IS IT CRUEL?

T. H. GILLESPIE

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"What Weather!"
Australian Pelicans in Snow

IS IT CRUEL?

A STUDY OF THE CONDITION OF CAPTIVE AND PERFORMING ANIMALS

BY

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TO

ALL WHO LOVE ANIMALS AND ARE CONCERNED

FOR THEIR WELFARE

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ILLUSTRATIONS

NOTE

THE basis of this book was a Lecture which I gave, some years ago, under the title "What Wild Animals Think of Captivity". It produced so many requests for repetition and seemed to interest so many people that I thought it might be worth while to expand it and offer it to a larger public. Part III was in its origin an 'after-lunch' talk to a Luncheon Club.

I have made consistent and repeated use of that rather ugly but so very convenient and expressive abbreviation 'Zoo' because it conveys, more clearly even than the formal term for which it stands, just exactly what everybody means by it; it has ceased to be a colloquialism and has almost become a word.

Naturally, most of my illustrations and arguments are drawn from the Zoological Park at Edinburgh, and when I refer to 'the Zoological Park' that is the Park I mean.

T.H.G.

INTRODUCTORY

THE interest of mankind in animals is almost literally 'as old as the hills'—indeed, it may be older than some of them, for it goes back, perhaps not merely to the time when man became man but, in a sense, to the ages before that, and came with many other of our most deeply rooted instincts as man emerged from the pre-human. It is, therefore, the most natural thing in the world that we should be deeply interested, in some way, in all living things. Our early human ancestors' concern with the animals with which they came in contact was doubtless a very simple though a very intense one; it centred on a kind of see-saw of hunting and being hunted, of eating and being eaten, but one's interest in animals would not be the less keen because one looked forward to the next meal-time in considerable uncertainty as to whether one was destined to be the diner or the dinner! It was pretty much the relation of one animal to another. Time and humanity did not stand still,

however, and as man added to his mental and emotional stature his early simple standpoint changed. With the dawn of the æsthetic sense came the perception of the beauty of animal form, and the record of its amazingly vivid expression remains for us on horn and bone and cavern wall.

Then, in some way, came the impulse in man to attempt to associate his animal neighbours with himself in a manner other than by devouring them. It may have been the same æsthetic recognition of the charm of cub or fawn, or it may have been the call of kinship in young thing to young thing—the desire of a child for a living plaything—that first stayed the weapon of slaughter and introduced a living animal to the domestic hearth. From this accident, as it may well have been, there would inevitably spring a further enlightenment of ideas concerning animals and some conception of the practical benefits to be gained from making animals captive and keeping them under control. So man began to tame the wild, and in doing so began to civilise himself. No doubt, the captivity of animals has found a multiplicity of forms and phases and subjects in different times and regions,

but it took two main forms or branched off in two main directions. On the one hand there arose the kind of captive animal we call domestic—animals which have bred freely and been cultivated in captivity through numberless generations until they have become widely separated, in form to some extent, and in mind more than in form, from the wild species in which they originated and which, in some cases, have long since disappeared. On the other hand, there are those much more numerous animals which man captured but which, though treated, we may suppose, in much the same way, have remained wild animals. Perhaps there may lie at the root of this separation some relation to economic values as distinguished from purely sentimental or emotional appeal. One cannot draw the line of demarcation between them too definitely, and it is not easy to say, precisely, what we mean by a domestic animal or a wild one. For example, the lion breeds freely in captivity and the same strain of lions may be bred in what amounts to domesticity till twenty or thirty or more generations separate their latest descendants from the original wild caught pair, yet the lion remains, in our

estimation, a wild animal. The Indian elephant, on the other hand, breeds so rarely in captivity that it may almost be said, for practical purposes at any rate, never to do so, and the ranks of working elephants have to be recruited from the wild stock, yet we regard the elephant, in the East at any rate, as but little short of a domestic animal. The difference cannot be found in ferocity and gentleness, or hardiness and delicacy, or in greater and less capacity for usefulness—at least, not in most cases. It was, of course, natural and inevitable that man should give the greater attention to, and take more trouble with those animals which he found helped him most in his struggle to live, but he never confined himself to a too narrowly utilitarian attitude. Though they might not, in a stricter sense, be useful to him, man appears at all stages of civilisation to have found pleasure and profit in keeping wild animals under his control. Sometimes the motive may have been one of sentiment or affection—the pet-keeping attitude. Often it may have been a desire to admire the beauty of the animal or observe its behaviour—the attitude of the artist and student. Not seldom it has been, less worthily,

the craving for the thrill of the sight of ferocity and potential danger witnessed behind the safety of iron bars—which one may perhaps term the attitude of the Bank Holiday crowd. Doubtless all these motives mingle in most of us. We are still very much at one with those ancient forefathers of ours; when we buy a dog or beg a kitten we are claiming kinship with them across half a million years, and it is possible to doubt whether we have advanced much in æsthetic feeling, whatever we may have done in technique, beyond that early genius who discovered that, with a sharp flint, he could scratch upon the walls of his cave and the bones of the animals he had eaten, shapes of the beasts whose form had impressed him.

When we come to our own day it seems to me that we find a marked and growing change in the general attitude towards animals. Interest in them is more widely spread and of a higher quality, in fact one of the outstanding characters of our race and thought to-day lies in our changing attitude towards animals. There is a definite sense of kinship with them and a gradually increasing consideration of the rights and interests of the animal as distinct

from our own—at least, so it seems to me. To us they are not so much wild animals as sub-human races. We realise much more keenly than former generations, that they are not merely living things, but feeling, thinking things—having minds, sensations, emotions, not comparable with our own in complexity and degree, but like enough to ourselves to add sympathy and some understanding to our relations with them. Never before, perhaps, has there been such a *friendly* interest felt in animals in general—making due exception, of course, of those instances where taboos and religious or superstitious influences produced similar effects—as there is among the British and American peoples to-day. The numerous societies and associations of various kinds that have come into existence during the last fifty years or so, having as their objects the welfare of animals, bear witness to it, and the body of laws which have been formulated to this end is an imposing and substantial accumulation. I grant that the texture of this regard is as yet a little patchy: there are still many who will deny all mind and personality to everything beneath the status of humanity. I have heard it deliberately stated—not so many

months ago—that "animals can't feel pain"! (I realise the temptation! I admit that I have in the past convinced myself that trout came under that disability; I could never attain to quite the same conviction regarding pheasants and hares, though I always hoped that they did!) Nevertheless, I do not think that I have overstated either the direction of the movement or the degree of its progress.

Inevitably, this very modern view of the rights of the animal and of man's duty towards it does not omit the subject of the captivity of animals, and that concrete expression of it, the 'Zoo', from its scrutiny, and here we find the ranks of the animal lovers divided. There are those—a large majority, I think—who desire more than ever to have wild animals living within their reach and access, not, certainly, in order to gloat over them, not merely to admire them, but chiefly to know them better and understand them in sympathy, and, on the other hand, there are those who look upon the keeping of any wild animal in captivity as entirely unjustifiable—as a wrong committed by the strong against the weak. The one class regards a 'Zoo' as most desirable, if not absolutely necessary, at

every large centre of human population; the other class regards it as an abomination—a place where the innocent suffer oppression and martyrdom at the hands of indifferent or callous tyrants! Yet both are equally and sincerely animal lovers! Between those two groups of quite definite opinion—whose views are not likely to be disturbed by anything I can say—there are very many people who are not quite sure what they ought to think about it and who are perhaps not too well versed in the facts on which an opinion can be soundly based. I have thought, therefore, that it might perhaps be helpful if I set down some considerations and make some suggestions, with the facts within my own experience on which I base them, in order to try to throw light on this question which, as I know well from much correspondence and many conversations, interests and perplexes a great many people—the question whether it is right or wrong to take wild animals from their natural way of living and keep them in captivity. I ought, perhaps, to make it clear at once that I, personally, do not think it is wrong; I have, on the contrary, the strongest conviction that it is right, but I did not reach

that conviction without much thought and considerable doubting at times. My conviction is, in the main, the product of a continuing association (over a period which is longer than I like now to calculate!) with animals and, if I may be permitted to claim it, the attainment of some small (I realise how very small!) understanding of their minds and their outlook on life, if I may term it so. While I am on a personal note, may I also try to make common cause with those whom I must regard as my opponents in this debate, on one aspect which is sometimes treated as a weakness of their case—I mean the element of sentiment. To say, as one quite often hears it said, that some protest against the behaviour of the human to the animal is 'purely sentimental' is, in my view, very far from being a sufficient answer to it; rather, I should regard it as the primary quality that called for investigation! My own regard for animals is decidedly a sentimental one; it dates back to the earliest years of childhood, and whatever of intellectual interest may have branched from it in later years, the trunk of it is rooted in sentiment. I hope that this may be counted to me for virtue by those whose position I am going to attack! I take

issue in this controversy not upon matters or degrees of sentiment, but entirely upon questions of fact and interpretation.

PART I

PART I

CAPTIVE ANIMALS

IN reviewing the state of wild animals in captivity and its effect upon them, some consideration must be given, in the first place, to the kind of captivity in so far as it touches their physical well-being. It is easy to picture an animal in conditions which might fall far short of the standard which one would regard as the essential minimum. If, for example, it were insufficiently fed or watered or were housed in markedly unsuitable quarters, that animal could not retain the bodily health which is the first essential for its happiness, and in such a case I should definitely regard its captivity as 'cruel'. The kind of captivity I am considering must imply good and sufficient food, and such degree of shelter, sunshine, shade, fresh air, room for exercise, and generally, such conditions as are desirable for that particular animal's welfare—such as it naturally desires. Here let me sound for the

first time a note which I shall probably repeat with 'damnable iteration' before I have finished my argument—I have said, such as the animal naturally desires, *not*, mark well, *such as the human observer or critic of its state would desire for himself*.

Such conditions being present, the whole question comes to be this—Does the loss of liberty alone so react on the mind of any animal as to cause it to suffer—to suffer, that is to say, in thought, feeling, or emotion, since we have already provided that it shall not suffer in body? Has any animal below the level of man attained so high a degree of mental development and self-awareness as to be capable of realising such an abstract state as freedom or captivity, apart, of course, from the practical effects of either state, and, even if it were capable of such realisation, would it set its birthright of liberty above the pottage which captivity provides? If an animal is hungry it will seek for food; if it is thirsty it will look for water; if it wants shelter it will find some hole or cover to make a lair or den; if it is alarmed it will, according to its race and temperament, turn to defend itself or seek safety in flight or hiding. These are its chief

A Puma at Home,—in the Zoo

concerns and in meeting them in their simple natural presentment the animal may be—whatever its race or relationships—as much the creature of unself-conscious instinctive response to stimulus as the most lowly among them. I do not mean to suggest that that is always so; on the contrary, I am convinced that when many mammals and birds (to go no lower) are confronted with situations in which habitual or automatic response is no longer capable of satisfying the needs of the moment, they are able, in varying—it may sometimes be very small—degree, to bring intelligence and reason to bear on their problems and to learn by experience, but that is very different from and vastly far short of the stature of mind which enables its possessor to conceive of himself as being captive or free—to say in effect: "Though I am abundantly provided for, I am unhappy because I have lost my freedom." After all, what is this liberty that we fight and contend for? Who among us was ever free? Are we not all bound by duties; chained by responsibilities; cabined, cribbed, confined by the conventions and necessities of our daily lives, which shut us up in office, shop or factory, tie us to relationships and obliga-

tions, and compel us to be the captives of the social order in which we live, whether we will or no? Are we not all in a cage? Though it be so, are we not quite reasonably happy in our cages—so long as we do not beat ourselves against the bars? If we should attempt to break free of those bonds and endeavour to live 'closer to nature', as some would have us do (by which they mean, I take it, live pretty much as animals do), should we be any nearer to a state of freedom—real freedom? I doubt it. I doubt whether any animal is more free than social civilised man to do what it wills or go where it pleases. One meets evidence of a wide-spread popular conviction that if an animal is wild and at liberty, all must be well with it. I am afraid the fact is far otherwise. Popular belief is prone to leave out of account such obstacles to well-being as hunger, thirst, illness, dangerous enemies, all of which, in diverse degree and combination, so constantly beset the dwellers in the wild. Times and chances doubtless change, for each animal and for every group of animals, from season to season or, it may be, from day to day—their lot is no more equal than our own—but the wild is inevitably and inexorably a hard and

hungry place; any amelioration of circumstances will be but temporary and will speedily bring its own extinction by attracting rivals and enemies, or by the pressure of over-population leading to famine or disease. There is a kind of rhythm in it. Let us suppose that a small herd of grass-eating animals, seeking new pastures, as such herds must constantly do, discovers a sparsely populated district with rich and abundant grass and no enemies to worry it. Such conditions naturally lead to a rapid increase in numbers, till one of two things happens—either the flesh-eaters who prey on this species are attracted and, finding game plentiful, they, in turn, increase by breeding, till a point is reached where the grass-eaters are driven away or become so reduced in numbers that famine waits upon the preyer as certainly as the death he causes comes upon the prey, or if, unaccountably, the flesh-eater does not become a factor in the case, then the increase in the grass-eating population will bring about a food shortage for them with starvation for many, probably disease induced by poor condition and over-crowding, and ultimately desertion by the survivors of that region, which will once more become an un-

populated and in a little, again a fertile region of rich grass to await a renewal of the cycle. Whichever course events may follow, it is clearly not a place of abiding peace or idyllic happiness. Some people seem to regard the wild as a kind of heaven for animals; it much more closely resembles a hell. We talk of 'the balance of nature', but not all who use that phrase perhaps visualise the detailed process by which that balance swings—the uncountable slow deaths from starvation or disease, and those more swift from tooth and claw, that are constantly and ruthlessly shearing off the unwanted myriads of individuals and trimming the species to a nice proportion. That, in human terms, would spell an inconceivable amount of pain and suffering, both of mind and body. One must most carefully avoid considering the animal in human terms, but apart altogether from the very profound doubt that exists whether any animal is aware, in the sense that man is, of pain or fear that it suffers, there is sound reason to conclude that freedom and happiness are not necessarily synonymous in the sub-human vocabulary.

It seems to me that we pack altogether too

much significance into the word 'captivity'. Captivity is too apt to be taken as a synonym for imprisonment and 'imprisonment' has a nasty sound in human ears. Imprisonment has been adopted very generally as a penalty for unsocial conduct or for the gratification of private vengeance. In an earlier state of society it derived its effect and forcefulness not from the bare curtailment of liberty alone but from the very unpleasant conditions which it laid upon its subject—conditions of bodily danger, discomfort and pain, hunger, darkness, filth and squalor. Imprisonment came, therefore, to imply physical suffering and was justly dreaded. Later, too, if not from the earliest, it carried the stigma of social degradation. To most of us, therefore, the word is significant of all sorts of unpleasant emotions and perhaps may be the worst of all possible calamities to contemplate. Yet even in human affairs the reaction to imprisonment is a relative matter. The sons of men have not always so safe a shelter as the holes of the foxes or so soft a nest as the birds of the air, and so it sometimes happens that man will deliberately seek the prison, and will commit some act which will ensure his reaching it, for the sake of the

comparative comfort it provides. As its consequences to social prestige and self-esteem diminish, the idea of imprisonment, as such, becomes proportionately less repellent, and its advantages of assured food and shelter and safe-guarding from worry and responsibility, increasingly attractive.*

If man, equipped with self-consciousness and imagination, may so change his viewpoint, how much more likely is the animal, in whose mind those attributes are either entirely undeveloped or at the most very shadowy, and whose outlook can travel so little a way beyond the simple physical, to neglect a state which is chiefly an ideal one, when conditions of advantage which are real and practical are presented to it in a converse state.

I have been asked—oh, how often: "What would you think if you were shut up in a cage for life?" If I were to give a considered answer to that question I should be tempted to say: "It would all depend." If I were shut up without any of those accessories of life that I have come to depend on I should think that it would be an appalling calamity, but if I

*Note. I came across an amusing side-light on that point the other day in 'Justice in the Jungle' by Frank Hives, Cp. IV. One need not go so far as West Africa, for examples, though.

were shut up with abundance of books, unlimited tobacco of approved blend and quality, a piano, some pictures, a chest of tools, an efficient wireless receiver, and a window with some sort of view, I think I should find it at least very tolerable. If, in addition, I were assured that no canvasser, creditor, Income Tax collector, or other enemy, could possibly reach me, the prospect might become tremendously alluring! That, however, is not the appropriate answer. What I do say is that the question is not remotely relevant. It is not what I or any man *would* think that is in question, but what an animal *does* think, and whether the animal is capable of thinking about it at all. I think it can be shown to the reasonable conviction of an open mind that there is sufficient evidence to warrant the belief that most animals are better off and happier in a well-ordered captivity than they would be at liberty and, when they are able to make the comparison, as it were, that they quite definitely prefer their latter captive state to their former free one. Such a comparison can, of course, be possible only to an animal which has been bred in the wild and has known at least a short period of life in

natural conditions, and I derive a degree of my own conviction from what seems to me a general rule that wild-caught animals tend to settle down in captivity and to be more contented than those animals that have been bred in captivity and have known no other life. That is, no doubt, directly contrary to a popular opinion. It is often argued that while it is 'cruel' to make a free animal captive and keep it in a 'Zoo', there can be no objection, or certainly less objection, to keeping in a cage any animal that has been born there. Yet I think that anyone who has had experience of wild animals in captivity (it is certainly foolish of anyone who has not had such experience to attempt to argue about it) will agree with me that the wild-caught animal is more reliable and less dangerous (if it be of a dangerous species) and more steady and less nervous and timid (if it be of a species of that tendency) than similar animals that have been bred in a 'Zoo'. As illustrating that, there jumps to my mind an instance which occurred in the Zoological Park at Edinburgh some years ago. A pair of hog deer arrived at the Park from India. They were fully adult when they arrived. They were placed in a small grass pad-

dock of about three-quarters of an acre in extent and though, like most new-comers, a little timid and bewildered at first, they soon settled down and before many months had passed, were spending most of their days running up and down the side of the fence begging from all the visitors who passed. They became increasingly tame and soon were quite undisturbed even when anyone entered their paddock. In course of time a fawn was born to them, and then another and another, until in a few years they had a family of five, all males. One would naturally have supposed that the young deer born in that paddock and constantly seeing human beings would have been tame and friendly from the beginning, but that was not the case. Not only did they show reluctance to come near the fence when young, but they never overcame their timidity. Moreover, if anyone except their keeper entered the paddock they fell into panic at once and so one could see the surprising spectacle of these captive bred deer dashing about in mad terror while their wild-bred parents looked at them in wonder as they approached the stranger to nose his pockets and beg from him! That may be an extreme case, but in less degree one

finds the same tendency at work. I do not intend to suggest that the animal is capable of making a considered comparison of one state of life with another, but I do think that when it has known fear and perhaps hunger, either by experience of its own or by association with its wild kindred, and afterwards finds itself in conditions where it learns that no danger ever threatens and where food is abundant and shelter assured, it is capable of realising and appreciating the difference.

What a pity it is that we cannot settle all doubts, definitely and finally, by asking the animals themselves whether they so greatly love liberty or find captivity congenial and prefer it, for, after all, it is not our opinion of what the answer to the question should be, but theirs, that matters. They have unfortunately—or, perhaps, fortunately—neither the words to reply nor the mind to apprehend our question, but, nevertheless, they are not entirely dumb. They have the speech of reaction and behaviour, not free from ambiguity and difficult to interpret, but conveying, it seems to me, a fairly convincing expression of their attitude. It is in our attempts to judge motive and mentality from the behaviour of

animals that difficulties and pitfalls abound. If we adopt either of the two most common conceptions of the animal mind we are condemning ourselves to error. If, on the one hand, we regard the animal as a mere flesh-and-blood machine, set in motion and controlled by external influences and fixed instincts, void of emotion and intelligence, we wrong the animal and ourselves. If, on the other hand, we look upon it as the furred or feathered incarnation of a man-like mind and credit it with the capacity for abstract thought with imagination that can picture the past or fear the future, with the self-conscious enjoyment of a sunny morning or a breezy upland, or a rosy sunset, or with any other attribute of the highly evolved mind of man, we may do less injustice to the animal but we shall at least equally betray our own judgment. Sun and rain and the wind on the heath—all sweet things, to the animal doubtless as much as to ourselves, but by the animal felt unconsciously rather than experienced, causing no conscious joy and leaving no regret. So, in trying to judge what an animal thinks or feels from what it does we must be most careful not to judge by human standards—we must never

assume that when an animal performs some action it does so from the same motive or has the same sort of feeling about it as we should have if we performed the same action, or if, in given circumstances, we should feel joy or sorrow or be happy or miserable, we must not conclude that the animal would feel the same. Equally, we must not assume that what would be pleasing or displeasing to one animal would be the same to another. The difference between the needs and desires and the habits of animals is not by any means confined to those between different species, but may be very marked between different individuals of the same species.

