange queens. On the other hand, we have never reared a pure tortoise-shell male Cat; but by breeding with white, we get an occasional tortoise-and-white tom. Why should the presence of white affect the sex question, as at first sight it appears to do?

There is another colour peculiarity connected with these tricolour Cats. The self-tricolour is really a ticked or speckled mixture of black, red-orange, and yellow; but when we mix white in and produce the handsome tortoise-and- white, the four colours stand out distinctly, in small irregular blotches of colour. Why should the admixture of white cause the three primary colours to separate?

Very little is known regarding the correlation of colour with other qualities, but Messrs. Dewar and Finn (“Making of Species”) draw attention to the association in Nature of black colouring with courage; yellow with a power to resist cold and damp; white with a lessened sensitiveness to cold; chestnut or bay with speed; and so on.

Of course, white (or albino) plants could not live anywhere — that is to say, pure albino strains. But the many variegated types appear to be less fitted to resist cold or damp, being far less hardy than their green cousins. So in the vegetable world, the correlation with white appears to be the reverse of what it is with animals. But we must not forget that albinism is most prevalent when animals are in a state of domesticity — protected from cold and damp, rather than exposed to them.

CHAPTER IV - PUSSY'S NAME

When we bear in mind the length of time that Puss has been a domestic friend of Man, we shall not be surprised to find, all over the world, a great similarity in the word used to describe her.

The English word Cat was in old Anglo-Saxon Catt; in Danish it is Kat, and in Swedish Katt; the Icelandic form is Kottr, Russian and Polish Kot,

German Katze; in France we have Chat, in Italy Gatto, and in Spain and Portugal Gato. The Latin form was Catus, Armenian Kaz, Turkish Kedi (the most distinct form of all), and the Arabic was Qitt. The Burgundian form was Chai, Picardian Ca, Provencal Cat, and Catalonian Gat.

This striking similarity of sound in so many diverse languages is, without doubt, due to Pussy's strong hold upon the affections of mankind. She was a much-talked-of animal, and therefore the primitive name was passed on from one nation, and from one generation, to another. One writer suggests that "Puss" as a name is derived from PERS, and he considers this a proof that Persia is the native land of our four-footed friend.

Although we frequently use the word "Cat" as a term of reproach or opprobrium for a fellow human being, the word is really extremely popular (and always has been) in proverb, local phrase, or word. Sailors use it frequently among their technical words, as, for instance, the following (with many others): Cat-head, Cat-tackle, Cat-purchase, Cat-hole, Cat-back, Cat-fall, Cat-rope, Cat-beam, Cat-block, Cat- hook, Cat-stopper, etc. A "Cat" also was the name of a type of vessel, now obsolete, that was used for carrying coal and timber on the north-east coast of our island. It is still applied to a small rig of sailing boats with a single mast, set well forward.

The word is also used in a number of children's games, such as Tip-Cat, Blind Cat, Cat's Cradle, Cat in the Hole, Cat and Trap, Cat's Carriage, Puss in the Corner, to say nothing of the too-well-known Cat-o'-nine-tails, which has not quite such playful associations.

Then we find many well-known and oft-used phrases, such as "A Cat may look at a King"; "Care killed the Cat"; "Enough to make a Cat speak (or laugh)"; "See which way the Cat jumps"; "Fighting like Kilkenny Cats"; "Bell the Cat"; "Letting the Cat out of the bag"; "Not room enough to swing a Cat"; "Grinning like a Cheshire Cat"; "Making a Cat's-paw of one"; "Cat-and-Dog life"; "Raining Cats and Dogs"; "When the Cat's away"; "The harmless necessary Cat"; "How can the Cat help it?"; " Cats in gloves will never catch mice"; "The scalded Cat dreads cold water"; "Before the Cat can lick her ear"; and many others.

It may be explained that the phrase "Grinning like a Cheshire Cat" refers to the fact that at one time cheeses (in Cheshire) were moulded in the form of a grinning Cat.

Then again the word is often used in describing other animals, as, for instance, the "Flying Cat," or owl; "Sea-Cat," or wolf-fish; "Cat Fish," or cuttle-fish; "Civet- Cat"; "Musk-Cat," and "Polecat," none of which are Cats in reality; the "Cat Squirrel," or grey American variety; "Cat-Bird," or American thrush.

In popular botany also the word is freely used, and we find such familiar names as "Cat in Clover," or bird's-foot trefoil; "Cat-keys" for the fruit of the ash-tree; "Cat Sloe," or wild sloe; "Cat Succory," or wild succory; "Cat Thyme," a species of teucrium that causes sneezing; "Cat-trail," or great valerian, so called because Puss is very sensitive to the scent of valerian; "Cat-tree," or spindle-tree; "Cat Whin," or dog-rose; "Cat-wort," or mint; "Cat's Claw," or kidney vetch; "Cat's Grass," or "Cat's Milk," for the sun spurge; "Cat's Spear," or reed mace; "Catkin," a familiar name for the clustered hanging flowers of the hazel,

willow, birch, poplar, pine, and others; “Cat’s Eye,” for the germander speedwell or forget-me-not; “Cat’s Foot,” for the ground-ivy or mountain cudweed; “Cat’s Tail,” commonly used for either the great mullein, the reed mace, the horse-tail (Equisetum), viper’s bugloss, or a well-known form of grass; “ Cat-brier,” or smilax; “Cat- chop,” for one of the curiously shaped family of Mesembryanthemum.

The Cat’s Head is a large apple of the russet variety, while Cat-Face is used for a mark in wood.

There are many other popular ways in which Puss is used to give point to our words, as when we talk of a Cat-nap, meaning our usual “forty-winks” taken when sitting up; or a Cat-hole, in reference to a hole in a wall or a deep pool in a river. And most of us have heard the phrase “Catlap” in reference to tea or any other “weak” drinks.

The Cat’s Eye is a well-known precious stone, a variety of chalcedonic quartz, very hard and transparent.

Catling is an old-fashioned word for kitten, and is also used to designate the smallest strings used on a musical instrument, though “catgut” (so called) is really made from the intestines of sheep. The word “Sea-catgut,” in reference to seaweed, is not so well known, though the analogy is obvious.

The word “Catling” is also used for a small, narrow, double-edged surgical knife, while the Cat’s Hair is a kind of tumour. Another very appropriate word is “Cat’s Purr,” to denote a certain thrill felt over the region of the heart in certain cases of heart disease.

The Cat’s Paw (a well-known phrase) is also used in architecture, and we also come across “Cat-steps,” as the name of certain parts of a gable roof, while a Cat-ladder is appropriate enough for a certain kind of ladder used on sloping roofs.

Cat Gold or Cat Silver are the names given to a brilliant variety of mica, while Cat Salt is a finely granulated form of common salt.

“Cat and Clay” is the curious name given to a mixture of straw and clay, which, when worked together, is used for building mud walls; while Cat-Brain is the word used for a soil consisting of rough clay mixed with stones.

The Cat-Call, as a method used by theatrical audiences to show their disapproval, is very well known, as also is the word “caterwaul.”

“Cats,” now more generally known as “Dogs,” were, of course, useful articles upon which things could be put before a fire: they are generally used for the fire-irons.

In medieval times a Cat was a movable penthouse used to protect besiegers when approaching a hostile gateway or wall. The same name was applied to a double tripod on six legs, so placed that, in any possible position, it always rested steadily on three.

It is difficult to explain many of these uses of the name of our domestic friend, nor is it easy to explain why a mess of coarse meal, clay, etc., placed in dovecotes to allure stranger birds should be called Cat!

And why should the iron bar used for securing a door be called a Cat-band?

It is not for us to say.

CHAPTER V – THE CAT IN HISTORY

Outside Egypt the early history of the Cat is not very clear, and is, in many cases, merely fable. There is no proof that she was domesticated in Babylon or Assyria; while in Rome and Athens Puss appears to have been as badly treated as she was venerated in Egypt. Theocritus compares a lazy slave to a Cat; and Damocharis (a disciple of Agathias) comments as follows: “Detestable Cat, rival of homicidal dogs, thou art one of Actaeon’s hounds. Thou, base Cat, thinkest only of partridges, while the mice play, regaling themselves upon the dainty food that thou disdainest.”

Champfleury remarks: “I have gone through more than one museum of antiquities, examined a great number of publications, and questioned divers archaeologists, but I cannot discover that the Cat is represented upon any vase, medallion, or fresco of the epoch of the Decline and Fall.”

According to Palliot (“La Vraye et parfaicte science des armoiries,” Paris, 1664), the Romans frequently blazoned the Cat upon their shields. One company had a sea-green Cat on a white or silver shield; another carried a half-cat, red, on a buckler; while a third showed a red Cat with one eye and one ear.

But no Greek monument shows Puss. Homer, who tells the story of the hound Argus, does not mention the Cat. As a pretty plaything, Puss was brought from Africa to Europe before the Christian era, but the veneration shown by the Egyptians no longer surrounded her.

Among the Celtic people (according to Champfleury) the Cat was not a domestic animal. This he proves by a reference to the tumuli, in Europe and Northern Asia, by M. de Blainville, in which he found great quantities of the bones of the bovine and ovine species, together with those of deer, dogs, and swine; but there were no remains of the Cat.

In Turkey, as in most parts of the East, Cats have always been favourites, possibly because of the extreme affection shown for them by Mahomet. They may enter mosques, where they meet with caresses and every attention, and they are treated with as much consideration as the children.

In Cairo there is an endowment for lodging and feeding homeless Cats. This was founded as far back as the thirteenth century (about 1260) by El-Daher Beybars, Sultan of Egypt. There is a daily distribution of food — principally refuse meat from the butchers — and at the official hour all the terraces in the vicinity are crowded with Cats!

“There is an admirable permanence about Oriental customs which we of the West regard with envious scorn,” says Agnes Repplier. “Seven centuries have elapsed since El-Daher Beybars atoned for the misdeeds of his fierce life by gentle charity. His gilded mosque has crumbled into ruins, the site of his orchard — called Gheyt-el-Quottah, the Cat’s Orchard — is

unknown; his legacy has lapsed into oblivion. Yet the Cats of Cairo receive their daily dole, no longer in memory of their benefactor, but in unconscious perpetuation of his bounty."

In Florence there is a cloister, situated near the Church of St. Lorenzo, which serves as a house of refuge for Cats.

A once popular tradition maintained that Cats were first introduced into Northern Europe by the Crusaders, but this is merely one of those numerous charming but fanciful morsels of history. Long before Peter the Hermit was preaching, Puss was sleeping by English firesides. The "Ancren Riwle" of 1205 denied to all nuns, even abbesses, the possession of any animals but Cats. As the old Saxon manuscript has it: "No best bute Katane" (no animal but one Cat). It has been suggested that this custom led to the traditional saying which associates Cats and old maids!

In Mill's "History of the Crusades" an account is given of the fete of Corpus Christi, held in Provence, when the finest male Cat of the district was wrapped up in white dressings, placed in a magnificent shrine, and exhibited to the people. Everyone knelt before the Cat, strewing flowers or offering incense. One wonders what Puss thought about it all.

It is somewhat painful to contrast the universal kindness to the Cat in the East with the ghastly barbarities practised in the so-called civilised West in the Middle Ages. It is humiliating to remember that it was not till the middle of the eighteenth century that the wife of the Marshal d'Armentieres obtained from her husband an order for the suppression, in Metz, of the custom of flinging live Cats into the bonfires kindled on the festival of St. John, June 24. For this ceremony the magistrates used to assemble with much solemnity in the public square, and place the cage containing the Cats on the funeral pile, to which they then set light!

The Turk, although he enjoys an unenviable reputation for cruelty, has never been, and is not now, cruel to animals. At Persian Banquets, troops of Cats glide in and out among the guests, offering no disturbance. In Siam and Burmah, Puss is treated with every consideration; and the Hungarian scientist, Vambery, is quoted by Miss Repplier as telling of a Buddhist convent, in eastern Thibet, where there were so many Cats, all sleek and fat, that he asked the pious inmates why they thought it necessary to keep such a "feline colony."

"All things have their uses," was the serene reply.

The god of Egypt, the plaything of Rome, became in the West a symbol of witchcraft and evil. Many extraordinary cases are recorded of witch trials, in which poor Puss shared the tragic fate of her mistress, generally by burning.

One result of this is seen in the scarce use of the graceful little animal in the church and cathedral decorations of those centuries of barbaric Superstition. Two droll Cats can be seen in the old minster in the Isle of Thanet. San Georgio Maggiore, in Venice, shows several, but these carvings were done by Albert de Brule at the end of the sixteenth century, when superstition was losing its grip on the popular mind.

The Coronation of Queen Elizabeth — the “good” Queen who was responsible for so many deaths by fire — was disgraced by the burning of a wicker-work “Pope”, the interior of which was filled with live Cats. When these unfortunate little animals screamed in terror, while being thus burnt to death, the spectators were delighted, saying that it was the language of the devils who had possession of the body of the holy Father.

So much for Humanity a couple of hundred years ago!

The dull-witted country folk of England roasted Puss alive, because they believed that such an act brought good luck to the house; in Scotland they spitted her before a slow fire. Cat-worrying was, for centuries, as recognised a “sport” as cock-fighting.

It is in France that we find the first signs of the modern turn of the wheel that has restored Puss to the place of favour that she has never lost in the East. The French country houses built in the seventeenth century were all furnished with “chatieres” or little openings cut in the doors for the accommodation of Puss, who was, in consequence, able to come and go at her own sweet will.

Probably we have all heard of the amusing case of the absent-minded philosopher and Cat-lover, who had two holes cut in the door, one for the mother-cat and a smaller one for the kittens!

Many prominent Frenchmen of the last two centuries were great lovers of Puss. Richelieu delighted in the gambols of kittens, and found them his only relief from his natural melancholy; but he gave them away when they grew up!

Mazarin’s love for Cats was more real and thorough, and, like Cardinal Wolsey, he made actual companions of them.

Frangois de Moncrif wrote a series of letters in praise of Cats. In his verses we read of his many Cat friends: Marmalain, Tata, Dom Gris, Menine, Grisette, and others. After his election to the French Academy, he was chaffed about his “ Histoire des Chats”, and withdrew the book from circulation.

La Fontaine, Madame la Duchesse de Bouillon, and many others could be named from this period. The Pontiff, Leo XII., made a most intimate companion of his Cat, Micetto, who was born in the Vatican, in the loggia of Raphael. And many Popes, besides Leo, have been devotedly attached to their Cats, “Gregory XV. cherishing his pets with exceeding fondness, while Pius IX so delighted in his Cat that he shared his meals with this little companion, whose dish was placed at his feet and filled by his kind old hands.” Victor Hugo was blessed in his feline society. All his Cats were serene, quiet, and dignified; and one of his friends, a M. Mery, remarked: “God made the Cat that Man might have the pleasure of caressing a tiger.”

“Sainte-Beuve’s Cat,” says Agnes Repplier, “would sit for hours on his master’s table, watching that swift and steady pen travelling down the page and sometimes encouraging it with a soft approving pat. He would step gently backward and forward over the loose sheets; the delight which all Cats take in the contact of crisp paper being doubtless enhanced in his case by appreciation of the courseries with which those sheets were covered.”

In all probability, however, it was not from appreciation of the courseries, but the fact that his master's hand had left its peculiar personality on the paper.

The "Black and White Dynasties" of Cats that ruled over Theophile Gautier's home have been mentioned in every book upon Cats. We need only refer to that amusing story of the big grey Cat that flew at and bit Mme. Gautier's legs when she scolded her son!

But we cannot refrain from once again putting on record a few of Gautier's references to his pets. "It is a difficult matter to gain the affection of a Cat. He will be your friend, if he finds you worthy of friendship, but not your slave. He lies for long evenings on your knee, purring contentedly, and forsaking for you the agreeable society of his kind. Sometimes he sits at your feet, looking into your face with an expression so gentle and caressing that the depth of his gaze startles you. Who can believe that there is no soul behind those luminous eyes!"

In spite of the frequency with which we come across Puss in English life, it was not until comparatively recent years that she was more than tolerated.

There are a few isolated cases to the contrary before the eighteenth century, but they are the exceptions that prove the rule. The most striking, and best known, is the Cat of Cardinal Wolsey, who shared his master's seat in Council. There is also the faithful Cat of the unfortunate Duke of Norfolk, who was imprisoned by "good" Queen Bess from jealousy of her fair cousin. This loyal little Puss actually made her way down a chimney to the Duke's room, and was thereafter permitted to share his captivity.

Lord Westmorland's Cat also freely shared her master's confinement, while Sir Henry Wyatt's furry friend followed him to the Tower.

In more recent days Sir Walter Scott inspired the most steadfast affection in every animal he met; while at Naples he visited the

Archbishop of Taranto, another Cat-lover, and promptly fell in love with all the pets. These animals were also referred to by Sir Henry Holland, who remarked that he scarcely knew which he admired the more, the prelate or his Cats!

It is worth noting that the return of poor Puss to a position of favouritism was largely due to the Church, a strange fact when one remembers the ghastly years of religious persecution and burning to which Cats had been subjected in the civilised West.

We have mentioned three or more of the Popes; while Richelieu, Mazarin, and Wolsey were not the only Cardinals who delighted in the companionship of their Cats. Of Bishop Thirlwall a story is told that might equally be quoted of many others. A visitor, who observed that the venerable Bishop looked wearied, asked him why he did not use his easy chair. "It is already occupied," said the Bishop, pointing to a big grey Cat fast asleep on the cushion.

Canon Liddon was the proud possessor of many Cats, as also Archbishop Whately.

Indeed, turn where we may, we see the same consoling picture: Puss restored to her old position of comfort and friendship, valued for her quiet sympathy, for her peace-loving ways. Southey, Sterne, Charles Lamb, Christopher North, Shelley, Johnson, Lord Byron, Scott, Matthew Arnold, Canning, Marshal Turenne, Lord Heathfield, Charlotte and Emily Bronte, Miss Edgeworth, Wordsworth, Carlyle. “Chosen companion of students, valued friend of careful housewives, and genius of the quiet fireside, she gives to Man, in return for his protection, nothing but her gracious presence by his hearth. The serenity of her habitual attitudes, her enjoyment of cushioned ease and warmth, have endeared her naturally to men of thought rather than to men of action. The race of authors have found in Pussy’s gentle presence a balm for their sensitive souls: to understand the character of a Cat, to respect her independence, to be charmed by her gentle moods, to appreciate her intelligence, and to love her steadfastly!” (Agnes Repplier: “The Fireside Sphinx.”),

CHAPTER VI – SUPERSTITIONS ABOUT CATS

Black Cats and skulls have always been associated with magic and witchcraft, the most powerful weapon for spells being the skull of a black Cat that had been fed on human flesh. Yet in the earliest years of the ancient Egyptians Puss was considered sacred, and had her special goddess; towns were dedicated to her service, and at death she was as carefully embalmed as her master. It is, indeed, almost impossible to fix a time when the Cat was not a domesticated animal and a companion of Man, and there can be no doubt but that she responds more easily and more fully to Man’s mood than any other animal, even the dog. It is true that she is more independent than the dog, and in a sense, therefore, less companionable; and, of course, one cannot take a Cat out for a walk as one can a dog. But this very independence of habit proves Puss to be the possessor of a stronger personality, and her faithfulness to those she loves is as great as, or greater than, the dog’s. Her vocabulary of sounds is much more varied, and, as a rule, Cats are fond of music, which shows that their sensibility to sound vibrations is similar to that of Man.

Under the Egyptians the male Cat was likened to the sun, and the female to the moon, and they held a very enviable position. In case of a fire, Puss was the first to be saved. But for some unexplainable reason the Cat passed from this state of semi-worship. So many ancient Eastern “fairy-tales” show Puss triumphant over her enemies through her cunning and cleverness, and so presumably she gradually became associated with magic and witchcraft, a curious perversion of her original position.

One can safely state that no other animal has suffered so much through association with superstition as the Cat. Often, as the companion of a witch, poor Puss perished in the flames with her mistress. In China people sometimes reverence the ghost of a Cat. They hang poor Puss, and then for seven weeks indulge in occasional prayer and fasting in her honour; this is supposed to bring prosperity. But if a neighbour whips the dead Cat, the luck is broken.

THE INFLUENCE OF THE BLACK

A black Cat in many districts is supposed, even to-day, to bring good luck; whereas in other parts a Cat is always thrown into a new house before anyone enters, the idea being that the first to cross the

threshold alive will be the first to cross it dead. In Cornwall it is said that sore eyes can be cured by passing the tail of a black Cat nine times over the afflicted eye. In other places, but not, I believe, in this country, blood from the tail of a Cat is believed to hold great healing properties. Another curious Chinese superstition is the hanging of hairs of Cats and dogs for eleven days outside the door of the room where a mother is lying. This insures that the baby will not be frightened by these animals.

We all know that a Cat is supposed to possess nine lives, yet this cannot be on account of any special vitality or power of endurance. Puss is not really long-lived, and if taken ill makes hardly any effort to assist recovery. The saying no doubt originated from her happy knack of twisting over while in the air and thus always alighting on her feet. Science is not able to explain this phenomenon satisfactorily; some authorities actually claim that the tail is used as a rudder; but they do not tell us why, if this be the case, all tailed animals have not the same power.

