



ALBERT R. MANN
LIBRARY

NEW YORK STATE COLLEGES
OF
AGRICULTURE AND HOME ECONOMICS



AT
CORNELL UNIVERSITY

Cornell University Library
QL 785.W33 1870

The reasoning power in animals.



3 1924 002 901 787

mann



Cornell University
Library

The original of this book is in
the Cornell University Library.

There are no known copyright restrictions in
the United States on the use of the text.

<http://www.archive.org/details/cu31924002901787>

**THE REASONING POWER
IN ANIMALS.**

THE
REASONING POWER
IN
ANIMALS.

BY THE

REV. JOHN SELBY WATSON, M.A., M.R.S.L.

¹Εγὼ—ἐν τοῖς ἀφ' αὐτοῦ καὶ ἀδιδάκτοις τοῦ θηρίου πάθει καὶ κινήμασιν,
ὡσπερ ἀκράτοις καὶ ἀπαραχύτοις, ἐμφαινομένην ὀρῶ τὴν σύνεσιν.

Plut. de Solert. Animal. c. xii.

SECOND EDITION.



LONDON:

L. REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.

1870. *cc*

Go

QL
785
W33
1870

A 7 6 3 8 4 8

PREFACE.

THIS volume scarcely requires more of preliminary remark than what is contained in the first two brief chapters, which will sufficiently explain its object.

What Mr. Jesse, to whom lovers of Natural History are so much indebted, observes of the anecdotes which he has given in his entertaining collections, that he has inserted none in the truth of which he had not good reason to believe, I can justly say, with regard to those which will be found in the following pages. For almost every statement I have referred to my authority; and in every instance in which I have not done so, the omission is to be attributed to the loss of the necessary reference.

No anecdotes are admitted but such as bear in some way on the subject of the book ; and I have endeavoured to deserve some little credit for arranging them under appropriate heads.

J. S. W.

Stockwell, January, 1867

CONTENTS.



CHAPTER I.

	PAGE
INTRODUCTORY	1

CHAPTER II.

INSTINCT	6
--------------------	---

CHAPTER III.

ELEPHANT.—GENERAL INTELLIGENCE	13
--	----

CHAPTER IV.

ELEPHANT.—MODES OF TAKING REVENGE	19
---	----

CHAPTER V.

ELEPHANT.—LOVE OF REGULARITY.—GOOD ORDER IN THEIR PROCEEDINGS	28
--	----

CHAPTER VI.

ELEPHANT.—DOCILITY.—JUDGMENT	40
--	----

CHAPTER VII.

ELEPHANT.—FURTHER INSTANCES OF SAGACITY.—SELF-GO- VERNMENT IN THE WILD STATE	51
---	----

	PAGE
CHAPTER VIII.	
DOG.—GENERAL INTELLIGENCE	60
CHAPTER IX.	
DOG.—NEWFOUNDLAND BREED	71
CHAPTER X.	
DOG.—PUNISHMENT OF SMALL DOGS BY LARGER	79
CHAPTER XI.	
DOG.—SHEPHERD'S	83
CHAPTER XII.	
DOG.—SHEPHERD'S—(<i>continued</i>)	94
CHAPTER XIII.	
DOG.—SPANIEL, POINTER, AND TERRIER	106
CHAPTER XIV.	
DOG.—SAVING LIFE	116
CHAPTER XV.	
DOG.—COMMUNICATION OF THOUGHTS FROM ONE TO AN- OTHER	128
CHAPTER XVI.	
DOG.—ASKING ASSISTANCE OF MAN.—UNDERSTANDING WHAT IS SAID BY MAN	136
CHAPTER XVII.	
DOG.—MEMORY —USES IT FOR REVENGE OR SERVICE	150
CHAPTER XVIII.	
DOG.—DISTINCTION OF PERSONS.—OF PROPERTY	159
CHAPTER XIX.	
DOG.—INTELLIGENCE IN GUARDING	174

CHAPTER XX.

	PAGE
DOG.—INTELLIGENCE IN FINDING LOST ARTICLES, AND IN NOTICING TO WHOM ARTICLES BELONG	184

CHAPTER XXI.

DOG.—HOW MUCH HE MAY BE TAUGHT	197
--	-----

CHAPTER XXII.

DOG.—MORAL FEELINGS.—SENSE OF JUSTICE	208
---	-----

CHAPTER XXIII.

THE HORSE.—GENERAL INTELLIGENCE.—GOOD FEELING	220
---	-----

CHAPTER XXIV.

THE HORSE.—GENERAL INTELLIGENCE AND GOOD FEELING (continued)	232
---	-----

CHAPTER XXV.

THE CAT	247
-------------------	-----

CHAPTER XXVI.

THE FOX	259
-------------------	-----

CHAPTER XXVII.

MONKEYS AND APES	271
----------------------------	-----

CHAPTER XXVIII.

RATS AND MICE	289
-------------------------	-----

CHAPTER XXIX.

ANIMALS FINDING WAY FROM PLACE TO PLACE.—DOG	309
--	-----

CHAPTER XXX.

ANIMALS FINDING WAY FROM PLACE TO PLACE.—OTHER ANIMALS	322
---	-----

CHAPTER XXXI.

BIRDS	340
-----------------	-----

CHAPTER XXXII.

	PAGE
BIRDS.—ROBINS, TOMTITS, SWALLOWS, AND OTHER SMALL BIRDS	358

CHAPTER XXXIII.

BIRDS.—COMMUNICATION OF IDEAS.—RESEMBLANCE BE- TWEEN BIRDS AND HUMAN BEINGS IN THEIR CON- JUGAL RELATIONS.—PARROTS	372
--	-----

CHAPTER XXXIV.

DISTINCTION OF TIME BY ANIMALS.—CONSIDERATIONS ON THE SUBJECT	392
--	-----

CHAPTER XXXV.

MISCELLANEOUS ILLUSTRATIONS OF INTELLIGENCE.—OX.— SHEEP.—PIG	406
---	-----

CHAPTER XXXVI.

MISCELLANEOUS ILLUSTRATIONS OF INTELLIGENCE.—DEER. —HARE.—WOLF.—LION.—TIGER.—GLUTTON.—RAC- COON.—BEAVER.—FISHES: CARP.—MULLET.—SALMON. —EELS.—WALRUS	421
---	-----

CHAPTER XXXVII.

ANIMALS PLACING SENTINELS AND LEADERS.—FEIGNING DEATH	436
--	-----

CHAPTER XXXVIII.

BEE.—ANT.—SPIDER.—BEETLE	447
------------------------------------	-----

CHAPTER XXXIX.

CONCLUDING REMARKS	459
------------------------------	-----

THE
REASONING POWER IN ANIMALS.



CHAPTER I.
INTRODUCTORY.

THIS book has one object, which is to show that the inferior animals, or many of them, have a portion of that reason which is possessed by man.

Whether the lower creatures are partakers of such reason or not, is a question which has been much and long considered, many, even in our own enlightened days, hesitating to answer it decidedly in the affirmative; but the instances of animal intelligence which will be given in the following pages will be sufficient, it is thought, to dispel all doubt on the subject.

I use the word reason, not in the higher sense of the term, as the faculty of arriving, by abstraction and generalization, at the laws and principles of things, but as the power of understanding, to a certain extent, what is presented to the observation, and of forming conclusions from experience, so as to conceive of consequences, and to expect that what has happened under

certain circumstances at one time will happen under like circumstances at another.

The unwillingness to allow brutes a portion of the rational faculty, or anything beyond what is called instinct, has arisen from the fear of admitting them to be on a level with ourselves. "One would wonder to hear sceptical men," says Addison,¹ "disputing for the reason of animals, and telling us it is only our pride and prejudices that will not allow them the use of that faculty." That beasts had no real thought or feeling, but only seemed to have, is a doctrine or notion as old as the days of the Cynics and Stoics, and is ridiculed by Plutarch in his discourse on the sagacity of animals.

Aristotle, too, the founder of zoology, author of the most ancient work on animals that has come down to us, the exactness of whose observations has excited the wonder of modern physiologists, expresses himself of much the same persuasion, for though he admits that there are in the inferior animals traces of mental affection and feelings, as of gentleness and fierceness, timidity and courage, anger and malice, and even of generosity and meanness, and though he allows that there is apparent in them something analogous to reflection and judgment in man, he is yet unwilling to concede that any other animal than man regulates his actions in any degree by reasonable considerations. The cat and the weasel, he says, show something like reason and judgment in their pursuit of birds, but he will not acknowledge that these qualities in the animals, though susceptible of comparison with those of man, are in reality of the same kind with his.²

¹ 'Spectator,' No. cxx. ² Hist. Anim. lib. i. c. 1; lib. viii. c. 1.

Seneca,¹ a Stoic, in conformity with the doctrines of his sect, declared that the homogeneity of the actions of men and beasts is merely apparent, their natures being altogether different; that a lion, though ready to tear in pieces anybody that he meets, is never angry, being no more sensible of anger, as he expresses it, than of luxury; and that though the animal should, from some cause, save the life of a man, he can have no sense of generosity or desire to do service. What we call the feelings of beasts, whether good or evil, are, he thinks, feelings only in appearance.

Descartes may be said to have adopted this opinion, for he intimated in his 'Discourse on Method,'² that all the lower animals are mere unreasoning machines, as much as a clock or a watch; that all their actions may be explained by the laws of mechanism. Many things, doubtless, they do better than men could do them, but they do these things only, and cannot learn to do others, showing that they do not act from thought or judgment, but from a mere instinctive use of their organs; for if what they do so well were done from understanding, it would be a proof, not merely that they have understanding, but that they have more understanding than man, and would do other things better than man if their attention were directed to them; whereas, from all that we see, we must rather conclude that they have no understanding at all, but act solely as their nature or the effect of the disposition of their organs incites them; just as a clock, a compound of wheels and other machinery, can measure time more exactly than a human being with all his reason.

Montaigne, on the contrary, is inclined to extol

De Irâ, c. 3.

² P. 36, ed. 1656.

beasts to the disparagement of man, allowing them thought and reason, and representing, in an illustration afterwards adopted by Pope, that a cat or a goose may consider man made for its service, as well as man may consider a cat or a goose made for his.

Buffon is less indulgent to beasts. He grants them, on the whole, everything that is possessed by man, except thought and reflection; they have, he says, perception; they have a consciousness of their present existence, but none of that which is past; they have sensations, but want the faculty of comparing them, that is, the power of forming ideas, which are, he says, sensations compared, or associations of sensations.¹

The opinion of Leibnitz regarding the inferior animals was not very different from that of Buffon; though he allowed them a certain portion of intelligence or reason, he considered them as distinguished from men by reasoning only on particular ideas, at the time when they receive them from their senses.

Of other naturalists and philosophers, Réaumur, who observed the minute with so much attention, is inclined to admit that there is intelligence in the lower animals, and had so high an opinion of bees, that, from the terms in which he speaks of them, he might be supposed to think them superior in understanding to all other living creatures. Condillac is similarly persuaded in regard to the lower creation, even asserting that the beaver builds its rampart, and the bird its nest, from forethought and judgment. Helvetius, Humboldt, Darwin, and Smellie asserted that the actions of brutes are the result of reasoning similar to that of man. Salmasius was much of the same opinion. Fre-

¹ 'Discours sur la Nature des Animaux,' t. ii. p. 331, ed. Flourens.

deric Cuvier, brother of the Baron, keeper of the menagerie in the Jardin des Plantes, not only declared, in his various observations on animals, that they had intelligence of the same kind as that of man, but endeavoured, as far as he could, to distinguish the different degrees of it in different species of animals.

As for Lord Brougham, who has written so well on this subject, he pertinently observes, "I know not why so much unwillingness should be shown by some excellent philosophers to allow intelligent faculties, and a share of reason, to the lower animals, as if our own superiority was not quite sufficiently established to leave all jealousy out of view, by the immeasurably higher place which we occupy in the scale of being, even though we admit the difference to be in degree rather than in kind; because when the difference of degree becomes so vast, there is hardly any more chance of encroachment or confusion, hardly any more likeness or comparison, than if the difference were radical and in kind."¹

¹ 'Dialogues on Instinct,' Dial. IV. *init.*

CHAPTER II.

INSTINCT.

IF a man, walking on a plank or platform, or any moveable surface, should feel it unexpectedly shift under his feet, he would catch at the nearest object, or endeavour to balance his body by stretching out his hands, in order to keep himself from falling. These acts would be acts of instinct, done on the prompting of the moment, reason having had no time to consider whether they ought to be done or not.

So when an infant, or the young of any animal, opens its mouth to receive food presented to it, the act is an act of instinct, for the agent is as yet uninfluenced by any stirrings of reason.

These instances are sufficient to show what are acts of instinct as distinguished from those of reason or intelligence. Instinct is an innate force or impulse in an animal, inciting it to act in a certain way ; and it cannot act contrary to its instinct, at least for any length of time, without departing from its nature, and ceasing to be in reality the kind of creature that it was before. Reason, on the other hand, does only what, on consideration, it thinks right ; it fixes, if two or more objects

are presented to it, on that which it deems beneficial or serviceable for its purposes, and avoids all that it deems of a contrary character; it acts, not on any impulsive force in the animal in which it resides, but with freedom and deliberation, choosing what it considers eligible and rejecting what it considers hurtful. Nor can it act otherwise, while it continues to be reason.

It may be said that instinct also makes its choices of what is fit, as well as reason. But much that is regarded as freedom of choice in instinct, ought, as it would seem, to be attributed to the force of chemical affinities. Thus the bee goes to particular flowers, not, apparently, from any judgment or conviction of their suitability for making honey, but from being drawn to them by some influence in them of the kind which we call chemical.

It was by such influence that Galen's kid, fresh from its mother's womb, was attracted to a pan of milk rather than to one of any other liquor. "On dissecting a goat with young," says he, "I found a lively embryo, and having detached it from the matrix, and snatched it away before it saw its dam, I brought it into a room where there were many vessels, some filled with wine, others with milk or some other liquor, and in others there were grains and fruit. We first observed the young animal get upon its feet and walk; then it shook itself, and afterwards scratched its side with one of its feet; then we saw it smelling to every one of those things that were set in the room, and, when it had smelt to them all, it drank up the milk." The acts of rising to walk, of shaking itself, and of scratching its side, were instinctive; the drinking of

the milk, it would seem, was the effect of chemical attraction.

It is by such attraction, too, we should be inclined to suppose, that the young crocodile or alligator, on issuing from the egg, is drawn towards the nearest water. Dr. Davy has an allusion to this fact in his 'Account of Ceylon.' Noticing an egg of one of these reptiles lying on the ground not far from a river, and seeing that it was ready to burst, he opened it with his stick, when a little animal escaped from the shell, and started off in a direct line for the stream, just as if it had been there many times before and was perfectly acquainted with the ground. Dr. Davy put his stick before it to stop its course, but it resisted the opposition and put itself in a posture of defence, exactly as an older animal would have done; and he then allowed it to pursue its way towards the water.

So it is with the young of turtles. The turtle, though a marine animal, goes on shore to lay her eggs and makes a nest for them in the sand. Yet no sooner do the little turtles come forth from their shells, and peep over the surface of the sand, than they commence a direct line of march towards the sea, making no stop till they reach the water's edge; and it is observed, says Humboldt, that though they may have burst the shell of the egg during the day, they are never known to come forth from the nest but at night; so that they are not assisted by daylight to find their way to the deep. Experiments have been made on the young, says the same observer, by putting them into a bag, carrying them to some distance from the shore, and then letting them out with the tail turned towards the water, but it is always found that they turn about, and

take without hesitation the shortest way to the beach, apparently discriminating on which side the air is most humid.

The operations of instinct are unvarying. The ant and the hen act now as they acted in the days of King Solomon, and are incapable of altering their course of action. "What can we call the principle," asks Addison, "which directs every kind of bird to observe a particular plan in the structure of its nest, and directs all the same species to work after the same model? It cannot be imitation; for though you hatch a crow under a hen, and never let it see any of the works of its own kind, the nest it makes shall be the same, to the laying of a stick, with all the other nests of the same species. It cannot be reason; for were animals endowed with it to as great a degree as man, their buildings would be as different as ours, according to the different conveniences that they would propose to themselves." The principle, then, is not imitation, nor is it reason, but is what we call instinct, a mysterious faculty, equally as inexplicable, remarks the same writer, as the principle of gravitation in bodies, and to be considered as a Divine energy acting in the creatures. "Deus est anima brutorum," said Cæsalpinus, and perhaps some philosopher before him.

"Reason raise o'er Instinct as you can,
In this 'tis God directs, in that 'tis man."

A higher Power, however, directs in both; though to the one is allowed more freedom than to the other. But each is limited and controlled; for the liberty of man, as Lavater observes, is but that of the bird in the cage.

Celsus, the antagonist of Origen, denying that all

things were made for the use of man, pretends that many beasts are not less excellent than man, and that bees and ants, as they have a form of government, must have the faculty of reason.¹ But the reply to this is, that ants and bees have no power of choice as to their form of government; they are bound to one form of it by the necessity of instinct, while man, exercising his reason about government, chooses what form of it he pleases.

Beasts are deficient in the power of reflection, which they possess but to a very limited extent. They perceive and know, and think within a certain bound, as M. Flourens observes, but they have not, like human beings, the power of perceiving that they perceive, of knowing that they know, and of thinking upon their own thoughts. The power of inferring, of deducing knowledge from knowledge, they have in some degree, but not in the same degree as man. "They receive through their senses impressions similar to those which we receive through ours; they retain, as we do, the traces of these impressions, which, thus retained, form for them, as for us, numerous and varied associations; these they combine, and draw conclusions and conceive judgments from them; and they have consequently a certain portion of intelligence. But . . . reflection is the precise limit which separates the intelligence of man from that of the inferior animals. That thought which contemplates itself, that intelligence which sees and studies itself, that knowledge which knows itself, form evidently an order of determinate phenomena of a decisive nature, and to which no inferior animal can make any pretension. There is in these, if we may so

¹ Orig. cont. Cels. lib. iv.

express ourselves, a world purely intellectual, a world which belongs to man alone."¹

Seneca² denied memory to beasts. When a horse, he says, for instance, has travelled along a road, and is brought to the road again, he recognizes it; but in the stable he remembers nothing of it. But this is gratuitous assertion. A dog, when he dreams,

"Et canis in somnis leporis vestigia latrat,"

is evidently thinking of what has occurred to him, and must think at the same time of the place in which it occurred; and if he thinks of events and places in his sleep, may he not think of them also when awake? And if a dog can think of such things, why may not a horse, though perhaps less vividly than the dog?

The great difference between man and beast, remarks Max Müller,³ is that man speaks, while no brute has ever uttered a word. There is indeed an account given by Leibnitz, of a dog having been taught by a peasant to utter thirty words, but he seems to have spoken them very imperfectly, and certainly without understanding them, so that little stress need be laid on his case, or on instances of parrots, which have been brought to utter many words. "To those who speak of development," adds Professor Müller, "who think they discover the rudiments at least of all human faculties in apes, and who would fain keep open the possibility that man is only a more favoured beast, the triumphant conqueror in the primeval struggle for life," the decisive answer may be given that "language is our Rubicon, and that no brute will dare to cross it."

¹ Flourens, 'De l'Instinct et de l'Intelligence des Animaux.'

² Epist. cxxxiv. ³ 'Lectures on the Science of Language.'

Of animals which manifest intelligence, those that exhibit most are the carnivorous, of which the chief is the dog; the pachydermatous, at the head of which we may place the horse and the elephant; and the quadrumanous, of which the highest are the ourang-outang and the chimpanzee. We shall give our attention first of all to the elephant.

CHAPTER III.

INTELLIGENCE OF THE ELEPHANT.

THE stories told by ancient writers concerning the sagacity of the elephant are, for the most part, less satisfactorily supported by testimony than those which are related by more modern authors. But they seem to show that the intelligence of the animal was almost as well known to the people of old times as it is to ourselves.

Looking into Pliny, we find him saying of the elephant that it is an animal distinguished for honesty, discretion, and a sense of justice, such as are rare even in mankind,—*quæ etiam in homine rara, probitas, prudentia, æquitas*; and that its understanding of what is communicated to it, its obedience to command, and retention of what it has learned, are marvellous. Respecting the docility of the elephants at Rome in his time, he relates that they would perform dances in concert, wield arms, and engage in gladiatorial combats; that they would walk on ropes, not only level, but sloping, and not only forward, but, what was more wonderful, backward; that four of them would carry a fifth on a litter, like a sick lady; and that if

one of them was invited into a dining-room full of guests, he would make his way to his couch with such carefulness of step as not to incommode any one of the company. As to their dancing, he tells the well-known anecdote of one, somewhat of the duller order, which, having been punished with stripes for not doing his lesson well in the day, was found practising it by himself at night; a story of which the truth has been much doubted, but Pliny says *certum est*,—there ought to be no doubt about it.¹

The anecdote is repeated by Plutarch,² who adds that the animal was seen practising by the light of the moon. It may perhaps receive some support to its credibility from an account given of a jay by Mr. Jesse.³ A bird of that species, belonging to a Somersetshire attorney, was an admirable mimic of sounds, but if it heard any new sound, as a strange kind of whistle or the like, would not attempt to imitate it whilst any one was within sight, but, having listened to it attentively, would try an imitation if he thought that he was not observed, and, if he succeeded, would display his new acquirement to the first person that passed him.

Pliny relates also that Mutianus, a man of eminence, who had been three times consul, used to say that he had seen an elephant that had learned to form Greek letters, in which he would write, *Ipse ego hæc scripsi, et spolia Celtica dicavi*. Mutianus was accustomed to relate also that he had seen some elephants landed at Puteoli, which, being frightened at the length of the temporary bridge between the vessel and the shore,

¹ Plin. H. N. viii. 1-13.

² De Solert. Anim. c. 12.

³ Gleanings in Nat. Hist. vol. ii. p. 234.

had sense enough to turn their tails towards it, and walk along it backwards, so that they might not see the danger which they had to encounter.

Both Ælian¹ and Plutarch² relate the story of an elephant, which was defrauded of its food by its keeper, revenging itself on him. The man, in measuring out the animal's barley, purloined a portion of it, and then put stones at the bottom of the measure, so as to raise the corn to the brim. He thus deceived the owner of the elephant, but not the elephant itself, who, one day, as the man was boiling his meat, took up a quantity of sand in his trunk, and spirted it into the pot, inflicting on the rogue a very appropriate kind of punishment.

Ælian³ adds, from a writer named Agnon, another story of an elephant that was cheated of its food. It was kept at a house in Syria, and was daily defrauded by its keeper of the half of a measure of barley allotted for it by its owner. It submitted to the deprivation for some time, but one day, when the owner was present, and waiting for the animal to be fed, the keeper poured out the whole measure, when the elephant carefully separated the barley into two portions with its trunk, taking the one and leaving the other, thus making known, as clearly as was possible for a dumb animal, the keeper's dishonesty.

A similar anecdote of the elephant appeared some short time since in the public papers, but I have had it repeated to me also by a gentleman who had received it direct from persons in India well aware of its truth. The occurrence took place in the early part of the year 1863. A large and strong elephant was sent

¹ De Anim. vi. 52.

² De Solert. Anim. c. 12.

³ Ibid.

to Nagercoil to assist in piling up timber, and the Dewan, the officer who dispatched it, requested the wife of a missionary residing there to be good enough to see the animal fed with its allowance of rice, lest the keeper, who was suspected of not being over honest, should abstract any portion of it. The animal was accordingly brought to the missionary's house for that purpose, and, for a time, all appeared to go on correctly; but at length the missionary's wife began to suspect that the quantity of rice was growing daily smaller and smaller. One day, in consequence, she intimated her mistrust to the keeper, who, with an air of the utmost sincerity expressed his wonder that she should think there could be any ground for such an imputation against him, concluding by saying in his own native phraseology, "Madam, do you think I could rob my child?" During the conversation the elephant was standing by, and seemed by degrees to become perfectly aware that what was being said related to himself and his food. The keeper had on a very bulky waistcloth, which the elephant eyed from time to time, and just as the man concluded his protestations, and the missionary's wife was hesitating whether she should say anything more, the animal quietly threw his trunk round the keeper, and suddenly untied the waistcloth, when a large quantity of rice, which the man had secreted in it, fell to the ground. Here again we see sagacity and intelligence almost equal to that of a human being.

Let us throw together here a few other old stories concerning the perspicacity of elephants.

An elephant at Rome that was ill-treated by a number of boys, who pricked his trunk with their writing-

styles, seized one of them, and raised him up over his head, intending, as the others expected, to dash him on the ground, but, while they were crying out in terror, he set him quietly down again, as if he thought he had sufficiently punished a child by giving him a severe fright.¹

A man who had a wife older than himself strangled her, in order to marry a younger woman, with whom he had fallen in love. But a tame elephant which he kept, and which saw the man commit the murder, took the new wife to the place where the other was buried, and turned up the earth with his tusks and trunk, till the body was completely exposed.²

The wife of an elephant-driver was unfaithful to him in his absence, and the animal, finding her and her paramour together, pierced them through with his tusks, and left them lying on their couch till his master returned, who saw at once her guilt and how it had been punished. This is said to have happened in India, but a similar occurrence took place at Rome in the reign of the Emperor Trajan. In the latter case, however, the elephant, when he had killed the pair, covered them up, and, at his master's approach, uncovered them, his tusks being still stained with their blood.³

When a number of elephants, says Plutarch,⁴ are going to cross a river, they send in the youngest and smallest one first, while the others stand on the bank and watch whether the water is too deep for him, for, if it is not, they know that they can all cross with perfect safety.

The same author⁵ relates that those who catch ele-

¹ Plut. de Solert. Anim. c. 12. ² Ælian. de Anim. viii. 19.

³ Ælian. de Anim. xi. 15. ⁴ De Solert. Anim. c. 12. ⁵ Ib. c. 17.

phants in India sometimes dig pits to entrap them, covering them over with earth and brushwood, and that, if one of a herd happens to fall into such a snare, the rest will bring wood and stones and throw them in to fill up the bottom, till the captive is raised high enough to step out.

CHAPTER IV.

ELEPHANT.—MODES OF TAKING REVENGE.

THE memory and thoughtfulness of the elephant are manifested in nothing more remarkably than in the modes, sometimes severe, sometimes ludicrous, in which he takes vengeance on those who have offended him. We have just seen how an elephant, in ancient times, avenged himself on a dishonest driver by throwing ashes into his broth ; and we may find abundant examples of similar retaliation practised by elephants in later days. The following has been familiar to many of us, I suppose, from our childhood.

An elephant somewhere in India, was accustomed to pass every morning close by the window of a tailor, who sat working at it. As it went along, it used often to put up its trunk towards the window, and sometimes to thrust it a little in, in a quiet and peaceable way, as if desirous to ascertain what was going on in the room. For some time the tailor took no notice of it, but one morning, being in an ill or mischievous humour, he took a fancy to prick the animal's trunk with the point of his needle. The elephant quietly withdrew it, and passed on his way, testifying at the time no re-

sentment or indication of having taken offence. But as he was going along the next morning, he stopped before he reached the tailor's house at a pool of water, from which he drew up a large quantity into his trunk, and when he came opposite the tailor's window, discharged the whole of it over the tailor and his work, taking ample revenge for the little puncture that he had suffered.

A story of an elephant taking the very same mode of revenge is told by Captain Shipp in his 'Memoirs.'¹ The captain, to try an elephant's memory, gave him two slices of bread-and-butter, between which he had concealed a large quantity of cayenne pepper. The elephant was very fond of bread-and-butter, but the cayenne pepper he did not at all like. The captain waited six weeks before he again went to the elephant, which, when he proceeded to fondle it as he had been accustomed to do, showed not the least resentment, and he was beginning to think that the stories told of elephants' memories were perhaps hardly to be trusted; but he was destined to be undeceived; for the animal, watching an opportunity for filling his trunk with dirty water, drenched him with it from head to foot, just as the other elephant had drenched the tailor.

Similar revenge to that which was inflicted on the tailor and on Captain Shipp, was inflicted on an artist in the Jardin des Plantes at Paris, as related in Smellie's 'Philosophy of Natural History.'² The artist was taking portraits of the animals in the garden in water-colours, and when it came to the elephant's turn, he wished particularly to represent the animal in a striking attitude, and for this purpose employed a little boy to throw apples into the elephant's mouth, obli-

¹ Vol. ii. p. 268.

² Vol. i. p. 448.

ging him by that means frequently to raise his trunk. Of apples there was a plentiful supply, but the artist could not easily satisfy himself, and was consequently a long while about his task; and the boy was therefore directed to deceive the elephant occasionally by a simulated throw, and thus make the most of the apples that were left. The elephant was evidently annoyed at this manœuvring, but manifested no decided anger; on the contrary, as long as the bag was not emptied, he seemed resolved to submit to his disappointments, and ate his apple, when it came, with apparent enjoyment. But at length the last apple was thrown, the bag was folded up and laid aside, and the elephant turned to his water-tank, as if for the purpose of washing down his repast. There wanted but a few more touches to complete the drawing, which the artist was proceeding to give, when an overwhelming flood from the animal's trunk drenched him and his work together, and so disfigured the sketch as to render it useless. What was remarkable in this proceeding was, that the elephant seemed clearly to understand who was the director in disposing of the apples, and left the boy, whom he regarded merely as an instrument, quite unmolested.

Another story of a similar occurrence, but showing more remarkably the excellence of the elephant's memory, is also well worth repetition. An elephant was shown, some years ago, in a caravan of wild beasts, at a fair in the West of England. A practical joker among the spectators, of the shopkeeper class, who wished to appear a genius in the eyes of those around him, presented some gingerbread nuts to the elephant, doling them out in small quantities, while the animal, between the protracted intervals of supply, exhibited

some of his tricks, as if manifesting his satisfaction and gratitude. On a sudden the fellow produced a large paper parcel, weighing two or three pounds, and gave the whole of it to the elephant at once, who took it without suspicion, and consigned it to his mouth. Scarcely had he begun to swallow it, however, when he uttered a loud roar, and exhibited all the symptoms of suffering from a parched throat, snatching up the bucket in his cage and handing it to his keeper, as if beseeching for water, which was immediately given him, and of which he for some time poured floods into his inside. "Ha!" said the joker to the elephant, "those nuts were a trifle hot, old fellow, I guess." "You had better be off," rejoined the keeper, "unless you wish the bucket dashed against your head." The dispenser of hot drugs took the hint, for there was an angry glare in the drinker's eye as he was finishing his sixth bucketful; and it was well for him that he did so, for he had scarcely approached the place of egress, when the heavy bucket was hurled after him by the elephant with such force and truth of aim that, if he had lingered but a moment longer, his joking and his life would have been ended together on the spot.

The affair, however, was not yet terminated. A year passed away, and the elephant returned to the same place, and the same conceited puppy was among his visitors. It may seem surprising that the fellow should not have thought that he had tempted the beast sufficiently, and have taken warning by his narrow escape not to repeat his trickery. But he came provided, as before, with pocketfuls of sweet nuts and hot nuts. He gave the elephant two or three from the best packet, which the animal took cautiously, and then offered him

a hot one. But no sooner had he proved the pungency of it than he seized the coat-tails of his tormentor, and whirled him aloft in the air, till, the tails giving way, he fell prostrate on the ground, half-dead with fright, and with his coat reduced to a jacket. The animal then quietly inserted his trunk into the pocket containing the best nuts, and, with his foot on the coat-tails, leisurely dispatched every one of them. When he had finished them, he trampled upon the pocket containing the hot nuts till he had reduced them to a mash, and then, tearing the coat-tails to rags, hurled them at the discomfited joker, who had stayed to see the end of the matter, and who had to endure the derision of those from whom he had hoped for applause.¹

The jesters in these stories were let off more lightly than the adventurer in the following case:—A man wished to try the temper of an elephant that was exhibited in France some time ago, and deceived it by pretending to throw something into its mouth. The animal in revenge gave him such a blow with its trunk as knocked him down and broke two of his ribs; it then trampled on him with its feet and broke his leg; and afterwards, bending down on its knees, endeavoured to push its tusks into his body, but happily only ran them into the ground on each side of his thighs, without doing him further injury.²

In the following instance, increased punishment was inflicted on a repetition of the same offence:—

“A sentinel belonging to the present menagerie at Paris, was always very careful in requesting the spectators not to give the two elephants anything to eat. This

¹ Broderip, ‘Zoological Recreations,’ p. 315.

² Bingley’s ‘Animal Biography,’ vol. i. p. 157.

conduct particularly displeased the female, who beheld him with a very unfavourable eye, and had several times endeavoured to correct his interference by sprinkling his head with water from her trunk. One day, when several persons were collected to view these animals, a bystander offered the female a bit of bread. The sentinel perceived it; but the moment he opened his mouth to give the usual admonition, she, placing herself immediately before him, discharged in his face a considerable stream of water. A general laugh ensued; but the sentinel, having calmly wiped his face, stood a little to one side and continued as vigilant as before. Soon afterwards he found himself under the necessity of repeating his admonition to the spectators; but no sooner was this uttered than the female laid hold of his musket, twirled it round with her trunk, trod it under her feet, and did not restore it till she had twisted it nearly into the form of a screw."¹

At Macassar, as M. Navarette relates, an elephant-driver was presented with a cocoa-nut, which, out of wantonness or thoughtlessness, he struck against the elephant's skull, more than once, to break it. The animal did not approve of his head being thus made a convenience for nut-breaking, but showed no resentment at the time. The next day, however, he was led past some cocoa-nuts exposed in the street for sale, when he took one of them up in his trunk, and beat it about the driver's head till he fell lifeless on the spot.²

Terry, in his 'Voyage to the East Indies,' observes that the elephant may be so trained that, if he is desired to terrify any person, he will rush at him with every appearance of fury, and when he comes near,

¹ Bingley's An. Biog. vol. i. p. 156.

² Bingley, ib. p. 157.

stop short without doing him the least injury; and when the master wishes to affront any one, seriously or in jest, he makes a sign to the elephant, who will collect mud and water in its trunk and squirt it upon the individual pointed out to him.¹

The elephant of the Jardin des Plantes, says Mrs. Lee,² used to play his visitors a trick which could not have been thought of but by an animal of much intelligence. His house opened upon an enclosure, called the elephant's park, containing a pond in which he used frequently to bathe, and in which he would lay himself under the water, concealing every part of him except the very end of his trunk; a mere speck, that would hardly be noticed by a stranger to the animal's habits. A crowd would often assemble round the enclosure, and, not seeing him in it, would watch in expectation that he would soon issue from his house. But whilst they were gazing about, a copious sprinkling of water would fall upon them, and ladies and gentlemen, with their fine bonnets and coats, would run for shelter under the trees, looking up at the clear sky and wondering whence such a shower could come. Immediately afterwards, however, they would see the elephant rising slowly from his bath, evincing, as it seemed, an awkward joy at the trick that he had played. In the course of time his amusement became generally known, and the moment the water began to rise from his trunk, the spectators would take to flight, at which he appeared exceedingly delighted, getting up as fast as he could to see the bustle that he had caused.

With the instances of ludicrous revenge taken by elephants already given may be joined the following:—

¹ Bingley, *An. Biog.* vol. i. p. 158. ² 'Aneodotes of Animals,' p. 276.

Elephants are excellent judges *quid valeant humeri*, *quid ferre recusent*, of what they can do and bear, and what they cannot. Looking into Mr. Williamson's 'Oriental Sports,' we find an anecdote of an elephant that always refused to carry so large a weight as those who had the care of him thought he was well able to sustain. Whenever he considered a sufficient burden had been laid upon his back, he constantly pulled off whatever was added to it. One day a quartermaster of brigade, irritated at what he considered his perverseness, threw a tent-pole at his head and walked away. The elephant did not pursue him, but nevertheless did not forget the offence, for overtaking him a few days after, as he was going along the road, he seized him with his trunk and lifted him up into a large tamarind-tree that overhung the way, where he left him to cling to the boughs and get down as well as he could.¹

Another instance of a similar character occurred not many years ago in the middle of London. An elephant was being led along the street, when a man took hold of his tail, an indignity at which the animal was so provoked that he suddenly turned about, and, grasping the offender with his trunk, pinned him close against some iron rails, and kept him prisoner, to his great terror, for some time, and indeed could with difficulty be induced by the keeper's entreaties to let him go.²

It is said that elephants, though they often thus avenge themselves for insults or injuries, are never provoked, even under the most painful or distracting circumstances, to hurt those from whom they have received

¹ Swainson, 'Habits and Instincts of Animals,' p. 37. Broderip, Zool. Recreat. p. 315. Menageries, p. 150. ² Menageries, p. 151.

no harm. A wounded elephant, in one of our Indian battles, was rushing forward in the utmost fury, uttering hideous cries, and a soldier, who lay in his way, was prevented by his wounds from obeying the admonitions of his comrades to flee. But the elephant, as he approached, would not trample him under his feet, but lifted him gently with his trunk, placed him on his side, and continued his route.¹

It may very well be supposed that it is dangerous to disappoint such an animal of anything which he has been given to understand that he is to receive. When elephants have been some time under training, they comprehend perfectly any sounds or signs which are used for directing them and working upon them in any way. They can be induced to perform particular acts, on the promise, communicated by means that keepers very well know, of some special reward, as a quantity of arrack or sweetmeats, of both of which they are very fond. When such proceedings are commenced with elephants, it is customary to let them see the promised reward, and always to give it them when the work is done; thus instituting a connexion in the animal's mind between his exertions and the gratification which they are to procure him. But if he is defrauded of his remuneration when the work is finished, his resentment may be fatal to his deceiver.

¹ Bingley's 'Animal Biography,' vol. i. p. 154.

CHAPTER V.

ELEPHANT.—LOVE OF REGULARITY.—GOOD
ORDER IN THEIR PROCEEDINGS.

ELEPHANTS, when tamed, and under the direction of man, are fond of regularity in all proceedings regarding their treatment. Whatever has been made habitual to them day after day, they expect to be continued day after day in the same mode. If any deviation from the ordinary practice occurs, they sometimes resent it, and in very odd ways. Pidcock, who was formerly owner of the wild beasts at Exeter Change, was for some years accustomed to treat himself and his elephant every evening with a glass of spirits, always giving the elephant the first glass. But one evening, being perhaps more eager than usual for his glass, he helped himself first, saying to the elephant, "You've been served first long enough; it's time for me to take the lead." The beast, however, was offended at the departure from the regular course; he refused the glass, and continued to refuse it, though Pidcock pressed it upon him; and never afterwards would he consent to partake of his master's spirits.

Beside this instance of resentment in an elephant may be placed an instance of similar feeling in a horse

belonging to Sir Walter Scott. Sir Walter had a handsome high-spirited steed, named Daisy, one of whose most valuable qualities to Scott, suffering from lameness, was, that he would stand perfectly still to be mounted. The horse was to all appearance attached as strongly to Scott as any horse ever was to its master. But Scott went on a visit to the Continent, and was absent from the horse for several weeks. When he returned, and the horse was brought to the door for him to mount, "instead of signifying, by the usual tokens," to use Scott's own words, "that he was pleased to see his master, he look askant at me like a devil; and when I put my foot in the stirrup, he reared bolt upright, and I fell to the ground rather awkwardly. The experiment was repeated twice or thrice, always with the same result. It occurred to me that he might have taken some capricious dislike to my dress; and Tom Purdie, who always falls heir to the white hat and green jacket and so forth (when Mrs. Scott has made me discard a set of garments), was sent for, to try whether these habiliments would produce him a similar reception from his old friend Daisy; but Daisy allowed Tom to back him with all manner of gentleness. The thing was inexplicable; but he had certainly taken some part of my conduct in high dudgeon and disgust, and after trying him again, at the interval of a week, I was obliged to part with Daisy." Somebody suggested that Daisy might have thought himself ill-used by being left so long at home when his master went abroad. "Ay," replied Scott, "these creatures have many thoughts of their own, no doubt, that we can never penetrate." But what was suggested as to the possibility of the horse having thought himself ill-used,—

whether propounded in jest or earnest,—was in all probability just; the horse, as it would appear, thought himself slighted by the desertion of his master; he found himself suddenly forsaken, certainly for no reason that he could imagine, by a master to whom he had long rendered all attention and respect; he considered himself affronted, and the supposed affront he obstinately refused to forgive.¹

Examples are sometimes seen of a change in the elephant in a contrary direction; of an animal suddenly applying himself to do what he had long altogether refused to do. Thus Mr. Williamson, in his 'Oriental Field Sports,' tells a story of an elephant at Chittagong which had long refused to prepare firewood as he saw other elephants doing. Firewood is there cut up into logs of a certain length, and regularly piled,—work which can be executed by elephants, when they are once taught, as well as by men. For some years, one of the elephants belonging to a gentleman there refused to perform this labour, and all attempts to force him to obedience were ineffectual, when one day, on a sudden, the animal walked of his own free will to the wood-yard, and applied himself at once to the work, which he soon performed quite as well as those which had had much longer practice. In this case the elephant evidently changed his behaviour from some motive; he had some reason in what must be called his mind for that alteration. Either he had some physical weakness or deficiency, which, though not apparent to the people about him, unfitted him to do what was required of him, but which was at length removed; or, after reasoning in his way about the matter, he came

¹ Lockhart's 'Life of Scott,' vol. v. p. 94.

to the conclusion that the annoyance which he suffered for not doing the work which he saw done by his companions, might be greater than the inconvenience which he should undergo in the performance of it. In whatever light we view the affair, something very different from mere animal instinct appears in it.

How elephants act in concert one with another, and how much intelligence they display in their social proceedings, is abundantly shown by many anecdotes that have been told of them. One remarkable occurrence, illustrative of their character, took place in the year 1821, near the Moravian missionary settlement of Enon or White River, in the interior of the Cape Colony. The elephants in those parts had been much hunted and alarmed, and in consequence kept away from the haunts of men, for the most part, during the day, but often approached close to the place, in great force, during the darkness, and sometimes did much mischief. One night the missionaries heard a large number of them bellowing and making other extraordinary noises, for several hours, near their orchard, but, as it is dangerous to interfere with these animals in their doings, the people did not venture forth till daylight, when, on examining the ground, they discovered the cause of all the uproar. There was a large trench, four or five feet wide, and about fourteen feet deep, which the missionaries had cut from the bank of the river to irrigate their ground. Into this trench, into which no water had as yet been admitted, one of the elephants had manifestly fallen, for the marks of his feet on the bottom, and the impress of his body on the sides, were still visible. He had doubtless slipped in by accident, but how he had been enabled to get out of a trench fourteen feet

deep could only be ascertained by reasoning from appearances. He must doubtless have been assisted, and who could have assisted him but his own comrades? On surveying the spot, the edges of the trench were found deeply indented with innumerable vestiges of elephants' feet, showing that several other elephants must have stationed themselves on either side, and exerted their efforts to hoist their brother out of the pit; an undertaking which, by their combined strength, but probably after many failures, as indicated by the marks on the soil, they at last succeeded in accomplishing.¹

The precipitation of an elephant into a vast well by another elephant, at the siege of Bhurtpore, in India, in the year 1805, furnishes another illustration of the sagacity and mental resources of these animals. The British army had been a long time before the city, and, it being the hot season, the water in the ponds and tanks was everywhere exhausted, and none was to be had but that which was left in the immense wells of the country. At these wells there was often no small struggle, among the numbers of men and cattle that sought them, for priority of place. One day two elephant-drivers, each with his elephant, the one very large and strong, the other smaller and weaker, came to one of the wells together; the smaller elephant had been furnished with a bucket, which he carried at the end of his trunk, but which the larger elephant, who had no bucket, took an opportunity of wresting from him. The smaller beast was sensible of his inability to contend with the other, but stood quietly watching him till he approached close to the side of the well, when

¹ From Pringle's narrative in 'The Menageries,' Soc. Diff. U. K., vol. ii. p. 99.

he drew back a few steps, and then, rushing forward with all his might, pushed his large opponent fairly into the water. This was very ludicrous, but occasioned great apprehensions that the water would be spoiled, and the well perhaps destroyed, by the floundering of the unwieldy animal. But elephants are very fond of swimming and wallowing in the water in hot weather, and this animal, floating at his ease on the surface, with several feet of water below him, continued to enjoy himself in the cool liquid, and showed not the least inclination to make any exertion to raise himself out of it. However a number of fascines had been used in the conduct of the siege, and, as many of them were lying about, it occurred to the driver of the elephant that several of these might be lowered into the well one by one, if the elephant himself would but assist in putting them down under his feet. This the driver managed to teach the animal to do; and the beast put each fascine beneath him as it was lowered into the well, until a pile was raised high enough for him to stand upon it. But, being still unwilling to leave the water, he could not be induced, after he had once felt a comfortable support under him, to allow another fascine to be lowered. The driver then had recourse to blandishments, caressing the animal and promising him, in terms which he well understood, plenty of arrack if he would raise himself out of the water. Thus soothed and incited, the elephant allowed more fascines to be put in, and lifted himself so high, that, after a portion of the masonry was removed from the margin of the well, he was able to step out. The whole of the proceedings occupied about fourteen hours.¹

¹ Swainson, 'Habits and Instincts of Animals,' p. 22. Griffith's Cuvier.

How one elephant will assist another is shown in a narrative in Shipp's *Memoirs*, describing the efficiency of elephants in military operations for conveying cannon up steep passes in the mountainous districts of India. In one of their marches, he says, "there was a small ravine branching off from the bed of a dry river, in which our encampment lay, and its entrance looked like the dreary access to some deep cavern. . . . We entered this little gaping cavern, leaving the principal part of our force for protection of our standing tents and baggage. We were equipped as lightly as possible. Two six-pounders were conveyed on elephants, and our march seemed to lie through the bed of this ravine, which was rocky, and watered by a crystal current that rippled along its flinty bed. We did not proceed at the rate of more than one or two hundred yards an hour, ascending and descending every twenty paces; at one time deep sunk in some dark excavation, and shortly afterwards perched upon the summit of a rock, the falling of the numerous cataracts drowning the noise made by our approach." At last they came, he says, to a considerable eminence, and when the men had all ascended it, their next object was to get up the elephants that were carrying the guns and ammunition. "Having cut away a good deal of the most prominent parts of the hill," proceeds the narrator, "and laid trees on the ascent, as a footing for the elephants, these animals were made to approach it, which the first did with some reluctance and fear. He looked up, shook his head, and when forced by his driver, roared piteously. There can be no question, in my opinion, but that this sagacious animal was competent instinctively to judge of the practicability of the artificial flight of

steps thus constructed; for the moment some little alteration had been made, he seemed willing to approach. He then commenced his examination and scrutiny, by pressing with his trunk the trees that had been thrown across; and after this he put his foreleg on with great caution, raising the fore-part of his body so as to throw its weight on the tree. This done, he seemed satisfied as to its stability. The next step for him to ascend by was a projecting rock, which we could not remove. Here the same sagacious examination took place, the elephant keeping his flat side close to the side of the bank, and leaning against it. The next step was against a tree, but this, on the first pressure of his trunk, he did not like. Here his driver made use of the most endearing epithets, such as 'Wonderful,' 'My life,' 'Well done, my dear,' 'My dove,' 'My son,' 'My wife,' but all these endearing appellations, of which elephants are so fond, would not induce him to try again. Force was at length resorted to, and the elephant roared terrifically, but would not move. Something was then removed; he seemed satisfied, as before; and he in time ascended. . . . On his reaching the top his delight was visible in a most eminent degree; he caressed his keepers and threw the dirt about in a most playful manner. Another elephant, a much younger animal, was now to follow. He had watched the ascent of the other with the most intense interest, making motions all the while as though he was assisting him by shouldering him up the acclivity,—such gestures as I have seen some men make when spectators of gymnastic exercises. When he saw his comrade up, he evinced his pleasure by giving a salute something like the sound of a trumpet. When called upon to take

his turn, however, he seemed much alarmed, and would not act at all without force. When he was two steps up, he slipped, but recovered himself by digging his toes in the earth. With the exception of this little accident, he ascended exceedingly well. When this elephant was near the top, the other, who had already performed his task, extended his trunk to the assistance of his brother in distress, round which the younger animal entwined his, and thus reached the summit . . . in safety. Having both accomplished their task, their greeting was as cordial as if they had been long separated from each other, and had just escaped from some perilous achievement. They mutually embraced each other, and stood face to face for a considerable time, as if whispering congratulations. Their driver then made them *salam* to the General, who ordered them five rupees each for sweetmeats. On this reward of their merit being ordered, they immediately returned thanks by another *salam*.”¹

In much of this, and especially in the aid afforded by the stronger elephant to the weaker, we see something far beyond mere animal instinct; something that plainly shows the exercise of a reasoning faculty.

Two elephants had been directed by their drivers to knock down a wall, being prepared for the undertaking by having their trunks guarded with leather, and by the promise, which drivers contrive to make them understand, of receiving a reward of fruit and spirituous liquor if they executed their task efficiently. Thus stimulated, they proceeded steadily to their work, doubling up their trunks and moving forward, not singly, but in exact concert,—combining their forces,

¹ Shipp's 'Memoirs,' vol. ii. p. 64, *seqq.*

swaying themselves in equal and measured time, and propelling their broad fronts against the mass of building. As it shook under the repetition of their uniform shocks, they watched the vacillation of the tottering masonry, and then, making precisely at the proper moment a grand simultaneous effort, suddenly drew back to avoid the tumbling ruins.¹

“This may be,” says Mr. Broderip, “what we somewhat superciliously call instinct, to use the expressive language of the author of ‘Vathek,’ but it looks very like reason. Two men could not have wielded their instruments of destruction with more efficiency and discretion. The broad and massive forehead, . . . the short compact neck, and the impulse of the well-balanced overwhelming weight, were all brought to bear in the most effective manner. . . . It may be said, indeed, with reference to the unity of purpose exhibited, that, in a state of nature, the necessity of removing or pulling down some great obstacle, a large tree for instance, would naturally induce the combination of two or more elephants to effect the removal, when it was discovered that the strength of one was inadequate to the task. But this observation, so far from weakening the case, strengthens it, by admitting spontaneous sagacious combination in the untutored beasts.”²

“There are also instances when single elephants,” says the same writer, “left alone, have acted according to the necessities of the case with the most remarkable intelligence. Take, for example, the story told by the author of ‘Twelve Years’ Military Adventure,’ who de-

¹ Cited from D’Obsonville, in Bingley’s ‘Animal Biography,’ vol. i. p. 153.

² Broderip, Zool. Recreat. p. 305.

clares that he had seen the wife of a mahout give a baby in charge to an elephant while she went on some business, and had observed the sagacity and care of the unwieldy nurse, to his great amusement. The babe, with the restlessness of childhood, began, as soon as it was left to itself, to crawl about, getting, in the course of its vagaries, sometimes under the huge legs of the animal, and at others becoming entangled among the branches of the trees on which he was feeding. On such occasions the elephant would, in the most tender manner, disengage the child, either by lifting it out of the way with its trunk, or removing the impediments to its progress in the same manner. When the child had crawled so far as nearly to reach the limits of the elephant's range (for he was chained by the leg to a stump driven into the ground), he would protrude his trunk and lift the child back as gently as possible, to the spot whence it had started. No old woman could have tended her charge with more show of reason."¹

As to the sympathy of elephants for one another, we have striking evidence of it in Bishop Heber's account of an occurrence which he himself witnessed. A poor old elephant having fallen down from weakness, another of larger size and better condition was brought to assist it to rise; and the Bishop says that he was much struck with the almost human expression of surprise, alarm, and perplexity in the look of the vigorous elephant as it approached its fallen companion. They fastened a chain round the neck and body of the sick beast, and urged the other in all ways, by encouragement and blows, to drag it up. The other pulled

¹ Broderip, Zool. Recreat. p. 306.

stoutly for a minute, but, on the first groan given by its wretched companion, stopped short, turned fiercely round with a loud roar, and with trunk and forefeet began to loosen the chain from its neck.¹

¹ Broderip, *Zool. Recreat.* p. 308.

CHAPTER VI.

ELEPHANT.—DOCILITY.—JUDGMENT.

ONE of the most remarkable ways in which the intelligence of these animals is shown is the training of the tame female elephants to catch wild males. The females appear, from the accounts which we have of their proceedings in Sir Stamford Raffles's 'Life,' and in Williamson's 'Sports,' to manifest a desire to bring the males, which the hunters point out to them, into the same condition in which they are themselves. They will inveigle any one to which their attention is directed with the most artful and curious wiles; they will lead him about so as to divert his attention from the hunters or drivers; and when the cords are passed round his legs, they will even assist in fastening them. Knox, in his 'Historical Relation of Ceylon,' says that the females used for decoys in that island are so accomplished in their art that they will do whatsoever their keepers wish, if they signify it but by a word or a sign, and will delude the males along through towns and large districts for many miles till they bring them to the place where they are expected, and where they will assist in securing them in snares. In Dowe's 'Hindo-

stan' we read that in that country, in the reign of the Sultan Akbar, when one of the hunted elephants which had been but partially secured made his escape, three trained elephants were sent in pursuit of him, which, after a fierce struggle, secured him at last with as much art as men could have secured one of their own species.¹

Words and signs they may be brought to comprehend with the utmost nicety of precision. The scene which is described in Sir Walter Scott's 'Surgeon's Daughter,' says a writer on this subject, where the sentence of Hyder Ali is summarily inflicted on an offender at a signal to an elephant, is not a mere picture of the fancy. Bishop Heber, in his 'Journal,' relates how an elephant-driver, having been offended by a woman, made a sign to his elephant to kill her, which was readily obeyed; but the signal had not been unobserved, and the man was brought to trial for murder and executed. The old traveller, Tavernier, when he went along with the Mahometan army of the Great Mogul, was surprised to see the elephants seize upon the little images that stood before the Hindoo pagodas, and dash them to pieces. It appeared to him at first to proceed from some dislike which the animals had to those figures, and it was not without much investigation that he discovered the truth, which was kept carefully concealed; the cause was, that the Mussulman drivers, being bigoted to their own religion, and eager to annihilate the monuments of a worship that was offensive to them, made the elephants a quiet signal, which was not easily observed, to destroy the images.

Here is another example of what these animals will

¹ Swainson, 'Habits and Instincts of Animals,' p. 26.

learn. The Duke of Devonshire had a she-elephant, kept at Chiswick, which would skilfully and delicately assist in many departments of labour about the premises. When she was wanted to work in the garden, "at the voice of her keeper she came out of her house, and immediately took up a broom, ready to perform his bidding in sweeping the paths or the grass. She would follow him round the enclosure with a pail or a watering-pot, showing her readiness to take that share of labour which the elephants of the East are so willing to perform. Her reward was a carrot and some water, but previously to satisfying her thirst with an ample draught, she would exhibit her ingenuity in emptying the contents of a soda-water bottle which was tightly corked. This she effected in a singularly adroit manner. Pressing the small bottle against the ground with her enormous foot, so as to hold it securely at an angle of about forty-five degrees, she gradually twisted out the cork with her trunk, although it was very little above the edge of the neck; then, without altering the position, she twined her trunk round the bottle, so that she might reverse it, and thus empty the water into the extremity of her proboscis. This she accomplished without spilling a drop, and delivered the empty bottle to her keeper before she attempted to discharge the contents of the trunk into her mouth. She performed another trick which required equal nicety and patience. The keeper, who was accustomed to ride on her neck, like the mahouts or elephant-drivers of India, had a large cloth or housing which he spread over her when he thus bestrode her, in somewhat of oriental state. Upon alighting, which she allowed him to do by kneeling, he desired her to take off the cloth;

this she effected by putting the muscles of her loins in action, so that the shrinking of her loose skin gave motion to the cloth, and it gradually wriggled on one side till it fell by its own weight. The cloth was then, of course, in a heap, but the elephant, spreading it carefully upon the grass with her trunk, folded it up again as a wrapper is folded, till it was sufficiently compact for her purpose; she then poised it with her trunk for a few seconds, and by one jerk threw it over her head to the centre of her back, where it remained as steady as if the burden had been adjusted by human hands. The affection of this poor animal for her keeper was very great. The man who had charge of her in 1828, when we saw her, had attended her for five years, having succeeded another who had been with her eight or ten years. When first placed under his charge she was intractable for some time, evidently resenting the loss of her former friend, but she gradually became obedient and attached, and would cry after him whenever he was absent for more than a few hours.”¹

Like the dog, the elephant has a strong discerning faculty. He distinguishes esteem from contempt, friendship from hatred, and many other emotions which are expressed by human gestures and looks. For this reason he is more easily tamed by mildness than by blows.

Terry, in his ‘Voyage to the East Indies,’² says that the elephant may be taught to terrify a person by running upon him with every appearance of fury, and when he comes near stopping short, without doing the person the smallest injury; and that he will collect water

¹ ‘Menageries,’ Soc. Diff. U. K., vol. ii. p. 7.

² P. 15.

and mud at the bidding of his master, and squirt it out upon any person whom the master wishes to affront. "The Mogul keeps some elephants who serve as executioners to criminals condemned to death. When the conductor orders one of these animals to dispatch the poor criminals quickly, he tears them to pieces in a moment with his feet. But if desired to torment them slowly, he breaks their bones one after another, and makes them suffer a punishment as cruel as that of the wheel."¹

Mr. Sirr, when he was in Ceylon, saw a remarkable instance of such docility, showing at the same time the retentiveness of the elephant's memory. It was a favourite mode of execution among the Caudians, when they were masters of that island, to make the elephants trample the criminals to death, training them so as to crush the limbs before touching the vital parts, in order to prolong the sufferer's agony. Mr. Sirr, without witnessing any real execution, was shown how one of these animals performed the duty. At the word of command, "Slay the wretch!" he raised his trunk and made as if he twisted it round some object; next he lifted one of his forefeet, and placed it where the legs of the victim would have been. He then stood motionless with his trunk in the air; but being ordered to "complete his work," he placed one foot as if on the man's stomach, and another as if on his head, apparently with sufficient force to destroy life. This exercise, it was told Mr. Sirr, the animal had not gone through for thirty-five years, yet he had an exact recollection of the whole.²

¹ Smellie, *Philosophy of Nat. Hist.* vol. i. p. 450.