It is so easy to jump to false conclusions concerning the motive which underlies some action of an animal and so difficult to free one's mind from the bias created by our own imagined reaction to its circumstances. Let us suppose the case of a humane person who sees a newly caught wild lion or tiger. It is confined in a comparatively small travelling box and, as the observer approaches it, it springs savagely at the bars and bites and tears at them in what is obviously a frantic effort to get out. What is the motive prompting it?

The answer that would be given by probably nineteen people out of twenty would be that the animal is frantic with despair at the loss of its liberty, because that is the paramount feeling we should have in its place. It is, however, improbable that the animal is affected by such a consideration except in a very indirect way. There is a much more probable explanation. Man has not lived, in a comparative sense, very long in this world, but while he has been here he has contrived to make himself highly objectionable to most of his animal neighbours and is greatly dreaded and detested by them, and the effort of the lion or tiger is not so much to regain liberty as to escape from the hateful presence. It is fear of man, not loss of liberty, that inspires it. In a little while the lion or tiger will have learnt—to his astonishment, probably, if he were able to reflect upon it—that it is possible to live very near to human beings without being injured, indeed with a great increase in the comforts of life in the way of regular food, security from danger, and freedom from all worry and trouble. Is it not the most natural thing to expect that, so far as the limitations of his mind permit, he should count the wild

and its hardships and perils well lost for this life of ease and luxury, as, for him, it is?

It might perhaps be argued that the distinction is not a very vital one and that to suffer from fear is as bad as to suffer from loss of liberty. It could not be denied that an adult wild animal, when newly captured, is likely to experience a good deal of fear, but it is not at all likely that its state of mind in fear corresponds closely with our own. Fear is the term we employ to denote what is, in our own case, a complex mental operation which includes the apprehension or recognition of danger and, at the same time, the painful emotion aroused in us by imagination and by our self-conscious recognition of ourselves in danger. It is in the complete absence or, perhaps, in some cases, the very rudimentary degree, of the capacity to apprehend its own mental states—to be aware of itself—that the mind of the animal differs most essentially from that of man. Even in mankind imagination and self-consciousness are by no means equal or constant; many a man has gained the credit of great courage when in reality he owed it to a somewhat slow-acting self-awareness and a limited imagination. No one can really know what

goes on in the mind of an animal; at best we can only guess, basing our guesses on observed behaviour, but it seems safe to assume that those faculties which form the apex of man's mental edifice are as yet undreamed of in the minds of animals or are limited in proportion as their general mental development is beneath his. We have to remember, too, that when we use the word 'animal' in this general sense we are covering a long gradation of evolved mentality; there is, for example, a vast difference between the minds of a dog and a rabbit among mammals, or of a crow and an ostrich among birds. The dawn of self-consciousness may have broken in the chimpanzee or the dog or the crow—we cannot be sure—but we may feel pretty certain that it has not in the rabbit or the ostrich. We do know, though, that an animal (using the term not in a total but in a majority sense) may be in great danger and show the symptoms of fear, but the moment the danger has passed or the cause of the fear been removed, and at a time when a human being, in similar circumstances, would be in the grip of nervous shock, the animal will become quite indifferent to what had disturbed it and will be 'carrying on'

as if nothing had happened. So one may see a bird just escape the spring of a prowling cat and next moment it will be singing cheerfully from a branch overhead; the cat itself may have just time to escape the jaws of a dog by fleeing to the top of the wall and will immediately sit down and calmly and indifferently wash its face—the experiences being noted by the brain for future guidance but no painful emotion surviving the actual happening. To go lower in the mental scale, I have known a frog that had been swallowed by a snake and then disgorged—surely as terrifying an experience as could well befall it—take a worm the minute after, and many times, in the days when I kept snakes myself, I have rescued a snake that had been half swallowed by a larger companion when both had seized the same frog, and the rescued snake was no sooner free than it seized another frog. Clearly, being swallowed alive was to them a minor happening as compared with getting a meal! One finds the same sort of thing in the region of physical pain—in fact it is there that one perceives clearer indication of the low development or absence of self-consciousness. A monkey will have an irritation at the end of his

tail and bites or scratches it to stop the irritation. He tastes the blood and likes the taste and after that he will spend his idle hours sitting nibbling at the end of his tail until he has reduced it to a stump so short that he can no longer nibble it or until measures are taken to stop him. One cannot doubt that the injury is painful, but the monkey seems indifferent to the pain or more probably fails to realise that he is causing it himself to himself. An animal of aggressive tendency that has been hurt will often bite the wound as if it mistook the wound for an assailant and in its instinct to avenge the injury it failed to realise that it was inflicting its vengeance on itself. I do not suggest that the animal body is less sensitive than the human; it is not a question of how much the animal feels but whether it *feels that it feels*; not whether it fears but whether it *knows that it fears*. To put a restrained conclusion on such evidence as we have, I think the answer to those questions tends very strongly towards the negative.

I believe, therefore, that to the animal, fear (using the term to indicate merely apprehension or recognition of danger) is not the painful emotion that we ourselves experience. Even

if that view be not accepted and if we took it at its worst, the animal's fear following and in consequence of capture is a passing mental discomfort, rapidly declining from its first intensity and if the animal were capable of contemplating and comparing states of mind it might well declare that it was worth going through for the sake of the benefits that succeeded it. I remember how, these many years ago, my own state of mind was revolted at the idea of being sent away to school! I thought my parents harsh and unfeeling, indeed, definitely cruel, and I should have welcomed the interference of anyone who would have saved me from that coercion! I was moved by dislike or apprehension of the unknown quite closely similar to the fear of the newly captured animal. Nevertheless, I disliked just as strongly having to leave school when the time came for that! So, too, does the animal who has found its 'school' a pleasant experience.

Much weight has been laid by opponents of the 'Zoo' on the supposed sufferings of animals while travelling, and while in the hands of dealers, and also on the alleged high death-rate among the newly captured. On all these points there is much mis-conception and some

inaccuracy of statement. It is true that large animals have to travel in relatively small boxes, not only on account of the difficulty of handling very large travelling cages on train and steamer but also because they travel much more safely in the smaller box. In a too roomy box the rolling of a ship or carelessness in handling may cause rubbing of skin or a broken leg, whereas in a box of limited size there is not room for the inmate to lose its footing or be thrown violently against the side of the box. One might have expected that on a long journey such cramped quarters would become very tedious, but I do not know that there is any evidence of it. Animals are such creatures of habit that they very quickly become at home in the small travelling box and sometimes it is difficult at the end of a journey to induce them to leave the place they have become used to for the enlargement of their new home. On a short journey the comfort of the animal is, I am sure, greater than that of a human holiday-maker in a crowded excursion train! As to the death-rate, among larger animals it is very small. It is very rarely indeed that a lion or a leopard or a large antelope dies on its journey to this country.

As illustrating this, during the last twenty years the Zoological Society of Scotland has imported (from Asia, Africa, or America) scores of large animals, including at least a dozen lions; some tigers; upwards of twenty leopards; seven cheetahs; a large number of bears; sea-lions; chimpanzees; and such animals as elephant, rhinoceros, buffalo, bison, large antelopes, and deer, and not only did no single one of them die on the way, but all arrived at their journey's end in good health with three exceptions, one leopard, a nilghai, and a wapiti.

In any case, the death-rate among animal travellers is lower now than it used to be. Where it chiefly occurred, and, I am afraid, still occurs, is very largely among small birds. There is no real reason why this should be the case. With due thought and care it should be no more difficult to take small birds round the world in perfect health than to keep them so in one spot, and if the deaths among them are numerous it may, perhaps, be attributed in the main, to overcrowding in the travelling cages, sometimes to lack of judgment or care in attending to them, or sometimes, but much less frequently, to sudden climatic contrasts.

The matter in the meantime is governed to a considerable extent by self-interest. No animal whose value in money terms is substantial is ever neglected, but where the value of individuals is trifling, and that of many tiny foreign finches is not much above the five farthings of parable—there may be a tendency to estimate it in the lump and to discount a high percentage of loss. It might be no ill thing if regulation and control of the traffic in animals came to place a greater sense of responsibility upon those in whose hands the lives of these small creatures lie. I am, of course, speaking quite generally on this subject; there are many exceptions where accident or ill-fortune or some unforeseen cause undoes all that care and skill and patience have sought to safeguard.

To show the extraordinary degree to which habit rules the desires of an animal and induces it to choose, for its happiness, some condition which to human preferences, seems least likely to conduce to that end, I will give the example of a small, though in another sense very great, friend of mine. She is a Pekinese and she came, at the age of three months, on a journey from London to Edin-

burgh, in a basket with a lid. The travelling-basket was kept in service as a sleeping basket and, for safety, while she was a puppy, the lid was closed at night or when she was left alone. She very soon showed a fondness for the basket and cried to be lifted into it, and she further showed she was not comfortable till the lid had been closed. As she grew up, the basket came to be more and more the central point in her world. She is quite eager to go out for a walk in the morning; she perambulates the breakfast table to test in turn the generosity of each person seated at it, and as soon as she thinks she has exhausted their possibilities, she goes to the door and whimpers till someone opens it for her, when she trots off to the basket and cries to be lifted into it. (The original basket, by the way, has been replaced more than once, and now is represented by a large laundry basket!) Often and often we have tried to persuade her to choose a less encloistered mode of spending her days and to find amusement in some other way, but she quickly tires of everything and runs eagerly basketwards at the slightest sign of a chance of getting into it. In the evening she is quite ready for another walk and for

dinner, but she is soon begging again to get back to her chosen place. Now, there is a dog —a very affectionate dog and a highly intelligent one—who understands a considerable amount of human speech and loves a game, yet who finds her greatest happiness in the condition which so many people who see her sum up in the exclamation: "Poor thing, shut up all day in a basket!" Just because chance happened, when she was young, to lay the foundation of a habit which has become dominant. In the same way a wild animal will form an attachment to a particular ledge in a rock den, or to a particular cage or corner of it, or even to a travelling box.

Of course, almost any animal that is captured and brought to a 'Zoo' finds a great change—a bewildering change at first—in its circumstances. There is the constant nearness to man, whom its inherited instinct is to avoid —in most cases, not all though, and one may contrast with the general attitude of animals towards man exceptions such as some species of penguins, who have not suffered from human persecution long enough to have acquired the hereditary dread, and who will approach a human visitor to their rookery

with friendly curiosity and entire absence of fear. Then there is the change from those hardships of freedom that I have already mentioned—the contest between hunter and hunted, the accidents of climate and the like, the constant burden of hunger and fear. In the 'Zoo' all that is changed. There, the animal is supplied daily with good and sufficient food, as much as it can eat or, in certain cases, as much as is good for it to eat; it has shelter, if it wants it, usually the companionship of its kind, protection from all enemies, no need to hunt and no risk of being hunted, nothing to do all day but lie in the sun and sleep, or indulge in such movement as its health and good spirits prompt it to. If it should fall ill or be injured it will be nursed and tended with all the skill that science has made possible for ourselves, instead of having to lie waiting for the arrival of the first hyena or vulture or crow. The danger of such misfortune to a wild animal is far greater than many people imagine. The risk of a disabling accident—a strained tendon, a fractured leg, an injured jaw—is always imminent. I incline to suspect—though I cannot state it as fact—that the death-rate from disease among wild

animals may be as great as that from accident. Intestinal parasites are the rule rather than the exception, and the seeds of such diseases as tuberculosis and mycosis await the condition which will stimulate them into activity. Hard weather, food shortage, over-crowding in a herd, pregnancy, incubation, moulting, or similar causes of physiological strain on the animal, may afford the disease its opportunity, and soon another meal is provided for the carrion-eater. It may be that one seldom sees the evidence of it—the 'undertakers' work too quickly for that; how many does one see, for example, of the thousands of small wild birds which die every winter in our own country, even in the suburbs of our cities, where we should expect that they would be readily noted? Yet die they do. Animals that reach a 'Zoo' in good health usually continue in the same state and live to an age far exceeding the maximum possible to them in the wild. The deaths which take place among the recently captured are, I am inclined to suspect, in a large number of cases due to disease of which the seeds had been sown or the ground prepared for it before capture, stimulated into activity, possibly, by the dis-

turbance of capture. Even for those more fortunate wild creatures which escape disaster in their youth or their maturity, there waits the inevitable hour when their prime has passed, the powers on which their lives depend decay, and old age advances upon them. It is not an age of peace and fulfilment for the wild animal, for it means death either by gradual starvation or by the teeth or claws of the hunter. Old age? There is rarely old age in the wild!

Naturally, the newly captured animal does not, at first, understand or realise anything of this, but in a very short time it will realise it; some do sooner, some later, but only very rarely does one meet with an animal that does not do so, and then, I am afraid, it is a case not of love of liberty but of lack of the capacity to learn or to adapt itself—in fact, sheer want of intelligence. The recognition of the protection they enjoy in captivity can be seen in the way in which so many animals become tame and friendly to most humans through the bars or netting that fence them off, but are alarmed immediately if one should enter their cage or enclosure. A lion, for example, who will rub against the bars and let you scratch his ears

"Does this Eagle look unhappy?"

and tickle his chin and make little noises of pleasure while you are doing it, will shrink snarling into a corner if you should open the cage door, and a deer or antelope which similarly will run up to the fence as you approach and feed from your hand, will dash off in terror if you should enter the paddock in which it lives. That is because they are well aware that they had the protection of the fence which prevented you coming nearer to them and they felt that you could not then hurt them, but when the fence is no longer a barrier between you they lose confidence in face of the changed situation and are at once on the defensive. When, however, the same person has entered the cage or enclosure several times and they have found that still no ill has befallen them, they quickly learn that that person is as harmless inside as out and they cease to show fear. They discriminate, of course, between different human beings and that is why one sees so many animals, quite indifferent to a keeper, whom they know well, when he enters their quarters, show fear if a stranger whom they do not know, should do so. The mere moving from a cage or paddock that has become familiar, to one that is strange, will

upset even a very tame animal and cause it to flee from those in whom it had been formerly most confiding, until the feeling of strangeness has passed and it feels at home again.

A few pages back I suggested, as one of the amenities of a 'Zoo' from the animals' point of view, the fact that they have no need to hunt. I expect that not a few people might question the soundness of that suggestion. It is, in fact, one of the most common arguments against the keeping of animals in captivity that hunting animals are no longer able to hunt (the viewpoint of the hunted being conveniently ignored). It is, say they who hold this view, usual and natural for such animals to exercise themselves in hunting, and if they should be deprived of the opportunity they must necessarily be unhappy in consequence. It is quite true that they do so exercise themselves. It is equally true that it is usual and natural for a coal miner to hew coal, but would anyone venture to suggest that if the miner should be deprived of the opportunity of doing so without losing the consequent benefits, if he could acquire a regular eight or ten pounds a week without hewing coal, he would be unhappy in consequence? I think not! He

would, in most cases, I think, employ himself in exercises more congenial and decidedly less strenuous, and in all probability as unlike his former compulsory occupation as possible. It is much the same with the hunting creatures. Hard necessity compels them to hunt if they would live, but when they find that they can live equally well without it, they give themselves up to the life of leisure now open to them with every indication of great content. I do not go so far as to suggest that if a zebra or a goat were introduced to the lion enclosure in the Zoological Park the lions would ignore it; doubtless the old instinct would revive and the lions would amuse themselves by the novelty of the 'kill', but I do believe it very possible that if it were done repeatedly while the ordinary feeding was continued, they might come to ignore the live prey. Obviously, it is an experiment that cannot be tried. I have seen many times, a lion lying with a bone in front of him, at which a rat was nibbling; the lion looked benevolently upon the rat but made no attempt to strike it with his paw. Moreover, the rats seemed to know that they were in no danger. I have also seen a bantam hen enter a brown bear's cage with several

chickens following her to pick up the crumbs in front of the bear in complete safety. Of course, neither lion nor bear was hungry—if they had been there might have been a different story to tell—and in any case, a rat might seem too 'small deer' to a lion!

One could not find a stronger witness to support me on this point, or a better example of the gulf between popular conception and actual fact in respect of animal behaviour, than the eagle. There is, I imagine, no inmate of a 'Zoo' which excites more sympathy—quite unmerited—and calls forth more protest, than a captive eagle. The general opinion seems to be that he is a very noble bird—he is the 'king of birds'—and there must therefore be some tinge of lese-majesty or sacrilege in confining him! The eagle has come to be regarded as a sort of symbol of untamed freedom. Some experience of the bird disposes me to state with emphasis that no less suitable symbol could be found! There are, in fact, few birds which adapt themselves to captivity or learn to appreciate its comforts and blessings so quickly as an eagle. All he wants is as much flesh as he can eat and a comfortable rock to sit on while he digests it, and when he has learnt,