In Scotland and the North of England it is considered unlucky for a Cat to die in the house, and Puss is generally removed to an outhouse when ill, which, perhaps, is unlucky for the Cat. In Devonshire it is believed that a Cat will not remain in a house that contains a corpse, and stories are told of disappearance on the death of an inmate and reappearance after the funeral. Yet many of us know cases of a faithful Cat refusing to leave the bed of her dead master, ignoring food and dying, practically of a broken heart, on the bed. But Puss certainly does not like an upset in the house, and this probably explains the mysterious disappearance of the Devonshire Cats at such times of stress and unrest.

Sailors are notoriously superstitious with regard to Cats. When Puss becomes unusually frolicsome, they say it foretells stormy weather. At Scarborough, in former days, the fish-wives believed that by keeping a black Cat they insured the safety of their husbands when at sea. In Russia a Cat is put into a new cradle in order to drive away all evil spirits from the infant. Another superstition is that if a young maiden is fond of Cats she will have a sweet-tempered husband. In all probability I fancy the husband would have no better time because of it. Some people believe that a Cat, to be a good mouser, must itself have been stolen. In Sicily it is held to be a bad sign if the Cat mews while the rosary is being counted.

“A LUCKY SNEEZE”

If Puss sneezes on the bridal morn, it presages “ good luck” to the fortunate bride!

Amongst others, Hindus believe in the transmigration of the soul—from humans to animals — and it is a remarkable fact that, owing to some curious coincidences noticed on the day of the death of a governor of Bombay, the Hindu soldiers believed that his soul had passed into the body of one of the household Cats. Whenever Puss quitted the house, between certain hours, she was duly saluted in full military form. This observance was honoured for many years by the Sepoys of various regiments.

It has been seriously claimed by Professor Garibaldi that Cats have a distinct language comprising several hundred words, and it is admitted by most leading physiologists that the throat and vocal organs of a Cat very

closely resemble those of man. The brain, too, is notoriously similar to the human, and differs only in weight and size. But all this was not known to the ancients, when witches were hanged or burned, especially in Scotland. A famous Scotch witch, Isobel Gowdie, burnt in 1662, actually confessed that she changed to a Cat at night and roamed the neighbourhood learning secrets. Joan Paterson, hanged at Wapping in 1652 for plaguing her neighbours under the semblance of a black Cat, was another so-called witch.

Margaret Gilbert and Margaret Olson, two women of Caithness, were accused of bewitching the family of a stonemason named Montgomerie by means of her Cats. It was seriously stated that these Cats entered the man's kitchen at night, though the place was bolted and barred, and that if cut in two with a hatchet, they disappeared only to return at a more favourable moment. Another witch confessed that she rubbed her naked body all over with a special black ointment that turned her into a Cat!

TIMES OF CRUEL PERSECUTION

The "Church Booke of Bottesford" gives the record of an extraordinary witch trial, where it is stated that the Earl and Countess of Rutland and their children had been bewitched by one Joan Flower and her two daughters, Margaret and Phyllis, by the aid of a black Cat called Rutterkin. The three women were hanged. A learned jurist, by name Keisner, collected the evidence given at a large number of witch trials, and showed that the Prince of Darkness appeared to his followers some sixty times as a cavalier, never as a woman, two hundred and fifteen times as a he-goat, but more than nine hundred times as a black Cat. And so it came to pass that poor Puss was cruelly persecuted through the dark Middle Ages.

In the reign of Queen Mary, it was a custom among those who hated Popery to shave the crown of a black Cat's head, in imitation of the monk or friar. At the Coronation of Queen Elizabeth, as related, a wickerwork Pope was carried through the streets, the figure being filled with struggling, screaming Cats! Spectators were delighted at this suggestion of the worthy Father filled with devils!

Yet, curiously enough, Puss has always been the companion of the learned. Petrarch had his pet Cats embalmed; Cardinal Wolsey had his Cat by his side when he gave audiences or received princes; Rousseau loved Cats; Sir Isaac Newton cut two holes in his door for his Cats, a large one for the mother-cat and a small one for her kittens! Dr. Johnson taught his pet to eat oysters; Henry James wrote his books with his Cat sitting on his shoulder; Paul De Koch, the French novelist, had thirty pets, and Cardinal Richelieu twenty. De Musset wrote verses to his Cats, and Edgar Allan Poe was a Cat-lover. The Pope gave Chateaubriand a present of a Cat, knowing that nothing would please him better; while Mahomet cut the sleeve from his garment rather than disturb a pet Cat that was sleeping thereon. Horace Walpole, Robert Southey, Shakespeare, Milton, Byron, Moore, Talleyrand, Benjamin Franklin, Julius Caesar, Thomas Gray, Sir Walter Ralegh, Lord Chesterfield, and many other great men, were all Cat-lovers.

Pussy's rapid progress in esteem appears to have begun in France, largely aided by Cardinal Richelieu. In the brilliant Court of Louis XIV., Puss enlarged her social triumphs, and thus from the absolute worship of the ancient Egyptians she passed through a period of stress and persecution

(too ghastly to detail here) as the familiar of witches and devils, until she at last has secured a well-deserved and enduring niche in nearly every household, in nearly every home.

CHAPTER VII – MENTALITY IN CATS

Louis Robinson, in his interesting book, “Wild Traits in Tame Animals,” suggests that the strong reasoning powers in Man were developed in self-protection, because his sense of smell is so small!

Just at first this appears to be rather far-fetched, but his argument is that Man comes from a tree-dwelling, fruit-eating ancestor, so that in his wilder years he did not need to track his food, or protect himself from enemies, by means of scent. Whereas the dog (or the wolf) gallops blindly and without thought along the tainted line left by the feet of his quarry, the primeval hunter had to infer, from a hundred small signs, what had passed that way. A broken twig, a shaking leaf, a shifted stone, all these told their tale, and so Man developed his powers of reasoning as a means of self-preservation.

This is the reason why “mental furniture” in dogs and men differs so essentially: “If you examine a human brain, you will find that the parts which first receive impressions from the nerves of smell are very small and rudimentary; but in the dog these olfactory lobes are large and full of ganglia, which are connected by innumerable telegraphic fibres with the main hemispheres of the brain. Hence most of the information we gather comes in through the channels of the other senses, and our ideas of external things are but little based upon the presentation of them offered by the organ of smell. The dog, on the contrary, forms his notion of the outside world more from impressions gathered in this way than in any other. He may be said, indeed, to think through his nose.”

Now, in the Cat, the sense of smell is no doubt stronger than in Man, but at best it is only very feeble. Unlike the dog, Puss has only a limited lung capacity, and therefore she cannot secure her supper by running it down, but instead she crouches out of sight and springs upon her prey as it comes towards her. In other words, she depends more upon her splendid eyesight than upon her sense of smell.

Now the eyes of a Cat are remarkable for their extreme adaptability. It is, of course, quite false to say that Puss can “see in the dark”; such a remarkable optical feat is quite impossible. But certain it is that she can see in the dusk long after Man’s power of vision fails him. Many people think that the Cat can see what is invisible to us, and it is quite a common thing to see a Cat obviously watching something that is passing across the room, unseen by ourselves. But whether Puss is watching a spook or a small insect is quite another question.

Grant Allen was probably the first to suggest that our appreciation of bright colours (and therefore of the splendours of the flower garden or of the sunset tints) might be owing to the arboreous and frugivorous habits of our very early ancestors, to whom the sight of red or golden-ripe fruit was naturally a keen pleasure, because it insured a good meal!

Poor “Little Mary”, what a part you have played in the world’s history and development!

This question of the sense of smell brings up another interesting point: the dog, dependent more upon scent than sound, frequently has drooping ears. Not so Man and the Cat, to whom sound is of far more importance. We may also note that the dog's call or cry is shrill, piercing, and far-carrying, whereas Pussy's note is soft and gentle as herself, except, of course, in the case of the harsh mating cry of the male.

Cats prefer deep tones, either in the voice of their masters or in music (of which, by-the-bye, they are very fond), as in the case of a stirring march tune, with a strong bass part. Many instances are on record of Cats sitting on the shoulders of a singer or a violinist. Theophile Gautier, referring to one of his pets, says: "She also had a taste for music. Seated on a pile of scores, she would listen attentively and with evident signs of pleasure to the ladies who came to our house to sing. But shrill notes made her nervous, and when the high A occurred, she never failed to shut the mouth of the singer with her paw."

Wotherspoon ("Knowledge") says very truly that "between the dawning consciousness of the infant and the full intellect of the adult, there is the widest possible difference of degree, but no difference of kind. We pass from one to the other by an unbroken series of gradations, and at no stage can we positively say, 'Here intelligence begins.'" "Practically all scientific men agree that instinct is stronger in animals than in human beings, and to a very great extent delays the full development of reason or intelligence. But that is a very different thing to denying any intelligence at all to other animals than Man. The same material is there, but when human beings neglected the use of their protective instincts, their intelligence rapidly developed.

Necessity has always been the mother of invention, and as Man strayed farther and farther from the simple primitive " instinctive" life, he gradually lost the keenness of his senses; and without that keenness the primitive instincts are very largely useless.

People are very often confused by the word "instincts" and perhaps it would be wise to give here the definition offered by Professor Romanes in his " Natural History of Instinct"; "Instinctive actions depend upon knowledge anterior to individual experience. They are actions which are performed by all individuals of the same species when placed in similar circumstances." In other words, instinct is inherited memory, automatic actions due to the inherited experience of countless previous generations of each species.

Thus in our tests of intelligence in animals, we must always bear in mind that the entirely unreal conditions seriously affect the animals experimented upon. Thus Thorndike spent many months putting dogs and Cats into boxes and watching how they released themselves. His conclusion was that it was purely by accident that they clawed around vaguely and indefinitely and so chanced upon the means of release. But his elaborate experiments were merely a waste of time, as obviously the poor animals were dominated by the one idea, the utter strangeness of their surroundings.

Upon this feeble basis he built his conclusion that the numerous recorded cases of Cats (not dogs) opening doors (by moving the latch or otherwise) were also due to accident. But all these authenticated instances occurred in the animal's normal home surroundings, when the intellect could peacefully work, even if slowly.

Then again, Man's artificial surroundings must often puzzle an animal, as, for instance, when a man undresses and slips into the sea, and then calls his dog. The animal, it has been recorded, at first fails to recognise his master when undressed, but wonders where the familiar voice comes from. We get a similar condition when sheep are shorn of their wool: the young lambs for some time fail to recognise the ewes.

It certainly appears as if animals inherit some extremely complicated instincts, as in the case of nest-building by birds, the vast majority of whom cannot possibly have been taught by their parents; or in the case of the cuckoo, who never by any chance imitates other birds, but invariably lays its egg in an alien nest.

But these acts are obviously instinctive — inherited memories, in fact — and though the greater part of the life of most wild animals is thus governed and ordered, it seems impossible to get away from the fact that the power of intellect is there as well, much less in degree than the mentality of Man, but the same in tendency and in action.

Mr. E. Davenport, in his extremely interesting book, "Domesticated Animals and Plants", draws attention to the thyroid gland in human children. If it fails to develop, the mental faculties are impaired, but the calamity can be averted by feeding the child with the thyroid substance taken from sheep. How can we ignore such a staggering fact as this: not only have animals the same thyroid gland as human beings, but the intellectual development of our backward children can be stimulated by its use?

CHAPTER VIII - CAT AND OTHER ANIMAL ANECDOTES

Intelligence in animals was not at one time recognised; they were looked upon as of an inferior creation. Yet animals perform many intellectual operations similar to those performed by ourselves. Many books have been written dealing with the lives of domesticated animals, and we are nowadays beginning to look upon this question with a broader sympathy.

Animals, like Man, have a free will and learn by experience. Their memory is excellent, their friendships strong and faithful, and when sensible of having done wrong, they will assume a pleading attitude, and only too obviously seek the forgiveness they do not always receive.

Dogs have saved the lives of many hundreds of children by plunging into water and dragging I hem out, and many a faithful creature has given up its life in such an effort. Clearly they are aware that danger threatens the child, and they know perfectly well what that danger is and how to assist.

Both dogs and Cats have rushed through flames to warn their friends of fire, and the author knows of more than one case where a Cat rescued, single-handed, a baby almost its own weight.

Cats have quite an extensive language of their own, and one observer made records of several hundred distinct cries or sounds made by a pet Cat, each having its own special meaning.

A horse, when it loses a shoe, will go of its own accord to the blacksmith's shop where he has been shod. A dog, when hurt or wounded,

will go to a friend for assistance, and if he chances to find another lame dog, will bring him also for help.

Birds repair broken limbs by making a splint of feathers plucked from the body mixed with mud or blood, thus doing as our own surgeons do when they make a plaster cast.

An elephant, worried by flies, will break a small branch off a tree and use it to get rid of the pests. If there is an object on the ground that he cannot reach, he knows quite well that by blowing beyond it he can drive it towards him. Cattle feeding in a pasture are more skilful than Man, for they easily discern which herbage is good for food and which for medicine, and which is to be avoided as poison.

A horse, after being absent for eleven years, returned to its old home, and recognised his owner, his stall, the way to the brook, and all the spots where he used to find the best grass. An elephant has been known to remember a former keeper that it had not seen for seventeen years, and at the first request readily performed some tricks taught by the man that it had not performed for all those years.

A poor man in Edinburgh named Grey, owned a bright little dog called Bobby, and they were wonderfully attached to each other. Mr. Grey died, and poor little Bobby fully realised the loss of his friend. He followed his master to the grave and refused to leave. The sexton found him there next morning, and, as dogs were not allowed in the cemetery, he removed him. But he always found his way back, and was regularly removed by the sexton each morning. Finally, a kind-hearted restaurant-keeper agreed to give Bobby his meals, and from that time the little fellow was left in peace and for many years slept on his master’s grave. After his death the Baroness Burdett Coutts erected a monument to the memory of this faithful little fellow.

Carrier-pigeons can be taken hundreds of miles from their homes, and when released will fly back in the most direct line. Horses, dogs, and Cats all have this homing instinct, and many really wonderful stories are told of their return, under great difficulties, to old friends and old haunts.

The intellectual faculties of Man are superior to those of animals, but that which we call instinct is far stronger in animals. The same remark, however, can be made of all primitive peoples and races: their intellect is no higher than that of animals until they come into contact with our modern civilisation.

It is claimed that the knowledge of immortality is an instinct only possessed by Man, but how can we honestly believe this when many of the greatest thinkers of the world have acknowledged that many animals have a distinct knowledge of the approach of death? There are innumerable records of the howling of a dog at the time of a death when the animal was in a totally different part of the house and could not possibly have had any personal knowledge of the sad event. There are also many proved cases of Cats showing intense uneasiness when a death has occurred in some other part of the house.

A Cat will go to a door, pat it with its paw, and look round in the obvious knowledge that you can, and will, open it. Without any training, a Cat will regularly open a latched door by jumping up and putting its weight on the end of the latch. I have seen hundreds of records of this

BROWN TABBY—"A FAVOURITE CORNER"

feat, and in no case was the animal taught the trick. It had obviously reasoned the matter out for itself, and decided that if the door opened when master pressed that latch, it would do so if Puss did the same.

There are records of Cats that raised the knocker on the centre of the outer door, and showed obvious signs of importance and dignity when the housemaid came and let them in. And the author knew a case of a Cat that wanted to get out of a room by the open window, but his master, wishing to keep him in, drew down the lower sash until the opening was too small for Puss. As soon as his master had turned away, Puss inserted his nose and forehead under the sash and reversed the process, thus gaining his liberty.

The intelligence of animals is really a mystery to us; we do not know what or how much they think. The Cat has, in many ways, the most highly developed personality, and often understands, in a most weird and startling way, the meaning of what you say to it.

The size of the brain does not determine the amount of intellect; indeed, many of the lower animals have larger brains, in proportion to size, than the most intellectual of the human race. The brain of a Cat so closely resembles that of Man that it has forced an unwilling admission from anatomists and physiologists that they differ only in weight and size. The throat and vocal cords of a Cat are also very similar to our own, and this explains the softness of the ordinary cat-calls.

MacLaughlin, the Scotch mathematician, worked out, by most elaborate calculations, a problem that had troubled Man for centuries: at what point should certain lines meet so as to give the most room with the least material and give the greatest strength in the building? After immense and wearisome labour he solved his problem, only to find that this exact line and building were formed in the cells of the common bee.

Both Cats and dogs have a distinct knowledge of time, and will hurry in almost to the second for meals or other regular functions. A story comes of a Hampstead Cat that never ventures up from the kitchen regions except on Sundays, but as soon as he is released by the cook on the seventh morning, off he goes upstairs.

That very mysterious pineal gland, a small heart-shaped, pulpy substance found in the brain of Man and long considered the seat of the soul, has now been found in the lower animals.

That curious nervous function called mesmerism or hypnotism affects animals in just the same way that it affects the most learned and intellectual human. Apparently it separates the mechanical functions from the mental, the mind of the operator serving as the motive power. Dreaming, also, is common to both man and animals.

That animals have a moral sense has been proved time and time again. How, indeed, can we, with satisfaction to our vanity, compare the unselfish love and devotion of a dog or Cat, the trust with which he looks up to his master as a superior being, with the purposeless worship of a wooden idol by a Hottentot? The Cat or dog worships a living, intelligent being, capable of rendering help and assistance in many wonderful ways; while the savage, though a human being, worships (often with a sacrifice of blood) such senseless objects as wood and stone, often carved by himself.

When we compare the moral sense, the knowledge of right and wrong, of many intelligent and kind-hearted animals, with the low and degraded types of Man, how can we question the fact that many such animals have a higher instinct of religion?

A dog will often resist abuse from a grown-up person which he would allow in a child without any attempt to protect himself. A horse will allow a child to crawl beneath him and cling to his legs without making any effort to dislodge or hurt the child. A Cat, similarly, will allow a child to pull its fur and drag it about in a way that must often be distinctly painful, yet it will never resist or resent it.

Animals' sympathy and love for each other show a distinct moral sense. They will defend each other against an enemy. Cats, dogs, and birds regularly feed and assist the old and helpless of their kind. A curious case was recorded in 1876 from Madras. A man who owned three Cats was obliged to leave for a few months' duty elsewhere, and his rooms were occupied by some young fellows who somewhat carelessly knocked the Cats about. One of the animals had kittens and kept them carefully hidden, but as soon as her master returned to the house, Puss brought out her babies and laid them, one by one, at her master's feet. Obviously the train of reasoning was that her young were now safe from danger.

Another story of a Cat's reasoning power is told by Professor Romanes. While a lamp was being filled with oil, a few drops of paraffin fell on the coat of a Cat sitting near the fire. As bad luck would have it, a cinder popped out and Puss was badly burnt. The door happened to be open, and the Cat dashed at full speed up the street and plunged into the trough of water provided for the benefit of the horses. Now why did Puss do this? It so happened that the servant was in the habit of pouring water on the fire last thing at night to extinguish the blaze. Puss had seen this on many occasions, and as soon as her fur caught fire, she made at once for the nearest water she knew of.

Another Cat story showing an amusing sense of reason. One evening no one was in the kitchen. Cook had gone upstairs and left a bowl of dough to rise by the fire. Shortly after the Cat rushed upstairs and showed by every means in her power that something was wrong. The cook was a

sensible woman, and hurried down and found that the household parrot was caught in the rising dough and was almost smothered.

Mr. T. B. Groves tells, in Nature, of a Cat that tried to fight its own reflection in a mirror. Meeting the resistance of the glass, Puss ran quickly behind the mirror. Not finding the object of his search, he came back to the front. Then, being puzzled, he took up his position by the side of the glass, and while his head twisted round in front to make sure that his adversary was there, he carefully and deliberately felt all round the back of the glass. Having thus reasoned the matter out, he never again paid the slightest attention to a reflection.

Elephants are remarkably clever animals, and are used to assist in building and transport operations. They have a very keen and true knowledge of weight, bulk, hardness, sharpness, etc., and will quickly toss up a bundle of soft clothes or wrappings, whereas they handle an iron crowbar or a wooden beam slowly and gently. They will carefully pick up a knife by the handle, even if the blade is nearest to them, and will place it flat before the keeper in order that he may do the same.

They are very cautious when passing over bridges and artificial roads and platforms, and seem able to tell by examination (with the 111 ink) whether it is safe to trust their great weight. A case is recorded of an elephant who thus refused to step on to a temporary bridge. His driver struck him time after time In the soft fleshy bit behind the ear, but the .iniinal would not move. Hearing a commotion, the keeper came out, and the elephant at once seized his hand with his trunk, rubbed il on the bleeding wound behind his ear, and then held the man’s hand in front of his face lor him to see the blood upon it.

An elephant in Ceylon is known to have remained out all night, without food, rather than abandon his driver, who was lying intoxicated in the jungle. The big animal is often left by his keeper to play the part of nurse to a young child. The elephant is chained up, to prevent roaming, and the child is left free to play about as it will. But as soon as it strays to the limit of the elephant’s reach, the sagacious animal seizes it gently with its trunk and lifts it back again within bounds.