² Mrs. Lee, 'Anecdotes of Animals,' p. 290.

Of the sensibility, as well as good sense of the elephant, a striking proof is related by the Baron de Lauriston, who, when he was in India, was dispatched on some public mission to Lucknow, at a time when some epidemic was making great ravages among the inhabitants. On an occasion when the prince was riding on his elephant to the palace gates, the ground was covered with sick and dying, through whom the beast must necessarily pass, and it seemed that in his passage he would inevitably trample upon and crush some of the unhappy sufferers, unless the prince should deign to stop till the way should be cleared. But to an Asiatic potentate no such considerations of mercy were known; he was in haste, and delay would have been unsuited to a personage of such importance. Yet the elephant, without appearing to slacken his majestic pace, and without receiving any command from his driver, gently put aside some of the sick persons with his trunk, and stepped over others with so much care and address that not one of them was injured, the heart of the beast being touched with compassion, while that of its master was hard as the millstone.¹

We have seen with what care elephants will tend children left in their charge; and with what sagacity two or more of them will combine their efforts to do heavy work, such as beating down a wall. We have also read of the skill with which they will pile boxes; and have noticed the caution with which they will step over whatever they do not wish to hurt. One remarkable account of tenderness shown to a man, in danger of being killed, by an elephant, of his own mere sagacity and intelligence, is given by an artillery officer, author

¹ Bingley, *An. Biog.* vol. i. p. 154.

of 'Twelve Years' Military Adventure,' and is well worthy of extraction. "The battering-train going to the siege of Seringapatam had to cross the sandy bed of a river, that resembled other rivers of the Peninsula, which leave, during the dry season, but a small stream of water running through them, though their beds are mostly of considerable breadth, very heavy for draught and abounding in quicksands. It happened that an artillery-man, who was seated on the tumbril of one of the guns, by some accident fell off, in such a situation, that in a second or two, the hind wheel must have gone over him. The elephant which was stationed behind the gun, perceiving the predicament in which the man was, instantly, without any warning from its keepers, lifted up the wheel with its trunk, and kept it suspended till the carriage had passed clear of him." Here the elephant manifestly reasoned—not merely half-reasoned, but reasoned wholly—for himself.

Elephants, after being tamed, and kept under the sway of man for years, will sometimes escape and resume their wild habits in their native forests; but they never forget their education; and instances have been known of elephants having been recognized by their former keepers after a lapse of ten years, and having obeyed the familiar voice and returned from amidst their free brethren to their old way of life.¹

The following story is told by Mr. Corse, from his own knowledge, in some observations on the natural history of the elephant in the Philosophical Transactions for 1799.² He was travelling with a large party,

¹ Mrs. Lee, 'Anecdotes of Animals,' p. 280.

² P. 40. See Fleming, 'Philosophy of Zoology,' vol. i. p. 219. Bingley, An. Biog. vol. i. p. 149.

in June, 1787, towards Chittagong, attended by several elephants carrying baggage, among which was one called Fâttra Mungul, a strong male. This animal, having come upon the track of a tiger, which elephants readily discover by the smell, took fright, and ran off, in spite of the utmost efforts of his driver, into the woods. The driver, as the elephant was hurrying along at full speed, saved himself from being dashed against the trees by springing from his neck, and clinging to a branch; and the beast, when he was freed from the man, contrived to rid himself of his load. A trained female, which was dispatched after him by the party, could not overtake him, but brought back his driver and the load which the animal had cast off; and the party then proceeded on its way without expectation of seeing him again. Eighteen months afterwards, however, a herd of wild elephants were taken, and as they were tied, and led out of the enclosure one by one in the usual way, one of the drivers, surveying attentively a male among them, declared that he resembled exactly that which had run away. This announcement drew a number of persons to look at him, but, when any one approached him he struck at him with his trunk, and appeared in every respect as wild and fierce as any of the other elephants. At length an old hunter, going up and examining him narrowly, said he had not the least doubt that he was the same elephant. Confident in his opinion, therefore, he mounted a tame elephant and rode boldly up to him, and, pulling him by the ear, ordered him to lie down. The animal, taken by surprise, obeyed the word of command with as much alacrity as the ropes that tied him would permit, uttering at the same time a peculiar shrill squeak

through his trunk, such as he had been known to utter in former days, a peculiarity from which he was immediately recognized by all who had had any acquaintance with him.

Mr. Corse also gives an account, from satisfactory evidence, of another old elephant, a female, which, being caught in 1765, turned loose again in 1767, and retaken again in 1782, recollected, after the lapse of fifteen years, the habits of her former servitude, and lay down at the command of her driver, who mounted her, fed her from his seat, and gave her his stick to hold, which she took with her trunk and put into her mouth, and kept it there till she was bid to return it, just as she had formerly been accustomed to do.¹

“A female elephant, belonging to a gentleman at Calcutta, being ordered from the upper country to Chotygoné, broke loose from her keeper, and was lost in the woods. The excuses which the keeper made were not admitted. It was supposed that he had sold the elephant; his wife and family, therefore, were sold for slaves, and he was himself condemned to work on the roads. About twelve years afterwards this man was ordered into the country to assist in catching the wild elephants. The keeper fancied he saw his long-lost elephant in a group that was before them. He was determined to go up to it; nor could the strongest representations of the danger dissuade him from his purpose. When he approached the creature she knew him, and, giving him three salutes by waving her trunk in the air, knelt down and received him on her back. She afterwards assisted in securing the other elephants, and likewise brought with her three young

¹ See Fleming, ‘Philosophy of Zoology,’ vol. i. p. 220.

ones, which she had produced during her absence. The keeper recovered his character, and, as a recompense for his sufferings and intrepidity, had an annuity settled on him for life. This elephant was afterwards in the possession of Governor Hastings."¹

Pliny² relates that elephants, in their old age, have recognized men who were their drivers when young.

How an elephant will exert himself at the bidding of his driver is seen in the following anecdote:—"In India, where elephants were once employed in launching ships, one of them was directed to force a large vessel into the water, which proving superior to its strength, the master, in an angry tone, cried out, 'Take away that lazy beast, and bring another.' The poor animal instantly redoubled its efforts, fractured its skull, and died upon the spot."³ We are not to suppose that the animal actually understood the words that the master uttered; but he knew from the man's tone that he was displeased with him for not exerting himself, as he thought, sufficiently, and therefore made a final desperate effort, to his own destruction, exemplifying, in a manner, the words of Burns,—

"Wha does the utmost that he can,
Will whiles doe mair."

When the elephant is employed, in India, as is often the case, in conveying artillery over hills, he pushes each gun onwards with his forehead, and, after each push, supports the carriage with his knee placed against the wheel, till he can give it another hoist. But a gun will sometimes fall off its carriage, and an elephant will then be required to lift it on again; in this case, he

¹ M. de Bussy, quoted by Buffon. Smellie, vol. i. p. 447.

² Hist. Nat. viii. 5.

³ Bewick, Hist. of Quadr. p. 191.

will ascertain, by a succession of efforts, whether the task is within his strength; if he finds that it is, he executes it at once; but if it is not, no persuasions can induce him to touch the gun again till assistance is afforded him.

So, throughout India, elephants are constantly employed in transporting goods from place to place, and never injure anything committed to their care; they will put weighty bundles into boats with their trunks, lay them down gently, and arrange them just as they ought to be stowed; they will then feel whether they are secure, and, if a bale is unsteady, or a cask rolls, they will go in quest of a stone or a piece of wood to support and keep it firm.¹

Père Philippe, in his 'Voyage d'Orient,'² says that he watched an elephant in a dockyard at Goa, drawing heavy beams for building a ship, and that, whenever other beams obstructed his passage, he would raise up the ends of his own beams, that they might run easily over those that lay in his way. Could the most intelligent man do more?³

¹ Buffon, Hist. Nat. tom. ix. p. 247, ed. 1769.

² P. 367.

³ Smellie, Philosophy of Nat. Hist. vol. i. p. 544.

CHAPTER VII.

ELEPHANT.—FURTHER INSTANCES OF SAGACITY.
—SELF-GOVERNMENT IN THE WILD STATE.

It is most interesting to observe the elephant, as it is to observe any other animal, not when it is practising tricks taught it by man, or acting under the influence of habits acquired in confinement, but when it is acting from its own impulse, and using its own natural sagacity. A person who has never seen an elephant except in a cage, kept quiet under the control of its keeper, can have but a faint notion even of its corporeal powers. For my own part, I had no conception of the effect with which an elephant can use his trunk till, several years ago, in the Regent's Park Zoological Gardens, I saw one, that had been led out for exercise and left standing by its keeper for a few moments under a tree, whisk its proboscis perpendicularly up among the branches, twist off a leafy bough, with the utmost ease, in a moment, and convey it into his mouth. Nor do we form any due estimation of the elephant's ingenuity and intelligence until we see him exercising it of his own accord.

“It is a usual part of the performances of an elephant

at a public exhibition to pick up a piece of coin, thrown within his reach for that purpose, with the finger-like appendage at the extremity of the trunk. On one occasion a sixpence was thrown down which happened to roll a little out of the reach of the animal, not far from the wall; being desired to pick it up, he stretched out his proboscis several times to take it, but it was even yet a little beyond his reach; he then stood motionless for a few seconds, *evidently considering* (we have no hesitation in saying *evidently considering*) *how to act*; he then stretched his proboscis in a straight line as far as he could, a little distance above the coin, and blew with great force against the wall; the angle produced by the opposition of the wall made the current of air act under the coin, as he evidently intended and anticipated it would; and it was curious to observe the sixpence travelling by these means towards the animal till it came within his reach, and he picked it up. This complicated calculation of natural means at his disposal was an intellectual effort beyond what a vast number of human beings would ever have thought of, and would be considered a lucky thought and a clever expedient, under similar circumstances, in any man whatsoever. It was an action perfectly *intelligent*, and one that had no relation either to self-preservation or propagation."¹

"I was one day," says Mr. Jesse, "feeding the poor elephant (who was so barbarously put to death at Exeter Change) with potatoes, which he took out of my hand. One of them, a round one, fell on the floor, just out of the reach of his proboscis. He leaned against his wooden bar, put out his trunk, and could just

¹ 'Animal Kingdom,' vol. iii. p. 374. Blaine, *Encycl. of Rural Sports*, p. 223.

touch the potato, but could not pick it up. After several ineffectual efforts he at length *blew* the potato against the opposite wall with sufficient force to make it rebound, and he then without difficulty secured it. Now it is quite clear, I think, that instinct never taught the elephant to procure his food in this manner, and it must therefore have been reason, or some intellectual faculty, which enabled him to be so good a judge of cause and effect; indeed the reflecting power of some animals is quite extraordinary.”¹

The male elephant called Jack, which was in the Zoological Society’s Gardens in the year 1840, used to be made to fast the whole of Sunday, like the carnivorous animals, with the exception of a slight breakfast. But after enduring this weekly privation for a time, he came to a resolution to submit to it no longer. Accordingly he made such disturbances on several successive Sunday nights that the keepers had little repose. But as this procured no relief to his hunger, he at length proceeded further, and made on one occasion such a determined attack on his door that the people were glad to get up in the night to feed him. After this energetic demonstration he was allowed his full meals on Sundays, and continued quiet.

This elephant gave a remarkable proof of ingenuity by certain operations on the ceiling in front of his apartment. It was a ceiling formed of boards, and considerably lower than that of the room within, but thought to be sufficiently high to prevent him from injuring it, and its surface was made perfectly smooth, so as to afford him no means of effecting a hold on it. But, wanting something to do in the monotony of his con-

¹ Jesse, *Gleanings in Nat. Hist.* vol. i. p. 19.

finement, he appears to have sounded it and concluded it was hollow; then, raising his head suddenly, he drove one of his tusks through a board, and next, setting to work with his trunk, he broke away the edges of the hole thus made, and gradually enlarged it, putting his trunk through and tearing down board after board, until his proceedings were observed and means taken to stop them.

The same elephant that drenched the painter, disregarding his boy, loosed with great ease and coolness the buckle of a large double leathern strap with which its leg was fixed; and, as the servants had wrapped the buckle round with a small cord and tied many knots upon it, the creature with much deliberation untied the whole, without breaking either the strap or the cord.¹

Of the elephant's sense and judgment the following instance is given as a well-known fact in a letter of Dr. Daniel Wilson, Bishop of Calcutta, to his son in England, printed in a Life of the Bishop, published a few years ago. An elephant belonging to an engineer-officer in his diocese had a disease in his eyes, and had for three days been completely blind. His owner asked Dr. Webb, a physician intimate with the Bishop, if he could do anything for the relief of the animal. Dr. Webb replied that he was willing to try, on one of the eyes, the effect of nitrate of silver, which was a remedy commonly used for similar diseases in the human eye. The animal was accordingly made to lie down, and when the nitrate of silver was applied, uttered a terrific roar at the acute pain which it occasioned. But the effect of the application was wonderful, for the eye

¹ Buffon, *ubi sup.*, p. 297.

was in a great degree restored, and the elephant could partially see. The doctor was in consequence ready to operate similarly on the other eye on the following day; and the animal, when he was brought out and heard the doctor's voice, lay down of himself, placed his head quietly on one side, curled up his trunk, drew in his breath like a human being about to endure a painful operation, gave a sigh of relief when it was over, and then, by motions of his trunk and other gestures, gave evident signs of wishing to express his gratitude. Here we plainly see in the elephant memory, understanding, and reasoning from one thing to another. The animal remembered the benefit that he had felt from the application to one eye, and when he was brought to the same place on the following day and heard the operator's voice, he concluded that a like service was to be done to his other eye.

The two following stories are of a similar character. The second especially shows the sagacity of the animal:—

“During one of the wars in India, many Frenchmen had an opportunity of observing one of the elephants that had received a flesh-wound from a cannon-ball. After having been twice or thrice conducted to the hospital, where he extended himself to be dressed, he afterwards used to go alone. The surgeon did whatever he thought necessary, applying sometimes even fire to the wound; and though the pain made the animal often utter the most plaintive groans, he never expressed any other token than that of gratitude to this person, who by momentary torments endeavoured, and in the end effected, his cure.”¹

¹ Bingley, ‘Animal Biography,’ vol. i. p. 155.

“In the last war in India a young elephant received a violent wound in its head, the pain of which rendered it so frantic and ungovernable that it was found impossible to persuade the animal to have the part dressed. Whenever any one approached, it ran off with fury, and would suffer no person to come within several yards of it. The man who had the care of it at length hit upon a contrivance for securing it. By a few words and signs, he gave the mother of the animal sufficient intelligence of what was wanted; the sensible creature immediately seized her young one with her trunk, and held it firmly down, though groaning with agony, while the surgeon completely dressed the wound; and she continued to perform this service every day till the animal was perfectly recovered.”¹

When elephants are in their wild state “they commonly march in large troops, the eldest precede; the young and the feeble are placed in the middle, and those of middle age and full vigour bring up the rear. The mothers carry their young firmly embraced in their trunks. This order, however, they observe in perilous marches only, as when they intend to pasture in cultivated fields. In the deserts and forests they travel with less precaution, but never separate so far as to exceed the possibility of receiving assistance from each other.”²

They call to one another, either to give warning of danger, or to summon to some plentiful pasture; the leader or leaders being especially prominent in giving these signals, as cocks among hens in a farmyard. So the wild horses, in the Ukraine and among the Cos-

¹ Bingley, ‘Animal Biography,’ vol. i. p. 155.

² Buffon, *Hist. Nat. de l’Eléphant*. Plin. H.N. viii: 5.

sacks, going in troops of four or five hundred, obey, apparently by compact, the command of a leader of their own number. He, by signs and voice, makes them proceed or stop at his pleasure. When the troop is attacked by wolves or otherwise, he gives orders for the necessary arrangements for defence; if he finds any horses out of their place or lagging behind, he obliges them to take their proper station. These animals, of their own natural impulse, march in nearly as good order and steadiness as our trained cavalry; they form companies, and pasture in files and brigades, without confusion or separation. The chief holds office for four or five years; when he grows weaker and less active, another horse, conscious of strength and ambitious of command, springs forth from the troop and attacks the old chief, who probably resists, and if not vanquished, keeps his command, but if conquered retires, with evident shame and dejection, into the common herd. The conqueror is then recognized as sovereign, and obeyed.¹

Major Skinner gave the following account of the proceedings of a herd of elephants to Sir James Emerson Tennent, observing that it seemed to denote more of reasoning power in brute animals than anything he had previously seen. In the height of the hot season at Neuera Kalawa, the streams of water are all dried up and the tanks nearly exhausted; and animals in consequence, being sorely pressed by thirst, congregate in the neighbourhood of those tanks in which any water is left. During one of these seasons Major Skinner was encamped on the bank of a rather small

¹ Smellie, vol. ii. p. 418, from a 'Description de l'Ukraine' by Beauplan, and M. Sanchez *apud* Buffon.

tank, the water in which was sunk so low that the surface could not have exceeded five hundred square yards, and as it was the only tank within several miles, he knew that a large herd of elephants which had been seen in the vicinity in the daytime must resort to it at night. He resolved accordingly, as it was moonlight, to watch their proceedings. He caused all his camp-fires to be early extinguished, and all his men to retire to rest, and went forth on the adventure alone. He climbed a tree about four hundred yards from the water, and waited patiently for two hours, before he heard or saw anything of the elephants. At length he saw a huge beast issue from the wood, and advance cautiously across the open ground to within a hundred yards of the tank, where he stood perfectly motionless ; and the rest of the herd, meanwhile, were so quiet that not the least sound was to be heard from them. Gradually, at three successive advances, halting some minutes after each, he moved up to the water's edge, in which however he did not think proper to quench his thirst, but remained for several minutes listening in perfect stillness. He then returned cautiously and slowly to the point at which he had issued from the wood, from whence he came back with five other elephants, with which he proceeded, somewhat less slowly than before, to within a few yards of the tank, where he posted them as patrols. He then re-entered the wood, and collected the whole herd, which must have amounted to between eighty and a hundred, and led them across the open ground with the most extraordinary composure and quiet till they came up to the five sentinels, when he left them for a moment, and again made a reconnaissance at the edge of the tank. At last, being ap-

parently satisfied that all was safe, he turned back, and obviously gave the order to advance, "for in a moment," says Major Skinner, "the whole herd rushed to the water with a degree of unreserved confidence, so opposite to the caution and timidity which had marked their previous movements, that nothing will ever persuade me that there was not rational and preconcerted co-operation throughout the whole party, and a degree of responsible authority exercised by the patriarch-leader."

When elephants are in the woods in hot weather, they are often to be seen, during the heat of the day, holding in their trunks leafy branches of trees, with which they will switch off the flies that torment them.¹

We shall next proceed to contemplate the sagacity of the Dog.

¹ Major Forbes, 'Eleven Years in Ceylon,' vol. i. p. 286. Mrs. Lee, *Anecd. of Animals*, p. 286. See also Buffon, tom. ix, p. 277, ed. 1769.

CHAPTER VIII.

DOG.—GENERAL INTELLIGENCE.

OF the sagacity and understanding of dogs, such numbers of stories, many of them well authenticated, are told, that it is a work of care and labour to make a selection of the most expressive. That such accounts should be numerous, is not strange, for every human being, who has seen anything of dogs, cannot but have noticed their good sense and good feeling. But we shall endeavour to choose, from among the mass of anecdotes related of them, a few of those which most remarkably prove them to have some share of the reason which pre-eminently distinguishes man. We shall first give some instances of their general intelligence, and then notice some examples of it exhibited in several species of dogs, and in different modes.

The story of the dog who attended daily at a convent in France, at the hour when twenty paupers were served with dinner, to pick up whatever scraps might remain, and who, observing that each person was supplied with his portion on ringing a bell, and finding himself one day but scantily regaled, rang the bell himself for more, is a fine example of reasoning power,

in the animal. The dog, says the account, rang the bell day after day, and received a person's portion without being for a long time discovered; for the portions were served out by means of a *tour*, a machine like the half of a barrel, which, turning on a pivot, exhibits whatever is placed in the hollow of it, without allowing the giver and receiver to see each other. At last the steward, finding that there was every day delivered one dinner more than the number of authorized receivers, set himself to detect the unlicensed applicant, and, watching from a hiding-place, saw the dog, as soon as the last recipient had retired, walk up to the bell-rope and pull it with his mouth. But the community, it is said, when the matter was made known to them, were so delighted with the dog's intelligence, that they allowed him to ring every day for his dinner till he died.¹

A similar story is told of an Italian greyhound, a kind of dog supposed to be among the least intelligent. This animal belonged to a gentleman at Bologna, and was accustomed to go from home every morning to visit a dog of its own species at a neighbouring house. But sometimes, when it made its call, it found the door of the house in which its friend dwelt not yet opened. In such a case it would place itself opposite the house, and by loud barking solicit admission. But as the noise which it made was not always agreeable, the door was often not only kept shut against it, but endeavours were made to drive it away by throwing stones at it from the windows. It would creep, however, so close up to the door as to be perfectly secure against the stones, and it was then driven away with a whip. After

¹ Bingley, An. Biog. vol. i. p. 206.

this repulse it stayed away some time, and then, on going again, used to wait without barking till the door was opened. As it thus watched, it sometimes saw people come to the house, and knock at the door; and it observed that after this operation the door was opened. At last it thought of using the knocker itself, and leaped at it several times, till it at length raised it and made it strike the door. Somebody from within opened the door, and was surprised to find no person at it; but the dog meanwhile slipped in with delight, and soon made his way to his friend. After this, similar knocks were often heard at the same time; and it was discovered that the dog had found the art of using the knocker; when, from admiration of his ingenuity, he was no longer refused access to his companion's habitation.

Mr. Jesse¹ relates the following instance of the intelligence of a dog belonging to a gentleman residing near Pontypool. The gentleman's horse was brought to the house by a servant, but while the servant was applying at the door, the horse detached himself, and ran away to a neighbouring hill. The dog, seeing the occurrence, set off after the horse of his own accord, seized the bridle, and brought him back.

The following manifestation of sagacity in a dog is told by a Mr. John Knight as having occurred at Hazell's Farm, near Sandby, a station on the Great Northern Railway. A few years ago, on account of the foxes being preserved for hunting, much havoc was made by them among the hens and their eggs. A hen, being about to lay one morning, proceeded, evidently with a view to securing her egg, into the kennel to which the

¹ Anecdotes of Dogs, p. 23.

dog was chained, where she delivered herself of her burden, and came forth with the cackle usually consequent on the operation. The dog appeared to know that the egg ought to be preserved for the use of his master, and brought it out very carefully in his mouth, carrying it so as not to break or crack it, and depositing it as near to the house as his chain would allow him to go. The housekeeper took up the egg, and gave the dog something to eat as a reward for his care. This process was repeated day after day, the dog laying down the egg, and the housekeeper giving him his recompense. Mr. Knight says that he had this account from the housekeeper's own mouth.

During a very severe frost and fall of snow in Scotland, the fowls at a certain farmhouse were missing at the hour when they usually retired to roost, and no one could discover what had become of them. But while the people of the farm were in perplexity, the house-dog entered the kitchen, carrying in his mouth a hen which was apparently dead. He made his way to the fire, laid the fowl down before it, and went out again. Soon after he returned with another fowl, which he deposited by the side of the former, and continued to bring others, one by one, till the whole number were got together. It appeared that the fowls, wandering about the stack-yard, had become numbed by the extreme cold, and unable to walk, when the dog, observing them in this condition, had come successfully to their rescue, for they all revived under the warmth of the fire.¹

As one of the northern mails was travelling towards London one very dark night, a dog came up before the

¹ Jesse, *Anecd. of Dogs*, p. 22.

leaders, and kept up an incessant barking, jumping up at the same time at their heads. The coachman, fearful of an accident, pulled up, and the guard got down to drive the animal away; but the dog ran backwards and forwards, so as plainly to indicate that he wanted the guard to follow him; he therefore took out one of the lamps, and went after him. He had gone about a hundred yards, when he found a farmer lying drunk across the road, and his horse standing by his side. Had it not been for the sagacity of the dog, the coach would probably have been driven over the man's body.¹

A dog, who used to go for bread to a baker's with a penny, was one day presented by the baker's journeyman, in fun, with a penny roll too hot for him to hold, when, after several ineffectual attempts to retain it in his mouth, he seemed to guess the trick that was being played upon him, and, jumping on the counter, snatched up the penny, and went off to the shop of another baker. To the former he never returned again.²

Most of us have heard of the dog who used to go to the butcher every day for his pennyworth of meat, with his penny in his mouth, which he would not deliver till the meat was ready for him to take. But a story is told of a dog in Bristol that was accustomed to go to the butcher's for a pennyworth of meat on trust, the butcher scoring it up to him on a board with a piece of chalk; and on one occasion, observing the butcher make two marks instead of one, he seized on an additional piece of meat, which he retained in spite of all the butcher's attempts to take it from him, and went off to his home with both pieces in his mouth.³

¹ Jesse, *Gleanings in Nat. Hist.* vol. iii. p. 14.

² Brown, 'Anecdotes of Dogs.' ³ 'Bristol Mercury' newspaper.

An instance of sagacity exhibited in a similar way was given a short time ago by a dog belonging to Mr. Robert Nash, an inhabitant, and churchwarden, of the parish of Otford, near Sevenoaks, in Kent. The dog was a fine black retriever, which would start regularly to the post-office in the village at about twenty minutes after seven every morning, to fetch his master's letters and newspapers. It used to go straight into the office, and the postmaster placing the letters on the counter, the animal would seize them in its mouth, and hasten off with them to its master's house, refusing always to deliver them to any one but Mr. Nash himself; and if he could not find him at once, he searched about the house and premises till he discovered him. It was invariably observed, too, that the dog walked slowly, and at its ease, from its master's house to the post-office, but returned with its charge at a quick trot.

“At Albany, in Worcestershire, at the seat of Admiral Maling, a dog went every day to meet the mail, and brought the bag in his mouth to the house. The distance was about half a quarter of a mile. The dog usually received a meal of meat as his reward. The servants having, *on one day only*, neglected to give him his accustomed meal, the dog on the arrival of the next mail buried the bag; nor was it found without considerable search.”¹ It were to be wished that the account had added whether matters were ever made up with the dog; how he acted the next day, or how they acted towards him.

For proof of the sagacity of dogs, it is observed by Mr. Frank Buckland, in his ‘Curiosities of Natural

¹ Jesse, ‘Anecdotes of Dogs,’ p. 48.

History,' that if a person wishes to frighten away a dog by pretending to pick up a stone and throw it at him, he must take care that there are stones in the place in which he makes such pretence; for, if the dog sees that there are no stones lying about, he understands very well that none will be thrown at him, whatever motions of his arm the simulating thrower may display. A cur dreads a stone hurled at him, but, in the midst of the bogs of Ireland, or any ground of that description, the veriest cur would care nothing at all for the most violent gesticulations in imitation of hurling.

A friend of Mr. Jesse's, an officer in the 15th Hussars, had a favourite bulldog, the mother of a brood of puppies, which, as they grew up, were making her, in the opinion of her master, too thin and weak; and he therefore took them from her, and shut them up in a sort of coop, to which he thought she would have no access. She contrived, however, to climb over the wall of the yard, and to get close to the coop; but finding that her pups could not reach her to suck, she emptied the contents of her stomach into their place of confinement, and continued to do so, two or three times a day, for some time; and, having no difficulty in procuring as much food as she wanted, she kept them, in this strange fashion, well supplied. "Instinct alone," observes Mr. Jesse, "would not have taught her this method of feeding her offspring."

A dog belonging to a man named John Godfrey (as is told by the Rev. Thomas Jackson¹), who worked at the wharf of a coal-merchant on the Surrey side of the water, had a dog, which used to attend him in his visits

¹ Our Dumb Companions, p. 48.

to a public-house in Gibson Street, Waterloo Road, where he was taught to drink malt-liquor, of which he gradually became excessively fond. One evening, a companion of Godfrey's said to him, "Jack, let's make the dog drunk," a proposal to which Godfrey readily assented; and an extraordinary quantity of liquor being given to the animal, he was unable, when he went home with his master, to ascend the stairs to the room where he used to sleep, getting up a step or two only to roll back. This afforded Godfrey and his companion much amusement; but the dog, who lived five years after this transaction, would never again taste malt-liquor, but showed his teeth and snarled whenever a pewter pot was presented to him. As for John Godfrey himself, he died in Lambeth Workhouse; and his companion, who retained his love of beer, was often told by his wife that he had not half the sense of Jack Godfrey's dog.

Mr. Nassau Senior, in one of his articles in the 'Quarterly Review,' a notice of a satirical book called 'Anecdotes of Monkeys,' gives an instance, from his own knowledge, of such cunning in a terrier as "would have done honour," as he expresses it, "to an Old Bailey attorney." We shall give the story in Mr. Senior's own words. "Our Oxford readers are probably aware that dogs are forbidden to cross the sacred threshold of Merton common-room. It happened one evening that a couple of terriers had followed their masters to the door, and, while they remained excluded, unhappily followed the habits rather of biped than of quadruped animals, and began to quarrel like a couple of Christians. The noise of the fight summoned their masters to separate them, and as it appeared that the

hero of our tale had been much mauled by a superior adversary, the severe *bienséances* of the place were for once relaxed, and he was allowed to enjoy, during the rest of the night, the softness of a monastic rug and the blaze of a monastic fire; luxuries which every initiated dog and man will duly appreciate. The next day, soon after the common-room party had been assembled, the sounds of the preceding evening were renewed with tenfold violence. There was such snapping and tearing, and snarling and howling, as could be accounted for only by a general engagement:—

‘The noise alarm’d the festive hall,
And started forth the fellows all.’

But instead of a battle royal, they found at the door their former guest, in solitude sitting on his rump, and acting a furious dog-fight, in the hope of again gaining admittance among the *quieti ordines deorum*. We have heard that he was rewarded with both the *grandes* and the *petites entrées*; but this does not rest on the same authority as the rest of the narrative.”¹

Dr. Arnaud d’Andilli, the translator of Josephus, author of several well-known works in the French language, was one day talking with the Duke de Liancourt on the opinion of Descartes that beasts were mere machines, having no portion of reason to direct them, and producing sounds only as machines may be made to produce them by the agency of wheels. The doctor was inclined to support Descartes, but the Duke declared himself of a quite contrary opinion, giving some instances in support of his conviction, one of which had come under his own knowledge. “I had in my kitchen,”

¹ Nassau Senior’s ‘Biographical Sketches,’ p. 516. .

said he, "two turnspits, one of which went regularly every other day into the wheel. One of them, however, not liking his employment, hid himself on the day on which he should have worked, so that his companion was ordered to enter the wheel in his stead. But the dog hung back, crying and wagging his tail, and making signs to those present to follow him. Being curious to see what he would do, they put themselves under his guidance, when he led them straight to a garret where the idle dog was hid, and immediately fell upon him and killed him on the spot."¹

A similar proceeding is related as having occurred at the Jesuits' College at La Flèche. One day when the cook had got the meat ready for being roasted, he learned that the dog which should have turned the spit was nowhere to be discovered. He attempted to employ another turnspit, but it bit his leg and ran away. Soon after, however, the same dog returned, driving before him the one that had shrunk from his duty, and forcing him to enter the wheel and perform his task.²

A blind dog, it seems, may have as much use of his ears, and form as accurate conclusions from what he perceives through them, as a blind man. "In the Zoological Gardens," says Mr. Youatt,³ "an old blind dog used to be placed at the door of the dissecting-house. Few had any business there, and every one of them he, after a while, used to recognize and welcome full ten yards off, by wagging his tail; at the same distance he would begin to growl at a stranger, unless accompanied by a friend. From the author's long habit of

¹ Blaine, *Encycl. of Rural Sports*, p. 398.

² Jesse, *Anecd. of Dogs*, p. 303.

³ *On the Dog*, p. 114.

noticing him, he used to recognize his step before it would seem possible for its sound to be heard. He followed him with his sightless eyes in whatever direction he moved, and was not satisfied until he had petted and fondled him."

CHAPTER IX.

DOG.—NEWFOUNDLAND BREED.

It is an opinion of Mr. Grantley Berkeley, and perhaps of others, that it is a mistake to suppose that one species of dog has greater sagacity than another. But to this notion we are not inclined to assent. We are disposed to think that a greater portion of strong natural sense is manifested in the larger kinds of dogs, as the Newfoundland and the mastiff, than in the smaller. First of all we shall give a few examples, for most of which we are indebted to Mr. Jesse, of intelligence in the Newfoundland dog. Of such examples, as he observes, an almost infinite number might be collected.

A lieutenant in the navy informed Mr. Jesse¹ that while his ship was under sail in the Mediterranean, a canary bird escaped from its cage, and flew overboard into the sea; when a Newfoundland dog belonging to the vessel, seeing the bird drop, jumped into the water and swam up to it, and then, taking it in his mouth, swam back with it to the ship. When the dog came on board, and opened his mouth, it was found that the bird was perfectly uninjured, the dog having carried it as ten-

¹ Anecdotes of Dogs, p. 127.

derly as if he were quite aware that the slightest pressure would destroy it.

Mr. Youatt relates, that as he was going one day to open a gate, to pass from one part of his premises to another, he saw a lame puppy lying just within, so that he could not push back the gate without rolling the poor animal over, and adding to its sufferings. As he was hesitating what to do, and thinking of going round by another gate, a Newfoundland dog, which was waiting within, and which Mr. Youatt was wont to caress as he passed, saw, as he glanced at the lame dog, the cause why Mr. Youatt delayed to enter, and putting out his great strong paw, gently rolled the invalid out of the way, and then drew back himself to allow room for the gate to open. In acting thus the dog evidently reasoned within himself, and decided what was requisite to be done in the case before him.¹

One of the late chaplains of the embassy at Lisbon brought to England with him a dog of the Newfoundland breed, so large that he was obliged to be taken from Torquay to London by sea, as no coach would convey him. He was very gentle, but perfectly well aware of his own strength, for when the waiter of the hotel at Torquay spoke harshly to him and tried to prevent him from going where he wished, he felled the man with one stroke of his paw, but without hurting him, and passed on. On the third day of his stay at the hotel he wanted water, and not being able to find any, went to the kitchen, took up a pail in his mouth and carried it to the pump in the yard, where he sat down till one of the men-servants came out, to whom he made such significant gestures that he pumped the

¹ Youatt, 'On the Dog.'

pail full for him; and when he had drunk enough he carried the pail back to the place in the kitchen from whence he had taken it. His proceedings were witnessed by the gentleman who related them.¹ Is any other instance known of a dog having restored a thing to its place, of its own accord, after having used it?

Mr. Jesse² also speaks of a Newfoundland dog that used to attend his master's wife and sisters when they went abroad; and if they were unaccompanied by any gentleman, he always walked before them, obliging any crowd that they might encounter to make way for them, but, if a gentleman was with them, he always walked retiringly behind.

A gentleman of Mr. Jesse's acquaintance, shooting one day, attended by a keeper, killed a hare, which had run through a hole at the bottom of a stone wall. The keeper sent a sagacious old dog of the Newfoundland breed to fetch the hare. The dog brought the dead animal in its mouth to the wall, over which he attempted to jump, but after several attempts, found that his load rendered him unable to do so. Desisting from his ineffectual efforts, therefore, he laid down the hare by the hole, through which he pushed it as far as he could with his nose, and then leaping over the wall, dragged it through on the other side, and brought it to his master. From the high ground on which the gentleman and his keeper stood they were able to see distinctly the whole of his proceedings.³

The following contrivance on the part of a dog is of a similar nature. A friend of Mr. Jesse's was shooting wildfowl with his brother, accompanied by a New-

¹ Jesse, *Gleanings in Nat. Hist.* vol. iii. p. 30.

² *Ib.* vol. ii. p. 221.

³ *Ib.* vol. iii. p. 14.

foundlander, and coming to some reeds at the side of the river, they threw down their hats, the better to conceal themselves as they approached their game. After firing, they sent the dog for their hats, one of which was smaller than the other, and the animal, after several vain attempts to bring them both together in his mouth, at last placed the smaller hat in the larger one, pressed it down with his foot, and thus brought them with ease. "Extraordinary as this anecdote may appear," says Mr. Jesse, "it is strictly true, and strongly shows the sense, and I am almost inclined to add, the reason, of the Newfoundland dog."¹

Great circumspection was shown by a dog of this kind which was in the habit of stealing from a kitchen that had two doors opening into it; for he would never indulge his thievish propensity if one of them was shut; but if both were open, he understood that the chance of escape was doubled, and readily seized what he could.

Similar precaution was exhibited by a Newfoundland dog, the mother of two whelps, which she had suckled till it was time for them to be weaned, but which were constantly following and annoying her for milk when she had little to give them. She was confined at night in a shed, which was divided from another by a wooden partition some feet high, and into this she conveyed her puppies, leaving them there by themselves, that she might enjoy her night's rest in the other shed undisturbed.²

A vessel containing eight men was driven by a storm on the beach at Lydd in Kent, when the surf was raging with such fury that no boat could be got off to her assistance. At length a gentleman came forward,

¹ Anecdotes of Dogs, p. 113.

² *Ib.* p. 108.

attended by his Newfoundland dog, into whose mouth he put a stick, and pointed in the direction of the vessel. The dog readily understood what he was expected to do, and sprang into the sea. He fought his way courageously through the rolling waves, but was unable to get close enough to the vessel to deliver that with which he was charged. The crew, however, seeing what was intended, fastened a piece of wood to the end of a rope, and threw it towards him. No human being could have comprehended more quickly what he ought to do than did the sagacious dog; he instantly dropped his stick and seized the wood which had been thrown to him, and then, with almost incredible strength and perseverance, dragged the rope attached to it through the surge, and brought it to the hands of his master. A line of communication was thus formed, and the whole crew saved.¹

A Newfoundland dog, belonging to a grocer in a large way of business, had observed one of the porters of the house, who had frequent occasion to go into the shop, take away money from the till and carry it into the stable to hide it. After seeing several such thefts, the dog became restless, and often pulled persons by the skirts of their coats, as if he wished them to do something for him. At last, noticing an apprentice enter the stable one day, he followed him, and going up to a heap of rubbish, scratched at it with his paws till he had uncovered the concealed money. The apprentice brought the hoard to his master, who marked the pieces of coin, and afterwards restored it to the hiding-place. But some of it was soon after found upon the porter, who was thus convicted of the theft.²

¹ Jesse, 'Anecdotes of Dogs,' p. 119.

² *Ib.* p. 121.

A dog belonging to Mr. Garland, a magistrate at Harbour-de-Grace, in Newfoundland, was in the habit of carrying a lantern before his master at night, bearing it along as steadily as the most attentive servant could have done, and making a halt whenever he ceased to hear his master's footstep behind him. If, moreover, when his master was from home in the evening, the lantern were given him with the command, "Go, fetch your master!" he would set off immediately for the town, which was a mile from Mr. Garland's residence, and would stop at the door of every house which he knew his master frequented, setting down the lantern and barking at the door, till he had discovered where his master was. His recollection of the houses as he went his round was always most accurate.¹

A gentleman at York had one of these large dogs, which had great sagacity in fetching and carrying articles. Sometimes the gentleman, on purchasing an article in a shop, and finding it inconvenient to take it away with him at the time, would call the dog's attention to it, and, after finishing his other business in the town, would tell his dog to go and fetch it. The intelligent animal never failed to return with the right article in his mouth. One day his master bought a brush in a shop, pointed it out to Carlo in the usual way, and sent him some time afterwards to fetch it. Unluckily the shopman had not detached the brush from the cord connecting it with a number of others, and the dog ran off with a whole string of brushes, dragging them vigorously along the street. The shopman pursued; but the dog gave him to understand

¹ Jesse, 'Anecdotes of Dogs,' p. 124.

that he had better not take possession ; nor did he stop till he had laid the whole number at the feet of his master.¹

Smellie, in his 'Philosophy of Natural History,' relates that a man who went through the streets of Edinburgh ringing a bell and selling pies, gave one to a large dog belonging to a grocer of that city. The next time the dog heard the pieman's bell, he ran impetuously towards him, seized him by the coat and forbade him to pass. The pieman showed him a penny, and pointed to his master, who stood at the street-door observing what was going on. The dog now, by all the means in his power, pleaded with his master for a penny, and, on receiving one, carried it in his mouth to the pieman, who gave him a pie. This matter of buying and selling was daily practised for several months.

Colonel Hutchinson relates that a lady, a cousin of one of his brother-officers, was walking out one day at Tunbridge Wells, when a Newfoundland dog, quite strange to her, came up to her side and snatched her parasol out of her hand, carrying it off in his mouth. She of course followed him, but he did not hurry away ; he only kept a little ahead of her, looking back from time to time to see if she were coming. At last he stopped at a confectioner's shop and went in ; the lady went after him, and tried to take her parasol from him, but he refused to let it go. She then applied for assistance to the shopman, who told her that it was an old trick of the dog's, and that she would not be able to get the parasol from him without giving him a bun. The bun being offered, the parasol was readily given up. This proceeding, if it proved the dog inclined to extor-

¹ Rev. T. Jackson, 'Our Dumb Companions,' p. 60.

tion rather than honesty, certainly manifested great intelligence in him. It is of the same class with that of the dog that stopped the pieman, and both seem to have acted from their own original thought.

Lord Eldon had a Newfoundland dog, which, he said, not only showed dejection for some time before his master left home, but pleasure in anticipation of his return for some days before it was to happen. He wrote an epitaph on him, of which the following is the conclusion :—

“To his rank among created beings
 The power of reasoning is denied ;
 Cæsar manifested joy
 For some days before his master
 Arrived at Encombe ;
 Cæsar manifested grief
 For days before his master left it ;
 What name shall be given
 To that faculty
 Which thus made expectation
 A source of joy,
 Which thus made expectation
 A source of grief ?”¹

¹ Twiss's 'Life of Lord Eldon.'

CHAPTER X.

DOG.—PUNISHMENT OF SMALL DOGS BY LARGER.

THE understanding or reasoning of these large dogs is shown more remarkably, perhaps, in none of their doings than in the way in which they often punish smaller dogs that annoy them.

“The mastiff,” says Mr. Bewick, “conscious of its superior strength, knows how to chastise the impertinence of an inferior. A large dog of this kind, belonging to the late M. Ridley, Esq., of Heaton, near Newcastle, being frequently molested by a mongrel and teased by its continual barking, at last took it up in his mouth by the back, and with great composure dropped it over the quay into the river, without doing any further injury to an enemy so much his inferior.”¹

A gentleman was staying at Worthing, where his Newfoundland dog was teased and annoyed by a small cur, which snapped and barked at him. This he bore without appearing to notice it for some time, but at last the Newfoundland dog seemed to lose his usual patience and forbearance, and he one day, in the presence of several spectators, took the cur up by his back,

¹ Bewick, *Hist. of Quadr.* p. 337.

swam with it to the sea, held it under the water, and would probably have drowned it, had not a boat been put off and rescued it.

“There was another instance communicated to me. A fine Newfoundland dog had been constantly annoyed by a small spaniel. The former, seizing the opportunity when they were on a terrace under which a river flowed, took up the spaniel in its mouth, and dropped it over the parapet into the river.”¹

The following anecdote is given by Dr. Abell in his ‘Lectures on Phrenology,’ and repeated by Mr. Youatt.²

A Newfoundland dog in the city of Cork had been greatly annoyed, as he passed along the streets, by a number of noisy curs, of whom, however, for a while he took no notice. But one of them, more forward than the rest, at length carried his presumption so far as to bite the Newfoundland dog in the back of his leg. The large animal, provoked beyond endurance, instantly sprang round, ran after the offender, and seizing him by the skin of his neck, carried him to the quay, when, after holding him suspended over the water for some time, he at last dropped him into it. But he had no intention to drown him, or to inflict on him more than a mild punishment, for after he had been well ducked and frightened, and was beginning to struggle for life, his chastiser plunged into the flood and brought him safe to land.

Dr. Hancock, noticing this anecdote in his ‘Essay on Instinct,’ says, “It would be difficult to conceive any punishment more aptly contrived, or more completely in character. Indeed, if it were fully analysed, an ample commentary might be written in order

¹ Jesse, ‘Anecdotes of Dogs,’ p. 112. ² On the Dog, p. 54.

to show what a variety of comparisons and motives and generous feelings entered into the composition of this act.”

Baby, a Newfoundland dog at Windsor, well known, for a long time, to every inhabitant of the place, was often much exposed, as he slumbered in front of the hotel to which he belonged, to the attacks of all sorts of curs, but though he never tamely submitted to an insult from a dog approaching his own size, he seemed to think that a pat from his heavy paw was sufficient punishment for any inferior assailant, for his gentleness was equal to his courage.¹

A literary friend of Mr. Jesse's, Lady Morgan we believe, relates of an old Irish wolf-hound, which she knew in her youth, that he kept two rough terriers that were with him in the same house in admirable order. One of them he could easily repress by merely placing his paw upon it when it became too frisky; but the other, a female, was more difficult to manage, and when she grew extremely presuming and troublesome, his extreme measure, at least in summer-time, was to take her up in his mouth, carry her out-of-doors, and deposit her, half strangled, in a bed of nettles at some distance. But what was most remarkable in his treatment of her was the discrimination which he showed between what was intended on her part and what was involuntary, for some of the family, in order to tease him a little, would occasionally push her against him, or make her do something to annoy him, but when this was the case he never punished her; though, when she provoked him of her own accord, chastisement was sure to follow.²

¹ Jesse, 'Anecdotes of Dogs,' p. 105.

² *Ib.* p. 90.

The Rev. J. G. Wood says that a Newfoundland dog belonging to one of his friends seized a little dog, by which he had been some time tormented, in his mouth, and the sea being at hand, swam out with the animal to some distance from the coast, dropped it in the water, and left it to make its way back again if it could. He tells also a similar anecdote of another Newfoundland dog, who, being assaulted and at last pinned by the nose by a little pugnacious bull-terrier, which could not be made to relax its hold, walked up to a pailful of boiling tar that happened to be near, and deliberately let down the terrier into it. The terrier escaped, but not without a severe scalding.

A Newfoundland dog, at the town of Honiton, in Devonshire, used to lie several hours every day before the entrance to the Golden Lion Inn, to which he belonged. As he was reposing, there used frequently to go by a little ill-conditioned cur, which never passed without barking and yelping at the larger dog, for the purpose of insulting him. The Newfoundland dog bore the annoyance a long time with apparent indifference, but one day he rose up deliberately, seized the cur by the neck, carried him across the street, and dipped him into a pond of water, in which he kept him immersed over head and ears for some seconds, when he lifted him out, laid him down on the kerb-stone, and walked back with dignified slowness to his usual place of rest. It may be supposed that the cur never insulted him again. But the meditated purpose of the larger dog to punish his annoyer without seriously hurting him, and the deliberate execution of that purpose, assuredly showed great reasoning powers in the animal.

CHAPTER XI.

DOG.—SHEPHERD'S.

NEXT in intelligence to the Newfoundland dog ought to be placed, perhaps, the Scottish sheep-dog, of whose sagacity extraordinary stories are told. Hogg, in his 'Shepherd's Calendar,' gives accounts of several dogs of this kind that he himself possessed. Of one, which he named Sirrah, he says that, "whenever he was hard pressed in accomplishing the tasks to which he was set, he had expedients of the moment that bespoke *a great share of the reasoning faculty.*" Hogg observes that his exploits might fill a volume, but that he can only mention one or two to show his character. One of these was his collection of seven hundred lambs into a hollow by his own unassisted exertions. Hogg had always about that number of lambs under his care at weaning-time; and had only a lad and his dog to help him in keeping charge of them. It was necessary to watch them day and night, lest they should run away in search of their dams. One night, between eleven and twelve, the lambs broke loose, running, as it happened, towards their keepers, with a noise, as Hogg expresses it, "louder than thunder." He and his as-

sistant got up and shouted, and did what they could to turn the lambs, but without the least effect. At last, they had the fortune to break them into three great divisions, one of which ran north, another south, and the third westward. Hogg cried out to his dog, "Sirrah, my man, they're a' away," an exclamation which always set him more on the alert than any other; and Sirrah immediately started off, but, on account of the darkness of the night and the blackness of the moor, Hogg could not tell in what direction. He himself, however, pursued one division of the lambs, and with great exertion, and the help of another old dog, turned them about for a space, but lost them again in a few minutes altogether. Hogg was in utter despair, but kept whistling at intervals to Sirrah, to keep up a communication with him; and at last the lad returned, but could give no account of either Sirrah or the lambs. However both of them concluded that whatever way the lambs ran at first, they would finally reach the folds where they had left their mothers; and thither accordingly they bent their course; but when they arrived there, there was nothing to be seen or heard of them. Hogg then ran several miles towards the west, and the lad a great distance towards the north, and the two met after daybreak, but neither had discovered the least trace of the lambs. "It was the most extraordinary circumstance," to borrow Hogg's own words, "that had ever occurred in the annals of the pastoral life. We had nothing for it but to return to our master, and inform him that we had lost his whole flock of lambs, and knew not what was become of one of them. On our way home, however," he continues, "we discovered a body of lambs at the bottom of a deep ravine,

called the Flesh Clench, and the indefatigable Sirrah standing in front of them, looking all around for some relief, but still standing true to his charge. The sun was then up; and when we first came in view of them, we concluded that it was one of the divisions of the lambs, which Sirrah had been unable to manage till he came to that commanding situation, for it was about a mile and a half distant from the place where they first broke and scattered. But what was our astonishment when we discovered by degrees that not one lamb of the whole flock was wanting! How he had got all the divisions collected in the dark is beyond all comprehension. The charge was left entirely to himself from midnight to the rising of the sun; and if all the shepherds in the forest had been there to assist him, they could not have effected it with greater propriety. All that I can say further is, that I never felt so grateful to any creature below the sun as I did to Sirrah that morning."

This proceeding showed great sagacity, and even intelligence, in the dog; but there is another exploit recorded of him by Hogg, that showed even greater sagacity. Hogg was sent to a place fifteen miles distant from his employer's house to fetch back a strong and frisky ewe that had strayed from home. The way lay over steep hills and through deep glens; there was no track; and neither Sirrah nor his master had ever traversed that part of the country before. When they reached the place from whence the ewe was to be brought, she was secured and put into a barn overnight; and after having been scared and annoyed by the restraints laid upon her, she was turned out to be driven home by herself. "She was as wild as a roe,"

says Hogg, "and bounded away to the side of the mountain like one."—"Do you really suppose," said the farmer to Hogg, "that you will drive that sheep over those hills, right through the midst of all the sheep in the country?" Hogg said he would try. The farmer replied that he might as well try to reach the sun. However, Hogg showed the ewe to Sirrah, and signified to him, as well as he could, that he was to have the charge of her. "After this," says Hogg, "I seldom got a sight of the ewe, for she was sometimes a mile before me, sometimes two; but Sirrah kept her in command the whole way,—never suffered her to mix with other sheep,—nor, as far as I could judge, ever to deviate twenty yards from the track by which he and I went the day before." At last Hogg lost all traces of them; he passed two shepherd's houses and asked at each if they had seen a black dog driving a sheep; but they had seen no such objects. "I had nothing for it," he continues, "but to hold my way homeward; and at length, on the corner of a hill at the side of some water, I discovered my trusty coal-black friend sitting with his eye intently fixed, though sometimes giving a glance behind to see if I was coming. He had the ewe standing there, safe and unhurt." But the affair was not destined to end satisfactorily to Sirrah. When the ewe was got home, and set at liberty among the other sheep, Sirrah took it highly amiss. He could scarcely be prevailed upon to let her go, and was so displeased that she should have been liberated after all his trouble, that he would not go near his master for some time, and refused to eat any supper when he went into the house. In acting thus, the dog showed that he reasoned about the matter

in his way, and formed his conclusions respecting it he had understood that that sheep was to be kept by itself, and that he was to be the instrument of keeping it so; and he considered himself insulted by the dismissal of the sheep to go among other sheep, after he had been required to make such exertion, and had made it so successfully, to keep her separate.

It is worth while to transcribe a few sentences in praise of the shepherd's dog from the pages of one who was so well qualified to judge of his merits and value as James Hogg. "A single shepherd and his dog," says he, "will accomplish more in gathering a flock of sheep from a Highland farm, than twenty shepherds could do without dogs; and it is a fact that without this docile animal the pastoral life would be a mere blank. Without the shepherd's dog, the whole of the open mountainous land in Scotland would not be worth a sixpence. It would require more hands to manage a stock of sheep, gather them from the hills, force them into houses and folds, and drive them to markets, than the profits of the whole flock would be capable of maintaining. Well may the shepherd feel an interest in his dog; he it is, indeed, that earns the family's bread, of which he is himself content with the smallest morsel; always grateful, and always ready to exert his utmost abilities in his master's interest. Neither hunger, fatigue, nor the worst of treatment, will drive him from his side; he will follow him through fire and water as the saying is, and through every hardship, without murmur or repining, till he literally fall down dead at his feet. If one of them is obliged to change masters, it is sometimes long before he will acknow-

ledge the new one, or condescend to work for him with the same willingness as he did for his former lord ; but if he once acknowledge him, he continues attached to him till death ; and though naturally proud and high-spirited, these qualities (or rather failings) are, as far as relates to his master, kept so much in subordination that he has not a will of his own."

It is no uncommon thing for one of these dogs to have the charge of a sheep, to take it from the fold to the farmhouse, though not for such a distance as the frisky ewe was conducted by the dog Sirrah. When a ewe's lamb dies, she is usually separated from the rest of the flock for a time, and the sheep-dog is often sent home with her under his sole care. Hogg tells a story of one that would bring home any ewe that was committed to him ; but it was necessary to look after the ewe as soon as she reached home ; for, when once the dog perceived that any one had noticed the ewe, he would no longer continue his attention to her, but would consider his commission to be at an end ; and no flattery or threats would induce him to assist in getting her into a place of security. As to finding sheep which they are sent to trace, the anecdotes told of these dogs are amazing. One of them is as follows :—A man, on a very dark night, was driving a ewe through the lands of his neighbour, whose name was Graham, and lost her, she having scampered away from him up the side of a hill. He immediately applied to Graham, whose house was near, to assist him in recovering her. Graham replied, that it would be rather difficult to capture the animal in the darkness, but that he did not know what his dog Chieftain might be able to do. So the two men, accompanied by the dog, and by James Hogg,

who was then quite a boy, went out to the spot where the man had missed the ewe, hurrying to reach it as soon as possible, lest the scent of the feet should be lost. When they came to what the man believed to be the place, Graham said to his dog, "Fetch that, Chieftain," but the dog, seeing nothing, jumped round and round his master in perplexity, not knowing what he was to do. At last Graham told his neighbour that he must hit upon the very track which the ewe was pursuing when she disappeared. The man then fixed on a certain grey stone, and said he was sure that when the animal took to the hillside she was within a yard of that stone. Graham then pointed with his finger to the ground, and said to the dog, "Fetch that, Sir; away!" The dog scented slowly round about the stone for some time, and then vanished in the darkness. "As all these good dogs," adds Hogg, "perform their work in perfect silence, we neither saw nor heard any more of him for a long time. I think, if I remember right, we waited there about half an hour, during which time all the conversation was about the small chance which the dog had to find the ewe, for it was agreed on all hands that she must long ago have mixed with the rest of the sheep on the farm. How that was, no man will be able to decide. John, however, persisted in waiting till his dog came back, either with the ewe, or without her; and at last the trusty animal *brought the individual lost sheep to our very feet.*" The owner of the sheep did not choose to run another chance of losing her by attempting to drive her before him, but tied her legs together and carried her off on his back.

This anecdote, which was published in the 'Percy

Anecdotes,' was told by the Ettrick Shepherd himself to Mr. Jesse.¹

I will add another anecdote of a dog bringing home sheep, which I have read, not in Hogg's 'Shepherd's Calendar,' but in Bingley. A farmer sold a flock of sheep to a dealer, who wanted assistance to drive them to his home, a distance of about thirty miles. The farmer told him he would want no more assistance than that of an intelligent dog which he would lend him, and that when he reached the end of his journey, and wished to part with the dog, he had only to feed him, and desire him to return home. The dog in consequence, at a sign from his master, set off with the flock and the drover, but instead of returning when he was expected, was absent for several days, so that his master began to be anxious about him, when one morning, to his great surprise, he found the dog before his door with a large flock of sheep, including all those that he had lately sold to the dealer. On making inquiries, he found that the dealer, seeing the value of the dog, had desired to appropriate him, and had accordingly shut him up, with the intention of keeping him in confinement till he should leave that part of the country. The dog, it may be very well supposed, was impatient of restraint, and at last succeeded in making his escape, when he went off immediately to the field, collected the whole of the dealer's sheep, and drove them back to his master. Whether the animal had some dim notion that the dealer had no right to the sheep, and ought not to detain them any more than to detain itself, and conceived that it was its duty to take them back to its master, may be matter of conjecture ; but from

¹ Jesse Anecd. of Dogs, p. 160.

its mode of proceeding it may well be supposed that it had some such notions in its head. Assuredly the master of the dog might well be delighted to own so intelligent an animal.