A Trained Falcon

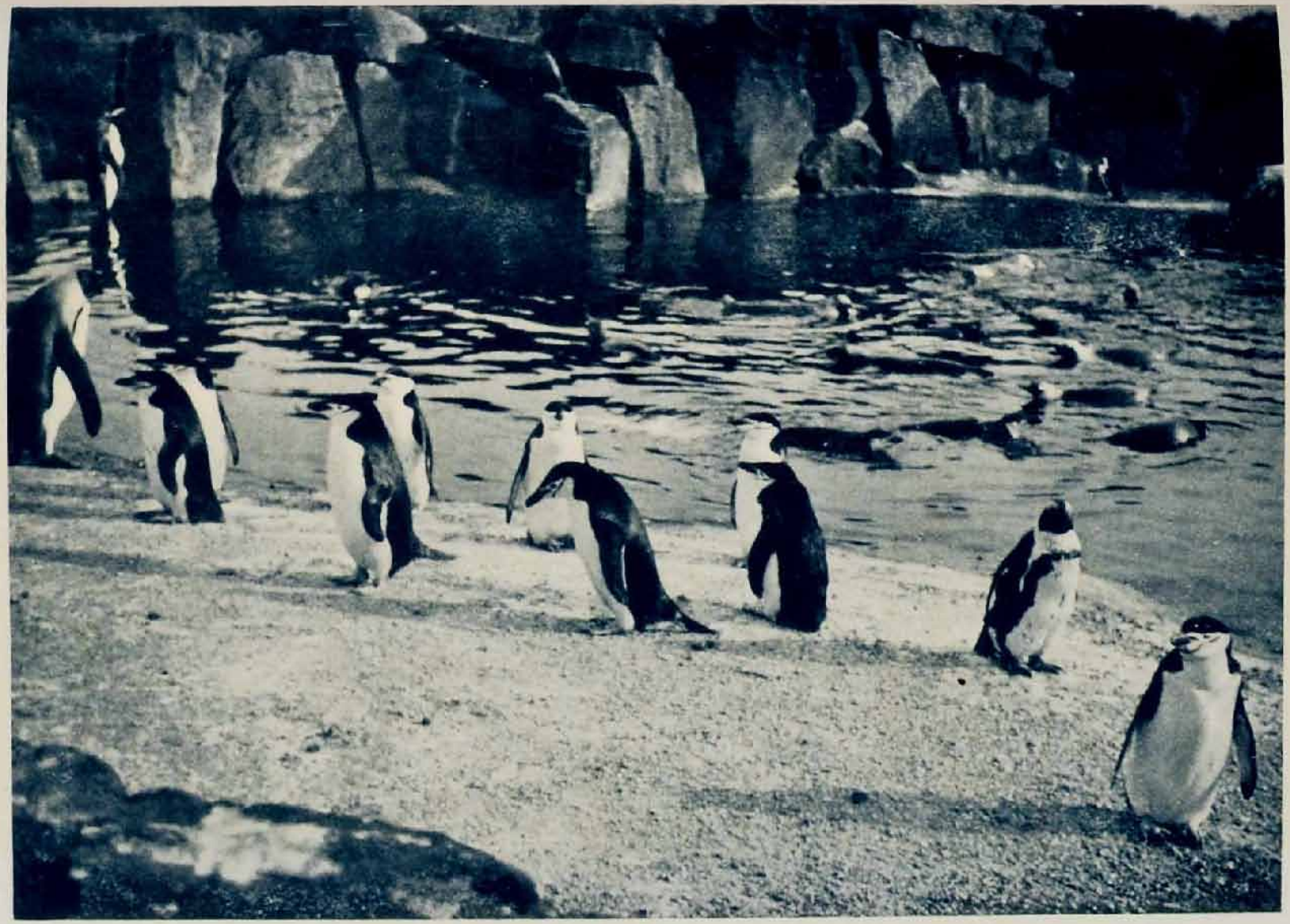
as he very soon will, that nothing will disturb or hurt him there, all the conditions are fulfilled for as high a degree of happiness as he is capable of. That an eagle sets no value upon liberty is not a matter of mere speculation; it is as much a demonstrable fact as any point in animal behaviour can be. One knows that it is so because one can take a freshly caught wild eagle or falcon and in two or three weeks, or a little more, have it so tame and so well adapted to its new circumstances that it may be allowed to fly loose, yet it will return to you, provided you have a lure (which may be either a lump of flesh or a contraption of leather and feathers with some meat bound to it). There is no secret or mystery in it; it is merely a matter of overcoming the bird's natural wildness and accustoming it to contact with man, which one does by constantly carrying it on one's fist, stroking it, speaking gently to it, feeding it by hand, and thus gradually gaining its confidence. In a few days it will show no fear when it is taken up; in a few days more it will fly to a piece of meat held in one's hand, and in little more time it can be cast off with the certainty that it will stoop to the lure as one swings it out, and allow itself to be taken

up on the hand again. I believe the only man who has trained eagles of late years, in this country is Captain C. W. R. Knight, but in the East the eagle is regularly trained and used in falconry. It is beyond question that if these birds be capable of comparing one state with another, or can in any way estimate the circumstances in which they live, then they must assuredly prefer their second captive condition to their former free one, since they do not fly off when they have the opportunity. Were it otherwise, the sport of falconry—one of the oldest in the world—would be impossible. An illuminating light was thrown on this matter by the behaviour of some golden eagles in the Zoological Park. Some years ago a new aviary was built for the eagles. It is a spacious place, some fifty feet long and wide and perhaps twenty high, with a cliff at the back and ample room for flight. It might be supposed that the eagles would have appreciated and made use of the flying facilities afforded them, but, when they were turned loose in it, they merely flew up to the ledges at the back, chose each a spot that suited it, and settled down to stolid contemplation, only coming down to get their food,

or to drink, or, rarely, to bathe in the pool. The aviary is enclosed with netting of large mesh, through which birds as large as magpie or jackdaw or bantams, and even cats, can and do enter it. I have seen a magpie come to a piece of flesh lying quite near to where an eagle was perched, feed, and fly away again, while all the time the eagle watched it with an appearance of benevolent interest but with no slightest suggestion of any inclination to interfere with it. Similarly rats and cats go in and out and pick up scraps without arousing any hunting instinct in the eagles. That the eagle loves to soar into the blue heavens is a pretty fallacy. It flies to hunt and hunts to live and though it may have to fly high and far in its search for game that it can catch, it does so, like the coal-hewing miner, from necessity and not from choice. When the necessity is removed, it abandons itself to the sweetness of doing nothing. The eagle is, in fact, to a considerable extent a carrion feeder and will not trouble, even when wild, to hunt live game if it can find a dead lamb or fawn.

The same argument that is used in the case of the eagle—that it is natural for it to fly and that it must suffer if deprived of the oppor-

tunity for flight—is urged against the caging of all wild birds. It has been made a prominent part of the case, in recent controversy, of those who seek to make the caging of all wild birds illegal. Flight is, say these people, the essential life of the bird. Their case would be stronger if it did not happen that the birds themselves bear witness against them. Flight is one of the many devices that animals have discovered as a means of enhancing their chance of winning food and of escaping danger and death. It is not a special prerogative of the bird, for each class of back-boned animals has experimented with it, and reptiles and mammals each attained considerable success in it, though certainly it is among the birds that the greatest degree of proficiency and achievement has been reached. *Do birds, however, fly from choice and pleasure, apart from the compulsion laid upon them by their environment* in the competition for food and the menace of enemies? *The evolutionary history of the birds says, "No."* It would seem that in danger rather than diet lay the chief stimulus to developing and maintaining efficiency in flight and in birds which came to occupy a region which was free from carnivorous mam-



RINGED PENGUINS

Birds which lost the power of flight because they no longer used it

mals and birds, a tendency to retrogression in flying, and in the organ of flight, the wing, began. There are many birds in the world to-day whose ancestors gave up flying or trying to fly and who are, in consequence, entirely incapable of flight. As examples of this one may cite the flightless cormorants of South America, the flightless rails of New Zealand which have wings but cannot fly with them, the penguins which abandoned flight and turned their wings into paddles or flippers to swim with instead, the ostriches and their relatives in which the wings have degenerated to a degree that stretches from an ornamental bunch of plumes in the ostrich itself to the merest vestiges in emu and apteryx. If it were true that 'flying is the life of the bird' and that birds fly for the love of it, the hand of Time could never have written this story of an ebb-tide in flight. Those are racial changes though, and it may be argued that an individual bird, in the full power of its wings may, if the use of this power be suddenly curtailed, suffer in consequence. One may remark, by the way, that in any properly equipped 'Zoo', and indeed in any cage which I should regard as adequate for a caged wild bird, no bird is

deprived of the opportunity to make some use of its wings if it wishes to do so. I can, however, give the reader some evidence of the opinion, on this point, of some birds which have the full use of their wings and fullest opportunity to use them, for they can fly from Edinburgh to South Africa if they choose. There are living on the sea-lion pool and its surrounding rocks, in the Zoological Park, several gannets; they have their full flight feathers and there is nothing to prevent their return to the Bass Rock on which they were bred except the fact, as it appears, that they do not want to leave their present quarters. They have lived where they are for many years, swimming in the pool at feeding time and snatching the fish from the sea-lions' very jaws, and perching on the rocks when they have fed. They never show the slightest inclination to take to flight. Another bird which lived for years on the same pool was a common gull which came there of its own accord and seldom left the ground surrounding the pool, though it did, when disturbed, rise in the air and fly as far as another pond, returning later to its chosen place. Herring gulls come in scores to the gull paddock at feeding time, and

some of them seem to spend most of their time there. Wild water-hens established themselves years ago on one of the duck ponds; two or three pairs breed there every summer and they never leave the vicinity of the pond, nor have I ever seen any of them take to flight. These are examples of birds that seem to regard their wings as designed 'for' business only' and not for use in 'joy flights'.

These instances also have some bearing on another argument used by opponents of the 'Zoo'. When one tries to show that animals in captivity are healthy and apparently happy, these people say: "Ah, you try them; open the cage door and see if they will stay in your 'Zoo'!" I am glad to say that in the Edinburgh 'Zoo' we have never had any experience to show whether a lion or tiger or other very dangerous beast would take a chance of escaping from it, though I do not think that they would, and it is obviously not the kind of risky experiment one would try in order to demonstrate an abstract proposition! I have, however, known many instances of animals escaping from their cages and either staying about the vicinity till they were coaxed back, or spending their time trying to get back into

what they evidently regarded as their home. There is, for example, the celebrated occasion when 'Starboard' the polar bear escaped from the pool. He spent two hours of liberty in wandering round the paths in the neighbourhood of his pool, never more than eighty yards away from it, and then returned to it, for he paid a visit to the African buffalos, whose ideas of hospitality were not cordial, and soon concluded that there was no place so good and safe as home. Still, perhaps it should be admitted, on behalf of the 'other side', that he had not a very visible and open road to Greenland, though the sea was not far off! !

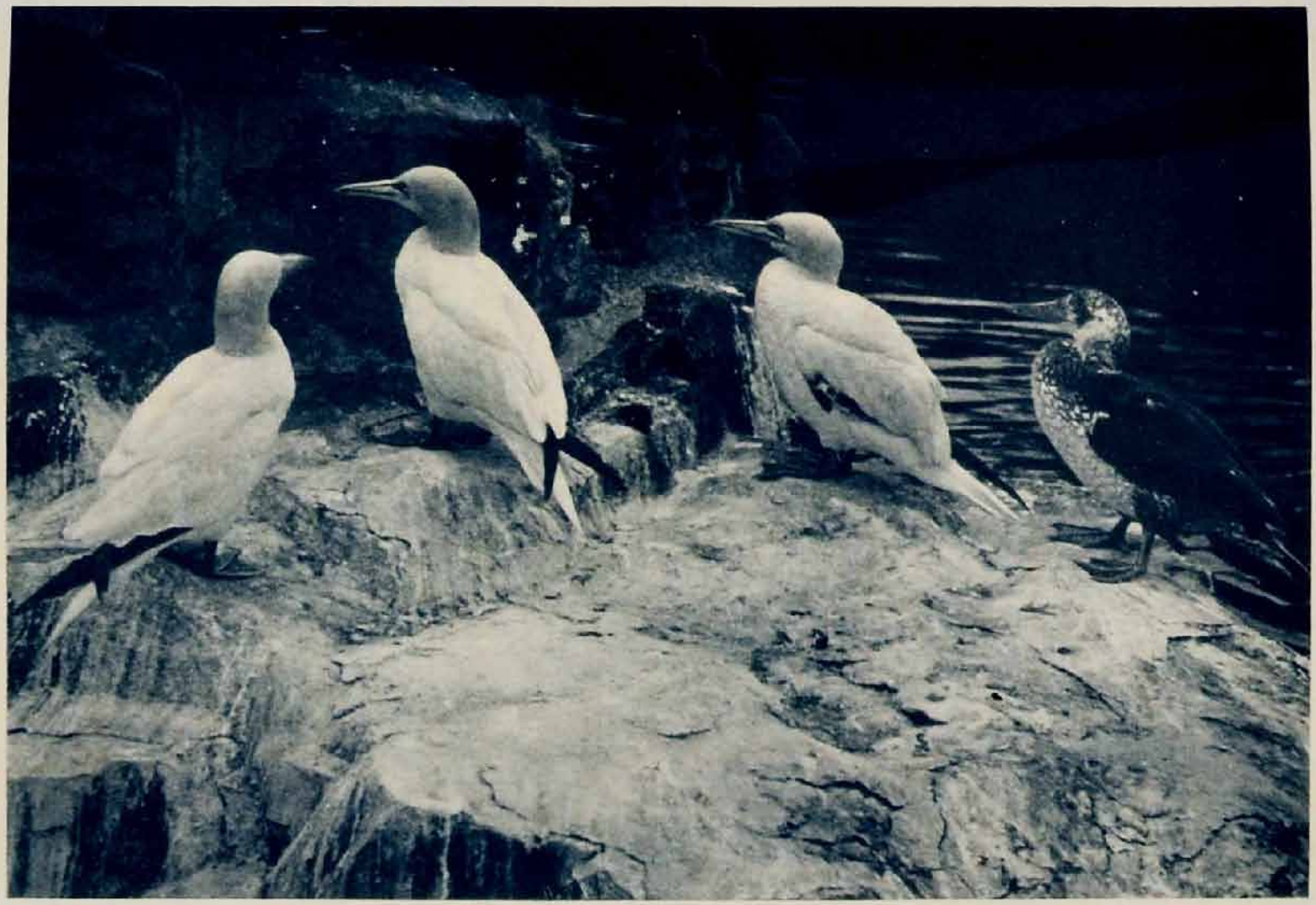
Not very long ago a Tibetan fox escaped from his cage. His road to complete liberty was certainly more open and more inviting than that which offered itself to the polar bear, for at that time wild foxes were not only in the habit of entering and leaving the Park as they chose, but were probably living in it, and the subject of the escape might have joined up with them or have left the Park by their path if it had had any desire to do so. Instead of doing anything like that, it never went far from its cage, spending most of the day time in adjacent shrubberies and coming out at

dusk to feed—not on the ducks and flamingoes and turkeys, as its wild relatives annoyed us by doing, but on scraps of biscuits, buns, and such like, scattered by visitors in front of various cages and enclosures; sometimes it would venture out to take scraps which my wife threw to it. It was at liberty for some six weeks or so and ultimately was coáxed back into its cage—a fortunate result for it, as on at least one occasion it narrowly escaped being shot by mistake for one of the wild raiders of the duck paddock!

The list of escapes we have had is a long one and though some birds have disappeared altogether, such as cranes and flamingoes that have been carried to a distance by high winds, I cannot recall any instance of an escaped mammal trying to leave the Park, with the exception of otters, a number of which have, at various times, got out and were never seen again, and three sea-lions which left their pool and made for the river a mile away. They were recaptured and returned to the pool and although this pool is unfenced and they have had just as good an opportunity of repeating their escapade on any night they liked for the last nine years, they have never left the pool

since. Their escape, I ought to explain, took place very shortly after the sea-lions had arrived in the Park, and the otters which disappeared, were also new arrivals. Not all the otters which escaped from their quarters showed a desire to regain their liberty though. There was one who was particularly adept in getting out of his pool. Time and again we thought we had discovered his way of escape and for many successive times he proved that we were mistaken. When he got out of his own enclosure, however, he did not attempt to leave the Park, which he could most easily have done, or even to go far within its boundaries, but invariably made for the sea-lion pool (which he seemed to think was better than his own) where he caused much perturbation among the sea-lions, who were badly scared by the intruder.

A less amusing escape that took place some years ago was that of a raccoon. The raccoons live in an enclosure containing a large tree and a pool and surrounded by a wall, only about four feet high but smooth on the inside and, as it was supposed, unclimbable. There began, at the time I write of, a succession of mysterious raids on the ducks, whose paddock and pond



BIRDS WHICH PREFER THE ZOO TO LIBERTY

For many years these Gannets, though with full flight feathers, have lived on these rocks and pool and never fly

lie very close to the raccoon enclosure. A visiting fox was suspected and a watch was kept, but the raider was never seen, although every second or third morning another duck was found dead and partly eaten. This went on for more than a month and the mystery was not solved until one evening a lady, passing the raccoon enclosure in the dusk, came face to face with a raccoon just pulling himself over the top of the wall. He had evidently been in the habit of leaving the enclosure of a night when he fancied duck for dinner, and after making his kill and finishing his meal, he returned to the enclosure. He made the mistake of leaving rather too early one night, or his ill deeds might have gone on for long enough before he would have been suspected. He deprived the 'Zoo' of a good many ducks, but in return he furnished me with an excellent answer to the people who maintain that an animal only stays in its cage because it can't get out!

These are all examples of animals that have been brought to the Park and confined in an enclosure whether they would or not, but it occasionally happens that an animal voluntarily enters itself, as it were, as a member of

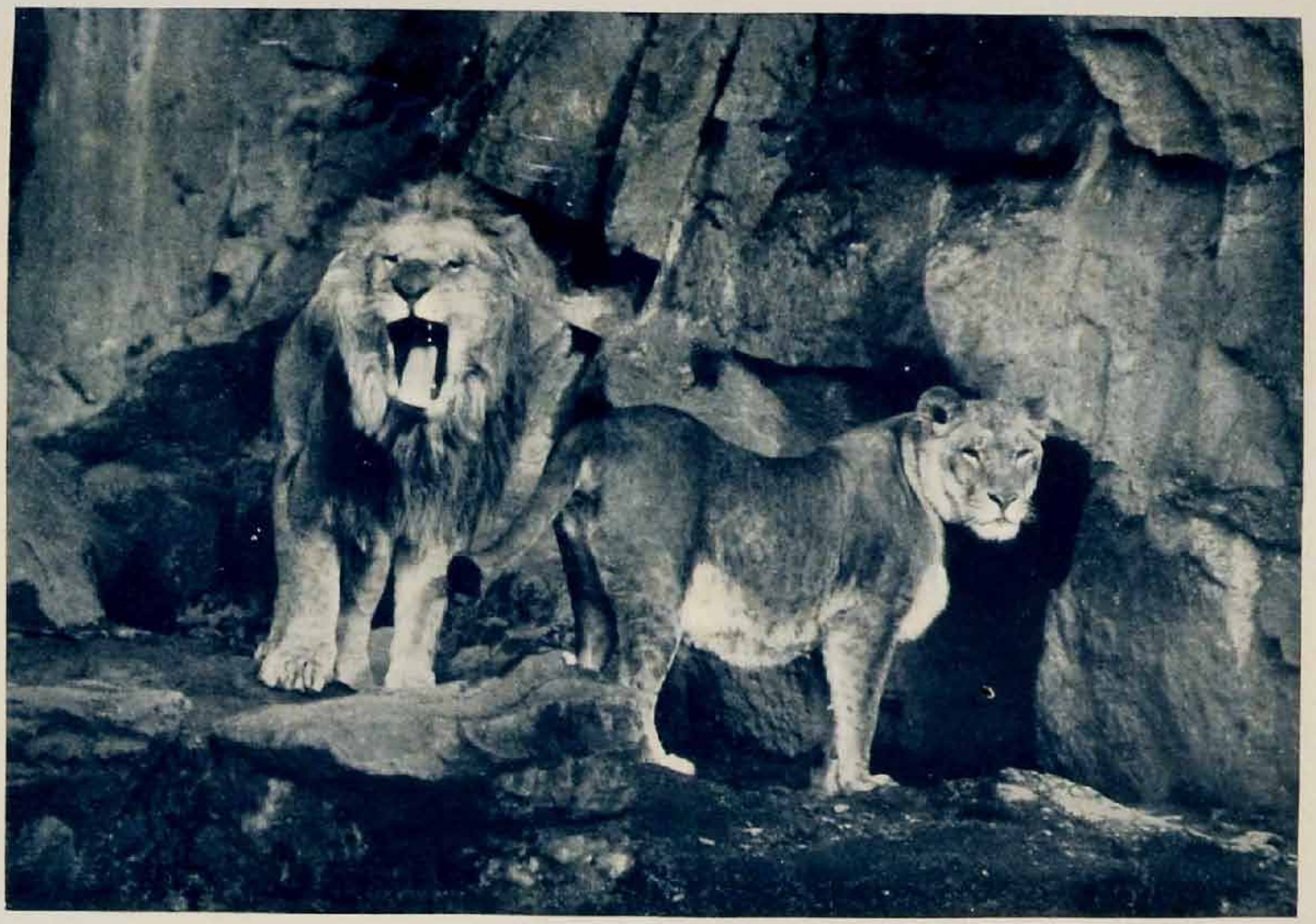
the collection. It is usually birds that do this —it is obviously more easy for them than for mammals to whom entry to the Park or to an enclosure from outside is scarcely possible. The gulls and water-hens already mentioned would come under this description, but one of the most interesting instances I have met with was that furnished by a wild heron. There were at the time—some eight or nine years ago—three herons with pinioned wings living in the stork paddock in the Zoological Park. One morning as I passed I saw a heron perched on a tall tree in the enclosure. I naturally thought at first that it was one of the pinioned birds, and wondered how it had come to rise so high in the world, but on my going nearer to look at it, the heron took wing. Next morning it was there again and, being careful not to disturb it, I watched it from a distance. For a long time it sat there with head and neck stretched downwards, evidently very intent on watching the birds on the grass beneath it. Then it was disturbed by someone passing, but later in the day was there again. For some days it haunted the tree and kept its watch upon the captive birds beneath, but it was some time before it ventured lower. How soon

it actually did so I never discovered but one day, some little time later, I saw four herons instead of three on the grass. The observant stranger had evidently come to the conclusion —a well-considered one, it seemed—that his relatives were worth visiting upon more intimate terms, his decision having probably been hastened and determined by the sight of the fish scattered in the enclosure each day at feeding time. Shy at first, and taking flight as soon as anyone came too near, it gradually became more and more indifferent to the approach of human beings (so long as they were outside the fence) and ultimately it became a regular inhabitant of the paddock, occasionally but very rarely making use of its wings in flight. It lived there for some four or five years, staying on the ground with the others, though at intervals of two or three months it would be absent for a few days. It is probable that on one of these occasional excursions it had met with some accident for it ultimately disappeared. It must have been, in any case, a very unprincipled heron, for it did not show that objection to the conditions under which captive birds live that some people would consider proper for it! !