The intelligence of the dog is quite distinct from that of the Cat. The former comes from an ancestry used to roaming about in packs, and the dog therefore is essentially an obedient animal, as that was, of dire necessity, the first elementary instinct of its wild life. The Cat, however, has always lived an individual life, generally in pairs, and its intelligence has developed on quite different lines. If you speak to a dog it will thump its tail on the floor and show signs of pleasure, but very often if you speak to a Cat it merely ignores you.

This, however, is not from lack of intelligence, as many believe, but from lack of interest. The Cat is far more particular and exacting in its choice of friends and confidants. But when Puss does meet a real friend, after an absence, he will chatter in his own way for many minutes at a time.

A dog is much more easily trained than a Cat, and is often taught, by blows, to perform tricks. This would never answer with a Cat, who must, without exception, be taught by kindness, and kindness only. Cats are more like men and women, they are creatures of moods and impulses; their nature is more complex than that of the dog. A dog will take a blow from

its master; a Cat will generally strike back; but they are such sensitive creatures that a harsh word or a shaken finger is quite sufficient punishment for most of them.

The domestic life of dogs has made them, like Man, far more sensitive to pain. A wolf or a fox will bear the severest kinds of suffering without flinching, but a dog will scream if you accidentally tread on its toes. It is exactly the same with Man; the savage, the North American Indian, and even the more civilised Hindu will endure bodily injury without a moan, injury that would cause extreme expression of suffering from a European. The nervous system has become more highly refined, more distinct from the physical.

Dogs are very jealous animals, as we all probably know; equally great is their sense of justice. Both Cats and dogs have a keen sense of humour, although Puss enjoys a quiet smile as well as the more boisterous fun that appeals to the dog. The different shapes of the jaw may partly account for it, but the author has never seen a true smile on the face of a dog, whereas it is quite frequently seen on that of a Cat while she sits meditating by herself by the fire on a chair.

The wonderful work done by sheep-dogs need hardly be mentioned: it shows intelligence and cool judgment of a marvellous kind. An amusing case is quoted from Inverness, where, owing to a broken fence, a neighbour’s cattle had to be driven from a field by a sheepdog. When this had been successfully accomplished, the farmer returned home and did not at once notice that the dog had not followed him as usual. Wondering what had happened; he returned to the field and found the intelligent dog seated in the hedge-gap, daring the strange cattle to trespass again!

A Birmingham dog, who was very fond of biscuits and sweet cakes, used to beg for coppers, and when a penny or halfpenny was given to him, would run with it in his mouth to a particular baker’s shop. He would accept a small biscuit for the halfpenny, but never gave up his penny unless he got a large bun or a good slice of cake.

There are many recorded cases of a dog recognising a portrait of his master or mistress. In several the animal used to spend his time lying underneath the portrait during his master’s absences from home on business. It would almost appear as if the dog recognised by sight and the Cat by scent, as I know of one undoubted case in which a pet Cat, caged at a veterinary surgeon’s, knew of his master’s coming visit several minutes before the doorbell was rung. If this was not by scent, it was by some marvellous species of second sight, still more difficult to explain.

A dog will stop a runaway horse by seizing the bridle and throwing his weight on it, in the same way that a Cat will jump upon and hang to a latch in order to open a door.

Another interesting instance of reasoning is the case of a dog who was in the habit of accompanying his master for his evening walk. One day he missed him, ran quickly into two or three rooms downstairs, and then started up the staircase. He had only ascended a few steps when he was seen to stop and return to the hall, where he quickly examined the overcoats. He soon satisfied himself that his master had not yet gone out, and lay down contentedly to wait.

Mrs. Wood, the wife of Professor G. O. Wood, of Harvard Medical School, once possessed fifteen Cats. She states that on one occasion, when there was a brood of young chickens in the yard, she found all the Cats in a circle round the mother-hen watching the chicks, and when they hid under the hen, one of the Cats would put out his paw and drive the little chicks out again. No harm was done; it was quite clear that the Cats were thoroughly enjoying the fun.

But the Cat has a great sense of dignity and importance, far more so than is the case with the dog. Cardinal Wolsey's Cat shared his master's seat in Council; there was no "Woolsack" in those days. Perhaps because of their more sedentary lives, intellectual men have always been fond of Cats. One could quote hundreds of examples, but the following names are all well-known: Victor Hugo; Rousseau; Sir Isaac Newton, who actually cut two holes in a door for his Cats, a large one for the mother-cat, a small one for the kittens; Dr. Johnson taught his pet to eat oysters; Henry James wrote his books while his Cat sat contentedly on his shoulder, the same thing happening in the case of many musicians, organists, singers, violinists, and others, as Puss is very fond of music; Paul de Kock, the French novelist, had thirty pets, and Cardinal Richelieu twenty; De Musset wrote verses to his Cats; Edgar Allan Poe was a Cat-lover; Horace Walpole, Robert Southey, Shakespeare (or Bacon), Milton, Byron, Moore, Talleyrand, Benjamin Franklin, Thomas Gray, Sir Walter Ralegh, and many other great men, were all Cat-lovers.

[Note: the repeat of this section is because the book was originally published as several individual articles.]

An amusing story is told by a literary man of a Cat who would always take possession of an open book if left upon the table. Puss settled down in front of it, gravely turned over the leaves, and after a time would fall asleep.

Mr. Harrabee tells the story of a Norman Cat who considered that she was too well fed. One day she brought home a starving waif to share the feast, afterwards sending the animal away. Next morning her master gave her a double portion at breakfast just to see what would happen. The philanthropic Cat journeyed farther afield and brought home two hungry visitors. Being encouraged, she sometimes had as many as twenty pensioners who regularly came in at meal-times!

A Cat, if properly attended to, is not, as a rule, a thief. The author has been told of one who would never dream of tasting even the most dainty morsel unless it were put in her proper saucer. If this were left on table, dresser, mantelpiece — anywhere, Puss would get it and help herself. It was her saucer, and quite well she knew it.

A Flemish Cat, living in the country near Malines, outsped twelve carrier-pigeons, covered over twenty miles, crossing the Scheldt, and reached home well in advance of his winged competitors. How did he do it?

A very beautiful Cat was given as a mascot to the Italian skipper of an oil-tank steamer that ran between Savona and Point Breeze, Philadelphia. In the course of time, she presented the ship with a family of kittens, who were about a month old when Philadelphia docks were reached. Pussy went on shore and was found to be missing when the Bayonne was ready to depart. Search was made about the wharves, and Captain Hugo was compelled

to sail without his mascot, and also had to look after the welfare of the young family.

Next morning the prodigal found her way back, but another boat now filled the Bayonne's place. Dismayed, Puss visited every steamer in the docks, and at last took up her quarters in a watchman's box and patiently waited for Captain Hugo's return. Week followed week, and Puss carefully inspected every incoming boat. At last the Bayonne was sighted, and Puss recognised her from afar, and stood quivering with excitement long before the vessel reached dock. While twelve feet or more away, she cleared the intervening space and rushed straight to the Captain's cabin, where she had left her kittens two months before.

When Lusby's music-hall in London was burnt down in 1884, a Cat belonging to the management had recently kittened. Three times she made her way through smoke and fire and rescued a wee mite; her fourth attempt proved fatal. It does not lie in the power of man or woman to do more.

Cats and horses are always great friends, as also Cats and elephants. Failing these, Puss will often make friends with chickens, or a dog, or even a rabbit. White mice will frisk at her feet, but such friendships are only made with animals recognised by Puss as members, with herself, of "The Family"!

The Animals' Friend (1906) tells the story of a dog that played during the summer with logs from a small heap stored for winter use. But the first time one of these logs was thrown on the fire and burnt, the dog sat and whined all the time, showing intense distress, and never afterwards played with any of the logs.

From the same paper (1899) we quote the following case of friendship between a Cat and a dog. A basset-hound and a Cat were devoted friends and often fed together. But, given an even start, the Cat usually fared very badly. So one day the owner fastened up the dog whilst the Cat was fed; but before taking anything herself, Puss picked out the largest bone and carried it outside to her friend, then returning to her own meal.

The Spectator gives another interesting story of Cat and dog friendship. A servant took a kitten to a pond in order to drown it, but when he threw it in, the dog (who had accompanied him) swam in and rescued the little mite. A second time the man threw it in and the dog again saved it. But on the third occasion, the intelligent animal, after rescuing the kitten,; swam across to the opposite end of the pond, and, racing home, laid the kitten before the fire. They became inseparable companions, sharing the same bed, the dog sleeping with one of his paws placed protectingly over the Cat's shoulders, daring anyone to touch!

The Rev. J. G. Wood is responsible for the story of a mother-cat, playing with her kittens, when a hawk swooped down and seized one of the wee things. Being encumbered by the weight, it could not rise quickly, and the mother-cat made a spring to the rescue. The bird dropped the kitten and a pitched battle ensued. After some time the Cat, with its ears badly torn, succeeded in breaking a wing of its adversary; then, making a supreme effort, she laid it dead at her feet. One moment to make sure of her conquest by tearing the head of her foe to pieces, and the Cat turned to her kitten, licked its bleeding wounds, and began to purr as if she had not received the slightest injury herself.

A Mr. MacFadyen had a Cat named “Sense” because of her intelligence. She was particularly fond of raw eggs, a taste dating from her kittenhood when an egg had been accidentally dropped in her presence and she had been allowed to lick up “ the mess”. Although not a thief, she could not resist eggs, and if left alone (or apparently alone) in a room in which there were such dainties, she would fish one out of the bowl with her curved forepaw. Then, with a quick movement, she would toss it to the floor, spring down, and lap up the contents.

CHAPTER IX – THE CAT’S SENSES

Our various senses are so much a matter of commonplace in our lives that we do not, as a rule, give them any consideration. Most of us know, or have been told, that the blind, as a class, have certain other senses more highly developed, such as touch. But we must not for one moment imagine that this is a kindly, motherly provision on the part of Dame Nature.

The real truth is that in Mankind the development of our reasoning powers has led to a gradual lessening of keenness in our senses. So when the blind make a greater use of their sense of touch, they are merely regaining what their fellows, as a type, have lost.

Few of us realise that the sense of touch is the quickest to reach the brain. Professor Romanes details some very interesting experiments that prove that the sensations derived from touch reach the brain in one-seventh of a second; those from hearing in one-sixth; while those from sight need one-fifth, very nearly half an long again as those from touch.

Most people probably would put sight at the top of the list, yet this invaluable function is the most easily deceived of all the senses. There are many childish but interesting experiments made with upright and horizontal lines that completely baffle the eye. Another similar trick consists of drawing two men ascending a staircase, one man being stout, one thin, yet both of the same height. But the eye refuses to realise this, even when the fact is stated, and persists in the impression that the thin man is the taller.

Animals, without doubt, possess other senses, or powers equivalent to such, in addition to those usually associated with Man, such as the instinct or feeling for direction, shown in its perfection in the migratory flight of birds at the seasonal changes. Many extraordinary “explanations” have been brought forward to account for this, among them a suggestion that two areas of land, at one time adjoining, may have been separated by upheavals in early prehistoric ages, and that the birds still inherit the memories associated with the once close but now distant area. This theory has been seriously put forward and discussed by a prominent scientist, but it seems altogether too far-fetched, and we only quote it to emphasise the utter want of knowledge on the subject.

That strange bird, the cuckoo, offers us a puzzle, for the old birds migrate first of all, followed later by the new seasonal youngsters. The latter, therefore, must be guided entirely by inherited instinct, as they never see the parent birds and know nothing of their earlier flight.

Yet this sense of direction – or what you will – appears to be wonderfully keen in many animals, apart altogether from birds. There is an unimpeachable record of a Cat returning in four days from London to

Huddersfield, a distance of two hundred miles! How many human beings would care to travel fifty miles a day on their feet, through strange country, guided solely by an all-compelling craving for their home?

“The remarkable fact,” says Romanes, “is that the animals are able to find their way back over immense distances, even though the outgoing journey has been made at night or in a closed box. Moreover, it is certain that in many cases, if not as a general rule, the animals on their return journey do not traverse the exact route which they had taken in the outgoing journey, but take a bee-line, so that, for instance, if the outgoing journey has been made over two sides of a triangle, the return journey will probably be made over the third side.”

Professor Romanes also states that he could fill pages with letters from all parts of the world describing similar remarkable journeys taken by dogs, cats, horses, asses, cows, sheep, goats and pigs. He only quotes one case, that of a spaniel that returned home to Mentone, after being taken by rail to Vienna, covering a distance of one thousand miles.

Mr. A. W. Howitt, writing to Nature, gives a number of cases of horses and cattle. In some of these the return journey was made after a considerable lapse of time — months, even years.

Many small animals “migrate”, such as the badger, rat, mouse, polecat, stoat, weasel, and hare. Mr. Crotch speaks of the lemmings (a small rodent) and their migrations in Norway: “They traverse the broadest lakes and cross the most rapid torrents and the deepest valleys. They rear their families on the journey, and three or four generations serve to swell the pilgrim caravan. They winter beneath more than six feet of snow during seven or eight weary months; but with the first days of summer the migration is renewed. At length the harassed crowd plunges into the Atlantic Ocean and perishes with its front still pointing westward. No survivor returns to the mountains. There is [Mr. Crotch continues] a solution of this remarkable case. I allude to the island or continent of Atlantis. It is evident that land did exist in the North Atlantic Ocean at no very distant date. Is it not then conceivable that when dry land connected Norway with Greenland, the lemmings acquired the habit of migrating westward? It appears to me quite as likely that the impetus of migration towards this continent should be retained as that a dog or Cat should turn round before lying down on a rug, merely because his ancestors found it necessary thus to hollow out a couch in the long grass.”

What an all-compelling power this instinct must be!

In Mankind there is some slight suggestion of this lost sense of direction. Many people seem almost incapable of finding their way from place to place; others, setting out with a correct notion of the relative position of the place they wish to reach, are easily able to find it, even though they may have to pass through a previously unknown maze of turnings.

Some such explanation seems the only one capable of covering this “homing” sense. The Cat, or other animal, while being taken from its home, whether by train, road, or water, evidently retains a keen sense of the relative position. Then upon release it makes its way back by the nearest and most direct route. This would appear to explain why such animals, when moved, do not always perform this wonderful feat; obviously

they only do so when the sense of direction is very keen and compelling. The author knew the case of a Cat, when scared and alarmed by a dog, absolutely losing this sense of direction, although it had only bolted to a garden a hundred yards away from its own home. When found by its owner, it showed every sign of distress at being lost, and it was not till some twenty-four hours later that it fully recovered its wonted serenity.

Coming back to the everyday human senses, that of scent is very highly developed in animals, as it so frequently serves as a means for securing food or as a recognition mark. Yet some incidents that have been recorded can hardly be explained by a glorified instinct of scent, though something kindred appears to be involved.

Mr. Nicholls, the owner of a celebrated mastiff named Turk, tells a story of a son of that famous animal. For three generations (at least) this strain of dogs had always shown the greatest antipathy to butchers and butchers' shops. Paris (the dog referred to) would hardly enter a street in which such a shop was situated, and would run hurriedly away after being dragged past it. One day his master took him to Hastings, and, in the hotel, the dog sprang at a gentleman who entered. The owner caught the dog and apologised, saying that he had never known the dog to do such a thing before, except in the case of a butcher. The gentleman at once said that was his business.

A Cat separated from his master for several weeks showed every possible knowledge of his approach several minutes before he rang the front-door bell.

Professor Preyer has published a very interesting theory touching the origin of the colour sense, the suggestion being that it is a special and highly exalted development of the sense of temperature.

A finger that has been warmed or cooled retains the change of temperature for some time after it has been thus warmed or cooled, and this is taken to correspond with the phenomena of after-images in the case of colour, such as the appearance of warm colours in the eyes when closed immediately after having been exposed to cold colours, and vice versa.

It is well known that if a small colourless surface is enclosed between two surfaces of cold or warm colours, the small surface will appear inversely coloured warm or cold. Professor Preyer has shown that if a small portion of the skin be enclosed by cold or warm surfaces on either side, the small enclosed area will feel cool if the neighbouring parts are heated, and the reverse. Colour-blindness he explains by supposing that the retina of the individual affected is sensitive above or below the normal. An over-warm eye would be blind to yellow and blue; an over-cool eye would not be sensitive to red or green. Total colour-blindness, as in certain nocturnal animals, has its equivalent in a condition sometimes met with in human beings, a total absence of the sense of temperature without impairment of the sense of touch.

In this comparison between colour and temperature we might mention the rare cases of human beings able to differentiate various colours by touch only, the eyes being out of use either through blindness or by deliberate blindfolding. There is a well-known case of a blind organist, John Vermaasen, quoted by Mr. Crouch, who could separate black, white, red, blue, green, yellow, and grey. This man said that he found great difficulty in separating black and white, as they appeared almost equally

rough to his touch; in the same way red and blue were often confused by him. The author knew a similar case, though the man was not blind; still he had an extremely sensitive touch. And a blind botanist was living not long ago (and may still be alive) in Leeds, who used his lips and the tip of his tongue for distinguishing the colour and other distinctions of flowers.

Tentacles and antennae — and probably the stiff bristly “whiskers” of the Cat — are looked upon as organs of touch, distinct from that of the hands and feet (or paws of animals) as known to human beings; but this is by no means certain.

“In some cases, indeed,” says Bastian (in “The Brain as an Organ”), “we cannot decide as to the precise kind of sense endowment which pertains to an organ legitimately regarded as in some way sensitive.” And he quotes Messrs. Kirby and Spence as his authorities for the suggestion that the antennae of insects and the mouth bristles of Cats and their like may be the organ by which they foretell the changes of the weather.

“Bees seem in some way [he says] to become aware of the approach of a shower, and hastily return to their hives in time to escape it, when we perceive no indications of any atmospheric change.”

It is admittedly difficult for human beings to understand the more highly developed sense life of animals. Take the case of the dog, where the sense of smell is all-important. The world must be a very different one to this animal than it is to ourselves. However ludicrous it sounds, we must be prepared to admit that Man owes his highly developed mental faculties to the fact that he was, many thousands of years ago, a helpless degenerate.

It sounds amusing, but it is impossible in any oilier way to explain why neither his appearance nor his natural odour arouses in animals (unacquainted with his present habits and deadly powers) any instinctive hatred or fear, as do the appearance and odour of many reptiles and carnivora.

Man’s senses were early degenerate, his sight, hearing, and smell far less developed than those of the animals around him. The power of sight in the hawk, for instance, is twenty times that of Man! In the everlasting struggle for existence, Man became more and more dependent upon his wits, and less and less dependent upon his instincts and his senses; and the great gap, when once started, grew rapidly wider and wider until helpless, terrified Man (many children and adults still show the old instinctive dread of the dark hours) gradually dominated the whole life of the world.

In this connection it is interesting to note that the senses of smell, touch, and hearing are all deficient in birds, who have, therefore, developed their power of flight, as Man did his brain.

Sleep, in itself, can hardly be treated as one of the senses, but the curious instinct of hibernating appears to be connected with the sense of temperature that we have already discussed. The difference between sleep and hibernation appears to be that the former is not under our control, whereas the latter is more or less deliberate, as is shown by the elaborate preparations made even by young creatures who have never actually experienced this curious physical condition.

Animals, reptiles and insects appear to be affected by it, but not birds. In the latter case, no doubt, the migratory instinct has taken its place. Frogs, toads, tortoise, snakes, bats, and field-mice are perhaps the best-known examples of this phase of life. But the caterpillar, of course, passes through a practically inanimate stage, sealed up in an unyielding horny case, before it attains to the full glory of its winged state.

Charles Darwin calls attention to the curious manner in which sight and hearing seem to be interdependent. He gives a very important experiment performed upon kittens while their eyes are still closed.

“I have made [he says] a great clanging noise with poker and shovel close to their heads, both when they were asleep and awake, without producing any effect. Trial must not be made by shouting close to their ears, for Cats are, even when asleep, extremely sensitive to a breath of air.”

The author has frequently noticed that “short-sighted” people — i.e., those whose sight is strongest at short ranges — are similarly sensitive to sounds near to them, but not to those at a distance. The reverse is also the case, as might be expected. Mr. White Cowper and Dr. Earle have remarked that inability to distinguish different colours, even as far as colour-blindness, is often associated with a corresponding inability to distinguish musical sounds.

Hut though the organs of sight, hearing, taste, and smell are similar in Man and the larger vertebrate animals, differing only in degree, with Man, as a general rule, the inferior, it is quite impossible for us even to imagine what these senses are like in the smaller animals. For instance, we must quite fail to realise the visual result produced by the compound eyes of insects. No doubt the spider knows more about its web than mere mortals do, but do its eyes tell it that the delicate, almost invisible thread of its web is not a single one but is a compound “rope” made up of some four thousand strands? (Leeuwenhoek’s Microscopical Observations.)

And so with all the other organs of sense, it is almost impossible to fit ourselves into the animal’s surroundings or realise how different their faculties are. In a strained endeavour to emphasise this difference, C. J. Cornish (“ Animals at Work and Play”) suggests that animals can only see in monochrome, and maintains that no definite proof has been brought forward to show that they have any real knowledge of different colours.