The dog, devoted to his master, has no care but to please him, and is ready to do anything, honest or dishonest, for his master's gratification. Sir Walter Scott, in his Notes to 'St. Ronan's Well,' tells a story of a dog that was taught to steal sheep in the night by one Millar, a shepherd, who, in conjunction with his master, named Murdison, committed extensive depredations on the flocks of their neighbours by the aid of this dog. Both of these men were hanged for their offences against the law in 1773. They lived in the vale of Tweed, and Millar had trained his dog with such art, that, in the words of Sir Walter, "he had only to show him during the day the parcel of sheep which he desired to have, and when dismissed at night for the purpose, Yarrow (for that was the dog's name) went right to the pasture where the flock had fed, and carried off the quantity shown to him. He then drove them before him by the most secret paths to Murdison's farm, where the dishonest master and servant were in readiness to receive the booty. Two things were remarkable. In the first place, that if the dog, when thus dishonestly employed, actually met his master, he observed great caution in recognizing him, as if he had been afraid of bringing him under suspicion; secondly, that he showed a distinct sense that the illegal transactions in which he was engaged were not of a nature to endure daylight. The sheep which he was directed to drive, were often reluctant to leave their own pastures, and sometimes the intervention of rivers

and other obstacles made their progress peculiarly difficult. On such occasions, Yarrow continued his efforts to drive his plunder forward, until the day began to dawn, a signal which, he conceived, rendered it necessary for him to desert his spoil, and slink homeward by a circuitous road. It is generally said that this accomplished dog was hanged along with his master; but the truth is, he survived him long, in the service of a man in Leithen, yet was said afterwards to have shown little of the wonderful instinct exhibited in the service of Millar."

A similar extraordinary instance of the intelligence of a sheep-dog is related by Dr. Anderson. The owner of the dog was hanged for sheep-stealing, and, among other facts elicited by the evidence given on his trial, it was proved that when the man intended to steal sheep, he did not take them himself, but sent his dog to act for him. Under pretence of looking at a flock of sheep with intent to purchase it, he would go through them with the dog at his heel, and make secret signals to him, so as to let him know the individual sheep that he wanted, to the number of ten or twenty, as Dr. Anderson says, out of a flock of some hundreds. He would then go away to several miles' distance, and send back the dog by himself in the night-time, who would fix on the sheep that had been pointed out to him, separate them from the rest, and drive them before him till he fell in with his master, to whom he relinquished them.¹

Of his dog Sirrah, Hogg relates that when he grew old, and was incompetent to take charge of a large flock of sheep, though still able to give much assis-

¹ Jesse, *Anecd. of Dogs*, p. 158.

tance, he sold him, as he could not afford to keep two dogs on account of the tax, to a neighbouring farmer for three guineas. As Hogg told him to go, he went, but, when he found himself doomed to serve a stranger, he would never again take pains to do his duty as a sheep-dog; on the contrary, he would run in among the sheep, and often seem intent on doing all the mischief he could. When Hogg found he was useless, he refused to take any money for him. His new owner gave him away to an old man, who was content to keep him in idleness for the sake of what he had been. While he was in this man's possession, he would frequently visit his old master's neighbourhood, but would never come to his house, being afraid, as it seemed, of the mortification of being driven away. He would watch, in the morning, near the road by which Hogg went out, and then walk along in the same direction with him, but always keeping about two hundred yards off; and when he had gone as far as he thought proper, he would make off to the house of his last owner. "When I thought," says Hogg, "how easily one kind word would have attached him to me for life, and how grateful it would have been to my faithful old servant and friend, I could not help regretting my fortune that obliged us to separate. The parting with old Sirrah, after all he had done for me, had such an effect on my heart, that I have never been able to forget it to this day. The more I have considered his attachment and character, the more I have admired them; and the resolution he took up and persisted in, of never doing a good turn for any other of my race after the ingratitude that he experienced from me, appeared to me to have a kind of heroism and sublimity."

CHAPTER XII.

SHEEP-DOG.—(*Continued.*)

A STORY of sheep being found by a dog, similar to that which is related by Hogg concerning Sirrah, is told by Mr. Cuthbert Bede, though the number of sheep in the latter case was smaller. A shepherd found that two hundred of his sheep were missing, and sought for them, in company with his dog, till nightfall without success. "I was with him," says the narrator, "when he came back. He explained to the dog, with similar words and manner that he would have used to a fellow-being, that the sheep must be found, and that he (the collie) must manage the business as best he could. With that he dismissed him. The collie answered with an intelligent look and wag of the tail, and bounded away into the darkness.

"The next day the shepherd renewed his search, but neither sheep nor collie were to be seen. In the afternoon the shepherd had reached a distant moor, and heard every now and then the faint barking of a dog. Guided by the sound, he advanced up a glen that narrowed at its furthest extremity into a small plot of ground, guarded on every side but one by lofty rock walls. There, at the outlet, was the faithful collie,

giving signal barks, but not daring to stir from his post; and there, before him, hemmed in by the rocky fold were all the sheep. Not one was missing. This glen was between four and five miles from the spot from whence the flock had wandered."¹

Lord Truro used to relate an instance of sagacity which he had seen in a drover's dog, that was desired to fetch three oxen out of some score which had mingled with another herd. 'Go, fetch them out!' was all the instruction the drover gave him, and he speedily brought out from the herd those very three.²

The following anecdote was told by Robert Murray, shepherd to Mr. Samuel Richmond, a farmer near Dunning in Fifeshire. Murray had purchased for Mr. Richmond fourscore sheep at Falkirk, but being prevented by some pressing engagement from taking them home himself, he committed them to the care of his female collie, in whose faithfulness and sagacity he had the utmost confidence, intimating to her that she was to drive them home, a distance of about seventeen miles. She proceeded on her way, and, as was afterwards found, was delivered, when she had gone a few miles, of two whelps, but, faithful to her charge, drove the sheep on a mile or two further; then, allowing them to stop, she returned for her puppies, which she then carried on for about two miles in advance of the sheep. Then, leaving her pups, she returned for the sheep, and drove them onwards for a certain distance. Thus she continued the whole way, alternately carrying her young and attending to the flock till she reached home. Her course of proceeding was learned by Murray from various individuals who had observed her going back-

¹ Williams, 'Dogs and their Ways,' p. 105.

² Lord Brougham's 'Dialogues on Instinct,' dial. iii.

wards and forwards on the road. But her efforts for her offspring had but ill success, for, when she brought in her flock safe, her puppies were dead. Her sense or instinct, however, directed her to means for her relief; for she went to a rabbit-brae in the neighbourhood and dug out of the earth two young rabbits, which she deposited in some straw in a barn and suckled.¹

To this may be appended the following anecdote, which will serve to show at least the good feeling of the sheep-dog as a mother. It is given by Mr. Jesse in the words of the gentleman who witnessed the fact.

“A collie, belonging to a shepherd on a farm where I happened to be, appeared very restless and agitated; she frequently sent forth howls and moans as if in great agony. ‘What on earth is the matter with the dog?’ I asked. ‘Ye see, Sir,’ said the shepherd, ‘aw drownt a’ her whelps i’ the pond the day, and she’s busy greeting for them.’ Of course I had no objection to offer to this explanation, but resolved to watch her future operations. She was not long in setting off to the pond and fishing out her offspring. One strong brindled pup she seemed to lament over the most. After looking at it for some time she again set off at a quick rate to a new house then in course of erection and scooped out a deep hole among the rubbish. She then, one by one, deposited the remains of her young in it, and covered them up most carefully. After she had fulfilled this task, she resumed her labours among her woolly charge as usual.”² We may well admire the fidelity of a dog to a master who drowns her puppies, and her light estimation of her own bereavement and sufferings in comparison with her solicitude for his property.

¹ Jesse, *Anecd. of Dogs*, p. 148.

² *Ib.* p. 155.

Another of the stories told by Hogg shows the pertinacity with which a dog will fulfil its trust without regard to its own personal inconvenience. A sheep-owner, named Steele, of Peebles, had such dependence on the attention of his dog to orders, that whenever he put a lot of sheep before her, he took a pride in leaving them entirely to her care. But on one occasion he committed a drove to her charge at a place called Willenslee, without observing, as he ought to have done, how far she was gone with pup. Willenslee is five miles from Peebles, with wild and almost trackless hills between them.

“Whether Steele,” says Hogg, “remained behind, or took another road, I know not, but, on arriving home late in the evening, he was astonished to hear that his faithful animal had never made her appearance with the drove. He and his son, or servant, instantly prepared to set out by different paths in search of her, but on their going out into the street there was she coming with the drove, not one missing, and, marvellous to relate, she was carrying a young pup in her mouth. She had been taken in travail on the hills, and how the poor beast had contrived to manage her drove in her state of suffering is beyond human calculation, for her road lay through sheep the whole way. Her master’s heart smote him when he saw what she had suffered and effected; but she was nothing daunted, and, having deposited her young one in a place of safety, she again set out full speed to the hills and brought another and another, till she brought her whole litter, one by one; but the last one was dead.”

Another tale of the same kind is, Mr. Williams says, well attested. A shepherd in one of our northern

counties had driven part of his flock to a neighbouring fair, leaving his dog to watch the remainder during that day and the next night, expecting to see them on the following morning. Unfortunately, however, the shepherd, when at the fair, forgot his dog and his sheep, and did not reach home till the morning of the third day. His first inquiry was whether the dog had been seen; the answer was "No." "Then," replied the shepherd, with a tone and gesture of anguish, "he must be dead, for I know he is too faithful to desert his charge." Instantly he repaired to the heath, where he found the dog just able to crawl to his feet, with an expression of joy, and almost immediately expired.¹

Mr. Williams had a friend, a farmer in Leicestershire, who had a dog that would go about among the sheep, and if he saw any that were lying on their backs and unable to rise, would set them on their legs again. The sheep in Leicester and Lincolnshire, in the early part of summer, are apt to roll on their backs to relieve the irritation caused by the ticks; and, when they have put themselves in this position, they are often, if they are fat and have thick wool, unable to throw themselves on their side so as to recover their feet. They are then in danger of suffocation, especially if they happen to lie with their heads down a slope. In this condition they are said by the shepherds to be "cast," and any good-natured person passing by will readily assist them to rise. But an intelligent dog will also often perform this service. The dog that has just been mentioned, whenever he heard his master utter the words "cast, cast," would run off to relieve whatever sheep he could find in this state.

¹ Williams, 'Dogs and their Ways,' p. 124.

Mr. Williams also knew a Mr. B——, who was acquainted with a farmer that had a dog of similar sagacity in this particular. Mr. B—— asked the farmer one Sunday evening whether he was going to church, and the farmer replied that he was, for his dog would be shepherd in his absence. Mr. B——, anxious to see how the dog would fulfil his charge, went up on a little hill where he could see all his movements. The farmer having told him to go and see that the sheep were all right, he saw him go into the first field and turn up any of the sheep that were “cast,” and then proceed to several other fields in which there were sheep and do the same thing. He then returned quietly homewards and waited his master’s return.¹

The following anecdote is given by Bewick, the famous wood-engraver, in his ‘Memoir of Himself:’²

“While I was at Woodhall,” a place somewhere in the neighbourhood of the Cheviot Hills, “I was struck with the sagacity of a dog belonging to Mr. Smith,” a friend of Bewick’s. “The character for sagacity of the shepherd’s dog was well known to me, but this instance of it was exemplified before my eyes. Mr. Smith wished to have a particular ram brought out from amongst the flock, for the purpose of seeing and examining it. Before we set out, he observed to the shepherd that he thought the old dog (he was grey-headed and almost blind) would do well enough for what he wanted with him. Before we reached the down, where the flock was feeding, I observed that Mr. Smith was talking to the dog before he ordered him off upon his errand; and, while we were conversing on some indifferent subject, the dog brought a

¹ Williams, ‘Dogs and their Ways,’ p. 102.

² Ib. p. 182.

ram before us. Mr. Smith found a deal of fault with the dog, saying, 'Did I not order you so-and-so?' and he scolded him for bringing a wrong sheep, and then, after fresh directions, set him off again, to bring the one he wished me to see. We then returned home, and shortly after our arrival there, the dog brought the very ram wanted, along with a few other sheep, into the fold, when I took a drawing of him."

Lord Truro told Lord Brougham an anecdote of a dog of this sort that was fond of pursuing sheep on his own account at night. He used to be tied up in the evening, to prevent him from indulging in such nocturnal excursions. To this he would quietly submit, but, when the family had retired to rest, would slip his head out of his collar, set off to gratify his propensity, and, returning before dawn, put his collar on again to conceal his offence.¹

A dog of this kind of equal sagacity is commemorated by Mr. Blaine.² A butcher and cattle-dealer, who lived about nine miles from Alston, in Cumberland, was accustomed to purchase sheep and oxen in his own neighbourhood, and after fattening them, drive them to Alston market for sale. In these journeys he was often astonished at the remarkable sagacity of his dog, which had previously belonged to a drover, and the dexterity with which he managed the cattle; so that at length he took very little trouble about them himself, but left the drove almost wholly to the charge of the dog. By degrees he became so convinced of his fidelity as well as intelligence, that he laid a wager that the dog would take a drove of sheep

¹ Lord Brougham, Dialog. on Instinct, dial. iii.

² Encyclop. of Rural Sports, Art. 806.

and oxen, alone and unassisted, from his house to Alston market. It was stipulated that no one who had the least control over the dog should be within sight or hearing, nor was any one in the least to interfere with him. All being settled, the animal proceeded with his business in the most steady and dexterous manner, and, though he had frequently to drive his charge through other herds that were grazing, he did not lose one, but, conducting them to the very yard to which he was accustomed to drive them with his master, he announced their arrival to the person appointed to receive them by barking at the door. Thus the wager was fairly won. Those who noticed the dog on his way, saw that when he was going through grounds in which other cattle came in contact with his, he would run on before, stop his own drove, chase the others away, and then, collecting his charge, start forward again.

The following description of a somewhat similar dog is from the pages of 'All the Year Round.' It is fanciful, but perhaps does not exaggerate such a dog's merits and intelligence. "At a small butcher's in a shy neighbourhood (there is no reason for suppressing the name; it is by Notting Hill, and gives upon the district called the Potteries), I know a shaggy black-and-white dog who keeps a drover. He is a dog of an easy disposition, and too frequently allows this drover to get drunk. On these occasions it is the dog's custom to sit outside the public-house, keeping his eye on a few sheep and thinking. I have seen him with six sheep, plainly casting up in his mind how many he began with when he left the market, and at what places he has left the rest. I have seen him perplexed by not being able to account to himself for any particular

sheep. A light has gradually broken on him; he has remembered at what butcher's he left them, and in a burst of grave satisfaction has caught a fly off his nose, and shown himself much relieved. If I could at any time have doubted the fact that it was he who kept the drover, and not the drover who kept him, it would have been abundantly proved by his way of taking undivided charge of the six sheep when the drover came out besmeared with red ochre and beer, and gave him wrong directions. He has taken the sheep entirely into his own hands,—has merely remarked, with respectful firmness, 'That instruction would place them under an omnibus; you had better confine your attention to yourself; you will want it all;' and has driven his charge away, with an intelligence of ears and tail, and a knowledge of business, that has left his lout of a man very, very far behind.'¹

Colonel Hamilton Smith,² in speaking of shepherds' dogs, observes that they are as ready to defend their sheep as to keep them in order, and mentions the case of one that took vengeance on another dog for biting a sheep. The offender was a tailor's cur, which attacked a sheep in the rear of the flock; an outrage unnoticed by the shepherd, but not by his collie, who immediately seized the aggressor, dragged him into a puddle by the ear, and gravely dabbled him in the mud. The cur yelled; the tailor came slipshod to its rescue with his goose, which he flung at the sheep-dog and missed him, and had then to stand and witness the end of the chastisement, not venturing to repossess himself of his instrument until the sheep-dog quitted the cur to follow the flock.

¹ Williams, p. 139.

² Naturalist's Library, vol. x. p. 138.

“Mr. Carruthers, of Inverness,” says Dr. Brown in his ‘*Horæ Subsecivæ*,’¹ “told me a new story of these wise sheep-dogs. A butcher from Inverness had purchased some sheep at Dingwall, and, giving them in charge to his dog, left the road. The dog drove them on, till, coming to a toll, the toll-wife stood before the drove, demanding her dues. The dog looked at her, and, jumping on her back, crossed his forelegs over her arms. The sheep passed through, and the dog took his place behind them, and went on his way.”

The shepherds of the Pyrenees have a breed of strong dogs, of a somewhat ferocious temper, but of the strictest fidelity, so that they can repose the fullest trust in them. “Attended by three or more of these dogs, the shepherds will take their numerous flocks at early dawn to the part of the mountain-side which is destined for their pasture. Having counted them, they descend to follow other occupations, and commit the guardianship of the sheep to the sole watchfulness of the dogs. It has been frequently known that when wolves have approached, the three sentinels would walk round and round the flock, gradually compressing them into so small a circle that one dog might with ease overlook and protect them, and that this measure of caution being executed, the remaining two would set forth to engage the enemy, over whom, it is said, they invariably triumph.”²

Colonel Hamilton Smith remarks of the cattle-dogs of Cuba and Terra Firma, that, like the sheep-dogs of Europe, they are extremely sagacious in managing cattle, though in a different kind of service. When vessels with live-stock arrive at any of the West India

¹ P. 195.

² Jesse, ‘*Anecdotes of Dogs*,’ p. 49.

harbours, these animals, some of which are nearly as large as mastiffs, are wonderfully efficient in assisting to land the cargo. The oxen are hoisted out with a sling passing round the base of their horns, and when an ox, thus suspended by the head, is lowered, and allowed to fall into the water, so that it may swim to land, men sometimes swim by the side of it and guide it, but they have often dogs of this breed which will perform the service equally well; for, catching the perplexed animal by the ears, one on each side, they will force it to swim in the direction of the landing-place, and instantly let go their hold when they feel it touch the ground, as the ox will then naturally walk out of the water by itself.¹

Smellie observes of the Scottish sheep-dog that "he reigns at the head of his flock, and that his language, whether expressive of blandishment or of command, is better heard and better understood than the voice of his master. Safety, order, and discipline are the effects of his vigilance and activity. Sheep and cattle are his subjects. These he conducts and protects with prudence and bravery, and never employs force against them, except for the preservation of peace and good order."

But these dogs will show their intelligence in other ways besides managing sheep. "A lady of high rank," says Mr. Jesse, "has a sort of collie or Scotch sheep-dog. When he is ordered to ring the bell, he does so; but if he is told to ring the bell when the servant is in the room whose duty it is to attend, he refuses, and then the following occurrence takes place. His mistress says, 'Ring the bell, dog.' The dog looks at the

¹ 'Naturalist's Library,' vol. x. p. 154.

servant, and then barks his 'bow-wow' once or twice. The order is repeated two or three times. At last the dog lays hold of the servant's coat in a significant manner, just as if he had said to him, 'Don't you hear that I am to ring the bell for you? Come to my lady.' His mistress always has her shoes warmed before she puts them on, but, during the late hot weather, her maid was putting them on without their having been previously placed before the fire. When the dog saw this, he immediately interfered, expressing the greatest indignation at the maid's negligence. He took the shoes from her, carried them to the fire, and after they had been warmed as usual, he brought them back to his mistress with much apparent satisfaction, evidently intending to say, if he could, 'It is all right now.'"¹ How often he was permitted to repeat this process, we are not told.

¹ 'Anecdotes of Dogs,' p. 47.

CHAPTER XIII.

DOG.—SPANIEL, POINTER, AND TERRIER.

GREAT intelligence is often shown by spaniels and pointers in their different ways of acting.

Mrs. Lee gives the following anecdote of a large spaniel named Flora, from her own knowledge. She was an excellent house-dog, and in general under no restraint; but one summer, in consequence of some real or reported accident, an order was issued by the magistrate of the town in which her master resided, that no dogs should go at large unmuzzled. Flora, accordingly, whenever she went out, as was often the case, with the man-servant, was equipped with a muzzle, which she evidently hated, but, after repeated efforts to get it off, she at length seemed to become reconciled to the encumbrance. In consequence, it was, perhaps, less carefully buckled on; and one day it fell off, when the man stooped down to pick it up and replace it. The dog, however, was too quick for him; she caught it up in her mouth and ran off towards a neighbouring pond, into which she at once plunged, and, when she had swum to the deepest part, dropped the muzzle into the water, and then swam back to

the shore, expressing by her looks and gestures the greatest delight.¹

A spaniel belonging to a medical gentleman with whom Mr. Jesse was acquainted, residing at Richmond in Surrey, was in the habit of accompanying him at night whenever he went out to visit his patients. If, as was frequently the case, he was shut out of the house of a patient, he would return home, and, whatever hour of the night it might be, would take the knocker, which was below a half-glazed door, in his mouth, and continue to knock till the door was opened.²

I will mention, also, an example of sagacity in a spaniel which I myself saw. The dog was a small spaniel, much loved by its master and mistress. There usually stood, for the dog's use, a pan of water in its master's dressing-room upstairs, the door of which he constantly left open, that the dog might go in and drink when it pleased. But it happened one day, whether from its master's forgetfulness, or from some other cause, that the door was shut. The dog, going to drink, and finding the entrance stopped, and knowing that its master was in the dining-room downstairs, went immediately down and scratched at the dining-room door, and when its master opened it to let it in, walked away at a slow pace upstairs, stopping on each step, wagging its tail, and looking first at its master and then up the stairs, intimating that it wanted his assistance upstairs, to enable it to get at its water. The master guessed what was the case, and went up and opened the door for it. Here is shown a certain por-

¹ Mrs. Lee, 'Anecdotes of Animals,' p. 127.

² Jesse, Anecd. of Dogs, p. 236.

tion of reasoning in the dog; it knew that it could not get to its water without assistance, and it decided with itself on calling its master to its aid, and on the mode of calling him.

The following anecdote of a spaniel, told by Mr. Jesse, shows great sagacity and judgment in the animal. The dog probably formed its notions of what its master was going to do from signs and movements which it noted around it. It was a small dog belonging to a friend of Mr. Jesse's, much attached to its master, and was left, while he went from home for a few weeks' visit, under the care of a servant, but was so miserable during his master's absence that the servant wrote to inform him of the dog's condition. The master, in consequence, caused the animal to be sent to him at his friend's house, and he, overjoyed at seeing his master again, remained perfectly contented in his new abode. But when the time came for his departure, and preparations began to be made for it, the dog, the day before it took place, showed great uneasiness, as if he were afraid of being again left behind. During the evening he kept as close as possible to the feet of his master, and was found, when . . . his bedroom door was opened next morning before daylight, lying close at it, although it was winter and very cold. At breakfast he not only nestled against his master, but became so troublesomely affectionate that he was at last sent out of the room. On going into his dressing-room, where the dog had been in the habit of sleeping, he found him coiled up in his portmanteau, which had been left open nearly packed. In this instance, remarks Mr. Jesse, the animal's understanding of what was going forward was very evident,

and his fear of being left behind could not have been more strongly exhibited, affording a proof that his was a faculty much beyond instinct.¹

The small poodle called the barbet occasionally shows great sagacity, often displayed in small, sly tricks. The late James Cumming, Esq., an observer of dogs, used to tell an amusing instance of this peculiarity. That gentleman had a barbet that was not easily kept under proper control. To manage him the better, he purchased a small whip, with which, while he was out on a walk, he once or twice corrected him. When he returned home, he laid the whip on a table in the hall, intending to let it lie there till he should want it again on the following day. But in the morning it was missing, and was found, after some little time, in an outhouse, when it was again used for correcting the dog. The dog, however, was suspected of having stolen it; and it was placed again on the hall-table, and watched. The result was that the dog was caught in the act of carrying it off, in order to hide it a second time.²

Pointers are extremely intelligent in their peculiar occupation. A pointer has been known to desert a bad shot, who has missed several birds in succession that the dog had found for him. The following instance of such desertion is told by Captain Brown:—A gentleman, going out shooting, obtained the loan of a pointer from a friend, who told him that the dog would behave very well as long as he killed his birds; but that if he frequently missed, it would leave him and run home. Unhappily the borrower was extremely unskilful. Bird after bird was put up and fired at, but flew off untouched, till the pointer grew careless. As

¹ Jesse, *Anecd. of Dogs*, p. 229.

² Youatt, 'On the Dog,' p. 50.

if willing, however, to give his client one chance more, he made a dead stop at a fern bush, with his nose pointed downward, his forefoot bent, and his tail straight and steady. In this position he remained firm till the sportsman was close to him, with both barrels cocked; he then moved steadily forward for a few paces, and at last stood still near a bunch of heather, his tail expressing his anxiety by moving slowly backwards and forwards. At last out sprang a fine old blackcock. Bang, bang, went both barrels, but the bird escaped unhurt. This was more than the dog could bear; he turned boldly round, placed his tail between his legs, gave one long loud howl, and set off homeward as fast as he could.¹

Mr. Jesse has also the following story. Some very bad shots went out to shoot partridges, attended by a good old steady pointer. After shooting some hours with very little success, they began to amuse themselves by firing at a piece of paper stuck on a post. At such trifling the old dog was disgusted, and ran off.²

The terrier is not less intelligent than the pointer or the spaniel. We have just noticed the craftiness of a barbet in hiding a whip with which it had been chastised. A terrier, belonging to a relative of Mr. Jesse, showed similar cunning in hiding its collar. Its owner was in the habit of tying it up at times, but frequently missed its collar, which he at last discovered that the animal carried off, whenever it was left in its way, in order to conceal it.

A respectable farmer, residing in a village near Gosport, had a terrier dog which was his constant com-

¹ Jesse, *Gleanings in Nat. Hist.* i. 20. ² Jesse, *Anecd. of Dogs*, p. 285.

panion. His business frequently took him across the water to Portsmouth, whither the dog regularly attended him; and having a son-in-law, a bookseller, in the town, he frequently took the dog with him to his house. One day the dog lost his master in Portsmouth, and, after searching for him for some time, went to the bookseller, and endeavoured to make him understand that he could not find his master. His looks and gestures were so significant that the bookseller readily guessed what he meant, and, giving his boy a penny, ordered him to go with the dog directly to the beach, and pay the money for the dog's passage to the opposite shore. The dog, who understood the whole proceeding, seemed greatly delighted, jumped into the boat with alacrity, and, when landed at Gosport, ran immediately home. If ever he lost his master again, adds the account, he always went to the bookseller, feeling sure that his boat-hire would be supplied.¹

Similar reasoning was exercised by a dog in the following case:—

A dog belonging to a gentleman residing in the Tower of London, was lost one day about seven miles from town. He attached himself to a soldier, and, when the soldier got into an omnibus, followed close behind it. The man, alighting at the Horse Guards, went to the barracks in St. James's Park, and the dog continued to keep him company. At last some one examined the dog's collar, and found on it the name and residence of his owner. In consequence the soldier took him to the Tower, and gave the above particulars. It may be supposed that the dog, having been familiar with the sight of guardsmen at the Tower,

¹ Jesse, *Anecd. of Dogs*, p. 198.

had followed a man in a similar dress in hopes that he belonged to that building, and would conduct him to it.²

The master of another terrier occupied furnished lodgings near the Inns of Court in London. Having occasion to remove, he left the dog, in the bustle of packing up, to the servants, who entirely forgot him, as he was not in the way when they left the house. When the dog returned, and found his master gone, he trotted off to Kensington, where he knew that an intimate friend of his master resided, to whose house he gained admittance, and quietly made himself at home in it. Being well known, he was fed and taken care of, till, at the end of three days, his master called, and he cheerfully went away with him. In this case, as Mr. Jesse observes, the dog exerted something of reasoning, which led him to conclude that the best chance he had of finding his master was to go to a place to which he had formerly accompanied him.²

“There is a well-known anecdote of two terriers who were in the habit of going out together to hunt rabbits. One of them got so far into the hole that he could not extricate himself. His companion returned to the house, and by his importunity and significant gestures induced his master to follow him. He led him to the hole, made him understand what was the matter, and his associate was at last dug out.”³

“Mr. Morritt, well known to the readers of the *Life of Sir Walter Scott*, as his intimate and confidential friend, had two terriers of the pepper-and-mustard breed,—or rather, as we prefer him to any other character Sir Walter Scott has delighted us with,—the Dandy-Dinmont breed. These dogs were strongly

¹ Jesse, *Anecd. of Dogs*, p. 208.

² *Ib.* p. 207.

³ *Ib.* p. 197.

attached to their excellent master, and he to them; they were mother and daughter, and each produced a litter of puppies about the same time. Mr. Morrith was seriously ill at this period, and confined to his bed. Fond as these dogs were of their puppies, they had an equal affection for their master, and, in order to prove to him that such was the case, they adopted the following expedient. They conveyed their two litters of puppies to one place, and while one of the mothers remained to suckle and take care of them, the other went into Mr. Morrith's bedroom, and remained quietly all night by the side of the bed; and this they continued to do day after day in succession. This charming anecdote was communicated to me from a quarter which cannot leave a doubt of its authenticity."¹

Two dogs of the terrier breed were much attached to a clergyman, and went out with him whenever they were permitted. One day he went to dinner at a house where he often dined, attended by the two dogs, which, when he alighted, went off with the horse, as was their custom, into the stable. When it was time for him to go home, the groom was desired to get his horse ready; but, as it was a long while coming to the door, inquiry was made as to the cause of the delay; when the groom said that he dared not take the horse out of the stable, as one of the clergyman's dogs was on its back, and the other at its side, flying at every person that offered to touch the animal. The reason of their resistance was that there had been a change of grooms; the one whom they had known was gone, and the dogs would not trust a stranger to them with their master's property.²

¹ Jesse, *Anecd. of Dogs*, p. 206.

² Mrs. Lee, *Anecd. of Anim.*, p. 145.

The following instance of intelligence in a terrier occurred in January, 1861, at a gentleman's house in Kent, who thought it so remarkable that he sent a letter on the subject to the 'Maidstone and Kentish Journal.' "I have," he relates, "a very old, black-and-tan smooth terrier, which, for the sake of warmth, lies generally in the kitchen. He is a great favourite with the servants, as well as with every one else, and is allowed to doze away his days in a comfortable basket near the fire. But, as the nights have lately been frosty, I have allowed a spaniel also to sleep in the kitchen, into which he had not been previously allowed to go. When he was first introduced into that part of the house, he made a minute inspection of the kitchen and the adjacent scullery, and finding in the scullery a brown earthenware jar, full of water for the terrier, took the liberty of drinking out of it. His lapping was overheard by the terrier, who appeared to think it his own property, and uttered from his basket a growl of discontent. The spaniel, however, continued to visit the jar, but every time a similar intimation of displeasure proceeded from the basket. He had just finished his fourth draught, when the old terrier jumped out of his lair, seized the jar with his forepaws, dragged it out of the scullery, across the kitchen, and actually lifted it, by dint of great exertion, into his basket. The distance that he transported it was about six yards. I never knew him carry or attempt to carry anything before, and such a vessel is a most awkward thing for a dog to lift, especially one so small, weighing indeed not more than eight pounds."

A Russian terrier, known to Mrs. Lee, lost himself one day in Dublin, and was brought home, after some

hours' absence, by a policeman, who said that he had actually delivered himself up at the station-house, for he had come into the room where several persons were seated, looked into the face of one of them, and quietly suffered his collar to be inspected, and then himself to be taken up and brought away. The same dog one day entered the drawing-room where his two mistresses were sitting, and made signs for one of them to go to the door. As she paid little heed to him, he pulled her gown with his teeth, and she, thinking there must be some extraordinary reason for his earnestness, followed him. The instant she opened the door, he seated himself on the mat, thumping the floor with his tail, and looking alternately at his mistress and at six dead rats spread out before him, which it appeared he had killed and brought for inspection.¹

¹ Mrs. Lee, *Anecd. of Animals*, p. 147.

CHAPTER XIV.

DOG.—SAVING LIFE.

THE great intelligence of dogs is distinctly shown in their admirable efforts to save life, whether of human beings or of other dogs. These efforts, of course, have been chiefly made by the larger individuals of the canine race.

All water-dogs, says Colonel Hamilton Smith, will readily exert themselves to save life, as well of their own species as of others. He says that he has seen one, unbidden, plunge into the current of a roaring sluice, to save a little cur maliciously thrown into it; and that he witnessed the feat of a Pomeranian dog, belonging to a Dutch vessel, which, seeing a child fall into the water, sprang overboard and rescued it before any person in the ship had noticed the accident.¹

Mr. Youatt says that he knew a dog that had saved the lives of four persons.

“The following,” says Mr. Blaine,² “we can venture to vouch for the truth of, for we received it from the owner of the dog, and the dog itself we also saw many times. A gentleman of fortune, a native of

¹ Naturalist's Library, vol. x. p. 86. ² Encycl. of Rural Sports, art. 808.

Germany, boarded and lodged with a clergyman with whom we were well acquainted. This gentleman had with him a large dog of the Newfoundland breed, of the most engaging qualities, and to which he was so attached, that, wherever he went, whatever sum he agreed to pay for his own board, he always tendered half as much for that of his dog, that thereby he might secure him the treatment which his fidelity so well merited. Travelling in Holland, the German one evening slipped from off the bank of a large dike into the water below, which was both wide and deep. Being wholly unable to swim, he soon became senseless; and when restored to recollection, he found himself in a cottage on the opposite bank of the dike to that from which he fell, surrounded by persons who had been using the Dutch means of resuscitation. The account he received from two of them was, that, returning home, they saw a dog swimming at a distance, seemingly employed in dragging, and sometimes pushing, a mass he appeared to have much difficulty in keeping above water, but which mass he at length succeeded in forcing into a small creek, and next drew it on land. By this time the peasants had advanced sufficiently near to discover that the object of his solicitude was a man, whom the dog, exhausted as he must have been, immediately set about licking the hands and face of. The peasants hastened across by the nearest bridge, and having conveyed the body to a neighbouring cottage, and applied the usual Dutch means of resuscitation, the fleeting spark of vitality (thanks to the fidelity and intelligence of the dog) was soon restored to the full flame of life. It remains to add, that the body of our friend, when first stripped, was found to

be deeply indented by the teeth of the dog, both in the nape of the neck and in one of the shoulders, and these scars he used to show with much satisfaction; and nothing could shake his firm conviction, that his dog had first suspended him by the shoulder, but that, finding his head was not elevated above the water, he had shifted his hold to the nape of his neck, for the express purpose of so elevating it. And, however we may hesitate to attribute this change of position to a motive so intrinsically intellectual, yet we must respect the error, if it was one, for where is the mind that might not be warped by such a debt? If our memory be correct, it was near a quarter of a mile that the dog had to swim with his master's body before any creek offered; and, when arrived there, he had still to drag it on a bank."

"A friend of mine," says Mr. Jesse, "took a Newfoundland dog and a small spaniel into a boat with him on the Thames, and, when he had reached the middle of the river near one of the locks not far from Hampton Court, he turned them both into the water. They swam different ways, but the spaniel got into the current, and, after struggling with it some time, was in danger of being drowned; when the Newfoundland dog, perceiving the predicament of his companion, swam to his assistance, and brought him safe in his mouth to the shore."¹

An anecdote of a dog lying, during a cold night, on his master's body, as if to keep in it life and warmth, is told with the names of the persons connected with it. A Mr. Henry Hawkes, of the village of Halling, in Kent, returning late homewards from Maidstone mar-

¹ Jesse, Gleanings in Nat. Hist., vol. ii. p. 221.

ket, stopped at a public-house at Aylesford, where he drank to excess, and left the place in a state of intoxication. It was a night of severe frost; and the whole face of the country was covered with deep snow. He had to pass a stream, an undertaking of some danger; and this he accomplished in safety; but a little on the other side he fell down in the snow, and, in his stupefied condition, was unable to raise himself, and fell asleep. His dog, who accompanied him, mounted on his body, and stretched himself over it; and in this condition the dog and his master lay all night, the snow still continuing to fall. In the morning, a gentleman, whose name was Finch, going out with his gun, caught sight of the dog's figure, and went to see why he was lying there. As the gentleman drew near, the dog jumped off his prostrate master, shook the snow from his hide, and seemed to desire the spectator to advance. Mr. Finch immediately recognized Hawkes, and caused him to be conveyed to the nearest house, where it was found that his heart was still beating; and, by the aid of restoratives, he was soon sufficiently recovered to be able to tell the story of his own intoxication and the dog's fidelity. He afterwards encircled the dog's neck with a silver collar, with these lines on it:—

“In man true friendship I long hoped to find,
 But missed my aim;
 At length I found it in my dog most kind:
 Man! blush for shame!”¹

In the year 1841 a labourer, named Rake, was at work by himself in a gravel-pit, in the parish of Botley, near Southampton, when the upper stratum of

¹ ‘Sportsman’s Cabinet.’

soil gave way, and he was buried up to his neck by a great quantity of gravel which fell around him, being so much hurt, at the same time, (for two of his ribs, as was afterwards discovered, were broken,) that he was utterly unable to extricate himself. He cried out, but no one was within hearing, nor was any one likely to come near the place. Death, it seems probable, would have been his fate, had it not been for a Newfoundland dog belonging to his employer, which, as was remarked, had been watching the man at work for some days, as if he had been aware that his assistance might be required. As soon as the dog saw what had happened, he jumped into the pit, and began to remove the gravel with his paws, a work which he effected with so much vigour and expedition, that the poor man was at length able, though with great difficulty, to set himself free. What the animal did in this case, he appears to have done from pure desire to be of service, for previously there had been nothing of friendship between the man and him.¹

When Admiral Sir Charles Napier was a boy, he had a large dog which was very fond of the water, and which used, in hot weather, to swim frequently over a river near which little Charley lived. One day he conceived the notion of making the dog take him across the stream; so, throwing off his clothes, he tied a string to the dog's collar, and took hold of his neck, and thus the two went across together, the boy embracing the dog, and the dog pulling the boy. When they had both played about for awhile on the other side, they returned in the same manner, but Charley, on looking for his clothes, could find nothing but his

¹ Jesse, 'Anecdotes of Dogs,' p. 137.

shoes, for the wind had blown all the rest of his apparel into the water. The dog at once understood what was necessary to be done, and breaking away from the string by which he was held, dashed into the river, and brought out first the jacket, and then all the rest of the garments one by one.¹

When Mrs. Lee's father was a child, he was one day missed, and traced to a deep pond in the garden. A large Newfoundland dog, much attached to him, was called, and some of the boy's clothes shown to him, while the person who held them pointed to the pond. The dog instantly understood what was meant, dashed into the water, and in a short time brought out the boy, who had been bathing, and had sunk beneath the water and was quite senseless. The dog watched the efforts made to restore animation, and at last, when he was thoroughly dried, got into the bed with the child as if to communicate warmth to him.²

The Newfoundland dog is ready, not only to save persons from drowning, but from destruction by land. It is a well-authenticated anecdote that when a child one day, in crossing one of the principal streets of Worcester, sloping towards the Severn, fell down in the middle of it, and would have been crushed by a horse and cart advancing, a Newfoundland dog rushed to its rescue, caught it up in his mouth, and conveyed it in safety to the foot pavement.³

Sir Walter Scott gives an account of a dog that saved his master from fire. Lord Forbes, son of Earl Granard, an Irish peer, "was asleep at his house at

¹ Rev. T. Jackson, 'Our Dumb Companions,' p. 64.

² Mrs. Lee, 'Anecdotes of Animals.'

³ Jesse, *Anecd. of Dogs*, p. 106.

Castle Forbes (in Ireland), when (he was) awakened by a sense of suffocation, which deprived him of the power of stirring a limb, yet left him the consciousness that the house was on fire. At this moment, and while his apartment was in flames, his large dog jumped on the bed, seized his shirt, and dragged him to the staircase, where the fresh air restored his powers of existence and of escape. This," adds Sir Walter, "is very different from most cases of preservation of life by the canine race, when the animal generally jumps into the water, in which element he has force and skill. That of fire is as hostile to him as (to) mankind."¹

There is no peril which a dog will not risk on behalf of his master. The dread of fire is overwhelming with animals, and yet he has often been found ready to brave the flames. At Libourne, in France, in 1835, one of the townsmen gave an old suit of clothes to dress up an effigy. His dog happened to be by when it was burnt, and, taking it for his master, he jumped again and again upon the fire to tear it away, biting those who attempted to restrain him, and would have been burned to death unless his master had appeared.²

The following account is from the 'Times' of October 10, 1865:—

An inquest was held at Charlton, in Kent, on the body of a child aged six years, named Elizabeth Serjeant, whose parents lived at No. 10, Ashford Place. She had been left there in a room on the ground-floor with two younger children, while their mother went to market. By some accident she set herself on fire, and,

¹ Lockhart's 'Life of Scott,' vol. viii. p. 123.

² M. Blaze, 'Histoire du Chien,' p. 340.

when she screamed, a little dog jumped through a pane of glass into the room, where the mother, on her return a minute or two after, found him tearing off the child's clothes with his mouth and paws, and when he saw the woman, he immediately ran up to her, and laid hold of her gown to draw her towards the child. In this proceeding we cannot but admire the dog's exercise of his own reason, and regret that it did not avail to save her whom he strove to aid.

Several stories are told of dogs that have attached themselves to firemen; attracted, probably, by some notice these firemen have casually bestowed upon them before they were past puppyhood. They have followed the engine and its attendants to every fire to which it was taken, seeming to delight in volunteering to give such assistance as they could. Samuel Wood, a brave fireman, who was said some years ago to have saved the lives of nearly a hundred men, women, and children, was greatly aided in his meritorious efforts by a dog that he had named Bill. The dog would run about barking, on the alarm of fire, as if calling people to come and help. He would mount a ladder with as much agility as his master, and he once saved his master's life by finding a way by which he was enabled to crawl out of a burning apartment. Bob, another fireman's dog, similarly accomplished, discovered at a fire in Lambeth a child in a house from which it was supposed that all its inmates had been rescued.

The following story is told of a dog at a house in the parish of Marylebone. A servant had carelessly left a child, about four years old, alone in one of the lower rooms, and the child, in her absence, began to amuse itself with a candle, at which its cap caught fire. A

little terrier which was in the apartment, seeing the terror of the child, darted immediately up the stair to the room where the servant was, barking with all its might, and would not cease till it saw her coming down to find out what was the matter. The child was much scorched, and, but for the timely summons of the dog, might have been burnt to death, as the servant was out of hearing of the child's cries.¹

“ Among the ruins of Herculaneum and Pompeii the skeleton of a dog was found stretched over that of a child. It was conjectured, on their discovery, that this dog, from his position, was attempting to save the child when the eruption of Vesuvius was fatal to the city. This opinion was confirmed by a collar which was found, of curious workmanship; its inscription stated that the dog was named Delta, and belonged to a man called Severinus, whose life he had saved on three occasions,—first, by dragging him out of the sea when nearly drowned; then, by driving off four robbers who attacked him unawares; and lastly, by his destroying a she-wolf, whose cubs he had taken, in a grove sacred to Diana, near Herculaneum. Delta afterwards attached himself particularly to the only son of Severinus, and would take no food but what he received from the child's hand.”²

The exploit of a dog belonging to a North American Indian, in saving a child's life, shows the intelligence of the animal in tracing any object to which its attention is devoted. In the history of this little matter we have (what is too seldom the case in regard to these stories) the names and abodes of the persons connected with the occurrence. At a place named Wawaring, near

¹ Williams's 'Dogs and their Ways,' p. 28.

² Ibid.

the Blue Mountains, in North America, lived a person, the owner of a large plantation, whose name was Le Fevre, the grandson of a Frenchman who had been obliged to flee from his country by the revocation of the Edict of Nantes. One day, early in the morning, the youngest of Le Fevre's children, aged about four years, was missed. No one could conjecture what had become of it. After searching some time, the family became alarmed, and sought the assistance of some neighbours. Parties explored the woods in every direction, but without success, during the whole of the day, and next day the search was resumed, but with no better result. As they were sinking into despair, Tewenissa, an Indian from Anaguaga, on the banks of the Susquehanna, accompanied by his dog Oniah, happened to enter the house of the planter to ask leave to repose himself. Observing the family's distress, and being informed of the cause, he requested that the shoes and stockings last worn by the child should be brought to him. He then made his dog smell them, and walked with the dog through the grounds near the house, describing a semicircle of about a quarter of a mile, directing the dog to scent the ground as he went along. At last the animal began to bark gently, and then started off, barking louder, into the woods at full speed. In about half an hour he was seen returning, showing by his gestures the greatest joy; and it was evident that he had found the child; but the parents were in great fear lest it should be dead. Tewenissa followed his dog, which conducted him to the foot of a large tree where the child was lying unharmed, having slid down a small ravine, from which it was unable to climb up again. It had suffered from nothing but

hunger, and though extremely weak, was easily restored by a little care to its former vigour.

For sagacity, and what may well be called human intelligence in a lower degree, the dogs of the convent of St. Bernard, situate on a pass over the Alps between Switzerland and Savoy, have long been highly celebrated. One of these dogs was renowned for having saved in twelve years the lives of forty persons; and another was believed to have saved at least twenty-two. The dog that saved the larger number, one day found in the snow a little boy whose mother had been killed by the fall of an avalanche, and, by coaxing the boy in his peculiar way, got him to mount on his back, and carried him safe to the convent.¹ But stories of these excellent dogs are in the hands of almost everybody, and I need therefore say no more of their merits.

“In looking . . . on the many varieties of the dog,” remarks a writer in the ‘Menageries,’² . . . “we cannot avoid observing the extraordinary modifications of which this quadruped has become susceptible. These modifications are so extensive, and have existed so long, that it is now impossible to decide which is the original breed. Buffon attempted a theory of this nature, but it is evidently unsupported by facts. Almost every country in the world possesses its different kind of dog, and in each of these kinds there are essential differences of character produced by education. The Esquimaux dog draws a sledge, the shepherd’s dog guards a flock; the mastiff protects a house; a dog very similar in nature worries a bull; the Spanish bloodhound hunts the naked Indian to the death, while the dog of St. Bernard rescues the perishing man at the risk of his own life. The dog

¹ ‘Menageries,’ Soc. Prom. U. K., vol. i. p. 69. ² Ibid. p. 70.

certainly has the greatest sympathies with man of all the race of quadrupeds ; and the nearer an animal approaches us, and the more easily he comprehends us, the more we are enabled to modify his nature and form his character. What is true of a species is also true of a class. The quadruped is more easily modified, that is, the class is more susceptible of instruction, than the bird, the bird than the insect, the insect than the fish. The difference between intelligence and instinct—the nice partition which divides these qualities—has formed the subject of infinite speculation. The qualities are certainly not one and the same, as some philosophers have maintained.”

CHAPTER XV.

DOG.—COMMUNICATION OF THOUGHTS FROM
ONE DOG TO ANOTHER.

Dogs, as well as many other animals, have some means of making known their feelings or thoughts, such as they are, one to another. They have some power of intercommunication,—some sort of language, as we may call it, though not the language of words. This is shown in numerous accounts of their proceedings.

A story has several times appeared in print of a dog having had his broken leg cured by a surgeon, and having afterwards brought to the same surgeon another dog with a broken leg.¹ A friend told me that he knew a medical gentleman, an Englishman named Phillips, resident in France, to whom an affair of this kind occurred. He found a dog in the street with his leg broken, took him home, and cured him; and some days after his departure he brought another dog with an injured leg to Dr. Phillips. In such cases the one animal must have some mode of signifying to the other what he wished him to do.

This is shown also in those cases in which dogs have asked assistance one of another. The following

¹ Blaze, *Hist. du Chien*, p. 46.

instance of such solicitation is given, from his own knowledge, by the author of 'The Menageries,'¹ published by the Society for the Diffusion of Useful Knowledge:—"At Horton, in Buckinghamshire, (a village where Milton passed some of his early days,) about the year 1818, a gentleman from London took possession of a house, the former tenant of which had moved to a farm about half a mile off. The new inmate brought with him a large French poodle, to take the duty of watchman in the place of a fine Newfoundland dog, which went away with his master; but a puppy of the same breed was left behind; and he was incessantly persecuted by the poodle. As the puppy grew up, the persecution still continued. At length he was one day missing for some hours; but he did not come back alone; he returned with his old friend, the large house-dog, to whom he had made a communication; and in an instant the two fell upon the unhappy poodle, and killed him before he could be rescued from their fury. In this case, the injuries of the young dog must have been made known to his friend; a plan of revenge concerted; and the determination to carry the plan into effect with equal promptitude."

"Though dogs," says the observant Mr. St. John, "often disagree, and are jealous of each other at home, they generally make common cause against a stranger. Two of my dogs, who were such enemies, and fought so constantly, that I could not keep them in the same kennel, seemed to have compared notes, and to have found out that they had both of them been bullied by a large powerful watch-dog, belonging to a farmer in the neighbourhood. They sus-

¹ Vol. i. p. 78.

pended their own hostilities and formed an alliance; and then they together assaulted the common enemy, and so well assisted each other, that, although he was far stronger than both of my dogs put together, he was so fairly beaten and bullied that he never again annoyed them or me by rushing out upon them as they passed by the place, as he had always been in the habit of doing before he received his drubbing.”

Count Tilesius, a Russian traveller, who wrote at the beginning of the present century, relates a most remarkable proceeding of a dog of his, which he himself witnessed. The dog, in one of his excursions from home, had been worried by an animal of greater strength than himself, and returned crest-fallen. For some time afterwards it was observed that he abstained from eating half of the food given him, but carried away the other half, and laid it up as a private store. When he had gone on thus for some days, he one day went out, and gathered round him several dogs of the neighbourhood, whom he brought to his home, and feasted on his hoard. This singular assemblage attracted the count's attention; he watched their movements, saw them all go out together, and followed them at a distance. They proceeded deliberately onwards, through several streets, till they came to the outskirts of the town, where, under the guidance of their leader, they all fell upon a large dog, whom they punished with great severity.¹ Among all the anecdotes that I have read of the dog, I have scarcely seen any stronger indication of his intelligence than this.

The following anecdote of three French dogs also,

¹ ‘Naturalist's Library,’ vol. x. p. 83.

which appeared in the journals in 1838,¹ illustrates the readiness of dogs to act in concert:—Two dogs belonging to M. G——, and another dog the property of M. P——, of Saint-Bonnet-sur-Galaune, went to the chase without their masters; and having pursued a rabbit, which took refuge in a burrow, one of the dogs of M. G—— rushed on with such eagerness that he became fixed in the passage, and could not extricate himself. His companions also scratched to no purpose, and then returned home, but so sad and dejected as to be noticed by their masters, who were unable to divine the cause. The next day the dogs disappeared, and they were seen to return in the evening to their respective abodes, with their paws bloody, and their bodies covered with earth and sweat, refusing every sort of nourishment. This occurred again and again; and M. G——, not finding his other dog return, and seeing his second one come back every night in a frightful state, told M. P—— of the matter, who observed that his dog had done the same for a week. The following morning, however, M. G—— was awakened early by the cries and barking of dogs, who scratched at his door, and, on going down to ascertain the cause, he saw the dog which he thought lost, worn to a skeleton, with the two other dogs, who, seeing it once more under its master's care, went away, though scarcely able to move their stiffened limbs, and slept tranquilly on a bundle of straw. M. G—— then sought for the place where they had been working, and found that the narrow passage into which the dog had forced itself had been widened by the efforts of the other two, who, from sympathy with

¹ Blaze, *Hist. du Chien*, p. 56.

the sufferings of the prisoner, had toiled day after day till they released him. In this proceeding it is observable that the dogs did not seek the assistance of man, as a single dog has often done, but acted by themselves, as if confident of their own power to accomplish what they desired.

The following instance is from Colonel Hamilton Smith. We give it in his own words. "In the town of Cupar, in the county of Fife, there lived two dogs, mortal enemies to each other, and who always fought desperately whenever they met. Captain R—— was the master of one of them, and the other belonged to a neighbouring farmer. Captain R——'s dog was in the practice of going on messages, and even of bringing butcher's meat and other articles from Cupar. One day, while returning charged with a basket containing some pieces of mutton, he was attacked by some of the curs of the town, who, no doubt, thought the prize worth contending for. The assault was fierce, and of some duration, but the messenger, after doing his utmost, was at last overpowered and compelled to yield up the basket, though not before he had secured a part of its contents. The piece saved from the wreck he ran off with, at full speed, to the quarters of his old enemy, at whose feet he laid it down, stretching himself beside him till he had eaten it up. A few sniffs, a few whispers in the ear, and other dog-like courtesies, were then exchanged, after which they both set off together for Cupar, where they worried almost every dog in the town, and, what is more remarkable, they never afterwards quarrelled, but were always on friendly terms."

A person in business at Davenport, some years ago,

took with him his dog, which seems to have been a very large one, on a journey to London. The animal was ill-treated, somewhere on the way, by a watch-dog, and, in a few days after his return home, in company with his master, was missed, as well as a large house-dog of the neighbourhood with whom he used to associate. They returned at the end of about ten days, and, just as they arrived, a letter was received by the owner of the smaller dog, acquainting him that that animal, attended by another of larger size, had been seen at the place where he had been maltreated, and that they had fallen upon the dog that gave the offence, and killed him.¹

The following anecdote was communicated to Mr. Jesse by a friend who witnessed the occurrence, and on whose veracity, he says, he could place the strictest reliance. A large Newfoundland dog, belonging to a gentleman near Southampton, with whom Mr. Jesse's friend was on a visit, had formed a friendship with a horse, which was kept in a paddock near the house. The dog, hunting one day by himself, was caught in a snare by the leg, and after struggling some time, during which his cries were heard, he disengaged himself so far as to break the string of the snare, though the wire still remained attached to the leg. In this condition he was seen by Mr. Jesse's friend and his host to go to the horse in the paddock, whom he seemed at once to make aware of his distress. The horse gently put down his nose, which the dog licked, lifting up, at the same time, the leg to which the snare was attached, with an intention which could not be mistaken. The horse immediately applied his teeth to the snare, in a gentle

¹ Williams's 'Dogs and their Ways,' p. 44.

and cautious manner, and endeavoured to detach it, but was unable to succeed.¹

“A gentleman had a pointer and a Newfoundland dog which were great friends. The former broke his leg, and was confined to a kennel. During that time the Newfoundland never failed bringing bones and other food to the pointer, and would sit for hours together by the side of his suffering friend.

“During a period of very hot weather, the Mayor of Plymouth gave orders that all dogs wandering in the public streets should be secured by the police, and removed to the prison yard. Among them was a Newfoundland dog belonging to a ship-owner of the port, who, with several others, was tied up in the yard. The Newfoundland soon gnawed the rope which confined him, and then, hearing the cries of his companions to be released, he set to work to gnaw the ropes which confined them, and had succeeded in three or four instances, when he was interrupted by the entrance of the jailor.

“A nearly similar case has frequently occurred in the Cumberland Gardens, Windsor Great Park. Two dogs of the Newfoundland breed are confined in kennels at that place. When one of them is let loose, he has frequently been seen to set his companion free.”²

A story is told of a pointer and a greyhound that hunted together,—the pointer’s scent finding the game, and the greyhound’s speed catching it. The pointer, becoming suspected, was clogged with a chain to keep him near home; but he still continued to rove; and being watched, it was discovered that the greyhound

¹ Jesse’s *Gleanings in Nat. Hist.*, vol. ii. p. 21.

² Jesse’s ‘*Anecdotes of Dogs*,’ p. 114.

assisted the pointer by carrying the chain in his mouth, until he himself was called to run after the game.¹

A gentleman was riding in the summer of 1834 on a turnpike road, and perceived something lying in the middle of it, which, on approaching nearer, he found to be two dogs. As they did not move away, he dismounted to ascertain the cause, and discovered that one of them had broken his leg, and that the other had crept under the disabled limb, and placed himself so as to form an easy support to it. "This anecdote," says Mr. Jesse,² "may appear too extraordinary to be true. It is, however, authenticated by a gentleman whose name I do not feel myself at liberty to mention, but who related the circumstance as he himself witnessed it."

¹ Quart. Rev., vol. lxxii. p. 497.

² 'Gleanings in Nat. History,' vol. iii., p. 82.

CHAPTER XVI.

DOG.—ASKING ASSISTANCE OF MAN.—UNDER-
STANDING WHAT IS SAID BY MAN.

WHEN the dog is unable to assist himself or his fellow, he will often ask aid of man ; nor is he the only animal that will do this ; but at present we confine ourselves to him. Mr. Jesse relates that “a gentleman,” who told him the following anecdote, “was walking one day along a road in Lancashire, when he was accosted, if the term may be used, by a terrier dog. The animal’s gesticulations were at first so strange and unusual that he felt inclined to get out of its way. The dog, however, at last, by various signs and expressive looks, made his meaning known, and the gentleman, to the dog’s great delight, turned and followed him for a few hundred yards. He was led to the banks of a canal, which he had not before seen, and there he discovered a small dog struggling in the water for his life, and nearly exhausted by his efforts to save himself from drowning. The sides of the canal were bricked, with a low parapet wall rather higher than the bank. The gentleman, by stooping down, with some difficulty got hold of the dog and drew him out,

his companion all the time watching the proceedings. It cannot be doubted but that in this instance the terrier made use of the only means in his power to save the other dog, and this in a way which showed a power of reasoning equally strong with that of a human being under similar circumstances.”¹

An instance of sagacity shown in a like case was given in a letter to the ‘Times’ of July 6, 1865, signed E. Vaughan Erlam, 56, Clifton Road East, St. John’s Wood. “At half-past six this morning,” says the writer, “I was fishing in the Hampstead Ponds, near the Vale of Health, when a well-fed, smooth, black-and-tan terrier came behind me, and shook the leg of my trousers. Thinking it not quite safe to have anything to do with it, after the recent police reports about dogs, I kicked it away, but it returned again, and from its gestures I could see that it wanted to draw my attention to something. I therefore followed it, and it led me on for some hundred yards to a pit with high banks, where I discovered a puppy, to whose assistance the dog, though not its mother, had evidently brought me. I extricated the little animal as quickly as possible; and the two, after following me some little distance, went their ways.”