I come now to another objection which is so frequently urged in connection with the captivity of animals—the size, or more strictly, the lack of size—of the cages in which they may be kept. One reads it so constantly, in the correspondence columns of newspapers, this complaint, usually in extravagant terms, about lions—it is invariably lions—cramped up in cages "so small that they can scarcely turn round in them". If that were the case it would certainly be much too small. (A lion, by the way, can turn round in a travelling box no longer and wider than six feet by two feet, and I do not think anyone will see a lion kept, even in the poorest of travelling menageries, in anything less than four or five times those dimensions.) Still, even that may seem much too small, but I am inclined to think that it is objectionable rather on the score of our own æsthetic susceptibility than of the lion's comfort. People who pity the lions that may have to live in a relatively small cage—small, that is to say, when thought of in relation to the unrestricted space it would have if at liberty—are relieved when they see the lions in the large 'open-air' rock enclosure at the Zoological Park. There can be no doubt that as

a picturesque spectacle, from the human observer's viewpoint, a lion seen among the rocks, with scrubby bushes growing in the crevices and the cliff behind and with ample space around him, is infinitely more beautiful and more worthy of being looked at than the same lion in a cage, but is he a happier lion? He cannot tell us in words, but if we may judge from his behaviour he is probably rather happier and certainly at least as happy in a small cage. The lions are never particularly anxious to go out to the large enclosure. They are trained to it and they form the habit of going out when the door is opened for them, but they never needed any training to get them to come back to the cage as soon as they were free to do so. They may sometimes have to be coaxed out, but they are always ready to return. If the lions are lying asleep on the rocks and one wants to make them move, all that is necessary is to rattle the door which closes the passage to the cages and immediately they are up and waiting at the door. The cage, in fact, is home to them; translated into human terms, it is fireside, armchair, and evening paper! So many people seem to imagine that if a lion, "born with one thousand square miles to

roam in" (to quote from one newspaper correspondent) is removed to and confined in a space of, say, one hundred square feet, his present misery must stand in something like the same proportion to his former happiness as the one area to the other! It is certain that no lion ever would roam over a thousand square miles unless he was hard pressed by hunger or thirst or the search for a mate; if these needs of his can be met within it he is much more likely to limit his peregrination to a hundred square yards—or less. 'Roaming' is much more a human than a leonine form of diversion! While I believe that that is the case with lions and most of the large cats, I do not suggest that the same argument could be applied to every animal. I do not think that a troop of baboons, for instance, if confined in a small cage, would be half so happy, as they would not be one tenth so interesting, as those on the Baboon Rock in the Zoological Park, with its peaks and ledges and crannies and caves, where they play and leap and run to the limit of their desire and their energy. There are other types of animal, too, to whom the lion line of argument could not safely be applied. The lion like the eagle, is, when its hunger is



"Who Rattled that Door?"

Lions at the gateway of the outside enclosure, waiting hopefully to go back to their cage when they heard the door moved

satisfied, inactive, even sluggish, and not a very intelligent creature, who is content enough in a very limited space, but their example would not be a safe one on which to judge the reactions of other animals, and I introduced lion and eagle merely because so many people seem to regard them as the crowning illustration of the 'cruelty' of confining animals in a limited space. Really there is always danger in generalising about animals owing to the great differences in temperament and inclination among them, even when of the same species. A striking example of this was furnished recently by a number of wolves in the Zoological Park. A 'Wolf Wood' had been formed—a large area of rocks, trees, grass, and undergrowth—and two groups of wolves which up to that time had been living separately in adjoining rock enclosures, were turned into it. Among these wolves were three, all of one litter, which came from Kashmir. These three, instead of prowling about the rocks or running among the trees, or showing, in some way appreciation of the wide space available to them, merely wandered upwards towards the higher end of the wood, scraped a hole each, curled up in it and—just stayed there.

To make them move, their food was always put in at the lower end of the enclosure, and they had to make some effort to get it and to come to the water, but otherwise they scarcely ever leave the spot that each chose to lie in. If the Wolf Wood had been judged by these alone, I should have regarded it as very much of a failure, both as an exhibition and as an attempt to provide the animals with a more acceptable home. The other wolves, however, consoled me, for they showed the most gratifying acceptance of the new conditions. They trotted in single file up and down through the trees, not merely at first but almost continuously, since they were put into the enclosure; they seem seldom to be at rest, and one may perhaps conclude that their greatly increased (and almost complete) freedom affords as much enhancement of well-being to them as it does of æsthetic enjoyment to the spectator. The contrast in the behaviour of these two groups of wolves is not due to any extraneous difference, such as that of age or treatment or period of captivity; they are all about the same age, have lived in the Park for just about the same time—about six years (they were all half-grown cubs when they

came), and lived under precisely the same conditions. The difference is entirely one of temperament. The first group would certainly be just as well and just as happy if they were caught up again and taken back to their old quarters; the second group perhaps might not, though that conclusion does not necessarily follow, because their activity, which is so interesting to watch, might be due more to a sense of discomfort and uneasiness through their removal from familiar landmarks than to any appreciation of the wide spaces lying open to them. The example of the wolves shows both the difficulty of deciding upon motive and the doubtfulness of generalisations upon animals, nevertheless, I think I am safe in saying that as a rule captive animals are indifferent, within reasonable limits, to the extent of their boundaries, once they have become accustomed to them. If they are in a large enclosure, they will choose one favourite spot in which they will spend much of their time and perhaps seldom leave it while if they are in a relatively small cage they will in most cases be equally content. (Once more, a great deal depends upon the temperament of the particular animal concerned and in thinking of

them in the mass one can do so only by a kind of averaging.) One judges their contentment from their friendliness, their good health and sleek condition and high spirit, their long lives, and their frequent readiness to breed. The circus or the travelling menagerie is often attacked in respect of the smallness of the cages which the necessities of travelling impose on their stock, but one rarely sees happier-looking or better conditioned animals anywhere than in a well-conducted travelling menagerie. This may be due, in part, to the constant change of air and of scene. Whatever the cause may be, it is certain that the size of the cages does not militate against it. If the animals in such a menagerie do not look well and happy the cause may be looked for in lack of attention, perhaps, or more probably in a deficiency in the quantity or quality of the food.

Reference to the size of cages brings one very aptly to an action of some caged animals, particularly lions, which many people interpret as an indication of discontent or unhappiness—I mean that 'restless' pacing up and down before the bars of the cage; that must, they argue, show that the lion is pining and

longing to get out. Some people even imagine that the lion is going up and down looking for a hole to get out by! There is perhaps excuse for the people who adopt this interpretation, for at first sight, and on a short and not very searching scrutiny, it does look as if the animal were seeking a way of escape or at least as if it were worried about something. I believe, however, that that interpretation is a mistaken one in the general case and that there is another explanation, linked up with another phase of animal behaviour. The lions, like most of the animals in a 'Zoo', are to be numbered among the unemployed; they are in a sense, 'out of a job' for the simple reason that all their necessities, and as far as possible all their desires, are abundantly supplied to them with little or no effort on their part. Yet the time remains to be filled, and how are the animals to fill it? Obviously, in the manner most pleasing to them. When the sun is shining, much of the time will be spent in sunbathing or sleep. At other times, hours will be spent in play of some kind—sometimes with each other, sometimes with some toy that has been given to them, or some object that they have found for themselves and adopted as a

toy. I have seen a stag playing for an hour with a dead branch fallen from a tree, charging it and tossing it and most obviously enjoying a make-believe fight with an imaginary enemy. Sea-lions, after basking in the sun or sleeping for a few hours after feeding, will rouse up and amuse themselves by tossing up and catching a fish left over from feeding time or a stick that had been thrown into their pool. Polar bears will play for hours with each other or with a floating log. Among all the varied methods by which different animals amuse themselves, there is one that seems, according to my observation, to have a wide acceptance among many widely separated forms and types—the repeating of a rhythmical or identical movement. I cannot doubt that a substantial degree of pleasure is induced in the animal by such repetitive movements—indeed, we know it from our own experience. One of the oldest, most widely diffused, and most pleasure-producing of human activities, is dancing, and while the impulse to dancing in humanity doubtless springs from complex motives—it is used to express and dissipate emotion as well as to produce it—an element in it, and probably the primary one, is the

THE SWEETNESS OF DOING NOTHING

How a Lion likes to spend his time

pleasure produced by repeating the same movement in a regular sequence and rhythm. We can see that from the easy way in which so many of us acquire little tricks and mannerisms in childhood—'bad habits', as we are then told they are—and how difficult it often was to break us of them—if we ever are really broken of them; twiddling one's thumbs, swinging one's leg, rocking one's body, are examples of what I mean. There is another very common and very simple one which will bring us back to the lions; how often (at least if I may take myself as an example!) if one is perplexed or worried or one's nerves are a little jangled, do we get up and pace the room—and how soothing it is! Back and forth we go, from the fireplace to the door or the door to the window, and if anyone takes note of it, it will be seen that our steps are regular in number and distance and time. We are pacing the floor very much as the lion paces his cage and I believe that the lion does it for exactly the same reason that we do it—because the movement is pleasing to him. If you watch the pacing lion carefully you will see that his movement is regular and rhythmical, always the same number of paces each way and the

same steady beat. If he should take a rather longer step and so has not room at the end of his beat to complete the regular number, he will 'mark time' for a pace and so maintain the rhythm. It is perhaps a very simple, elemental form of dance, and the lion may gain as much pleasure from it as we do from our much more complex pacing in minuet or quadrille, and that, too, without having to worry to remember the movements in the next figure!

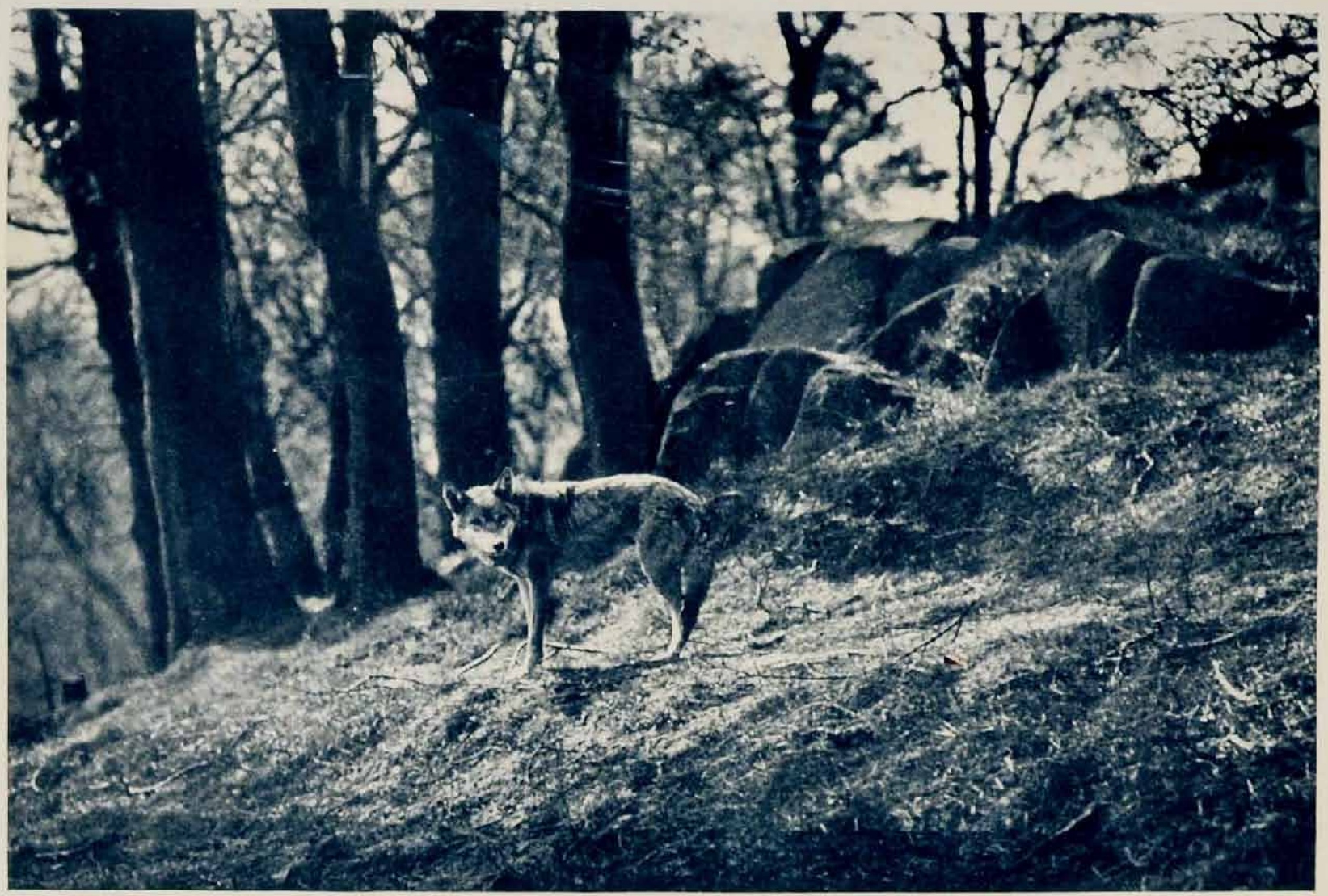
My attention was first drawn to this tendency among animals when, years ago, I kept a kind of miniature 'Zoo' in a suburban garden. A hedgehog, at the time, was living in a disused aviary in which two hawthorn trees were growing, and I noticed one day that there was a sort of track in a circle round each tree. Then, one morning, I saw how the track was made, for the hedgehog was running in a peculiar way round and between the trees. He ran round one tree in a clockwise direction and then crossed between them and round the other tree anti-clockwise, forming a figure of eight track. My attention drawn to him, I watched him carefully and found that he kept this up for nearly an hour and that he did it

daily, trotting regularly round and across and round again, not hurriedly, but in a steady, plodding sort of fashion. I did not think much of it at the time, but the matter recurred to me later on when I had enlarged my acquaintance with animals. The next manifestation of this tendency that I saw, and I think it is the most remarkable that I have ever seen, was given by two polar bears. There were living in the Polar Bear Enclosure in the Zoological Park two male polar bears named 'Starboard' and 'Snowball'. Sometime about the year 1916 'Starboard' was observed to be swimming backwards and forwards across the pool in a rather unusual fashion. He would push himself off from the promontory in the centre of the pool across to a point on the rock on the outside of the pool, turn on his back, and with another strong thrust of his hind legs, propel himself across the pool to the point from which he had started, turn over and push off again, and so he went on repeating exactly the same routine movements, always travelling from the centre rock to the outside back upwards, and turning over back downwards as he returned. It was found that he kept up the repetition of these movements for hours at a

time, day after day and year after year, never varying the direction of his course or the two points on the centre rock and outside wall from which he pushed himself off. When the pool was periodically emptied, indeed, these two points, polished clean by the constant impact of the bear's feet, could be clearly seen and each could have been covered by an eighteen inch circle. There is a more remarkable part of it yet to come, though. When 'Starboard' was engaged in this movement in the water, 'Snowball' carried on a similar repetition movement, not in the water, but on the rock at the back of the enclosure. He paced up and down, always exactly on the same track and always between the same two points. These two points, and the line of the track, were not determined by any character of the enclosure or other external factor which, to human perception, seemed adequate to affect the matter; it did not run from wall to wall, for example, or from wall to water; on the contrary, it lay well away from either and seemed to have been chosen by the bear either by accident or caprice; I think perhaps he just chose a level place which happened to be fairly central and the length of his walk was limited

not by physical obstructions but by the number of steps it pleased him to take. The number of paces he took was seven each way, and it scarcely ever varied. I counted them frequently at various times and intervals over a period of some years, and invariably the number was seven. If a somewhat longer step took him to the end of his beat before the seventh step was made he 'marked time' and maintained the rhythm by a movement of his legs before turning; he did not lengthen his walk by making the full step as one might with most reason have expected. There was ample room at each end of his track for several more steps if he had wished to make them, and the number was manifestly not fixed by limitations of space. 'Snowball' did not keep his performance going quite so regularly as 'Starboard' or for quite such long periods; he sometimes paused to rest and sometimes he would lie down and have a nap in the middle of it, afterwards waking up and going on again, while all the time 'Starboard' had been going to and fro as regularly as a pendulum. Usually, however, 'Starboard's' beginning was the signal for 'Snowball' also to begin, and they went on as if they had been, in some way,

geared together. They kept up the daily practice of these routine movements for five years, until, in fact, 'Snowball' died, and afterwards 'Starboard' practised his by himself for a year or two more, till he was supplied with a mate, a young and flighty person, who thought it splendid fun to stand poised on the rock above till 'Starboard' passed beneath her, and jump in on top of him! In this way she upset the balance of his movements and gradually he became more and more irregular. It was the behaviour of 'Snowball' in this way that first opened my eyes to the rhythmic element in the lion's pacing. One may see a tendency to a similar rhythmic pacing in other large carnivores—in the leopard and cheetah in particular. In the tiger it does not seem to be so much indulged in, and wolves, when they exercise themselves, as they frequently do, are more prone to a trotting or galloping run than to anything so sedate as the movements of the lion. Some monkeys will at times march up and down along the fronts of their cages, but I have no evidence to support a view that that is other than impatience at the non-arrival of bun and biscuit bearing visitors whose presence is desired!



In the Wolf Wood

An example of an ideal enclosure for Animals

Other and simpler forms of repetition movement are practised by other animals. The elephant, for example, is fond of swaying its head and shoulders from side to side, raising first one forefoot, then the other, alternately in a steady swing. Polar bears, too, will stand and swing their heads from side to side. In all these varied movements there is a common basis of rhythm, and I cannot doubt that they afford pleasure to their exponents. Do not pity the lion, therefore; he is merely enjoying himself!

In marked contrast to the measured treading of the lion is the 'dancing' of certain birds, particularly the cranes. This is an exuberant, high-spirited performance. A couple of cranes will face and bow to each other, leap high in the air with wings outspread and raucous cries, twirl round, hop first to one side, then the other, waltz or pirouette round each other, with an appearance of complete abandon. No human dance—not the wildest Highland fling or most extravagant Charleston—could be more expressive of the joy of living or more productive of noise and excitement, than the dance of the cranes, but, though it doubtless indicates the happiness and healthiness of the

birds, it is an expression of the emotions of courtship rather than of the love of rhythm. There is nothing rhythmic about it.

Reference to polar bears and cranes leads one to another of the causes of much good human sympathy being wasted on animals through misconception. When we have frost and snow, people, in complaining about it, will seek some small consolation in the thought that it may benefit somebody. "Well," they say, "at any rate the polar bears in the 'Zoo' will enjoy it." While in the summer, when it is hot, they say: "Poor things! How they must suffer in this heat." They are quite wrong on both counts! The polar bears do not in the least object to the heat; on the contrary, they love it—in fact, of all the animals in the 'Zoo' if there is one that enjoys our hottest sunshine more than all the others, it is the polar bear; he simply revels in it. Certainly, they go into the water a good deal in summer—more than they do in winter when the water is cold, but when the sun is hottest they lie for hours in the full glare and very rarely go into a shady corner, as they could do if they did not like the heat. It is much the same with the king penguins and ringed penguins, which come

from the far south, from a climate perhaps not quite so cold as that of the polar bear, but cold enough in winter to make ours seem almost sultry by comparison. The penguins, too, seem to like all the sunshine they can get and to feel the heat even less than we do ourselves. The musk ox, another Arctic animal, shows the same indifference to heat as do the bears. The only animal from the frozen north that has seemed to me to dislike much heat and to seek shade from our summer sun, is the reindeer.