As Mankind has this knowledge, and, in almost every case, the sight of animals is superior to our own, this suggestion is too absurd. Beddard, indeed, draws attention to the fact that no mammals are as brilliantly coloured as are birds, his sensible contention being that this is due to their highly developed sense of sight. This is practical — one might almost say obvious — whereas the “monochrome” theory is merely an out-of-date attempt to glorify poor humanity as something quite specially created and endowed.

“Instead of the highest,” says J. H. Moore (“The Whole World Kin”), “Man is in some respects the lowest of the animal kingdom. Man is the most unchaste, the most drunken, the most selfish and conceited, the most hypocritical, and the most bloodthirsty of terrestrial creatures. Almost no animals, except Man, kill for the mere sake of taking life.”

With regard to the sense of sight, Dr. A. T. Schofield states that newly-born infants do not really “see”, though their eyes are sensitive to light. The young of many animals are born with closed eyes, though some — such as lion cubs — can see from the moment of birth. Our eyes, also, work separately for the first few days, gradually acquiring the trick of moving and acting in unison, a power that, once acquired, we cannot lose. Lindsay even suggests that the mysterious pineal gland is really a rudimentary (or perhaps developing) third eye. But, as we have already pointed out, this gland is obviously essential for the due development of our mental powers. It is, however, curious that white pigment should be found in this pineal gland!

Before passing from the sense of sight, it is interesting to note that various animals, and practically all birds, sleep standing up. The best-known example of this is, of course, the horse, but the elephant also has this habit. In the case of birds, they retain their upright position while asleep, because the grip of the toes on the perch automatically locks the muscles, and they have to be consciously spread before the bird can leave the perch.

Many plants, of course, regularly “go to sleep”, but we need not here go farther into this — it is enough for our purpose to mention it.

Dr. Schofield also states that the sense of taste is active at birth, that of smell develops during the first day; it is instructive that they should not be interdependent. This obviously suggests that the craving for food came before the power of discriminating between what was good and what was bad for us. In the case of human beings there is no such instinctive knowledge, and during many nervous troubles the patient clamours for the most absurd and irrational articles of diet. Not so with other animals. Dr. A. R. Wallace points out that the presence or absence of certain herbs and grasses will indicate to a skilled botanist whether horses, cows, or sheep have grazed the land. And in the case of illness most animals voluntarily go without food, thus leaving Dame Nature free to put things right.

Practically every herb and animal has its own peculiar and individual scent. Trained humans can recognise many of these, but the average individual would be puzzled to identify even a score of different scents. C. J. Cornish (“At the Zoo”) quotes the case of a lion once kept at the Tower. It had been brought up by a Mr. Archer like a puppy, but it soon became too dangerous to keep it free as a pet. Yet after seven years in captivity it recognised by scent, before seeing him, a servant of his old master who came on a visit to the Tower.

The restless walk, backwards and forwards, of caged animals is merely a question of lack of exercise. Curiously enough, the domestic Cat at feeding times frequently shows this same instinctive call of the muscles.

With regard to Mr. Moore’s charge of blood-lust in human beings, we imagine that this dates from the early days of Man’s physical degeneracy, before the growth of his mental powers. In those early days of unreasoning terror, his natural impulse would be recklessly to “kill at sight.” In other words, to hang the prisoner first, for safety’s sake, and try his guilt afterwards. In that way Man developed his present habit of slaughtering innocent creatures wholesale for the gratification of the mere pleasure of taking life.

Dr. Wallace gives details of the painful case of the “passenger pigeon”, a bird now extinct; yet less than a hundred years ago there were hundreds of millions of these birds in North America. Yet all this beautiful palpitating life has been slaughtered by Man.

J. H. Moore also refers to humanity as “the most drunken,” and it is, unfortunately, only too true. No other animal ever gets drunk or incapable in a state of nature; a few can be made so by Man. But only once. Horses and dogs upon whom this “amusing” I trick has been tried cannot be tempted a second time.

Home-love is an absorbing craving in the Cat family: every Cat has its own particular corner. Yet in most other animals this feeling is only shown when the young need protection. Birds never build winter homes or nests for themselves, their efforts are purely parental. Even in Man the restless craving for adventure is really the dominant one; homes are really used for protection and for the young.

CHAPTER X – PUSSY’S STRUCTURE

The brain of the Cat so closely resembles that of Man as to force the admission from anatomists and physiologists that in form and substance they bear so close and striking a similarity that they are, to all intents and purposes, the same in substance and in conformation, and differ only in weight and size.

The vocal organs, also, present a general resemblance to each other. In the Cat the epiglottis is comparatively small, and there are proportionally small cavities in the thyroid cartilage and the osoihydeum, which communicate with the ventricles of the larynx and the laryngeal-pharyngeal sacs, which give the peculiar softness to the vocal tone of the Cat, a pleasing feature in our little friend.

Mivart (“The Cat”) states that “no more complete example of a perfectly organised living being can well be found than a member of what may be regarded as the highest mammalian family, the Felidae, or Cats.”

The lower jaw is incapable of lateral motion, thus giving the teeth only a biting power. The skin of all Cats hangs very loosely, and is capable of being drawn nearly half-way round the body; the animal thus avoids many ugly wounds, as the claws of enemies do not get a purchase. The bones are solid and resemble ivory.

The tiger is by far the strongest member of the family, and many cases are on record in which one of these animals has seized an elephant by the hind leg and fairly pulled it over on to its side.

The Cat cannot, of course, see in the dark, as is often erroneously or carelessly stated, but it can see better in the dusk than can a human being, because Pussy’s eyes are sensitive to the ultra-violet rays of the spectrum, and the pupil is capable of great expansion, thus admitting every faint particle of light available.

When we compare the teeth of the Cat and the dog, we find a great difference, the latter having forty-two teeth, while Puss has only thirty. Man, by-the-bye, has thirty-two, so that in this point also there is more resemblance to humanity in the Cat than in the dog. We also know

that Man has fewer teeth and a smaller jaw than the monkey families, and is undoubtedly of a higher type. As stated, there is a similar difference between the Cat and the dog. Puss happens to have two fewer teeth in the lower jaw, otherwise the number agrees with Man.

Then while thus comparing the teeth, we might note that the contents of the stomach of the dog varies from one and a quarter pints in the small varieties to a maximum of one and three-quarter gallons in the larger dogs; while in the domestic Cat it is only two gills (half a pint), or considerably less than half that of the smallest types of lap-dogs. Puss, therefore, can never have been such a greedy animal as the dog, and is, indeed, well known to be a dainty and fastidious fender.

The “canine” teeth of the Cat are not used for dividing food, but for seizing and destroying prey, or for combat. In certain prehistoric Cats these teeth were extremely long, forming tusks; and as they proceeded from the actual jaw of the animal, they prevented the full closing of the mouth.

Pussy’s tongue is well known to be very rough, but it is quite smooth beneath. On the upper surface there are four kinds of papillae, all with their apices (or tips) directed backwards, like so many very minute claws.

The upper lip of a Cat is divided by the nostrils, and is not, therefore, continuous as in Man.

Puss walks on her toes and not on the sole of the foot, as in the case of the bear and Man, or on the nails, unduly enlarged, as do horses and cows and other hoofed animals. Besides the central pad, there are six small pads on the front feet of the Cat, thus showing that originally Puss possessed six toes. These were placed on the foot (or hand) in three sets of pairs: the two central ones, as now, nearly equal in length and power; two others outside these, one on each side, with much more lateral play, and corresponding to the index and little fingers in Man; while the third pair were shorter and still farther outside, and corresponded with our thumbs. One of these has entirely disappeared outwardly in the Cat, though in dissection one finds a small bony protuberance; while the second (our big toe) is also missing from Puss’s hind feet, where she now only retains the four central toes.

This division of the fingers and toes into three sets of two is further proved by the muscles. The index and little “fingers” of the Cat’s front legs have both a flexor muscle and an extensor, while the two central have no separate flexor muscle. There are several records of Cats with six toes. In some cases this peculiarity has persisted regularly for several generations. Charles Darwin has commented on this as reversion to a primitive type.

It is rather curious to note that the “toes” are longer and stouter than the “fingers” in the Cat, which is the exact opposite of those in Man, where the toes are small, badly shaped, and almost useless. This reversal is also seen in other bones of the limbs, the shin-bone of the Cat being much longer than the thigh-bone; it is, indeed, the longest and most powerful bone in the Cat’s body.

The Cat’s tail contains from eighteen to twenty-four vertebrae and measures from eight to ten inches in length. There are, therefore, an

average of two to three bones per inch of tail, which easily explains its graceful flexibility. But what use is a tail to a Cat?

The shoulder-joint is a remarkably free one, thus allowing the foreleg to be rotated to a considerable extent in all directions. The collar-bone is small — sometimes absent altogether — thus again adding to the easy flexibility of the animal.

The skin of the Cat, as we have just stated, hangs very loosely, and Puss possesses a curious cutaneous muscle, enveloping the body under the skin, one of the largest muscles in her body, with which she gives herself that peculiar "shake" that seems to settle every hair in its proper place.

Some of the white nerve-fibres of the Cat measure only one-twelve-thousandth part of an inch in diameter, which means that twelve thousand such nerves could be laid side by side upon the surface of a penny.

The activity of our nerves has often been likened to that of electricity, but the analogy is not a good one. Electricity, along a wire, travels at the rate of four hundred and sixty-two million feet per second, while nerve force appears to pass at a rate varying from about eighty to two hundred feet per second. So we must either abandon the comparison altogether or admit that a wire made by Man is so superior a conductor as to account for this staggering difference in speed.

It is interesting to note that only Man and the Cat appear to possess those two puzzling glands known as "Cowper's glands." They are not present in the dog or bear families. These glands are two comparatively large structures of firm consistency, which secrete a viscid fluid of absolutely unknown function. As the value of these glands has not yet been traced or guessed at, it is impossible to say whether they are a survival in these two high types of an organ now lost to the rest of the animal world — which is extremely unlikely — or whether they are a novel development altogether. If the latter, it is indeed remarkable that they should simultaneously appear in these two distinct types, though both are admittedly the highest present development of their order.

There are no conspicuous scent-glands present in the Cat family as in most other animals; these also are absent in Man.

The Felidae as a rule do not drink much water, but the smaller kinds drink more in proportion to their size than do the larger species. The lion is found in desert regions, and when in captivity drinks very little. The fondness of the domestic Cat for milk cannot be explained.

Mivart points out ("The Cat") that the Ounce (a member of the Cat family) ranges from 9,000 to 18,000 feet in altitude, a rarity of atmosphere at which Man breathes with much difficulty.

The larger members of the Cat family appear to live the longest: the lion for about forty years. The domestic Cat lives from twelve to eighteen years as a rule, though much longer dates have occasionally been recorded. A female Cat was recently exhibited at a country Cat show that had reached the respectable age of twenty-four.

It has been suggested by Mivart, in his interesting but highly technical book, that the Cat's "original ancestor" was probably some long-lost beast of the Order Insectivora, of which the hedgehog is the existing

representative. We need not here give details of his plausible reasoning. The book itself should be referred to by anyone desirous of following up the deeper scientific view of the Cat's origin. But as he claims for our furred friend the proud position of the highest form of mammalian development—higher as an animal than even Man himself — we may be pardoned for quoting the following:

"The Felidae, as a whole, must be held to be the typical family of the whole order; for they carry the type of structure to an intense degree, in the direct line of development which the Order Carnivora has followed. But the Cats are not merely highly developed Carnivora; something may also be said in favour of their being the highest of mammals, the very flower and culmination of the mammalian animal tree.

"The organisation of the Cat tribe may be deemed superior because it is not only excellent in itself, but because it is fitted to dominate the excellences of other beasts. Thus considered, the carnivora would rank first among mammals, and the Cats would rank first amongst the carnivora.

"Man, however, is a mammal, and therefore to affirm this would be to affirm the inferiority of our own species. But Man's superiority is mental; it resides in his intellect, not in his peculiarly formed great toe, hand, pelvis, or other bodily peculiarity. Viewed as an intellectual being, Man stands quite apart from and outside of the whole visible creation, and has no place whatever in any scheme of biological classification. Considered merely in his capacity as an animal, it is by no means certain that his place is at the summit.

"In considering the question which of all the groups of animals is to rank highest, we must estimate the value of their structural characters. Therefore it is true that something may be said in favour of Cats being the highest of mammals, Man being considered merely in his animal capacity, in which alone he can be compared with other organisms. There can be no question but that the Cat is the most highly developed type of carnivorous mammalian life, the most perfect embodiment of the type."

When making such a comparison between Man and the other animals, it is well to keep before us the first great point insisted upon by Charles Darwin in his "Descent of Man." He mentions about eighty rudimentary, or vestigial, organs in Man, most of which are useful in lower forms of life. It is impossible to ignore such a wonderful mass of evidence connecting Mankind with other highly developed types of the animal world.

For instance, he refers to the characteristic loose skin of the Cat family, and points out that we retain traces of this at our eyebrows, our necks, and (in a few cases) our scalps. He quotes a youth who could throw books from his head merely by the movement of the scalp.

It has been proved that the external ear is too flat to be of any use to us now and is merely the degenerate remains of a once useful organ. Besides the external shell itself, we have all the necessary muscles for moving it. These are quite useless now, though occasionally one comes across an individual who can slightly control them and twitch the ears.

Charles Darwin does not mention the matter, but probably the external shell of the ear has persisted because it acts as a protection to a peculiarly sensitive spot on the skull, immediately behind the ear. This spot is unprotected by hair and is extremely sensitive to temperature,

either heat or cold. Why this should be so is not easy to understand, but the fact remains that (as an example) if we are feeling very hot, a little cold water applied behind the ear will immediately have a cooling effect. It is equally effective in the case of nervous (or tired) headache.

Most animals have a similar “cool spot” at the tip of the nose, which, in health, should be slightly moist, and is always free from hair or fur. This spot is, however, usually coloured — generally pink — and so strong is this tendency that in the Polar bear the tip of the nose remains black, though the animal is one of the finest examples of albinism.

Dr. Wallace suggests that colour is most apt to appear on those parts of animals and plants that have undergone the highest modification, and gives as instances the tail of the peacock, the wings of the butterfly, flowers, etc. This would apply to the nostrils with great force; indeed, in the case of Man, the nostrils and lips are the only parts of the skin to show external colour, as the eye is the only organ.

Darwin also points out that the third eyelid, so useful in the case of birds, is useless though present in the Cat family, but is quite rudimentary in Man. He also refers to our “tails”, which can clearly be traced anatomically by the presence of three or four small vertebrae, more or less fused. That this is really a rudimentary tail is proved beyond a doubt by the fact that in the embryo it is highly developed, being longer than the limbs, and is provided with a regular muscular apparatus for moving and wagging it. These tail muscles are generally represented in adults by bands of merely fibrous tissue, but cases are known where the actual muscles have persisted through life.

Not only is the tip of the nose free from fur in the Cat and other animals, but the hair smooths downwards on the nose from the bridge to the tip, and upwards from the bridge to the forehead.

The baby elephant is clothed with hair at first, gradually losing it with maturity. But few people know that the hedgehog is born naked, then grows a covering of hair, and, finally, its uncommon (and essentially useful) armour of spines.

To show the curiously persistent points of inter-relationship between very different types of animals, W. P. Pycraft points out that the Cat, camel, and giraffe, when they walk or run, move together the fore and hind limbs of the same side. In most animals the fore left leg would move with the hind right leg and vice versa. That would be the case with Man, who swings forward his right arm when he moves his left leg; it is impossible deliberately to reverse this.

We have not tested Mr. Pycraft’s statement in the cases of the camel and giraffe, but we find that Puss can use either method of progression, changing easily and rapidly from one to the other. We frankly admit that we were, and are, surprised, having tried the experiment on ourselves.

Weight for weight, a Cat eats far more in proportion than a man, averaging about six ounces of solid and half a pint of liquid per day. An ordinary man would eat four or five times this, but would weigh as many stones as the Cat does pounds.

Finally, it is worth noting that there is the same difference between the skulls of a Cat and a dog — the round shape as against the pointed — as there is between Man and the apes.

CHAPTER XI - CONCERNING CATS, LARGE AND SMALL

For how many years has Puss been a domesticated companion of Man? This question is not easy to answer, but assuredly not as long as the dog, an animal that has easily and always been subdued even by the most primitive of savage races. But Puss requires some sense of decency in her surroundings, and only joins her life to that of mankind at the dawn of some sort of civilisation.

M. Lartet ("Human Remains") states that the osseous remains of a Cat have been found in the human sepulchre cave at Aurignac, in the south of France. This vault is supposed to be of the highest antiquity, as indicated by the existence of almost entire bones of the great cave-bear. This animal, presumably, was used for food and for clothing, but the small specimen of the wild-cat type would be useless for such purposes, and must be looked upon either as a "stray" or as an early domesticated animal.

It is well known that our modern Cat will freely breed with several wild forms and that the young are fully fertile. This may be accepted as a proof that our present domestic Puss comes from a very mixed strain of ancestry, which is further demonstrated by the great variety of colour and markings now shown. It is, indeed, quite a common occurrence to find three or more different colourings in the kittens of a single litter. This would not be the case if our fireside companion sprang from more definite stock, although the Felidae are admittedly extremely variable in colour and markings. As one writer remarks, the two sides of a Cat will frequently differ from each other.

It is also well known to breeders that short-haired and long-haired Cats — so-called English and Persian — freely interbreed; and the finest kitten of its kind, known to the writer, as regards length and texture of coat, was a crossbred, the only long-hair kitten in a litter of short-hairs.

"The human race [says M. Lartet] at Aurignac belonged to the remotest antiquity to which, up to the present time, the existence of Man can be traced." These cave-dwellers, in fact, belonged to the Neolithic Age, before the use of bronze or any of the metals. Now copper and tin were used in Egypt about 4400 H.C., and Sir John Lubbock (Lord Avebury) says: "We may safely carry back the discovery of copper to about 5000 B.C."

There is no trace of the use of corn or oats in those early days, though apples — fatal fruit — have been found. It may, therefore, be fairly safe to assume that these early bones of our friend the Cat go back fully seven thousand years in their association with mankind.

Dr. William Salmon, in 1693, wrote a curious book called the "Compleat English Physician," and he mentions three kinds of Cats: the tame Cat, the Wood wild-cat, and the mountain wild-cat. The two wild forms were probably only varying types of the same species.

Some portions of the wood wild-cat appear to have been employed as medicines: "The flesh of the wood wild-cat is particularly helpful to the

gout; the fat mixed with palm oil of aniseed dissolves tumours; the blood of the tail, ten drops, mixed with six grains of salt of man-skull and ten grains of the powder of ox-horns, will cure the falling sickness; certain excrements made into a powder and mixed with mustard seed, the juice of onions and bear's grease, to form an ointment, cures baldness and the alopecia."

Here seems a good chance for some enterprising person to put upon the market a new and infallible hair restorer!

Professor William Lindsay, in reference to the Cat, says: "The lower animals are subject to the same kinds of mental disorders, produced by the same causes, as in Man. Cats readily comprehend and thoroughly understand Man's words." He attributes the following to our soft-footed friend: moral sense, honesty, sense of duty and trust, sense of guilt and shame. They are sensitive to insult, neglect, injustice, punishment, and reproof; have the idea of time, tune, number, orderliness, succession of events, etc.

Professor Romanes tells the following: "A fisherman, of Portsmouth, called Robinson Crusoe and made famous by Mr. Buckland, had a Cat called 'Puddles,' which overcame the horror of water characteristic of its race, and went fishing with his master, who said of him: 'He was the wonderfullest Cat as ever came out of Portsmouth Harbour, was Puddles, and he used to go a-fishin' with me every night. He'd lay down on me while I was asleep, and if anybody come, he'd swear and have the face off 'em if they went to touch me. And he'd never touch a fish, not even a little teeny pout, if you didn't give it to 'im. I was obliged to take him out a-fishin' or else he'd stand and yowl till I went back and ketched him by the poll and shied him into the boat, and then he was quite happy. The dogfish used to come along by the thousand, and he would dive in and fetch 'em out, jammed in his mouth, just as if they was rats, and he didn't tremble with the cold half as much as a Newfoundland dog. I larnt him the water myself; one day, when he was a kitten, I took him down to the sea, and in a week he could swim after a feather or a cork.'"

In Cat-judging at shows, there is at present no common-sense system of points. At present each specialist society indulges its own fancy, and the only result is chaos. Let us examine a few figures. Take, for instance, the eyes of a Cat, surely an important feature in the animal, but, I venture to suggest, equally important in all varieties; yet, according to the official figures, the eyes are worth twenty points in one hundred in the case of blues and Siamese, but are only worth five points in the case of silver, tabby, orange, cream, and tortoise. This is obviously absurd, but what is even more so is that the eyes are valued at ten points in chinchillas, but only five in silver tabbies. Why should the black bars cause a reduction of one-half in the value of the eyes? Such absurdities cannot be justified.

Another curious set of figures refer to coat. In silver, silver tabby, and smoke this is worth twenty points only, but in blue it is worth thirty. Why? Surely the texture and length and general condition of the coat is equally important in a chinchilla. Then in the case of the orange, cream, and tortoise varieties an extra ten points is allowed for condition, besides twenty-five for coat generally, whereas in the Siamese Cat the whole value of coat and condition is valued at ten points only. Can anyone explain why the texture and condition of the coat of an orange

Cat should be worth thirty-five points, while that of a Siamese is only worth ten?