Two small terriers were in the habit of hunting rabbits together in a warren at some distance from their home. One day one of them penetrated so far into a rabbit-burrow that he could not extricate himself. His companion, being unable to assist him, returned to the house, and by whining and significant gestures, attracted the notice of his master, who was at last induced to follow him, and was led to the

¹ Jesse, ‘Anecdotes of Dogs,’ p. 209.

rabbit-burrow from which the other dog was soon dug out.¹

It is not wonderful that an animal so ready to apply to man, should endeavour to comprehend, as far as he is able, what man says or signifies to him. It is not to be supposed, however, that the dog always understands words spoken when he seems to do so; it is rather to be considered that he gathers much, and draws conclusions, from the looks of the speaker, and from changes in the appearance of things around him.

“The wisest dog I ever had,” said Sir Walter Scott, “was what is called the bulldog terrier. I taught him to understand a great many words, inso-much that I am positive that the communication between the canine species and ourselves might be greatly enlarged. Camp once bit the baker, who was bringing bread to the family. I beat him, and explained the enormity of his offence; after which, to the last moment of his life, he never heard the least allusion to the story, in whatever voice or tone it was mentioned, without getting up and retiring into the darkest corner of the room, with great appearance of distress. Then if you said ‘The baker was well paid,’ or ‘The baker was not hurt after all,’ Camp came forth from his hiding-place, capered, barked, and rejoiced.” We must suspect, notwithstanding what Sir Walter says about the voice and tone, that the mode in which the affair was touched upon had much to do with the dog’s dejection or cheerfulness.

“When Camp became old,” continues Scott, “and was unable to accompany his master in his rides, he would still go out to meet him on his return, if he was

¹ Jesse, Gleanings in Nat. Hist., vol. ii. p. 220.

made to understand by what road he was coming. The servant at Ashestiel, when laying the cloth for dinner, would say to the dog, as he lay on the mat by the fire, 'Camp, my good fellow, the sheriff's coming home by the ford,' or 'by the hill;' and the poor animal would immediately go forth to welcome his master, advancing as far and as fast as he was able in the direction indicated by the words addressed to him."

"We have observed," says Mr. Blaine,¹ "to a person present, in our ordinary tone, and without any apparent notice of a terrier lying in the room, 'That we should take a walk by-and-by, but we did not intend to take Pincher to-day.' This was always heard, though, as before observed, it was not addressed to the dog, nor spoken in an elevated voice; yet the effects were the same, for the animal invariably slunk to a remote corner of the room, where he laid himself down disconsolate. If we in a little time afterwards remarked in a similar tone, 'That we had altered our mind, and should take Pincher,' poor Pincher was instantly at our feet, thanking us for the change."

"I have had many opportunities," observes Mr. Jesse, "of observing how readily dogs comprehend language, and how they are aware when they are the subject of conversation. A gentleman once said in the hearing of an old and favourite dog, 'I must have Ponto killed, for he gets old and is offensive.' The dog slunk away, and never came near his master afterwards."

During the late war, when the 'Leander' was stationed off Halifax, in Nova Scotia, there was an old Newfoundland dog on board. He had been attached to

¹ *Encycl. of Rural Sports*, p. 225

the ship many years, and several instances were recorded of his extraordinary sagacity and sense. The sailors one and all declared that he understood what was said; and the following circumstance would appear to prove it. He was a great favourite with the crew, and of course had been kindly treated. He was lying on the deck one day, when the captain in passing by said, "I shall be sorry to do it, but I must have Neptune shot, as he is getting old and infirm." Whether there was anything in the tone of voice which frightened the dog, I leave my readers to judge, but he immediately afterwards jumped overboard, and swam to a ship which was near the 'Leander.' He was taken on board, and remained in it till he died. Nothing could ever induce him to return to the 'Leander.' If the dog happened to be on shore, and any of her boats or crew came near the place where he was, he immediately made off, and nothing could make him approach his old acquaintances. The lady who told me the anecdote was at Halifax at the time, where the circumstance I have been relating was the subject of much conversation. She herself heard it from the captains of both the ships.¹

"A black and white spaniel, belonging to a friend of mine," says Mr. Lee, "seemed to understand everything said to him, and if his master whispered in his ear, 'Find something for your master,' every loose article which he could carry was sure to be laid at his master's feet; and frequently the ladies of the family were obliged to lock their work-boxes to prevent the contents from being carried off by Dash. If one glove was missing, and the other were shown to him, he did

¹ Jesse, Gleanings in Nat. Hist., vol. iii. pp. 17, 20.

not rest till he had found it; and one day I saw him push a pile of music-books off a whatnot, and drag a glove out which had been deemed irrecoverable. A countryman, charged with a letter to be delivered to Dash's master, arrived at the house while the gentleman was at breakfast. The man was shown into a parlour, where he was about to sit down, when a growl saluted his ears. Turning round, he saw Dash lying in a chair near the fire-place, who reared his head, and the ring of the bell-pull hanging close by, he put his paw in it. As often as the man attempted to sit, so often did Dash growl, till at last, the stranger's curiosity being excited as to what the dog would do if he persevered, he sat down on a chair. Dash then effectually pulled the bell, and the servant who answered the summons was much astonished when he heard who had rung. He, however, was equally pleased, for it explained a mystery which had long puzzled him and his fellow-servants. It seemed that whenever any of them sat up for their master or mistress when they were out, the parlour bell was sure to ring immediately after they had settled themselves to sleep. Of course they had never suspected the spaniel, though, when they afterwards discussed the matter, they recollected that, when they awoke, he was not to be seen. There was no doubt that directly he saw their eyes closed, he went to the bell in order to rouse them to watchfulness."¹

A dark brown retriever, named Sam, was very friendly with the hounds in a certain kennel, and if Sam, when they were taken out for exercise, was told to go and amuse them, he would run off among them, jump Jim Crow, and play various antics which he had learned,

¹ Mrs. Lee, 'Anecdotes of Animals,' p. 129.

while they would look attentively at his proceedings. One day he went with his master to call on a lady, who petted him, and asked him to stay with her, when the dog ran to his master, looked up into his face, and seemed to desire his consent to the lady's request. His master then told him to return to the lady, and take care of her; upon which he ran to her side, took her basket from her, and appeared anxious to express his willingness to serve her. He remained with her for some hours, and when his master came to fetch him away, she had become so pleased with him that she asked for his company till the next day. His master stroked and praised him, told him to be a good dog, and stay with the lady until the following morning after breakfast. The dog remained with her all night, ate his breakfast in the morning, and then looked up in the lady's face, wagged his tail as if to take leave, left her house, and ran straight home.

The same dog would distinguish the different parts of his master's dress when they were named to him, and would fetch them to him, and return them to their places. He would sit in a chair at dinner with the family, without making any disturbance or confusion; or he would dine apart, taking bread and meat alternately, and then drinking a little milk; and if any one said, "Give me a piece, Sam," he instantly complied. When his meal was over, he would clear away his plates. He would also fetch his master's horse from an inn, pay the ostler, and ride back on the saddle. He appeared, indeed, to be capable of understanding anything that was said to him, and his good temper and desire to please were extraordinary.¹

¹ Mrs. Lee, 'Anecdotes of Animals,' p. 132.

That dogs readily understand when persons are speaking about them, even though they speak in a low tone of voice, and neither call them by name nor use any means to excite their attention, is certain. Dr. Gall goes so far as to say that dogs “learn to understand not merely separate words or articulate sounds, but whole sentences expressing many ideas.” “I have often,” he says, “spoken intentionally of objects which might interest my dog, taking care not to mention his name, or make any intonation or gesture that might awaken his attention. He, however, showed no less pleasure or sorrow, as it might be; and, indeed, manifested by his behaviour that he had perfectly understood the conversation which concerned him. I had taken a bitch from Vienna to Paris; in a very short time she comprehended French as well as German, of which I satisfied myself by repeating before her whole sentences in both languages.” This is doubtless imaginary. But the writer of the treatise on ‘Menageries’¹ says, “We have heard an instance of this quickness in the comprehension of language which is very remarkable. A mongrel, between the shepherd’s dog and terrier, a great favourite in a farmhouse, was standing by while his mistress was washing some of her children. Upon asking a boy, whom she had just dressed, to bring his sister’s clothes from the next room, he pouted and hesitated. “Oh, then,” said the mother, “Mungo will fetch them.” She said this by way of reproach to the boy, for Mungo had not been accustomed to fetch and carry. But Mungo was intelligent and obedient; and, without further command, he brought the child’s frock to his astonished mistress. This was an effort of ima-

¹ Vol. i. p. 75.

gination in Mungo, which dogs certainly possess in a wonderful degree. He had often observed, doubtless, the business of dressing the children, and the instant he was appealed to he imagined what his mistress wanted. Every one," adds the writer, "knows the anxiety which dogs feel to go out with their master, if they have been accustomed so to do. A dog will often anticipate the journey of his owner; and, guessing the road he means to take, steal away to a considerable distance on the road to avoid being detained at home. We have repeatedly seen this circumstance. It is distinctly an effort of the imagination, if indeed it be not an inference of reasoning."

Dr. J. Macculloch relates, of his own knowledge, several singular anecdotes of a Scottish shepherd-dog, who always eluded the intentions of the household respecting him, if aught was whispered in his presence that did not coincide with his wishes.

"The dog's capacity of understanding certain wishes of man is still more curiously evinced in the Pariah dogs belonging to the Sepoy soldiers in India. As these men are of many different creeds, sects, and castes, scarcely any two can cook together, or use the same vessels; they are even jealous of a defiling shadow passing across their food. But their duties not permitting personal superintendence, many have dogs so trained as to keep off all strangers. These animals will stand on their hind feet, and, springing in the air, drive away an argeelah or a stooping vulture, being ever *careful that their own shadow does not cross the vessels.*"¹

In the life of Samuel Drew, of Cornwall, we find an

¹ Colonel Hamilton Smith in the 'Naturalist's Library,' vol. x. p. 84.

instance of the manifestation of this faculty in dogs. His mother-in-law had a dairy under a barn, the floor of which was not free from chinks, and from whence the chickens, that flew up there to scratch among the corn or straw, would occasionally scatter dust on the pans of milk. The chief offender in this way was a handsome cock. There were two dogs belonging to the house, a small one and one much larger. One morning, in harvest time, on going into the dairy, followed by the little dog, she found dust on the pans, and exclaimed, in a tone of impatience, "I wish that cock was dead." Shortly after, being out in the harvest field, she saw the little dog coming towards her, dragging something in his mouth, which proved to be the cock just killed, and which he brought up to her feet, looking as if he expected to receive commendation. But she, provoked at this literal execution of her hastily-uttered wish, snatched a stick from the hedge, and attempted to give the dog a beating. The dog, disappointed at this reception, ran off, while she cried after him, "I'll pay thee for this by-and-by." Drew, in telling the story, observes that he does not suppose the dog understood the exact import of his step-mother's wish, but, disliking the attention she bestowed on the cock, which was a more recent favourite than himself, he may have seized an opportunity of taking vengeance on it, to which he would doubtless be encouraged if he perceived anything in his mistress's voice or manner that indicated a change of feeling towards the cock. However, in the evening she was about to inflict the threatened chastisement on the dog, but she found him posted in a corner of the sitting-room, with the large dog standing over him as

a protector. She endeavoured to drive off the larger animal, but he would not withdraw; she then tried to get behind him, but he assumed a threatening attitude, and uttered a fierce growl, which seemed to say, "Touch him if you dare." The result of the matter was that she relinquished her intention. These dogs, says the narrator, evidently had a power of communicating with each other, a faculty in the inferior animals of which we know very little; but "on the whole," he adds, "I never remember to have met with a case in which, to human appearance, there was a nearer approach to moral perception than in that of my father's two dogs."¹

Great intelligence in a Siberian dog is manifested in the following account of one that belonged to Chabert, afterwards known, from exhibiting himself half-roasted in ovens, by the title of "The Fire-king." The dog was a strong spirited animal, that would draw his master in a light carriage twenty miles a day. Somebody wanted to buy him, and Chabert fixed his price at two hundred pounds, a considerable portion of which sum was eventually paid for him. But between the sale and the delivery of the animal, he fell and broke his leg. Chabert, to whom the money was then of great importance, was afraid of losing it, and took the dog to a veterinary surgeon, to have the leg, if possible, healed. Being afraid that the animal would not willingly submit to an operation at the hands of a stranger, he used great care and art in introducing the dog to the curer of wounds. He talked to the dog, pointed to his own leg, limped round the room, and then made the surgeon put some bandages round the

¹ Rev. T. Jackson, 'Our Dumb Companions,' p. 30.

limb, after which application he began to walk in his ordinary manner. It may be thought hardly possible that the dog should have understood this pantomime, but such, it appears, was the case. When it was over, Chabert patted the dog, who was looking at him and the surgeon alternately, on the head, requested the surgeon to pat him, and give him his hand to lick; and at last, holding up his finger to the dog, and gently shaking his head at him, he quitted the room and left him and the surgeon together. The dog, as the surgeon stated, at once allowed himself to be laid down, submitted to have the bone set, and the limb bandaged, without offering the least resistance, or making any motion except to lick the operator's hand. He continued submissive, also, day after day for a month, and was so free from restlessness, that at the end of that time the leg was sound and strong. No trace of the hurt was visible, and the purchaser, who was living when Mr. Youatt wrote his book 'On the Dog,' was not aware of its occurrence.¹

We shall conclude this chapter with the following judicious remarks on the subject from a writer in the 'Quarterly Review':²

"Much has been written to demonstrate that the dog can even attain to the comprehension of the ordinary conversation between man and man. Gall declares that he had often spoken purposely of objects which might interest his dog, taking care not to mention his name, or make any intonation or gesture which might awaken his attention, and that he still showed by his behaviour that he understood what was said. Lord Brougham says that a most accurate and literal person gave him

¹ Youatt, 'On the Dog,' p. 58. ² Vol. ci. p. 509.

an account, of which the substance was, that his shooting-dogs discovered by what they heard that he intended to go into Nottinghamshire on the following day. A mother asked her boy to fetch his sister's clothes, and on his refusing peevishly, she said, to reproach him, "Oh, Mungo will fetch them," and the dog immediately executed the commission. We agree with Lord Brougham that these instances of presumed interpretation of our language are probably due to the microscopic eye of the dog for what passes round him, though, as he justly remarks, this only illustrates the more how well animals can profit by experience, and draw correct inferences from things observed by them. When the words are addressed immediately to himself, it is not difficult to determine that he collects their purport either from the introduction of some well-learned phrases, or from the tone and action that accompany them. To take an example which at the first sight appears to support the higher view of the understanding of the dog. M. Blaze having one day lost his road, a peasant offered him his dog to escort him to a certain house. "Take the gentleman," he said, turning to the animal, "to such a place, but don't go in, mind you, and come back directly,"—then to M. Blaze, "I tell him not to go in, because he would fight with the other dogs." The dog did as he was bid, conducted M. Blaze to the house, and returned to his master. Here it is clear that the house to which he was sent was a familiar word like his own name, and equally clear that he had been often scolded for venturing within its precincts, and embroiling himself with his kindred, so that he would readily comprehend the scope of the prohibition from the monitory voice with which it was uttered.

It was certainly a beautiful display of docility ; but as regards the capacity of the dog to catch the meaning of words, it proves nothing more than that he attaches ideas to a few customary well-defined and expressive sounds.”

CHAPTER XVII.

DOG.—MEMORY.—USES IT FOR REVENGE OR SERVICE.

THE intelligence of the dog is assisted by an excellent memory, which long retains a sense of benefit or injury done to himself or those with whom he has been familiar, as well as of persons and things that have in any way come into contact with him. Many stories tell of his remembrance of the murderer of his master, and his readiness to take vengeance on him. The oldest is perhaps that related by Plutarch of a dog that attracted the notice of Pyrrhus.

As Pyrrhus, king of Epirus, was riding out one day, he observed a dog keeping watch over the corpse of a murdered man that was lying at the wayside. On inquiry, he found that it was the body of the dog's master, and that the animal had been guarding it for three days, refusing to be drawn from it, and not having tasted food during the whole time. Pyrrhus ordered the corpse to be buried, and took the dog with him in charge of his attendants. A few days after, there was a review of the army, and the soldiers passed in order before Pyrrhus as he sat looking on, with the dog lying quietly at his side. All at once, as two of the soldiers

came up, the animal began to bark vehemently, and darted towards them with the utmost fury, and so continued, sometimes barking at them, and sometimes looking back towards Pyrrhus, so that the men fell under the suspicion, not only of the king himself, but of all who witnessed the dog's proceedings. In consequence they were taken into custody, and examined, when indisputable evidences of their guilt appeared, and they were put to death,¹ confessing that they were the murderers of the dog's master.¹

A similar discovery is said to have been made by the dog of a certain Hesiod, surnamed the wise, which brought to justice the sons of Ganyctor of Naupactus, by whom Hesiod had been murdered.²

A like story is told of the celebrated dog of Montargis in France, who, when his master was murdered, drew his master's friend to the spot where the corpse was buried, and afterwards, meeting the assassin, flew on him with such fury that he was hardly prevented from killing him. As this threw suspicion on the man, who yet asserted his innocence, it was determined, with the sanction of the king, whom some accounts call Charles VI., and others Louis VIII., that the question should be settled by a single combat between the man and the dog, and as the dog was victor in the encounter, the man was sentenced to death. But there are other old stories of the same kind; one told by St. Ambrose in his *Hexaëmeron*,³ of a murder at Antioch discovered by a dog, and another by Giraldus Cambrensis,⁴ who wrote about A. D. 1200, of a public combat, on similar grounds, between a dog and a soldier armed with a

¹ Plutarch, 'De Solertia Animalium,' c. 13; Tzetzes, 'Chiliad,' iv. 211.

² Plut. ib.

³ V. 24.

⁴ Itinerar. Cambr. i. 7.

staff, the result of the contest proving the same as of that at Montargis.¹

Benvenuto Cellini had a large dog that guarded his shop. One night a thief broke into it, whom, though he was armed with a sword, the dog at once attacked, and kept for awhile at bay; then, running for aid into the journeymen's chamber, he awoke them by pulling off the bedclothes, and catching hold of their arms; but they, not understanding what he wanted, drove him out and locked the door. He then ran again towards the thief, who was retreating into the street, and caught him by the cloak, but he had the wit to cry "Mad dog!" which brought some fellows, who were loitering about, to his assistance, and for that time he escaped. But, after some considerable interval, as Cellini was walking with the dog in one of the squares in Rome, the animal flew on a young man, from whom he could hardly be detached by the bystanders with sticks and swords, and, as the fellow was endeavouring to get off, some bundles escaped from under his cloak, in one of which Cellini espied a little ring of his own, and exclaimed, "This is the villain that broke open my shop, and my dog knows him again." The thief stood convicted, and lost no time in confessing his crime and imploring mercy.

The following story is numbered among romances, but has probably a basis of truth. A certain Sir Mardock, a knight at the court of Aradas, king of Arragon, had mortally wounded a certain Sir Roger in a forest, and left him there to die. Sir Roger's greyhound saw who had committed the deed, but, omitting to pursue the slayer, remained with his master till he died, and then

¹ See 'Notes and Queries,' 2nd Ser. x. 25.; Quart. Rev., vol. ci. p. 503.

scraped a pit for his body, which he covered with grass and leaves, and constantly guarded, except when he was obliged to go in search of subsistence for himself. As the prey in his neighbourhood diminished, he was necessitated to enlarge his circle of exploration, and at length, in the seventh year after the death of his master, he extended his expeditions as far as the king's palace, when he suddenly appeared on Christmas Day, in the midst of the company feasting in the hall. Though he was gaunt with hunger, he maintained a gentleness of demeanour, going slowly round the tables, and receiving quietly whatever the several guests chose to give him. He returned the next day, went round among the company as before, and disappeared. The king, who had known the dog previously, did not recollect him on the first day, but on the second remembered to whom he had belonged, and gave orders that if he should return again, some of his attendants should follow him, and see whither he betook himself. On the third day the dog came as before; but it chanced that Sir Mardock, who had been absent on the two preceding days, had taken his seat at the table on that day. The greyhound, in going his round, no sooner saw Sir Mardock, than he sprang upon him, and bit him in the throat, inflicting a wound of which he soon after died. The attendants followed the dog, till he came to the place where his master was buried, when he lay down upon the grass, and barked at them. Being unable to drive or entice him from the spot, they returned and reported the particulars to the king, who instantly understood the whole affair. He gave orders that they should dig in the place when the dog had lain down; and the remains of Sir Roger were readily discovered

with sufficient of his equipments to identify them. They were then removed to consecrated ground, and a monument erected over them, at the foot of which the faithful dog soon after expired.¹

“A dog,” says Mr. Blaine,² “has been known to recollect a person after several years of total absence. The remembrance of places is never lost. . . . Lord Maynard had a dog stolen from him on the Continent, which found its way to his lordship’s residence a year or two afterwards.”

Tallenant des Reaux says that a lady of his acquaintance, who came from Poitou to settle in Paris, left a spaniel behind her. Ten years afterwards she sent some clothes, packed by herself, to the person who had the charge of the dog. The little creature no sooner smelt them, than he gambolled round them and showed every mark of expressive joy.³

Lord Combermere’s mother, Lady Cotton, had a terrier named Viper, who would remember the name of any one of the numerous visitors at Combermere if it was once told him. A Mrs. H—— came on a visit there on Saturday. Lady Combermere took the dog in her arms, and going up to Mrs. H——, said “Viper, this is Mrs. H——;” and then, taking him to another newly arrived lady, she said, “Viper, this is Mrs. B——;” and no further notice was taken. On the following Sunday morning, when they were going to church, Lady Cotton put a prayer-book into the dog’s mouth, and told him to take it to Mrs. H——, which he did, and then, on receiving a similar direction, took another to Mrs. B——.⁴

¹ Ellis, ‘Specimens of Early English Metrical Romances.’

² Encycl. of Rural Sports, p. 223.

³ Quart. Rev. vol. ci. p. 507.

⁴ Jesse, Gleanings in Nat. Hist. vol. iii. p. 29.

The dog's strong recollection of what he conceives to be injury or insult was shown, a few years ago, by what happened between a dog and a maid-servant at St. Cloud ; an affair which made a great noise throughout Paris and the neighbourhood at the time of its occurrence. The dog, one of the large Newfoundland breed, was tied up, and the servant, who had occasion to go by it every morning in very hot weather, threw on it, as she passed, a quantity of water ; imagining, as it appears, that she was thus doing the dog a kindness and a pleasure by cooling it. This went on for some time, the dog being still constantly tied up, and submitting to the deluges of water without any manifestation of resentment, but in reality considering himself mortally offended every time it was bestowed upon him ; for, when a day for letting him loose came, the maid-servant no sooner presented herself before him, then he sprang upon her with the fiercest hostility, and could not be drawn off from her till she was quite dead.

A similar story of a dog's revenge, though not attended with such unhappy consequences, is told by a writer in the 'Dublin University Magazine.' The dog was a native of Labrador, called Tiger, of wonderful strength and energy. He once ran by the side of a stage-coach from Newcastle to Edinburgh, a distance of one hundred and twenty miles ; the driver, from compassion, took him up when he was about halfway, but he jumped down in disdain when the coach stopped, chased the birds through the fields, and leaped up at the horses' noses when they started. On another occasion, he was to be taken across the Queen's Ferry in the mail-boat, but it was impossible to confine him in

it; he jumped overboard in the dead of night, swam after the boat, and overtook the coach that started from the landing-place, after he had allowed it to get ahead of him for several miles. Such were his physical feats; and his intellectual qualities were equally remarkable. When he was at Newcastle, a gentleman of the name of Huntly, a friend and visitor of his master's, had set a stout bulldog on him. Tiger fought valiantly, but was inferior in strength to his opponent, to whom he was at length obliged to yield the victory. He was sadly mortified, and did not forget the affair. Some months afterwards, he removed with his master to Edinburgh. One day, when he was lying under the table, as was his custom, Huntly, who had come to Edinburgh on business, called in. Tiger at once recognized him, rushed forward, ruffled up his back, growled, showed his teeth, and stood defiant, until rebuked and ordered down by his master. Huntly took apartments for his stay, close by. In a few days he came again to Tiger's master and said, "Your dog alarms me. Every morning when I go out, I find him standing opposite my steps; he gives a kind of significant growl, and goes away slowly, looking at me over his shoulder. I cannot but think he means mischief." A week more elapsed, when one morning the dog's master, who was engaged in writing, heard a rushing noise upon the stairs outside the door of his room, followed by a growl, a sound as of struggling, and a shriek. He ran hastily to open the door, when Tiger scuttled in, and went under the sofa, his usual place of retreat when he had done anything to offend. Huntly followed, looking pale and disturbed, with his trousers torn, and blood flowing from a part of his person which

they covered. The dog had seized him suddenly, and taken his revenge. He was dragged out, and received a severe punishment from his master, which he bore with all the philosophic patience of a Stoic. But from that moment he seemed to consider that his honour was satisfied and his debt paid, for ever afterwards he received Huntly with placidity, wagging his tail, and showing, after a time, a disposition to lick his hand.

“Newfoundland dogs,” observes Mr. Jesse, “should be treated kindly, for, if used roughly, they may turn sulky, and, if they receive what they think an injury, may recollect and avenge it. A traveller on horseback, passing through a small village in Cumberland, saw a Newfoundland dog reposing by the side of the road, and, in some wantonness, gave him a blow with his whip; on which the animal made a violent rush at him, and pursued him for a considerable distance. It was not till twelve months afterwards that he had occasion to visit the same village, when, as he was leading his horse, the dog, recollecting him, seized him by the boot, and made his teeth penetrate to the leg; and might have inflicted further injury, but that some persons came up and drew the animal off.”¹

“The Almighty,” says Sir Walter Scott, “who gave the dog to be the companion of our pleasures and our toils, has invested him with a nature noble and incapable of deceit. He forgets neither friend nor foe,—remembers, and with accuracy, both benefit and injury. He has a share of man’s intelligence, but no share of man’s falsehood. You may bribe a soldier to slay a man with his sword, or a witness to take life by a false accusation, but you cannot make a dog tear

¹ Jesse, *Anecd. of Dogs*, p. 134.

his benefactor. He is the friend of man, save when man justly incurs his enmity."

With what consideration Scott himself treated dogs, how he addressed them as if they were rational beings, and how he mourned their absence when the loss of fortune separated him from them, has been often told. Washington Irving eulogized this kindness of Scott in prose, and Hallam, when visiting Abbotsford, was moved to write some verses on it, given by Lockhart in his life of the great novelist:—

“ But looking towards the grassy mound,
 Where calm the Douglas chieftains lie,
 Who, living, quiet never found,
 I straightway learned a lesson high :
 For there an old man sat serene,
 And well I know that thoughtful mien
 Of him whose early lyre had thrown
 O'er mouldering walls the magic of its tone.

“ It was a comfort, too, to see
 Those dogs that from him ne'er would rove,
 And always eyed him reverently
 With glances of depending love :
 They know not of the eminence
 Which marks him to my reasoning sense ;
 They know but that he is a man,
 And still to them is kind, and glads them all he can.

“ And hence their quiet looks confiding ;
 Hence grateful instincts, seated deep,
 By whose strong bond, were ill betiding,
 They'd lose their own, his life to keep.
 What joy to watch in lower creature
 Such dawning of a moral nature,
 And how (the rule all things obey)
 They look to a higher mind to be their law and stay !”

CHAPTER XVIII.

DOG.—DISTINCTION OF PERSONS.—OF PROPERTY.

THE intelligence of dogs is strongly manifested in the distinctions which they make with regard to human beings. All dogs, it is well known, which have been brought up among well-dressed people, will show a vehement dislike to persons in ragged clothing. Mr. Jesse gives an amusing instance of such antipathy.

“A gentleman of my acquaintance,” says he, “had a sheep-dog which he generally kept in a yard at the side of his house, in the country. One day a beggar came into the yard, and the dog barked at and attempted to bite him, but he defended himself with a stout stick that he carried. On the appearance of a servant, who came to learn the cause of the noise, the dog ceased barking, but, watching an opportunity, got behind the beggar and snatched the stick from his hand, and then carried it out into the road and laid it down.”¹

This dislike arises, however, as the same writer observes, from habit. “He knew,” he says, “of four dogs kept by a gentleman at Wexford, of which three

¹ Anecd. of Dogs, p. 153.

had been brought up among people of the better class, and would manifest ill-feeling towards vagrants or ill-dressed persons; but the fourth, which, in his puppyhood had belonged to a poor man, would receive beggars, and people in tatters, as welcome friends, and showed particular dislike to carriages and those riding in them."¹

But their distinctions of persons are often exhibited in other ways. "A relation of mine," says the Rev. Charles Williams,² "went, on one occasion, some distance from home, to see if a brace of pointers would suit him. He accompanied the keeper and feeder in a walk, and after seeing them make some points, they came to the corner of the field which they were about to beat. Mr. C. W. then said, 'Keeper, you and the dogs beat this by yourselves; I can see their performances here.' Off the man and dogs started, but they had not gone more than fifty yards, when the pointers came back to the probable purchaser. As the keeper called and whistled, but the dogs only looked at him and wagged their tails, he at length returned, when the remark was made, 'This is a queer business, keeper; the dogs will not follow you; what is the reason?'—'Don't you know, Sir,' he replied; 'these here dogs know by your looks and dress that you are a sportsman and a gentleman, and so they prefer your company to mine, who am only a servant.' I have seen, before and since, other instances," the narrator remarks, "of dogs preferring those who show them game to those who feed them; but I never saw them before prefer a stranger to a man who attended and fed them."

¹ Anecd. of Dogs, p. 44.

² 'Dogs and their Ways,' p. 248.

The dog is sometimes capricious in his attachments, acting as if he wished to show that he has sense and discrimination to choose masters for himself, if he were quite at liberty to do so. From the master with whom he has been brought up he seldom wholly separates himself; but he will often wander from him, for a time, to enjoy the society of other people to whom he may have taken a fancy. A story illustrative of this peculiarity in the dog is given in Bingley's 'Animal Biography,' as related by a Mr. Bolton, to whom the affair happened:—"One night," says he, in words which we shall slightly abridge, "I had been dining in the Tower with a nobleman, and was returning westward to my father's house, when a large Scotch terrier attached himself to me in a very peculiar manner, keeping close to my side, and even maintaining the wall for me, with a growl or a snap, against any that would thrust me from it. He accompanied me to Bedford Square, but, when I entered the house, declined to follow, and immediately disappeared. On the following morning he was at my door early, remained with me through the day, and left me again at night. Subsequently, he would at times enter the house in the evening, and sleep at my chamber-door. On the whole, he was quite capricious, sometimes manifesting great fondness for me, and at other times leaving me with apparent coldness and indifference. On one occasion he had been absent from me for many days, when, on driving into London with a friend in a gig, we chanced to be overturned, and, on getting up out of the mud, were highly amused at seeing the dog walking leisurely along the high-road, seeming perfectly indifferent to any of the objects around him, till he heard my voice,

which seemed to electrify him, and he became extremely troublesome with his expressions of joy and gratulation. At any time, if I left behind me a stick, or glove, or purse, calling his attention to the article, he would return and fetch it; and if I deposited anything in a particular place, and told him to watch over it, he would allow no one to take it but myself, and would never quit his charge, even though I were absent for several hours. The end of this friendly connexion was not at all to my credit. In going to the theatre with a friend, accompanied by the dog, we were overtaken by a shower of rain, and called a coach; and, being rather carefully dressed, excluded the dog lest he should lay dirty paws upon us. I rather fear I thrust him from me, and told him to go away in an angry tone. However this might be, he went off, I know, growling surlily, and from that evening I have never seen or heard of him, though I have offered large rewards for discovering him." In this case we see that the dog acted and reasoned, as we may say, for himself; he offered his attentions to a person whom he did all in his power to serve and please; and he had something, we may conceive, of moral feeling, which was hurt and offended at what he considered an ill-requital for good offices, and at not receiving from his friend the treatment he thought he had deserved.

As the dog distinguishes persons, he also distinguishes the property of his master, or others with whom he is connected. He will preserve what belongs to his master, and will even abstain, though in hunger, from touching eatables to which he knows that no right has been given him. As to preservation of his master's property, I suppose many a child, and per-

haps some grown persons, have wept on reading the fate of the poor dog commemorated in the following anecdote. It is an old story, but no history of the dog's virtues and intelligence can be complete without a repetition of it. A French merchant set out from home on horseback, attended by his dog, to receive a sum of money from another merchant who lived at some miles' distance. Having accomplished his object successfully, and tied the money in a bag which he carried before him on his horse's neck, he proceeded on his return, while his dog frisked and barked joyously about him, as if overjoyed at the prospect of going back again. After riding some miles, he alighted to rest and refresh himself in the shade, and laid down his bag of money at the foot of a tree. After awhile he remounted, but the dog, instead of going cheerfully and harmlessly along as before, began to bark furiously in front of the horse, as if desirous to prevent him from proceeding; then, finding his efforts produced no effect, he cried and howled as in desperation, and at last began to bite the horse's heels.

The merchant, who could see or divine no cause for the dog's behaviour, at length conceived a suspicion that he must be mad; a suspicion which was confirmed, when, on crossing a brook, he observed that the animal, though seemingly parched with thirst, did not drink. He now wished that he could find some one to put him to death, being afraid to alight himself for the purpose, lest he should be bitten. No one being in sight, he drew a pistol from his holster and fired at the animal, which was wounded, but was still able to crawl towards its master. The merchant could not bear the sight of its agonies, and spurred his horse into a gallop, try-

ing, as he fled from the spot, to console himself with the thought that he had prevented a greater evil by dispatching a mad animal than he had incurred by its loss, yet feeling that he would almost rather have lost his money than his dog. As his thoughts recurred to the money, he put out his hand to feel if it was safe, and found that he was no longer in possession of it.

He now apprehended the cause of the dog's extraordinary conduct. He turned his horse's head, and galloped backward at its utmost speed. He quickly regained the place at which he had shot the dog, but did not find him there, or any trace of him, except stains of blood. Hurrying to the spot at which he had stopped to rest, he discovered the faithful creature stretched on the bag of money at the foot of the tree, bleeding fast to death, but having still strength to wag his tail at the approach of his master, and to lick the hand that had put him to death. He had done his utmost to make known the absence of the bag, which he must have understood his master's desire to preserve, and, when he found himself unable to effect his wish, and was wounded instead of rewarded for his attempts, he made his way back, debilitated as he was, to watch over the object of his master's regard.

There is an older account of a like occurrence in *Ælian*:—A merchant of Colophon, having occasion to make purchases at Teos, went thither, accompanied by his slave, who carried a bag of money, and his dog. The slave, being under the necessity of stopping by the way, laid down the bag of money, and the dog, who had stayed with him, stretched himself upon it. When the slave resumed his journey, he forgot to take up the bag, and the dog remained behind with it.

The slave overtook his master, and they reached Teos together, but, missing the bag, they both returned to the place where the slave recollected that he had laid it down. Here they found the dog still lying on the bag, but so faint with hunger, that he had scarcely strength, at the sight of his master, to rise off the bag, and immediately after fell down dead.¹

The story is told in the same way in Tzetzes,² except that the dog is there said to have belonged, not to a merchant, but to Anacreon, the poet.

An anecdote told by Mr. Bell,³ of a dog belonging to a friend of his, is not less wonderful. Mr. Bell's friend was travelling on the Continent, accompanied by his dog. One day, on quitting his lodgings in the morning, with the expectation of being absent till the evening, he took out his purse to see if it contained money enough for the day's expenditure, and, having satisfied himself, went out, leaving the dog and his man-servant behind him. He dined at a coffee-house, where, on paying his bill, he missed a louis-d'or, and thinking it possible he might have dropped it there, sought for it, but to no purpose. When he returned home it was late in the evening, and his servant, as he let him in, said, with a face of sorrow, that the poor dog was very ill, and had eaten nothing all day; but, what was very strange, she would not suffer him to take away the food that he had placed before her, but had laid herself down with her nose close to it, yet without attempting to eat. When her master entered the room where she was, however, she instantly jumped upon him, and laid a louis-d'or at his feet, and then

¹ 'Ælian, 'De Animalibus,' vii. 29.

² Chil. iv. ver. 235.

³ 'History of British Quadrupeds,' p. 227.

ran back towards her food and began to devour it with great eagerness. The truth was easily understood; her master had dropped the coin in the morning when leaving his room, and the faithful dog had found it and kept it in her mouth till she should be able to restore it to his own possession, even refusing to eat lest it should pass out of her custody.

A sheep-dog was in the habit of accompanying the farming-man about a farm, but always ran home at a certain hour, at which his mistress dined, to be fed, and then returned to his usual attendance in the fields. During one of these hasty visits to the house, he met a young woman going from it, whom he had never before seen, wearing his mistress's cloak, which had been lent to her. We may very well suppose that he was hungry, but, ceasing to think of the food awaiting him, he turned his eyes and thoughts on the young woman, wheeled about and followed close at her heels, to her very great alarm. She did not stop, nor did the dog cease to attend her, till she reached a village four miles off, where the brother of the dog's mistress resided, whose house she entered. As soon as he had seen her go in there, he turned about and went quietly back to the farm. The explanation of his conduct was, that seeing her enter a house which he knew, he concluded that she was a friend of the family. Had she gone to a strange place, he would probably have seized her, and tried to take the cloak from her. In all this the dog's power of reasoning was manifested.¹

Mr. C. Hughes, a country comedian, had a wig which generally hung on a peg in one of his rooms. He one day lent the wig to a brother player, and some time

¹ Jesse's 'Anecdotes of Dogs,' p. 172.

afterwards called on him. Mr. Hughes had his dog with him, and the man happened to have the borrowed wig on his head. Mr. Hughes stayed a little while with his friend, but when he left him the dog remained behind. For some time he stood still, looking full in the man's face; then, making a sudden spring, he leaped on his shoulders, seized the wig, and ran off with it as fast as he could, and when he reached home, he endeavoured, by jumping, to hang it up in its usual place.

The same dog was one afternoon passing through a field in the skirts of Dartmouth, where a washerwoman had hung out her linen to dry. He stopped and surveyed one particular shirt with attention; then, seizing it, he dragged it away through the dirt to his master, whose shirt it proved to be.¹

The uncle of a friend of Mr. Jesse's once sent a coat to the tailor to be mended, who left it in his shop on the counter, but the gentleman's dog, which had followed the servant, thinking that the tailor could have no right to the coat, watched an opportunity for getting possession of it, pulled it down from the counter, and carried it off home in triumph to his master.²

Major M——, an old friend of Mr. Jesse, had a very sagacious pointer, which was kept in a kennel with several dogs. One day the gamekeeper, going into the kennel, dropped his watch by accident, and went away without perceiving his loss. He fastened the gate as usual, but had not gone far from it when he heard it rattle, and, on looking round, saw the pointer standing with her forepaws against it, and shaking it, evidently

¹ Bingley's 'Animal Biography,' vol. i. p. 206.

² Jesse's 'Anecdotes of Dogs,' p. 141.

to attract his attention. Returning to her, he found her with his watch in her mouth, which she restored to him with much seeming delight.¹

Sir John Harrington, in a letter to Prince Henry, son of King James I., gives an account of a sagacious dog that he had. The animal used to travel, as a messenger and carrier, between Sir John's house in London and the town of Greenwich. One day, as he was going to London with two flasks of rack, the cords with which they were fastened to his neck gave way. He, however, hid one flask in some rushes by the wayside, and took the other in his teeth to the house, and then returned for that which he had hid, and brought it to the house in safety. Some persons who were working in the fields noticed him and watched his proceedings, and gave the account of the affair to Sir John.

Dogs, says Colonel Hamilton Smith,² bear an instinctive comprehension of the nature of property, as evinced in the case of a lady at Bath finding her progress along the street arrested by a strange mastiff-dog, when, in her trepidation, she perceived that she had lost her veil. Retracing her steps to look for it, she found that the dog went on before her, until she came to it, and picked it up; and the animal, having seen her do this, hastened off after his own master.

Of the dog's abstinence from food which he regards as not his own, there are some striking instances.

Mr. W. Young Ottley, when a boy, passed a day at the house of a gentleman of fortune near Borough-bridge, when he saw a little cur dog which was much

¹ Jesse's *Gleanings in Nat. Hist.* vol. iii. p. 16.

² Brown's '*Anecdotes of Dogs*,' p. 467.

³ *Naturalist's Library*, vol. x. p. 85.

caressed by the lady of the house, and of which he observed that it "was no beauty." But being told that it had other merits, he inquired what they were, and learned that it had belonged to a poor woman on the estate, who, returning from market, one winter day, with a basket of provisions, had been overtaken by a snow-storm, and had perished. In consequence of the depth of the snow-drift her body was not discovered till three days afterwards, when her dog was found lying close by its mistress, *with the basket of eatables untouched*. It was then remembered by the inhabitants of the village that the dog had gone about on the evening of the snow-storm, and had endeavoured, by importunate whinings, and other signs which they did not understand, to get some of the poor woman's neighbours to follow him.¹

A boy, upon a hard-trotting horse, having allowed some cakes which he had bought to be tossed out of a basket, found, on his arrival home, that the greater part had been gathered up and brought home by his dog, who had deposited them untasted, and then set off to fetch the remainder.²

A mastiff was once locked by mistake in the well-stored pantry of his master, where there was milk, butter, and meat within his reach for a whole day. The servant, when he bounded out on the door being unlocked, trembled for the consequences of her negligence. But he had not tasted anything, though he fell voraciously on a bone that was given him.³

"The keeper of a tap-room in Glasgow has a dog of

¹ Jesse's Gleanings in Nat. Hist. vol. ii. p. 40.

² Colonel Hamilton Smith in 'Naturalist's Library,' vol. x. p. 85.

³ Brown's Anecd. of Dogs, p. 35.

the Irish bull breed, possessed of uncommon sagacity ; so that he is said to be as good as a servant. Nearly three years since he began to carry his master his breakfast in a tin can between his teeth. When the family moved, the dog altered his route, and has never gone wrong ; nor will he accept of any favour when on his master's business. He avoids any of his own species also when on business. Though what he carries is often tempting, he faithfully delivers it untouched ; he often carries beef from market, to the extent of half a stone. He carries his master's hat or shoes. He will take a snuff-box or other article to such of the neighbours as he knows. He will take a bank-note to the tap-room, and bring the change in silver. He understands Gaelic as well as English."¹

A French dog, that used to be sent to a confectioner's for *petits pâtés*, was one day attacked on his return with his full basket, by two other dogs, who were attracted by the savoury smell of its contents. The dog put his basket on the ground, and defended himself, but while he was engaged with one assailant, the other went to the basket and began to help himself. The carrier of the basket was puzzled for a time, but at last, seeing no chance of beating off both his assailants, he fell on the *pâtés* himself, and, having dispatched the remainder of them, returned to his owner with the basket empty.²

Mr. Grantley Berkeley relates that he had two intelligent deer-greyhounds, Smoker and Shark, Smoker's son, who was being bred to hunt under his father. "One day," he says, "when Shark was first admitted into the house, it chanced that he and Smoker were

¹ Hancock's 'Essay on Instinct,' p. 89.

² Brown's 'Anecd. of Dogs,' p. 472.

left alone in a room with a table, on which luncheon was laid. Smoker might have been left for hours with meat upon the table, and he would have died rather than have touched it; but at that time Shark was not proof against temptation. I left the room to hand some lady to her carriage, and, as I returned by the window, I looked in; Shark was on his legs, and smelling curiously round the table, whilst Smoker had risen to a sitting posture, his ears pricked up, his brow frowning, and his eyes intensely fixed on his son's actions. After tasting several viands, Shark's long nose came in contact with about half a cold tongue. The morsel was too tempting to be withstood. For all the look of curious anger with which his father was intensely watching, the son stole the tongue and conveyed it to the floor. No sooner had he done so, than the offended sire rushed upon him, rolled over him, beat him, and took away the tongue." It is observable, however, adds Mr. Berkeley, that the father took no thought of replacing the tongue on the table, but contented himself with having administered punishment, and retired gravely to the fireside.

Mr. Berkeley observes also that these dogs, though they would fetch game from a distance, would never touch it if it fell at his feet; and that no bidding or entreaty would induce either of them to fetch a glove or a stick. "It seemed," he says, "as if they simply desired to be of service when service was to be done, and that when there were no obstacles to be conquered they had no wish to interfere."¹

Mr. Youatt gives the following story as "strictly authentic." He quotes it from 'Travels in Scotland,'

¹ Jesse's 'Anecdotes of Dogs,' p. 29.

by the Rev. J. Hall, vol. ii. p. 395 :—A young man, an acquaintance of Lord Fife's coachman, was walking not long ago, as he had often done, through his lordship's stables at Banff. Not having any nice regard for honesty, he took an opportunity, when none of the servants were watching him, to slip a valuable bridle into his pocket. A Highland cur which frequented the stables noticed the act, and immediately began to bark at him; nor, when he attempted to walk out of the door, would the dog allow him to go, but, when he persisted in going, seized him by the leg, and held him back. The servants, attracted by the noise, came to see what was the matter, and were astonished at the dog's conduct towards a person whom he had so often seen on the premises. But, as the man turned about, they observed a portion of the bridle peeping out of his pocket, and the dog's behaviour was then easily understood. When the stolen article was taken from the man, the dog, who had still kept guard at the stable-door, offered no further opposition to his departure.

The following anecdote illustrates at once the dog's care of property intrusted to him, and his regard to physiognomy. Bewick is the authority for it. During a severe storm, in the winter of 1789, a ship from Newcastle was lost near Tenby, and, of all the living creatures on board, the only one that escaped was a Newfoundland dog, which carried in its mouth something that was afterwards found to be the captain's pocket-book. Among the persons assembled on the shore several attempted in vain to take it from him. He seemed to be sensible that what he carried was of importance, and not to be inconsiderately parted with ;

and, after looking round for awhile on the crowd, he singled out one particular individual, on whom he leaped fawningly, and suffered him to take the book from his mouth. It had doubtless been given him in charge by his master when the vessel was sinking; and something in the look of the man to whom he consigned it must have induced him to fix on that person to be the recipient of it. After he had given it up, he returned to the edge of the water, and watched for anything else that might be thrown on shore from the wreck, and whatever came, he seized and took charge of it. The dog was afterwards kept at Dropmore by Lord Grenville, who, on the animal's death, wrote a Latin epitaph on him, with an English translation, of which the following is a portion:—

“*Naufragus in nudâ Tenbeis̄ ejectus arenâ,
Ploravi domino me superesse meo,
Quem mihi, luctanti frustra frustra que juvanti,
Abreptum, oceani in gurgite merait hyema.
Solua ego sospes, sed quas miser ille tabellas
Morte mihi in mediâ credidit, ore ferens. . . .*

“*Insuperata adeò illuxit fortuna, novique
Perfugium et requiem cura dedit domini.
Exinde hos saltus, hæc inter florea rura,
Et vixi felix, et tumulum hunc habeo.*

“*Cast by a fatal storm on Tenby's coast,
Reckless of life, I wailed my master lost,
Whom, long contending with th' o'erwhelming wave,
In vain with fruitless love I strove to save.
I, only I, alas! surviving bore
His dying trust, his tableta, to the shore. . . .*

“*But fortune smiled; a safe and blest abode
A new-found master's a generous love bestowed,
And 'midst these shades, where smiling flow'rets bloom,
Gave me a happy life, and honoured tomb.”*

CHAPTER XIX.

DOG.—INTELLIGENCE IN GUARDING.

THE intelligence of dogs, especially those of the larger sort, is remarkably shown by the way in which they keep guard over premises, or over any articles entrusted to their charge.

The best yard-dogs, observes Mr. Blaine, take no notice of people that pass quietly by, but, if a person stops, they are immediately on the alert, and begin to bark if they think it necessary.

“We ourselves,” he continues, “purposely visited a house where a large yard-dog seized on a man in the night, who had made his way into a timber-yard. The dog had pulled the man down without injuring him materially; he then stood astride his body and attempted nothing further, but at every effort the man made to free himself from his imprisonment the dog shook his clothes violently, but purposely refrained from biting his flesh; and so he detained him for more than an hour, until a passer-by, who heard one of the scuffings, alarmed the master of the house, who, on getting up, found the dog astride of the frightened but unhurt delinquent. Surely intellectuality was mani-

fested here in the highest degree ; and the act was as equally remarkable for an amiable forbearance as for determined courage.”¹

A gentleman in Ireland had a fine black setter, which he called Black York, very sagacious in the field, and very sensible in all matters with which he had to do. One morning, the mistress of the family went with her maid to take a bath, and, as a general permission had been given to the servants to go to a neighbouring fair a mile off, the nursemaid, a giddy young woman, went away among them, leaving the youngest child, quite a baby, in its cot. According to the custom of that period and locality, the hall door stood wide open, and, except the sleeping baby, Black York, and the cats, there was not a living creature in the dwelling. In this state of things, a priest, whom Black York did not know, entered the hall, on a visit to the master and mistress, when the dog, which was ordinarily very quiet, sprang towards him with the fierceness of a tiger. The priest, thinking a combat with such an adversary by no means desirable, retreated, and Black York sat down beside the child's cradle, where he had doubtless been stationed when the priest arrived. There he remained till the mother returned, and, when she came into the nursery, the dog laid his tongue gently over the infant's face, as an intimation that all was well with him, and offered no further opposition to the priest's entrance.²

An intelligent Newfoundland dog, named Boatswain, belonging to a gentleman in Ireland, was found by his master, early one summer's morning, keeping watch over a countryman, standing, pale and terrified, with

¹ Encycl. of Rural Sports, p. 222. ² Mrs. Lee, *Anecd. of Animals*.

his back against a wall in the rear of the premises. He was a simple, honest man of the neighbourhood, who, having to go to market at four o'clock in the morning, had made a short cut through the grounds guarded by Boatswain, who had driven him to the wall and kept him there, growling and showing his teeth whenever he offered to stir from the spot; so that he was kept a close prisoner till the dog's master came to release him.¹

“I know a dog,” says Mr. Jesse, “that never barked or showed any degree of restlessness when his master's family were at home, but when the house was left in the care of one servant only, the dog's vigilance was extreme, and he barked at the slightest noise. This is very much the case with a good yard-dog; he is always on the watch, and the least noise excites his attention, but he only gives the alarm when it is necessary to do so, and when he does, it is in a different tone from that with which he receives his master when the latter has been some time absent.”²

The sagacious vigilance with which a dog will watch and pursue a thief is shown in a very old story.

“A man, having secreted himself in the temple of *Æsculapius* at Athens in the night, stole a quantity of gold and silver off the statues and offerings, and made off, thinking himself secure from detection, though the dog that guarded the edifice had observed and barked at him. The animal, however, as he was unable to make any of the attendants hear, followed the thief, and kept him in sight, and though the fellow threw stones at him, and attempted to drive him away, he

¹ Jesse, *Anecd. of Dogs*, p. 139.

² Jesse, *Gleanings in Nat. Hist.*, vol. ii. p. 220.

persisted in going after him. When day came on, he still pursued him, not close at his heels, but always having his eye on him. The man, to propitiate him, threw him something to eat, but he declined to take it. When the thief slept, the dog kept watch by him; and when he arose, the dog arose with him. At last the animal began to fawn upon people passing by, barking at the same time in the direction of the man. By-and-by, the stolen articles being missed, people went different ways in quest of the thief, and hearing of the dog's doings, and learning that his size and colour were the same as those of the dog belonging to the temple, they continued the pursuit with vigour, and overtook the offender at the village of Crommyon, whither the dog had followed him. As he was led away by his captors, the dog marched before them, looking proud and in exultation, as if he knew that he deserved all the credit of the seizure. The animal was afterwards held in honour, and maintained under the care of the priests till he died."¹

Similar faithfulness and intelligence are seen in English mastiffs, which we chiefly use as watch-dogs,—"a duty which they discharge," says Bingley, "not only with great fidelity, but frequently with considerable judgment. Some of them will suffer a stranger to come into the enclosure they are appointed to guard, and will go peaceably along with him through every part of it, so long as he continues to touch nothing; but the moment he attempts to lay hold of any of the goods, or endeavours to leave the place, the animal informs him, first by gentle growling, or, if that is ineffectual, by harsher means, that he must neither do

¹ Plutarch, 'De Solertiâ Animalium.'

mischievous nor go away. He seldom uses violence unless resisted, and even in this case he will sometimes seize the person, throw him down, and hold him there for hours, or until relieved, without biting him."¹

Such a dog recognizes, by his acute sense of hearing, the step of those who frequent the premises under his charge, and discriminates, by the same sense, between the honest tread of conscious innocence and the stealthy and fearful approach of the ill-designing.

Dogs are even said to have a mysterious faculty, something of divination, that has enabled them to detect hostility, on many occasions, towards their masters or others with whom they were connected. A dog of Henry III. of France growled furiously at the monk Clement as he presented himself at the audience at which he slew that monarch, and could with difficulty be forced into an adjoining room. M. Blaze, in explanation of such canine feeling, supposes that the anxiety of a man meditating a crime causes him to emit a peculiar odour from his body; but in the case of Clement, remarks a writer in the 'Quarterly Review,'² his monkish uncleanness may have offended the dog's nose. It seems more likely, however, as the same writer suggests, that the peculiar observation of the dog leads him to notice circumstances that escape our eyes. There is another equally well-known anecdote of an English mastiff following his master, Sir Henry Lee, of Ditchley, into his bed-room one night, into which he had never before been accustomed to go, and, though repeatedly shut out, would not be quiet till he was allowed to remain. During the same night a valet entered the room, and, being ignorant of

¹ Bingley, 'Animal Biography,' vol. i. p. 202.

² Vol. ci. p. 503.

the dog's presence, was preparing to murder his master, when the dog prevented the deed by stretching him on the floor.¹

Dogs, it is certain, have at times shown strong dislike to particular individuals, for which there has subsequently appeared to be good cause. Mr. B——t, who made frequent journeys on the Continent, used to be accompanied in his travels by a poodle-dog, which, in one of his tours, showed great dislike to a person by whom he was seated at a *table d'hôte*, and whose conversation he found so agreeable that a sort of intimacy sprang up between them. The dog had never before exhibited dislike of any one, so that Mr. B——t could not help remarking the singularity of his behaviour. The two persons separated, but, in the course of their travels, met again, when Mr. B——t offered the stranger a seat in his carriage, as they were both going the same way; but the man had no sooner entered the vehicle than the dog manifested greater aversion to him than before, which was continued during the whole course of the journey. At night they slept at a small inn in a wild and but little frequented country, and on separating to go to their respective rooms, the poodle snarled at the stranger, and was with difficulty restrained from biting him. In the middle of the night Mr. B——t was awoke by a noise in his room, and saw, as there was some little light, that the dog had seized his travelling companion, who was forced to confess that he had entered the room for the purpose of stealing Mr. B——t's money, of which he was aware that he had a considerable sum.²

¹ Hancock's 'Essay on Instinct,' p. 87.

² Jesse, 'Anecdotes of Dogs,' p. 245.

The following manifestation of sagacious vigilance in a dog was attended with a like fortunate result:—

In the year-1791, a person went to the house of a shopkeeper in Deptford who let lodgings, which he engaged, stating that he had just arrived from the West Indies, and would send his trunk that night, and take possession himself the next day. The trunk was accordingly brought, about nine o'clock in the evening, by two porters, who, as it was very heavy, were desired to carry it upstairs to the bedroom. A little dog was kept in the house, which seemed to take no notice of the trunk when it was brought in, but, when he saw the family going to bed, he went out of the shop, in which he usually slept, and placed himself close to the floor of the chamber in which the chest was standing, barking, at the same time, with great earnestness. The people, thinking that there must be some cause for his proceedings, opened the door of the chamber, when the dog flew towards the trunk, and barked and scratched against it with the utmost fury. They attempted to get him away, but to no purpose; and at length, in their perplexity, they called in some neighbour, who began to move the trunk about, and soon discovered that it must contain something alive. In consequence they did not hesitate to force it open, when out of it came their new lodger, who had been conveyed into the house with the intention of robbing it.¹

A few more anecdotes, of a more general nature, of the intelligence of dogs in preserving things that have come under their care, may not inappropriately be added.

¹ Bingley's 'Animal Biography,' vol. i. p. 207; from Gmelin's System of Nat. Hist., and Zool. Journal.

A gentleman who had a country-house near London, discovered, on arriving at it one day from town, that he had brought away a key which would be wanted by the family, and sent an intelligent Newfoundland dog, which had been accustomed to carry things, back with it. The animal, as he was passing along with the key, was attacked by a butcher's dog, to whom, at the time, he offered no resistance, but got away from him. When he had safely delivered the key, however, and was returning to his master, he stopped deliberately before the butcher's shop, and when the dog again sallied forth, attacked him with the utmost fury, and did not quit his hold of him till he was lifeless. The dog's first object was to guard the key entrusted to him, and his next to avenge himself.