Then in the matter of frost and snow, I am afraid the polar bears and penguins are not more appreciative of it than we are ourselves. The bears do not go into the water so much in cold weather, and though it amuses them to break up a sheet of ice over their pool, they are much more inclined to go to sleep in a sheltered, and if possible, sunny corner. As for the penguins, they sometimes let weeks pass in the winter without entering the water. The fact is that both bears and penguins are well accustomed to sunshine in their own homes, for while they have to pass a winter of darkness and extreme cold (which they do in the case of many if not all polar bears, by

hibernating under snow, and in the case of the penguins by moving further north) they have a summer when for weeks the sun scarcely ceases to shine, and they instinctively make the most of it.

What about the other extreme? One might imagine that if our winter is too cold for a polar bear's comfort it must be a period of great misery to animals that come from the warmer parts of the earth. A great many people think so and pity the tropical animals accordingly. I am afraid that again it is pity wasted. It is true that some of them do not bear the cold, and especially the damp of our winters well, and have to be kept for those months in warmed quarters, but they are in surprisingly small proportion, and very many show utter indifference to everything unpleasant that our winters can produce. Birds of the parrot family, for example, such as the macaws and parrots from the warmest parts of South America, love-birds from Madagascar, cockatoos from Australia, do not care in the least what the weather may be. Not only are they as cheerful as ever in rain or snow or frost, during the day time, but they are just as regardless of such meteorological unpleasant-

ness at night. Though they have a house provided for them, the majority of the birds in the large Parrot Aviary never use it, but prefer to sleep out under the open sky with nothing above them but wire-netting. They have been doing this for nineteen winters and no matter how low the temperature nor how heavy the snow they do not, or very rarely, change their regular roosting place. The case of the cranes is very similar; sheds and shelters are there for them if they want them, but I have never seen a crane enter one. They have, certainly, abundance of bushes and trees in their paddocks which serve as a shelter from wind and this seems to be all that they want. Sarus, Stanley, demoiselle, and crowned cranes are among those that have expressed, in this way, their indifference to a succession of Edinburgh winters. I do not include the common crane and Siberian crane since, owing to the cold they may experience in their own ranges, their opinion does not carry weight! In contrast to the cranes, adjutant storks and marabous always take cover in their shed (open and unheated) at night, though during the day time they face the cold with composure. There is an ostrich which has lived in the

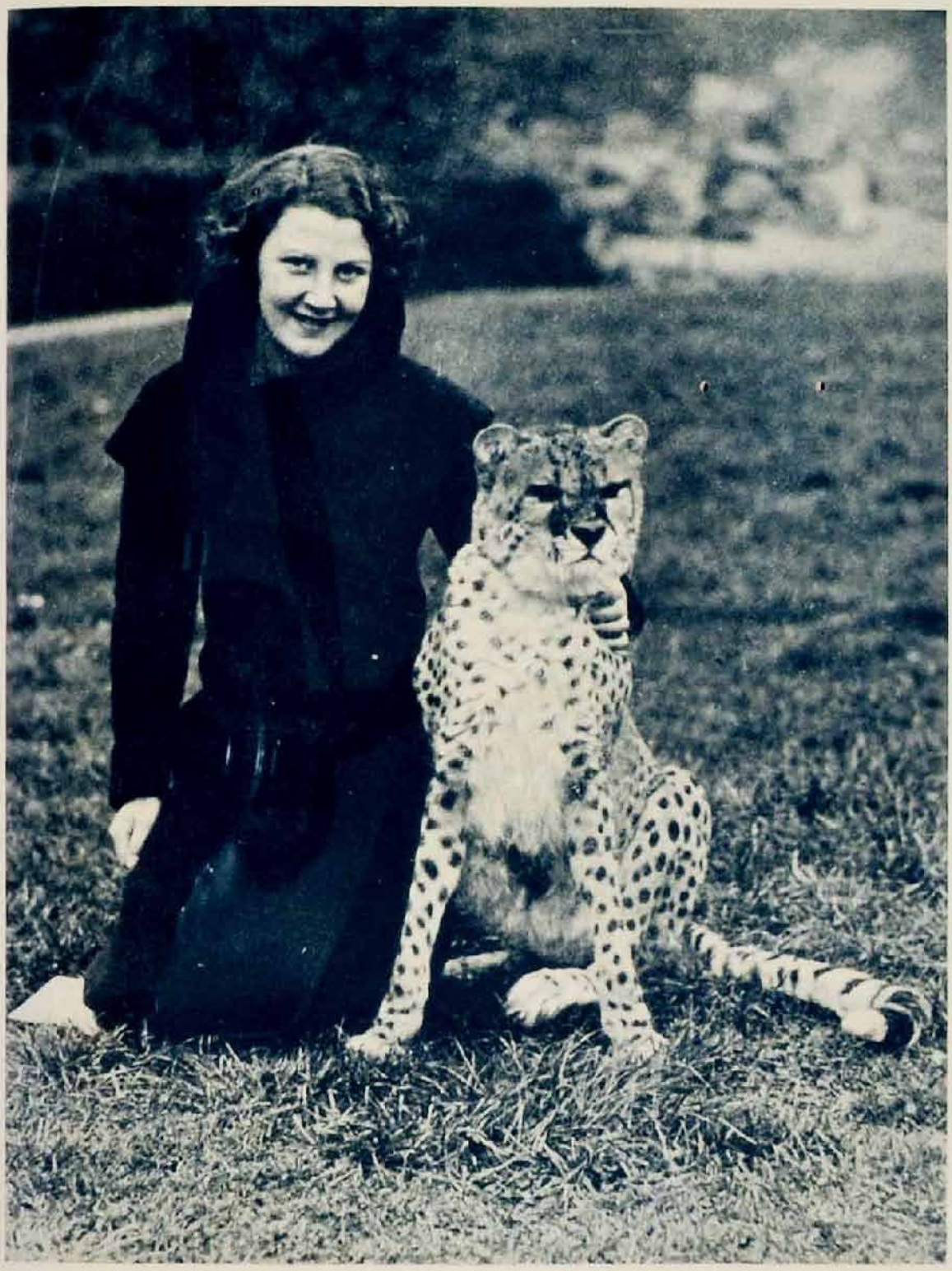
Zoological Park for ten years and during all that time he has never been under a roof. He has a house but nothing will induce him to enter it, and at night he sleeps in the middle of a field—far from the trees and bushes which grow in it—even in twenty-five degrees of frost and with eight inches of snow on the ground. This instance is perhaps not so very remarkable as it might seem at first sight, however, for the ostrich is accustomed to severe cold in a large part of its range.

Among mammals I have noticed some quite striking examples of the indifference to our winter of species whose home is in tropical and sub-tropical countries. A case in point is that of a pair of Malay porcupines which lived for some years in a large grass enclosure. Not only does this porcupine come from a very warm region where the variation in temperature is comparatively small, but it is not what one would call adequately clothed for a cold climate since its hair has been changed into quills and it has no thick woolly undercoat. These porcupines showed as little concern for the cold of winter as the polar bears do and every morning during a spell of hard frost, when the thermometer fell to twelve degrees,

I saw them running about their enclosure in the bustling, fussy-looking manner they have and playing together in a clumsy but lively and amusing fashion. Then, one morning in the December of their first winter, they appeared with a 'baby' porcupine in their company who seemed as well able to bear the cold as its parents. Of course, they made burrows in which they had shelter at night or when they wanted it. Ultimately these porcupines died, not in winter but in summer, and not from cold, but I fear, from something injurious given to them by the public. Another animal from a warm region which lives well out of doors throughout the year here, is the capybara, whose home is in the rivers of tropical South America; they thrive well in a grass paddock with only an open shed for shelter. So it is with many other animals. The buffalo and the antelope from tropical Africa share the same shelter of an open unheated shed with the bison and the musk oxen from Northern Canada, and are equally healthy and hardy although the bison and the musk ox have a warm winter coat of thick shaggy hair to protect them while the antelope and buffalo have no thicker covering than that

which they wore in summer—the buffalo, in fact, has practically no covering coat at all. Lion and leopard sleep in the same kind of open, unheated cages as the northern bears with their thick coats, and lie out on the rocks of their enclosures in frost and snow or rain, yet there could not be finer or more healthy lions or leopards than those in the Zoological Park. It is evident, then, that changed climatic conditions have little or no influence on the health and happiness of animals, whether they come from the Poles or the Tropics. Cold rarely affects any animal, though damp combined with cold may be hurtful to some. The elaborate equipment for the supply of an artificial equivalent of sunlight and sun-heat, which is a distinctive feature of the modern 'Zoo', bears witness to the care that is taken that those animals which do find difficulty in adapting themselves to our climatic changes shall not be the worse off for having been brought to spend their lives in our midst.

There is another source of much happiness lying open to the inmates of a 'Zoo' which must, one imagines, from the nature of things, always be denied to the dweller in the wild—



FRIENDLINESS OF THE ANIMALS IS ONE OF THE GREAT CHARMS OF A ZOO

the opportunity for friendship. Many captive animals form warm and deep attachments to their keepers, to certain selected visitors, or to some other animal, often of a type very remote from their own in relationship. An attachment to a keeper is, in a sense, a proper and inevitable sort of thing; he is constantly in very close association with his charges, they quickly become familiar with him,' and he is, to them, the giver of all good. That. however, is not the whole of the matter. There must be personal or temperamental sympathy as well. If that should not exist between them, the beast and his keeper may be associated for years with no warmer feeling on the part of the animal than a good-natured or indifferent tolerance. It is a curious thing, this affinity between certain animals and certain human beings or certain other animals. It is a purely emotional quality and has no basis in material benefits—it is not 'cupboard love'. Certainly, if one goes to a Zoo regularly and if one always takes some special gift of food to a favourite animal, it will look out for and welcome this benefactor, but if that is the only bond between them, as soon as the bag is empty it will turn away and its only display of gratitude

will be a lively sense of favours to come—from the next visitor. No doubt, the animal finds this a source of happiness, but it is certainly of a material quality. Of the less material and, as I regard it, more exalted kind of attachment, I have myself known several instances. A male tiger we had showed a marked and quite unearned affection for me. It had been in the Park for a considerable time before I noticed that whenever I passed its cage it came forward and rubbed against the bars purring loudly. When I realised that it was showing me evidence of a particular regard I went up to it and immediately it became very much excited, leaping round the cage and coming back to me and purring more ecstatically when I put my hand through the bars and rubbed its ears and chin. That was the beginning of a warm little friendship; always after that I paid him a visit when I was in his neighbourhood, and he always showed his delight and, when I left, would watch me, with one eye glued against the bars, till I was out of sight. The interesting point in this is that I had never, before I perceived his affection for me, spoken to this tiger or paid him any particular attention or tried in any way to make friends

with him, and curiously enough, for his keeper, who was very proud of him and would gladly have been on the most friendly terms with him, he seemed to feel a quite unmerited dislike. A similar and rather moving affection was shown for me by a striped hyena, and again I had done nothing to deserve it. This old fellow, whenever he saw me in the distance, used to cry in a most pathetic tone till I went to speak to him. As soon as he saw me coming to him he pressed his throat against the cage front and made little crooning noises as I scratched his neck, while his eyes expressed pure bliss. His delight in my presence was so manifest and so touching that I paid him many a special visit just because I could not bear to think of him looking for me in vain, as I knew he would do. I was so confident of the quality of his affection for me that I did what I have never done in the case of any other large carnivorous animal, however tame and affectionate it might be—I used to go into the cage beside him and he would rub against my leg and lie on his back for me to tickle him, exactly as a dog would do. I do not think I have ever felt more regret at the death of any animal than I did when he died, and for his

sake I hold all hyenas in a special regard. There can be no doubt that in his quite disinterested affection for me this hyena found a joy such as no animal in a wild state could ever experience. Many animals in a 'Zoo' have their own special friends who visit them regularly—people they have chosen from among the crowds who pass before them, through some feeling of sympathy or other inexplicable reason, who inspire in them a devotion which is free from all material prompting, and which brings much happiness to both the giver and the object of it. Of course, all animals are not equally capable of such affection; one meets with some who seem indifferent and some that are definitely unfriendly—just as one meets with grumpy and morose men, but they are comparatively few who do not show some degree of friendship towards humanity when their circumstances permit them to develop it.

Many accounts have been published of ardent, if ill-assorted, friendships between animals of different species, but I think the story I am now going to tell is perhaps the most striking I have known or heard of. There are, in the sea-lion pool of the Zoological Park,

three sea-lions—a full-grown male, his mate, and a young one born in 1927. Adjoining the sea-lion pool, and separated from it only by a path and a low fence, is a pond and paddock populated by a number of geese, including two Egyptian geese. Sometime during the summer of 1930 the two Egyptian geese took it into their heads to leave their own paddock and take up residence on the sea-lion pool and its surrounding rocks. They were doing no harm there and for some time they were allowed to remain undisturbed. In the autumn however, for no particular reason but moved maybe by a mood of 'tidying up', or perhaps by a favourable chance to catch them, the keeper one day put them back into their own place. Then the emotional content of the affair became manifest! The Egyptian gander, it appeared, had conceived a deep and overpowering affection for the sea-lion lady, and no sooner had the keeper departed than, with much chattering and squawking, the gander flew over his fence and hastened back to the sea-lions. I happened to come upon the scene just when he was swimming excitedly across to the rocky island in the middle of the pool where all three sea-lions were lying at ease.

The gander landed on the island and the three sea-lions lifted their heads. The male seemed (quite properly, doubtless!) to resent the gander's presence—or it may even have been the other way about; at any rate, the gander put his wings up and his head down, stretched out his neck, and ran, hissing loudly, at the male sea-lion, who stood not on the dignity of his going, but plunged quickly into the water, whence he barked his opinion of ganders from a reasonably safe distance! The young sea-lion was next driven off the island and the gander, going close to the object of his regard, stood quivering his wings and rubbing against her neck while he chattered soft nothings to her. The recipient of this outpouring seemed, to me at any rate, depressingly unenthusiastic, not to say bored, but that did not damp the gander's ardour. He stayed—one ought, indeed, to say 'stays', for the affair is still going on—almost constantly beside her, and in course of time he came to tolerate the presence of the other sea-lions, though his affection is all for the one. The two old sea-lions are usually shut into a house at night, and as evening came on the gander would precede them to the doorway and, with

The romantic attachment of the Gander and the Sea-Lion

every sort of argument and expostulation, try to persuade the lady not to enter. She invariably turned a deaf ear to his prayers (since there was a late supper of fish laid out on the floor) and, the door being shut, her admirer took up his place outside it and stood on guard—all night, I suppose. The group of sea-lions with the happy gander in the midst of them, may be seen any and every day.

I hope that any reader who has persevered so far with this book will agree with me that the animals that are brought to a 'Zoo' are, all things considered, no worse off than they would have been if they had been left where nature placed them, and not merely so, but that they are in many cases—I, personally, think in the vast majority of cases—better off. I have attempted to answer the more usual—I am tempted to call them the conventional—objections urged against the capturing and keeping in captivity of wild animals and I have tried to do so not merely by argument but by citing the animals themselves as witnesses—by the evidence of their behaviour. It is, as I have suggested before, often very difficult and rarely easy to interpret their conduct with complete freedom from doubt,

and in illustration of the points I wished to prove I have tried to confine myself to instances where the inference of motive is either clear beyond question or at least, in the most reasonable view, seems to bear the interpretation I have put upon it.

It may be noted that there is one form of defence—it might be more accurate to term it 'excuse'—for the 'Zoo' that I have entirely avoided, though it is a common one—the suggestion that it is no worse to keep animals captive than it is to kill them for food or for sport or make use of them in any other way, and that so long as we continue these practices there is little ground on which to criticise the 'Zoo'. Well, it is, I admit, a temptation, when say, some irate lady is lecturing one on the iniquity of 'making a poor lion a prisoner for life', to count the number of musquash or other skins in her coat and remind her that she has been indirectly responsible for causing something like a hundred little creatures to hang for hours by the legs in steel traps; or to ask her to reflect on the spectacle of a poulterer's window in the week before Christmas! Nevertheless, that line of argument does not appeal to me. For one thing, it leaves the

question I am concerned with still an open and unanswered one. It seems to admit that the one may be a wrong, but that it is cancelled by another wrong, perhaps even a worse one, or, in colloquial phrase, that 'two wrongs make a right'. I should not like to think that the 'Zoo' could claim no higher standing than the slaughter-house or the trapper's store. In any case, I do not seek to excuse the 'Zoo'; I aspire to justify it.

Equally, I have excluded any tincture of another line of defence—that man has 'dominion' over his fellow animals, either in virtue of his higher standing on the ladder of evolution, or on any other ground, and so is justified in sacrificing them for his benefit or to gratify his desire. For that proposition, again, I have no particle of sympathy but a good deal of hatred. It seems to me only a claim, in somewhat euphemistic phrasing, that might is right. If wild animals are to be captured and brought among us for our benefit, we must, it seems to me, be reasonably satisfied that they may be better off, or, at the lowest, no worse off, than if they had been left at liberty. It would be an outrage to enslave a man and force him to work for us entirely to his loss;

it is generally regarded as quite justifiable to employ him to work for us so long as we pay him an adequate wage for his work. Something of the same principle seems to me to rule the subject of this discussion. We take an animal from its own sphere of life and bring it to do something for us. We thereby incur the responsibility of making adequate return to it, which I maintain we can do by the manner in which we care for and protect it. If we have done that, I think the balance of justice between the animal and ourselves swings even. Justice or injustice is always a relative matter. It is true that we take the animal without its consent, just as we send a child to school without its consent, because neither is capable of the foresight and understanding necessary to form consent, and our authority and justification lie, not in our greater strength, but in our benevolence and our wise conduct of their future. The standpoint from which I would have this matter viewed is that of the stronger, not overpowering the weaker, but guarding and caring for it; not conquest but adoption. I need scarcely add the expression of my conviction that a 'Zoo' (under the conditions and qualifications I have mentioned

in previous pages) conforms to this, and I consider that the animals that are brought to it are among the greatly more fortunate members of their respective races.

PART II

PART II

PERFORMING ANIMALS

THE subject of performing animals excites even more antagonism, and of a more fanatical quality, from a section of the public, than the keeping of animals in a simple captivity, and—I am inclined to think—with rather less reason. There is, I consider, at least a case to answer for those who hold that we have no justification for capturing and confining any wild animal, and I have endeavoured in the preceding section of this book, to state an answer as well as I am able to do. If, however, the animal is assumed to be already in confinement, what ill or wrong can be done against it by allowing it to go through some kind of performance? "Allowing it? No!" my opponent in this debate would say. "It is not a matter of anyone *allowing* it that I am concerned about; what I object to is the *compelling* it, by all manner of dire and shocking cruelty, to go through a

succession of unnatural and unnecessary antics that cause sheer misery to the beast and do no good to anybody!" There is no doubt that a large part of the force of the campaign against performances by animals centres on the belief that the preparation for the performance, the training, as well as the actual exhibition of the animal, involves the infliction of physical pain or fear. As an example of this belief, one might quote a speaker in a recent debate in the House of Lords on 'The Performing Animals (Regulation) Amendment Bill'. He is reported to have said: "It is difficult, if not impossible, to train them" (i.e., the animals affected by the Bill) "without cruelty to the animals themselves." That, as a general statement, seriously made, rather takes one's breath away! It is just about as remote from the truth as any statement on the subject could be. It would be much more nearly true to state the converse—that it would be difficult, if not impossible, to train animals to perform by anything savouring of cruelty. Of course, something must depend upon what we mean by a performing animal. I do not doubt the possibility that in the past there may have been animals in plenty ex-

hibited as performing animals and going through some kind of simple movements, for which the training was, or at any rate might have been, a cruel process, but I should not myself regard such animals as entitled to the adjective 'performing'. An example of this kind of thing that comes most readily to my mind is the old so-called dancing bear which was a familiar sight in the streets when I was a boy. I don't think I liked it even then. The bear had a ring through its nose, to which a lead was fastened, and at the owner's signal it used to rear up on its hind legs, grasp a pole in its forepaws, and raise its hind feet alternately. I believe it possible that such a 'performance' could have been induced by a training which was very unpleasant for the bear. I have been told that the 'training' was limited to an upward pull on the ring and a heated iron plate beneath the bear's feet, the one causing the bear to rise on its hind legs to ease the pull on its nose and the other making it raise its feet alternately in an effort to avoid the pain of the burning. In a comparatively short time the habit would be formed and on a given signal the bear would make the related movements, even though the original induce-

ments—a pull on a sensitive nose and a hot plate beneath the feet—were no longer present. I do not say that that was the method of training, for I have no direct knowledge on the subject, but it seems possible that it might have achieved the end desired. Against that version, however, one must remember the tendency of bears to rise on their hind feet in moments of excitement and to swing their paws. The brown bears in the Zoological Park may be seen any day standing up on their hind feet, waving their paws imploringly, or sitting up and rocking from side to side, all in the hope of inducing a visitor to part with one more biscuit, and they had no training; all they do (and it is a far more amusing and clever performance than that of the dancing bear) is the result of their own instinctive tendencies or intelligent appreciation of the effect of their movements on human benevolence. The dancing bear is, I suppose, entirely a thing of the past; it would make very small appeal, I fancy, in these days. In the much more complex tricks and training demanded by the audience of to-day there is no room for anything that smacks of cruelty or compulsion. Cruelty is always stultifying, whether it be

Sitting Upright is a natural and common attitude of a Bear

directed against man or animal, and if an animal is to be of any commercial value as a performer, its trainer cannot afford to imperil the fruits of the time and trouble he knows he must expend, or the price he has already expended, by arousing fear in his pupil. If he should be so stupid as to try such a method either of design, or by the loss of temper or patience, he would utterly destroy all chance of making his unhappy victim into a performing animal; it might become savage and rebellious, or moody and treacherous, or broken-spirited and nervous, but it would never in this world become a clever and amusing performer. The initial stage of the trainer's work, in fact, is to allay all fear; he must win the confidence, at least, if not the affection (and he usually gains the latter, too) of his pupil before he can hope to proceed with the education he proposes for it. It is not every man who can be an animal trainer; on the contrary, comparatively few are fitted for it. He must have much innate sympathy with and great understanding of the mind and temperament of the animal he is going to work with, and he must have patience—and more patience—and still more patience. I have

watched an animal trainer at work and I never cease to wonder how any man can be so gentle and unruffled, while the conviction grew in me that if there was any suffering involved in the matter it was borne by the teacher and not by the pupil. A statement such as that quoted above seems to me exceedingly unfair and misleading, since it attacks, without justice or discrimination, a class of whom the majority at least are conspicuous for more than the average share of such qualities as kindness, gentleness and patience.