The relative value of the head shows another amusing muddle. This important feature of a Cat is valued at twenty-five points in blues and silver tabbies, at twenty in silvers and smokes, at fifteen in orange, cream, and tortoise, but only at ten points in the Siamese.

Pussy's brush is another amusing instance. This is worth ten points in blue, silver, silver tabby, or smoke, but is not valued at anything at all in any other variety. One can understand this in the case of a Manx, where points should really be given for the absence, more or less, of the brush, but surely the lovely orange Cat ought to have a tail!

The question of colour is not quite so involved, except that no points at all are allowed for this in the case of blues. This is staggering when one remembers the immense amount of patience shown by our judges in the matter of level colour. Yet, according to the Blue Persian Society, all blue Cats should score alike for colour: good, bad or indifferent, solid or shaded, or even tabby barred.

The only other point worth noting in regard to colour is that practically all varieties (except blues) are valued at twenty-five points, but that Siamese score fifty.

Perhaps the following humorous comparison will emphasise my remarks:

THE POINTS OF A CAT.

Eyes . . . 20 in blue, but only 5 in silver tabby.
Coat . . . 35 in orange, but only 10 in Siamese,
Head . . . 25 in blue, but only 10 in Siamese.
Brush . . . 10 in blue, but 0 in orange.
Colour . . 50 in Siamese, but 0 in blue.
Total . . .140 but – Total 25 for the same points.

Bedlam could not carry the matter farther.

Why does a Cat purr? This is one of the ordinary "children's questions" which their seniors find so difficult to answer; and, of course, a complete and satisfactory answer to this question must tell us three things. It must explain (1) why the noise made by a Cat (and a few other animals) is the peculiar sound which we imitate in describing it as a "purr"; (2) why the Cat makes the noise, or any noise at all, seeing that solitary hunting animals are mostly silent except when they deliberately challenge their rivals or cry out through pain; and (3) why the Cat only purrs when it is pleased.

The first question, why " Cats" — meaning all kinds of Cats, up to and including the leopard and the tiger — make the noise which we call a "purr," suggests that other animals do not make this noise; but there is at least one other animal, Man, who may be observed to "purr" on three distinct occasions.

Firstly, a man sometimes "purrs" when he is consciously imitating the noise made by a Cat, for his own, or his friends', or even his Cat's entertainment. The great Cardinal Richelieu did this for the last reason,

so his chroniclers tell us. Secondly, a man “purrs” when, acting under doctor’s orders, he “gargles” medicine. Thirdly, he usually “purrs” when he dies, making the curious sound which the watcher by a death-bed recognises as the “death-rattle.”

Each of these three sounds is produced in the same way — namely, by the breath being gently forced forward through a liquid film in the air passage, the liquid being thus blown into a quick succession of bursting bubbles, which make the “purring” noise, as motorcycles make a loud purring noise when the explosions of the petrol become rapidly successive. When a man tries to imitate a Cat’s “purr”, he consciously accumulates a little liquid at the back of his throat and breathes outward through it. Try to “purr” yourself and you will realise that it is so. When he “gargles” he simply “ purrs” vigorously through the doctor’s stuff. When he dies quietly, his failing organs allow the air passage to become flooded with liquid, and his last breath is a series of bursting bubbles. So he “purrs” a good-bye to the world.

But it cannot be said that, as a general rule, Man purrs when he is pleased, like a Cat; and probably it is true that Cats and Cat-like animals stand alone in expressing pleasure by a series of bursting bubbles in the throat. Why is this?

To answer this question, let us ask another: What is the most glorious moment in the youthful experience of a wild-cat, a tiger, or a leopard, at the time when its most vivid and lasting impressions of life are being formed? It is the moment when it has for the first time seized for its prey some comparatively large creature, perhaps as large as, or larger than, itself. What happens then? We all know that when a sportsman in India wishes to shoot a tiger, he usually depends upon the news brought to him by the natives of a “kill.” This means that the tiger has killed some large animal, such as a bullock, and left it. The sportsman knows that the tiger will return to eat part of the bullock during the night, and he makes his plans accordingly. But why did not the tiger eat as much of the bullock as it was likely to require at the time when it was killed? Because, when it had killed the bullock — usually by a double blow with both forepaws, one paw striking heavily down on the neck just in front of the shoulders and the other striking violently upward under I he chin (the combined effect of the two being to snap the brawny neck as easily as the stem of a clay-pipe) — when it had done this, the tiger drove its fangs deep into the victim’s throat, cutting through the blood-vessels and drinking thence the hot stream of blood that gushed violently out, as from a high-pressure tap turned on to the full. It is no exaggeration to say that while a tiger, or cheetah, or other large wild Cat is thus engaged, its stomach can be seen to swell visibly in size, so copious is the draught of blood. Naturally, it does not proceed at once to eat part of the carcase. It is replete. But liquid blood is so easily digested that, before many hours have passed, it will be back again at the “kill”, satisfying hunger more solidly and for a longer period.

But before it returns, while the sportsman may be viewing the “kill” and making arrangements for his midnight vigil, what is the tiger doing? Only “purring” probably. It began to “purr” as soon as it fixed its teeth in the bullock’s throat, and it “purrs” again as it lies in its lair and dozes off its surfeit of fresh blood. In the first instance, no doubt, its “ purr” was the natural result of circumstances. It could only breathe through a film of the blood that was gurgling down its throat. Even afterwards, as it lay at ease, it may have been so full of the blood

that each breath was naturally drawn through bursting bubbles of it; and it needs no vivid imagination to understand how and why the “purr-purr” of the indrawn and outblown breath became the highest expression of the great Cat’s content. And all Cats are tigers in miniature.

The rabbit is the bullock and the rat the goat of the common Cat; and, though the domestic Pussy may seldom actually breathe through air passages brimming with blood, the glorious suggestion of the hereditary sensation is there, when the breath comes slowly, “purr-purr,” like the voice of the turtle-dove, through a liquid film at the back of the throat. I do not suppose for an instant that the Cat is conscious of the reason why “purring” and pleasure go together. But watch any kitten when she is purring her loudest on the rug, as her claws go in and out of the yielding, hairy surface, as if squeezing the blood out of the victim’s throat; there you have a complete picture of the instinct of the fierce wild tiger’s life in your undeveloped “harmless necessary Cat”; and the “purr” is its audible expression of the hunting fury of bygone ages.

For the reason why a cheetah, with its teeth fixed in the antelope’s throat, purrs as the blood gushes down its throat, is not that it is consciously pleased or purrs “on purpose.” It purrs because it cannot breathe otherwise. Try the experiment upon yourself, and see. Imagine yourself with a rich stream of blood flowing down your throat, not that you are merely drinking, but that the arteries of an animal as big as yourself are pumping their full force of blood down your throat while you are gripping the dying creature with your teeth and squeezing its throat with both hands. Imagine yourself in this tiger-like position, and then breathe. You will find that you must breathe through the upper part of the air passage only; and, though the stream of blood is imaginary only, you begin to purr. That is why the tiger purrs with its teeth buried in the bullock’s neck, and his claws gripping the shivering carcase; and it is the inherited association of ideas which makes Pussy purr like a clockwork machine as she plunges her claws into the hearthrug and grips them out again. (“Country-side Leaflet.”)

The above interesting extract is not quite convincing. It certainly explains how a “purring” sound could be obtained, but it does not necessarily follow that it is the correct Nature method. I seriously doubt if any animal could really force its breath out through a down-rushing stream of blood, pumped from the dying victim’s veins at full arterial pressure. This stream of blood is obviously forced at high pressure down the whole length of the throat into the stomach. I am not a doctor, nor a vet., yet I quite fail to see how it would be possible to breathe out through such a stream of moisture — and thick moisture, too.

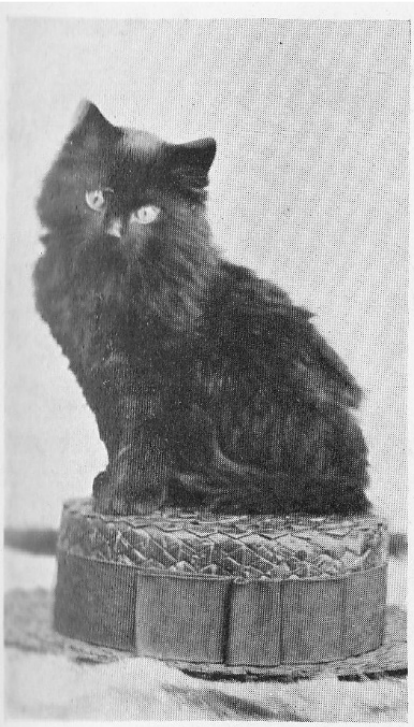
Then again, there is another weak spot in this interesting theory. Purring, as described, is absolutely a subconscious action; yet Puss, when pleased, deliberately creates a film of moisture in order to purr its pleasure. Is it possible for a subconscious act to be so changed? I doubt it. We must imagine that the Cat has studied the noise and has discovered “how it is done,” and then has reasoned that the saliva of the mouth, if held in position, would produce the same result as the inrushing stream of blood. In no other way can Puss have deliberately and consciously learnt to purr when she wished to show her pleasure.

Why does not a Cat purr while drinking milk? This is a thing it never does, however thirsty. And yet again, why can a Cat lick your hand or hair while it is purring, when the movement of the tongue would obviously

break any film of moisture, retained in the upper part of the throat? I have experimented with my own prize-winner, and have found that he can purr for over half an hour without once ceasing; that he can walk about, lick my hands and hair, or his own fur, and can even “chatter,” while the, purr never ceases for a fraction of a second. He can and does purr while gobbling down chicken — when he gets the chance of such a meal. So, altogether, I am far from satisfied or convinced.

To compare gargling and purring seems quite false. Let anyone try to gargle and at the same time put out the tongue and lick his own hand. He would at once swallow the moisture, and the gargling noise would cease; not so when a Cat is purring and washing her fur. I have watched Puss making the most extreme gymnastic movements while licking some out-of-the-way spot, purring contentedly all the time.

Let us look at the matter from another point of view altogether. The peculiar effect of the bagpipes is caused by the fact that a monotone A is always sounding, like a pedal note on the organ. The air continually rushes out and causes this monotonous but musical sound below the melody. Then again, when Man sings, the sound is produced by the outrushing of the air; and by the use of muscles which change the shape of the vocal cords, Man can vary the pitch of the note. If moisture gathers in your throat while you are singing, as it does if you are “out of practice”, the column of air is broken and the tone ceases. I cannot, therefore, believe that purring is a wet sound it seems to me to be monotone singing. Puss uses only one note, Man uses and combines several; Man can walk about while singing, he can move tongue and jaws in forming words; a Cat can move and can lick its fur or your hand. The similarity is, at least, striking. Now comes the question: Does Puss sing, or merely gargle?



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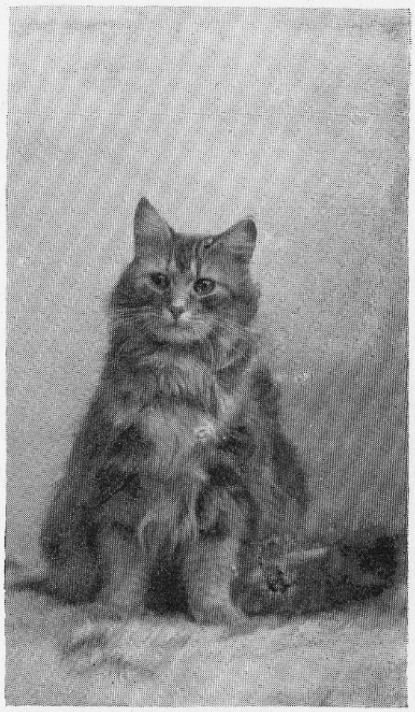


“TREACLE”
ORANGE LONG-HAIR

A casual stranger dropping into one of our Cat shows would easily identify a black Cat, or a white one. There, however, the matter would end, for our blues are a slate colour; our smokes are (practically) black with silver undercoat; our tortoise-shells (tricolours) are merely speckled Cats that do not in any particular conform with the printed requirements of the specialist society that looks after them. Then our creams are either biscuit colour or fawny; our reds are orange, with no pretence of red about them; our brown tabbies are sable (with black markings), though it is true that our silver tabbies live fairly well up to their name.

Incidentally, can anyone tell us why self-coloured Cats are almost invariably bulkier than the tabbies, with the exception of the brown tabbies, which are generally big Cats? Chinchillas are generally larger animals than the silver tabbies, from whom they were bred; creams also are big Cats, whereas the so-called red tabbies are generally quite small. Tortoiseshells are always small, but blacks — the allied blood-colour — carry plenty of bone. Do colour and bulk go together in breeding? If so, those fanciers who aim at self-colours should choose the biggest stud and queen on the chance of getting self-coloured kittens in the litter. Would it work? Perhaps not, but it is a curious fact that the nondescript " blue-creams" used for breeding are invariably very small Cats, though both blues and creams are bulky, almost clumsy, animals. It would certainly appear as if the mixing of the colour pigments in this case affected the size of the Cats.

In April, 1877, an experiment was tried in Liege to settle the disputed question of the Cat's sense of locality. Thirty-seven domestic Cats of the city were taken, in bags, a distance of twenty miles into the country. They were liberated at 2 p.m., and at 6.48 the same afternoon one of them quietly turned up "at home." This works out at over four miles an hour through totally unknown country. Within twenty-four hours all the rest were accounted for, and a proposal was made to establish a regular system of Cat communication between Liege and the surrounding villages, but the project came to nothing, and Puss was not allowed to act as special messenger in rivalry with the carrier-pigeon.

It has been asserted that if there were no Cats there would be no clover! This is really a catch, clover being fertilised by bees, who are heavily preyed upon by the field-mice. So (they say) if there were no Cats to kill the mice, there would be no bees and no clover.

The caracal is the only lynx that can be successfully tamed. It is used by the Arabs and Persians for hunting small antelopes, peafowl, etc. The Fishing Cat of India is a sable tabby with both spots and bars, no two being alike in colour and markings. The snow leopard is a beautiful creature, and is found in the snowy regions of Western Asia, as far as Corea. It has been found in the Himalayas at 18,000 feet elevation. The hunting leopard (Felis Jubata) is the only "Cat" with non-retractile (i.e., fixed) claws like the dog. And, like that animal, it will happily follow its master about the fields or roads, being very tame and obedient. But the dentition proves it to be a Cat — and it purrs!

THE KILKENNY CATS.

O'Flynn, she was an Irishman, as very well was known,
And she lived down in Kilkenny, and she lived there all alone,
With only six great large tomcats that knowed their way about;
And everybody else besides she scrup'lously shut out.
Oh, very fond of Cats was she, and whiskey, too, 'tis said,
She didn't feed 'em very much, but combed their hair instead:
As may be guessed, these large tomcats did not get very sleek,
Upon a combing once a day and a 'aporth once a week.

Now on one dreary winter's night, O'Flynn she went to bed
With an empty bottle 'neath her arm, the whiskey in her head.
The six great large tomcats, they all sat in a dismal row,
And horrid glared their hazy eyes, their tails wagged to and fro.
At last one grim graymalkin spoke, in accents dire to tell,
And dreadful were the words which in his horrid whisper fell:
And all the six great large tomcats in answer loud did squall:
"Let's kill her and let's eat her, body, bones, and all!"

Oh, horrible! Oh, horrible! Oh, deadly tale to tell!
When the sun shone through the window hole all seemed still and well:
The Cats they sat and licked their paws, all in a merry ring,
But nothing else in all the house looked like a living thing.
And then they quarrelled savagely--they spit, they swore, they hollered!
At last these six great large tomcats each one another swallered:
And naught but one long tail was left in that once peaceful dwelling,
And a very tough one, too, it was — this same that I've been telling!

When a Walloon maiden wishes to dismiss a suitor with supreme contempt, she gives him a Cat, and tells him to come back when he has counted the hairs in its tail.

The sacristy in the Church of St. Lorenzo, in Florence, built by Michael Angelo in 1523-29 as a mausoleum for the Medici family, is well known. The adjacent cloister is devoted almost entirely to Cats.

"It is a large cloister," says Charles Warren Stoddart (in Ave Maria, January, 1890), "with light arches leaping from column to column all the way round, and with the customary campanile towering far above it; and whenever the bell strikes the quarter hours the air is flooded with affrighted doves, such white doves, sailing dizzily against such a blue sky.

"Between the columns is a parapet, and beyond it a moat, four or five feet deep, and dry save when the rain pours into it. This moat surrounds a kind of island terrace that rises out of the moat as high as the parapet, and is covered with the greenest grass and a little cluster of the darkest cypresses.

"It seems to be a kind of enchanted spot, for that island is the kingdom of the Cats, as many as choose to settle there, and their name is legion.

"Cats, fat ones and lean ones; the lazy and the lively, the dreamy and contemplative; Cats with tails and Cats without them. There they are fed regularly, through the charity of someone who long ago left a legacy for their sole use; and they are fed irregularly by anyone who chooses to feed them, as I do.

“There they lay, the tabbies of the cloister, sunning themselves in the rich grass of spring f shading themselves under the boughs of the cypress; climbing into those boughs in some cases and sprawling there in attitudes of luxurious content.

“After all, thought I, as I turned away and left that happy family purring in concert, is there anybody or anything in the whole wide world more comfortable than these convent Cats? Nothing whatever to do but to pose for the edification of the idly curious, and to let the world go by, as they sit washing their pink- tipped faces with gracefully curved paws, before resuming the favourite pastime, a sedate friendly game of Puss in the cloister.”

In Germany they say that if a person dislikes Cats their burial will be accompanied by storm and rain. But in Holland the belief is that the wedding will be a stormy one if the bride forgets to feed the Cat.

Many animals show an aversion to water similar to that of the Cat. Even ducks, if brought up away from water, show a dislike for entering that element. Louis Robinson (“Wild Traits in Tame Animals”) suggests that this fear of water is due to an original instinct of self-preservation, dating from the time when the rivers and water-beds concealed crocodiles and other similar unpleasant enemies.

A lion named “Pompey” died in 1760 in the Tower at a great age: it had been kept in captivity for seventy years! Lions, in captivity, allow rats in their cages, and Basil Hall relates that tigers are afraid of mice.

Can you suggest any particular advantage to the Cat’s original ancestry in the possession of a tail? Certainly tailless types are to be found in several parts of the world, in addition to the well-known Manx Cat. But what real use could a tail be to the original Puss?

In the case of the horse and the cow, it is used to drive away flies and other objectionable insects, and it must always have played an important part in the health of the animal. Incidentally, we may point out that the soup-making qualities of the ox-tail are due to its use as a fly-destroyer, the bones composing it being very light, porous, and gelatinous.

Very few people know that the hairy tuft at the tip of a lion’s tail generally has a horny spur or claw, of no apparent use to the animal nowadays. What was its original purpose? Anyhow, as H. B. Orr (“Development and Heredity”) points out, Pussy’s tail must have been evolved before her legs and feet!

Still, what use is her tail to a Cat?

Unlike kittens, the cubs of the lion are born with their eyes open.

Wordsworth’s idea of a Cat:

Think of her beautiful gliding form,
Of her tread that would hardly crush a worm,
And her soothing song by the winter fire,
Soft as the dying throb of a lyre.

Dr. Livingstone describes the dreamy trance, which precluded pain, after he fell into the clutches of a lion: “The shake annihilated fear and allowed no sense of horror in looking round at the beast. This peculiar state is probably produced in all animals killed by the carnivora, and if so, it is a merciful provision by our Creator for lessening the pain of death.”

In India the claws of the tiger are made into a circlet and slung round a child’s neck to preserve it from the evil eye. This animal’s whiskers are said to be a deadly poison. This sounds far-fetched, but powdered glass is well known to be fatal, and it is more than probable that the very stiff bristles of the tiger, if cut as finely as powder, would be equally dangerous.

An average decently fat tiger weighs about five hundred pounds; a lion would be rather more than this.

“Le Chat Fidele” was a favourite sign for country inns in France, and this phrase was brought over to England, promptly and naturally mangled, and appeared in Piccadilly as “The Cat and Fiddle.”

Lewis Carroll was well known as a Cat-lover, and a most amusing character in his world- famed “Alice in Wonderland” is the Cheshire Cat.

“Cheshire Puss,” Alice began, “would you tell me, please, which way I ought to go from here?”

“That depends a good deal on where you want to get to,” said the Cat.

“I don’t much care where,” said Alice.

“Then it doesn’t matter which way you go!”

This is magnificent philosophy, and is descriptive of hundreds of thousands of human lives.

“This time the Cat vanished quite slowly, beginning with the end of the tail and ending with the grin, which remained some time after the rest of it had gone.

“Well, I’ve seen a Cat without a grin,” thought Alice, “but a grin without a Cat! It’s the most curious thing I ever saw in all my life.”

The first Cat show was held at the Crystal Palace in 1871.

Few people realise that the graceful movements of the lion and tiger, as compared with the bear, are due to the fact that they walk on the tips of their toes, while the bear walks upon the entire sole of the foot.