A shepherd, in an excursion over the Grampian Hills to collect his flock, took with him one of his children, little more than four years of age, in order to initiate him early in the occupation which he was to pursue. He was of course attended by his dog, and after traversing his grounds for some time, had to mount a height for a better view. As the ascent was too difficult for the child, he left him at the foot, charging him strictly not to move from the place. But he had only reached the top, when one of the Scotch mists suddenly came on, so thick that it almost changed the day into night. He returned, as soon as he could, to look for his child, but was unable to find him, and was obliged, after a long search, to return to his cottage without him. To his surprise, the dog was also absent. On the next morning, as soon as daylight appeared, he resumed his search, but with no better success than before, and learned, on his return,

that the dog had been home, had received his allowance of food, and had immediately started off again. For four successive days the same proceedings were repeated: the shepherd made fruitless investigations, the dog came for his meal and went away on receiving it. At last he determined to follow the dog, and was conducted by him to a cataract at some distance from the foot of the hill, when the animal went down a rugged and almost perpendicular descent, and disappeared in a cave, the mouth of which was almost on a level with the torrent. The shepherd followed him with difficulty, but, on entering the cave, found the infant sitting in it, eating a cake which had just been brought him by the dog, who seemed to look on with the proud consciousness of having undertaken an important charge. The child, it appeared, had strayed to the brink of the precipice, and, having fallen or scrambled down, had been prevented by the torrent from re-ascending. The dog had traced him to the spot by the scent, and had afterwards fed him with a share of his own allowance. He seems to have remained with the child night and day, except when he hurried home for food, for he had been observed running to and from the cottage at full speed.¹

Of the intelligence of "Rab," a stout pugnacious dog belonging to James Noble, a carrier between Howgate and Edinburgh, Dr. Brown² gives the following anecdotes:—He had been found guilty of worrying sheep, and was to be shot, but James saved him from death, on condition that he should take him away from the scene of his offence. He was terribly ill-tempered

¹ 'Annals of Sporting,' vol. i. p. 83; Youatt, 'On the Dog,' p. 64.

² 'Horæ Subsecivæ,' p. 197.

when James took possession of him, but his wife Ailie saw that his fractiousness was partly caused by a splinter in his fore-foot; and by extracting the splinter she gained his friendship, and reconciled him to a residence with her and her husband. He soon fell into the carrier's ways, and on returning home from Edinburgh it was his habit to make his appearance about half an hour before his master, as if to announce his coming. "One morning," says Dr. Brown, "James came without him. He had left Edinburgh very early, and in coming near Auchindinny, at a lonely part of the road, a man sprang out on him and demanded his money. James, who was a cool hand, said, 'Weel, a-weel, let me get it,' and, stepping back, said to Rab, 'Speak till him, my mon.' In an instant Rab was standing over him, threatening strangulation if he stirred. James pushed on, leaving Rab in charge; he looked back, and saw that every attempt to rise was suddenly put down. As he was telling Ailie the story, up came Rab with that great swing of his. It turned out that the robber was a Howgate lad, the worthless son of a neighbour; and Rab, knowing him, had let him cheaply off; the only thing, which was seen by a man from a field, was, that before letting him rise, he quenched *pro tempore* the fire of the eyes of the ruffian by a familiar Gulliverian application of hydraulics, which I need not further particularize. James, who did not know the way to tell an untruth, or embellish anything, told me this as what he called 'a fact *positevely*.'"

CHAPTER XX.

DOG.—INTELLIGENCE IN FINDING LOST ARTICLES,
AND IN NOTICING TO WHOM ARTICLES BELONG.

ONE of the most remarkable ways in which dogs show their sagacity is in finding and fetching articles which have been lost or left behind by their owners, and which it might be thought that signs would but ineffectually direct them to seek. The Rev. Charles Williams says of his friend Mr. H——'s dog Mungo, who has been already noticed, that he would fetch anything of which he could be made to understand that it was wanted. One day, when there was snow on the ground, Mr. H—— left home for a walk with his dog. He had gone about two miles, when he discovered that he had lost one of his gloves. Showing the one that he retained to Mungo, he told him to fetch the one that was wanting. Mungo looked up earnestly in his master's face, as if endeavouring to catch as much of his meaning as possible, and then started back on the search. Mr. H—— watched how he proceeded, and observed that he noted each of the footprints carefully. At length he returned with the glove, and, from the time that he was absent, Mr. H—— supposed that he must

have gone back at least a mile. Writing to Mr. Williams respecting Mungo, Mr. H— says, “ I could send him at any time for a fork or a rake in the hay-field ; in fact, for any one thing I could show him, assured of his bringing it if not too heavy ; a stick or a glove I had been using, I could send him for, though it had not been pointed out to him. If I had been, for instance, at your house at S— with him, and had left my glove, stick, whip, or pocket-book in your house, I mean in the room, on a table, or in a chair, and not have called his attention to it at all at the time, and if, on arriving at T—, and only holding up my hand, and saying ‘ Mungo—lost,’ he would have looked me earnestly in the face, and on my repeating the word ‘ lost,’ have instantly started back to S—. He would have gone directly to your house, walked into all the rooms I had been in, proceeded to the stable if I had been there, till he succeeded, which he was sure to do if the article had not been removed ; and, once in his possession, touch him who dare.”¹

Similar sagacity was shown by a Newfoundland dog mentioned by the Rev. J. G. Wood. A gentleman who was at Clifton on a visit to some friends went out for a walk on the Downs, where he sat down to read, and became so interested in his book, that he forgot, when he rose, to take up his gold-headed cane. He had a Newfoundland dog, whom he had left at the house where he was staying, and to whom, as soon as he returned, he made signs that his cane was lost, and that he must go and seek for it. Shortly after the dog was dispatched, he was called to take his seat at the dinner-table. Just as the second course appeared, a noise

¹ ‘ Dogs and their Ways,’ p. 157.

was heard in the hall, and the dining-room door being opened, the dog burst in with the cane in his mouth, in spite of the servants' efforts to prevent him, determined to deliver it to no one but his master.

"An English gentleman, some time ago, went to some public gardens at St. Germain's, attended by a large mastiff, which was refused admittance, and in consequence left in the care of the guards at the entrance. A short time after he had gone in, he returned, and informed the guards that he had lost his watch, which must have been stolen, but observed that if he was permitted to take in his dog, he would soon discover the thief. Leave was accordingly given, and the gentleman then made signs to the dog to indicate what he had lost, and the dog immediately went about among the company, traversing the gardens in all directions, till at last he laid hold of a man, who tried in vain to get away from him. The gentleman expressed himself certain that this man had his watch, and gave him in charge to the guard, who, on the gentleman's allegation, searched him, and found not only the watch sought, but six others, from among which the dog at once took up his master's.¹

A Newfoundland dog, as M. Blaze relates, was so highly valued by his master for his fidelity and intelligence, that one day, when he was riding out with a friend, and the dog following, he assured his companion that if he left any article behind him, and made the animal aware whereabouts it was deposited, he would return, whatever might be the distance, and fetch it without fail. As the other gentleman expressed some doubt, it was agreed that a marked shilling, being first

¹ Mrs. Lee, 'Anecdotes of Animals,' p. 153.

shown to the dog, should be placed under a large stone by the roadside, and that, when they had ridden three miles further, the dog should be sent back to bring it. This was accordingly done; and the two gentlemen then rode off homewards, but, to their great concern, the dog did not overtake them; nor did he make his appearance till four o'clock the following morning, when he came crying to his master's door, with the shilling, and something besides, in his mouth. On inquiries being made respecting his doings, it was discovered that he had gone to the place where the shilling was deposited, but had found the stone too heavy for him to move, and that in consequence he had sat by it howling till two horsemen came up, who, being attracted by the dog's cries, lifted the stone, and one of them, observing the shilling, and not knowing that it was the object of the dog's anxiety, picked it up and put it into his pocket. They then remounted their horses, and went on; but the dog followed them for twenty miles, entered with them into the inn where they stopped, and secreted himself under one of the beds in a double-bedded room in which they were to sleep. The possessor of the shilling hung his trousers on a peg by the bedside; and the dog, as soon as the men were both asleep, seized the trousers, leaped out of the window, which was left open on account of the heat, and ran with them in his mouth, mile after mile, till he reached the house of his master. In the pockets were found a watch and some money, for which an advertisement was offered, and thus the dog's adventures were brought to light.

It might be wished that the names of the actors in this affair were known; for the story seems scarcely

credible. We can hardly conceive that the dog, who would of course keenly watch the raising of the stone, would have suffered the gentleman so easily to possess himself of the shilling, or, when he was possessed of it, would have allowed him, knowing that he had it about him, to ride off with it unopposed. The concealment of the dog, too, under the bed, without attracting the notice of either of the inmates, is a circumstance rather beyond belief. The story is characterized in the 'Quarterly Review'¹ as "too good to be true."

Yet we may perhaps regard this story as rather nearer to credibility than the following, which was given a short time ago in the 'Cambridge Independent,' on the information of the person who witnessed the occurrence which it relates:—"One day this week, the collector of assessed taxes in Chesterton had occasion to leave a tax-paper with a gentleman who has a small white bulldog,—the paper being, in fact, a notice to tax the animal. No one was at home, but the collector thrust the paper under the door. Glancing through the window, he saw the dog looking steadfastly at him. The dog then deliberately took the paper in his mouth, placed his feet upon the fender, and thrust the objectionable paper into a low fire, and perseveringly held it between the bars of the grate. The collector rattled meanwhile at the window, and made a noise to induce the dog to bark and drop the paper, but utterly in vain; it was held in the fire till it was consumed." We cannot believe this to be true, unless, indeed, the dog had been taught and accustomed to burn papers previously.

We can more readily afford our belief to the follow-

¹ Vol. ci.

ing anecdote :—“ A black retriever at Northampton was very recently accustomed to go with a boy to the stationer’s shop for the newspaper ; but one day he took it into his head to go alone for it ; and the boy met the dog coming back with the paper in his mouth. As this became known, he was told to fetch the paper ; and the writer’s informant has seen him doing so ; nor would he allow any one on the way to take it from him.”¹

The dog’s faculty of distinguishing articles, and recollecting to whom they belong, is shown in such anecdotes as the following :—

Mrs. Lee had a fine Newfoundland dog, extremely good-natured and trustworthy, named Lion. “ The great defects in his disposition,” she says, “ were heedlessness, and an under-estimate of his own power. He did not stop to think before he acted, as many more cautious dogs will do ; and he forgot that his weight was so great as to spoil and crush whatever he laid himself upon. As an instance of the former, he one day fancied he saw some one whom he knew in the street, and immediately dashed through the window, smashing not only the glass, but the frame-work. Directly he had done it he felt he had been wrong, and, returning through the shattered window, which was opened for him, he hung his head and walked unbidden to a recess in the room covered with matting, to which place he was always banished when naughty, and seated himself. The bell was rung for the housemaid to come and clear away the broken glass, and, as the woman smiled when she passed Lion, I turned my head towards him. There he sat, with a pair of my

¹ Williams, p. 226.

slippers, accidentally left in the room, in his mouth, as if he thought they would obtain his pardon. My gravity was disturbed, and Lion, seeing this, humbly came up to me, and rested his chin on my knees. I then lectured him concerning the mischief he had committed; and he so perfectly understood, that, for a long time, when any one pointed to the window, he would hang his head and tail, and look ashamed. During my absence he constantly collected articles which belonged to me, and slept upon them. One day, on returning from church, he met me on the stairs, dragging a new silk dress along with him by the sleeve, which he must have contrived, by himself, to have abstracted from a peg in a closet."¹

But clever as this Lion was, says Mrs. Lee, it must be owned that Professor Owen was acquainted with a Lion who surpassed him. The Professor was walking with a friend, the owner of the dog, near the mouth of a river on the coast of Cornwall, where he picked up a piece of seaweed. He saw that it was covered with minute animals, but, as it was only of trifling size, he threw it into the water, observing to his friend that "if so small a piece afforded so many specimens, how microscopically rich the whole plant would be! I should much like," he added, "to have one." They then walked on, but immediately after heard a splashing in the water, and, turning round, saw Lion in the midst of it. He seemed to be making violent exertions, thrusting his head under the water and then raising it again to breathe, till at last he came ashore, shaking himself and panting, and laid a whole plant of the same species at Mr. Owen's feet.² This Mr. Owen men-

¹ Mrs. Lee, *Anecd. of Animals*, p. 94.

² *Ib.* p. 95.

tioned as a wonderful proof of intelligence; and, if there was nothing to guide the dog but the words spoken, it certainly was so. The animal, it must be supposed, observed what Professor Owen had in his hand, and understanding, from something in his look or manner, that he was dissatisfied with it as he threw it away, brought him another piece in the hope, or on the chance, that he might like it better.

But these instances of intelligence seem to be surpassed by that of Dandie, a Newfoundland dog belonging to Mr. M'Intyre, of Edinburgh, which, however, appears to have been sedulously instructed. He would select his master's hat or penknife from a number of others, or a card chosen by his master from a whole pack; and pick out any article, which he might have been told to find, from a multitude of others belonging to the same person, showing that he was not guided by smell, but a sense of what was required of him. One evening a gentleman, sitting in company with some friends at Mr. M'Intyre's, accidentally dropped on the floor a shilling, which, after a diligent search, could not be found. Dandie, during this proceeding, had been sitting in a corner of the room, apparently unconscious of what was going on; and at last Mr. M'Intyre said to him, "Find us the shilling, Dandie, and you shall have a biscuit;" when the dog instantly jumped up, and laid the shilling on the table, having picked it up and kept it in his mouth, unperceived by the party. On another occasion his master, returning home when the family were gone to rest, could not find his bootjack, and told Dandie to look for it. The dog immediately scratched at the room-door, which his master had shut, and, when he was let out, went off to

a distant part of the house, and returned with the boot-jack in his mouth ; and Mr. M'Intyre then recollected that he had left it there under a sofa.

Some gentlemen were in the habit of giving Dandie occasionally a penny, which he would carry to a baker's and exchange for bread. One of them, not having given the dog a penny for some time, was accosted by him with signs of supplication, when he said, "I have not a penny with me to-day, but I can find one at home." He then returned to his house, and soon after heard a noise at the door, and Dandie, when it was opened, sprang in for his penny. The gentleman, by way of frolic, gave him a bad one, for which the baker refused to give him a loaf ; and the dog returned with it to the house, and laid it down at the feet of the servant who opened the door, with an air of disdain. But it was remarkable that he did not spend all his money, though it was for a long time unknown what he did with it. One Sunday, however, a day on which it was unlikely that he would receive money, he came home with a loaf ; and Mr. M'Intyre desired the servant to look whether any money was lying about. Dandie watched her motions, but seemed quite unconcerned till she approached one of the beds, when he caught hold of her dress and gently drew her back. As she sought there the more, he growled and struggled, and his master was obliged to secure him ; and the woman then found sevenpence-halfpenny hid in the bed under a piece of cloth. From that time the dog showed dislike of the woman, and hid his pence in the corner of a sawpit, under a heap of dust.¹

Dr. Edward Walsh, some years ago, had a dog which

¹ Mrs. Lee, *Anecd. of Animals*, p. 99.

he described as one of the most sagacious that ever were seen. She was a large brown water-spaniel, named Quail, standing nearly three feet high; an animal of great vivacity; and, whenever she was addressed, would turn her head on one side with the utmost apparent inquisitiveness. In her younger days she was taught many things by the boys of the family, but acquired far more for herself than she learned from others. In fetching and carrying she soon became a proficient; but she even learned to distinguish what belonged to every member of the family, and to every part of their person. If a glove were lost, the owner had but to point to the hand, and Quail would proceed to search for it, almost always with success. In time she would pick up of herself any article that was dropped, and thus saved many. If one of the family went out without his hat, and wished to have it, he need only let Quail see him touch his head, and she would go to the hall table, select the right hat from the rest, and bring it to him. If on these occasions, or any other, she went to the back door, to which there was no rapper, and at which people generally obtained admittance by thumping, she would beat the door with her tail till she brought some one to open it.

One day Dr. Walsh went out to shoot, attended by Quail. He proceeded several miles before he fired his gun, and, on preparing to reload it, found that he was without his powder-horn. Quail readily understood what was wanting, and as readily went back in quest of it. She retraced her master's footsteps through meadows and fields, and across roads and ditches; following even several windings over the same fields; till

at last she discovered the powder-horn, and brought it back in somewhat less than an hour.

An old woman in the family was fond of snuff, but unable to fetch it; she therefore sought the services of the boy, but he transferred the commission to Quail. He put the coin for payment into the box, and taught the dog the way to the snuff-shop, where, putting her fore-feet on the counter, she would rattle the money in the box, and get the box filled. She was even brought to shut the door, a thing which dogs will very seldom learn; lifting up her paw, and pushing the door forward till the lock clicked. On one occasion she could not move the door, and after several efforts drew back, whining to express her disappointment. What prevented her was a smoothing-iron, which the servant had placed against the door to keep it open, because the room smoked. Quail, again returning to the door, considered awhile, and at last saw what was the hindrance; she then ran at the iron, dragged it away, and shut the door in an exultation of delight. Similar obstructions were often placed at the door afterwards, that it might be seen how she would act; but she was no longer puzzled; she removed the object, whatever it was, and then barked at it and shook it, as dogs do in venting their displeasure at anything that annoys them.

Dr. Walsh's mother lived with him, and during her absence on one occasion, a portrait of her was brought home, and placed on a sofa ready for being hung up. Hearing Quail barking with delight in the room the day after, the doctor looked in to see what was the cause, when he found that she had recognized the portrait, and was licking its face. After the picture was

hung, she always noticed it when she entered the room, and would lie down before it on the carpet, gazing at it intently; a practice which she continued till Mrs. Walsh's return, when the original detached her attention from the portrait.

A similar story is told of Mr. J. P. Knight's portraits of his "Two Boys," which were so much admired at the International Exhibition of 1862. When the likenesses were brought home, they were recognized with great joy by a spaniel strongly attached to the originals. The little animal endeavoured to attract their notice, and was with difficulty withheld from leaping on the picture and perhaps injuring it. This manifestation of feeling continued for many minutes, and was renewed on the next and following days; but at last, finding no return made to its advances, the spaniel drew off in mortification, yet continuing to look back, as if reproaching its play-fellows for withholding their usual caresses.¹ This recognition of likeness may have been a proof of superior intelligence in these dogs; for dogs in general, we believe, will seldom pay much attention to the portrait of a friend; and it is observable how little surprise (most commonly, we believe, none) dogs will show at seeing the exact likeness of themselves in a glass set on the floor. Most of them, perhaps, have seen the reflection of their faces in water; but it might be expected that a complete image of themselves, presented before them for the first time, would startle them. But dogs are chiefly determined, as to identity or non-identity, by scent; if no scent proceeds from the object before them, it is to them unreal; if not the known scent, it

¹ Williams, 'Dogs and their Ways,' p. 313.

is by them unrecognized; and we rather wonder that Quail, after finding Mrs. Walsh's portrait smelt of oil, should have retained the notion that it was Mrs. Walsh herself; if indeed she did retain that notion; for she may, as we have intimated, from something of higher intelligence than that of ordinary dogs, have valued it only for its likeness to the original, without being deceived as to its real character.

CHAPTER XXI.

DOG.—HOW MUCH HE MAY BE TAUGHT.

THE intelligence of dogs is very much shown in the knowledge or accomplishments which they are capable of acquiring. Of what dogs have been taught there are many remarkable accounts.

The art of teaching dogs tricks is as old at least as the days of the Roman emperors. Plutarch witnessed the performance of a dog thus taught before the Emperor Vespasian in the theatre of Marcellus. The animal belonged to a man who represented some kind of dramatic piece, in which were several characters, the dog also having a part, and acting it with suitable feelings, apparently, and gestures. One part of his performance was to counterfeit being poisoned by eating a piece of bread, in which it was pretended that some deadly drug was mixed. "Having swallowed the bread," says Plutarch, "he soon after assumed the appearance of trembling, staggering, and being stupefied, and at length, stretching himself out, he lay as if dead, and allowed himself to be dragged from place to place as the business of the play demanded; but when he understood, from what he heard and noted, that it

was time for him to come to life again, he began to stir himself, at first very gently, as if waking from a deep sleep; then he raised his head and gazed about him; and, afterwards, to the astonishment of the spectators, rose and walked up to one of the actors, jumping up at him and seeming overjoyed, just as the tenor of the piece required; so that all who were present, the emperor as well as the rest, appeared to sympathize with him in his delight."¹

"The dancing dogs at Sadler's Wells," says Bingley,² "were curiously instructed. After storming a fort, and performing various other feats, one of them was brought in as a deserter, was shot, and carried off as dead by his companions. The mode in which a dog is taught to point out different cards that are placed near him (a common trick) is this:—He is first taught, by repeated trials, to know something by a certain mark; and then to distinguish one ace from another. Food is frequently offered him on a card he is unacquainted with, after which he is sent to search it out from the pack; and after a little experience he never mistakes. Profiting by the discovery of receiving food and caresses as a reward for his care, he soon becomes able to know each particular card, which, when it is called for, he brings with an air of gaiety, and without any confusion; and in reality it is no more surprising to see a dog distinguish one card from thirty others than it is to see him in the street distinguish his master's door from those of his neighbours."

One of the most remarkable accounts of dogs' accomplishments is given in the 'Lancet,' from which

¹ Plutarch, 'De Solertiâ Animalium,' c. xix.

² An. Biog. vol. i. 190.

Mr. Youatt transferred it to his treatise on the dog.¹ I extract it from Mr. Youatt's pages. The editor of the 'Lancet' having heard that a French gentleman in London, M. Léonard, had been for some time instructing two dogs in various difficult performances, with a view to elicit the highest manifestation of intellect and power of reflection that the dog can possibly exhibit, sought an introduction to him, and was obligingly favoured, at his house near Hanover Square, with a sight of what the dogs could do. He thus describes what he saw :—

“Two fine dogs, of the Spanish breed, were introduced by M. Léonard, with the customary French *politesse*, the largest by the name of Monsieur Philax, the other as Monsieur Brac. The former had been in training three, and the latter two years. They were in vigorous health, and, having bowed very gracefully, seated themselves on the hearthrug side by side. M. Léonard then gave a lively description of the means he had employed to develop the cerebral system in these animals; how, from having been fond of the chase, and ambitious of possessing the best trained dogs, he had employed the usual course of training; how the conviction had been impressed on his mind that, by gentle usage and steady perseverance in inducing the animal to repeat again and again what was required, not only would the dog be capable of performing that specific act, but the part of the brain which was brought into activity by the mental effort would become more largely developed, and hence a permanent increase of mental power be obtained.

“After this introduction, M. Léonard spoke to his

dogs in French, in his usual tone, and ordered one of them to walk, the other to lie down, to run, to gallop, halt, crouch, etc., which they performed as promptly and correctly as the most docile children. Then he directed them to go through the usual exercises of the *manège*, which they performed as well as the best trained ponies at Astley's.

“He next placed six cards of different colours on the floor, and, sitting with his back to the dogs, directed one to pick up the blue card, and the other the white, etc., varying his orders rapidly, and speaking in such a manner that it was impossible the dogs could have executed his commands, if they had not had a perfect knowledge of the words. For instance, M. Léonard said, ‘Philax, take the red card and give it to Brac;’ and ‘Brac, take the white card and give it to Philax;’ the dogs instantly did this, and exchanged cards with each other. He then said, ‘Philax, put your card on the green,’ and ‘Brac, put yours on the blue;’ and this was instantly performed. Pieces of bread and meat were placed on the floor, with figured cards, and a variety of directions were given to the dogs, so as to put their intelligence and obedience to a severe test. They brought the bread, meat, or cards, as commanded, but did not attempt to eat or touch unless ordered. Philax was then ordered to bring a piece of meat and give it to Brac, and then Brac was told to give it back to Philax, who was to return it to its place. Philax was next told he might bring a piece of bread and eat it; but, before he had time to swallow it, his master forbade him, and directed him to show that he had not disobeyed; and the dog instantly protruded the crust between his lips.

“While many of these feats were being performed, M. Léonard snapped a whip violently, to prove that the animals were so completely under discipline that they would not heed any interruption.

“After many other performances, M. Léonard invited a gentleman to play a game at dominoes with one of them. The younger and slighter dog then seated himself on a chair at the table, and the writer and M. Léonard seated themselves opposite. Six dominoes were placed on their edges in the usual manner before the dog, and a like number before the writer. The dog having a double number, took one up in his mouth, and put it in the middle of the table; the writer played a corresponding piece on one side; the dog immediately played another correctly, and so on until all the pieces were engaged. Other six dominoes were then given to each, and the writer intentionally placed a wrong number. The dog looked surprised, stared very earnestly at the writer, growled, and finally barked angrily. Finding that no notice was taken of his remonstrances, he pushed away the wrong domino with his nose, and took up a suitable one from his own pieces, and played it in its stead. The writer then played correctly; the dog followed, and won the game. Not the slightest intimation could have been given by M. Léonard to the dog. This mode of play must have been entirely the result of his own observation and judgment. It should be added that the performances were strictly private. The owner of the dogs was a gentleman of independent fortune, and the instruction of his dogs had been taken up merely as a curious and amusing investigation.”

Two poodle dogs, educated in Milan, exhibited their

attainments in Paris, and "I can vouch," says Mrs. Lee, "for the veracity of the following statement. The elder was named Fido, and the younger Bianco. The former was a serious, steady dog, who walked about with much solemnity; but Bianco was giddy and frolicsome. A word was given to Fido from the Greek, Latin, Italian, French, or English languages, and selected from a book where fifty words in each tongue were inscribed, which, altogether, made three hundred" [two hundred and fifty] "combinations. He selected from the letters of the alphabet those which composed the given word, and laid them at the feet of his master. On one occasion the word 'heaven' was told to him, and he quickly placed the letters till he came to the second *e*, when, after vainly searching for the letter in his alphabet, he took it from the first syllable and inserted it in the second. He went through the first four rules of arithmetic in the same way, with extraordinary celerity, and arranged the double ciphers in the same way as the double vowel in 'heaven.' Bianco, however, although so heedless, was quicker than Fido, and, when the latter made a mistake, was called upon to rectify it, but as quickly dismissed, as he was wont to pull his companion's ears to come and play with him.

"One day Fido spelt the word Jupiter with a *b*, but the younger *savant* being summoned to correct the error, he carefully contemplated the word, and, pushing out the *b*, replaced it with a *p*. A lady held her repeating watch to the ear of Fido, and made it strike eight and three-quarters. Fido immediately selected an eight, and then a six for the three-quarters; the company present and the master insisted upon his error,

and he again looked among his ciphers, but, being unable to rectify it, he coolly sat down in the middle, and looked at those around him. The watch was again sounded, and it was ascertained that it struck two for every quarter, which quite exonerated Fido. Both dogs would sit down to play *écarté*, asking each other for, or refusing cards, with the most important and significant look, cutting at proper times, and never mistaking one card for another. Bianco occasionally won, and went to the ciphers to mark his points, and when he was asked how many his adversary had gained, he took out a 0 with his teeth. They sometimes play at *écarté* with one of the company assembled to see them, when they evinced the same correctness, and seemed to know all the terms of the game. All this passed without the slightest audible or visible sign between them and their master.”¹

Though Mrs. Lee “vouches for the veracity” of this account, yet, as she did not see these wonderful performances herself, it may be wished that she had told us from whom she received the information respecting them. Many readers must surely feel some degree of incredulity when they hear so positive a statement of dogs spelling two hundred and fifty words, and playing at *écarté* without error, and without being prompted by any one about them.

M. Blaze witnessed the exhibition of some dancing dogs, who took a citadel by assault; part feigned to be vanquishers, part to be killed, others affected to be wounded, and went about limping.²

Attempts have even been made to teach dogs to

¹ Mrs. Lee, ‘Anecdotes of Animals,’ p. 134.

² Hist. du Chien, p. 49.

speaking, though, as might be expected, with no great success.

In the 'Memoirs of the French Academy' is an account, communicated by Leibnitz, of a dog that was made to speak several words, and to call, as it is expressed, for tea, coffee, chocolate, and other articles. It is described as a dog of middle size, and belonged to a peasant at Misnia, in Saxony. The peasant's son, a little boy, imagining that he heard the dog utter sounds resembling words, took it into his head to teach him to speak. For this purpose he took great pains with the animal, which was about three years old when its instruction in language commenced, and was made to articulate, more or less distinctly, at least thirty words. He was however very reluctant to exercise his faculty, and could never be brought to utter a word unless it was first pronounced for him by his teacher. Even this imperfect attempt at elocution the French Academicians say they would scarcely have ventured to admit into their records, had it not been reported by so eminent a philosopher.¹

M. Blaze, in noticing this account, adds that of another dog at Berlin, whom his master, by exciting him to growl, and then working about his jaws, taught to utter something like sixty words.²

Joannes Faber, as Bewick observes, mentions a dog, belonging to a nobleman of the Medici family, which always attended at its master's table, took from him his plates, and brought him others; and, if he wanted wine, would carry it to him in a glass placed upon a silver plate, which it held in its mouth, without spilling

¹ Cited from Dr. Shaw in Blaine's 'Encyclopædia of Rural Sports,' art. 2544.

M. Blaze, Hist. du Chien, p. 69.

the smallest drop. The same dog would also hold the stirrups in its teeth, whilst its master was mounting his horse.¹

Dogs, as they may be taught other things, may also be taught to steal.

Sir Walter Scott, who, as we have seen, tells the story of the sheep-dog that stole sheep for his master, tells a similar story of craftiness in a spaniel, which a friend of his had purchased from a dealer in dogs. This dog, whenever his owner entered a shop, would linger behind him at some little distance, keeping himself so far aloof as to appear totally unconnected with him. Thus he would wait about in the shop till his master left it, when he would still loiter behind till he could find, if possible, an opportunity of seizing a pair of gloves, or silk stockings, or some other thing that he could easily carry, which he would bring off and offer to his master. But finding these practices discouraged, when it had no longer a thief for its master, the animal was gradually cured of them.²

Such acquirements in the dog as we have noticed in this chapter show great tenacity of memory, and great power of attention and understanding, and would scarcely be credible if we had not such trustworthy testimony to their having been gained. But we must be sensible that the dog, under such training and treatment, is only an instrument in the hand of man; he requires the attention of man to keep him to the practice of his accomplishments, that he may retain his hold of them; if he were left to himself for but a few weeks or days, he would cease to cultivate, and gradually forget, all that he had learned. There is there-

¹ Bewick's *Hist. of Quadr.* p. 367.

² Notes to 'St. Ronan's Well.'

fore no ground for hoping, with M. Léonard, that the intellect of the dog will be permanently enlarged and improved. His attainments are of no value, except to show what he is capable of being taught; nor is it pleasant to contemplate the animal under the forced exhibition of them. I had rather see the dog frisking in his natural state, and showing such sense as he possesses, in his own way, than witness his performance of the most elaborate tricks that can be taught him. I have seen dancing poodles taught to execute quadrilles, and go through much of the etiquette of a ball-room, but to me the sight of the dogs under constraint engage in toils in which they could feel no interest, was extremely painful. An acquaintance of mine had a dog that he had taught to walk round his dining-room after dinner on his hind legs, with his fore-feet against the wall, for the reward of a biscuit, and the amusement of the company, but I should have been better pleased to have given the poor dog the biscuit without exacting the performance of the feat. As to uttering words, says M. Blaze, "I love better to hear the dog's natural language; it is a thousand times more delightful than the mechanical repetition of all the words in the dictionary."

But whenever men have a fancy to train dogs for any purpose, it should be done by kind and gentle means. There is no occasion, says Mr. Youatt, who did not speak without knowledge of the subject, to chastise a dog by beating; he should be corrected with good temper and firmness, not with passion or violence; for a dog has sufficient sense to distinguish between an angry infliction and the intention to punish a fault. In educating hounds, an intelligent huntsman will care-

fully note their various dispositions and tempers, and profit by the difference in them. Some hounds are timid, and require encouragement; some, though forward, and requiring to be checked, may yet be of a warm and generous nature, that will return kindness, and not be sullen under correction. Thus rewards and punishments may be adapted to their several dispositions.

CHAPTER XXII.

DOG.—MORAL FEELINGS.—SENSE OF JUSTICE.

As to moral feeling in the inferior animals, Sir Benjamin Brodie, in his 'Psychological Inquiries,' observes that dogs, and some other animals, manifest it in their actions towards one another, as well as in their conduct towards man. Animals assist one another, and make suitable returns for good treatment, both among themselves and towards human beings. Bishop Watson, after reading Bingley's 'Animal Biography,' observed that "domesticated and well-educated animals seem to have a knowledge of what may be called their duty to their master." The horse, the dog, and the elephant attach themselves to those that deal kindly with them, and are ready to afford them any help in their power when they are in difficulties; and even animals in their wild state, who have had no association with man, will, when they casually fall in with him, and receive from him any service, show a proper sense of it, and a willingness to make a recompense for it. The story of Androclus and the lion is too well known to every school-boy, from the pages of 'Sandford and Merton,' and other books, to be re-

peated here. But it may be observed that, though the truth of the story has been doubted, there is as much attestation to it as can well be desired.¹

“The inferior animals,” says Mr. Youatt, “are, to a certain extent, endowed with the same faculties as ourselves. They are even susceptible of the same moral qualities. Hatred, love, fear, hope, joy, distress, courage, timidity, jealousy, and many varied passions influence and agitate them, as they do the human being. The dog is an illustration of this—the most susceptible to every impression—approaching the nearest to man in his instincts, and in many actions that surprise the philosopher, who justly appreciates it.”²

Mr. Youatt also tells us, in confirmation, that having once a Newfoundland dog, for which he had great fondness, but which it was inconvenient for him to keep, he gave it to a person who, he knew, would treat it well. Four years after he had parted with the dog, during which time he had never seen him, as he was going one day towards Kingston, he met him and his master at the brow of the hill where Jerry Abershaw’s gibbet was then standing, when the dog, notwithstanding the length of their separation, immediately recollected his former master, and began to jump upon him. After talking with Mr. Youatt awhile, his second master proceeded towards Wandsworth, and the dog followed him; but Mr. Youatt had not gone halfway down the hill, when the dog came running up to his side again, not with gentle advances, but growling deeply, and with his hair bristling up. Mr. Youatt was surprised at the dog’s demeanour, and

¹ See Aul. Gell. v. 14.

² ‘Youatt, ‘On the Dog,’ p. 107.

turning about, saw two ill-looking fellows making their way through the bushes between the Roehampton and Wandsworth roads, who, when they saw Mr. Youatt attended by a formidable dog, retreated. Mr. Youatt thought that they were probably seeking an opportunity for robbing; and it was evident that the dog was convinced they meditated mischief, for his only reason for returning was to accompany Mr. Youatt to the bottom of the hill, where, seeing him out of danger, and wagging a farewell with his tail, he started off to overtake his master. Here we see a desire in a dog to make a return for kindness to a person whom he had not seen for four years, yet of whom he had a vivid recollection.

There was much of moral feeling in the generous compassion for an injured animal, manifested by the hero of the following story. A cat, some years ago, fell into the hands of some young ruffians at Liverpool, who stoned it and dragged it through a pool of water. Many persons, during the course of their proceedings, passed by without attempting to stop them; but a dog, who came up at the time, was moved with pity and indignation. He rushed in among the boys, barked furiously at them, sprang towards the cat, stood over it, terrified its persecutors into flight, and carried it off in his mouth, bleeding, and almost senseless, to his kennel at the Talbot Inn, to which he belonged. There he laid it on the straw, licked it till it was clean, and then stretched himself on it, as if to impart to it some of his own warmth. At last it began to revive, when he went immediately to seek food for it, and the people of the house, observing the dog's operations, gave it some warm milk. It was some

days before the cat fully recovered, but, till such was the case, the dog never remitted his attention to it; and the cat from that time showed such attachment to the dog, that they were seen going about together for years in Liverpool.¹

A strong sense of justice must have existed in the dog who showed such decided resentment at being ill-treated as is told in the following anecdote, which is related as a fact by Mr. Westcott in his 'Recreative Science.' A gentleman met with a retriever while on a shooting excursion. The dog came at the sound of a whistle, and, after a little coaxing, made himself quite friendly, and followed the gentleman home, seeming resolved to adhere to him as his master. Some weeks afterwards a stranger happened to be shooting in the neighbourhood, and, passing near the house in which the dog had found an abode, he was invited in by the owner to take some refreshment, who naturally asked what sport he had had. "None worth mentioning," he replied; "my dog is unequal to his work. I lost one a short time since worth his weight in gold; and, unfortunately, have heard no tidings of him since." His entertainer then asked when and how he lost him. "About fifteen miles from hence," he replied, "while I was out shooting I missed several birds, which put me out of temper. I beat the dog, and threatened to shoot him. When I got into the next field the dog was gone. I thought I should find him at home; but no, he had gone utterly; and I believe he went because I threatened to shoot him." Just as the visitor had proceeded thus far in his account, the dog that had attached himself to the hest

¹ Williams's 'Dogs and their Ways,' p. 43.

entered the room ; and the stranger at once recognized him as the one that he had lost. But the dog would show no recognition of his former master ; to his call he was resolutely deaf ; and when he attempted to pat him, he gave a threatening growl. His new master tied a cord round his neck, and gave the end of it to his former one ; but the dog planted his feet stubbornly, and refused to be led away. When the cord was slackened he took refuge under the sofa, from whence he would not come out till his old master, who now willingly gave him up to his new one, had left the room.

Strict observation of justice among themselves is maintained by the dogs of Constantinople, whose condition would greatly surprise an Englishman going thither without having received previous information respecting them. In this country every dog has a master ; he is brought up under guardianship ; if he loses his master, he sets himself to find another, being uneasy unless he is a client to some human patron. He deserts his own species that he may attach himself to man. But among the Turks the state of dogs is very different ; the Mahometans regard them as unclean, and will not admit them into their houses. Yet they tolerate them in the streets, where they are born and nurtured, and where they are of great use ; for, as the people throw their kitchen refuse out of doors, the stench and obstruction of the ways would soon become intolerable, were it not for the clearance made by the dogs acting as scavengers.

These animals, being left to their own guidance, establish a kind of government for themselves ; they understand, from natural sagacity, that each, as the

proverb has it, is to live and let live; and that every one, therefore, must confine his search for subsistence within a certain limit, allowing others to seek theirs without that limit. They, in consequence, form themselves, like horses in their wild state, into troops, each of which keeps itself to a particular quarter of the city or suburbs, and of which every individual is on the watch to repel strangers from their territories. If a dog is found in a quarter not his own, the dogs of that quarter fall upon him, and it is well for him if he escapes with life.

“No one, I suppose,” says the Right Hon. W. G. Rose, “who sees the dog depending on his master for meat, drink, and home, and only pursuing his game under his instruction, can easily imagine him the citizen of a canine republic, governed by certain laws, and supporting himself by his own exertions. Yet this may be seen at Constantinople.

“At Constantinople dogs so entirely cover the streets that the French expression *c'est de quoi les rues sont pavées* may, literally speaking, be applied to them. These live masterless, and under a sort of federal government of their own, for they seem to have national and provincial laws. Thus, though they are united for general purposes, if a dog of another street intrudes into that of which he is not a denizen, he is driven out by the simultaneous attack of the autochthones.

“This has been witnessed and related by hundreds of Europeans. What I am going to relate rests upon the authority of one alone, the son of an ambassador to the Porte, long resident at Pera. He assured me that if the intruding dog made a respectable resistance, a single champion was assigned him to contend against,

and, if he proved victorious, he not only received his denizenship, but was installed in the best quarters, to wit, in those nearest a butcher's shop. Nor do dogs only unite under a combination of artificial circumstances; they will do so in a state of nature. The buccaneers report that they form associations in South America for purposes of chase; and Woodes Rogers describes them as hunting under a captain of their own, and, when the quarry is brought down, suspending their feast till he is satisfied."

A similar state of things, in reference to dogs, may be seen at Lisbon, and, according to Sir Emerson Tennent, in Ceylon, where, though there are no native dogs, yet "every town and village is haunted by mongrels of European descent, which are known by the generic description of *Pariahs*. They are a miserable race," he adds, "acknowledged by no owners, living on the garbage of the streets and sewers, lean, wretched, and mangy, and, if spoken to unexpectedly, shrinking with an almost involuntary cry. Yet in these persecuted outcasts there survives that germ of instinctive affection which binds the dog to the human race, and a gentle word, even a look of compassionate kindness, is sufficient foundation for a lasting attachment."

"It is a singular but well-authenticated fact," says the Rev. C. Williams, that at Constantinople "not even a bone of roast meat will induce a dog to follow a person beyond his own district. A visitor to the city caressed, by way of experiment, one of these animals, whose post, with many others, was near the Mevlevi Khan; he daily fed the dog till he became fat and sleek, carried his tail high, and was no longer to be recognized as his former self. He was even so greatly

improved as to lose his currishness, and, when his friends approached, expressed his gratitude by fondling upon them and licking their hands; yet he would never follow them beyond an imaginary limit either way; here he would certainly stop, wag his tail, look wistfully after them till they were out of sight, and then return to his post. On one occasion, and only one, when very hungry, and allured by tempting food, he overstepped his limit, but he had not exceeded it twenty yards when he recollected himself and ran hastily back.”¹

Of the dogs of Egypt Sir Gardner Wilkinson² gives a similar account, and observes that the number of such barking plagues might be diminished, much to the advantage of the country. “They consist,” he says, “of a number of small republics, each having its own district, determined by a frontier line, respected equally by itself and its neighbours; and woe to the dog who dares to venture across it at night, either for plunder, curiosity, or a love adventure. He is chased with all the fury of the offended party whose territory he has invaded; but if lucky enough to escape to his own frontier unhurt, he immediately turns round with the confidence of right, defies his pursuers to continue the chase, and, supported by his assembled friends, joins with them in barking defiance at any further hostility. Egypt is therefore not the country for a European dog, unaccustomed to such a state of canine society; and I remember hearing of a native servant, who had been sent by his Frank master to walk out a favourite pointer, running home in tears with the hind leg of the mangled dog, being the only part he could

¹ Williams, ‘Dogs and their Ways,’ p. 267. ² ‘Modern Egypt.’

rescue from the fierce attacks of a whole tribe of *suburranæ canes*.”

Whatever sort of feeling jealousy be considered, immoral certainly rather than moral, and not a dweller in the strongest minds, it is experienced by dogs and other animals as well as by human beings. Newfoundland dogs, with all their intelligence, are subject to envy and jealousy, even when there is little cause for them. Mr. Charles Davis, the well-known huntsman of her Majesty's stag-hounds, told Mr. Jesse that a friend of his had a fine Newfoundland dog, which was a great favourite with the family, and that while the dog was confined in the yard, a pet lamb was given to one of the children, which the dog soon found to be sharing a great portion of those attentions from the inmates of the house which he had been in the habit of receiving. This state of things produced so severe an effect upon the poor animal that he fretted and lost his appetite, and became altogether extremely unwell. As it was thought that exercise might be of use to him, he was let loose; but he no sooner found himself at liberty than he availed himself of an opportunity of seizing the lamb, and carrying it off in his mouth. He was seen to convey it down a lane, which was about a quarter of a mile from the house, and at the bottom of which the Thames flowed; and, when he came to the river, he thrust the lamb under the water, and held it there till it was lifeless. When it was afterwards examined, it did not appear to have been bitten or otherwise injured; “and it might almost be supposed,” says Mr. Jesse, “that the dog had chosen the easiest death for removing the object of his dislike.”¹

¹ Jesse, Anecd. of Dogs, p. 126.

M. Blaze, in his 'History of the Dog,' tells us of a terrier that even killed a child, because he was jealous of the caresses bestowed by the child on a rival dog, while he himself was neglected.

But if the dog has such defects in his character, his virtues are far more frequently shown than his vices. It is pleasant to read Arrian's account of his excellent greyhound, named, as being eager and spirited, Hormé. "She is also," he proceeds, (for she was alive when the description of her was written,) "of a most gentle and affectionate disposition; and never before was any dog so strongly attached as she is both to myself and to my friend and fellow-sportsman Megillus. When she is not actually engaged in coursing, she is never willingly absent from one or other of us. If I am at home, she remains with me; if I go out, she follows me; if I go to the gymnasium, she is at my side, and sits down near me while I am exercising; and, when I return, she runs on before, frequently turning back to notice whether I have gone out of the road, and, when she sees me coming, shows signs of pleasure, and trots on before me again. If I go out on any public business, she stays with my friend, and behaves to him as she would behave to me. If either of us is sick, she is his constant attendant. When she sees either of us after a short absence, she leaps gently up upon him by way of salutation, barking at the same time, as if to bid him welcome. At meals she pats us first with one foot and then with the other, reminding us that she is to have her share of food. She has also many tones of voice, more than I think I have ever known in any other dog, intimating by sounds what she wants. And having been, when a

puppy, corrected with a whip, she even to this day, if any one names a whip, goes up to the person that names it, crouching down and supplicating him, applying her mouth to his as if to kiss him, leaping up, and hanging upon his neck, and not letting him go till she is satisfied that he had no intention of hurting her.”¹

If the reader would wish to see the dog’s virtues summed up, let him read M. Blaze’s eulogy of him :—

“The dog possesses incontestably all the qualities of a sensible man ; and, I grieve to say, man has not in general the noble qualities of the dog. We make a virtue of gratitude, which is nothing but a duty ; this virtue, this duty, are inherent in the dog. We brand ingratitude, and yet all men are ungrateful. It is a vice which commences in the cradle, and grows with our growth ; and, together with selfishness, becomes almost always the grand mover of human actions. The dog knows not the word virtue ; that which we dignify by this title, and admire as a rare thing—and very rare it is in truth,—constitutes his normal state. Where will you find a man always grateful, always affectionate, never selfish, pushing the abnegation of self to the utmost limits of possibility ; without gain, devoted to death, without ambition, rendering every service,—in short, forgetful of injuries and mindful only of benefits received ? Seek him not ; it would be a useless task ; but take the first dog you meet, and from the moment he adopts you for his master, you will find in *him* all these qualities. He will love you without calculation entering into his affections. His greatest happiness will be to be near you ; and should

¹ Arrian, ‘De Venatione,’ e. 5.

you be reduced to beg your bread, not only will he aid you in this difficult trade, but he would not abandon you to follow even a king into his palace. Your friends will quit you in misfortune; your wife perhaps will forget her plighted troth; but your dog will remain always near you; he will come and die at your feet; or, if you depart before him on the great voyage, he will accompany you to your last abode.”¹

¹ Hist. du Chien, pref. p. iv.

CHAPTER XXIII.

THE HORSE.—GENERAL INTELLIGENCE.—GOOD
FEELING.

OF the horse no stories are told denoting any very high sagacity or intelligence. The good qualities of horses are chiefly sensibility to kindness, attachment to those who treat them well, and docility under judicious management. Some instances of cleverness in their doings, however, are recorded, sufficient to show that they have a certain portion of understanding, though not approaching at all to the “half-reasoning” faculties of the elephant or dog. In one of Lord Brougham’s ‘Dialogues on Instinct’ mention is made of a horse that secured admittance to a pasture from which he had been excluded, by pressing down the upright bar of the latch of a wicket, exactly as a man would have done. A story is also related of a hunter, belonging to a gentleman near Leeds, that did something more than this of a similar nature;—he was turned into a field where there was a pump and a trough, and observing that when people worked the handle a supply of water came, he imitated what he saw, and whenever he wanted to drink, and the trough

was empty, he would take the handle in his mouth and work it himself, till a sufficiency was collected for his need. Some other instances of equal or greater sagacity in the horse may be found, as well as examples of pleasing qualities, and what we may call sound moral feeling in him.

A better illustration of the sagacity of the horse could hardly be found than is contained in the following anecdote :—“ Mr. J. Lane, of Frescombe, in Gloucestershire, on his returning home one day, turned his horse into a field. A few days before this the horse had been shod, and unfortunately had been pinched in the shoeing of one foot. The following morning Mr. Lane missed the horse. He caused an active search to be made in the neighbourhood, when the following circumstances transpired. The animal, it is supposed, feeling the foot to be uncomfortable, made his way out of the field by lifting the gate off the hinges with his teeth. He went straight to the farrier's shop where he had been shod, a distance of a mile and a half. The horse advanced to the forge, and held up his ailing foot. The farrier examined the hoof, and discovered the injury. He took off the shoe, and replaced it more carefully, on which the horse set off at a merry pace for his well-known pasture. Shortly after, Mr. Lane's servants, who were in search of the horse, passed the farrier's shop, and mentioned their supposed loss, when the farrier laughingly replied, ‘ Oh, the horse has been here, and got re-shod, and has gone home again.’ This they found to be actually the case.”¹

Similar intelligence was shown by a horse at Glas-

¹ Rev. T. Jackson, ‘ Our Dumb Companions,’ p. 94.

gow, who applied for relief, of his own accord, to a farrier from whom he had before received medicine. He had an internal disease, which had at one time been very severe, but from which he had for a considerable period been free, till one morning, when he was employed with several other horses in drawing carts, he took an opportunity at breakfast time, when he was released from his cart, and his driver's back was turned, to walk off to the farrier's workshop, which was at some little distance. When the farrier appeared, he lay down, and seemed anxious to show, by every means in his power, that he was in distress. The farrier understood him, concluded that he was troubled with his old complaint, and administered the usual dose; and in a short time the animal trotted off contentedly to his master, who had been looking in all directions in quest of him.

The following anecdote is furnished by Mrs. Lee.¹ The horse of whom it is told is said to have previously given many proofs of great sagacity; who is the narrator, she does not state. "During the winter, a large wide drain had been made, and over this strong planks had been placed for our friend, the cart-horse, to pass over to his stable. It had snowed during the night, and had frozen very hard in the morning. How he passed over the planks in going out to work, I know not; but, on being turned loose from the cart at breakfast, he came up to them, and I saw his fore-feet slip; he drew back immediately, and seemed for a moment at a loss how to get on. Close to these planks a cart-load of sand had been placed; he put his fore-feet on this, and looked wistfully to the other side of the drain.

¹ Anecd. of Animals, p. 332.

The boy who attended the horse, and who had gone round by another path, seeing him stand there, called him. The horse immediately turned round, and set about scraping the sand most vigorously, first with one hind-foot, then with the other. The boy, perhaps wondering what he was going to do, waited to see. When the planks were completely covered with sand, the horse turned round again, unhesitatingly walked over, and trotted up to his stable and driver."

In the 'Naturalist's Magazine' a Mr. Billows says, "When a boy, living at Whitchurch, near Blandford, in Dorsetshire, I noticed two cart-horses that were driven from a farmyard to drink. The brook was frozen over, and one horse struck with his foot to break the ice, but it was too hard to yield. The two horses then, standing side by side, lifted each a foot simultaneously, and causing their hoofs to descend together, the united impulse broke the ice." Men could not have acted with greater sense.

The following pleasing anecdote illustrates at once the sagacity of the horse, and his attachment to the master who uses him, and his desire to serve him to the utmost of his power:—A German gentleman, a friend of Professor Krüger, of Halle, was riding home one dark night through a wood, and had the misfortune to strike his head against the branch of a tree, and fell to the ground stunned and senseless. As soon as this occurred, the horse went back to a house about a mile distant, where his master had just called on a friend. The family were then going to rest, and the door was barred. But the horse struck his paw against it, and continued to paw it, from time to time, till some one, startled by the noise, came and opened it. All were

surprised and alarmed to see the horse of their friend standing riderless before them; the animal turned round, and looked about as if he wished to be followed; and the master of the house accordingly went after it, and was conducted by it to the spot where its owner was lying.¹

When a horse in a race lays hold with his teeth of a rival that his getting ahead of him, and endeavours to keep him back, something more is shown in the act than mere instinct. Instances are recorded of this having been done by horses. A fine horse called Forrester, after having won many severely contested races, was matched against a horse of extraordinary speed named Elephant, belonging to Sir Tennison Shaftoe. The course which they had to run was four miles in extent, and, as they approached the winning-post, Elephant was gradually getting in advance. Forrester made desperate efforts to recover his lost ground, but, finding himself unsuccessful, he at last made a desperate plunge forward, and seized his rival by the jaw with such force that he could scarcely be forced to quit his hold. Another incident of the kind occurred in 1753, when a fine horse belonging to Mr. Quin, a well-known sporting character of those days, became so frantic at finding his rival gradually passing him, that he seized him by the leg, and both riders were obliged to dismount to separate the animals.²

So in the Italian horse-races, (run by riderless horses, having girths round their bodies, to which are attached loose straps with balls of lead at the end of them armed with steel points, for the purpose of spurring the

¹ Youatt, on the Horse, p. 89.

² *Ib.*, p. 76; Bell's 'British Quadrupeds,' p. 381.

animals, as their running puts the straps in motion), the horses, in their wild career, often show emulation or spite by catching and biting at one another when they are afraid of being left behind.¹

A horse has also been known to assist his rider in battle, by seizing and tearing his antagonist's horse with his teeth.

A horse named Jack, which was employed in drawing the trucks of stone for Waterloo Bridge, used his teeth for a different purpose, as is related by Mr. Smiles in his 'Lives of the Engineers.' He was a sensible animal, and a great favourite among the workmen engaged on the bridge. His driver was a man of tolerably steady character, but rather too fond of a glass of ale. The railway along which the trucks were drawn passed in front of a public-house door, at which the horse was frequently pulled up while Tom secured his glass. But on one occasion the man stayed much longer than usual, so that Jack became impatient, and thrusting his head in at the open door, took his master's collar between his teeth, in a very gentle manner indeed, yet with sufficient force to draw him out from among his companions, and oblige him to resume his work.

The skill with which the horse uses his heels, offensively or defensively, is justly regarded, in general, as merely the suggestion of instinct, as the use of his horns by the bull, and of his beak and claws by the bird. But I have read an account of an affair in which a horse was concerned, where he showed such cleverness and judgment in the use of his heels, that we might almost suppose he reasoned about the employment of them as a man would reason about the em-

¹ 'History of the Horse,' by W. C. L. Martin, p. 166.

ployment of an instrument. The account is contained in Bishop Newton's Narrative of his own Life, and is well worthy of notice, as a demonstration at once of the sense and courage of the horse. "When the Duke of Marlborough," says the Bishop, "was sent by the British Government on an embassy to the first King Frederick of Prussia, there was a battle of beasts exhibited one day for the Duke's entertainment. A trooper's horse and a bull were turned out, and soon after were let loose a lion, a tiger, a bear, and a wolf, [all] kept hungry for the purpose. The tiger was the first to commence operations; he crawled along like a cat towards the bull, jumped upon his back, and brought him to the ground; when a grand scramble began over the bull's carcass, which the beasts began to tear to pieces, fighting with one another at the same time for the possession of the best pieces, or the most convenient places for infixing their teeth. They tore each other till the wolf and the tiger fell dead, or dying. There was then a long struggle between the lion and the bear; the lion, with his teeth and claws, wounded the bear in several places, but could not penetrate much beyond the skin. At last the bear contrived to take the lion at a disadvantage, drew him within his grasp, and hugged him with such force as fairly laid him breathless. All this time the trooper's horse was grazing quietly at some distance, seeming to take not the least heed of the other beasts' proceedings; but the bear, when he had overcome the lion, thought proper to give the horse his attention, and walked up confidently towards him; but the horse, as he approached, gave him a kick on his ribs, which repulsed him for a moment, but did not deter him from

making a second attempt,—when the horse, raising his heels again, inflicted such a stroke upon his head as broke both his jaws and laid him helpless on the ground; so that, contrary to the expectation of all who had come to see the contest, the trooper's horse remained sole master of the field." What was most remarkable in the affair was the tranquillity with which the horse continued grazing during the conflict among the other animals, as if he had settled in his mind that he might calmly await the result, being a match for any of them whenever he might be attacked.