Then, again, the animal trainer is never likely to be tempted to take up this calling from financial inducement if other motives are not at work, and it is a safe conclusion that the choice is, with few exceptions, urged by a liking for the animals themselves and for association with them. When we postulate a man with a fondness for animals, with understanding of them, and with the knowledge that any sign of harshness or nervous impatience is going to defeat the aim he has in view, the argument *a priori* is all against the entrance of cruelty into the scheme. A contention sometimes put forward, that many or most performing animals are trained abroad, seems scarcely

worth answering; I cannot conceive that my own country has a monopoly in kindness and common sense.

Why have animal performances at all? Frankly, I don't quite know. They do not appeal to me and while I see no sound reason for objecting to them, I cannot think of any particular end they serve except that they seem to give pleasure to a large number of people—which, perhaps, is no mean argument. It may be that my advocacy lacks enthusiasm because I do not care for them myself, for with a few exceptions, I have never seen any performance by animals that I should care to see again. It does not interest or amuse me to watch lions leaping through hoops or sitting on shelves, or elephants standing on tubs, or a horse tapping out words or numbers with its forefoot, or picking up the correct card, all in obedience to signs from their trainers. I feel as bored as the lions look! The illusion, perhaps, is spoilt for me by my knowing too much about it!

Apart from the thrill there may be in seeing a man or woman in a situation of seeming great danger, as, for example, in a cage with a number of lions (the danger being, in most

cases, much more apparent than real), which must, I should think, have only a very limited appeal, probably the chief charm these performances have for so many people lies in the surprise and astonishment they feel at, first, the 'cleverness' of the animal, which appears to be acting in some almost man-like fashion—it carries us back to the fairy-stories of our childhood in which the animals all thought and talked and acted like humans—and, second, the skill and patience of the trainer who has taught them to play their part in such perfection. While I should hate to seem to disparage, in the slightest, either the efforts of the animal or the achievements of the trainer, there is not quite so great a marvel in it as might appear to be the case. There is one common factor in all performances by animals and it is this: Every performing animal has, as the basis at least, and very often as the total of its performance, some action that is quite natural to it. It does not matter how much 'embroidery' there may be in the shape of coats and caps, or chairs and tables, or lamps and ladders, or other 'properties' which are designed to suggest or enhance the resemblance to human action, the essential be-

haviour which is the real performance is something that the particular animal in the case is either in the habit of doing as part of its natural daily routine or that it tends, of its own accord, to do in face of any emergency or inducement. It is, to take a simple example, quite a usual thing for a dog or a deer to leap over an obstacle when it is running, and that action may be regarded as a daily occurrence; it is not exactly customary for either to stand up on its hind legs, yet either will do that quite naturally in order to reach something that tempts it, and both these natural acts, especially the latter one, can be used as the foundation of a performance the amusement value of which will depend on the ingenuity of the exhibitor whose part it is to combine the actings of the animal into a sequence and add such things as beds, tables, chairs, hats, coats or perambulators, to suggest human motives and conduct. The dog, by the way, is almost the only animal, apart from the chimpanzee, that one can train to adopt and repeat movements that are outside its natural actions. Anyone who has trained his dog to sit up and beg or 'lie down dead', or, for that matter, to bring his slippers or carry home a basket,

knows the whole of the secrets of the training of performing animals.

If we analyse the performance given by the usual types of performing animals—I think, by any performing animal—we shall find that it is always an elaboration of the kind of natural action I have mentioned. Take one of the simplest—the performance (if one can dignify it by that name) given by trained lions or tigers or leopards. It always, so far as my observation goes, consists of leaping through hoops, leaping on to and sitting on shelves or high stools, or standing on hind legs with fore-paws resting on some support. Anyone who watches a number of young lions at play together in a cage will see them doing all these movements (without the adventitious aids of hoop or stool) quite naturally and spontaneously. The trainer places the shelves or stools in some kind of symmetrical arrangement and teaches the lions to leap on to them or sit on them at a certain word or signal, or straddle across from one shelf to another, or whatever it may be, and so creates a suggestion of an ordered performance. That is all there is in it.

A performance by bears usually consists of

sitting on chairs, lying down on a bed, standing upright, or drinking from cup or bottle, and all these things a bear does quite naturally. Give any bear, entirely untrained, a bottle of milk or a tin of syrup and it will immediately sit up and take the bottle or tin in its forepaws to drink the contents. While it is doing so it may very likely sit down on a rock. Put the cup or glass or bottle or tin on a table, place a chair near it, and lead in a tame bear; the bear will do the rest, anticipating all need for training—grasping the vessel in both paws as it lifts it to its mouth and in all probability sitting back against the chair. Add another bear or two and there is a bears' tea-party all ready for the stage!

A boxing kangaroo is, or used to be, a special attraction of the circus or variety stage. It was amusing enough to see the beast, with boxing gloves on its forepaws, apparently-sparring with its keeper, and it seemed, when one knew little about it, a very clever example of animal training. There were two kangaroos, both males—father and son, in fact—living in the Zoological Park some years ago, who now and then provided, quite spontaneously and without any incitement to it by human

agency, a 'sparring' exhibition as entertaining as any that could be seen in the ring or on the stage, and far more interesting, as it was unrehearsed and evidently indulged in by the animals for their own amusement. I had the good fortune to see them several times, standing up on their strong hind toes, supported by their tails, and each alternately striking at the other's head with his fore-feet and then warding off his opponent's blows. The younger was rather a 'light weight' in comparison with his sire, and after a little 'in-fighting', would feel that he had had enough and, freeing himself, he would hop away down the paddock, where he waited until his father had his attention engaged elsewhere, when he would come quickly back and get in a sly blow which renewed the bout. Now if these two kangaroos had each had a pair of gloves on its fore-feet and had been accustomed to the environment of a circus or music-hall, they would have furnished a first-rate 'turn'. It would have been largely illusion. The kangaroos were not, as a matter of fact, striking at each other with their 'fists', as human boxers do, though they looked like it. The kangaroo's method of fighting is to grasp its enemy with its fore-

paws and hold him so while it brings the powerful hind foot with its long claw to bear on his body and rip it with a tearing stroke. The apparent blows and guards that each made were the attempts (playful in this case) of each to get hold of the other's head and to prevent its own head being grasped. I consider this a very interesting and instructive episode which shows how much the seemingly highly trained performance of the stage may be simply the directing, for exhibitional purposes, of a natural action of the animal, and one that it quite evidently enjoys. Another—a large male Red Kangaroo—that lived in the Zoological Park for a number of years, gave even more striking illustration of this, for, having no companion of his own race to play with, he was almost always ready to have a sparring bout with anyone who would play with him. All that was necessary to set him going was to tickle his chest when he came up to the fence (which he was generally prompt to do when he saw a friend) and then push him away. I have had many a 'fight' with him, and he could, with the greatest ease and with little or no special training, have been taught to give a finished public performance.

The sea-lion is another animal that can be taught to give a most interesting and amusing performance and one that seems to show a high level of intelligence and an equally high degree of skill in training, but here again the many and various tricks which sea-lions can be taught to perform are always founded on and developed from those actions which the sea-lion does naturally. Invariably, the substance of the sea-lion's performance is a succession of feats of catching and balancing—catching a ball on its nose and balancing it there, throwing balls to each other and catching and throwing them back, balancing and carrying on its nose a lighted lamp, and similar feats. Almost any evening, at the sea-lion pool in the Zoological Park, a visitor who watches them may see the sea-lions carrying out, entirely for their own amusement and 'off their own bat', exactly the same sort of performance with a fish or two left over from feeding time; they will throw the fish up in the air and catch it, throw it to a distance and dash off across the water after it, throw it to one another and pursue each other for it, and their skill in throwing and catching the fish will be seen to equal that of any trained performing

sea-lion. The cleverest and best-trained sea-lion, I think, that I have ever seen on the stage was one that belonged to Captain Woodward and was exhibited by Mrs. Woodward. He was named 'Jellico' and his performance was, as well as I can remember, something like this: He rode on to the stage sitting on the driving seat of a motor cycle combination, with Mrs. Woodward in the side-car, and circled two or three times round the stage. I suspected a third person concealed in the side-car who controlled the steering, or there may have been some gearing which enabled the visible passenger to control it; I doubt if it is within the compass of a sea-lion's intelligence to learn to steer a cycle, though it may not be impossible. So far, apart from any question of steering, the attitude of the sea-lion, if you substitute two points of rock for the wide seat and the handle-bar, was a perfectly normal one. At about the third time round a loud explosion occurred in the neighbourhood of the engine, the cycle stopped, and 'Jellico' got down from his seat, and put his head under the cycle with the appearance of seeking to discover the cause of the 'breakdown'. The 'engine trouble' was

then abandoned and preparations made for a 'pic-nic', the trainer taking various dishes, boxes, and bottles from the side-car and handing or throwing them to 'Jellico', who took them on his nose, and carried them, so balanced, perhaps throwing them up and catching them again, across to a table which had in the meantime been brought in, where an attendant took them from him and placed them on the table. After that (and after, probably, some other by-play that I have forgotten) an arrangement of two sloping ladders, leading up on each side to a platform, was brought in, and 'Jellico', after going up and down the ladders a few times, carrying balls or the like on his nose, came to the front of the platform and was given a lighted lamp. With the lamp perfectly balanced on his nose he would roll over once or twice and then he ascended the ladder on one side, crossed the platform and descended the other ladder without ever (so far as I saw and I witnessed this performance quite a number of times) letting the lamp over-balance or making any slip in the perfect precision of his performance. Up to the end of the 'pic-nic' the movements of the animal were comparatively simple and,

apart from being rather better than usually staged, neither the performance nor the degree of teaching involved was in any way remarkable, but the carrying of the lamp always seemed to me a very notable example of patience and skill in training and of response on the part of the animal. 'Jellico' was physically a remarkably fine sea-lion and, he may have been unusually intelligent and teachable (I shall refer to him again presently), but with it all the performance never moved beyond the boundary of a sea-lion's native, instinctive actions. The long, very flexible, 'snaky' neck of the sea-lion, which enables him to dart out his head or twist it round and which is responsive to correct the slightest sway of his body, makes balancing and catching in a comparative sense an easy matter for him. The fact is that it is the sea-lion's vocation to catch and balance; he has been doing it ever since he became a sea-lion, and it is no novelty for a sea-lion 'to labour in his vocation'. He feeds entirely on fish, which he catches by his superior speed in pursuit of them, and in that lies the origin of his flexible, telescopic neck and the swiftness and accuracy of his aim. When he catches his fish

it will, in most if not all cases, be seized across the body—an impossible position for swallowing it, since the sea-lion swallows his fish whole and invariably head first. To slacken the grip of his jaws under water while the fish is still alive might enable the prey to escape again, so the sea-lion, having caught his fish, comes to the surface and, while still swimming at full speed or balancing himself on the top of a wave, he tosses the fish up and catches it head downwards, so swallows it, and goes off after the next fish. He has been doing that for countless generations, until catching and balancing became as natural and easy to the sea-lion as swimming is to the polar bear or leaping to the deer, or, for that matter, as standing and walking upright is to us. Tame your sea-lion (and the taming is a very short and easy process, for the sea-lion is a comparatively fearless and very confiding creature), let him realise that by holding a lamp on his nose for three minutes or by catching and balancing a ball on his nose, a fish will come to him as certainly as if he had hunted and caught it, and your sea-lion is practically already trained to perform. That is the whole essence and substance of animal

training, from foundation to coping stone—inducement by reward. The trainer appeals to the animal's self-interest. The animal learns that if and when it does a certain thing in a certain way it will be rewarded by the gift of something that it particularly likes and wants, and it accordingly does them, for precisely the same reason that a man does his work—because he wishes to earn the payment or reward for it. No animal was ever trained to perform, in the only reasonable sense of the term, by any other stimulus. Once the trick has been acquired two other motives may come into operation—habit, and in some cases, the love of showing-off and of applause. No animal could possibly be taught to do any kind of trick by cruelty or by any method that frightened it or was unpleasant to it; one could not induce it, by such methods, to take the first step, or any succeeding step. One can, by unpleasant methods—by punishment or by treatment which might be termed 'cruel', teach an animal *not to do* something, but never the converse.

The first stage in training is to establish friendly relations and confidence between the animal (which is almost invariably a young

one whose habits are not yet settled) and the teacher. That is done by softness of voice, steadiness and calmness of movement, and temptation of edibles. That part achieved, the trainer begins to coax the animal to adopt, step by step, the attitudes, and to make the movements he wants, always by tempting it into position with a small portion of its favourite food and rewarding it when it has made the movement he wants, until it learns that by making this movement it is sure of the reward. For example, one persuades a lion to leap on to a shelf by holding a bit of meat above it and giving it the meat when it has made the leap, and by repeating the lesson a few times, more or less according to the intelligence of the particular beast, the lion will, as soon as it catches sight of its trainer coming, leap on to the shelf in anticipation of the meat, so that it may even have to be taught that the meat will not be forthcoming, that is to say, that it is not to leap, until it has been given the signal to do so. One would teach a sea-lion to jump off a motor cycle at the sound of an explosion and look underneath by the simple means of firing a blank and at the same time letting the animal see you throw a fish under the cycle.

Very soon the sea-lion has only to hear the report of an explosion to leap down and look under the cycle for the fish, which afterwards, may not be thrown there, but given to it by hand when it has made the routine movements. In similar fashion, the animal will be led, step by step and movement by movement to perform a series which, in the aggregate may seem complex and difficult but which are, in detail, of the same simplicity and naturalness.

All this is not to say that it is impossible that animals are ever treated cruelly; we know too well that there are, unfortunately, human beings who are only too ready to inflict cruelty on anything weaker than themselves, but such a person never trained an animal successfully to give a performance and he would be a fool to try. The public may rest assured that when they see an animal going through a clever performance, with an appearance of willingness and spontaneity, they are witnessing the result of understanding and sympathetic treatment and infinite patience.

"That may be all very well," say some, "but even though you may train an animal by kind and gentle methods and coax it to do the things you wish while it is in training and be-

hind the scenes, the case is different when it is being exhibited in public. Then it is necessary that it shall perform its part, not according to its mood, but according to a time-table; not with interruptions and repetitions, but in orderly sequence without a hitch, and you cannot ensure that without making the animal realise that it may not depart from the strict routine that has been impressed upon it without its incurring some unpleasant penalty." That argument may seem a little more plausible than the primary one that you cannot train the animal without cruelty, but it is not any the more sound or convincing. I cannot conceive any method by which one could coerce the animal into carrying through its performance against the dictate of its mood and impulse any more than one could teach it by coercion in the first place. However carefully and thoroughly an animal had been trained to go through a performance, the whole force and effect of its preparation would be vitiated as soon as fear or dislike entered into it. There are two vital and essential qualities at the foundation of all performances by animals—that the animal shall *like* doing what it is being trained to do, and that a *habit*

shall be formed of doing certain acts, in a certain sequence or upon the giving of certain signals. The first is dependent largely upon the receipt of inducements, usually of an edible nature, partly upon the second since animals like to repeat what has become habitual to them, and partly, in the case of the more intelligent animals, such as sea-lions, dogs, and chimpanzees, by love of approval and applause. It is surely obvious that if the animal should become frightened by or should come to dislike its trainer or exhibitor, or if it were brought to the point of associating its rehearsals or stage appearances with pain or unpleasant experience, the performance is doomed to degenerate and lose its exhibitional value. A whip is sometimes (not always) carried by the exhibitor of large performing animals such as lions, bears or elephants—largely, perhaps, as a traditional symbol of authority; it may not always be an empty symbol, but even if it be not, it has nothing to do with the training of the animal or with its performance on the positive side, though it might be important for the negation of temper or violence in the case of animals of savage race or tendencies. It is no more an instru-

ment of cruelty, though, than the cane in the Head's study—which, as every schoolboy knows, is never used nowadays!

Even when the animal has learnt its tricks, constant and careful rehearsal are necessary to keep it perfect, and in addition to the public performances which the animal may go through twice nightly, or afternoon and evening, morning rehearsals are generally carried out so that any part of the performance which the 'actor' may be inclined to slur, may be repeated again and again until the habit has become refreshed and strengthened, and so that variations may be introduced if desired. The fact is—and it carries the final answer to the particular argument I am dealing with—that performing animals do not always carry through their 'turn' just as their trainer prepared them and desires them to do, when they are before the public; they seem to know, some of the more intelligent or more moody of them, that the 'show' cannot be interrupted just as well as their owner does, and that if they choose to vary or 'cut' their part, they can do so. Some of them may be as 'temperamental' as an operatic soprano or a film star. All that the exhibitor can do, in

such a case, is to ignore the variation and carry on with the rest of the performance and try next morning, by patient rehearsing, to get the programme back on to its original lines. In this connection I remember Mrs. Woodward telling me, some years ago, a very interesting and amusing story of her sea-lion 'Jellico' whom I have already mentioned. 'Jellico', who had been giving his clever and rather complex performance for a considerable time, suddenly took it into his fancy to 'cut' a certain small section of his programme. He never showed the slightest tendency to make this 'cut' when he was rehearsing in the forenoons, but every afternoon and evening, when the public were present—and when he very well knew that because the public were present no notice would be taken of his sin of omission—he steadily persisted in omitting this small section of his part and went on to the succeeding movement. His owner rehearsed him more frequently and was particularly careful that he should do very exactly the part he had been omitting, but there was little service in such care, for at rehearsal he never attempted to omit it. This went on for some time, but ultimately he was cured of his

recalcitrance as suddenly as it had begun, and by a cause as surprising as it is interesting. It happened that in the course of a tour in the English Midlands the sea-lion was booked to appear as an interval 'turn' at a picture house in a small town. Now, in the music-halls where 'Jellico' had been accustomed to exhibit his talents there were bright lights and an audience crowding the front seats, from which the best view of the stage could be found, and 'Jellico', as soon as he saw the lights and the people, knew that he could please himself as to what he would do or refrain from doing. The picture house was, however, in comparative darkness, except for the footlights, and the audience, as is usual in such houses, favoured the back seats rather than the front where, the 'house' not being a very good one on the first night, a number of rows of seats were empty. When 'Jellico' made his entry on the platform on the first night of the week, he missed the lights. He moved forward, Mrs. Woodward told me, to the front of the platform and deliberately surveyed the 'house', but as the front rows of seats were empty and he did not perceive the people further back in the darkness, he evidently regarded his appearance

this time as in the nature of a rehearsal rather than an exhibition. He went through his whole performance perfectly that night and throughout the week, and he never afterwards repeated his whim of cutting that part of his programme. An illuminating side-light, that, on animal mind and temperament.