Although so different externally, the lion and tiger are really remarkably alike; so much so, indeed, that only an expert can distinguish between the skeletons of the two animals, and even then only by slight differences in the skull.

All the members of the Cat family are well known as excellent parents, Puss herself making a most devoted mother; but at its worst, animals have a much easier time than birds. A pair of blue titmice, watched by a careful and patient observer, were seen to make no fewer than four

hundred and seventy-five journeys to the nest during a period of about seventeen hours! So that each of the parent birds must have made a journey to and from the nest every four minutes. This does not leave much time for their own meals.

While speaking of birds, it is interesting to note that the first meal of the young flamingo consists of the egg-shell from which it has just been hatched. This no doubt is due to the need for lime; for much the same reason, deer eat their antlers.

The kitten, seeking food, closes its mouth, but the nestling opens his wide.

A Scotch naturalist resident in Stirlingshire (Mr. J. A. Harvie Brown) took a great deal of trouble to ascertain the existing haunts of the wild Cat in the United Kingdom. The result was published in the Zoologist for January, 1881. There were no wild Cats in Scotland south of a line drawn from Oban on the west coast up the Brander Pass to Dalmally, and thence following the borders of Perthshire to the junction of the three counties of Perth, Forfar, and Aberdeen, northward to Tomintoul, and so to the city of Inverness. It is only northward and westward of this line that the animal still keeps a footing in suitable localities, finding its principal shelter in the great deer forests (Harrison Weir: “Our Cats”).

“A Cat may looke on a King” is quoted in John Hey word’s “Proverbes”, published in 1546. It was, however, a collection (the earliest) of English colloquial sayings, so the phrase must be of much earlier origin. The line was used by Sir Anthony Weldon in 1652 for the title of a pamphlet (“Printed at the Unicorn in Pauls Church-yard neer the Little North-door”), a satirical account of the life and character of King James I., with caustic comments on the various English monarchs from William the Conqueror, the author pleading for a commonwealth. The price was twopence.

The following brief extracts will show the style of the book:

“Henry IV. After he had murdered his Predecessor, nothing took up this King’s reigne but ruine and blood upon the Nobility and Gentry of this Kingdome, with such unsufferable taxes as never were before, nor since.

“Henry VIII. He never spared man in his anger nor woman in his lust.

“King James. To write the life and reign of this King, requires a better Book-Man, and a better Pen-Man: that which I have to observe, is onely to render him as great a Tyrant as any of the rest; for though his Fearfulness kept him from Wars and Blood, yet as much as was in his Power he laid as many Springs to enslave this Nation as ever any. For his Person, a man might sufficiently and truly make a Volume, onely to tell of his lazinesse, and uncleannesse; but I cannot do it without fouling too much paper. His hypocrisie, perjury, cowardise, blasphemy, malice, are known to all; and base ingratitude, which comprehends more then all the rest.”

This scurrilous little book remained unanswered, perhaps unnoticed, till 1714, when the author was himself attacked in the same delightful fashion, of which, in fairness, we give a sample:

“To rake among the Ashes of the royal Dead, upon no other Account than to be so ungenerous as to cast scurrilous Reflections on the Memory of Crowned Heads, is a Piece of Villany not to be paralliz’d in no Nation so much as in Great Britain. I am sure a Man of Breeding, and good Manners and Literature abhors any such Crime; his Fingers are too clean to be foul’d by throwing Dirt in other Mens Faces. Now supposing Henry the III. did Pawn his Crown; which was most easie to his Subjects, to Tax them or dispose of what was his own, to supply his Necessities?”

Thomas Berthlet, in a translation from the Latin, in 1498, writes of Puss as follows:

“The Cat is surely most like to the Leoparde, and hathe a great mouthe, and sharp teeth, and a long tongue, plyante, thin and subtle. He lappeth therewith when he drinketh, as other beastes do that have the nether lip shorter than the over; for, bycause of unevenness of lips, such beastes suck not in drinking, but lap and lick, as Aristotle saith, and Plinius also.

“He is a swifte and merye beaste in youthe, and leapeth, and riseth on all things that are tofore him; and is led by a straw, and playeth therewith, and is a righte heavye beaste in age, and full sleepye, and lyeth slyly in waite for Mice; and is ware where they bene more by smell than by sighte, and hunteth, and riseth on them in privy plaos.”

A schoolboy in an essay on Cats wrote: “A Cat has four legs, one at each corner. A kitten is chiefly remarkable for rushing like mad at nothing whatever and stopping before it gets there.”

In 1783 two Cats of Messina behaved so strangely and showed such evidences of terror that their master, infected by their obvious fear, fled from his house in time to escape the first great shock of the earthquake and the tumbling of his walls in ruins.

A writer once drew the following distinction between the Cat and the dog:

“It is the unchanging and passionless East surveying through centuries the restless vagaries of the distracted West.”

Agnes Repplier, in “The Fireside Sphinx”, states that in the life of Robert Stephen Hawker, the clever but eccentric Vicar of Morwenstow, we find that he was usually followed to church by nine or ten Cats, who entered the chancel with him and careered about during the service, affording what must have been a welcome distraction to the youthful members of the congregation. Mr. Hawker would pause every now and then, while preaching or reading the prayers, to pat these small parishioners, or scratch them under their chins. One envies (she says) the children of Morwenstow, who, alone perhaps of all the children in England, must have felt downright enjoyment in going to church!

Madame de Custine, comparing Cats and dogs, said: “I am not at all touched by the attachment of dogs. They look as if they were condemned to love us; they are mechanically faithful. I prefer Cats to dogs; they are more independent, more natural, more graceful than dogs; when they love that tyrant, Man, it is not with the degraded slavishness of those wretched dogs, who lick the hand that strikes them, and are faithful only because they have not sense enough to be inconstant.”

Charles Darwin, referring to the numerous cases of deafness in white Cats (with blue eyes), drew attention to the curious correlation of colour and disease, quoting numerous cases of animals either wholly or partly white who were affected, while dark-coloured companions escaped.

He quotes Professor Wyman as authority for the fact that all the hogs, except those of a black colour, suffer severely in Virginia from eating the root of Lachnanthes tinctoria. Buckwheat, when in flower, is highly injurious to white pigs, but is quite innocuous to black pigs. Hypericum crispum in Sicily is poisonous to white sheep. With cattle, cases have been quoted by Youatt and Erdt of cutaneous diseases, with much constitutional disturbance, affecting every single point which bore a white hair, but completely passing over other parts of the body. Similar cases have been observed with horses.

Sir George Davis brought up a lion from a whelp, but when it was about five years old he parted with it, as it was becoming mischievous and dangerous. Three years later he saw it in a menagerie in Florence. Though fierce to others, the animal at once recognised Sir George, and licked his hands. He entered its den, and the lion put its paws affectionately on his shoulders, licked his face, and gave many other evident signs of joy.

CHAPTER XII – CATS IN CAPTIVITY

WE often say that an ounce of practice is worth a pound of precept, and this is especially true in the case of Natural History studies. Anyone really interested in Puss should spend a day at the Natural History Museum, South Kensington, and study the Cats in captivity there.

The collection is not a very large one, but all the principal types are represented, and, of course, skeletons can be studied with great advantage. The value of this method of study, however, lies in the fact that so many different animals can be compared, externally and internally, with our friends the Cat family.

For instance, we shall find that curious creature, the giraffe, is similarly built, internally, to our hearthside Puss, having seven vertebrae in its neck, the enormous length being due to the size and not to the number of the bones.

As soon as we realise this, we look for further similar curious points of resemblance, and we find that the giraffe walks on the tips of its fingers and toes, just as Puss does, but, instead of being separated, the fingers and toes unite to form the hoof, in much the same way as if the palms of our human hands extended to the finger-tips. Otherwise the bones of the arms and legs, wrists and ankles, agree with those of Cats and humans. If now we look at the skeletons of the man and horse shown in the central hall, we shall notice that we have rudimentary tail bones attached to the spine, just as the Manx Cats have, and, curiously, there is the same relative difference in length between hind limbs and fore. There are, however, in addition to the Manx variety, records of a tailless Cat in Cornwall many years back, and if we may judge by the South Kensington specimen, the four limbs were evenly balanced, as in the case of the ordinary Cat with a tail.

To go back to our friend the giraffe, we should notice that his “heel” is about four feet from the ground.

The collection of domestic Cats shown in the museum is a very poor one, sadly out of proportion to the really fine show of dogs. It is, of course, true that, except in colour, Puss is not really a variable animal as is the dog, but our complaint is that the specimens actually shown are such very poor ones.

The huge “War Office” Cat interests us because of the personal element, but it is “miles and miles “removed from being a typical Cat. The male chinchilla long-hair, “Silver Lambkin”, father of the handsome chinchilla breed, interests us for the same reason; he is, in fact, an “historical” member of the Cat family. The dates given for birth and death are 1889 and 1906, so the fine old fellow was about seventeen years old when he died, a very good age for a somewhat delicate breed. This no doubt accounts for the poverty of his “brush” and some unevenness in the colour of the fur; the head and eyes are good, but the body is too long; he is not compact enough in bone.

The blue Persian, “Forget-me-not”, presented by that well-known Cat-lover Mrs. Herring, is a very good specimen in every way, colour, shape, head, etc., all being excellent. This Cat is the only really good specimen of a modern Puss. The brown tabby long-hair is a disgrace to our National Museum, having white paws, one white cheek, white breast, while the tabby marks are so heavy that the Cat is more black than anything else. It was probably a mongrel cross between a black and white and a tabby.

The Siamese representative is a good one, but being six years old, the colour is too level. A typical young animal, just under twelve months, should be shown in order to emphasise the curious colour contrast of this breed.

The specimen wild-cat, a typical grey tabby with narrow markings, caught in Inverness- shire, well represents the almost extinct British type. There is no white on the coat, and we may at once confess that the solid black and white seen in our domestic Cats forms one of the many puzzles in the Puss world. There is no white on any wild Cat, except where the colour lightens on the under-body or belly of the tiger; there is no white or Arctic Cat to correspond with the Polar bear, Arctic fox, and other northern animals; nor is there a really black Cat in any form or size. The nearest approach is the so-called black leopard, a good specimen of this interesting animal being shown at South Kensington.

But this, of course, is not really a black animal; there is a very heavy sprinkling of black hairs, mixed up with the ordinary spotted sandy coat, but the typical colour and marking is quite easily seen, and it merely looks as if it had been trying to escape via an unswept and sooty chimney.

The stripes on the tiger’s coat are black, but of true white or true black there is none.

Going now upstairs to the Mammalian Gallery to inspect the many types of the Cat family that are shown, we are first struck by the very marked division of this interesting family into three distinct sizes. There are, firstly, the huge Cats, represented by the lion, a self-coloured animal; the tiger, a striped animal; and the leopard and jaguar, which are spotted.

Then we notice the numerous types of small Cats, which are, roughly speaking, all about the same size as our fireside pets, and, indeed, outwardly and when “stuffed”, there does not seem very much difference between six or seven of these types and the animals seen at our Cat shows. There is the Kaffir Cat (F. Cafra), similar to our Abyssinian; the Wild Cat (F. Catus); the Pampas Cat (F. Pajeros), a fawny-grey colour, with barred legs and chest; the Fishing Cat, which certainly is a larger animal, but the extreme fondness of our domestic Cats for fish diet almost forces us to the conclusion that the, strain must, at some remote period, have been crossed with this animal, the only wild Cat known deliberately to seek fish for its food. This animal is long in the body, with a relatively short tail; it has thin legs, a “seal”-shaped head, and the body colour is grey with spots.

Then also there is the Geoffroy Cat (F. Geoffroyi), a silver-coloured animal with spots, the tail and paws being ringed; and Pallas’s Cat, a drab-grey in tone, hardly marked at all.

All these small-sized Cats are remarkably like our present-day pets, and most of them, no doubt, come somewhere and somewhen into the ancestry. We reckon our short-hair and long-hair Cats as distinct, but they freely interbreed and have perfectly fertile offspring, and the same series of colours can be produced in each. In build, size, structure, bones, teeth, habits, and food they are exactly the same, the only difference being the length of fur.

This extreme variability of colour, but not of size and structure, points to a very mixed ancestry, a descent from various strains all very much of a size and build. The tabbies, greys, reds, and creams can easily be traced to wild types, but, as we have pointed out, the solid black, solid white, and the very frequent black-and-white patched Cats appear to be a freak produced by Man. Black Cats have been associated with omens and witchcraft for many centuries, but are not heard of in the East.

Then we have the Marbled Cat (F. marmorata), with spots; the Tiger Cat, quite misnamed, as it shows the ring-spots of the jaguar and leopard type; the Colocolo, a rufous-grey tabby; and the Leopard Cat (F. Bengalensis), also misnamed, as its spots are solid, with stripes on the forehead.

In between the “big Cats” and the small ones, we find an intermediate set which, in their turn, are very much of a size, thus forming a distinct third series. There are, however, no tabby types among these, though some are spotted. Thus the caracal, the jungle cat, and the bay cat are self-coloured; while the lynx is a speckled type with occasional spots, and the ocelot is obviously spotted. The fishing cat might almost be included in the intermediate set, though, personally, we prefer to include it among the small series for the reason given. It is somewhat of an oddment in the Cat family, as also is the Puma, a diminutive lion which really resembles the lioness, lacking the fine head and mane. The cheetah (or hunting lion) also has solid spots. Unlike the rest of the Cat family, generally patient waiters and watchers, the cheetah actually “hunts” its prey.

As the intermediate series of Cats does not show an example of the stripe, but only self-colours or spots, it is interesting to note that the stripes on the tiger very often have light- coloured hairs*down the centre, suggesting that they are really ring-spots long drawn out, and

they frequently have spots on the tail. In the leopard the spots are open rings, while in the jaguar these rings contain small dark spots. The distinction hardly seems of much importance; both types have self-coloured noses and chins.

When comparing the skeletons of the Cat family with those of other animals, as we did with our weird friend the giraffe, the most noticeable point, apart from the teeth, appears to be the fingers and toes. The bones that form the equivalent of the upper and forearms, the thigh and shin, of Mankind, are practically identical in all vertebrate animals. But the fingers and toes vary in an extraordinary way.

The Cat family have a small, almost rudimentary, thumb on the forelegs, but only the four toes on the hindlegs. Birds, as we know, have four toes, generally arranged three in front and one in absolute opposition at the back, so as to insure a good grip of the branch or perch upon which they rest. Cage birds, unfortunately, often suffer from a species of cramp due to the uniform thickness of the artificial perch given to them. This trouble closely resembles writer's cramp, due to a too constant use of one pen.

Some birds, however, have their four toes arranged two and two. This is the case with the cuckoo, wryneck, swift, osprey, barn owl, woodpecker, toucan, and others. In a few cases, such as the kingfisher and hornbill, two of the toes are partly joined, thus clearly suggesting the way in which the toes united to form the hoofs of the horse, cow, deer, giraffe, and other ruminant creatures, which now have either a solid or a dual hoof. The thick horny substance to which we fasten the horse-shoes is, of course, the same as our nails.

But the forelimbs, or arms, of these birds have developed into wings, with only two "fingers" remaining, though some birds have a small "bastard wing" that corresponds with our first finger. The ostrich, for example, has this bastard first finger — of course, no thumb or little finger — but it is absent in the cassowary, emu, and penguin. In fact, the emu has only one finger (the second) left in its wing.

So Puss is by no means alone in the loss of her thumb — or rather her big toe — and in all probability the mammalian prehistoric ancestors all had six fingers, two central and somewhat tied fingers, two outside these, one on either side and much more free in use, and two "thumbs", one on each side of the hand or foot. The whale has six such fingers on its rudimentary forelimbs.

In Cats, Man, and all vertebrate animals, where two adjoining bones work together on the ball-and-socket principle, the "ball" end of the vertebra faces towards the head and the "socket" towards the tail of the animal. A curious exception to this rule is found in the crocodile, where the socket or cup is in the front of the bone. Why this should be so cannot be explained, as the animal can gain no advantage from this reversal, and it staggers one to imagine how or why the change took place.

The South Kensington Museum has an excellent skeleton model of a dinosaurus, the extraordinary early ancestor of the crocodile; but the ball-and-socket arrangement follows the universal example, and therefore offers us no explanation of the reversal of this in the crocodile.

We have already asked the question: What use is her tail to a Cat? At any rate, it is a sensible length, is graceful and pretty, and does no harm even if it is of no apparent use. But the dinosaurus, to which we have just alluded, indulged in a fifty-foot tail. It was a four-footed beast, slow in moving, and surely could not need a tail at all!

CHAPTER xiii – ARE ANIMALS IMMORTAL?

THIS question is, of course, one that will never be answered by mortal man, although modern science is capable of many wonders. Many famous philosophers have written on the subject, and most have held the view that the immortality of animals is probable, if not more than probable.

There is no real distinction between " Man" and the "lower animals", but one of degree. With the great bulk of human society, life consists merely of following a few instincts with perfect ignorance of the consequence. There is very little difference between such lives and those of the more highly developed "lower animals." Whether death terminates such existence or merely gives it a new and unknown impulse, we cannot say.

We quote a very powerful passage by Dr. Buckner dealing with this question of the immortality of animals:

"I say to a boy, 'John, please go and drive those chickens from the garden.' He obeys me and returns feeling proud of having done me a favour. The chickens soon return, so I call my dog and say, 'Carlo, go and drive those chickens away.' He also cheerfully obeys my command and returns looking wistfully into my face. They both suddenly die and lie before me. I look into their faces and see the eyes that guided their bodies, the ears which heard my voice, the limbs which propelled their bodies, and the head which contained the brain over which the soul presided. Now how can you call the brain energy in the boy one thing and in the dog another? If that mysterious substance called Soul was the cause of action in the one case, it was so in the other. If the mental powers and vital essence of that faithful and intelligent dog, with its memory and loving devotion, can be sunk into nonentity at death, what proof or evidence can be adduced to show that the boy shall live after the death of his body?"

But sages and philosophers, in all ages, have taught that "life" was animated by some higher principle than mere matter and motion, and that this principle, called the mind or soul, is independent of the body, is immaterial and immortal.

Animal life is that state of existence during which the vital organs are able to perform their functions—body and soul are united. In death they are divided, and we know not the future state of the soul, though the earthly body returns to its original atoms.

Martinengo ("The Place of Animals in Human Thought") asserts that "it is as difficult to imagine a sudden beginning of Soul as a sudden ending"; and, when referring to self-sacrifice and devotion, he mentions the case of a lion and its mate as told by Major Leveson. While hunting in South Africa, he came across two lions fighting, while a lioness looked on. A bullet from one of his party laid the lioness low (such is the "sport" of Man), but the combatants were so hotly engaged that neither took notice of the sound. Another bullet killed one of the lions, and the survivor, surprised that his opponent should so suddenly surrender, turned round

and saw the hunters. He was about to spring, when he caught sight of the dead lioness.

“With a peculiar whine of recognition, utterly regardless of our presence, he strode towards her, licked her face and neck with his great rough tongue, and patted her gently with his huge paw as if to awaken her. Finding that she did not respond to his caresses, he sat upon his haunches and howled most piteously.” It is not stated whether this unfortunate beast was also shot to gratify human lust for blood, but that probably, almost certainly, would be his fate. But if we contrast the conduct of human and beast, the man takes a very inferior place indeed by the side of this lion.

Edward Quinet, also, describes how on one occasion, when visiting the lions’ cage in the Jardin des Plantes, he observed the lion gently place his large paw on the forehead of the lioness, and so they remained, grave and still. He asked St. Hilaire (who was with him) what it meant. “Their cub died this morning.”

If we believe in Spiritualism, we must of necessity include animals, as many such have been controlled by mediums, especially dogs, which, of course, have for centuries been in close companionship with Man.

All animals are dual beings, possessing a dual organism, partly physical, visible, and tangible; partly mental, invisible, and intangible. By the same analogy and logic which is used to prove by the Bible that men have souls, we can equally prove that the lower animals also have such.

As Solomon says: “They have all one breath, so that a man hath no pre-eminence above a beast.” Socrates admitted the immortality of all animal life. The Rev. Dr. Talmage drew attention to the honoured place given to the animal world at the birth of Jesus Christ. “You cannot,” he says, “get into that Bethlehem barn without going past the camels, the mules, the dogs, the oxen. The animals of that stable heard the first cry of the infant Christ.”

John Wesley spoke of a general restoration of all animal life: “Nothing can be more plainly expressed. They shall be delivered from the bondage of corruption into glorious liberty.”

The Rev. Dr. E. B. Pusey says: “All nature having suffered together, shall be restored together.”

Canon Wilberforce said that he believed that “these beautiful and useful forms of life are bound to pass over into another sphere, and that in the great Eternal men and animals would sink or swim together.”

Mrs. Mary Somerville said: “I shall regret the sky, the sea, with all the changes of their beautiful colouring; the earth, with its verdure and flowers; but far more shall I grieve to leave the animals who have followed our steps affectionately for years, without knowing for certain their ultimate fate. I am sincerely happy to find that so many believe in the immortality of the lower animals.”

Thousands of years before the Christian era the Egyptians showed that they were believers in the immortality of animals. The large number of mummy animals which are found beside human beings go to show that they placed animals practically on an equality with Man as far as future

destiny was concerned. And in all folklore, from whatever part of the world one gathers it, animals and fairies and spirits of mortals are inextricably mixed up.