Of good feeling in the horse there are many instances. The following is a pleasing example of gratitude in a colt:—A farmer's boy, who had fed a colt, and taken great care of it, was one day attacked, as he was working in a field, by a bull, from which he attempted to escape by plunging into a ditch. The animal, however, still pursued him, and would at length probably have gored him, had not the colt come to his assistance, and not only kicked the bull, but uttered so loud a scream (for scream only could the noise be called), that some labourers who were working near at hand, came to see what was the matter, and rescued the boy from his danger.¹

Lamartine tells a most interesting anecdote of the attachment of an Arabian horse to those about him. His master, Abou-el-Marek, had, at the head of his tribe, attacked a caravan in the night, and all were returning, laden with plunder, when they were surprised by a body of cavalry belonging to the Pasha of Acre, and some killed, and others made prisoners. Among the captives was Abou-el-Marek himself, who

¹ Jesse's 'Gleanings in Natural History,' vol. iii. p. 44.

was carried to Acre, and laid, bound hand and foot, at the entrance to the horsemen's encampment. During the night, as the pain of his wounds kept him awake, he heard his horse, which was picketed at a little distance from him, neigh; and wishing to caress him, perhaps for the last time, he dragged himself up to the animal, and said, "Poor friend, what will be your fate among the Turks? You will be shut up under a roof, with the horses of a Pasha or Aga; the women and children of the tent will no longer bring you barley, camel's milk, or dhourra in the hollow of their hands; you will no longer gallop free as the wind in the desert; you will no longer cleave the waters with your chest, and lave your sides at pleasure. But if I am to be a slave, at least you shall go free. Return to our tent; tell my wife that Abou-el-Marek will come to her no more; put your head still under the folds of the tent, and lick the hands of my beloved children." Uttering these words, the chief, as his hands were bound, undid the fetters which held the horse, with his teeth, and set him at liberty; but the noble animal, instead of galloping away to the wilderness, bent his head over his master, and seeing him unable to rise, took his clothes gently between his teeth, lifted him up on his back, and set off homewards at full speed. He arrived at the distant tent in the mountains in safety, laid his master at the feet of his wife and children, and immediately dropped down dead with fatigue. "The whole tribe mourned him," says Lamartine, "and his name is still constantly in the mouths of the Arabs of Jericho."¹

Of the horse's sensibility to kind treatment, we find

¹ Mrs. Lee, 'Anecdotes of Animals,' p. 324.

a remarkable instance in one that belonged to the military people at Woolwich. This animal had proved so unmanageable, that even the boldest rough-riders were afraid to mount him. He would lie down when any one attempted to get on his back, and try to roll over him, or would endeavour to crush his leg against a post. All efforts to cure him of these tricks proving ineffectual, he was brought before the commanding officer, Colonel Quest, as an animal incurably vicious, and with a recommendation that he should be sold out of the service. The Colonel, knowing the horse to be thoroughbred, and seeing that he was a very fine animal, was unwilling to part with him, and had him transferred to the riding-school. Here he undertook the management of the horse himself; he had him led quietly into the riding-school every day; he allowed no whip to come near him, but patted him, and endeavoured by gentle means to make him perform little manœuvres. As often as he was obedient, and seemed to try to do what was required of him, he rewarded him with a handful of corn or beans, or a piece of bread, which he carried in his pockets in readiness. By this treatment the horse was gradually rendered perfectly tame and quiet. In a little time he would kneel down while his rider mounted, and was at length brought to perform more evolutions and tricks than any other horse in the regiment could be taught to execute; and was at the same time so free from mischief that any one might approach him with perfect security.

The following anecdote illustrates the same quality in the horse's character:—A lady, remarkable for her kindness to brute animals, observed one day, from her

garden gate, a poor miserable horse sent to graze on an open piece of ground adjacent, with its shoulder raw and bleeding. She coaxed the animal to the gate with a piece of bread, and then contrived, with some assistance, to cover the wound with a plaster of soft leather spread with adhesive ointment. Shortly afterwards, the owner of the animal, a coarse unfeeling fellow, led the horse away, and the lady saw no more of him till the next day, when he reappeared at the garden-gate, and put his head over it with a gentle neigh. On going out to him she found that the plaster had been removed, either by some person's hand or by the rubbing of his collar, and applied a fresh one to the sore. The third day he appeared again, exhibiting the wound once more uncovered, and soliciting relief in the same manner. After this application, the plaster was allowed to remain, and the horse recovered; and ever afterwards, when it saw the lady, it would go up to her, and evidently attempt to express, by its voice and gestures, its pleasure at seeing her, and, we may well suppose, its sense of gratitude for her kindness and service.¹

The horse is capable of strong attachment, not only to man, but to his own species, and to other animals. In the portrait of the Godolphin barb, an Arabian belonging to the Earl of Godolphin, is a portrait of a cat, between which and the horse a strong affection subsisted. The cat could not endure to be long away from the horse, and the horse became uneasy if the cat's absence was greatly protracted. The cat, indeed, gave greater proof of its affection than the horse could give; for the horse died first, in the year 1753, at the age of

¹ Martin's 'History of the Horse,' p. 120.

twenty-nine, and the cat afterwards gradually pined away, and was said to have manifestly died of grief for its loss.¹

Mr. Youatt observes, "We do not perhaps see many instances of horse-friendship; we do not see many in man. He is a happy man who has met with one friend in the course of a long existence. Those friendships, however, do exist. We see them to a great degree in those horses that inhabit the same stable, or draw together. The coachman well knows that he gets over his stage in less time, and with a great deal more pleasure, when old yoke-fellows are pulling together, than when strange horses are paired. In some, the friendship is so intense that they will neither eat nor rest when separated from each other." He adds the following instance of this from Jesse's 'Gleanings in Natural History':—"Two Hanoverian horses had long served together, during the Peninsular War, in the German brigade of artillery. They had assisted in drawing the same gun, and they had been inseparable companions in many battles. One of them was at last killed, and after the engagement was over, the survivor was picketed as usual, and his food brought to him. He refused however to eat, and was constantly looking about him in search of his companion, sometimes neighing, as if to call him. All the care that was bestowed upon him was of no avail. He was surrounded by other horses, but he did not notice them, and he shortly afterwards died, not having tasted food from the time his former associate was killed."

¹ Blaine's 'Encyclopædia of Rural Sports,' Art. 866.

CHAPTER XXIV.

THE HORSE.—GENERAL INTELLIGENCE AND
GOOD FEELING.—THE ASS.—THE MULE.

“MAN,” said Napoleon, “is the link between the inferior animals and the Divinity. He is only an animal more perfect than the rest. He reasons better. How do we know that animals have not a language of their own? My opinion is, that it is presumptuous in us to deny this merely because we do not understand them. A horse has memory, knowledge, and attachment. He distinguishes his master from his domestics, although these are more constantly about him. I had a horse which distinguished me from the rest of the world, and which manifested by his bounding and haughty gait when I was upon his back, that he carried a man superior to those around him. He would not suffer any one to mount him, except myself and the groom that took care of him; and when the latter was on his back, his movements were so different, that he seemed to know that he was an inferior person. When I had lost my way, I threw the bridle upon his neck, and he always found it again, in places where, with all my observation

and particular knowledge of the country, I could never have succeeded.”

Of Bucephalus, Alexander's horse, it is said that, when he was without his trappings, he would allow the groom to mount him, but, when he was in full dress, would suffer none but Alexander himself to get on his back.¹

It is not surprising that an animal so ready to attach himself to man, should, when he is in difficulties, ask assistance of man. I was told by a friend that a gentleman in one of the midland counties was one evening startled, as he was sitting with a large party at the head of his dining table, by one of his mares forcing herself into the room through the glass door that opened upon the lawn. The animal plainly showed that she wanted something, and, being followed at last by her master, led him away into a field where he found her foal in some embarrassment, from which he had to extricate it.

Another story of the same kind is told by a writer in the 'Naturalist's Magazine,' who says, "It is curious to observe how any very powerful feeling will arouse a wonderful amount of sense in the dullest and most stupid of animals. A curious instance of this," he adds, "came under my notice a short time ago. An old cart-mare, belonging to a man in the village, that looked as if it had scarcely sense to do its work, and would certes be the last animal in the world one would expect to show any power of mind, had a foal this summer, and one day the old mare came galloping up the village to its owner's door, neighing, and seeming very uneasy. Its master noticing it, said, 'Something must be wrong;' and he went out. The mare trotted off neigh-

¹ Plutarch, 'De Solertiâ Animalium,' c. 14.

ing, and then returned to him ; so he followed her, and she led him to the mill-dam, where he found her foal had fallen in, and was nearly drowned. Having recovered her foal, the old mare relapsed into a most profound state of stupidity, though I always look at her with a feeling of great respect, knowing how deep the love must be that could call forth such an unwonted energy of mind and promptitude of action."

The horse has an excellent memory both for persons and for places. "The horse," says Mr. Youatt,¹ "never forgets a road he has once travelled. Should years pass away, and his next journey be in the dusk or in the dark, the rider has nothing to do but to let the animal have his own way, and he will safely reach the destined spot. A friend assured me that he once rode thirty miles from home on a young horse which he had bred, and neither he nor the horse had ever before seen the village to which he was bound. Two years passed over, and he had occasion to repeat the same journey. No one rode this horse but himself, and he was perfectly assured that the animal had not since been in that direction. A mile or two before he reached his journey's end he was quite benighted. He had to traverse moor and common, and he could scarcely see his horse's head. The rain began to pelt. 'Well,' said he, 'here I am, lost! absolutely lost! I know not, nor can I see an inch of my road. I have heard much of the memory of the horse; it is my only hope now; so there!' throwing the reins on his horse's neck, 'go on!' In half an hour he was safe at his friend's gate."

"We knew a horse," says the author of 'The Menageries,'² "which, being accustomed to be employed

¹ 'On the Horse,' p. 89.

² Vol. i. p. 56.

once a week on a journey with the newsman of a provincial paper, always stopped at the houses of the several customers, sixty or seventy in number. But, further, there were two persons on the route who took one paper between them, and each claimed the privilege of having it first on the alternate Sunday. The horse soon became accustomed to this regulation; and, though the parties lived two miles distant, he stopped once a fortnight at the door of the half-customer at Thorpe, and once a fortnight at the door of the other half-customer at Chertsey, and never did he forget this arrangement, which lasted for several years."

"A friend told me the other day that a horse had been in the habit of going with his master a certain road, and stopping at the same inn, when those who fed him always threw some beans into the corn put before him. After a time, he and his master went from that part of the country, and remained away for two years; then the same habits were resumed, and the same inn frequented; the latter, however, had changed its owners. While enjoying his dinner, the rider was informed that his horse would not eat; that he appeared to be perfectly well, but there was something wrong about the corn, which they knew not how to rectify, for it was the very best. The gentleman went to the stable; the horse neighed, looked at him and then at the manger, and it struck him suddenly that the animal missed the food he had been accustomed to receive there, and nowhere else. 'Throw some beans in,' he said to the ostler; he was obeyed; and the horse looked at him as if to express his thanks, and took his meal contentedly."¹

¹ Mrs. Lee's *Anecd. of Animals*, p. 331.

Of the memory and attachment of the horse a remarkable instance is given by Colonel Hamilton Smith. He had a charger in his possession two years, which, on quitting the army, he left behind him, but which was sent away and sold in London. Three years afterwards the colonel was travelling up to town by the mail, when, on getting out at a place where the horses were changed, his attention was attracted by one of the wheel horses, and, on going up to look at it more closely, he found that the animal recognized him, and testified its pleasure by rubbing its head against him, and making little stamps with its fore-feet. The coachman, observing the horse's gestures, expressed his surprise, and asked the colonel if it was not an old acquaintance. The colonel's reply was, that it was his old charger.¹

An old favourite horse of a resident in the Temple Chambers had been sold as unfit for his service. Some years afterwards a hackney-coach was admitted into the square, when the neighings of the old horse roused his former master from his breakfast; and we do not envy him his feelings, when he beheld the four-footed Nestor with outstretched neck recognizing his former owner's domicile.²

The horse's memory, like that of the elephant and the dog, is sometimes subservient to the infliction of revenge, when he imagines that he has been unfairly treated. We have seen how Sir Walter Scott's horse bore in mind, as it seems, the wrong that he fancied himself to have received by Sir Walter's desertion of him; and how he resented it. An anecdote

¹ Martin's 'History of the Horse,' p. 120.

² Blaine's 'Encyclopædia of Rural Sports,' p. 223.

dote also appeared in the newspapers, some time ago, of a horse that fell upon his master, for some supposed insult, and bit and trampled him to death.

A gentleman in Suffolk had an excellent hunter, of so strong and well-compacted a frame that it seemed as if it never could be tired. It appeared as fresh, when it returned from a day's sport, as when it went out. One day his master, from some caprice, vowed that he would tire the horse. He rode him accordingly through ploughed fields, and all manner of difficult ground, till the animal plainly showed himself, at the end of the course, dead beat. He was taken by the groom, and suffered himself to be led off quietly to the stable as usual. But the next morning, when his master went to see how he was, he burst from his stall with the utmost fury, breaking the halter with which he was fastened, and attacked him with his feet and teeth so violently that he would quickly have killed him, had not the groom and some other attendants beaten him off.

It is told of a horse, too, at Boston, in Lincolnshire, that he retaliated on his master in a similar way for deceiving him. His master, a farmer in the neighbourhood of the place, was accustomed, like many other farmers, to take into his field, when he wished to catch his horse, a measure of corn, to which he invited the horse, and, while he was eating it, slipped the bridle over his head. But at last he thought of deceiving the horse, by offering an empty measure; but the animal, after having taken the deception quietly two or three times, looked into the measure one day when he was called, and finding it empty, turned his heels towards the deceiver, and kicked him till he fell dead on the spot.

Most horses, if well treated, are docile and easy to be managed. Show a horse kindness, and he will in general take pleasure in doing whatever work you require of him, to the utmost of his ability. But there occasionally appear horses, which, from natural ill-temper, refuse to submit to training, or which, from mismanagement in early years, have acquired vicious propensities; and these animals are rarely, if ever, brought into satisfactory subjection. It may be considered certain, says Mr. Youatt, depending not only on his own experience, but on that also of Mr. Castley, whom he calls an excellent veterinary surgeon, that if a horse once kicks in harness, whatever be the cause, he will be liable to kick ever afterwards; and as to riding, a man may master a refractory horse, and make him quiet for months or almost for years, but, if an opportunity for mischief offers, he will be nearly sure to try his old tricks again. He heard from Mr. Castley two instances of this incorrigibility; one of a horse, so savage that nobody could ride him, being tamed by a Yorkshire colt-breaker, named Jumper, as famous in his district as the *Whisperer* was in a larger area; but though he would for a time lie down on being bidden, carry double, or submit to anything like a tame dog, he became, after being turned out to grass for a summer, as vicious as before, would never suffer himself to be mounted, and was at last with difficulty brought to go in a stage-coach. The other instance is that of a horse tamed by the *Whisperer* himself, a racer named *King Pepin*, belonging to Mr. Whalley. He would at times fly at any person within his reach, and seize him with his teeth, so that it was impossible to ride him without what is called a sword, a strong stick attached at one

end to the check of the bridle, and at the other to the girth of the saddle, to prevent a mischievous horse from biting his rider's leg. On one occasion, when he was to run in the Curragh, in the spring of 1804, he fiercely resisted all attempts to put the bridle on his head, and seized a countryman, who volunteered to bring him to reason, by the chest, shook him like a rat, and would probably have killed him, but that, it being holiday time, he had on, as is customary with Irishmen on such occasions, an extra quantity of his best clothing. To tame him, the Whisperer was sent for, who, after being shut up with him all night, exhibited him in the morning so obedient that he would allow any person on the course to handle him and open his mouth; so that he was easily brought to run in the race, which he won, and continued docile for a long time, but at length, resuming his old ways, he became so ferocious that at the end of three years he was of necessity shot.¹

What was the mode by which the Whisperer obtained a mastery over horses, has never been positively stated. Possibly it was the same as that by which wild horses, as related by Mr. Catlin, are subjugated among the North American Indians, after they are caught with the lasso.

When the captive horse, after violent struggling, sinks down from exhaustion, the Indian, still keeping the lasso tight upon his neck, advances slowly towards his head, and contrives to fetter his two fore-feet; he then passes a noose round the under jaw, and in spite of the animal's rearing and plunging as he recovers breath, holds him down, so as to prevent him from

¹ Youatt, 'On the Horse,' p. 440.

rolling over on his back. At length he places his hand over the horse's nose and eyes, and breathes into its nostrils, after which operation it becomes tame and docile, so that he can safely unloose its feet, and lead or ride it away wherever he pleases. Nor does it ever after, it is said, show the least return of a disposition to rebel.

Of the Whisperer himself we get the most complete account from Mr. Crofton Croker, in his 'Fairy Legends and Traditions of Ireland.'¹ His name was Sullivan, and he was an awkward rustic, ignorant of almost everything but hunting and horse-breaking. The wonder in his subjugation of horses was its celerity and ease, being effected without any apparent means of coercion. "Every description of horse," says Mr. Croker, "or even mule, whether previously broken or unhandled, submitted without show of resistance to the magical influence of his art, and in the short space of half an hour became gentle and tractable." When he proceeded to operate, he shut himself up with the object of his experiment in the stable, desiring that the door should not be opened till he gave a signal, and after a *tête-à-tête* of not more, in general, than the time just named, during which little or no bustle was heard, he would be seen, on the door being opened, lying down with the horse by his side, and playing with him as with a dog. In regard to one case, in which Mr. Croker witnessed the effect of his skill, he observes that the animal on which his influence had been exercised "appeared terrified whenever Sullivan either spoke to or looked at him." In some instances he would tame the horse without retiring with him at all,

¹ Part ii. p. 100.

having apparently some instinctive power of securing ascendancy over him. His fee for each case was two or three guineas, according to the distance that he had to go; and, had he gone abroad, as he was advised, he might have made a large fortune, but his attachment to a pack of fox-hounds at Duhallow prevented him from leaving that spot. If he whispered in the ears of horses, as he is said to have done, and thus to have gained his name, he probably adopted the trick to cover his real mode of proceeding. He died in 1810, without divulging his secret; and his son, who succeeded him as a horse-breaker, had no more influence over horses than ordinary men.

It may seem surprising that many people, after reading Mr. Catlin's account, have not tried the effect of the Indian process on vicious horses in this country, as Mr. Dickens's Uriah Heep is made to try it in seducing the affections of Miss Trotwood's pony. But we hear of only one or two experiments of the kind. "Mr. Ellis, a graduate of Trinity College, Cambridge," says Mr. Youatt, "felt a desire to put the truth of Mr. Catlin's statement to the test; and as his brother-in-law had a filly scarcely a year old, and quite wild, he resolved to try the efficacy of breathing into the nostrils upon her. The operation was performed by a gentleman of his acquaintance, a well-known amateur in matters relating to horses, who, after with difficulty contriving to cover the filly's eyes, blew into her nostrils, and then, as the blowing seemed to produce no effect, breathed into them; when the animal, which had been very restive, and offered great resistance to being blindfolded, stood perfectly still and trembled, and was afterwards quite tractable.

On the following morning, when she was taken out again, she was perfectly tractable, so that to startle or frighten her seemed almost impossible."

Of this animal we hear nothing further. But of a restive colt on a neighbouring farm, which, after having utterly foiled the breaker, allowed itself to be tamed in the same way, at the same time, and submitted to be bridled, saddled, and ridden in the space of an hour, we are told that, being taken in hand by the breaker on the following day, and beaten, according to his custom, with great severity, it burst from him, and became as unmanageable as ever, showing that judicious treatment is necessary to keep a horse in subjection, however effectually it may seem to have been cowed.

That the late Mr. J. S. Rarey, who so much distinguished himself in horse-taming, had any secret art of this kind for mastering unruly animals, has not, as far as I know, been asserted. In his book, assuredly, no mention is made of any such stratagem. All that he recommends, and all that he himself practised, he says, was to treat a horse with such kindness and judgment as gradually to produce in him fear, love, and confidence; and, when these feelings are once created in him, he will, if he be made to understand what he is expected to do, do it quickly and cheerfully. He intimates that the horse has a pleasure in the scent of the human hand, and doubtless of the human body generally, and that this liking may be turned to account in strengthening a horse's attachment to a person.

Turning our attention from the horse to the ass, we may observe that they are far from being by nature so

stupid as is generally supposed. Most of the donkeys that we see in England are no fair specimens of the animal. Many of them, from bad feeding and treatment, are not well grown; ill-usage has rendered them obstinate and reckless; and when once the temper of an ass is spoilt, there is no possibility of making the creature tractable. It will bear numberless blows without mending its pace, or exerting itself at all the more; and it is well for the animal, considering the barbarous treatment that it experiences from boys and unfeeling men, that it has an extremely tough hide. But in its best condition, when well fed and well managed, it is capable of being trained, and attached to man, with as much facility as the horse. Buffon even says that the ass is more susceptible of strong attachment than the horse, and under a good and kind master, may be made to exhibit very great sagacity. In Arabia and Persia the ass is of a very different character from that in which he appears among us; and in Spain he is so highly bred, and brought up to such a degree of beauty and vigour, as to be for many purposes equal to the horse. In these countries asses are smooth and sleek; they carry their heads erect, and have finely formed legs, and walk or gallop with extreme grace and agility.

“A friend of mine, a Yorkshire farmer,” says the Rev. T. Jackson,¹ “used to say that he wondered why asses were considered emblems of stupidity; for he had several horses and only one donkey, and if ever they played him an ingenious trick, the donkey was sure to be the leader in the exploit. On one occasion he fastened up several of his horses and the one donkey

¹ ‘Our Dumb Companions,’ p. 115.

in a large paddock. In the next field he had a fine crop of oats that was nearly ripe. He found that the animals entered the field, and ate a considerable quantity of the oats, while they spoiled much more. He set a watch early one morning, and soon discovered that the donkey, with his teeth, deliberately undid the fastenings of the spring-sneck of the gate which opened from one field into another, and so let his companions through to browse upon the oats. . . . An ass is more than a match for wild animals larger than himself, in consequence of the skill with which he takes up a defensive position, while he strikes out his hoofs with the force of a catapult.”

The same writer relates, on the testimony of an eye-witness, that a costermonger, who had a donkey and a dog, to both of which he was very kind, had trained the donkey to stand still whenever he had to take vegetables from his cart into a house, and to remain standing until his return, and had taught the dog to keep guard over the vehicle and its contents during his absence, by mounting on the donkey’s back. When the master came back to the cart, the dog at once jumped down, and the donkey then moved on to the next customer’s house.

The ass, like the horse, has an excellent memory for places that he has visited, and for anything that has occurred to him in those places. An ass, belonging to a carrier at Wigan, used to stop with his master at a certain public-house, where the master got a pot of beer, and always allowed the animal a small share of it. At length the master turned teetotaller, and had no occasion to stop at the public-house; but the ass could not be forced by the place until he received beer

as before ; so that the man, though abstaining from it himself, was obliged to buy it for his beast.

What is here said of the ass, may be said still more strongly of the mule. The mule-drivers in Spain never beat or vex their mules, but treat them with the kindness and consideration with which the Arab treats his horse, and find docility and attachment to be the result.

The sagacity of a mule was once an object of wonder to the sage Thales. The animal was one of a number laden with salt, and was one day observed to roll himself in the water of a river which he had to cross, by which means much of the salt was melted, and he rose up with his load greatly lightened. He seemed to be aware of the cause, and to keep the occurrence in his memory ; for whenever he came to the same river, he always took care to stoop and let down his panniers beneath the surface, inclining first to one side and then to the other, so that both his burdens might be equally affected by the flood. Thales directed that his baskets should be filled with wool. When the animal came to the river he acted as before, but finding that his load had become heavier instead of lighter, he understood that that mode of proceeding had become useless, and for the future forded the river with such caution as not to allow his panniers even to touch the water.¹

When a temple was being built at Athens in the time of Pericles, and large stones were brought for it on cars drawn by mules, an old mule, exempted from labour on account of his age, used to come up to the other mules, as they were drawing their loads, and run

¹ Plutarch, 'De Solertiâ Animalium,' c. 16.

along the side of them, as if exhorting them to exertion. His zeal was so much admired that he was kept to a great age at the public expense, like a superannuated athlete.¹

¹ Plutarch, 'De Solertiâ Animalium,' c. 13.

CHAPTER XXV.

THE CAT.

“CATS,” said Sir Walter Scott, “are a very mysterious kind of folk; there is more passing in their minds than we are aware of;” a remark which he extended, on another occasion, to the rest of the domesticated animals.

Cats, however, in general, show much less of intelligence than dogs. But there are many instances of cats manifesting something far beyond mere animal instinct. The Rev. J. G. Wood, in his ‘Glimpses into Petland,’ tells us of a cat which he bred up from a kitten, and which proved itself one of the most sagacious of its species. One particular in which he showed his understanding was, that, though he would never allow strange cats to enter the house, he would readily offer them food, (if he thought they were looking for food,) in the yard; he would thus sometimes give away his dinner, and then mew for another dinner for himself afterwards. From one cat in the neighbourhood, which was fed upon meat from the cat’s-meat man, he took away her meat, as if he thought it not good enough for her, and buried it, and then gave

her some of his own meat. He would even steal meat for his friends, and it was for some time undiscoverable how he managed to effect his thefts; for the larder was kept closely shut, both as to doors and windows; but it was at last found that he watched the cook as she went to the apartment, crept stealthily in under her dress, and accomplished his escape in the same way.

One day he came mewling piteously to the door of the dining-room. When Mr. Wood opened it, he continued to mew, looking hither and thither as if he were disturbed and perplexed about something. At last he made for the foot of the stairs, ran up two or three steps, and then looked back as if he wished Mr. Wood to follow him. When Mr. Wood did so, he led him up to his study door, and going to a heap of books that lay on the floor, he began to thrust his paws under some of the volumes, continuing to mew with seeming impatience. Mr. Wood lifted the books one after another, the cat standing by with looks of earnest expectation; and, when the last volume was lifted, forth darted a mouse, which the cat soon seized and dispatched, and then began to purr, and to gesticulate, as if expecting to be congratulated for his acuteness in getting assistance when he was not able to effect his object by his own efforts.

A wonderful instance of intelligence in a cat, with regard to one of its kittens that had died, is told by Dr. Good, the poetical translator of Lucretius, and author of the 'Book of Nature,' from which I extract it in his own words:—"A favourite cat, that was accustomed from day to day to take her station quietly at my elbow, on the writing-table, sometimes for hour

after hour, while I was engaged in study, became at length less constant in her attendance, as she had a kitten to take care of. One morning she placed herself in the same spot, but seemed unquiet, and instead of seating herself as usual, continued to rub her furry sides against my hand and pen, as though resolved to draw my attention, and make me leave off. As soon as she had accomplished this point, she leaped down on the carpet, and made towards the door, with a look of great uneasiness. I opened the door for her, as she seemed to desire, but instead of going forwards, she turned round, and looked earnestly at me, as though she wished me to follow her, or had something to communicate. I did not fully understand her meaning, and, being much engaged at the time, shut the door upon her, that she might go where she liked.

“In less than an hour afterwards, however, she had again found an entrance into the room, and drawn close to me, but, instead of mounting the table, and rubbing herself against my hand, as before, she was now under the table, and continued to rub herself against my feet, on moving which I struck them against something, and, on looking down, beheld with equal grief and astonishment, covered over with cinder-dust, the dead body of her little kitten, which I supposed had been alive and in good health. I now entered into the entire train of this afflicted cat’s feelings. She had suddenly lost the nursling she doted on, and was resolved to make me acquainted with it, assuredly that I might know her grief, and probably also that I might inquire into the cause, and, finding me too dull to understand her expressive motioning that I should follow her to the cinder-heap on which

the dead kitten had been thrown, she took the great labour of bringing it to me herself, from the area on the basement floor, and up a whole flight of steps, and laid it at my feet. I took up the kitten in my hand, the cat still following me, made inquiry into the cause of its death, which I found, upon summoning the servants, to have been an accident in which no one was much to blame ; and the yearning mother having thus obtained her object, and got her master to enter into her cause, and divide her sorrows with her, gradually took comfort, and resumed her former station by my side.”

Mrs. Lee's mother-in-law had two great favourites, a cat and a canary. The bird she kept chiefly in her bed-room, where he was allowed to fly at large, the cat being of course excluded. But the two, by some means, contrived to effect a communication with each other ; and their mistress, one morning, raising her head from her work, saw the bird perched on the cat's back, the bird being free from fear, and the cat evidently delighted. After this time the two were allowed to be constant companions. But one day, when they were together in the bed-room, their mistress was alarmed by seeing Puss, after uttering a slight growl, seize the canary in her mouth, and leap with it on to the bed ; her hair bristling, her tail stiffened out, and her eyes of twice their usual size. The lady of course gave up the bird for lost ; but her alarm was groundless, for the cause of the cat's excitement was soon apparent : the door of the bed-room had been accidentally left open, and a strange cat had come in ; and it was to save the bird from the intruder that his friend had seized him. As soon as the other cat was driven

away, she set him at liberty, and he was found quite unharmed.¹

Cats have the same faculty of communicating their thoughts or notions to individuals of their own or other species as many other animals have.

M. Wenzel, a German, a great observer of the inferior animals, who wrote a volume 'On the Language of Brutes,' had a cat that was strongly attached to a dog, from which she would never willingly be separated. The dog returned her affection, and, whenever he had any choice food, was sure to share it with the cat. They daily ate out of the same plate, slept in the same bed, and took their airings abroad together.

One day M. Wenzel, to put the cat's remembrance of the dog to the test, took her into his own room, and gave her a share of his own dinner, keeping the dog excluded. His object was to see how the cat would enjoy an excellent meal without her hitherto constant companion. He observed her carefully, and saw that she enjoyed her feast, apparently in utter forgetfulness of her associate. He left half a partridge, which his wife reserved for his supper, covering it with a plate, and putting it into a cupboard, the door of which she did not lock. The cat, when the meal was over, was suffered to go where she pleased, and M. Wenzel went out on business.

When he returned, Madame Wenzel surprised him with an account of what had occurred in his absence. The cat, it appears, had noticed the depositing of the half-partridge in the cupboard, though she had not seemed to pay any attention to it. When she was let out of the dining-room, she went in search of the dog,

¹ Mrs. Lee, 'Aneedotes of Animals,' p. 245.

and having found him, mewed extremely loud, and in different tones of voice; sounds which the dog answered with short barks. They then went together to the door of the dining-room, waited till some one chanced to open it, and then entered both together. The mewings of the cat drew the lady's attention, and she stepped softly to the door, which stood ajar, to ascertain what was going on, when she saw the cat lead the dog to the cupboard, where the half of the partridge was, and, pulling open the door, and pushing off the plate, exhibit the intended supper of her master to her friend, who eagerly seized and devoured it.¹

Cats, though supposed to be attached to places rather than to persons, have often strong affection, as far as their nature permits, for those with whom they are familiar. Montaigne's cat, and Dr. Parr's, are examples of such fondness. One way in which they have shown their sagacity, as well as their attachment to their masters and mistresses, has been in fixing on the perpetrator of deeds of violence committed on those connected with them. Miss Knight, in her 'Autobiography,' gives an account of an occurrence of this kind, which came under her own knowledge. An old lady of some property, who died in Ireland, had a nephew a lawyer, who had made her will, and to whom she had bequeathed all that she possessed. The old woman had a favourite cat, which was constantly with her, and even remained close by her coffin after her death. When the funeral was over, the will was read, and on the door being opened at the conclusion of the ceremony, the cat sprang into the room, rushed at the lawyer and seized him by the throat with such force,

¹ Williams, p. 51.

that she was with difficulty prevented from strangling him. About eighteen months after this scene the man died, and was moved by remorse to confess on his deathbed that he had murdered his aunt to get possession of her money.

Mr. Jesse records a similar occurrence.

“A man,” says he, “who was sentenced to transportation for a robbery informed me after his conviction that he and two others broke into the house of a gentleman near Hampton Court. While they were in the act of plundering it, a large black cat flew at one of the robbers, and fixed her claws on each side of his face. He added that he never saw any man so much frightened in his life.”¹

Of a story of this kind the author of the ‘Experiences of a Gaol Chaplain,’ an animated and interesting work, has availed himself. His account is, that an old woman was murdered; that nobody could discover the perpetrator; that a miller of the neighbourhood, whom no one suspected of anything wrong, went to visit the scene of the crime with the rest of the people around, and that a cat, when he entered the room where the old woman’s body was lying, sprang upon him, and scratched his forehead, as if she would have torn his eyes out. As he seized her, and took her off, he said, half to himself, “This is the second time you have served me so.” Those who overheard the words noted them, and began to consider when the first time might have been. The discussion led to inquiries about the miller, which ended in his apprehension and conviction; and thus the attack of the faithful cat on the murderer was the cause of his punishment.

¹ Jesse’s ‘Gleanings in Natural History,’ vol. iii. p. 123.

Mrs. Lee gives an account of a similar affair that occurred in France. "A physician of Lyons was requested to inquire into a murder that had been committed on a woman of the city. In consequence of this request he went to the habitation of the deceased, where he found her extended lifeless on the floor, weltering in her blood. A large white cat was mounted on the cornice of a cupboard, at the far end of the apartment, where he seemed to have taken refuge. He sat motionless with his eyes fixed on the corpse, and his attitude and looks expressing horror and affright. The following morning he was found in the same station and attitude, and when the room was filled with officers of justice, neither the clattering of the soldiers' arms, nor the loud conversation of the company, could in the least degree divert his attention. As soon, however, as the suspected persons were brought in, his eye glared with increased fury, his hair bristled, he darted into the middle of the apartment, where he stopped for a moment to gaze at them, and then precipitately retreated under the bed. The countenances of the assassins were disconcerted, and they were now, for the first time, abandoned by their audacious ferocity."¹

The cat, like the dog and the horse, will occasionally manifest strong resentment if offended. A favourite cat, much petted by her mistress, was one day struck by a man-servant; an injury which she resented so much that she refused to eat anything given to her by him. Day after day he tried to conciliate her by placing her dinner before her, but she drew back in sulky indignation, though she eagerly ate the food when it

¹ Mrs. Lee's 'Anecdotes of Animals,' p. 248.

was offered by any other person ; and she maintained her displeasure undiminished for upwards of six weeks. The same cat, having been offended by the housemaid, watched three days for an opportunity of retaliation, and then, finding her on her knees washing the floor, flew at her, and left deep marks on her arms, as if to show that no one should ill-use her with impunity. But if her resentment was strong, her attachment to those whom she liked was not less so ; and her affection for her mistress she had singular methods of showing. All the tit-bits she could abstract from the pantry, and all the dainty mice she could catch, she invariably brought and laid at her mistress's feet. She has been known to bring a mouse to her bed-room door in the middle of the night, and mew till it was opened, when she would put it down on the floor with the greatest delight, and remain afterwards quiet and contented.¹

The sagacity of the cat is often shown in the means by which she will make her way back to any place from which she has been taken, and to which she is attached.

“ A cat was once conveyed to a new home, and had kittens just after her arrival. Two of these kittens were kept, and the cat seemed so happy in attending upon them, that every one thought that she would settle contentedly in the new house. But as soon as the kittens could see and eat, Puss was one day missing with one of her little ones, and it was afterwards found that she had carried the kitten all the way back to the old house, a distance of many miles, and which must have taken two or three days to ac-

¹ Jesse's 'Gleanings in Natural History,' vol. iii. p. 125.

complish. She must have rested often on the road, but she arrived, very much exhausted, and so weak that she could scarcely crawl. The new owners of the house pitied the starving creature, and treated her well. As soon as her strength was restored, she left her kitten in their charge, and went back to fetch the other. The second kitten was now old enough to run by her mother's side a part of the way, so that the second journey was not so fatiguing as the first."¹

The same writer mentions a story which he had read of the manifestation of feeling in a cat:—"A fine tabby was lurking about a bush in which there was a blackbird's nest containing young ones. The cat was evidently contemplating making a meal of the little birds. The old blackbird, however, suddenly appeared, and with a mother's daring flew fiercely at the cat. Puss, apparently conscience-stricken, slunk away, leaving the bird in undisturbed possession of her treasure."²

Smellie relates that he had a cat, which was foud of visiting a certain closet, the door of which was fastened by a common iron latch; and, if she chanced to be shut in it, she was quite unconcerned, for, when she wished to get out, she would mount on the sill of a window near the door, lift the latch with her paw, and throw the door open; a practice which she continued for years.³ Mr. Jesse observes that a cat will get cream out of a jug with her foot, as a rat gets it out with his tail, when she cannot thrust in her head.

The strong affection which a cat feels for her young sometimes leads to extraordinary manifestations of sagacity and foresight in her. A cat, when

¹ Rev. T. Jackson, 'Our Dumb Companions,' p. 126.

² *Ib.* p. 132.

³ Smellie, *Philos. of Nat. Hist.* vol. i. p. 152.

she was about to have kittens, was observed to collect several mice and young rats, which she did not quite kill, but lamed, so as to prevent them from escaping. One day, when her master was sitting at dinner, she bounced into the room in chase of one of her maimed prisoners, a young rat which the servants had noticed for some days under her surveillance in a back court. The rat darted up the window-curtain for safety, but being unable to maintain its position, was soon recaptured.¹

Like other animals, they do not lose their natural propensities by association with man; indeed intercourse with man has much less influence on cats than it has upon dogs. If such reasoning power as they have is increased by domestication, it is not increased to such an extent as to prevent them from doing absurd things under the sway of their instinct. All the species of the cat tribe cover up their excrement. "Most persons," says the author of the 'Menageries,'² "must have observed that cats effect this with ashes, earth, or whatever loose rubbish they can find near; a habit which renders them a great nuisance in gardens, particularly after seeds have been sown. From the great care with which, in such cases, they draw the mould together, going round and round the circle till they seem satisfied with their work, it might be concluded to be more a rational proceeding than one arising from instinct. But cats, when confined to a room or a paved yard, go through the very same process, scratching the wooden floor or the flag-stones and going similar rounds, as in a garden or a dust-pit; whereas, had the animals possessed much ration-

¹ 'Menageries,' Soc. Diff. U.K. vol. i. p. 213.

² Vol. i. p. 309.

ality, they must at once have perceived the folly of such attempts.

So I have seen a dog take a bone to the corner of a room, and make motions about it with his nose as if he were heaping earth upon it, continuing the motions as long as he would have continued them had he been throwing up mould in the open air.

CHAPTER XXVI.

THE FOX.

THE Fox we may pronounce to be possessed of at least as much intelligence as the cat, and being obliged, in its wild state, to shift for himself, his wits are much sharpened by his necessities. He has been celebrated in all ages for his craftiness and address. Much is told of his cunning, as exerted for his own good, but little of his amiableness, except in his attachment to his young, and his occasionally assisting a brother fox.

He is fond of having a fixed habitation, and of securing all possible domestic comforts about him. He chooses his situation with judgment, renders his den commodious; carefully conceals, as far as he finds practicable, the approach to it; and makes proper outlets from it for his escape in case of necessity. The ingenuity which he shows in these arrangements ought alone, in the opinion of Buffon, to set him high among the more intelligent of quadrupeds. He likes to settle on the borders of a wood, and in the neighbourhood of cottages or farm-houses, where he can hear the crowing and cackling of the poultry. He plans expeditions against them with great judgment, and executes them

in the night, always with caution and mostly with success. He leaps the wall of the courtyard, or creeps through some hole in it, puts one or more fowls to death, and then retires stealthily, either concealing what he carries off in the neighbouring herbage or thicket, or taking it away to his lair. If he has killed two he will probably take away one, and return for the second, or, if he finds it expedient to hide both, will hide them in different places. He watches bird-catchers, and if he sees birds taken in their nets, seizes and carries them off. He will dig out rabbits from their holes, and cunningly surprises partridges and quails on their nests. When he is hunted he makes for his dwelling, but, as the hunters have generally stopped the entrance, he darts off when he finds his home shut against him, seeking thickets and other places difficult of access, where he trusts that the dogs may be unable to follow him. His arts to elude the hounds are well known.

Being extremely fond of honey, he often attacks nests of wild bees, and when they rush out and sting him he rolls on the ground and crushes them, and returns to the charge so often that he forces them at length to abandon the hive, from which he extracts both the honey and the wax. He sometimes lies extended as if dead, and eyes the birds on the hedges and trees, and, if any come within his reach, pounces upon them and kills them.¹

Mr. St. John tells the following story of a large fox whose operations he watched on the margin of a field near a plantation.—“Just after it was daylight,” he says, “I saw him come quietly along; he looked

¹ See Smellie's *Philosophy of Nat. Hist.* vol. i. p. 405; Bingley's *Animal Biog.*, vol. i. p. 225.

with great care over the turf wall into the field, and seemed to long very much to get hold of some of the hares that were feeding within it, but apparently knew that he had no chance of catching one by dint of running. After considering a short time, he seemed to have formed his plans; he examined each of the different gaps in the wall, fixed upon one which appeared to be most frequented, and laid himself down close to it, in an attitude like that of a cat at a mouse-hole.

“In the meantime I watched all his proceedings. He with great care and silence scraped a small hollow in the ground, throwing up the sand as a kind of screen; every now and then, however, he stopped to listen, and sometimes to take a most cautious peep into the field. When he had done this, he laid himself down in a convenient posture for springing on his prey, and remained perfectly motionless, with the exception of an occasional reconnoitre of the feeding hares. When the sun began to rise, they came, one by one, from the field to the plantation; three had already come without passing by his ambush, one within twenty yards of him, but he made no movement beyond crouching still more flatly to the ground. Presently two came directly towards him, and though he did not venture to look up, I saw, by an involuntary motion of his ears, that those quick organs had already warned him of their approach. The two hares came through the gap together, and the fox springing with the quickness of lightning, caught one and killed her immediately. He then lifted up his booty, and was carrying it off, when my rifle-ball stopped his course.”¹

When the fox is troubled with fleas he will go into

¹ ‘Sketches of the Sports of the Highlands.’

water, at first to a small depth, the water rising very little above the bottom of his belly : the fleas, to avoid the water, will creep up towards the top of his back. Gradually he will go deeper and deeper, till the fleas actually gather on his back, when he will sink his hinder parts gently and by degrees below the surface of the water, till the fleas are driven forward; and he will at length merge every part of his body, in the same quiet way, beneath the water, except his nose, on which the fleas will congregate as on an island. At last he will suddenly sink his nose also and withdraw, leaving the fleas to be drowned. A gentleman told Mr. Jesse that he saw a fox doing this in a lake in Italy.¹

The people of Thrace used to say that when a river was frozen over, they could judge of the thickness of the ice by observing how a fox would act if he wanted to cross ; for he would step on it gently and cautiously from the bank, and when he had advanced a little way, would put down his ear, and if he heard any sound from the current underneath, would conclude that the ice was thin and unsafe, and come back again, but, if he heard no sound, would go forward without apprehension.²

Of the fox's stratagems to save himself when hunted there are many anecdotes.

An old man in Ireland, as he was wandering by the side of a stream that runs into the Almand, observed a badger walking leisurely along the ledge of a rock on the opposite bank. Soon afterwards a fox came along in the same track, and after walking some distance in the rear of the badger, leaped into the

¹ Jesse's Gleanings in Nat. Hist. vol. iii. p. 26.

² Plutarch, 'De Solertiâ Animalium,' c. 13.

water. In a little time came up a pack of hounds, in pursuit of the fox, which was then floating in security down the stream, leaving the unhappy badger, as the old man witnessed, to be torn to pieces in his stead.¹

In the same neighbourhood occurred a similar instance of sagacity in an animal of the same species. A farm servant was preparing a small piece of land, near Pumpherton Mains, for the reception of wheat, and was surprised to see a fox going slowly along in the furrow immediately before the plough. He heard behind him, at the same time, the cry of hounds, and wondered that the fox should be apparently so much at his ease; and turning round, he saw the whole pack at a dead stand near the other end of the field, at the very spot where the fox must have entered on the newly-ploughed land. It was evident that the fox had taken this effective method of breaking the scent, and the ploughman, admiring his cleverness, concealed his whereabouts from the hunters, and allowed him to escape.²

A fox, which had been frequently hunted in Leicestershire, was always lost at a particular place, where the hounds could never recover the scent. The repeated disappointments excited some curiosity, and it was at last discovered that he jumped upon a clipped hedge, and ran along the top of it, and from thence crept into the hollow of an old pollard oak-tree, where he lay concealed till the hounds had withdrawn. Another, with similar sagacity, selected a magpie's nest as a place of retreat, but was found out through his negligence in allowing bones, feathers, and other

¹ Garratt, 'Marvels and Mysteries of Instinct,' p. 121.

² *Ib.*

tokens of spoils, to lie exposed on the ground under the nest.¹

At a fox-hunt in Galloway, in 1819, a very strong fox was hard run by the hounds. Finding himself in great danger of being caught, he made for a high wall at a little distance, over which he sprang, and lay down close by it on the other side. The hounds of course followed, and leaped the wall also, but no sooner had the last of them crossed, than he sprang back over it again, and thus cunningly gave them the slip, and got clear off.

Another, at Pittsfield, was hunted for nearly two hours by an American gentleman with two blood-hounds, at the end of which time the dogs were at fault. Their master came up with them near a large log of wood lying on the ground, and saw them, to his surprise, making a circuit of several roods without any apparent object in view, for they seemed to have lost every trace of the fox, though they still went on yelping. The gentleman, after searching about for some time, discovered the fox stretched on the log, apparently lifeless. Forbearing to disturb the animal, he endeavoured to direct the attention of the dogs to him, but without success. In the course of his efforts he approached so near him as to be able to see him breathe; but, even then, he persisted in maintaining the semblance of being dead. At last he aimed a blow at him with the branch of a tree, when, finding that he was avoiding one sort of death only to be in danger of another, he resolved to make one more effort for life, and, leaping from his resting-place, was caught by the dogs.²

¹ Jesse, Gl. in N. Hist. vol. i. p. 208. ² Mrs. Lee, Anecd. of An. p. 178.

A fox that had been unearthed by dogs, after running away from them for a short distance, would not leave the cover, but kept running from one part of it to another. Just as a hound was going to seize him, he turned suddenly round, and jumped over him as he came up. Thus also he acted with another and another, and so saved himself for some time; but at last, tired out with leaps over a long succession of enemies, he was obliged to yield. When he was examined, the reason for his manœuvre was found to be that he had only three feet, having probably left one of them in a trap. "The cover being entirely of furze, and not large," says Mr. Hogg, who communicated the account to Mr. Bell, "I could see all sides of him during this hunt, and was much pleased with the many elegant and quick leaps which the poor three-legged fox made to save himself from destruction."¹

An occurrence, of which an account appeared in the public prints in 1863, just after it took place, illustrates the cunning of the fox, as well as the readiness with which foxes will assist one another, as far as they can. The gamekeeper of a gentleman near Preston, in Lancashire, was going his rounds through a wood early one morning, when he saw a large male fox fastened by the neck, or rather suspended by the head, between two trees that grew close together. The animal had apparently exhausted itself in desperate efforts for its release; but, having found them all useless, had at last settled itself in quiet, and saved its life by its own cunning; for, when the keeper approached, it did not pull back its head, or make any endeavour to get away, but remained perfectly at rest,

¹ Bell's 'British Quadrupeds,' p. 253.

as if it were quite satisfied of the inefficacy of any attempts to quit its position. It merely showed its teeth. But the keeper, having also a portion of cunning, was able to take him out without being harmed; he threw over him a strong net which he was carrying, and then easily lifted his head from between the trees. He was quite uninjured, with the exception of a slight bruise in the neck; but his ravenousness for food showed that he must have been captured for many an hour. Being taken to the house of the keeper's master, he was put into a kennel, and chained. On the second morning after he was caught, the keeper, as he was taking him his usual meal, saw another fox, of nearly equal size, lying by him, which darted away as soon as the keeper came up. He supposed this to be a female fox, which might venture to pay the kennel another visit; a supposition which was confirmed by what afterwards occurred; for, the following night, he missed two Cochin China pullets and a bantam cock, the feathers of which he saw lying in the kennel in the morning. As the occupant of the kennel could not have gone after the fowls, it was evident that they had been brought to him by another animal, probably the one which the keeper had seen; and, a trap being set, the female was caught a night or two afterwards, when both were put to death, the one as a robber of the henroost, and the other as a participator in the stolen property.

To this story one of somewhat similar nature may be appended. It tells of a fox liberating its young one; and the affair occurred at Ruthwell, in the county of Dumfries, not very long ago. A fox hardly full-grown, was caught in a trap on a Saturday night, and was

secured during Sunday in an outhouse, against the door of which a large stone was placed. On Monday morning, when the people of the house went to look at the animal, they found that though the door had not been opened, and though the stone was still against it, the prisoner was gone. On examination, it was seen that a hole had been gnawed in the door from the outside; and there was little doubt that the mother fox, having ascertained the place where her offspring was confined, had worked during the night in gnawing a hole for its escape; for that the gnawing had been done on the outside was evident from the marks of the teeth.

Foxes sometimes hunt in concert. The following fact was communicated to Mr. Jesse by a gentleman of strict veracity:—A friend of his was in the habit of shooting over a tract of wild and rocky ground in the south of France. Part of this ground was on the side of a very high hill, which was inaccessible to sportsmen, and from which hares and foxes took their way to the plain in the evening; and between the rocks and the lower ground were two passages, in the form of channels or gulleys made by the rain. Near one of these the gentleman and his attendant had stationed themselves one evening, in the hopes of being able to shoot some hares. They had not been there long when they observed two foxes coming down, one following the other, the first of which concealed himself under a large piece of rock, and the second returned to the heights, but soon came back, chasing a hare before him. As the hare passed the rock where the first fox had hid himself, he tried to pounce upon her with a sudden spring, but missed his aim. The chasing fox

then came up, and finding that his prey had escaped through the inefficiency of his associate, he fell upon him savagely, and the two fought together with such animosity that the gentleman and his attendant came up and destroyed them both.

Of the foxes in the Arctic regions, Steller, a Russian traveller, who was long detained by ill-fortune on Behring's Island, gives a full account, having had ample opportunities of studying their habits, and says that these animals, for cunning, roguery, and impudence, far exceed the common fox, for a detail of their innumerable tricks might vie with Albertus Julius's 'History of the Apes on the Island of Saxenberg.' They would roll down casks of provisions weighing some hundred-weight, and steal meat out of them with such skill that the theft could hardly be believed to have been performed without human hands. If, to hide the carcase of an animal from them, the people buried it underground and piled stones upon the spot, they would contrive to push away stone after stone with their snouts and shoulders, assisting one another till they made a way to it. If the carcase were put on the top of a high pole, one of them would either climb up the pole and throw down what was on it to his companions, or the whole would combine together to dig up the earth at the bottom, and lay the pole with its burden flat upon the ground. If they could not consume the whole of what they seized at once, they trailed it in portions to the mountains, where they buried it, running to and fro as long as anything remained to be conveyed away, and while the greater number were thus engaged, others stood on guard and kept watch. Charleroix says that these foxes will lay themselves down at the edge of a piece

of water, and gently move their tails in such a way as to attract foolish waterfowl to come and pull at them, when they instantly spring round and capture the birds.¹

Dr. Henderson, in his 'Journal of a Residence in Iceland,'² gives much the same account of these foxes. "An animal of this species," says he, "on discovering a flock of sea-gulls sitting about the shore, approaches them backwards, with his tail so raised as to resemble one of themselves; and as it is commonly white, and he advances with slow steps, they seldom discover the intrigue until he has reached them, when he is sure to seize one of them for his prey. In the winter he scrapes up the snow to the windward and blinds them, so that they are completely taken at unawares."

The same writer gives also another instance of sagacity in this kind of foxes, which abound in Iceland, in the vicinity of the North Cape, where they hunt various species of sea-fowl. "They proceed," he says, "on their predatory expeditions in company, and, previous to the commencement of their operation, they hold a kind of mock-fight upon the rocks, in order to determine their relative strength. When this has been fairly ascertained, they advance to the brink of the precipice, and taking each other by the tail, the weakest descends first, while the strongest, forming the last in the row, suspends the whole number till the foremost has reached their prey. A signal is then given, on which the uppermost fox pulls with all his might, and the rest assist him as well as they can with their feet against the rocks. In this way they proceed from

¹ Bingley's 'Animal Biography,' vol. i. p. 230, 233. ² Vol. ii. p. 99.

rock to rock, until they have provided themselves with a sufficient supply."

Pontoppidan, speaking of the foxes in those parts, says that a man was one day surprised to see one of them near a fisherman's house, laying a number of cods' heads in a row. He watched to see what would follow; and saw the fox hide himself at a little distance, and pounce upon the first crow that came to taste them.¹ This was indeed employing a means to an end, and ought to set the fox, according to Dr. Darwin's notion, high among rational beings.

In giving an anecdote of the English fox, Sir Benjamin Brodie, in his 'Psychological Inquiries,'² takes occasion to observe how much the lower animals, even the most intelligent of them, are slaves to their instincts and appetites. "The object immediately before them," he observes, "seems to supersede every other consideration."—"In a hunt," (as Sir Benjamin was told by a gentleman who saw the occurrence,) "the hounds had very nearly reached the fox, when a rabbit crossed his path. Apparently forgetting his own danger, the fox turned on one side to catch the rabbit, and was soon after himself seized by the dogs with the rabbit in his mouth." Whatever portion of reason, therefore, we may consider the fox to have, he had not enough to control the force of his instinct, or he would certainly have done so at that moment, and have thought more of preserving his life than of gratifying his appetite.

¹ Bingley's An. Biog. vol. i. p. 227. ² Part ii. p. 142.

CHAPTER XXVII.

MONKEYS AND APES.

THE general intelligence of monkeys and apes, except in the faculty of imitating what they see done by other animals, and especially by man, appears scarcely equal to that of the elephant, the dog, or the fox. Assuredly they are unequal to those animals in approximation to what in mankind we call common sense. They have much cunning, but little reason to guide them in turning their cunning to any useful purpose. We shall offer a few remarks on their character, and add a few anecdotes in illustration of it.

It has been said that they approach nearer to man in understanding than any other animal in their use of instruments. One mode in which they use an instrument is the following, as told by Gemelli Carreri in his 'Voyage Round the World,' where he says of the orang-outangs that they come down to the seacoast to seek a large species of oyster, of which they are very fond, and that when they find any of these fish with their shells open, they will not thrust in their paws, but will insert a stone between the shells to prevent them from closing, and then tear out the fish at their

leisure.¹ Dampier relates that monkeys go still further in the use of an instrument; for he says he has seen them on the coast of South America take up an oyster from the beach, lay it on a stone, and beat it with another oyster till the shells of one or both were broken, so as to allow them to devour the contents. Wafer says that he has seen monkeys on the island of Gorgonia lay the oyster on a stone, and beat it with another stone for the same object.² It is also said that they break the hard pod of the Brazil nut in a similar way, laying it on the branch of a tree or on another stone.³ But monkeys are not the only animals that have hit upon stones for tools; birds also, it is said, have found out the use of stones in dealing with oysters, and an eagle is asserted to have turned *Æschylus's* head into a instrument for breaking a tortoise. We shall have something more to say hereafter on the use of instruments by animals.

Another way in which they use tools is taking sticks to beat anything hostile. Mr. Gosse tells us how the greatest of all apes, the gorilla, wields his staff against the elephant. "The old male," he says, "is always armed with a stout stick, and knows how to use it. The elephant has no intentional evil thoughts towards the gorilla, but unfortunately they love the same sorts of fruit. When the ape sees the elephant busy with his trunk among the twigs, he instantly regards it as an infraction of the laws of property; and, dropping quietly down to the bough, he suddenly brings his club smartly down on the sensitive finger of the elephant's

¹ 'Naturalist's Library,' vol. ii. p. 33.

² Bingley, *An. Biog.* vol. i. p. 88.

³ Mrs. Lee, 'Anecdotes of Animals,' p. 28.

proboscis, and drives off the enraged animal trumpeting shrilly with rage and pain."¹ At the English fort at Wimba, on the coast of Guinea, several apes surprised two of the slaves, and were just going to poke out their eyes with sticks, when a party of negroes came up and rescued them.² Such is their use of instruments; but how far their reason and judgment extends in the application of them, is shown in the account of the female orang-outang described by Vosmaër, which, seeing the padlock of her chain opened with a key, put a bit of stick into the key-hole and turned it about, in the hope of its producing the same effect as the key.³

When we speak of the monkey's use of tools, we mean his use of such tools as he takes for himself in his natural state. Those which he uses when domesticated with man, as spoons or forks, he uses, not from intelligence, but from mere fondness for imitating what he sees done. In this direction, by indulging his propensity, he makes wonderful progress. Thus, one of the chimpanzees in the Zoological Gardens at Paris would sit in a chair, set out his own dinner, and eat with his knife and fork. He would also, when drinking tea, make a proper use of his spoon, and seemed to delight in assimilating himself to all the habits of his keeper's family.⁴ Such also was the case with one in the Zoological Gardens in the Regent's Park; it learned to use the knife and fork, but preferred a spoon, which it handled as well as any child of seven or eight years old.⁵ The orang-outang which Buffon closely observed would present his hand to conduct the com-

¹ Gosse, 'Romance of Natural History,' 1st series, p. 258.

² Bingley, 'Animal Biography,' vol. i. p. 57.

³ *Ib.* p. 61.

⁴ Mrs. Lee, 'Anecdotes of Animals,' p. 16.

⁵ Jesse, *Gleanings in Nat. Hist.*, vol. ii. p. 42.

pany who came to see him, and walk along as gravely as they walked ; he would “ sit down at table, unfold his napkin, wipe his lips, use a spoon or fork to carry his food to his mouth, pour his liquor into a glass, and . . . make it touch that of the person who drank with him. At tea he would fetch a cup and saucer, place them on the table, put in sugar, pour out the tea, and allow it to cool before he drank it.” But to keep him at these performances, till they were quite gone through, signs and orders from his master were occasionally requisite, though he would frequently go through them of his own accord.¹

Their wonderful faculty of imitation was noticed in days of old. Thus *Ælian*² tells us of an ape that he himself saw, which, by imitating the motions of a charioteer, became skilful in driving horses, relaxing and tightening the reins, and using the whip with the greatest apparent judgment. The same author, also, gives a story of another ape, whose ardour for imitation was not quite so harmless ; for having observed, from some elevated position, a nurse in a chamber undressing a child, and dipping it into a bath, he made his way, as soon as the nurse was gone, through an open window into the room, undressed the child again, and plunged it, not into such water as the nurse had used, but into a pan of boiling water, and so put an end to its life.³

This propensity for imitation is sometimes turned to their own destruction. Looking again into *Ælian*,⁴ we find accounts of stratagems for catching them adopted by hunters. One would put on a pair of

¹ Buffon, vol. viii. p. 86, Eng. Transl.