While I have not the slightest sympathy with the efforts and especially the methods, that are made and used by certain societies to have performances in general by animals prohibited by law, for the reason that I am convinced that they do no harm, there are some that I should be glad to know would die out, like the old-time street dancing bear, through a change in the public sense of entertainment. In that category I would include all so-called performances by cats of any kind, from the largest to the smallest—especially the smallest. None of them seem to me to be edifying; what earthly pleasure can it give to anyone to see a lion leap up on to a shelf and sit there until it is told to come down again, or leap through a hoop or stand upright with its fore-paws on a shelf while a number of other lions do the same thing? We all know that lions can do these things easily, and if we want to see them

in the act we shall see a far more picturesque display by watching them at play in a 'Zoo'. As for the smaller members of the family, if there is one kind of animal performance which I should like to see suppressed by law it would be those which involve domestic cats. I have only seen one exhibition of that kind in my life and I do not want to see another. The fact is that cats are, by mind and temperament, quite unsuited for training to perform. It is not so much lack of intelligence, for though I do not think that the average domestic cat is nearly so intelligent as the average dog, any more than that of the lion or leopard can be compared with the intelligence of the wolf, one knows that many a cat has shown that it was capable of surprisingly 'clever' behaviour. It is rather that the cat—solitary and unsocial in its habits and hunting methods—does not readily determine its actions by outside suggestion or stimulus. It has not the racial propensity to accept or welcome leadership and discipline that characterises animals of stronger social habit. Intelligence, or the lack of it, probably does enter into its disability too, though, for a brown bear is not less solitary and independent in its

ways than the cat, and the bear will quickly learn—if he thinks the bribe offered is sufficient inducement—but then, the brown bear has a high ratio of reasoning power. It is significant that the member of the cat family which shows most aptitude for training—the lion—is the least cat-like in its general behaviour. The 'performing' domestic cats which I saw showed not the slightest ability or interest in what they were supposed to do. They were hustled in turn through certain movements by their trainer, but their 'performance' was neither more nor better than that of the rabbit which a conjuror produces from a hat. They looked abject and miserable, and a more unhappy travesty of entertainment I could not imagine. What a contrast was presented by the troup of performing dogs which followed them! Alert, keen-eyed, happy looking, barking joyously as they ran to take their part and even to anticipate it, wagging their tails with pleasure as the applause broke out—no one who saw them could have the slightest doubt that they loved their work and their trainer.

There is another animal very frequently seen as a performer, that I have not yet dealt

with—the chimpanzee. No other is, it seems to me, so well fitted for training or so interesting and amusing when it has been trained, and yet it is one whose vocation in this direction is threatened by present-day efforts in restrictive legislation. To support these efforts, a certain eminent authority has been frequently quoted or, as I should regard it, mis-quoted, since the quotation used is generally separated from a context which greatly qualifies its import. It is only in one particular that there is any validity in the objection to performing chimpanzees. It is essential that a chimpanzee which is to perform in public should be fairly young and it is unfortunately the case that a time must come in the life of almost every performing chimpanzee when its fully developed muscular strength and a growing uncertainty of temper after it has reached maturity combine to render it unsafe in the comparative freedom of a public stage. When that time may come will depend largely upon the particular individual, though it is generally in the neighbourhood of seven years old. There is, at the moment of writing, in the Zoological Park, a male chimpanzee who is over seven years old and who is still quite

A "Performing Chimpanzee"
"Philip" rides a cycle and smokes a cigarette

tractable as he goes out every fine day to have tea at a table with the others or to ride a cycle, while another was becoming unsafe before he had reached the age of six. Generally, however, when its seventh birthday has passed the remaining days of a performing chimpanzee's appearances on the stage are becoming few and he must then retire to a 'Zoo', where he will still perform as his mood inclines, or as the audience in front of his cage incites him. A young chimpanzee not only excels all other animals in intelligence, but it is also very teachable, is of a very cheerful disposition, and is so fond of 'showing off' that little inducement is required beyond some expression of approval and applause. The chimpanzee is, in fact, a born buffoon and a born performer. Even when no attempt is made to teach it any tricks, it will, unless it is very much below the average of its race in intelligence and personality, evolve a programme for itself. One which we had in the Zoological Park some years ago—named 'Boko'—was not only remarkable for the variety and vigour of his self-invented programme, but he equalled the most 'temperamental' human artist in his response to the

size and 'atmosphere' of his 'house'. He would begin by turning a few somersaults and then sit up solemnly and wait for the applause he expected. If there were only a few people looking on, and if they were not loud in their laughter and did not cheer him on, he would look at them with an expression of surprise, and doubtless some contempt, as being of a class incapable of appreciating his acrobatic pearls, and retire to his shelf to sit and meditate—perhaps upon the affliction of having 'cousins' so lacking in artistic understanding! If, however, the audience was large and the laughter was sufficiently boisterous, 'Boko' threw himself (very literally) into the work of entertaining them and would give 'non-stop variety' until he was exhausted. In the end he 'brought down the house' in a too literal sense, for in his exuberance he loosened bricks and displaced doorposts and compelled the building of a new and stronger house!

Chimpanzees are so imitative that they quickly copy each other, or a human, and so to train them is a comparatively easy matter, at least in some of the simpler forms of human manners and activities. They learn easily to wear clothes, to drink tea with some sem-

blance of the human mode, to smoke a cigarette, to ride a cycle (especially if it has three wheels!), to unstopper a bottle and pour the contents into a glass, and the like. A chimpanzees' 'tea-party' has been a regular entertainment in the London 'Zoo' for some years, and we have one every fine day in the Edinburgh 'Zoo', too. The amount of 'training' involved in ours was infinitesimal. 'Phillip', one of the chimpanzees, had already learnt, before he came to us, to drink beer from a glass and the transition to tea from a cup was only a matter of substitution. 'Bobo', another of the party, learnt to take tea soon after he came, and when he was still very young, by no more than being allowed to take a seat at a table and having a cup placed in front of him. He very quickly acquired the 'tea habit' and the greatest pleasure of the day to him was to be taken into the public tea-room and allowed to have tea among the other visitors. He behaved very well except for a trifling failure to realise human prejudices, and an occasional but not, I think, very frequent tendency to disregard proprietary rights in tea-cups, and to jump down from his own chair when his cup was empty and seize the

nearest cup he saw on another table, which led to the abolition of this form of entertainment. It must be confessed that 'Bobo's' behaviour is more circumspect and correct when he takes tea alone than when he shares the company of his kind. Alone, he sits calmly on his chair, waits till his tea is poured out, or sometimes tries, not always with complete success, to pour it out for himself, takes a biscuit from the plate, dips it in his tea after the manner of a toothless old man or woman, drinks without spilling, and so on. With company he cannot resist the temptation to show the others, at intervals, how cleverly he can turn somersaults on the table, or juggle with the teapot, or he will reach a foot under the table to pull one of his smaller table companions off the chair, all of which, while it adds to the hilarity of the occasion, does not always make for the peace of the party. We have made it something of a rule not to try to persuade these chimpanzees to adopt our ideas of conduct at table but rather to encourage them to act precisely as they feel inclined, and the 'party' has certainly lost nothing of entertainment value on that account. The amusement afforded by performing chimpanzees lies

largely in this readiness to provide unrehearsed effects and introduce variations of their own into the routine of the performance. Almost any chimpanzee, as soon as he has acquired some proficiency in a trick, will begin to improvise innovations of his own, and the more he is allowed and encouraged to do so, the better performer he will become. All manner of things he will discover for himself. 'Bobo', for example, found out by close observation, how a drawer which he could not open, no matter how hard he pulled at it, opened easily after someone put a little bit of metal into a hole in the front of it. He was given several such bits of metal, all tied together on a ring, and he tried one after another, with absorbed concentration, until he finally managed to get one to go into the hole. He had to be shown how to turn the key after it was in the lock, and he soon grasped the idea and before long could pick out the correct key from a bunch, with very few errors, and open either a drawer or the office safe. 'Ikey', another chimpanzee, is an expert in untying knots; no matter how complicated the knot in a rope or how many times it is tied, 'Ikey' will untie it. The best age at which to begin the

education of a young chimpanzee is round about two years—a little less or more according to the development of the animal in question. At that age they not only are more quick in understanding and more apt to learn but they seem to be more in earnest over the matter—they resemble to some extent an intelligent child seriously anxious to learn to do what its elders do. As they grow older, high spirits and their disposition to frolicsome mischief tend to turn everything into an excuse for play. What they have already learnt at an earlier age they will continue, but they become less ready to follow their instructor's ideas and more abundantly supplied with their own. There is no sound reason that I can see for objecting to the training of chimpanzees for public performance if they are taken young; of all animals they are the most suited for it and the most worth the trouble for the interest of their intelligent response to teaching and the originality of their behaviour, as well as for the entertainment they provide. It would be a great pity, therefore, that any Bill for the regulation of performing animals should pass through Parliament which included the prohibition of performances by

chimpanzees. It may at the same time be desirable that the trainers and owners of performing animals should be subject to some form of control and, as a chimpanzee that has attained sexual maturity may be expected to develop a proneness to fits of rage and so be no longer safe outside a cage, it might be well to provide for the compulsory withdrawal from public showing of any animal that has given indication of having reached the danger age. That, however, is a far different thing from forbidding all performances of the many amusing and intelligent and docile chimpanzees on account of the few which might be open to objection. He must be a foolish showman, however, who would risk his person, his public, and the status and reputation of his exhibition, by continuing to exhibit an animal that he knows (and he is bound to know it before anyone else does) is no longer safe, and I doubt whether the danger of such an animal being exhibited, as matters are, is a real one. At any rate, I cannot recall any instance of a performing chimpanzee having turned savage or injured anyone while performing. The other two large anthropoid apes—the orang-utan and the gorilla—are quite unfitted for training

to perform on the stage—the first by reason of its melancholy and morose disposition, and the second on account of its great size and strength.

Then there is the objection that performing animals are carried about the country in small travelling boxes which, apart from the hour or so a day when they are on the stage, are their only home—close, cramped, dark and depressing. Of all the arguments advanced against the practice of exhibiting performing animals, this seems to me the most cogent. At first sight it does seem indeed a dreary prospect, but I am just a little afraid that in admitting so much I am perhaps guilty of the mistake against which I have already warned my readers—I am permitting myself to read my own feelings into the animal. One has to remember that, as I mentioned in the preceding section of this book, animals tend to become attached to their travelling boxes on a journey from abroad, and leave them only with reluctance at the end of their journey. Sometimes an animal newly arrived at the Zoological Park is so manifestly unhappy when it has been driven out of the box in which it has spent two or three or more weeks

that I have had the box left in the enclosure or cage, so that it could stay in it as much as it wished until it had come to feel at home in its new quarters. In the case of such animals as lions or bears, which spend much of their lives in sleep and are active chiefly just when necessity compels, I do not think there is any hardship involved in the travelling boxes. I should feel more doubt in the case of dogs, but I have to remember the example of the little Pekinese I mentioned before, who shows so plainly how much of her happiness lies in her basket. It is so much a matter of habit and custom. To an animal that had grown to maturity in freedom or in comparatively spacious surroundings, I should think that the restrictions attendant upon constant travelling must be a hardship, but in the case of animals that have been accustomed to it from an early age—and most, if not all performing animals are so accustomed—I doubt whether it is a real hardship. One could cite many forms of human occupation which inflict upon their employees what seem to me greater hardships.

I am not really concerned to support the general practice of training and exhibiting

performing animals and in so far as I have sought to defend it, I have done so not from any love of it, but because I hate the uninformed fanaticism which attacks it with violence and intemperance proportionate to its lack of knowledge; it is, with me, not Rome more but Cæsar less. I am, however, convinced that the training need not involve, and seldom, probably never, does involve, any more 'cruelty' than is necessary to teach a child to dress itself or behave itself at table, and not perhaps so much as is required for the breaking in and driving of a horse. We who know animals, and love them, prefer them in a less unnatural environment than a music-hall or a circus, and acting more in accordance with their own impulses than in an awkward parody of ourselves. There are many thousands, though, who have not the same knowledge of or regard for animals as we have, but may lay the foundation of them in watching an 'animal turn'. When I have been a member of the audience witnessing a performance by animals, I have been more interested, usually, in the reactions of the spectators than in the actions of the performers, and I have often noted how easily sentiment is stirred by the

sight of an animal going through its part cleverly, especially if the animal be young or small, like a bear cub or a dog. Equally, I have noted how quick the crowd is to express distaste for any sign of roughness or impatience on the part of the showman. It may be, therefore, that these performances have a positive value in arousing what one might call 'animal consciousness' in the minds of thousands who would, without them, scarcely realise that animals exist. If that be so, they are helping directly to promote that greater regard for the welfare of animals which I, and all who read this book, hope for.

PART III

PART III

THE 'ZOO'—WHAT AND WHY?

THE methods by which men confine wild animals may be regarded, roughly, as of three types—the menagerie, the zoological garden or park, and the animal reservé or sanctuary. Between the first and second it would be difficult to draw a definite line, but between them and the third there is, or ought to be, a clear distinction. The animal reserve has an entirely different function to fulfil. Unlike the zoological garden, it is not intended to bring wild animals close to man but, on the contrary, to protect them from man and his works. Its object is the preservation of wild species which are or might be in danger of extinction, either directly, from the increase or advance of human activities, or indirectly, from the effect of these activities on the balance of species. It is a sanctuary for those animals which would be unable longer to keep their place in the sun without some help. As

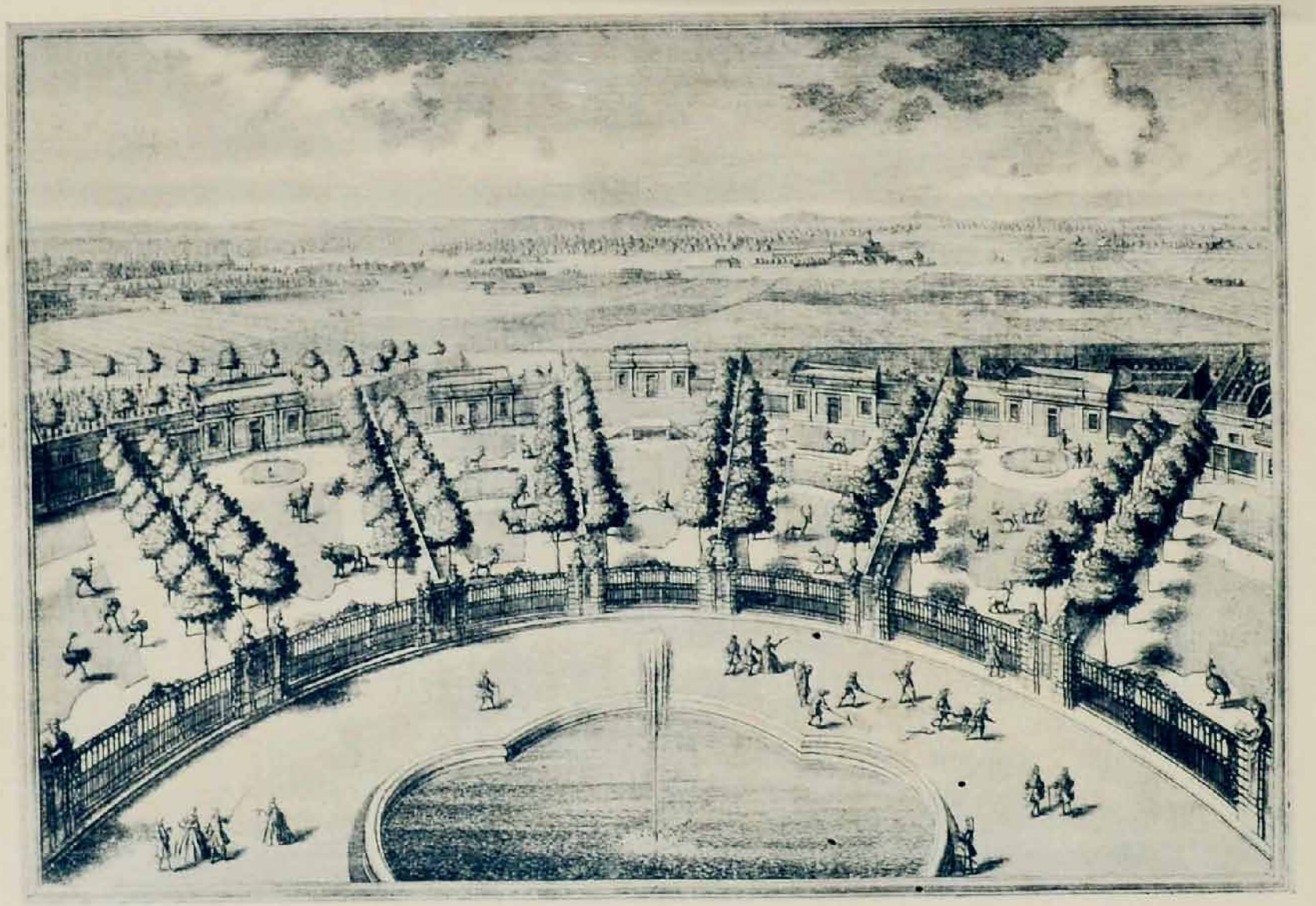
the animals that are to benefit from it must be self-supporting, and as it is designed to include in the beneficence of its boundary, species which may be hostile to each other in habit, it follows that its dimensions must be considerable, running to hundreds of square miles. Jasper Park in Canada, for example, contains over 5,000 square miles. It is true that even in such vast territory one may see something of the animals inhabiting it; in the Yellowstone Park in North America the black bears may come to feed out of one's hand, and in the Kruger Memorial Park of South Africa the lions may lie on the road in front of one and obstruct the passage of one's car, but in spite of such thrilling departures from true 'wildness', such a reserve cannot be included in our meaning of the term 'Zoo', for though it may succeed in running parallel with the 'Zoo' in some of its purposes, in others, and to my mind, the more important, it is necessarily at variance with it.

By menagerie, we mean usually, but perhaps rather loosely, a smallish kind of place where animals are exhibited in plain cages without any attempt at naturalistic display; while by zoological garden or park, we imply some

more elaborate or more decorative method of exhibition, smaller or larger, and formal or less formal. There is no real distinction, and they mean substantially the same thing—a place where wild animals are kept for human (and generally, but not necessarily public) pleasure and benefit. Nevertheless, the shades of meaning in these terms count for something; the term 'menagerie' seems to be tending to bear a definitely condemnatory significance, while the modern ideal is coming to prefer the word 'park' with its suggestion of fuller freedom and wider space.