The religions of Egypt and Phoenicia, Islamism, Brahmanism, Buddhism, Greek and Norse religions, Confucianism, Judaism, and the strange religions of the Peruvians and the Aztecs all advocate, directly or indirectly, the immortality of the lower animals.

Darwin says: “The senses, intuitions, emotions, and faculties of which Man boasts may be found in an incipient, or even in a well- developed condition, in the lower animals.”

Agassiz was a profound believer in a future life for the lower animals. He says: “Most of the arguments of philosophy in favour of the immortality of Man apply equally to the permanency of the immortal principle in other living beings. In some incomprehensible way God Almighty has created these beings, and I cannot doubt of their immortality any more than I doubt of my own.”

Miss Frances Power Cobbe says: “I will venture to say plainly that there is no possible solution of this heart-wearing question save the bold assumption that the existence of animals does not end at death. It is absolutely necessary to postulate a future life for dog or cat or horse or monkey, if we would escape the unbearable conclusion that a sentient creature, unoffending, incapable of giving offence, has been given by the Creator an existence which, on the whole, has been a curse. That conclusion would be blasphemy.”

Rev. J. G. Wood, author of “Man and Beast,” says: “I feel sure that animals will have the opportunity of developing their latent faculties in the next world; they surpass” many human beings in love, unselfishness, generosity, conscience, and self-sacrifice. I claim for them a higher status in creation than is generally attributed to them and claim they have a future life.”

George T. Angell (American Humane Education Society) says: “In God’s great universe, comprising as it does perhaps, millions of worlds larger than our own, is there not room enough for all?”

There is no distinction between Man and the lower animals in regard to the chemical elements of the body, as they are all composed of the four principal elements — oxygen, hydrogen, carbon, and nitrogen — with a few odds and ends such as calcium, phosphorus, potassium, etc. Almost everything in the universe is common to both — gravitation, force, violence, disease, injuries, pain, mental defects, physical defects, etc. They all need nourishment, shelter, etc., and all have a similar nervous system sensitive to all the impressions made upon the body. All crave liberty, comfort, happiness.

No physiologist has yet been able to make a distinction, save that, in Man, the emotions and mental powers are more complex. Yet we all know that primitive Man was scarcely more developed than many of the more intelligent animals; it is only a question of time and degree.

Theology offers no other reason for denying souls to the lower animals than the simple fact that they are not of the same species as Man, and that is no argument at all.

“The difference between the educated and uneducated lower animals is as great as that between the savage and civilised Man. We must study the nature of lower animals and endeavour to think as they think, feel as they feel, and, in a sense, place ourselves in their position. We have often noticed a dog, on a clear night, when all Nature seemed asleep, sit for hours and gaze into the starry heavens and utter a pathetic, doleful cry. What it means has never been explained, but that it is some instinctive devotion is the most reasonable conclusion. Savages have the same habit.” (Buckner.)

Southey, coming home and finding that a favourite old dog had been “destroyed” during his absence, wrote the following beautiful lines:

“Mine is no narrow creed; and He who gave thee being did not frame the mystery of Life to be the sport of merciless Man. There is another world for all that live and move — a better one — where the proud bipeds, who would fain confine Infinite Goodness to the little bounds of their own charity, may envy thee.”

The Rev. J. F. Moor, in the course of a paper read to the Hursley Clerical Society in 1875, said: “It is possible that I may be met by the objection that no practical good is likely to arise from a question of this nature. To this I reply that everything connected with the works of God must of necessity be of deep interest to us. It seems to me to be of real moment that we should have clear ideas of the destiny of the lower animals, in order the more fully to impress upon those who come under our teaching the imperative duty of kindness, tenderness, and love towards those creatures of God whom He has placed around our path of life. If it be probable that a future life is reserved for our domestic pets, surely we shall be inclined to regard them in a higher light and shall teach others to do the same. I will even venture to affirm that the sufferings of animals in this life point to the idea that suffering is as needful for them, for their perfection, as it is for Man.”

The Rev. H. Kirby, in a lecture in 1879, said: “Of no human beings can it be said that they have to suffer so much, or so undeservedly, as the beasts. Hence we cannot help thinking that a just and merciful God, who will not always punish the innocent and who can never inflict wanton suffering, will make up to them in a future life for the ills to which they are subject in this. To quote the words of Mary Somerville, if animals have no future, their existence is most wretched. Starved, cruelly beaten and loaded during life, many die under a barbarous vivisection. I cannot believe that any creature was created for uncompensated misery; it would be contrary to God’s mercy and justice.

“ Until it can be proved that animals are not constituted with a twofold nature - corporal and spiritual — or until it can be proved that death, in their case, is an utter and entire annihilation, the presumption in favour of their having souls, and of their consequent immortality, is as strong as in the case of Man.”

The Rev. Granville E. Money (Animal World, October, 1888) says: “We are not the least sure that all animals will not live like ourselves in a future state—^that is to say, that we shall not meet them again in Heaven. Indeed, a passage in Romans (viii. 19, 24) seems to indicate that there is a better time in store for them as well as for us.”

The Rev W. L. Lechmere (Animal World, April, 1879) says: “Is the Dog, whose pathetic love for his master never wanes, whose fidelity is never dimmed by inconstant moods, never disturbed by gusts of selfishness? — is the Cat, which is so wonderfully susceptible of, and responsive to, kindness — are such animals as these to be used by us and then contentedly forgotten as so much lifeless rubbish?”

Read Deuteronomy xxv. 4; Job xxxviii. 41; Psalm xxxvii. 21–26; civ. 11, 12, 14, 17, 18, 20, 21, 27, 28; cxii. 4, 5; cxlv. 9; cxlvii. 9; Proverbs xi. 17; xii. 10; Jonah iv. 11; Matthew x. 29; Luke xii. 6; 1 Timothy i. 5, 18; Matthew xxv. 40, 45, substituting “ creatures” for “brethren” in the last two verses. (Rev. J. F. Moor.)

“Surely it was something of prophetic instinct which led Sir Edwin Landseer, when too old and weak for work, to leave behind him upon his easel an unfinished sketch of a lion with a little lamb lying down beside it, the last thing that he ever drew.” (Edith Carrington.)

From “There and Back,” by George Macdonald: “If animals have no soul, what a poor aimless existence is theirs! Except for compensation of some worthy kind in store, how are we to regard their sufferings?”

“Do not we and the animals alike perish, so far as our flesh is concerned? Do not the words ‘Dust thou art, and unto dust shalt thou return’ apply to both? If it does not refer to the soul of Man, what right have we to say that it was spoken of the living principle in the lower forms of creation? Why should we have the presumption to declare that, while we are in process of being saved, no such good was ever intended for the living creatures beneath us?” (“Future State of Animals,” Rev. J. F. Moor.)

Both horse and ass have worked for Man
In their short life’s too narrow span;
With blows and stripes from morn till night
They’ve toiled for Man. How sad the sight!
Is there for them no future life,
Nothing but pain and toil and strife?

Can He who made both Man and beast
And loves His works — yea, e’en the least —
Can He, whose very name is Love,
Exclude from His fair home above
The creatures He himself hath blest.
And give them no eternal rest?

CHAPTER XIV – THOSE INTERESTING KITTENS

If we ask ourselves the question, “Why do we keep pets?” we shall be puzzled to find an answer. No other but Mankind does such a thing, or indeed “collects” at all, except perhaps the magpie, whose thieving propensities are difficult to understand. Our friend the dog collects “old bones” as a provision for a rainy day, not having the same trusting faith in Man as a housekeeper that Puss shows.

But from the little girl with her dolls, past the enthusiastic schoolboy with his “foreign stamps”, the shop-lifter and the kleptomaniac, nearly all of us “collect” something.

It is easy to see that a flock of sheep, cattle, horses, pigs, roots, etc., form essentials of life, and these, no doubt, have been collected and hoarded from the earliest days of our race. Dogs, again, would be useful for the chase, but that does not explain our fondness for dwarfed and delicate lap-dogs, whose principal charm seems to be their degenerate size, bone, weight, and stamina.

But the domestic Cat of to-day is almost exactly the same size as the domestic Cat of the early Egyptian, though not strictly of the same breed. These early felines were undoubtedly “pets” in the fullest sense, led easy and luxurious lives, and seem to have been as gentle and affectionate then as now.

In those primitive days of early civilisation, many animals were venerated as gods or as little less than gods. Crocodiles, for instance, afford a curious example of this feeling, but fortunately this “harmful and unnecessary” animal has fallen into disfavour.

So also did poor harmless, friendly Puss! For many centuries she was tortured and ill-treated, burnt alive, roasted, ill-used; but her sterling good qualities as a household friend were once again recognised and she has regained her old place, without the semi-religious worship of old.

So once more we ask the question, “Why do we keep pets?” and echo answers: Why?

We do not, however, ask the question in any expectation of receiving an answer; our object is to quicken a little deeper, more thoughtful interest in these same pets.

Mr. Pycraft, in his interesting book, “The Infancy of Animals”, says: “While most people find young animals interesting, few realise how much more so they become when we ask the why and the wherefore of their several peculiarities of form and colour, and of the degrees of activity which they display on their entry into the world.”

This comment is exceedingly true. Very few of us think twice about the fact that the “darling little kittens” are born with their eyes fast closed, and have tissue-paper legs that won’t carry the weight of their wee bodies.

Yet, surely, if it is worth while keeping a pet at all, we might take sufficient trouble to find out something about it. Of course, we cannot all start as breeders, but we can, at least, help and encourage those who do this work by buying well-bred kittens when we feel the need for a fireside pet.

We do not think that anyone could make a living by keeping and breeding Cats — as one can from poultry, for instance — but “expenses” can certainly be paid, and the work should open our eyes to many fascinating sidelights upon Nature’s methods, should teach us to think, to realise what a very complex, fascinating evasive thing life actually is.

Suppose we decide, then, to start breeding kittens as a hobby that is intended to pay its way. We purchase a well-advertised “queen”, and pay perhaps a couple of guineas by way of a start, with a small “mating” fee, unless we buy our pet in kitten, as often is done. The period of

gestation is sixty-five or sixty-six days, roughly nine weeks. In spite of her long association with helpless Mankind, Puss can comfortably look after herself, and, indeed, should not be interfered with, unless anything by mischance goes wrong.

We can provide a comfortable box or bed in Pussy's favourite corner, out of the full light and out of the draught, for Gats are peculiarly sensitive to cold. They can stand a fairly high temperature, but anything below freezing-point affects them unpleasantly. And so, if all goes well, we wake up one fine spring morning and find that " the household " is increased by four or five young lives — very active, very hungry, very helpless.

We must remember that these wee babies should not be touched; this is very important, though it is hard for anyone who loves the Puss-mother to keep their hands off the fascinating balls of fur. Yet, for the first day or two it is wise to avoid disturbing the family.

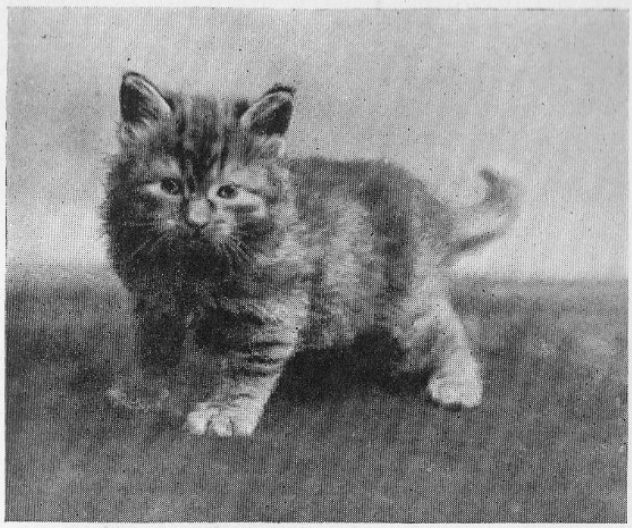
Now let us consider a few unusual points about these interesting little strangers, and first of all note the number of the litter. The scientific opinion of a generation ago held that the greater the dangers that threatened the young, the more prolific the animal should be, Nature thus endeavouring to preserve a balance. But modem thought reverses this and holds that prolificness in itself is a source of danger to wild animals; there are so many more mouths to feed, so many more helpless youngsters to look after.

Take the case of a hard-working bird with a family of four or five nestlings. For about sixteen hours a day the two parent birds will fly to and from the nest every five minutes with food for those wide-open mouths, making between them some five hundred such journeys each day. How many of us recognise this heroic devotion, or realise the unselfish sacrifice of such everyday, humble little personages as the sparrows, finches, and tits?

We see our chickens and ducks fully clothed in down when born, and able to run about and (more or less) look after themselves within an hour or so of birth; as soon, in fact, as they are dry and comfortable after their long journey from Nowhereland. But nestling sparrows, crows, and most other birds are perfectly helpless, naked, and blind.

So it is now recognised that prolificness is really a source of danger, and we realise that Puss can better afford to bring up a family of four or five than can that big type of "Cat", the lion or tiger, who is generally content with one or two cubs.

For the benefit of anyone unused to breeding, we may point out that the colour of the young is seldom the same as that of the adult. This is a matter in which personal experience is necessary, unless the Cat-lover possesses that "instinct", possessed by many successful breeders, which enables one to "guess" what colour the kitten will eventually become when it reaches maturity. There is a distinct tendency to show tabby markings or bars in almost all colours of Cats, even the black. These faint markings on the young almost always disappear if on the body, but are sometimes rather obstinate when on the brows, forelegs, or tail.



EIGHT WEEKS' OLD

A BLUE

Where the kittens are tabby bred, one must be careful in selecting, from the youngsters, as an evenly marked kitten will probably be too pale when an adult, whereas one that appeared to be too black or too heavily marked will develop into "just the right thing", to our great disappointment if we have given it away as an ugly duckling. The explanation is that the pale colour is the "body colour", the dark one forming the tabby bars. These black markings do not increase in size proportionately with the growth of the kitten, and that is why we must choose a dark youngster if we want, ultimately, a good tabby-cat.

A very short experience should enable a breeder to settle such a case, but it is far more difficult to decide the point when we handle "self-coloured" kittens such as blacks, blues, silvers, smokes, orange, or creams.

Well-bred white kittens frequently show marks that look like discoloured fur, but as a rule these do not reappear in the adult coat. These changes in the colour are very difficult to explain, for the young of the lion is marked very much as the tiger, though the adult is really a very

excellent specimen of a self-coloured animal, with the exception of the quite usual darker shade along the ridge of the spine, so frequently met with in Nature.

But that spine-mark raises a fresh question altogether, and before going further into the general colour of kittens, we will consider the dark mark on the lion and many other animals, a well-known case being “the Sign of the Cross” on our old friend the donkey, though the mark, of course, was there many centuries before the birth of Christ.

It is generally conceded by modern science that, though colouring is frequently “protective”, the marks are largely due to the influence of the bones and more important internal vital organs. All tabby-cats have the dark mark along the spine, with others that correspond with the ribs, and one frequently sees a broken circle or horseshoe mark between the ribs and the hip-bones. The marks on the forehead correspond to the more active nerves of the face, and the two lobes of the brain are indicated on the crown of the head.

The simplest forms of life consist of small cells of jelly-like matter, semi-transparent and devoid of colour. But as soon as we examine an individual consisting of two cells, colour appears. Why this should be so we cannot say.

It is easy enough to say that the colour is due to the influence of light acting upon pigment, but it is impossible to explain why the pigment is there to be acted upon. Yet it would be a queer sort of world if we were all, more or less, transparent. No doubt we should get used to it, as we do to many other strange things, such as breathing, for a new-born babe has to learn that lesson within the first few minutes of its independent life.

That colour is so often a valuable aid by its protective quality seems more an accident than a design, yet it is very dangerous to talk too positively about Nature’s doings. Naturalists have photographed the open mouths of young and helpless nestling birds in the nest, and have shown the curious spots and marks on the tongue and inner membrane of the mouth. The reed-warbler and the sedge-warbler have a pair of black spots on the tongue, the garden-warbler and other birds have a triangular mark on the tongue. Others have spots on different parts of the walls of the mouth.

Are these intended as guides to the parent birds? If so, they are not of the same use now as they would have been when forests were more dense and the light was therefore more obscure. Anyhow, the marks largely disappear after infancy.

But it is quite a usual thing to find small spots of colour on the lips of our Cats.

Though the difficulties of judging the different kittens of a litter cannot be ignored, they do not greatly affect the beginner, as he (or she) is usually content with some simple and well-established type, such as the blue long-hair Cats. This colour (really a warm and pleasing shade of slate) is always a popular one, and can safely be recommended to the young or inexperienced breeder, as the type is a healthy one, well boned and sound. Another advantage is the fact that blue kittens always sell

easily, though possibly they do not fetch quite such good prices as other types,

The degree of blueness does not matter; the kittens can be pale or dark, provided they do not err too far either way. The only point for consideration is that they must be clear of marks, and the colour must go evenly through to the skin.

These little additions to the household are dependent upon the mother for about eight weeks, a long period for a wild animal. Many people carelessly state that the higher the development the longer the period of helplessness for the young. But the birth-period is not a fair test or standard of measurement, as Nature's ways appear to be so very haphazard. Some young are carefully guarded by one or both of the parents, while others seem pitch-forked into the world, to live or die as careless fate may decree.

Some are born more forward than others. The young of the rabbit have no fur and their eyes are not open, but the leveret (the young of a very similar animal) remain in the womb until these events are accomplished. The period of infancy is certainly longer in Man, and no doubt that has given rise to the careless saying alluded to; but the young elephant, all being well, remains with the mother for twenty-five or even forty years.

Another point we shall notice in these newly born kittens is the absurd little tail. There is so little fur on it, and it is so stiff and without grace. What use is her tail to the Cat? That is another of the numerous puzzles placed before us when we use our eyes and our wits, when we handle these wee mites of life.

It has been claimed that Puss uses her tail as a lever when she turns over, during a drop through the air, so as to land on the pads of her toes. But the Cat is the only animal to perform this useful trick, and she is not the only possessor of a tail! Besides that, if Puss used her tail as a lever for such a purpose, we should find the attachment muscles extremely powerful, as the weight of the body is out of all proportion to that of the tail.

Look, for instance, at the wings of a bird. These correspond with the arm of Man or the forelegs of animals, but they have been specialised for flight, and the muscles are extremely powerful and complex. Yet we cannot doubt that they were, at some remote period, developed from forelegs, because certain nestlings have a finger and claw well developed on the wing, and actually use it for climbing from branch to branch of the ancestral home. This finger and claw shrivel and are absorbed at maturity.

M. de Gembloux tells the story of a Cat belonging to Saint Mery, who had never been permitted to rear a single kitten. When she gave birth to her third litter, the servant began removing the wee babies one by one each morning. This went on till only one kitten was left; then, desperate, the mother-cat carried her youngster into her master's study, leaped on his lap and laid it gently on his knee, while looking up into his face in a way that could not be misunderstood. M. de Saint Mery gave orders that the kitten should be left alone, but each morning the mother-cat, in her anxiety, brought her baby to her master and laid it at his feet.

Nothing can exceed the bravery and devotion of the mother-cat. Numberless instances are recorded of gallant rescues from streams or from burning buildings. When Lusby's music-hall was burned in 1894, a Cat and her little family lay in a basket at the back of the stage. Three times that Cat made her way through smoke and flame and brought back a youngster; the third time she was so scorched as to be unrecognisable; she was blind, and hardly a patch of fur was left on her scorched body.

The maternal instinct — the "yearning for progeny" as Romanes calls it — is so strong that when deprived of her rightful babies, the Cat has been known to adopt and rear such youngsters as puppies, rats, leverets, rabbits, squirrels, hedgehogs, pigeons, and other hereditary foes. A case is recorded of a devoted Cat who, at one and the same time, reared a happy family consisting of four kittens, six chickens, three ducks, and one wagtail!

The hen is the only other creature to adopt these very mixed families, faithfully rearing ducklings, peacocks and hens, ferrets, and other strange youngsters. A case is recorded of a Brahma hen who brooded over a pea-fowl egg, and after her strange chicken (a peacock) was duly hatched, remained faithfully with her enormous "baby" for over eighteen months before she gave up the job in despair!

Throughout Nature, sex maturity invariably appears before physical maturity. This is due, without doubt, to the ever-present struggle for the existence of the species; and in those cases where the struggle is the keenest, we find, as we might expect, that sex maturity is complete at a very early age. This is true of Mankind, where in the East this sex maturity is notoriously early, due, without doubt, to the severity of the climate and the relative scarcity of food for past centuries.

Speaking of kittens, Moncriff observes that: "Everything that moves serves to amuse them. They believe that all Nature is occupied with their diversions. The most intrepid of explorers, they make strange voyages of discovery in dark closets, underneath beds and bureaus, up curtains and table legs, trembling with excitement and with a terror that is half pretence. Their agility is wonderful, yet no less ridiculous than their hardihood."

Brehms also draws attention to this characteristic of the domestic Cat, the most playful animal except Mankind. He says: "The playfulness of Cats is noticeable in their early infancy, and the mother does everything in her power to encourage it. She becomes a child with her children from love of them; she sits surrounded by her little ones and slowly moves her tail. The kittens are excited by the motion, their eyes take on expression, and they prick up their ears."