² ‘*De Naturâ Animalium*,’ vol. xxvi. ³ *Ib.* vii. 21. ⁴ *Ib.* xvii. 25.

shoes in the sight of an ape, and then, going away, leave a pair of leaden shoes with springes attached, into which the ape would be sure to thrust his feet, and equally sure not to be able to draw them out. Another would use a looking-glass while an ape was observing him, and then leave another glass in its place with a trap affixed to it, in which the animal, while admiring himself in the glass, would assuredly be caught. Another would wash his face with water from a basin in sight of an ape, and place another basin for the imitator filled with a strong solution of bird-lime, with which it would glue down its eyelids, and be caught in a state of blindness. "We have heard, too," says a writer in the 'Naturalist's Library,'¹ "of monkeys cutting their throats in imitation of the feigned action of the person whom they annoyed, and of one who killed himself by infusing a paper of tobacco with milk and sugar, instead of tea, drinking it as he had observed some sick sailor do."

But they show, in their wild state, considerable intelligence in the ways in which they act in concert, and support and assist one another. The species called the Barbary Apes often assemble in great numbers in the open plains of India, and form associations. Tavernier informs us that as he was travelling in the East Indies, in company with the English president, they observed several large apes upon the trees near them; and the president requested Tavernier to shoot one of them. The native attendant, who was well acquainted with the dispositions of these animals, begged him to desist, for fear the survivors should do them some mischief in revenge. As the president was urgent,

¹ Vol. ii. p. 52.

however, Tavernier killed a female, which fell among the branches, letting her little ones, which clung to her neck, fall to the ground. In an instant all the other apes, to the number of sixty or more, leaped down from the trees in a fury, and sprang, as many of them as could, on the president's coach, and would soon have over-mastered Tavernier, had not the attendants been numerous enough to drive them off. Still they continued to follow, and watch for an opportunity of attack, for at least three miles from the spot where their companion was slain.¹

In Job Ludolphus's 'History of Æthiopia,' there are some accounts of apes that set their understandings in a more favourable light than most other stories that are told of them. It is there stated that the Æthiopian and Abyssinian apes, going up and down in flocks of a thousand or more, and being very fond of worms and other small animals to be found under stones, turn up the stones for the purpose of discovering them, and that, if one comes to a stone which he cannot lift, he calls for one or more of his brethren, till enough are gathered round to raise it; that they often invade gardens for the sake of the fruit, but that they will never venture into them till they have sent spies before, and learned from them that the way is safe; and that, if the young ones make a noise, they beat them into silence with their fists; and also, that when they are pursued by larger beasts, and despair of escaping them by speed, they will make a halt, and, filling their paws with dust and sand, fling it in the eyes of their enemy, and then take to flight again.²

¹ Bingley's 'Animal Biography,' vol. i. p. 68.

² 'Naturalist's Library,' vol. ii. p. 32; 'Menageries,' vol. i. p. 39; Broderip, Zool. Recreations, p. 219.

These African apes, when they go in a body, as they often do, to plunder gardens or plantations, always send one of their party to the top of an adjacent tree or high ground, as a sentinel to keep watch, who, if he perceives any person approaching, utters a peculiar kind of shriek, at which the whole troop immediately make off with whatever they have seized.

There is a larger species of South American monkey, called *ouarines*, which, on account of a certain odd practice which they have, are often called preachers.

Marcgrave, in his 'History of Brazil,' relates the following facts concerning them, which he himself, he says, has often witnessed. Every morning and evening they assemble in the woods, when one of them takes a position higher than the rest, and makes a signal with one of his fore-paws for them to sit round him and listen. When they are all seated, he begins to utter a long succession of sounds, rapid and loud, so as to be heard at a great distance, while all the rest observe profound silence. When he stops, he gives another signal with his paws, and all the others then cry out together, and continue to make a confused noise till he gives a third signal, when they all become quiet again. He then recommences his seeming harangue; they again listen to him for a while, and the assembly disperse. Marcgrave makes no conjecture about the object of these apparent addresses; nor has his account, as far as I know, been confirmed by any subsequent writer; but, if the statement be true, the *preachings* must have as much meaning for those animals as our public speeches have for us.¹

¹ Smellie's Phil. of Nat. Hist. vol. ii. p. 425, from Marcgrave's Hist. of Brazil, p. 226.

The account of these preaching monkeys may remind the reader of another ludicrous story of a monkey's imitation.

Père Carbasson, a French abbé, brought up an orang-outang, which became so fond of him that, wherever he went, it always showed a desire of accompanying him; and whenever, therefore, he had to perform service in his church, he was under the necessity of shutting it up at home. On one occasion, however, the animal escaped and followed the preacher to the church, where, silently mounting the sounding-board above the pulpit, he lay perfectly still till the sermon commenced. He then crept to the edge, and, overlooking the preacher, imitated all his gestures in so grotesque a manner that the whole congregation were irresistibly urged to laughter. The father, surprised and confounded at this ill-timed levity, severely rebuked his audience for their misconduct. The reproof was without effect; the congregation continued to laugh; and the preacher, in the warmth of his zeal, redoubled his earnestness of remonstrance and gesticulation; and the ape imitated him so exactly that the audience could no longer maintain the least restraint on themselves, but burst into loud and universal laughter. At length a friend of the preacher stepped up to him and showed him the cause of his hearers' behaviour; and such was the arch and ludicrous demeanour of the animal, when discovered by his master, that the father himself could hardly command the muscles of his countenance, and keep himself apparently serious, while he ordered the attendants to take him away.¹

¹ Bingley's An. Biog. vol. i. p. 66; Garrett, 'Marvels of Instinct,' p. 76.

Mr. Broderip tells a story of an ape that lived with an old pig-tailed bachelor in some country town, and that would sit quietly and decorously at the dinner-table in a high child's chair, eating and drinking only of what was set before him or handed to him. One day, at a small dinner-party at his master's, at which Jacko was allowed to be present, there was some apricot tart on the table, to which the host helped several of his guests, but omitted to help Jacko. Jacko devoured the tart for a time with his eyes, and at last, unable longer to restrain his desire for devouring with his mouth, put his paw quietly behind his master, and pulled his pig-tail. His master, startled and surprised, gave him a look, and Jacko, glancing alternately at his master's face and at the tart, made known what he wanted, and was pardoned his importunity and helped to a handsome slice. Mr. Broderip would make it appear that Jacko's intention in pulling his master's pig-tail, instead of touching him on the arm or shoulder, was that his hint of the inattention might be unobserved by the guests at the table; but the justice of this view of the proceeding may be doubted.

Some men, as Monboddo and Rousseau, who have no great notion of the dignity of their species, would fain persuade us that man is but a better developed monkey. It is well that those of a contrary opinion have Professor Owen on their side. Among many observations which that learned anatomist makes on this subject, he remarks that the difference in structure of the feet and the teeth in man and the ape is sufficient to show that they are not one and the same animal. In man the muscle called *flexor longus pollicis pedis* terminates in a single tendon, concentrating its

force in the great toe, the principal point of pressure for raising the body on the heel for walking. In the ape this muscle terminates in three tendons spreading into the three middle toes, so as to enable them to grasp more firmly, and suit the requirements of an animal that climbs and sits upon trees. "Surely," says Mr. Owen, "it is too much to require us to believe that, under any circumstances, these three tendons should become consolidated into one, and the one become implanted into a toe to which none of the three separate tendons were before attached." As to the teeth, he remarks that the germs of them exist before the animal is born, and that, "let a monkey improve his thinking faculties as he may, they must, in obedience to an irresistible law, pass through their phases of development, and induce those remarkable changes in the maxillary portion of the skull, which give to the adult orangs a more bestial form and expression of head than many of the inferior *simiæ* present."¹ As to the physiognomies of man and the ape, it is well observed by Mr. Lawrence, that, while the human countenance is an organ of expression, an index of what is passing within, the brute face is merely an instrument for procuring and preparing food, and often an offensive and defensive weapon.

Man could not, if he wished, walk on all fours, for he would be unable to keep his face raised so as to look forwards; nor can the monkey walk constantly erect, for he is destitute, like other quadrupeds, of any calf, or other muscular formation in his hind legs, to support him.

"Man," remarks Lawrence, "is bimanous and biped;

¹ Broderip, Zool. Recr. p. 250.

monkeys and apes can neither be called quadrupeds nor bipeds; they are quadrumanous or four-handed, their fore-feet and hind-feet being equally formed for prehension. The orang-outangs, therefore, and other *simice*, neither go erect in their natural state, nor on all-fours, but live chiefly in trees, for which they are admirably adapted by having prehensile members, instruments for grasping and holding, both on the upper and lower extremities. Hence Cuvier calls them "Les grimpeurs par excellence." They love to be in trees, in which they find much of their food; they can hang in them by one fore or hind leg, employing the remaining members in gathering fruit or in other ways; and those which have less efficient hands are furnished with prehensile tails, with which they can be more securely supported in trees. The delineations of the orang-outang and chimpanzee, taken from the life, show how unnatural and inconvenient the erect posture would be to them; the hind feet, or rather hands, have the toes bent something like a clenched fist. The pelvis is narrow; the muscles of the buttocks and calves are of small size; the *os calcis* has no great prominence, and does not come to the ground. No ape can sustain the body on one foot only, like a man, with the sole spread flat on the surface of the ground; the outer edge of the ape's foot alone touches the ground, and the toes, as has been said, are bent."¹

As to the monkey's brain, indeed, it comes nearer in size to the human brain than that of any other of the mammalia. The weight of a man's brain, in proportion to that of his body, averages about 1 to 27; that of the long-armed ape about 40; while that of

¹ Lawrence's Lectures, p. 138.

the fox, which comes next, is only as 1 to 205 ; that of the horse as 1 to 400 ; and that of the elephant as 1 to 500.¹ But there is this difference between the human brain and the monkey's, that the cerebral hemispheres in man are prodigiously developed, to an extent to which no animal, whatever ratio its encephalon may bear to its body, affords any parallel.² The organs of speech in the monkey seem as fully formed as those of man, but the want of power in the brain, the want of connected thought and the faculty of reasoning, leaves them useless and inert ; and man himself, as Hobbes observes, could, without speech, have had no commonwealth or society more than lions, bears, or wolves. Camper is even said to have proved by dissection that the orang-outang is incapable of speech.³

There has been among monkeys, however, one case of suicide ; for Sir Stamford Raffles, when he was in Java, had a pet monkey, which, on being corrected for faults, attempted to destroy itself, and, after two ineffectual attempts, at last succeeded ; and as suicide, observes Mr. Jesse, has hitherto been considered as confined to the human race, monkeys are thus brought nearer to us than might be wished.⁴

Looking a little more at the doings of monkeys, we may see that much of what they perform of themselves is utterly unmeaning and without any good purpose ; so that the tricks which the foolish among human beings play, the practical jokes and other nuisances to

¹ Garratt, 'Marvels of Instinct,' p. 23.

² Lawrence's Lectures, p. 169.

³ Jesse, 'Gleanings,' vol. i. p. 253, citing Blumenbach.

⁴ Jesse, Gleanings in Nat. Hist. vol. ii. p. 77.

reasonable persons, are very properly called monkey tricks. But monkeys, as Mrs. Lee justly remarks, appear to be very improperly called frolicsome, mirthful, and merry, for they go through all their proceedings in sober seriousness. They steal; they outwit one another, and human beings, when they can; they tear and destroy whatever surrounds them in a domestic condition; but they do not seem to enjoy the mischief; they seem to contemplate and effect it as a business. They lay artful plans to effect their mischievous purposes; but all with solemn gravity. Mrs. Lee has often watched them in their wild state in the woods, and says, "Do you stand under a tree, whose thick foliage completely screens you from the sun, and hope to enjoy perfect shade and repose? A slight rustling proves that companions are near; presently a broken twig drops upon you, then another; you raise your eyes, and find that hundreds of other eyes are staring at you. In another minute you see the grotesque faces, to which those eyes belong, making grimaces, as you suppose; but it is no such thing; they are solemnly contemplating the intruder; they are not pelting him in play; it is their business to drive him from their domain. Raise your arm; the boughs shake; the chattering begins; and the sooner you decamp, the more you will show your discretion."¹

The monkey tribe have a good memory of affronts, and the better disposed among them of good treatment. Mrs. Lee relates that she once annoyed a monkey in the Jardin des Plantes, Paris, by preventing him from appropriating the food of one of his com-

¹ Mrs. Lee, 'Anecdotes of the Habits and Instincts of Animals,' p. 10; Garratt, 'Marvels of Instinct,' p. 49.

panions, and, in the course of the proceeding, gave him a knock on his paw. He was dreadfully provoked, rolled himself about and screamed, and would probably have done her some mischief, if strong wires had not protected her. Nor did he ever forget the offence. Whenever she visited the garden subsequently, he would manifest the utmost rage as soon as he heard her voice, and after a lapse of several months, during which she had been constantly absent, he seized on her gown while she stood too near his cage, dragged a portion of it within the bars, and bit a large piece out of it, though it was made of very strong material.¹

A somewhat better-tempered monkey Mrs. Lee herself brought from Senegambia, having given it to her daughter, then but a child, whom he did not hesitate to bite and scratch whenever he considered that he was handled too roughly. Mrs. Lee punished him when he thus offended, but caressed him when he was well-conducted, and so acquired an ascendancy over him. Being mischievous in London lodgings, she was obliged to fasten him to the bars of a stove; and he was no sooner let loose than he tried to break everything within his reach. At last, to get rid of him, it was resolved to present him to the Jardin des Plantes. Mrs. Lee took him there, and, while she stayed at Paris, paid him daily visits. When she ceased to go to him, he showed, as the keeper told her, great disappointment, perpetually watching for her return. Two years after, she went again to see him, and when she said, "Mac, do you know me?" he gave, she says, "a scream of delight, put both his paws beyond the

¹ 'Habits and Instincts of Animals,' p. 11.

bars, stretched them out, held his head down to be caressed, uttering a low murmur, and giving every sign of delighted recognition.”¹

Of good feeling manifested among them one towards another, the following is a pleasing instance:—“A female monkey was shot by a friend of Mr. Forbes, and carried to his tent. Forty or fifty of her tribe advanced with menacing gestures, but stood still when the gentleman presented his gun at them. One, however, who appeared to be the chief of the tribe, came forward, chattering and threatening in a furious manner. Nothing short of firing at him seemed likely to drive him away; but at length he approached the tent door with every sign of grief and supplication, as if he were begging for the body. It was given to him; he took it in his arms, carried it away, with actions expressive of affection, to his companions, and with them disappeared. It was not to be wondered at that the sportsman vowed never to shoot another monkey.”²

It is somewhat strange, that, with all their propensity to imitation, they should not have mimicked persons whom they saw (for they must have seen many) putting sticks on fires. But this they have never done. They will gather round a fire which people have left, and enjoy the warmth, but never conceive a thought of replenishing it.

One anecdote, indeed, is told of a chimpanzee taught to keep up a fire in an oven,—an office which she could not only perform with the utmost cleverness, but would tell the moment when the requisite degree of heat was attained, and fetch the baker to put in his dough. The account of this animal is given in Brown’s ‘Anec-

¹ ‘Habits and Instincts of Animals,’ p. 13.

² *Ib.* p. 27.

notes,' from M. Grandpré, who saw her on board a vessel bound for America. She would take care that no live coals fell from the oven into the ship; and would assist the sailors in splicing ropes and managing the sails.¹

The monkey's device of using the cat's paw to take his roasted chestnuts out of the fire is said to have taken place in the hall of Pope Julius II.,—"a scene," says Mr. Broderip, "which Sir Edwin Landseer has so admirably represented,—painted, we would have said, but painting it may not be called, for the coals are live coals, and the yelling cat is held by the imperturbable monkey to a fire that makes one hot to look at it."²

Monkeys may be taught of course many tricks, but they soon forget them, unless they are kept in constant practice. Mrs. Lee tells of a monkey at Paris that was trained to perform a number of clever tricks. His master brought him one day to Mrs. Lee's house for exhibition, and she met him suddenly as she was going down the drawing-room stairs. He made way for her by standing in a corner; she said to him "Good morning," and he took off his cap, and made her a low bow. She asked him, at the prompting, I suppose, of his master, whether he was going away, and, if so, where was his passport. Upon this he took from his cap a square folded piece of paper, which he opened and held before her. His master then told him that the lady's gown was dusty, when he took a small brush from his master's pocket, raised the hem of her dress, brushed it, and then performed the same operation on her shoes. He was perfectly docile and

¹ Garratt, 'Marvels of Instinct,' p. 55, 57.

² Broderip, Zool. Recr. p. 268.

gentle. When something was given him to eat, he did not cram it into his pouches, but ate it quietly and delicately; and when money was put into his hand, he transferred it to that of his master.

Francis Pyrard, in his 'Voyages,' tells us that the orang-outangs in Sierra Leone are strong and well-limbed, and so active, that they may be trained to work like servants; that they will pound substances in a mortar, and that they are sent to fetch water in small pitchers, which they carry on their heads; but if, when they return, the pitchers are not soon taken from them, they allow them to fall, and, when they perceive a pitcher overturned and broken, they weep and lament.¹

Schoutton² also speaks of apes taught to use their fore-feet as hands in rinsing glasses, carrying round drink, turning spits, and various other operations.

Le Guat,³ too, tells of an extraordinary ape that he saw at Java, a female, which learned to make her own bed, lie down upon her side, and cover herself with the bedclothes.

One of the most remarkable examples of monkey intelligence was given by a red orang-outang exhibited in Edinburgh by Mr. Cops, who one day gave him the half of an orange, a fruit of which he was particularly fond, and put away the other half on the upper shelf of a press out of his reach and sight; a proceeding of which the animal seemed to take no notice. But some time after, as Mr. Cops was reclining upon a sofa with his eyes closed, the orang began to prowl about the

¹ 'Voyages de François Pyrard,' tome ii. p. 331.

² 'Voyages aux Indes Orientales.'

³ 'Voyages,' tome ii. p. 96; Smellie, Phil. of Nat. Hist. vol. i. p. 440.

room, and soon showed that, notwithstanding his apparent inattention, he was well aware of the place where the half-orange was deposited. He cautiously approached the sofa, and tried to ascertain whether Mr. Cops, who feigned to be asleep, in order to watch him, was really sound, and concluding that he was, mounted stealthily to the top of the press, seized the remainder of the orange, and dispatched it all but the peel, which he carefully concealed in the grate among some paper shavings, and then, thinking himself safe from detection, lay quietly down to rest.¹ Here was reasoning to a great extent; and perhaps if he could have left the room, he would have carried the orange-peel to some hiding-place at a greater distance.

The same monkey had a checked shirt, which he was very fond of wearing. One day a gentleman appeared before him with a shirt of a similar pattern, when the animal immediately made up to him, and would not be satisfied until he was allowed to examine the shirt, pulling out the breast of it, and holding it up to compare it with his own, while he looked up in the gentleman's face with an expression that seemed to question his right to be clad like himself.

¹ 'Naturalists' Library,' vol. ii. p. 51, 92.

CHAPTER XXVIII.

RATS AND MICE.

THE intelligence of the rat, and, we may add, of the mouse, seems to be much upon an equality with that of the fox. The ingenuity of rats is shown in nothing to more advantage than in the contrivances by which they convey eggs from place to place, and extract oil from long-necked bottles.

Rats have been known to carry eggs, which had been deposited in the garret of a house, down to the cellar, acting several in concert, and lowering each egg over every step of the stair with the utmost caution, so as to bring them to the bottom without the least injury ; and then to lay them up in their nests for future use, where many of them have been found. I had an account of such a proceeding from an old lady, who had heard of it from some farmers in whose house such things had more than once occurred. Whether the rats in this case had actually been seen in the process of conveying the eggs, I do not remember that she stated ; but she said, "I know that numbers of eggs, marked for the purpose of making the matter certain, vanished from the loft, and were found in the rats' nest

in the cellar ; proving that the rats themselves must have taken them thither."

In the following instance, however, the rats were detected and watched in the act of transporting the eggs down the stairs. It is told by James Rodwell,¹ on the testimony of "a very respectable and intelligent person who was eye-witness of the fact." She was a servant at a pastry-cook's in London, who had laid up some fine eggs in a store-room at the top of his house, without letting any of the domestics know that they were there. Some of these eggs he in a short time missed ; and he found that night after night the number rapidly decreased. Though the existence of the eggs had not been communicated to the servants, he nevertheless could not help suspecting them, or some one of them, of the abstraction. The suspicion, when expressed, caused much uneasiness in the house ; when one morning early, as the teller of the story was getting up, she heard a slight noise on the stairs, and immediately fancied that some person was stealing the eggs. She stole gently out of her room to the landing. in the hopes of detecting the thief, and peeping over the banisters, saw, not a human depredator, but two rats, one larger than the other, conveying one of the eggs down the stairs. When she first saw them, she said, they were both on one step, about halfway down the flight, and the egg lying between them ; the larger rat then descended to the step below, and stood on his hind-legs, with his fore-paws resting on the step above, while the other rolled the egg towards him ; then, putting his fore-legs tightly round it, he lifted it down to the step on which

¹ 'The Rat, its Natural History ;' Routledge, 1863.

he was standing, and held it there till the other came down to take charge of it. Thus they continued from step to step, till she grew tired of watching them and drove them off. Dr. Carpenter also received a similar account of the proceedings of rats from an eye-witness.¹

According to a writer in the 'Quarterly Review,' rats will not only convey eggs from the top of the house to the bottom, but from the bottom to the top. The male rat places himself on his fore-paws, with his head downwards, and, raising up his hind legs, and catching the egg between them, pushes it up to the female, who stands on the step above, and secures it with her fore-paws till he jumps up to her; and this process is repeated from step to step till the top is reached.

"The captain of a merchantman," says Mr. Jesse,² "trading to the port of Boston, in Lincolnshire, had constantly missed eggs from his sea-stock. He suspected that he was robbed by his crew, but not being able to discover the thief, he was determined to watch his store-room. Accordingly, having laid in a fresh stock of eggs, he seated himself at night in a situation that commanded a view of his eggs. To his great astonishment he saw a number of rats approach; they formed a line from his egg baskets to their hole, and handed the eggs from one to another in their fore-paws."³

We are told in a fable of La Fontaine that the mode in which rats carry eggs is, that one rat raises himself over the egg and grasps it with his fore-feet, and then

¹ Mrs. Lee's *Anecd. of Animals*, p. 264.

² *Gleanings in Nat. Hist.* vol. iii. p. 157.

³ Jesse's *Gleanings*, vol. ii. p. 281.

throws himself on his back with the egg resting on his belly, when a second rat takes hold of his tail, and drags him like a sledge to the place where the egg is to be deposited. This we might suppose to be poetical invention; for it is nowhere said, as far as we know, that any such process was ever witnessed. Incredible as it may appear, however, observes the writer in the 'Quarterly,'¹ whom we have just quoted, there is no reason to disbelieve it, when we know how artfully rats will manage eggs in other ways.

An anecdote showing how one rat deals with an egg by himself, is given by Rodwell. "A few years ago, a gentleman living at Louth Hall, and taking a walk one morning round the establishment in company with the coachman, the latter all at once drew his attention to the hen-roost, where a rat was struggling with an egg; and so intent was the animal on the undertaking that it was perfectly unconscious of their presence. They watched its manœuvres for about ten minutes, and its principal difficulty seemed to be in balancing the egg; this it did by stretching out one of its fore-legs underneath the egg; and steadying it above with its cheek. When thus secured, it hopped very steadily and cautiously upon three legs,—thus looking in its action more like a young rabbit than a rat. When he was near his hole they gave him chase, and it was not till they were close upon him that he dropped his burden to save himself by running. The gentleman picked up the egg, and had it for his breakfast."

A friend of Mr. Jesse once saw the way in which a weasel contrived to carry off an egg to his den. He

¹ Vol. ci. p. 130.

rolled it along with his nose, taking great care so as not to break it, and yet moving it forward with much ease.¹

As to oil, rats have been known to get oil out of a narrow-necked bottle in the following way:—One of them would place himself, on some convenient support, by the side of the bottle, and then, dipping his tail into the oil, would give it to another to lick. In this act there is something more than what we call instinct; there is reason and understanding—a portion of the same sort of reason and understanding of which human beings are possessed. It is the same kind of intelligence that was manifested by the crow that threw pebbles into a pitcher, to raise the water in it to a height at which she could reach it.

Mr. Jesse gives an instance of rats having been seen at such a proceeding; an instance which he heard, he says, from a person of such veracity, that he was as much convinced of its truth as if he had witnessed the occurrence himself.

A box containing some bottles of Florence oil was placed in a store-room which was seldom opened; the box had no lid to it. On going to the room one day for one of the bottles, the owner found that the pieces of bladder and cotton at the mouth of each bottle had disappeared, and that much of the contents of the bottles had been consumed. The circumstance having excited suspicion, a few bottles were refilled with oil, and the mouths of them secured as before. Next morning the coverings of the bottles had been removed, and some of the oil was gone. However, upon watching the room, which was done through a little

¹ Jesse's Gleanings in Nat. Hist. vol. iii. p. 144.

window, some rats were seen to get into the box, and insert their tails into the necks of the bottles, and then withdrawing them, they licked off the oil which adhered to them.¹

Rodwell also gives an account of a rat that gnawed small holes in the bungs of several broad-mouthed bottles of salad oil, and was seen inserting his tail into the hole in one of the bungs, and then drawing it gently forth and licking it clean; a process which he continued till he was satisfied.²

The following anecdote is likewise furnished by him:—

At a place near the railway at Manchester, where a station has been deserted for another at some distance, a gentleman, happening to be waiting thereabouts, saw a fine sleek rat come from the premises of the old station, and, going up to a carriage that was standing off the line, climb up a spoke in one of the wheels to the box in which the grease was kept. Watching the animal's proceedings, he observed him raise the spring-lid with one of his fore-paws and hold it up, looking round to see whether any one was noticing him. Then, seeming satisfied that there was no danger, he plunged his nose into the grease, a compound of palm-oil and tallow, and devoured it with great eagerness. Occasionally he drew out his head to see that all was safe, still holding up the spring-lid with his paw, and then, seeing nothing to fear, resumed his eating, and so went on till he was satisfied, when he let fall the lid, and returned quietly to the place from whence he came.³

¹ Jesse's Gleanings in Nat. Hist. vol. ii. p. 255.

² 'The Rat,' by Uncle James, p. 58. ³ *Ib.* p. 59.

It may be supposed that animals who will assist one another in getting eggs and oil, will not be indisposed to combine for mutual advantages in other ways. Rats, remarks Mr. Frank Buckland, in his 'Curiosities of Natural History,'¹ are not selfish animals, for when they have found out where there are materials for a feast, they proceed to make known the discovery, by what signals we are left to conjecture, to their neighbours. He then relates, in confirmation of this communicativeness, a fact which came under his own knowledge, and of which we shall extract the account, with slight abridgment, from his pages. An excellent old lady, named Oke, who resided at Axminster, some years ago, was celebrated for making sweet wine, of which she placed, on one occasion, a large cask in her cellar. The second night after the cask had been deposited, she was frightened by an unaccountable noise in the lower part of the house, which caused her to call up her servants, who searched the whole premises, but without discovering the origin of the sounds. The next night, as soon as the old lady and her household had retired to rest, the same dreadful noise was heard again. There was squeaking, pattering, and other sounds, such as ghosts have been supposed to make; and the old lady became possessed with the belief that her house must be haunted; she seems to have been too much alarmed to call up her servants, but lay in bed, with her candle alight on her table, pale and sleepless with terror, and muttering her prayers, till the morning dawned, and the cocks began to crow, when she thought it must be time for ghosts to withdraw. As she hoped, so it proved; for the sounds really ceased,

¹ First Series, p. 98.

and she fell asleep. But expecting similar disturbances the next night, she made great preparations against them; she brought into her house the farm servants armed with pitchforks; the female servants took the dinner-bell into their room; and the great dog was tied up in the hall. The old lady herself borrowed a pair of pistols from a neighbour, and seated herself by the fireside in her room, with the pistols on the table. There was no cause, however, for action; all was quiet throughout the night, no sounds of ghosts or other beings were heard; nor did any similar disturbance occur afterwards; and the whole affair began gradually to slip out of memory. But after some weeks she invited a few friends to tea, and desiring to treat them in the evening with some of her wine, sent the maid to the cellar for a supply. The damsel soon came rushing back in a fright, gasping for breath, and crying, "'Tis all gone, ma'am; the ghost must have taken it;" and in truth it was taken; the cask had been drained of every drop.

An examination of the barrel, and the discovery of the marks of teeth about a large breach in the side of it, soon showed how the wine had been abstracted. The rats in the old lady's cellar had found out the wine, and had communicated the news of its locality to other rats in the neighbourhood; and a large party had assembled to enjoy the beverage. They first gnawed out the bung, and got at as much of the liquid as they could; and then, finding the wine below their reach, gnawed down the wood till they came to its level; and as rats are most persevering animals, they continued their operations during the two nights, till the cask was completely emptied; for they must at

last have got into it, and licked up the very dregs. They then withdrew to their respective abodes, quite unconscious of the fright which they had given to the owner of the grateful fluid. Mr. Buckland adds that the cask, with its imperfect side, and the marks of rats' teeth in the wood, is still in his possession.

This affair is sufficient to show how rats will act in combination. But there are other instances of the same propensity. As James Rodwell, the author of 'The Rat,' was passing, on a summer afternoon, near one end of the Serpentine, where there are bushes and long grass forming an excellent shelter for rats, he saw a number of these animals regaling themselves on the remains of a dead cat. After a while a boy came up with a little frisky yelping cur, which he incited to attack them. As the dog approached, they all cowered down, as if with the intention of making a simultaneous spring on him; while he, appearing suspicious of their design, barked and jumped about, as dogs will often do in front of a cow or a horse. At length, as he ventured nearer and nearer, one sprang at him, then another, and then more, but he dexterously avoided each by jumping aside. In the end, as they pursued their attacks with increasing vigour, he turned tail and ran away. At that instant came forward a dog-dealer, leading a black-and-tan terrier, which he unloosed to assail the rats. The rats turned on him as they had turned on the other dog, apparently undaunted; and one leaped forward upon him; but the dog caught him and killed him in a moment, and then another; when the rest, seeing what was likely to be their fate, fled to their hiding places. But the proceeding amply testified how rats

will support one another, and execute undertakings in concert.

A gentleman also told Rodwell that the landlady of a house in which he lodged had a very fine tortoise-shell cat, which she highly valued for its efficiency in killing rats, with which her premises were much infested. The cat was in the habit of staying in one of the kitchens at night for the purpose of watching her intended victims. But one morning, when the manservant went down, he found the cat stretched helpless on the ground in the agonies of death. The flesh of the back and sides, from the head to the tail, was wholly torn off, so as to lay the bones bare. The mistress, as soon as she saw its condition, gave orders to have it killed. No one rat, and no half-dozen, observes Rodwell, could have so maltreated the cat; for a cat is a most courageous fighter in case of danger, and would probably have contrived to jump up somewhere out of their reach; so that it must have been a whole host of rats that sprang upon her and pinned her down till she was utterly disabled.

Not long ago, says the same authority, there appeared in a country paper an account of a most extraordinary contest between a body of rats and some terriers. The men employed in some large grain stores were one evening alarmed by a great noise, chiefly of the barking of dogs, proceeding from the lower end of the yard. They seized whatever weapons they could find, and hurried to the spot with lights, where they beheld thousands of rats collected on and about a cart, at the bottom of which lay the shakings of some meal-bags, and two fine terrier dogs, belonging to the master of the premises, battling with the rats, and

killing all that they could seize. But the rats, though they saw several of their comrades slain, had such confidence in their numbers that they showed no signs of retreat, but, on the contrary, appeared, at the time of the men's arrival, on the point of overpowering the dogs. The men of course, with heavy sticks, turned the battle in the dogs' favour, though the rats stood their ground for a time, even in defiance of blows. As for the dogs, they were so severely bitten about their heads and bodies that on the following day they could scarcely move.

It is to be remembered that rats in their natural condition, and in full vigour, are very different from many of those of which the dog Billy used to kill a hundred in an hour, and from such as have been submitted to other canine champions in matches of that kind. A great portion of those animals had been kept in confinement, perhaps with insufficient food, for days or weeks, so as to be utterly weakened and dispirited, and, when they were turned into the arena before their adversary, at once gave themselves up for lost. But a well-fed and well-grown rat, in its wild state, has the fierceness of a tiger, and will attack anything from which it seems likely to suffer violence.

The intelligence of the rat was strongly shown in a combat of one with a ferret; an experiment of a medical gentleman at Kingston, who, wishing to know how the ferret, an animal of slow motion, could be so destructive to the more active rat tribe, resolved to test the fighting powers of the two under his own eye. The encounter, which took place in an empty room with only one window, is described¹ at great length by

¹ 'Gleanings in Natural History,' vol. ii. p. 256.

Mr. Jesse. The rat's sagacity was chiefly manifested in keeping himself close under the window, with his back to it, so as to throw the glare of light on the eyes of his antagonist. The combat resembled that of Sayers with Heenan; the rat darting forward, time after time, biting the ferret about the head, and then retiring from the ferret's embrace, which would have been fatal to him. The struggle had lasted two hours, when the gentleman, to prove whether the rat took post under the window from choice, dislodged him by stationing himself there; and the rat showed that he was quite sensible of the advantage he was deprived of by endeavouring to regain his post, from which the gentleman persisted in excluding him. It was not, however, till the end of the third hour that the ferret, with all the caution that he found himself unexpectedly obliged to use, and with all the advantage of light which the gentleman had given him, was able to accomplish his intended grapple, when the rat, conscious of being overpowered, uttered one plaintive shriek, and surrendered itself without further effort to its fate.

Had it not been for the gentleman's interference, the affair might have ended differently; for in another conflict of the same kind, mentioned in the 'Quarterly Review,'¹—a conflict in which the rat was left undisturbed,—the ferret was forced to retire defeated, the skin of its head and mouth being bitten into shreds. To spring forward to bite, and then dart back, is the rat's natural mode of attack. But this, when confined in its hole and pressed by the ferret, it cannot long practise, and in consequence soon falls a victim to its enemy's hug.

¹ Vol. ci. p. 135.

“The sagacity of the rat in eluding danger,” says the writer in the ‘Quarterly Review’¹ “is not less than his craftiness in dealing with it when it comes. A gentleman, Mr. Jesse relates, who fed his own pointers, observed through a hole in the door a number of rats eating from the trough with his dogs, who did not attempt to molest them. Resolving to shoot the intruders, he next day put in the food, but kept out the dogs. Not a rat came to taste. He saw them peering from their holes, but they were too well versed in human nature to venture forth without the protection of their canine guard. After half an hour the pointers were let in, when the rats forthwith joined their hosts, and dined with them as usual.”

During the great flood of the Tyne, in September, 1829, a rat saved itself from drowning on the back of a swan. Some people standing on the margin of the river, when the water was at its height, observing a swan swimming towards them with a black spot on its plumage, watched to see the cause of the unusual appearance. As the swan drew nearer, they found that the spot was a live rat, which, it was probable, had been carried into the water on some floating object, and had escaped drowning by leaping on the swan’s back. When the bird came close to the land, the rat leaped off and ran away.

That rats are ready to assist and benefit one another, we have already seen; and the following anecdote shows at once their good feeling in this respect, and their intelligence and inventiveness:—“The Rev. Mr. Ferryman, walking out in some meadows one evening, observed a great number of rats in the act of migrat-

¹ Vol. ci. p. 134.

ing from one place to another. He stood perfectly still, and the whole assemblage passed close to him. His astonishment, however, was great, when he saw an old blind rat, which held a piece of stick at one end in its mouth, while another rat had hold of the other end of it, and thus conducted his blind companion."¹

Another proceeding of a similar kind took place in 1757 on board a ship named the 'Lancaster,' the surgeon's mate of which, Mr. Purdew, as he was lying awake one evening in his berth, saw a rat enter, look cautiously round, and withdraw. But he soon returned, leading a second rat, which appeared to be blind, by the ear; and these two were shortly afterwards joined by a third, which assisted the first in picking up fragments of biscuit, and placing them before the blind one, which Mr. Purdew supposed to be one of their parents.²

The same Rev. Mr. Ferryman that saw the blind rat led by its companion with a stick, told Mr. Jesse that a clerical friend of his, a person of retired and studious habits, always believed that he had been saved from being burned through the sagacity of a rat which he had tamed, and which was his constant attendant, running about him as it pleased, and appearing greatly attached to him. The old gentleman was in the habit of reading in bed by a lamp. One night he had fallen asleep, and was awoken by a sharp pain in his cheek, when he found that his bed-curtains were in a blaze. He jumped up, and escaped, but his house was burnt down. Whether his rat perished in the flames, or

¹ Jesse, 'Gleanings in Natural History,' vol. iii. p. 206; Mrs. Lee, 'Anecdotes of Animals,' p. 261; Bell, 'British Quadrupeds,' p. 313.

² 'Quarterly Review,' vol. ci. p. 130.

what became of it, he never knew ; for he saw no more of it. But he was always convinced, and was indignant if any one doubted, that his favourite, seeing his danger, had saved him by biting his cheek, on which he exhibited marks like those of small teeth.¹

Rats must have water. When they are in a ship, they will stay in it as long as the cargo is on board, provided they find water obtainable. In a rainy night they will come on deck to drink, and even climb the rigging to sip the moisture lying in the folds of the sails. The reason why they generally desert a ship as soon as it reaches the shore after a voyage, is doubtless the want of water. On such occasions they make their way to land, if possible, dry-footed ; a feat which they generally accomplish by passing in single file along the mooring-rope, but, if they find this impracticable, they will betake themselves to swimming. In the same manner they go on board ships from the shore, unless the sailors stop their passage with a prickly birch broom, or something else that they cannot get over. The rats in the Paris sewers have been seen marching forth in quest of water in the dusk of the evening.²

Rats, it is known, transfer themselves from one island and one country to another. How they contrive to do so, has been matter of conjecture ; but it is generally supposed that, when a ship is in harbour, a number of them, by what feelings or expectations prompted we do not know, and are not likely to discover, swim from the shore to the vessel, and climb on board ; and that, when the ship anchors on another

¹ Jesse, 'Gleanings in Natural History,' vol. iii. p. 207.

² 'Quarterly Review,' vol. ci. pp. 126, 130.

coast, such of them as wish to quit the vessel swim in a body to the shore. When they are on board, they will gnaw their way through the timbers from one part of the vessel to another; but it has been remarked, and thought by some a wonderful indication of the intelligence of the rat, that however boldly they may gnaw in other parts, they never gnaw through the sides, though in numberless instances they have eaten half-way.¹ But Mr. Jesse² has probably hit upon the right reason for their forbearance; he supposes that they will gnaw the sides as readily as any other portion, until they find the wood distasteful from the effects of the salt water with which it is partially saturated, and which causes them to desist from further operations.³

A ship on her voyage was much infested with rats, and, as she proved also unseaworthy, it was determined to transfer her stores to another vessel. It was of course desirable that the rats should not pass from one ship to the other, and, to prevent them from doing so, the two vessels were anchored at some distance from each other, while the stores were removed in boats. But when the crew were preparing to leave the vessel, the rats were seen making their way, in one unanimous body, down the sides, and swimming off to the ship which contained the stores, and in which, but for the vigilance of those on board, they would have lodged themselves.³

“A Belgian newspaper not long since published an account of a theatrical performance by a troop of rats, which gives us a higher idea of their intellectual nature than anything else which is recorded of them.

¹ ‘The Rat,’ by James Rodwell, p. 162.

² ‘Gleanings in Natural History,’ vol. ii. p. 315. ³ *Ib.* vol. iii. p. 208.

This novel company of players were dressed in the garb of men and women, walked on their hind legs, and mimicked with ludicrous exactness many of the ordinary stage effects. On one point only were they intractable. Like the young lady in the fable, who turned to a cat the moment a mouse appeared, they forgot their parts, their audience, and their manager, at the sight of the viands which were introduced in the course of the piece, and, dropping on all-fours, fell to with the native voracity of their race. The performance was concluded by their hanging in triumph their enemy the cat, and dancing round her body.”¹

Of mice we have fewer anecdotes than of rats, but those which we have, tend to prove that they are not inferior to rats in general sagacity and intelligence.

We have previously given an account of “preaching monkeys,” and Mrs. Lee had opportunity of observing such proceedings among mice as may indicate that they hold assemblies, and deliver and listen to harangues, in much the same way as the oratorical monkey-tribe. She was ill for some weeks, at the Cape of Good Hope we believe, in apartments fearfully infested with mice. A wainscot ledge ran round the room in which she lay, and on this projection it was their delight to scamper one after the other; and she was obliged to have the head of her bed removed a yard from the wall to prevent them from springing on her pillow and her face. But “their head-quarters,” she says, “seemed to be a large closet in one corner of the room, from which they constantly issued, and to which they retreated on the least alarm; for it was always ac-

¹ Quart. Rev. vol. ci.

cessible, in consequence of the door not closing properly. They often appeared to me to hold a council, for they would sally forth in a body, not giddily, as if by chance, but with all the gravity of diplomatic characters, and form a circle, when deliberations commenced. They were carried on in a language between a squeak and a chatter, and occasionally one would rise and place himself in another part of the circle. I would have given a great deal to have understood what was going on; but, as I could not, I occasionally disturbed them by laughing, when they huddled back to the closet; and, when I grew stronger, I sometimes dashed a pillow in among them, which made the poor senators breathless with agitation, and scuffle under the furniture till they thought they might gain the closet in safety.”¹

Nor do they appear to be less clever than rats in inventing and concerting modes of effecting their objects. The same lady² tells us that during her convalescence from the preceding illness, her appetite was kindly tempted by various dainties, which were placed under tin covers on the top of a chest of drawers. “The endeavours of my rodent companions,” she relates, “to get at these were excessively droll; as fast as they clambered an inch or two up the side of a cover, the slippery metal caused them to slide down again; then they thought that if they could but get to the top of the cover they should succeed; so they mounted upon each other’s shoulders and accomplished the feat, but not their purpose; for, instead of getting inside, down they came in a body again; but they became so used to my laughter that they did not mind it. Many of them combined together to push the cover off the

¹ Mrs. Lee’s ‘Anecdotes of Animals,’ p. 28.

² *Ib.* p. 269.

dish, but it was too firmly retained by the rim to be moved. One day they thought they had triumphed, for the cover was not quite put down in one place. A summons was evidently given, and presently a number of little paws were inserted to raise it still higher; but instead of doing this, the cover slipped on to their paws, and it was very ludicrous to see their pain and mortification. After this they so far abandoned the attempt, that only one would be occasionally seen walking round, as if by reconnoitring the fortress again, his genius would suggest a successful termination to the enterprise.”

A few years ago the Rev. Mr. North, rector of Ashdon, in Essex, placed a pot of honey in a closet, in which, as it had been but recently built, a quantity of plaster rubbish had been left. It chanced, from some cause, that he did not go to the closet for the honey till some months afterwards, when he was surprised, as the closet had been locked, to see a mound of the rubbish piled against the sides of the pot, nearly to the top of it. He delayed removing it till he should try to discover how it could have been heaped up. He set a trap and caught a mouse, which he had no doubt was the builder. On examining the honey, too, he found that a quantity of the rubbish had been thrown into it, so as to raise it nearly to the edge of the vessel, just as the crow is said to have raised water in a jar by throwing in pebbles.¹

Dr. Henderson, when he was travelling in Iceland, took occasion to make inquiry respecting a famous species of mouse in that island, which is said to have remarkable talents for navigation. Povelsen, a writer

¹ Jesse's Gleanings in Nat. Hist. vol. iii. p. 176.

on Iceland, had related that these mice would collect in parties of from six to ten, select a flat piece of dried cow-dung, and pile on the middle of it berries, or whatever they had for food, and then, uniting their force, bring it to the edge of any stream that they wished to cross, launch it, embark on it, and range themselves round the heap with their heads joined over it, their backs to the water, and their tails pendent in the stream to serve as rudders. To this account Pennant¹ gave credit, observing that in a country where berries were but thinly dispersed, the animals were obliged to cross rivers for distant forages. But Hooker, in his 'Tour in Iceland,' threw discredit on the story, as mere invention. Dr. Henderson, having been apprised of these conflicting opinions, says, "I made a point of inquiring of different individuals as to the reality of the account, and am happy in being able to say that it is now established as an important fact in natural history by the testimony of two eye-witnesses of unquestionable veracity, the clergyman of Briamslaek, and Madame Benedictson of Stickesholm, both of whom assured me that they had seen the expedition performed repeatedly. Madame Benedictson, in particular, recollected having spent a whole afternoon, in her younger days, at the margin of a small lake on which these skilful navigators had embarked, and amusing herself and her companions by driving them away from the sides of the lake as they approached them. I was also informed that they make use of dried mushrooms as sacks, in which they convey their provisions to the river, and thence to their homes."²

¹ 'Introduction to Arctic Zoology,' p. 70.

² Dr. Henderson, 'Journal of a Residence in Iceland, in 1814 and 1815,' vol. ii. p. 187.

CHAPTER XXIX.

ANIMALS FINDING WAY FROM PLACE TO PLACE.
THE DOG.

HAVING now noticed various actions of the elephant, the dog, the horse, the cat, the fox, the monkey, and the rat, such as show them to be possessed of some portion of reason and intelligence, we will, before proceeding to notice such indications in other creatures, turn our attention to this peculiar manifestation of sagacity which is shown by many animals in finding their way from one place to another, not only back over ground that they have already traversed, but along ways which they had never before seen, pursuing their course steadily and unerringly, even where there was not only nothing to guide them, but innumerable objects, as we should suppose, to obstruct and perplex.

We find abundance of accounts relative to this subject, so well attested as to leave no doubt respecting their truth. For feats of this kind the dog is of all animals the most distinguished. The following adventure of a dog was told me by Dr. W——, an intimate friend of mine, from his own personal knowledge. It occurred in the family of his brother's wife's

father, a gentleman who farmed his own land, near Grantham, in Lincolnshire. This gentleman sold a large number of cattle to a cattle-dealer, who took a fancy to a fine sheep-dog belonging to the seller. As the bargain had been concluded much to the gentleman's satisfaction, he offered to make the cattle-dealer a present of the dog, if he liked to take him. The cattle-dealer gladly accepted the offer, but, as it was thought that the dog would not easily be induced to follow him away from his home, he was put into a covered wagon and sent up to London, a distance of a hundred and ten miles, to a house which the cattle-dealer had in or near Smithfield. Here, lest he should attempt to make his escape, he was kept confined for a fortnight, at the end of which time it was supposed he would feel the necessity or propriety of remaining in his new abode. But after he was let loose he stayed but a very short time; one morning the cattle-dealer missed him, and wrote to the gentleman to say that the dog, much to his regret, had gone off. Both parties considered that the dog was quite lost; but, at the end of little more than another fortnight, a piteous cry was heard at the gentleman's door, and, on opening it, the dog was found at it footsore, emaciated, and seemingly almost starved. How it could have found its way from Smithfield out of London, amid the numerous objects that would, it might be supposed, have distracted and bewildered it, and how it hit upon the right road to Grantham, and pursued it for a hundred and ten miles,—a road which it had previously travelled in a covered wagon, and of which it could consequently have seen little or nothing,—is to us human beings quite undiscoverable.

Mr. West, another friend of mine, knew a case of a dog being carried from Limousin in France to Geneva, a distance of more than two hundred miles, and finding its way back. It was a lap-dog, and was taken in a carriage by the Baroness Rivet, to whom it belonged. No one suspected that when it was once lodged in Geneva, it would think of running away. But in a few days after its arrival the dog had vanished, and in a week or two it was found at Limousin, having made its way back, by what art is inexplicable, to its former abode.

The following instance was communicated to Mr. Jesse,¹ on the authority of the late Lord Stowell. Mr. Poynder, brother of the Treasurer of Christ's Hospital, on returning from Newfoundland, brought with him a dog of that country, to whom on two occasions, when he had lost his way during snow-storms, he had been indebted for enabling him to find his way home, and thus probably saving him from death. There was a strong attachment between the dog and his master; yet Mr. Poynder, not caring to take him to England, had made arrangements for leaving him behind; but the dog, after Mr. Poynder had embarked, escaped from those who had charge of him, and swam after the ship, overtaking it at three miles' distance from the coast. Mr. Poynder, on landing at Blackwall, took the dog with him to his father's house at Clapham, where he was placed in a stable, and kept in it till the second day after his arrival, when Mr. Poynder took him in a coach to Christ's Hospital. Leaving the coach in Newgate Street, Mr. Poynder proceeded up the passage leading to the Treasurer's house, but not finding

¹ 'Anecdotes of Dogs,' p. 109; 'Gleanings,' vol. iii. p. 27.

the entrance on the side open, went round to the front door. In the excitement of meeting his friends, from whom he had been long absent, he forgot his dog for awhile, but, as soon as he recollected him, hastened forth to bring him in. The dog, however, was nowhere to be seen; Mr. Poynder gave him up for lost, and prepared an advertisement, in the latter part of the day, offering a reward for his restoration. But next morning he received a letter from the captain of the ship in which he had sailed from Newfoundland, stating that the dog had swum to the vessel on the preceding day, and was then safe on board. By a comparison of the time at which he disappeared from Newgate Street with that of his arrival at the vessel, it was clear that he must have gone directly from Christ's Hospital to Wapping, and have at once taken to the water. How he could have found his way among the wilderness of houses, through ground that was altogether strange to him, is beyond the power of man to explain.

The following anecdote we have also from Mr. Jesse, to whom it was told by the late Captain Gooch, one of the elder brethren of the Trinity House. Captain Dance, who, as commodore of a fleet of Indiamen, gallantly repelled the attack of some French frigates, brought with him from China a native dog, which he called Bonner. When his ship was moored in the Thames, he ordered a chaise, had the dog put into it, and drove with it to his house near Leatherhead, in Surrey, where Bonner was left in the custody of Captain Dance's sisters. The next night, as the ship was getting under weigh for the docks, one of the sailors heard a barking among the rushes on the Kent side of the river, and

immediately exclaimed that it was Bonner's voice. This was declared by his shipmates to be impossible, but, as the man persisted that he was not mistaken, a boat was lowered, and Bonner was discovered among the rushes and taken on board. "Here was an instance," says Mr. Jesse, "of a dog being brought to a strange land, and taken in a carriage twenty or twenty-five miles from the ship that he had just left, finding his way back to it through a country essentially different from his own, a country of different soil and climate, different objects, and different people. By what instinct he was enabled to do this it is not easy to define; I can only give the fact as I received it from the most respectable authority."¹

The next instance I transcribe from Bingley's 'Animal Biography':²—

"An anecdote related by Mr. Hope, and well authenticated by other persons, shows also that this animal" [the terrier] "is both capable of resentment when injured, and of great contrivance to accomplish it. A gentleman of Whitmore, in Staffordshire, used to go twice a year to London; and, being fond of exercise, generally performed the journey on horseback, accompanied, most part of the way, by a faithful little terrier dog, which, lest he might lose it in London, he always left to the care of Mrs. Langford, his landlady at St. Alban's; and on his return he was sure to find his little companion well taken care of. The gentleman calling one time, as usual, for his dog, Mrs. Langford appeared before him with a woful countenance, 'Alas, Sir, your terrier is lost! Our great house-dog and he had a

¹ Jesse's Gleanings in Nat. Hist. vol. ii. p. 216.

² Ibid. vol. i. p. 304.

quarrel; and the poor terrier was so worried and bit before we could part them, that I thought he could never have got the better of it. He, however, crawled out of the yard, and no one saw him for almost a week. He then returned, and brought with him another dog, bigger by far than ours; and they both together fell on our great dog, and bit him so unmercifully that he has since been scarcely able to go about the yard, or to eat his meat. Your dog and his companion then disappeared, and have never since been seen at St. Alban's.' The gentleman endeavoured to reconcile himself to the loss. On his arrival at Whitmore, he found his terrier; and, on inquiring into the circumstances, was informed that he had been at Whitmore, and had coaxed away the great dog, who, it seems, had in consequence followed him to St. Alban's, and completely avenged his injury."

Bingley adds in a note:—"An inquiry respecting this circumstance has lately been made of Mr. Langford, surgeon, in St. Alban's. He says that there is now living in St. Alban's one of the inn servants who has a perfect recollection of the event."

The next instance is taken by Bingley¹ from M. D'Obsonville:—

"A most extraordinary instance of memory in a mastiff, is related by M. D'Obsonville. This dog, which he had brought up in India from two months old, accompanied him and a friend from Pondicherry to Benglour, a distance of more than three hundred leagues. 'Our journey,' he continues, 'occupied nearly three weeks; and we had to traverse plains and mountains, and to ford rivers, and to go along several

¹ 'Animal Biography,' vol. i. p. 202.

bye-paths. The animal, which had certainly never been in that country before, lost us at Benglour, and immediately returned to Pondicherry. He went directly to the house of M. Beylier, then commandant of artillery, my friend, and with whom I had generally lived. Now the difficulty is, not so much to know how the dog subsisted on the road, (for he was very strong, and able to procure himself food,) but how he should so well have found his way, after an interval of more than a month!"

The following account Mr. Jesse received from Lord Stowell:—

“ One of the most extraordinary instances of the faculty that dogs have to find their way back to a place that they have known, is that of a dog returning from America to Northumberland. A Mr. Edward Cook, after having lived some time with his brother at Togsten, in that county, went to America, and took with him a pointer dog, which, while shooting in the woods near Baltimore, he lost. Some time afterwards, Mr. Edward Cook and his wife, who continued still to reside at Togsten, were roused one night by the barking of a dog, which, on the door being opened, came into the house, and which they immediately saw was the same that the other Mr. Cook had taken with him over the Atlantic. They took the animal in, and he lived contentedly with them till Mr. Cook's brother returned from America, when they recognized each other. But by what vessel the dog made his way back they were never able to trace.”¹

Mr. Jesse adds an instance of a dog returning to

¹ Jesse, Glean. in Nat. Hist. vol. iii. p. 25. This story, or another of a similar nature, is alluded to in Hancock's 'Essay on Instinct,' p. 72.

England from Bremen. A lady residing in the neighbourhood of London had a terrier which was much attached to her, and which she gave to a friend who was going to reside at Bremen. In about a week after he had reached that city, she received a letter from him stating that the dog, after pining for awhile, and seeming utterly wretched, had disappeared, and that no trace of him could be found. She was concerned at the information, but, in less than a fortnight afterwards, just as she was going to bed, she heard a loud barking under her window, and said to her maid, "If it were possible, I should say that that is Viper's bark." The barking continued, with the sound of pushing at the door, which was no sooner opened than Viper sprang in, rather thinner than when he left home, but on the whole not in bad plight. How he had got back could never be ascertained.¹

The following anecdote, from the Rev. James Hall's 'Tour in Scotland,' shows at once how a dog will find its way for hundreds of miles, and how strongly he will retain his attachment to his master. A dog was buried in one of the churchyards of Edinburgh which had belonged to a Scotch gentleman of property, that had travelled from Edinburgh to Rome, where he had left the dog with a friend, and returned home. Six months after his master's departure, the animal quitted Rome, and set out in quest of him. He proceeded over the Alps, through France, and arrived at Calais. He tried several times to get on board vessels leaving the harbour, but was prevented by the sailors, till at length a gentleman, who took a fancy to him, procured him admission to one of the ships.

¹ Jesse, Glean. in Nat. Hist. vol. iii. p. 35.

The gentleman was very attentive to him on the passage from Calais to Dover, and thought he had gained his affection, but, a few yards before they reached the harbour, the creature jumped overboard, swam ashore, and ran off as fast as he could. The collar on his neck told to whom he belonged, and in less than six weeks after he had left Rome, he arrived at his master's house in Edinburgh. When he was on the shore at Calais, he was reduced almost to a skeleton from scarcity of food.¹

The following anecdote, of a similar kind, exhibits a dog attracted a long distance by like attachment:—

A Newfoundland dog of the true breed was brought from that island and given to a gentleman residing on Fish Street Hill, to whom he became strongly attached. But as the gentleman had no convenience for keeping the animal there, except in close confinement, he made a present of him to a friend in Scotland, to whom he dispatched him by a Berwick smack. The dog, however, after he was landed, took the first opportunity of escaping, and made his way back to his former residence on Fish Street Hill, though in so exhausted a condition that, while expressing his joy at seeing his master, he fell down dead. How he could find his way for so many miles over ground on which he had never before set foot, is what no human being can conjecture.²

The Rev. T. Jackson furnishes us with the next two examples. It is related that a Swiss nobleman, named Leonard Solikoffer, who went as ambassador from his country to Paris at the conclusion of the Swiss union,

¹ Cited in Brown's 'Anecdotes of Dogs,' p. 483.

² Jesse, 'Anecdotes of Dogs,' p. 136.

had a large dog, which, as he did not wish to take it with him, and desired to prevent it from following him, he ordered to be shut up for a week after his departure. His directions were obeyed; but the dog, at the end of his imprisonment, ran off, and traced his way to Paris, a distance of four hundred miles, and rushed in upon his master, covered with mud, on the day of audience, leaping and barking as if mad with joy at having found him. In the castle of the Solikoffer family at Thuringia there is a painting of the occurrence. Whether the dog had been in Paris before, and traced his way by recollection, or whether he was guided wholly by scent, or by fortunate conjecture, we have no account. But we have already remarked that dogs must have a means of finding their way from place to place of which we know nothing.