The pleasure and profit to be gained from collections of living animals seem to have been recognised in very ancient times among Eastern nations. The earliest place of the kind of which there is historical evidence existed in China some centuries before the Christian era, and the purpose of its foundation and the estimation in which it was held are reflected in the name 'park of intelligence', which suggests a conception of the value of such an institution approximating that of our own to-day. This ideal did not persist as civilisation flowed westwards, and though the custom of keeping collections of animals was

observed by royal and ruling personages in many countries and ages the motives which moved them may not always have been such as we would approve of nowadays. Sometimes they may have been desired as a source of intellectual or æsthetic enjoyment, but sometimes certainly the end they served was merely a means to sensational spectacle—a sort of glorified form of cock-fighting and bear-baiting. This attitude was especially marked in the case of the large numbers of wild animals transported to European cities in Roman times, brought together for the purpose of slaughter in the arena. In medieval Europe, except for the travelling showman and sensation-monger, with an odd monkey and a bear or two and occasionally something less usual, the idea of providing living animals for the amusement and instruction of the people had not been conceived, and the maintenance of a menagerie was the hobby of princes. A menagerie formed at Woodstock by Henry II may have been the first 'Zoo' in Britain, at least it is the first of which there is record. It was transferred to the Tower early in the thirteenth century and was continued there till it became the nucleus of the collec-



AN EIGHTEENTH CENTURY IDEA OF A ZOO

From an Engraving, dated 1730, of the Menagerie in the Gardens of the Duke of Saxony (reproduced by permission of F. C. Mears, Esq., F.S.I.B.A., F.R.S.E.)

tion in Regent's Park, when the Zoological Garden was formed there. We do not know very much about the methods of keeping and display in the older menageries though we do know, as an interesting example, that the Sheriffs of London were required, in 1253, to provide a muzzle and chain to hold the white bear of the Tower when the said bear was fishing or washing himself in the River Thames! A plan, dated 1736, for a menagerie for Eugene Francois, Duke of Savoy and Piedmont, a photograph of which is reproduced here, shows ingenious and effective design on lines that seem to anticipate, in some directions, more modern tendencies, but in which the practical has suffered sadly in contest with the ideal. It shows a series of seven enclosures (there may perhaps have been more not shown in the perspective) arranged in fan-shaped formation, running backwards from the terrace viewpoint with its ornamental pond. The fronts are of heavy ornamental iron work, set between sculptured pillars, and the enclosures are divided from each other by walls with a row of trees on each side. At the further and wider end of each division is a neat house and, beyond that again, what

seem to be service passages and yards. The inhabitants, as indicated by the engraving, are interesting. In the first enclosure is a group of four ostriches; next come cattle of some kind—perhaps the European bison; in the third are, it seems, ibex or wild goats and, probably, four-horned sheep. In the centre, as the place of honour doubtless, a solitary lion reposes in state; in the next two are groups of deer, and in the last is what appears to represent a cassowary though it might, indeed, be only a bustard. One notes that the lion lies quietly in his place and makes no attempt to pass the relatively low boundaries and visit his neighbours the deer, and above all, the animals are shown on grass lawns, with neat verges trimmed to formal pattern, between smooth paths! Oh, the optimism of that artist!! Nevertheless, when he had sacrificed some of his symmetry by heightening his walls and railings, torn up his turf and replaced it with stone or cement, and removed what the ruminants had left of his trees, he would have had left a quite practical scheme with a distinct flavour of the Mappin Terraces!

These earlier menageries were all alike in one respect—that their purpose and scope

were the amusement of the individual or the few rather than the satisfying of any need or desire of the many.

The first collection of wild animals, in modern times, formed primarily for public exhibition, came into being in Paris in 1793 (a bright spot in a black year!) by the removal to the existing Jardin des Plantes of the animals in a menagerie established by Louis XIV at the Palace of Versailles. The animals in this collection were numerous and valuable, and it is interesting to note that among them was a group which is sometimes seen in a travelling menagerie or a 'Zoo' to-day, and which never fails to arouse the apprehension and the ire of the ill-informed and the prejudiced—a lion and a dog living together on terms of close friendship.

In the early part of the nineteenth century the 'Zoo' 'idea' began to gather force and make headway. The impetus was given by the foundation of the London Zoological Garden in Regent's Park in 1829. After that the number of public zoological gardens in Europe began to increase rapidly. The Dublin garden was founded in 1830, Clifton (Bristol) in 1835, Belle Vue, Manchester (privately

owned), in 1836, Amsterdam in 1838, Edinburgh in 1838 (this was a small garden which continued for nineteen years and was closed in 1857), Antwerp in 1843, and Berlin in 1844, while during the next twenty years or so zoological gardens were established in a large number of European towns as well as in Asia and America. By the end of the century there were not less than fifty zoological gardens of greater or less size in Europe.

Notwithstanding their popularity and success, none of these institutions was the kind of 'Zoo' that we want and that we are making to-day. The evolution of the zoological garden during the nineteenth century was, in fact, very slow, and a conventional system governed in general the arrangement and details of each succeeding establishment. One cause of this retardation, probably, was the attitude of the public, among the mass of whom (however enlightened may have been the views of the minority) the tendency persisted to regard wild animals from the standpoint of sensation-craving curiosity only—to whom ferocity and the unaccustomed at close quarters behind iron bars were most pleasing, and who were satisfied with the existing system. Another

THE OLD EDINBURGH ZOOLOGICAL GARDEN (1838-1857)

From an Old Print in the possession of The Zoological Society of Scotland

among the ruling factors was lack of knowledge of what was essential and what not essential in the keeping of animals, and a conviction that next in importance after food was climate and temperature. Nobody then dreamed, for example, that a parrot or a porcupine or any beast that came from a hot country could live in the cold climate of northern Europe just as well as in its own country, and the promoters of the older 'Zoos' would have thought it madness to turn their lions and leopards out on a frosty day in winter to lie on exposed rocks, as ours do. No one understood the relatively much greater need for fresh air and exercise and amusement. Upon the existence of such ideas it followed that the majority of exotic animals were kept in houses capable of being closed up in cold weather and artificially heated, and the cost of such houses and the necessities of sanitation were generally sufficient to reduce cage accommodation to never very large and more often to quite small dimensions, and to the barest in design and fitting.

So the standard was set and the 'Zoo' of the nineteenth century, whether it was a large 'zoological garden' or a small travelling

menagerie, was a collection of cages in which animals, solitary ones chiefly, lived in close confinement, each beneath a neat label informing one of its name, its country, and other more or less interesting particulars. It was, in fact, an animated museum, its only difference from a declared museum being that the beasts were alive instead of being stuffed. It satisfied people in our fathers' and grandfathers' times, and it satisfies some people even to-day. It allows one to get close to the animal, to poke it with sticks, to make it snarl, and to get the thrill of seeing untamed ferocity and savage power at close quarters where they cannot hurt one. There is a section of the public who cannot realise, to this day, that anything else can be a 'Zoo'. I am not infrequently asked by visitors in the Park, who have already traversed much of the grounds, and who have seen some of its chief attractions and finest animals: "Can you tell me, please, where the 'Zoo' is?" And when I reply: "Why, you are in the middle of it," they say: "But where are the wild beasts?"! The sea-lions and the polar bears in their large pools; the penguins and the baboons on their rocks, are not 'wild beasts' because they are not in cages and be-

hind bars! Even the lions are scarcely lions to these people when they are out in their rock enclosure; they need the bars to give the appropriate stage setting!

That kind of 'Zoo' does not satisfy most of us now. We regard the matter from a new point of view. The spreading knowledge of evolutionary principles and the growth of the modern conception of the unity of all life have brought about in us a change of heart. We no longer see, or desire to see, the animal as a museum object still infused with the breath of life. It has become a fellow being with an individual temperament, feelings, desires, emotions, thoughts, a social system, perhaps, of its own—all intensely interesting to us who enjoy or suffer from similar things, and teaching us, if we open our minds to learn, quite a number of facts about ourselves. When such animals are brought to our towns and kept for our benefit, we want to see not the mere body of the beast, but the whole beast, body and, as far as possible, mind, as a living creature. We realise that in order to do that and to appreciate the beauty of an animal, it should be viewed in a natural setting and against a suitable background, instead of a setting and

background of iron bars and boards or white tiles. We realise also that if we are going to take the animal from its native place and environment and bring it to another in order to minister to us or to please us, we are under obligation to make the change as little discomposing and irksome to the animal as we can.

So the older type of 'Zoo' had ceased to satisfy either our intellect, our artistry, or our conscience.

Already, towards the close of last century, a progressive movement had begun, the leaders in the change to more rational and more pleasing methods being not so much the large public institutions, hampered as they were by expensive buildings, restricted space, inadequate funds, and other opposing factors, as the owners of private collections who were free to experiment, and discovered that tropical and sub-tropical animals could be kept in comparative freedom in the open, even in the northern winter, with results that were gratifying not only in regard to economy in housing and attractiveness in exhibition, but also for the gain in the health and vitality of the animals themselves.

So a new type of 'Zoo', governed by the

altered outlook, has developed in the last generation, in which the first consideration is that the health and happiness of the inmates shall go hand-in-hand with the naturalness and beauty of their surroundings.

The name which is perhaps most popularly identified with the promulgation of the new doctrine is that of Carl Hagenbeck, who some thirty odd years ago began the laying-out of a great animal park at Stellingen near Hamburg and created a most impressive panoramic display of wild animal life. There have been many others, some before Hagenbeck, whose vision, courage, and enthusiasm have been not less effective than the spectacular demonstration of Hagenbeck in carrying the evolution of the 'Zoo' to a higher plane and a more satisfying expression. The Scottish national Zoological Park at Edinburgh, founded twenty years ago, when the new wine was reaching maturity, was the first 'Zoo' in this country to begin its career untrammelled by the old tradition, and with freedom (sadly qualified, however, by financial limitation) to embody the new spirit.

The ideal, then, of the modern 'Zoo' is to exhibit its inmates—or rather to permit them

to exhibit themselves—with the utmost possible degree of naturalness. The aim of its designer must be to keep his animals in such a way that they may enjoy at least a substantial measure of liberty in surroundings resembling those to which they had been accustomed, and may live to a greater rather than a less degree the life natural to them; to show themselves as living creatures, under conditions which not only allow but invite them to display their normal instincts, habits, and mode and routine of daily life. Thus they shall live long, in such happiness as they are capable of attaining, and we shall not only appreciate their physical beauty to the full, but also learn much more than we could otherwise do of their manners and minds—that is to say, of their lives.

Unhappily, one has to descend from the ideal to the actual and the practical, and there is a greater conflict between them than might at first sight appear.

Restraint and protection are necessary, and though one may take pains to make the restraining and protecting media as simple and unobtrusive as will fulfil their purpose effectively, they inevitably militate against the result one wishes to produce.

One of the great difficulties is the complete failure of the animals themselves to realise what you are trying to do for their benefit, and to second your efforts! Especially, the happiness of some animals seems to lie in the rapidity and thoroughness with which they can demolish all the picturesque place you have spent so much labour in making for them! They will eat your trees, dig up your bushes, pull down your rocks, and trample your turf. One is forced to the conclusion that appreciation of natural beauty has no place in the soul of the animal! That is a pity. It compels you to give your bears dead trees rooted in concrete instead of the living leafy tree which would look so much more beautiful; to put your monkeys on bare rocks, fortified with cement, instead of rocks clothed with grass and bushes, and in a thousand ways to qualify the complete naturalness of the enclosures.

In spite of all that, however, it is possible to create surroundings for most animals which in themselves satisfy the eye, and in which the animals not only look at home and natural, but in which they act naturally. That is the more easy when the animals are small and one can give them a space which is amply large in

proportion to their size. When one comes to deal with larger animals the problem becomes more difficult, for not only does a given area become, in comparison with them, much smaller, but their greater size and power demand much higher and stronger walls or fences or much wider and deeper ditches. It is always, I think, better to use a ditch for enclosing animals when it can be done, for then there is no visible obstacle between the observer and the object, but making a chasm of sufficient width and depth will always be proportionately more expensive than other modes of fencing, and when it has to be cut through solid whinstone rock, as in the case of the Edinburgh 'Zoo', it becomes a frightfully costly kind of barrier. So it is that we in Edinburgh, and most 'Zoos' like us, have to put up with a good deal of steel netting which is comparatively cheap and, after all, not too unsightly. Nevertheless, we have used the ditch form of barrier in some cases, and I do not think it has ever been more effectively applied anywhere than in our outside 'Lions' Den'. There, the ditch, which is about fourteen feet deep and twenty-five wide at its narrowest part, is so well concealed that a

goodly number of visitors seem to fail to realise that it is there at all. One or two amusing illustrations of this failure occur to me. I remember one morning, during the War, seeing two Australian soldiers looking at the lions in the 'Den'. They stood for some minutes in silence taking in the spectacle, and then one of them, turning to the other, slapped his hand on the three-foot high pale fence which keeps the public back from the low rockwork in front of the ditch, and said: "You know, Bill, I don't think this fence is enough to keep in lions, do you?" "Well, it seems to," said Bill ! ! ! On another occasion an old Scots woman, accompanied by a small boy, possibly her grandson, was walking up towards the place when she looked up and suddenly caught sight of a lion lying on the ledge in front of her, and with no kindly bars between. She gave one gasp, ejaculated: "Eh, mairey, rin laddie!" and grasping the boy by the arm rushed off down the path as fast as she could hobble!

Other important enclosures in which we have adopted the ditch or pit form of barrier are the Polar Bear Pool, the Brown Bear Enclosure, and the Baboon Rock. All of these

have a water-filled cutting, with the water surface well below ground level, surmounted by smooth rock and by a low parapet wall, along something like half the circumference, while at the back the rock rises to form a slightly overhanging cliff. Visitors are excluded from going behind and the enclosure can be viewed from the selected aspect only. By thus choosing and limiting the viewpoint, artifice can be concealed and a more natural or naturalistic spectacle presented. Whenever it has been possible the rule has been followed, of never allowing a spectator the opportunity to view the animals against a background formed of a row of fellow spectators.

In planning a ditch—indeed, in planning any means of confining animals—one has to make a decision as to the minimum height, depth, width, strength, etc., which are required, and as to the margin of safety one should in wisdom allow, all of which one wants to restrict for both æsthetic and financial reasons. I am often asked whether the ditch which confines the lions is wide enough and if it would not be possible for the lions to leap across it. I always reply that I don't know, but that they have not done so

PART OF THE BABOON ROCK

yet—in twenty years! It seems that in the case of the lions the margin we allowed was sufficient! I am afraid that we did not always hit the mark so truly. Clearly, we underestimated the agility of 'Starboard' the polar bear who made his escape from the pool in the spring of 1916 and compelled us to increase the height and depth of the surrounding wall and the pool by some feet.

So much for *what* the 'Zoo' should be. *Why* should it be? We are told that it is unnecessary. Are there not natural history museums, magnificently stocked, which exhibit every type of animal form? Are there not text books to instruct us in animal function? Are there not cinematograph pictures of animals to show us the animal in action? Without doubt there are. The museum specimen, though, is, it seems to me, exactly as fit to show animal form as a block of ice is to show running water —and no more. The text book owes, and will continue to owe, much of its most authentic substance to the 'Zoo'. There are animal films and they are very interesting and instructive—some of them. When they are genuine films, taken in bush or forest, of uncontrolled wild animals—quite a number of

the animal films exhibited have no claim to any part of that description—they give us partial and fleeting glimpses of animal habit and behaviour. All these things—museum, text book, film—are useful supplements to the 'Zoo'; none of them is in any way a substitute for it.

It might be held sufficient reason for the existence of the 'Zoo' that it brings hours of pleasure into the lives of many millions of people; that, in a world like this, is no inconsiderable justification. It does very much more than that, though. It brings into close personal touch with living things those of us whose lot in life would otherwise debar us from that relation, with all its direct and indirect effects on mind and sentiment. As the contact with animals first called into expression the dawning love of beauty in primitive humanity, so the 'Zoo' arouses the artist in each one of us through the fascinating interplay of colour and light and movement and the myriad forms it spreads before us. Nothing so stimulates the spirit of inquiry and the desire for knowledge in the young and the not-so-young, as the contemplation of living animals and the infinity of questions they thrust at us. To the

educationist and the artist, using both terms in the widest sense, as well as to the zoologist and morphologist, the 'Zoo' is an unquestionable and irreplaceable necessity.

There is, beyond its intellectual and æsthetic appeal, another call of the 'Zoo', certainly not less moving than they—perhaps the most compelling of all; I will call it the sentimental appeal. I mean the desire so many of us feel—the same sort of impulse, doubtless that animated those far-off ancestors of ours who first tamed the wild—to *know* the animals; to make friends with them and find them respond; to express, more or less unconsciously, perhaps, our sense of kinship with them. Akin to this is the influence of the 'Zoo' in fostering the love of animals in children. All children are interested in animals; most if not all children will love them if they have the opportunity, but that opportunity will never come if they cannot meet the animals in the living flesh. One may perhaps acquire the love of nature in the abstract from books or museums or even films—an intellectual love—but no one, child or adult, ever came to care for animals as individual living things by such a cold and colourless path.

Many children, of course, are fortunate enough to have their own pets—which are, in effect, the 'Zoo' in miniature—which inspire in them a love that will radiate outwards to all animals, but every child is not so blessed, and to the generations of city children, whose knowledge of animals otherwise would be confined to those of labour and of food, the 'Zoo' is the only means of contact of a kind that can develop affectionate regard. Remember, too, that if it is wrong to keep lions in a 'Zoo' it is equally wrong to keep rabbits in a kindergarten. In relation to this phase of the 'Zoo' there is a trend in some recent establishments which seems to me to be an unhappy one—the matter of size. I feel that a 'Zoo' should not be too large. The dens and ranges and other quarters for the animals should be roomy and spacious but not so much so that the animals are lost in them. One or two of the larger 'Zoos' of the world seem to me to exceed in this respect what is desirable in a 'Zoo' and to be tending towards the idea of the animal reserve. Thus, they fail to be one thing or the other; they are too large for a Zoo and far too small for a reserve except, perhaps, for animals of the smallest size and of pacific

habit. A 'Zoo' may easily be too spacious and too scattered, and so the sense of friendliness and intimacy that should characterise it is lost. It seems, at first sight, such a splendid idea that the ground should be so ample that the animals shall have complete liberty, in fact if not in name, but it does not work in practice. If you put, let us suppose, a group of deer, or buffalo or antelopes into a twenty-five or thirty acre range, one of two things will happen; either, being shy, they will retire to the most remote and secluded part of their range whenever they perceive the presence of human beings, and so will rarely be seen at all—when, of course, they might as well not be there—or, being tame, they will parade up and down the fence, when they might as well be in a half-acre paddock. It is far better therefore to put them in a range a fourth of the size, where they will have ample room but cannot make themselves so remotely invisible. The same thing applies to wolves or bears or lions or any other animals. So the great 'Zoo' of hundreds of acres, though it sounds ideal, fails because its greatness defeats most of the aims for which it exists. Apart from the difficulty of the withdrawal of

the animals into distant seclusion which results from over-spaciousness, there is also the convenience of the visitor to be considered. The time that most people have at their disposal is not unlimited and on the average will not extend beyond a few hours and not many people are able to travel the considerable distances from point to point in a very large park or spend the intervals of waiting before the animals may disclose themselves. The consequence is that even when the total acreage of a 'Zoo' runs into hundreds, the tendency is to group the greater number and the more important of the exhibits together at one centre where the visitor with limited time may see them within the compass of a few hours.

On the other hand, a 'Zoo' may be a very good 'Zoo' even though it be of very few acres, provided that it is designed on suitable lines, keeps to first principles, confines itself to animals that it can adequately provide for, and does not attempt to exceed its capacity. It is not the size of the ground that matters nor the number or rarity of the species it contains, but the manner in which it shows the animals it does possess living

happy, healthy, natural or nearly natural, lives.

It is perhaps to be expected, and, I hope, to be forgiven, that I should have a predilection for the Zoological Park at Edinburgh, but I hope that it is not entirely personal bias which inclines me to hold it as an example in many respects, and particularly in point of size, of what a 'Zoo' should be. It owes much to the beauty of its situation and the natural features of its ground, and something, perhaps, to its poverty which has placed an effectual veto on the erection of ornate buildings such as, in some more wealthy establishments, tend to obscure the animals they were designed to display. All its structures are of the simplest, being no more, in many cases, than a load of larch poles and a few rolls of steel netting. Rock and boulder enter conspicuously into its settings. Its rock enclosures for carnivores and its ranges for deer and llamas and the like are spacious enough to allow a great degree of liberty to their inmates, and provide most beautiful and natural-looking pictures of animal life for the observer, but not so large that all sight and sense of contact with the animals is lost. Its seventy-four acres may seem small

in comparison with the two hundred and sixty of New York or the four hundred and eighty of Whipsnade, but they provide as much as the average man or woman can wander round and see comfortably in an ordinary day's outing. It has had many compliments paid to it for its beauty and for other qualities, but the one that pleased me most was the remark of a traveller who had seen most of the important 'Zoos' of the world, and who, giving his impression of this one, said: "This seems to me such a happy, friendly 'Zoo'."

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