There can be no doubt that Cats deliberately play. If the ball or cotton-reel stops rolling, they start it again, an act of obviously conscious self-deception. The lion and the puma frequently play "hide- and-seek".

Mr. Andrew Lang tells the story of a poor vagabond Cat who, with her young kitten, came daily to his door to beg. The kitten, being pretty and lively, was adopted by the neighbouring family and reared in luxury. Yet the faithful mother-cat, when any specially dainty morsel was given to her by Mr. Lang, would scale the dividing wall and give it to her "baby".

It has been pointed out that the difficulty in drowning young kittens is due to the existence of an aperture which allows the blood to pass directly from the right to the left auricle of the heart without passing through the lungs. This aperture has been known to be still open a week after birth, and, obviously, allows the heart to continue beating after the lungs are saturated with moisture.

It is interesting to compare two outwardly dissimilar animals and note the wonderful similarity of their actual construction. For instance, if we compare our wee kittens with a giraffe, we find that both have seven bones or vertebras in the neck, and the extraordinary outward difference is merely due to a difference in length of perfectly similar bones. The giraffe also walks upon its toes in the same way as our kittens, though the fingers and toes are united into a hoof in the one case; but the heel of the giraffe is about forty-eight inches off the ground. Man, of course, like the bear, walks on the sole of the foot, the Cat on the tips of her fingers and toes.

The more closely we examine into the mysteries of Nature, the more fascinating and wonderful we find them.

Everyone who has kept kittens knows the peculiar sharp hiss they make when alarmed; it is often called “spitting”, as the young Cat open its mouth wide at the time. Quite sedate and elderly Cats do this at times, but it is generally noticed in the younger animals.

This has been explained by the fact that during the cretaceous period the whole world was swarming with voracious reptiles, including no doubt that “newspaper” variety, the sea-serpent. Through an immense period of time, the strife must have been of the most fierce and deadly character; and though the mammals eventually proved victorious, we all, Man included, inherit the world-old dread of a serpent.

This explains the peculiar hiss and open mouth of the frightened young Cat; it is an inherited imitation of a serpent and is intended to frighten away a foe. We must also remember that, when thus alarmed, our little friend the Cat elevates her tail and makes it as conspicuous, as possible, switching it with a peculiar sinuous movement from side to side. All snakes, when about to strike, jerk their tails to and fro. Puss also elevates her spine, thus disguising her Cat shape and giving another slight suggestion of a moving coil of the snake.

Now the earliest forms of the Cat family were small and undoubtedly more defenceless than the great majority of those existing to-day. We can therefore trace the common ancestry of our fireside Puss with her fierce and cruel cousin, the tiger, by the fact that both have inherited this hiss, which is not of the slightest value to the tiger, one of the strongest and most savage animals in existence. Yet the power of imitating a serpent must have proved invaluable to the timid Cat, none too well defended by Nature.

“It has been remarked,” says Louis Robinson, in “Wild Traits in Tame Animals,” that wild-cats commonly make their homes in hollow trees and other dark retreats, where their broods are fairly safe from molestation. Now if we examine into the habits of other creatures which breed in similar places, we find that their tender offspring have one common and remarkable trait. Nearly every young bird or mammal, whose nursery is in a shallow hole, utters a sharp hissing noise whenever an apparent enemy

approaches. Owls, bats, titmice, woodpeckers, phalangers, hornbills, opossums, and even certain monkeys, all employ this method of intimidation. The only thing which most of these sibilant youngsters have in common seems to -be the character of the nurseries in which their parents deposit them. So widespread a defensive method can only have arisen from a common need of protection from one kind of danger."

To this we may add that all long-necked birds that nest among reeds and bushes have the same trick, the domestic goose (and many varieties of ducks) being a characteristic type.

It has frequently been stated that the eagle is a great enemy of the Cat, menagerie keepers finding that these birds prefer the flesh of a Cat to any other food. And emphasis has been laid upon the fact that a tabby-cat, when coiled up in sleep or rest, presents a very good resemblance to a snake, the black spine-bar and other marks thus affording valuable protection to the owner. This partiality of certain birds of prey for poor Puss draws our attention to another little recognised peculiarity in the Cat world.

To-day we are quite accustomed to the fact that wild-cats and many domestic Cats track small birds as the principal portion of their daily food. We are so used to this that we take little or no notice of it. Very few of us, however, realise that in the early days of mammalian life the contemporary birds were all huge creatures, as also were the reptiles. These dangerous though unwieldy creatures have all died out now; but it is interesting to note that in the progress of time Puss has entirely reversed the position, and, with the exception of the few birds of prey, now hunts the varied feathered tribes, whose early ancestors dined sumptuously off the prehistoric Cats and kittens.

This power of imitation — as shown in the "hiss" of the kitten and young bird — is very general in Nature, and is without doubt really valuable in the protection of life. It must surely be a puzzle if one follows a tasty blackbird, with thoughts of dinner, to hear the crowing of a back-yard cock; but the starling appears to be the most imitative among birds, as it has been known to copy the characteristic calls of the kestrel, partridge, moorhen, coot, plover, curlew, quail, and corncrake, as also the quack of a duck and the cackling of a hen.

Some birds, of course, easily imitate the human voice, though they quite lack the mobile lips of Mankind; but it has been recorded that the bull-finch, when taught this trick, frequently loses the power when moulting.

What a curious mix-up Nature is!

CURIOUS POINTS IN CATS

There are so many curious and interesting points about the Cat. How many of us realise that Puss walks on the tips of her toes, that her ankle and wrist joints are, apparently, half-way up her legs and are generally mistaken for knee or elbow, while, as a matter of fact, the two latter joints are close under the body and are easily mistaken for hip and shoulder?

The shoulder-blades and hip-bones are rather peculiarly set, and this, with Pussy's tiptoe walk, explains the extreme gracefulness of motion always seen in the Cat. Puss, indeed, cannot stride; she can make a

magnificent spring or leap, but when she runs or trots, her steps are short and rapid, the body is never out of balance.

All Cats can climb trees except the lion and the t iger, whose bulk is probably too great, and for this purpose the curious movable claws are wonderfully adapted.

“There is no power of movement in the nails of Man, nor in the usual domestic animals; indeed, in the horse, they have changed into a solid hoof, and in the elephant are very similar, though they can be traced more easily. But Puss can as freely move her claws, in and out of their socket-sheaves, as she can move her ears, another power long lost to mere Man, though the rudimentary muscles are still there.

Another curious point about the Cat is that there does not appear to be a natural tendency towards “dwarfing” — the production of an undersized race. The true dwarf resembles the normal individual except as to size. Nearly all animals are subject to dwarfing (including Man), and in many cases a dwarf variety has been firmly established, as in the case of lap-dogs, ponies, bantam chickens, etc. But no such dwarf race of Cats has ever been known, though a true-breeding white (due to albinism) and black (due to melanism) type has long been in existence.

Plants, on the other hand, are easily dwarfed, and the Japanese are extremely skilful in producing exquisitely dainty dwarfed “ trees”, many of these being only a few inches high, although perfectly typical in all other points.

Just as we have idiotic or insane people, so we have idiots among horses and dogs. But we do not hear of mad Cats, though their nervous development is far higher than that of the dog.

The homing instinct of the Cat is very highly developed, though, of course, nothing like the power of the carrier-pigeon, which has been trained and specialised for many generations. But there are a number of well-authenticated stories relating to Cats that force us to recognise this peculiarity.

The mother of Saul Andrews, the writer on educational and juvenile subjects, had a Cat that lived with them for twenty years. He had peculiar markings and ways of his own. He disappeared one day and was, naturally, mourned as dead, as twenty-four is an extreme age for Puss. But one day, some six or seven years later, a very old Cat came to their door and begged to be let in. He had the same markings, and when let in, he obviously knew all about the interior of the house, went to an old favourite sleeping-place and fell calmly asleep. Fie continued his life there, with all his old tricks and habits, as if nothing had happened. When he finally died, he must have been over thirty-three years of age. (Vide “Concerning Cats,” by Helen Winslow.)

In the domestic Cat the eyes, when exposed to a strong light, narrow down into straight slits, but in the larger members of the family the pupils remain round, and cannot assume this curious vertical shape.

Cats indulge in a very miscellaneous diet, though they don’t “eat” stones like the ostrich. Dr. Johnson’s Cats ate oysters, but cases are recorded of crabs being broken and eaten. Tomatoes, cabbage stumps, watercress, variegated lady’s-grass (commonly known as “lady’s garters”), peas, broad

beans, asparagus, and potatoes are among Pussy's vegetable fancies; figs, sultanas, apples, almonds, and various jams form a fruit course; while snails, cockroaches, crickets, and moths, to say nothing of oatmeal, bread-and-milk, or curry, add variety to the menu.

The well-known habit of the Cat when she turns herself round and round before settling down to sleep is due to the primitive necessity for making an unseen resting-place in long grass or undergrowth. She treads down just enough for her curled-up sleeping body; too large an open space would probably end by poor Puss making a meal of herself for the benefit of some vagrant enemy.

In a roundabout way this explains the fact that Puss so enjoys lying upon something. True, she much enjoys the comfort of a soft and downy cushion, but she is not used to sleeping on bare boards and hard stone. Her grass bed was rough and uneven, and Puss retains to-day her old power of making herself thoroughly comfortable upon an uneven surface, such as an old jacket flung on a table, a pile of stockings or socks, an open book, or on top of her mistress's new hat if left unguarded in an open box.

A very similar survival is seen in birds, which suffer from sore feet when caged and supplied with delightfully smooth and even wooden perches. Their poor little feet have been used to rough bark and branches and twigs of many varying thicknesses, and they do not appreciate the unconscious cruelty of the smooth sticks.

The tailless Manx Cat is a well-known variety, but to be true to type the hind legs should be distinctly longer than the fore ones, giving Puss a peculiar and unique appearance. About a hundred years ago there was a tailless variety known as the "Cornwall Cat", but I am unable to trace any reliable description of its structure, and so cannot say if it corresponds with the Manx Cat of to-day. But the Malay Cat (so called, I presume, because it is found in Siam and Burma!) is also similar to the Manx, as it possesses no tail worth speaking about, being content with a "kink."

The domestic Cat of to-day is probably the worst mongrel in the world, in spite of her beautifully graceful form. She is known to breed freely with, and have fertile offspring from, the African Caffre Cat (F. Caffra), the Leopard Cat (F. Bengalensis), the Rusty Spotted Cat (F. Rubiginosa), the Desert Cat of India (F. Ornata), the Wild-Cat of Europe (F. Catus), the Jungle Cat (F. Chaus), the Egyptian Cat (F. Libyca), and the Pallas's Cat (F. Manul). From each of these she inherits certain "points", such as the dark sole of the hind foot (in certain colours) and the long tail from the Caffre Cat. This versatility of blood no doubt accounts for the ease with which breeders can vary and develop the colour of the Cat's fur. The whole race of Felidae are notorious for the variability of their markings, but as a rule the body colour is persistent, except in the domestic Cat.

It is true that there are black tigers and also white tigers, black leopards and black pumas; but no black and no white lions have ever been recorded. When we remember that there are an immense number of varieties of "Cats" - large and small — the three exceptions named above are really of no importance. So the numerous colour changes in the domestic Cat are not a characteristic of the Felidae, and can only be explained by the very mixed character of Pussy's ancestry.

Like most animals — and birds — though few but breeders know it, Puss has three eyelids: the ordinary two and a third one at the nasal corner of the eye. This is an inner eyelid (i.e., it moves beneath the ordinary pair) and serves to keep the eye clear of dust and other intrusions. This was necessary because the ordinary eyelids do not normally meet when Puss closes them over her eye, as can easily be proved by any Cat-owner if he watches his pet when asleep: the eyes will generally appear to be half closed. But like the muscles of the ear in human beings, those of the Cat's third eyelid are no longer under control, though a liver attack will at times cause it to move partly over the eye.

The Cat is well known as a light sleeper and wakes easily in response to any unaccustomed noise; but it is not so generally recognised that any shadow falling upon the Cat's half-closed eyes (in sleep) will also waken her. But— owing no doubt to the long security and safety of her domestic life with her friend Man, probably lasting some seven thousand years now— — when very sleepy, Puss will fully close her eyes and blindly trust her life to fate and chance.

The eyelashes are totally absent in the Cat.

The heart of a Cat is small in size compared with the bulk of body; the temperature of the blood is 100 degrees F., several degrees above that of ourselves, which explains why Pussy feels "so warm" when we are nursing her.

There is a record of a Cat, owned by a Mr. W. B. Herman, of Newbury, Berks, that was still flourishing at thirty-one years of age, but this is quite a "centenarian" feat among Cats.

The collar-bone in the Cat is very short and rudimentary; in many species it is absent. This no doubt assists Puss when she performs her unique and curious " turning over" in the air when falling from a height. We all know that a Cat always alights on her toes, but we cannot explain how she does it. It has been gravely asserted that she uses her tail as a lever, but this is too ridiculous.

We have mentioned that the Cat has five toes on the front feet and only four each on the hind feet. This odd arrangement is unusual in Nature, but for some reason the fifth toe has disappeared from the hind feet more rapidly than from the front. It is generally recognised that all four-footed animals (including primitive Man) were originally six-toed, and one still comes across an occasional record of a family whose members have six fingers and six toes; some such cases are quite well known, having persisted for many generations. The hoofed animals, such as the horse, walk on the two centre toes, now merged in the hoof.

"All the Cat's habits show it to be by nature a solitary animal. Even in early life, when family ties necessarily bring out the instinct of association, this is apparent. If you compare the play of puppies with that of kittens, you will find in the one case that companionship of some kind is an essential, for if a puppy has no playmate of his own species he will always try to make one of the nearest biped, whereas a cork or a bit of string is all that is necessary to satisfy the requirements of the kitten.

"The way in which the Cat takes its food is a sure sign that, in its natural state, it is not in the habit of associating with greedy

companions. It first carefully smells the morsel, then takes it in a deliberate way and sits down to finish it at leisure. There is none of that inclination to snatch hastily at any food held before it which we observe even in well-trained dogs. Indeed, no greater contrast in natural table manners can be observed anywhere than when we turn from the kennel or the pigsty and watch the dainty way in which a Cat takes its meals. That a Cat allows people to approach it while it is feeding without showing jealousy proves that it does not attribute to human beings tastes like its own. A dog engaged with a bone growls if his master draws near; having accepted his human friends as members of his pack, it seems to him probable that his master would like to steal the bone and gnaw it himself." (Louis Robinson, "Wild Traits in Tame Animals.")

To this interesting extract, dealing so thoroughly with the inherent difference between the Cat and the dog, we may add that the lion and tiger do not needlessly kill, whereas wolves and wild dogs will destroy many more sheep than they can possibly eat, for (apparently) the mere pleasure of killing. The lion, of course, is well known as a most affectionate creature, but the tiger is naturally and always savage and cruel, yet the latter is not blood-guilty.

The reason Puss sticks her claws into tree-trunks, table-legs, etc., is not in order to sharpen them but to stretch the muscles and tendons of the foot, which in a state of domesticity would rapidly contract for want of proper use.

The Cat, unlike the dog, has not often been the friend of fighting men, though Marshal Turenne had "whole families" of Cats whom he loved and cared for. Lord Heathfield, also, when Gibraltar was besieged by the Spaniards, went about his duty attended by his Cats, who followed close to their master, undisturbed by the noise and the uproar. But it is rather curious to note that sailors are almost always partial to Puss, and there can be, one imagines, few ships without their domestic Cat.

But thinkers, readers, and writers have always been the great friends of Puss, from the earliest days to the present moment. And no doubt the peaceful, quiet atmosphere suits our little friend most excellently.

Mr. Louis Wain has stated: "I have found, as a result of many years of inquiry and study, that people who keep Cats and are in the habit of petting them do not suffer from those petty ailments which all flesh is heir to. Rheumatism and nervous complaints are uncommon with them, and Pussy's lovers are of the sweetest temperament. I have often felt the benefit, after a long spell of mental effort, of having my Cat sitting across my shoulders, or of half an hour's chat with 'Peter.'"

This, no doubt, is really the case, but it will be due to nervous reaction; there is admittedly a large amount of electricity or magnetism in a Cat.

A literary man — a great Cat-lover — delights in placing his Cat on his shoulder, where Puss nestles close into his neck. He says that the gentle rhythm of the Cat's heart-beat is inexpressibly soothing when he feels tired. But in considering this point, we must not confuse cause and effect. The temperament of the Cat-lover goes far to explain the sense of relief undoubtedly felt when stroking or petting a furred favourite. The quiet contented purring of the Cat, in response to our caress, is certainly soothing in its graceful monotony; whereas the fussy

emotionalism of the dog is the reverse of restful to a tired mortal. It may be stimulating to a certain type, but the highly strung nervous temperament does not need this.

It is undoubtedly the fact that there is a certain amount of electricity in a Cat's fur, but it is doubtful if this is sufficient in itself to create a distinct nervous stimulus. On the other hand, the higher temperature of the Cat, more than two degrees above that of Man, may also prove soothing to people who are sensitive to temperature, which is generally the case with the artistic and literary classes, who have always been Pussy's "warmest" admirers.

So it is only natural that people of such tastes as these should appreciate the quiet companionship of an affectionate, purring Cat, who, like a good book, gives companionship without fuss. And if Puss stretches himself across your papers or book, curls in his front paws and settles down to a philosophic review of life, does it hurt you to do likewise and settle down also to " nothing in particular " with so sympathetic a comrade?

Dupont de Nemours, who comments on the extreme gentleness of the Cat when sufficiently fed, relates the following anecdote: At the Jardin des Plantes there appeared a very large and old Cat who was driven by want to thieving. Its paws were so shrunken that they hardly hid its claws; its eyes were dilated and haggard, its thinness was terrible, its aspect hideous. It lay in ambush near the kitchen of M. Desfontaines' house; he was Director of the Jardin under the Restoration. Whenever it had the chance, the poor Cat would enter the kitchen, seize the first scrap of food in its way, and bound off, pursued by brooms and other missiles. The moment it was seen it was hunted, and the Cat's terror was so great that often it could get nothing and was dying of sheer hunger.

One day, from his window, M. Desfontaines saw the wretched Cat staggering along, ready to drop with weakness. He took pity on the animal, fetched some meat from the kitchen, and threw the pieces, one by one, to the starving Cat. The poor creature, famished, pounced on the first piece, regardless of risks; then, seeing that it was not persecuted, it came a little nearer, took the second piece, and made off to a little distance to eat it. The third time it came nearer still, and, having secured the meat, paused before eating it to look at its benefactor.

Half an hour later the Cat had entered M. Desfontaines' room by the window and curled itself up comfortably on the bed, clearly showing its full appreciation of his kindness of heart.

There is a curious Belgian record of a race between a Cat and twelve pigeons. They were taken a distance of over twenty miles from their village home and let loose. Although there was a river to cross, the Cat triumphed over the birds and was the first to reach home.

Charles Darwin ("Expression of the Emotions in Man and Animals") says: "The desire to rub something is so strong in Cats, when feeling affectionate, that they may often be seen rubbing themselves against the legs of chairs or tables or against door-posts. This manner of expressing affection probably originated through association, from the mother nursing and fondling her young, and perhaps from the young themselves loving each other and playing together. Why Cats should show affection by rubbing so much more than do dogs, and why Cats only occasionally lick

the hands of their friends, whilst dogs always do so, I cannot say. Cats cleanse themselves by licking their coats far more regularly than do dogs; on the other hand, their tongues seem less well fitted for the work than the longer and more flexible tongues of dogs."

Cats have been known to live for very long periods without food of any sort, Thompson ("Passions of Animals") quoting two exceptional cases of twenty-nine and thirty-eight days respectively. No doubt Puss is helped by her lack of restlessness, a very marked feature in her character. Most Cat-lovers know how their pets retire to a quiet corner, out of sight, often in the dark, and rest quite passively, when not feeling well.

The Cat is, by origin, a flesh-eating animal, though, in domestication, she is often fond of vegetables. She will, as a medicine, eat grass because of its valuable property as a mild irritant on account of its indigestibility. But as regards strange "foods", no animal equals the elephant and ostrich, who tackle such odd items of diet as paper bags, string, bits of rope, ladies' reticules, keys, baskets, stones, etc.

If a dog does not get what he likes, he will "like" what he gets. Not so our dear little friend Puss, who is an infinitely more dainty, cleanly, and particular creature.

Bless her faithful little heart!

FINIS

"They say that most animals, and especially cats, creep away into darkness and solitude to die. Nero, our cat, had been ill for a long time, and in spite of all our care, we knew the end was near, and we dreaded that this instinct might assert itself. But when the death agony was upon him, and we were looking on, helpless, he crept close to his master and bore his great pain with patient courage, responding always to the encouragement of his master's voice, and then, having lain for three hours with his head pillowed in the palm of his master's hand, and the loving, wistful eyes fixed immovably upon his face, he died, good and gentle to the last. "Do you believe that spirit was one of those which 'go down into the earth'? Or that there is no promise of futurity for such love and such intelligence?" – Spectator, 1872

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