A similar anecdote, though the distance explored by the dog was less, is told of a Scotch terrier belonging to a gentleman named Scott, residing in the north-west part of Aberdeenshire. His business occasioned him to visit Leith, whither he went by sea, taking the dog, which had been reared by himself, and had never before been from home, with him in the vessel. During his stay in Leith the dog was lost, and every means was used for his recovery, but no trace of him could be found. The gentleman was in consequence obliged to return without him, and departed by the same vessel by which he had come. But when he got home, he found that the dog had arrived two days before him, having made his way for so many miles through a country totally unknown to him, and having had to cross ferries at Leith and at the Tay. How the dog

could have chosen and pursued the right direction it is in vain that we try to imagine.¹

Mrs. Lee's father had a setter, named Flash, which, when he was going on a shooting excursion into another county on the opposite side of London, he drove to town, a distance of fifty miles, in his dog-cart, a vehicle so constructed that the opening for air was at the top, and the dog in consequence could see no part of the road. On his arrival in London, Flash was tied by a rope in the yard of the inn where his master put up, who went to see that he was comfortable just before retiring to rest himself. But in the morning, when he was going to release him, he was not to be found; the rope was severed, and the dog gone. It was supposed that some one, who understood his value, had seized an opportunity of stealing him. But late in the evening of the same day, Mrs. Lee's mother heard a low bark at the hall door, and when the servant opened it, Flash entered, wet, dirty, tired and hungry, with part of the rope hanging to his neck. He must of course have pursued his way from London direct and without stopping.²

Hancock³ mentions a similar case of a dog that returned out of Essex, through London, into Hampshire.

How dogs find their way across water we may partly understand from what we are told by Colonel Hamilton Smith, who relates that, as he was sailing across the Bay of Biscay, a Newfoundland dog was picked up in the Bay swimming, having been descried by a man at the mast-head, who reported that there was no ves-

¹ 'Our Dumb Companions,' p. 62, 63.

² 'Mrs. Lee's Anecdotes of Animals,' p. 124.

³ 'Essay on Instinct,' p. 72.

sel in sight at the time. The animal, when taken into the ship, gave no signs of extreme fatigue, and, in a short time, was missed, having taken a fancy, it was supposed, to go on board some other vessel.¹

I have now given instances enough, I think of this faculty in dogs, but if it were necessary to produce more examples, I have before me an abundance of them. I have an account of a dog that was taken from London to Glasgow one week, and found his way back from Glasgow to London the next; of another that was taken from London to the West Indies, and having got back to London, made its way through the intricacies of the metropolis to its old residence at Brompton;² of a Scotch dog, which, having been taken to Frankfort, and having there seen its master drowned in the Oder, after having made ineffectual attempts to save him, found its way from Frankfort to Hamburg, from Hamburg to Hull, and from Hull to Edinburgh; of a blind terrier that was taken from Cashiobury Park, near Watford, to Windsor, and escaped back to Cashiobury;³ of a shoe-black's poodle in Paris, which used to roll in the mud and rub itself against people's clean boots to make work for its master, and which, having been purchased by a gentleman for its intelligence, and taken to London, found its way back to Paris to its old master, and to its old occupation;⁴ of two hounds sent from Leicestershire to Ireland by Lord Lonsdale, that reappeared in Leicestershire at the end of three weeks;⁵ of a terrier that

¹ Naturalist's 'Library,' vol. x. p. 133.

² Hancock's 'Essay on Instinct,' p. 72.

³ Jesse, 'Anecdotes of Dogs,' p. 210.

⁴ M. Blaze's 'Histoire du Chien,' p. 326.

⁵ Jesse's 'Gleanings,' vol. i. p. 106.

was taken from Arundel to London in a close cart, and being tied up in the evening in a yard near Grosvenor Square, was found at Arundel, sixty miles distant, the following afternoon; ¹ of a drover's dog that was borrowed at Biggar, in Lanarkshire, by another drover who had to take cattle to London, and after accompanying him and the cattle to Smithfield, returned home by himself long before the person who was supposed to have charge of him.²

¹ 'Times' newspaper, January 10th, 1823.

² Lord William Lennox, 'Recreations of a Sportsman,' vol. i. p. 102.

CHAPTER XXX.

ANIMALS FINDING WAY FROM PLACE TO PLACE.

—OTHER ANIMALS BESIDES THE DOG.

HAVING noticed these instances of the dog's faculty of finding his way from place to place, we will turn to a few cases of the same faculty manifested in other animals. Next to the dog, the most numerous examples of it seem to have been observed in the cat. A story appeared in a Scotch newspaper some time ago, of a cat that found its way to a place thirty miles distant, at which she had never been before. A family removed from Edinburgh to a town thirty miles off, to reach which it was necessary either to cross an arm of the sea or to make a very long circuit; which of these ways the family went the account does not state. They had a favourite cat, which they wished to take with them, but the animal, apparently alarmed at the unusual bustle of the preparation for their departure, hid itself for some days before they quitted the house, and, as they were unable to discover its place of concealment, they were under the necessity of leaving it behind them. Of course they never expected to see it again. But one morning, several weeks after they had been settled

in their new abode, their attention was attracted by a violent scratching at the front door, and, on opening it, they saw, greatly to their astonishment, their favourite cat walking in. How she had discovered the road to their house, whether she had found some opportunity of crossing the sea in a vessel, or whether, as is perhaps more probable, she had gone round the longest circuit by land, will never be learned by any human being in this world. But of an animal finding a way apparently impossible for it to trace there is no more remarkable account on record.

Mr. Bell¹ observes that cats, notwithstanding their dread of water, will cross rivers to return to their accustomed habitations.

Mrs. Lee gives the following instance from one of her correspondents:—"When living at Four Paths, Clarendon, Jamaica, I wanted a cat, and had one given to me, which was nearly full-grown. It was brought from Morgan's Valley Estate, where it was bred, and had never been removed from that place before. The distance was five miles. It was put into a canvas bag, and carried by a man on horseback. Between the two places there are two rivers, one of them about eighty feet broad, and two and a half deep: and over these rivers there are no bridges. The cat was shut up at Four Paths for some days, and when considered to be reconciled to her new dwelling, she was allowed to go about the house. The day after obtaining her liberty she was missing; and upon my next visiting the estate she was brought from, I was quite amazed to learn that the cat had come back again. Did she swim over the rivers at the fords where the horse came

¹ 'British Quadrupeds,' p. 190.

through with her, or did she ascend the banks for a considerable distance, in search of a more shallow place, and where the stream was less powerful? At all events she must have crossed the rivers, in opposition to her natural habits.”¹

The same story is told by Mr. Jesse,² who gives the names of the two rivers, Mino and Thomas’s River.

Mr. Swainson had a cat, an excellent mouse-catcher, which he consented to lend for a time to a friend whose house, greatly infested with mice, was about a mile and a half from Mr. Swainson’s residence at Tittenhanger Green, near St. Alban’s. As the cat had a kitten two or three months old, it was sent with her, in the expectation that she would remain more contentedly in her new abode if she had her little one’s company, and, that she might not find her way back, she was tied up with the kitten in a bag, and both were thus conveyed together. When she was deposited, and found plenty of mice about her, she made no effort to escape, but the next morning, to Mr. Swainson’s surprise, she presented herself at his breakfast-room door, having returned through fields and thickets, over ground which she could never have trod before. When the animal had received its breakfast, it disappeared, and was seen no more that day; but on the following morning she was again at Mr. Swainson’s breakfast-room, and these appearances and disappearances continued for more than a week. When the circumstances were mentioned to the cat’s new protector, he stated that he had missed the cat every morning at his breakfast hour, but that she regularly

¹ Mrs. Lee’s ‘Aneodotes of Animals,’ p. 249.

² ‘Gleanings,’ vol. iii. p. 124.

returned in the forenoon to her kitten, which always remained quietly in the house during her absence.¹

The Rev. Thomas Jackson² has extracted from some publication the following instance of the manifestation of this faculty:—"A favourite tabby, belonging to a ship-master, was left on shore, by accident, while his vessel sailed from the harbour of Aberdour, Fifeshire, which is half a mile from that village. The vessel was about a month absent, and on her return, to the astonishment of the ship-master, Puss came on board with a fine stout kitten in her mouth, apparently about three weeks old, and went directly down into the cabin. Two others of her young ones were afterwards caught quite wild in a neighbouring wood, where she must have remained with them till the return of the vessel. The ship-master did not allow her again to go on shore; otherwise it is probable she would have brought the whole litter on board. What makes this the more remarkable is, that vessels were daily entering and leaving the harbour, none of which she ever thought of visiting till the one she had left returned. How wonderfully accurate must the animal's recollection of the ship have been! The difference, however trifling, between it and the other vessels which put in, must have been all closely observed and remembered; or we must suppose the creature to have had its recollection awakened by the voice or figure of some of its ship-mates passing near to the wood where its family was located."

The following recent case was related in the 'Times' newspaper, some time in January, 1866:—Lieutenant-

¹ Swainson's 'Habits and Instincts of Animals,' p. 28.

² 'Our Dumb Companions,' p. 125.

Colonel W. A. G. Wright, of the Royal Marines, was recently transferred on promotion from Plymouth to the division at Portsmouth, to which place a favourite cat of his was dispatched, on Saturday, the 30th of December, in a basket, by the South Devon Railway, and lodged in his new residence. Here the animal remained during the Saturday night, but on the Sunday was missed, and on the following Wednesday, the 3rd of January, was observed in the rear of its master's former residence at Stonehouse, near Plymouth. It is a large strong male, twelve months old, was born at Stonehouse, and had never before quitted the place.

Lord Brougham¹ was told by his friend Lord Truro, of a cat, belonging to a grocer, named Gardner, living in Fore Street, which the grocer's apprentice, at the desire of his master; had tried to hang, but finding himself unable, he took the animal in a bag to Blackfriars Bridge and threw it into the water. The cat, however, made its escape, and reached its home as soon as the apprentice, though the distance from the bridge to Fore Street is about a mile, and through the most crowded part of London. The apprentice may have gone straight home, but it is certain that the cat returned in an hour or two.

In the 'Letters on Instinct' mention is made of a cat that was taken to the West Indies, and on the return of the ship to London found its way through the City to Brompton, from which she had been taken.² Mr. Jesse³ also tells of a cat belonging to a nobleman, which was taken from his town-house to his seat in the country, a distance of a hundred miles, and made

¹ 'Dialogues on Instinct,' Dial. iii.

² Lord Brougham, *ib.*

³ 'Gleanings,' vol. i. p. 199.

its way back, and of another¹ which, being carried, when in the family-way, in a close basket from Edinburgh to Glasgow, stayed at her residence something more than two months, till she had brought forth, and partly reared, two kittens; but at the end of that time she was missing, and about a fortnight afterwards, was heard mewling at the door of her old mistress at Edinburgh, and walked in with her two kittens, which were in excellent condition, though she herself was very thin. The animal must have carried her kittens the forty miles' distance, and as she could probably carry but one at a time, and must then, on putting it down, return for the other, she must have travelled the ground at least three times over, in addition to various turns which she would take for her kittens' safety, travelling perhaps chiefly by night.

The horse will also find its way from place to place, though not so distinguished in that respect as the dog and the cat.

Mr. Jesse² speaks of the following as a recent occurrence:—A farmer residing on the borders of the New Forest, Hampshire, went over to the Isle of Wight, where he purchased a mare from a person of his acquaintance, near Newport. The mare was conveyed in a boat to the coast of Hampshire, taken from thence to the purchaser's residence, and turned into one of his fields. The next morning she was missed; she was sought in all directions, but nothing could be heard of her, and it was supposed that she had been stolen. But the farmer having occasion, soon afterwards, to go to the Isle of Wight, learned from the person of whom he had bought her that she had re-

¹ 'Gleanings,' vol. iii. p. 184.

² *Ib.* vol. iii. p. 180.

turned safely to his farm. The nearest distance between the Hampshire coast and the Isle of Wight is five miles, which distance at least, but probably something more, the mare must have swum.

Horses, it is certain, have the power of swimming many miles at a stretch. A gentleman, while bathing in the sea, under the rocks near Dunraven Castle, in Glamorganshire, saw some strange object, at a considerable distance, swimming towards him. As it came nearer, he heard a loud snorting, and found it was a horse. The opposite coast was ten or twelve miles off, and it was never discovered to whom the horse belonged, or from whence he came, but it was supposed that he must have been taken across from some part of Wales, and had swum back in search of his old quarters. He was much exhausted when he landed, and was taken to Dunraven Castle, the owner of which took care of him for many years.¹

But the following adventure of an ass surpasses anything of the kind that is told of the horse. It is found in Kirby and Spence's 'Introduction to Entomology,'² and is given there on the authority of Lieutenant Alderson, of the Royal Engineers, who was personally acquainted with the facts. It was communicated also to Mr. Jesse³ by Edward Hawke Locker, Esq., one of the governors of Greenwich Hospital, who was in the Mediterranean at the time of its occurrence:—

“In March, 1816, an ass, the property of Captain Dundas, R.N., then at Malta, was shipped on board the 'Ister' frigate, Captain Forrest, bound from Gibraltar for that island. The vessel having struck

¹ 'Gleanings,' vol. iii. p. 180.

² Vol. ii. p. 502.

³ 'Gleanings,' vol. i. p. 197.

on some sands off the Point de Gat, at some distance from the shore, the ass was thrown overboard to give it a chance of swimming to land,—a poor one, for the sea was running so high that a boat which left the ship was lost. A few days afterwards, however, when the gates of Gibraltar were opened in the morning, the ass presented himself for admittance, and proceeded to the stable of Mr. Weeks, a merchant, which he had formerly occupied, to the no small surprise of that gentleman, who imagined that, from some accident, the animal had never been shipped on board the 'Ister.' On the return of this vessel for repair, the mystery was explained; and it turned out that Valiante (as the ass was called) had not only swum safely to shore, but, without guide, compass, or travelling-map, had found his way from Point de Gat to Gibraltar, a distance of more than two hundred miles, through a mountainous and intricate country, intersected by streams, which he had never traversed before, and in so short a period, that he could not have made one false turn. His not having been stopped on the road was attributed to the circumstance of his having been formerly used to whip criminals upon, which was indicated to the peasants, who have a superstitious horror of such asses, by the holes in his ears, to which the persons flogged were tied."

Cows have something of the same faculty.

A cow, which had a calf not weaned, was taken from Bushy Park, and driven to Smithfield market to be sold, her calf being left in the yard at the Park. But early the next morning she was found at the yard gate, having found her way through all the intricacies

of London, and travelled twelve miles of road, in order to get back to her calf again.¹

A cow had been sent to grass to a place twenty-one miles from her owner's residence. She remained very contentedly during the summer, while the pasture was good, but in October, when the grass began to fail, she made twenty-one miles' journey to her former pasturage.²

Sheep also:—"A sheep which was driven from Scotland into Yorkshire, made its escape, and after passing through towns, crossing rivers, etc., revisited its native spot in the hills of Annandale. Another from Perthshire came back to a farm twenty miles from Edinburgh. When it reached Stirling, it was fair-day; the animal would not venture through the town among the populace, but rested itself at the north side till the fair dispersed, and came through late in the evening."³ Captain Brown speaks of the same ewe in the 'Naturalist's Library,' saying that she had a lamb with her, and was nine days on the road. Welsh sheep also, says Mr. Jesse, have been known to find their way back from London to their native mountains.

Swine, too, have the faculty of returning, like the dog, to the home from which they had been conveyed. A farmer residing at Caversham bought two pigs at Reading market, which were carried to his house in a sack, and let loose into his farmyard on the banks of the Thames. The following morning they were missed; and inquiry being made in the neighbourhood, a person gave information that two pigs had

¹ Jesse, 'Gleanings,' vol. ii. p. 14.

² *Ib.* p. 180.

³ Hancock, 'Essay on Instinct,' p. 72.

been seen swimming across the water. Subsequently they were seen trotting along the Pangbourne road, and in one place, where two roads meet, putting their noses together as if in consultation. At last they entered the place from which they had been at first taken, having travelled a distance of nine miles by cross-roads. They were taken back to Caversham, but seized the first opportunity to escape again, and made their way to their first home with equal success. The most wonderful part of the proceeding was that they swam across the river, keeping unanimously together, in the exact line towards their old master's house, of which direction, as they had been carried in a sack, it might have been supposed that neither of them would have had any conception. "I have observed great sagacity in swine," says Dr. Darwin in his 'Zoonomia,' "but the short lives we allow them, and their general confinement, prevent their improvement, which would otherwise probably equal that of the dog." Mr. Jesse was told by a gentleman, who resided some years on the Susquehanna, of some pigs which, having been carried fifteen miles through an American wood, had found their way, by the next morning, back from their new to their old home.¹

Even a serpent has been known to pursue its way for a hundred miles to regain its old quarters. "I am well informed," says Lord Monboddoo, "of a tame serpent in the East Indies, which belonged to the late Dr. Vigot, and was kept by him in the suburbs of Madras. This serpent was taken by the French when they invested Madras, in the late war, and was carried to Pondicherry in a close carriage. But from

¹ Jesse, 'Gleanings,' vol. i. p. 200.

thence he found his way back again to his old quarters, which, it seems, he liked better, though Madras be distant from Pondicherry above a hundred miles. This information," he adds, "I have from a lady who then was in India, and had seen the serpent often before his journey, and saw him after he returned."¹

How birds, especially the pigeon and swallow kind, will return to the places from which they have been taken, is well known. The same swallows return year after year to build their nests in the same place. But the following is a most extraordinary instance of quick return to old quarters:—According to the 'Assemblée Nationale,' six swallows, two or three years ago, were taken from their nests at Paris, and conveyed to Vienna, where a small roll of paper, containing several words, was affixed to the wing of each; and they were then let go one morning at a quarter past seven. Two arrived at Paris a little before one; one at a quarter-past two; one at four; and the other two did not make their appearance at all,—having perhaps lost their way, or lost strength to pursue it, or, possibly, having met with some mishap.²

Of pigeons, some seem to have more ability in finding their way than others. The most remarkable exhibitions of this faculty have been given by trained birds. The first instance we give is of birds untrained.

Mr. Knight, in his 'Museum of Animated Nature,' repeats, from some older writer, that a gentleman of Cologne, having business to transact at Paris, took with him from home two carrier-pigeons that had

¹ Monbòddo, 'Ancient Metaphysics,' vol. ii. b. iv. c. 6.

² Garratt, 'Marvels of Instinct,' p. 176.

young at the time, and, on his arrival at Paris, tied a letter to each of them, and dispatched them at eleven o'clock in the forenoon. One of them arrived at Cologne at five minutes past one, and the other nine minutes later; so that, supposing their flight to have been direct, they had flown nearly a hundred and fifty miles an hour.¹

The two following instances are from Goldsmith's 'Animated Nature,' and the pigeons employed we may suppose to have been trained.

In the year 1819, an experiment was performed with carrier pigeons, for prizes, between London and Antwerp. Thirty-two pigeons, which had been reared in Antwerp, were brought to London, and let loose, with the words "Antwerp" and "London" marked on their wings, at seven o'clock in the morning on the 11th of July. The same day, a little before noon, one arrived at home, and obtained for its owner the first prize; a quarter of an hour later came in another, to gain the second prize. But no more of them appeared in Antwerp till the following day, when twelve alighted there. Of the fate of the other eighteen no account is given.

In 1829 another experiment was made, in consequence of some merchants at Maestricht having wagered that pigeons, taken from thence to London, and let loose, would return in six hours. Forty-two pigeons were accordingly brought to London, and thrown up into the air at twenty-six minutes past eight in the morning. But the first of them did not reach Maestricht till six hours and a quarter after quitting London, so that the principal wager, which was ten

¹ Garratt's 'Marvels of Instinct,' p. 174.

thousand guilders, was lost. The second arrived in seven hours, the third in seven hours and ten minutes, and the fourth in seven hours and a half; and in four days, says the account, more than twenty had reached Maestricht. The animals were supposed, on this occasion, to have been retarded by heavy rains, and the greatest speed was only forty-five miles an hour, supposing the flight to have been direct.

Of the birds missing in such adventures some are supposed to meet with accidents,—perhaps to be shot; others to take up their quarters with other flocks on the road. But the failures show that all have not alike the will or the power to return. Those that deal in birds train them to fly home, at first from short distances, which they gradually extend to twenty or thirty miles; and when this distance has been successfully accomplished, they expect that the pigeons will ever after return from any spot, however remote it may be. But experience shows that such expectations are often unfulfilled.

M. Virey, in his 'History of the Habits and Instincts of Animals,' cited by Lord Brougham,¹ tells of a falcon that was taken from the Canaries to Andalusia, and returned in sixteen hours, a distance of six hundred miles, so that it must have flown at an average of twenty-four miles an hour.

Fish have the same power as many land animals of finding their way back to places in which they have been bred, or to which they have become attached. A gentleman who often fished in the Thames was in the habit of marking many of the fish which he caught, taking them miles up the river in the well of his boat,

¹ 'Dialogue on Instinct,' Dial. iii.

and then turning them loose ; and he frequently caught them a second and a third time in the place where they were originally taken.

Salmon, too, are supposed to return in all cases to the river where they were bred. Mr. Alexander Fraser, in his 'Natural History of the Salmon,' tells us that in February, 1829, he marked several grilse by cutting off the fin above the tail, and that in the following September he caught two of them, then grown into large fish of about fourteen pounds weight, very near the ground where they were marked. Mr. Mackenzie, of Ardross, he also observes, tied wire round the tails of some breeders returning to the sea in March, 1824, and caught one of them thus marked just a year afterwards, doubled in size. Various similar experiments have been made with like results. But it is not supposed that salmon go to so great a distance from their native place as that from which dogs and horses find their way home.¹

When the fishermen take a crab that is not in good condition, they put it back into the sea, and sometimes make a mark on its back with the point of a knife or other sharp instrument, which mark will not only remain on the old shell, but will be found on the succeeding new one ; and they say that though these marked crabs be carried out to the distance of two or three miles from the shore, they will always find their way back to their old haunts, as they know by having retaken them there.²

But the most extraordinary story told of a fish finding its way is the following, which is related by Mr. Jesse concerning the tortoise :—

¹ Jesse's Gleanings in Nat. Hist. vol. i. p. 78.

² Bingley's An. Biog. vol. iii. p. 381.

“An officer of rank in the British army informed me that a ship, which touched at the island of Ascension, on her way to England, took in several large turtle, and, among others, one which from some accident had only three fins. It was in consequence called, and known on board the ship, by the name of the Lord Nelson. It was marked in the usual way by having certain initials and numbers burnt upon its under shell with a hot iron, and which marks are known never to be obliterated. Owing to various causes, the ship was a long time on her passage homewards, a circumstance which occasioned many of the turtle to die, and most of the rest were very sickly. This was the case with the Lord Nelson, and it was so nearly dead, when the ship arrived in the Channel, that the sailors, with whom it was a favourite, threw it overboard, in order, as they said, “to give it a chance.” Its native element, however, appears to have revived it, for two years afterwards the very same turtle was again taken at its old haunt on the island of Ascension. The proofs brought forward of the accuracy of the statement place its authenticity beyond a doubt, and it affords a most extraordinary instance of the wonderful instinct possessed by animals. When we consider the vast tract of waters this turtle had to pass through, and that the island of Ascension is only a little speck in the mighty ocean, it is impossible not to reflect with wonder upon the unexplained instinct which enabled so unwieldy, and apparently so stupid an animal, to find its way back to its former haunts.”¹ In this we can hardly suppose but that there must have been something of chance.

¹ Jesse' Gleanings in Nat. Hist. vol. iii. p. 76.

Among insects, the bee kind have the same faculty of finding their way, and the unerring readiness with which they exercise it is marvellous. A bee will take its way to its own hive among scores of others exactly similar in appearance, flying to it as straight, and almost as swiftly, as a ball from a gun; and it is well for bees that it is so, for, if they were at all puzzled as to their course, how much time would they lose, and how would their labours be delayed and rendered inefficient! Honey-finders in America discover bees' nests by catching two bees, carrying them to some distance apart, and letting them fly. Each will at once take the straight line towards the nest, and by observing these two lines, and noticing when they intersect, the nest is found. Their instinct in this respect is the more remarkable, as the bees' vision, from the convex form of the eye, is known to be extremely limited; insomuch that she is supposed to see not much more than a yard before her.¹ A multitude of bees were seen, on more than one occasion, stirred to the swiftest flight homewards by the approach of a thunderstorm. The house, in which the spectator lived, had a flower-garden on one side, and a kitchen-garden, in which stood the hives to which the bees belonged, on the other; and one large room in it had windows opening on both the gardens. Sometimes in summer the windows on both sides would be open, and the bees would find a passage through the room. But at times the window nearest to the hives might be shut, and if a storm arose, the insects, in their eagerness to get home, would rush in at the window on the other side, fly across the room with a speed that made

¹ Lord Brougham's 'Dialogues on Instinct,' dial. iii.

them almost invisible, and knock their heads against the glass of the closed window with a shock that brought them senseless to the floor. On recovering themselves, as they quickly did, it might have been expected, if they reasoned upon their proceedings, that they would have turned back, flown out at the open window, and made their way over or round the house towards their hives; but, instead of doing this, they would, on rising from the floor, fly at the glass with seeming fury and anger, as if bent on forcing a passage through it, and as if no other course towards their hives were discoverable. Dogs, under similar circumstances, would have turned back and sought another road.¹

In concluding this subject, we may observe that the faculty of finding the way from point to point, without any mark to direct, is also possessed to a certain extent by human beings in the savage state. A gentleman, who lived some years in Australia, informed Mr. Jesse that, having occasion to go a great distance into the interior, he lost his way, and should have been unable, he supposes, to return, but for the assistance of one of the natives, who conducted him in a straight line of more than a hundred miles to the place where he wished to reach, and who, he was assured, could have guided him as well blindfold, for he travelled as accurately when the sun was obscured as when it was visible. He was not assisted by marks on the bark of trees, or anything else but an instinct similar to that of the carrier pigeon.²

Mr. Jesse observes that it is an interesting subject

¹ Garrett's 'Marvels of Instinct,' p. 37.

² Jesse's 'Gleanings,' vol. ii. p. 228.

of inquiry why the instinct which is possessed by the savage man should be lost to man as his faculties become more cultivated. A savage man will find his way for scores of miles by instinct; a civilized man has no sense or feeling of such instinct.

CHAPTER XXXI.

BIRDS.

BIRDS, though they are not generally regarded as having much understanding, yet exhibit, at times, a considerable portion of it. Arcussia, an old French writer on hawking, declared that they were possessed of greater intelligence than any others of the inferior animals; but this assertion appears to have been in the same spirit in which dancing-masters, and other professors of small arts, represent their pursuits as the most important of all human occupations. However, we find various instances of acuteness displayed by birds.

“Who taught the raven in a drought,” asks Bacon in his ‘*Advancement of Learning*,’¹ “to throw pebbles into a hollow tree, where she espied water, that the water might rise so as she might come to it?” Having asked this question, he next inquires, “Who taught the bee to sail through such a vast sea of air, and to find the way from a field in flower a great way off to her hive?” Or, “Who taught the ant to bite every grain of corn that she burieth in her hill, lest it should

¹ Book ii.

take root and grow?" But it is plain that these cases of the bee and the ant are very different from that of the raven and the pebbles. When the ant bites off the end of a grain of corn, she does only what she is prompted to do by that which we call instinct; she does it she knows not why, as it seems to us; and she cannot help doing it. Her proceeding is not the result of experiment, producing in her a conviction that what she does is for the best. The ant did the same with the first grain of corn that it ever seized for laying up, has gone on doing the same ever since, and will continue to do so, as far as we can judge, as long as it shall continue to raise hills. But with the raven and the water the matter is entirely different; the raven has not to put pebbles in his water every time he drinks, as the ant has to bite every grain of corn before she lays it up; but, when she sees water that she cannot reach, she has to find out some means of bringing it within her reach; she considers, and thinks of getting pebbles into it; and her mode of proceeding appears to us as much the result of reason (though of a lower degree of exercise of it) as man's invention of the pump. When the raven builds her nest, she builds it, like other birds, under the prompting of instinct, but when she finds herself necessitated to raise water to a certain level, she hits upon the means of raising it by the exercise of a portion of reason.

Whether there have been eye-witnesses of the raven throwing pebbles into water, (as there have been eye-witnesses of the rat dipping his tail into an oil-bottle and giving it to his neighbour to lick,) I do not know; but it may be supposed that such a contrivance would

hardly have been imputed to the raven if it had not occurred. The belief in ravens exercising such ingenuity is as old as the time of Plutarch, who mentions it in his 'Treatise on the Sagacity of Animals.'¹

The crow kind are generally considered, I believe, to be among the most sagacious or intelligent of the feathered tribes. Lord Campbell, in his 'Lives of the Chancellors,' declares that the crows in Scotland (and Dr. Darwin says something similar of the crows of England) are able to distinguish Sunday from the other days of the week, and that though, on every working-day, they will take good care to keep out of the reach of gunshot, they will on the Sabbath come close to the houses, and pick up their food within a few yards of the farmer and his men, being able to tell the recurrence of the day of rest from the ringing of the bells and the discontinuance of field labour, and feeling certain that on that day they are safe from molestation.

This is perhaps rather too much for belief; but it is certain that the Scotch have a high opinion of the sagacity and cunning of that species of bird. Captain M'Clure, the Arctic voyager, who had experience of the ravens a good deal further north, tells an amusing anecdote of two ravens that came about his ship in Mercer Bay,—a place so near the Pole that he found wine frozen within a yard of the fire. These two birds, he says, established themselves as friends of the family for the sake of scraps of food thrown to them by the ship's crew. But the dog belonging to the ship, regarding their pickings as an encroachment upon his rights, used to fly at them from time

¹ De Solert. An. cap. 10.

to time, and try to catch hold of them with his mouth. But the birds took good care to baffle him; they used, at the time when the mess-tins were cleared out on the dust-heap, to throw themselves intentionally in his way, and when he sprang at them, would fly only a few yards off; and then, when he made another spring, they would take another flight, till they had tempted and lured him to a considerable distance from the shore. They would then fly back, at their utmost speed, to the dust-heap, and had generally picked out the best scraps, and either devoured them or got them ready for carrying off, before the dog could return to prevent them. How often this was repeated, Captain M'Clure does not say; but it may be supposed that the good sense of the dog would not always allow him to be outwitted in that way.

Dr. Darwin remarks that apprehension of danger from mankind is more apparent in rooks than in any other birds. Any person who has paid the least attention to their ways, will have observed that they even consider a man to be more formidable when armed with a gun than when he is weaponless; for they will follow a ploughman along the furrow, each striving to be nearest him, in order to have the best chance of the turned up worm. In the spring, when there are young in the nests, if a man happen to walk under a rookery with a gun in his hand, the inhabitants of the trees will rise on their wings and scream aloud, with the object, as it has been surmised, of giving notice to their offspring to shrink into their nests out of sight of the enemy; and hence the country-people assert that rooks can smell gunpowder.¹

¹ Bingley, 'Animal Biography,' vol. ii. p. 105.

Sir Walter Scott used to tell with great delight an amusing story of the cunning of a mischievous corbie-crow, whose great and constant pleasure was to tease and plague all mankind and beastkind in whatever way it could devise. "A stranger," he said, as Basil Hall repeats the story, "called one day [at Scott's house] with a very surly dog, whose habit was to snarl and bite at every animal save man; and he was consequently the terror and hatred of his own fraternity, and of the whole race of cats, sheep, poultry, and so on. 'Maître Corbeau' seemed to discover the character of the stranger, and from the moment of his arrival determined to play him a trick. I watched him all the while, as I saw clearly that he had a month's mind for some mischief. He first hopped up familiarly to Cato, as if to say, 'How d'ye do?' Cato snapped and growled like a bear. Corbie retired with a flutter, [as if] saying, 'God bless me, what's the matter? I had no idea, my good Sir, that I was offending you;—I scarcely saw you;—I was looking for a worm.' By-and-by he made another studied sort of approach, and when Cato growled, he drew off, with an air as if he said, 'What *is* the matter with you?—*I'm* not meddling with *you*;—let *me* alone.' Presently the dog became less and less suspicious of Mr. Corbie, and composed himself on the sunny gravel-walk into a fine sleep. Corbie watched his moment, and hopped and hopped quietly till close up, and then leaping on Cato's back, flapped his wings violently, gave one or two severe dabs with his bill, and then flew up to the edge of the cornice over the gateway, and laughed and screamed with joy at the impotent fury of the dog;—a human being could not have laughed more naturally; and

no man that ever existed could have enjoyed a mischievous joke more completely than our friend Corbie."¹

Mrs. Lee tells a similar story, observing that great intelligence has often been shown by ravens in their arts of teasing dogs, yet without actually rendering them their enemies. A large otter-dog was kept chained in a stable-yard, where there was a raven on terms of intimate familiarity with him. Yet the bird could not abstain from giving him small annoyances. He began by snatching a piece of food occasionally from the dog's feeding-pan, before he had finished his meal. As the dog submitted to such liberties quietly, the bird would at length take a scrap at any time, and, if he did not care to eat it, would carry it away out of reach of the dog's chain, then bring it back again within reach of it, and even hang it on the dog's nose, and, when the dog was opening his mouth to catch it, would dart off with it again out of his reach. At other times he would hide a piece under a stone, beyond the length of the dog's chain, and then, with a cunning look, perch upon the dog's head. Yet, with all his mischievousness, he would never run away with the dog's food altogether, but would allow him at last to have what he had been playing with, with the exception of any small portion that he might wish to deduct for himself. The dog was so little alienated by all these tricks, that he saved the bird's life when he was nearly drowned in a tub of water just beyond his range; he saw the raven struggling, and dragged his heavy kennel forward till he could put his head over the edge of the tub, when he took up the raven in his mouth, and laid him gently down on the ground to recover.²

¹ Lockhart 'Life of Scott,' vol. vii. p. 333. ² An. of Birds, p. 102.

The sagacity of a raven which had been bred up with a dog, and used, of his own accord, to go a-hunting with him, is remarkable. The two would go out together and watch hens and rabbits; for, when they came to a cover, the dog would enter and drive out the animals, while the raven, waiting at the outside, would seize and detain each as it came forth; the dog would then hasten out, as soon as he could, to his assistance, and, by their joint efforts, every one would be dispatched.¹

“There is one trait,” says Mr. Jesse,² “in the character of rooks which is, I believe, peculiar to that sort of birds, and which does them no little credit. It is the distress which they exhibit when one of them has been killed or wounded by a gun while they have been feeding in a field or flying over it. Instead of being scared away by the report of the gun, leaving their wounded or dead companion to his fate, they show the greatest anxiety or sympathy for him, uttering cries of distress, and plainly proving that they wish to render him assistance, by hovering over him, or sometimes making a dart from the air close up to him, apparently to try and find out the reason why he did not follow them,

“ ‘While, circling round and round,
They call their lifeless comrade from the ground.’

If he is wounded, and can flutter along the ground, the rooks appear to animate him to make fresh exertions by incessant cries, flying a little distance before him, and calling to him to follow them. I have seen one of my labourers pick up a rook so wounded, which

Mrs. Lee, *Anecd. of Birds*, p. 102.

² ‘*Gleanings*,’ vol. i. p. 59.

he had shot at for the purpose of putting him up as a scarecrow in a field of wheat, and while the poor wounded bird was still fluttering in his hand, I have observed one of his companions make a wheel round in the air, and suddenly dart past him so as almost to touch him, perhaps with a last hope that he might still afford assistance to his unfortunate mate or companion. Even when the dead bird has been hung, *in terrorem*, to a stake in the field, he has been visited by some of his former friends, but, as soon as they found that the case was hopeless, they have generally abandoned that field altogether." This concern is the more remarkable, as rooks in general avoid any one carrying a gun.

Much of sense and sensibility in a crow is shown in the following anecdote, told by Wilson in his 'American Ornithology.'¹

A gentleman living near the Delaware, a few miles below Easton, had reared a crow, for which he had a great liking, and which lived a long time in his family, but at length disappeared, and was supposed to have been killed. Eleven months, however, after he had lost sight of it, he was standing by the side of the river, in company with several other persons, when, as a number of crows passed over their heads, one of them separated itself from its companions, and perched upon his shoulder, chattering at the same time with great volubility. Recognizing it for his old favourite by some mark, he spoke to it, and it seemed to listen placidly to his voice, but, when he attempted to lay hold of it, it drew back, and resolving to preserve its liberty, of which it had so long enjoyed the sweets,

¹ Mrs. Lee, 'Anecdotes of Birds,' p. 98; Jesse, 'Gleanings,' vol. i. p. 64.

soared gently into the air, and vanished from his sight for ever.

As for magpies, though generally noted only for their cunning, they are sometimes observed to show a higher kind of sagacity when occasion requires. A pair of them, in a neighbourhood where there were no trees, built their nest in a gooseberry bush, and frequented it for years ; but, as it was accessible to foxes, cats, and other animals, they barricaded, with a circle of briars and thorns, not only the nest, but the whole bush. Inside, the nest had the usual soft and warm lining, but outside was so rough and strong, and so firmly entwined with the bush, that even a man could not make his way in to the young without a hedge-knife, the surrounding barrier being more than a foot in breadth. They renewed the fortification every spring, choosing for the purpose the most prickly bushes, some of which it required their united forces to drag to the spot.¹

Mrs. Lee gives the following instance of a magpie's artfulness. He belonged to the family of a Mr. Ranson, and would watch about a neighbouring toll-gate, at times when he expected the toll-keeper's wife to be making pastry ; and when he observed her so employed, he would go and perch upon the gate, and shout " Gate ahoy ! " when of course, if her husband were absent, she would hurry out to open it ; the bird would then dart into the house, and carry a bill-full of her pie-crust, eating it and chattering over it with the greatest glee.²

Looking to larger birds, we find the eagle, of which we have not many anecdotes, exhibiting his intelli-

¹ Mrs. Lee's Anecd. of Birds, p. 112.

² *Ib.* p. 113.

gence in the following case, related in the French Journals of 1807 :—

The bird described was of the golden kind ; it had been for some time in the Menagerie of the Garden of Plants at Paris, and had shown as much good sense and temper, during an operation performed on its wounded foot, as an elephant or a dog could have shown under similar circumstances. “ He was taken,” says the account, “ in the Forest of Fontainebleau, in a trap set for foxes, the spring of which broke his claw ; his cure was tedious, and attended by a painful operation, which was borne by the eagle with a patience not often exceeded in man. During the operation his head only was at liberty, and of this he did not avail himself to oppose the dressing of the wound, from which several splinters were taken ; nor did he attempt to disturb the apparatus which the fracture required. Swathed in a napkin, and laid on one side, he has passed the entire night upon straw without the least motion. The next day, when all the bandages were unstrapped, he lodged himself upon a screen, where he remained twelve entire hours without once resting on his unsound foot. During all this time he made no attempt to escape, though the windows were open. Yet he rejected all nourishment till the thirteenth day of his captivity; when he tried his appetite upon a rabbit which had been given to him. He seized it with his uninjured claw, and killed it with a stroke of his beak between the head and the first joint of the neck. After having devoured it, he resumed his usual place upon the screen, from whence he stirred no more until the twenty-first day after his accident. Then he began to try the wounded limb, and without in the least

deranging the ligature by which it was bound, he has regained the use of it by moderate and reasonable exercise. This interesting creature has passed three months in the room of the servant who attended him. As soon as the fire was lighted, he came up to it, and suffered himself to be caressed; at bedtime he mounted his screen, as close as possible to his attendant's bed, but removed to the opposite extremity as soon as the lamp went out. Confidence in his own powers appeared to exempt him from any kind of distrust. It is impossible to show more resignation, more courage, and, one might almost be tempted to say, more reason, than was exhibited by this eagle during the long continuance of his illness. He is of the most beautiful kind, and does not appear to experience the least weakness in consequence of the accident which robbed him of his liberty." ¹ For some time after his recovery an English game-cock was domesticated with him, which he at last killed and ate, but whether the cock provoked his wrath, or whether the eagle was tired of the cock's society, was not known. In general, it may be observed, these birds are not remarkable for gentleness and mildness, but rather for the contrary qualities, being sullen or ferocious when in captivity, and not to be trusted even by those who feed them.

The following instance of intelligence in an eagle at St. Kilda is given by Mr. Macgillivray in his 'History of British Birds.'—"Two sons of a man of the name of Murray, having robbed an eagle's nest, were retreating with the young, when one of the parent birds having returned, made a most determined attack upon

¹ Penny Magazine' for 1835; Blaine's Encycl. of Rural Sports, Art. 2184.

them. They said they had never been in such peril; for the eagle dipped her wing in a burn that ran by, and then in sand, and sweeping repeatedly by them, struck at them with her wing. Although each had a stick, it was with great difficulty that they at length effected their escape, when almost ready to sink under fatigue." The dipping of the wing in water, and then in sand, to give more effect to its stroke, was as much an act of reason as any that has proceeded from man.¹

Of the heron, it is observed that she shows remarkable sagacity in fishing. It is well known that fish are startled at shadows in motion on the water; a feeling with which the heron would seem to be well acquainted; for she fishes in general only when the sun does not shine. But on occasions when a river, having overflowed its banks, and inundated the neighbouring ground, has left, on retiring, pools of water with fish in them, she will fish there in sun as well as in shade, as if quite certain that a shadow could be of no consequence, since her prey can no longer escape her. As these modes of proceeding, however, are common to all herons, we should perhaps be content to consider them only as the offspring of instinct.²

It was said in old times that a heron would swallow a shell-fish, with its shells closed, and keep it in her stomach, to her great inconvenience, till she felt it relaxing and opening under the influence of the warmth, when she would cast it up again, and pick out the edible part from between the shells.³

To geese, also, the ancients were inclined to attri-

¹ Blaine's *Encycl. of Rural Sports*, p. 656, Art. 2184.

² Garratt's '*Marvels of Instinct*,' p. 153.

³ Plutarch, '*De Solertiâ Animalium*,' c. 10.

bute more intelligence than people of modern times are disposed to allow them.

The geese of Cilicia, says Plutarch,¹ when they fly over Mount Taurus, being afraid of the eagles by which it is frequented, carry small stones in their mouths, to prevent them from indulging their propensity to gabble, and attract the notice of the eagles.

Maximus Tyrius speaks with equal commendation of the understanding of cranes. Sense and experience, says he, are not confined to man; for the inferior animals also learn and discover things by experience; so that they also may claim to have some portion of intelligence. Thus when the cranes of Egypt, preparing to leave the country on account of the heat, extend their sail-like wings, and direct their course through the air towards Scythia, they find that, as their body is not well-balanced, (the middle being heavy, the neck long, the part near the tail light, that under the wings lank, and the legs spread), their course is necessarily unsteady, like that of a ship tossed by the wind; and feeling this, either from mere present observation, or from previous experience, they are careful, before soaring into the higher regions of the air, to take stones in their mouth as ballast, which is a means of ensuring them a safe course.² Ælian says that when they take rest in the night during a journey, three or four keep watch for the rest, and, lest they should fall asleep, they rest only on one foot, and hold in the other a stone, which, if slumber should steal upon them, would fall and awaken them.³

¹ 'De Solertiâ Animalium,' c. 10.

² Max. Tyr. Diss. xl. See also Aristot. Hist. Anim. viii. 12.

³ Ælian, Hist. Anim. iii. 13. ; ii. 1.

This is assuredly fable, but, among the larger birds, even geese are not without some portion of understanding. There was a farmer in Westmoreland, whose ground was on the coast of Lake Windermere, and on the margin of his homestead was a small island. He kept several geese and one gander, and, one evening, the gander suddenly disappeared; he could not be found in the morning, and it was supposed that he had been stolen. Afterwards, day by day, the geese disappeared one by one; and it was supposed that they were stolen also; but all the vigilance that they could use failed to discover the thief. All hope of recovering them was given up, when one day the farmer heard a cackling sound, and cried, "Dear me, if I did not know my gander was gone, I should think that was his voice." On going out, he found the gander actually in waiting, attended by the whole flock of geese safe and sound, and each accompanied by a brood of young ones. It seems that the gander, whether by chance or from any internal impulse, had swum over to the island, which was at some distance, and, finding means of subsistence there, had enticed over first one of the geese, and then another, till he had collected them all around him. What induced him to return, whether failure of food, or any other motive, I do not know; but it was observed that he seemed very prond of having brought back his household safe, and strutted about before the farmer as if in a kind of triumph.

An instance of sagacity and intelligence in a turkey is given by Audubon. "While at Henderson, on the Ohio, I had," says he, "among many other wild birds, a fine male turkey, which had been reared from its

earliest youth under my care, it having been caught by me when probably not more than two or three days old. It became so tame that it would follow any person who called it, and was the favourite of the little village. One morning I saw it fly off, at a very early hour, to the woods, in another direction, and took no particular notice of the circumstance. Several days elapsed, but the bird did not return. I was going towards some lakes, near Green River, to shoot, when, having walked about five miles, I saw a fine large gobbler cross the path before me, moving leisurely along. Turkeys being then in prime condition for the table, I ordered my dog to chase it and put it up. The animal went off with great rapidity, and, as it approached the turkey, I saw, with surprise, that the turkey paid little attention. Juno was on the point of seizing it, when she suddenly stopped, and turned her head towards me. I hastened to them, but you may easily conceive my surprise when I saw my own favourite bird, and discovered that it had recognized the dog, and would not fly from it; although the sight of a strange dog would have caused it to run off at once. A friend of mine, happening to be in search of a wounded deer, took the bird on his saddle before him, and carried it home for me. The following spring it was accidentally shot, having been taken for a wild bird, and brought to me on being recognized by the red ribbon which it had round its neck. Pray, reader, by what word will you designate the recognition made by my favourite turkey of a dog which had been long associated with it in the yard and grounds? Was it the result of instinct or of reason, an unconsciously revived impression, or the act of an intelligent mind?"¹

¹ Broderip, Zool. Recr. p. 132.

The following remarkable instance of intelligence in a moor-hen is given by Bishop Stanley :—

“A water-hen, observing a pheasant feed out of one of those boxes which open when the bird stands on the rail in front of the box, went and stood in the same place as soon as the pheasant quitted it. Finding that its weight was not sufficient to raise the lid of the box, it kept jumping on the rail to give additional impetus. This only succeeded partially, so the clever bird went away, and returned with another bird of its own species. The weight of the two had the desired effect, and they both enjoyed the reward of their sagacity.”

Sea-gulls sometimes exhibit great sagacity in harassing the eagle, as smaller birds do in annoying the owl or the hawk. A Mr. Drozier, of Norfolk, says that as he was one day admiring, on the northern coast of Scotland, the majestic flight of an eagle, he observed him on a sudden alter his direction, and heard, at the same moment, a flight of five or six sea-gulls whizz over his head with the greatest rapidity. These birds were in pursuit of the eagle, and pursued their way towards him in a steady unwavering course. They soon came up with him, and a fierce engagement ensued, the short bark of the eagle and the cry of the gulls being clearly heard. Each of the gulls attacked the eagle in turn, but not in front; he took a short flight round him till he brought his own head and tail in the same line with the eagle's, and then, making a desperate swoop, struck the eagle on the back, and then doubled up again almost perpendicularly. The birds acting thus in quick succession harass the eagle most unmercifully. If the eagle turned his head when a gull was about to descend upon him, the gull easily

started aside, and another took his place. The eagle constantly wheeled about as quickly as his ponderous wings would allow, and the contest, which lasted some time, was terminated by the eagle's approach to some rocks, whither the gulls did not care to follow him.¹

Rapacious birds, says Smellie, uniformly endeavour to rise higher in the air than their prey, that they may dart forcibly down upon it with their talons. To counteract such attempts nature has endowed the smaller and weaker species of birds with many arts of defence. When they see a hawk, if they cannot conceal themselves among trees, hedges, or brush-wood, they are often seen, in great numbers, apparently to follow the hawk, and expose themselves rashly to danger, but "in fact, by their numbers, their perpetual changes of direction, and their uniform endeavours to rise above him, they perplex the hawk to such a degree that he is unable to fix upon a single one of them, and after exerting all his art and address, is frequently obliged to relinquish the pursuit." When they fly to men or women for protection, they show their extreme terror of the hawk, and their sense that it will be better to fly for refuge anywhere than to await his grasp.²

The owl, however, when it happens to be driven forth in the daytime, is pursued by small birds, it appears, for the sake of sport; for as the owl is unable to see in the bright light, and knows not where he is, whither to fly, or whom to attack, he is necessitated to suffer indignities with the most patient stupidity. An aversion which the smaller birds have to

¹ Mrs. Lee's 'Anecdotes of Birds,' p. 208.

² Smellie's 'Philosophy of Natural History,' vol. i. 409.

him, and a temporary assurance that they have nothing to fear from his resistance, incite them to pursue him, encouraging each other by mutual cries to harass the common enemy. Bird-catchers sometimes take advantage of this propensity, and, imitating the cry of an owl, attract a concourse of small birds to settle on twigs previously smeared with birdlime.

CHAPTER XXXII.

ROBINS, TOMTITS, SWALLOWS, AND OTHER
SMALL BIRDS.

AMONG the smaller sorts of birds, one of the most sensible is the robin redbreast. I myself witnessed many proofs of intelligence given by a bird of this species. The robin is known to be one of the boldest of birds; it will readily approach man, and become familiar with him, especially when in winter cold and hunger impel it to seek food and shelter. The one that I knew made gradual advances one winter to a family living in a cottage, who received it with kindness, and gave it encouragement. At first it came about the door, picking up crumbs, and, finding no repulse, ventured by degrees into the sitting-room, picking up whatever little eatables it could find on the floor. As it grew more confident, it would fly on the chairs and tables, and at length became so bold that it would alight on the table where the people were at dinner, and peck pieces from their plates. The family consisted of the master of the house, his wife, and a boy of about ten years old; and it was observed that

it was more ready to take pieces from the boy's plate than from those of the grown-up persons, probably because the boy, being smaller than the others, was regarded by the bird with less fear. At last it became quite an inmate of the family, winter and summer, and when the doors were shut, and it wanted to be let in, it would come to the window and chirp, and when it saw through the window any one going towards the door, would immediately fly towards it. One of the eatables that it liked best was sponge-cake, and a little tray, with crumbled sponge-cake in it, was consequently placed for its use on the inside sill of one of the windows. There were two windows to the room; birds are sometimes guilty, in a house, of little violations of cleanliness, but it was remarked that it never made any dirt in the window in which its tray stood; and it was upon the whole a very clean bird. Thus it went on for three or four years; though, with all its familiarity, it would never suffer itself to be handled; nor did it ever readily take anything from the hand. I believe it was only on two or three occasions that it was induced, with much coaxing, to do so; at other times it held back, looking shy and suspicious. At length its attendance ceased; it was supposed some mishap had befallen it; and some days afterwards the dead body of a robin was found with many marks of violence about it, especially on its head, which was much injured; and it was supposed that it had been fighting with another robin, and, as robins are desperately pugnacious, had received injuries in the combat of which it died. This bird, it may be well understood, gave proofs of great sagacity, not only in its chirping to be let in at the window, but .

in its general demeanour towards the family to whom it attached itself. Visitors witnessed its behaviour with surprise.

Captain Brown tells us that as his father was sitting at the window of his house during some severe autumn weather, a robin flew up, when he opened the window, and threw some crumbs for it on the floor. It hopped boldly in, and picked them up; and as his father was fond of animals, he took pleasure in taming the bird. "At length," he says, "it would pick small pieces of raw flesh and worms from his hand; it sat on the table at which he wrote, and, when the day was very cold, perched upon the fender. When a stranger entered, it flew to the top of a door, where it perched every night. The window was frequently opened to admit air; but the robin never offered to go away. As the spring advanced, and the weather became fine, it flew away every morning, and returned every evening, till the time of incubation arrived; and it then flew away altogether. At the next fall of the year, it again asked for admittance, and behaved exactly in the same manner as before. It did this a third time; but when it flew away in the ensuing spring, it was never seen again."

Here is an instance of a robin manifesting his reasoning powers by asking assistance in a difficulty. A gardener, in the service of a friend of Mrs. Lee's, had encouraged the attendance of a redbreast, which would follow and hover about him; but he was one day surprised at the frequency with which the bird came up to him, and then, retiring a short space, appeared to wait for him, and, when he did not follow, returned again. At last it struck him that the robin must want

something, and he accordingly walked in the direction in which the bird went. After proceeding a considerable distance, it stopped, and uttered a loud cry, near a flower-pot, in which the gardener found that its nest was built. On looking closely into the spot, the man perceived that a snake had coiled itself round the pot, but without having as yet done any mischief to the young. He removed the reptile, and the robin evidently attempted to express his gratitude by extraordinary flutterings and singing.¹

The tomtit, in the winter, when food is scarce, will often fly to a bee-hive, tap with its beak on the piece of wood at the entrance, and wait calmly till one of the bees comes out to see what is the matter, when it will immediately snap up the bee and devour it. I understand that it will swallow the bee without any regard to the sting, which appears not to affect the bird. This proceeding has often been witnessed by a farmer and bee-keeper in Kent, who spoke of it to an intimate friend of mine.

“When the lapwing wants to procure food, it seeks for a worm’s cast, and stamps the ground by the side of it with its feet. After doing this for a short time, the bird waits for the issue of the worm from its hole, which, alarmed at the shaking of the ground, endeavours to make its escape, when it is immediately seized, and becomes the prey of the ingenious bird. The lapwing also frequents the haunts of moles, which, when in pursuit of worms on which they feed, frighten them, and the worm, in attempting to escape, comes to the surface of the ground, when it is seized by the lapwing.”²

¹ Mrs. Lee’s ‘Anecdotes of Birds,’ p. 55.

² Jesse’s ‘Gleanings,’ vol. i. p. 71.

A lady of Dr. Darwin's acquaintance saw a little bird repeatedly hop on a poppy-stem, and shake the head with his bill, till many seeds were scattered, when it settled on the ground and picked up the seeds.¹

Although birds build their nests, from instinct, always in the same manner and form, yet they exercise thought and reason about ways and means of fixing or suspending them, and about modes of repairing and protecting them if they are injured or molested.

A pair of goldfinches had built their nest on a small branch of an olive-tree, and, after hatching their brood, found that the weight of the nest and its contents would be too great for the bough on which it rested. Something was necessary to be done for its support. They were watched, and observed to fasten, with a piece of string which they had picked up, the failing twig to a higher and stronger branch of the tree; a contrivance by which their nest was completely secured.²

A farmer living near Spilsby, in Lincolnshire, was one day watching one of his ploughmen, who was ploughing a piece of fallow land, when he saw a partridge, disturbed by the plough, glide off her nest, which, on inspection, he found full of eggs, but which was so placed that it was evident the next round of the plough, if it was not removed, must overwhelm it. He observed the old bird, however, return to her nest as he was leaving the spot, and resolved to see how she would act when the plough came round again. As it approached, he looked for the nest, which he found,

¹ Hancock's 'Essay on Instinct,' p. 79.

² Mrs. Lee's 'Anecdotes of Birds,' p. 85.

but the eggs and the bird were gone. It struck him that she must have removed them, and, before he left the field, he found her sitting on twenty-one eggs, some of which showed by cracks that they were on the point of sending forth young ones. The round of ploughing had occupied about twenty minutes, in which time she, with the assistance probably of her mate, had removed the twenty-one eggs to the distance of about forty yards. The farmer watched her subsequently, and found that she reared nineteen birds.¹

Of the intelligence of the lark in the protection of its young we find the following instance in the 'Naturalist.' As some mowers were cutting long grass in a field, one of them passed his scythe close over the nest of a skylark, but without injuring either the young or the female who was sitting on them. The bird did not fly away; and the mowers went on with their work, levelling all the grass around her, whilst she showed no concern at their proceedings. The son of the owner of the crop, who saw what had happened to the bird, went back, some time afterwards, to see if she was still there, and found that she had constructed in the interval, a dome of dry grass completely over the nest, leaving only an aperture on one side for ingress and egress, and thus securing herself shelter similar to that which had been previously afforded by the long grass.

During the early part of the summer of 1835 a pair of water-hens had built their nest on the margin of a large ornamental pond, which was ordinarily fed by a spring, but was occasionally swollen by the contents of another pond being admitted into it. This addition to its waters once began to be made while the female coot

¹ Jesse's 'Gleanings,' vol. iii. p. 161.

was sitting ; and as the nest had been built when the water was at the lower level, the rise, which was of several inches, threatened its speedy destruction. The birds saw the danger, and took measures to escape it ; for when the gardener, who had some regard for them, went to see in what condition they were, he found them both busily engaged in adding fresh materials to their structure, so as to raise it above the altered level of the water ; they had removed the eggs from the nest and deposited them on the grass about a foot from the brink of the pond. When they had made the nest sufficiently high, they replaced the eggs, and in less than half an hour the hen was again sitting quietly upon them.¹ This, Mr. Jesse² says, is not an uncommon proceeding among swans, the male and female always joining in the work ; but he remarks that they are not always sufficiently speedy in their operations to prevent the nest from being swept away by the water.

A gentleman, an attentive observer of the habits of birds, was told by some children of a wren's nest near a cottage which he sometimes visited. He looked at it, and wishing to having it left unmolested, told the children that, if they would take care it was not meddled with, he would give them some reward ; and they promised to keep it undisturbed. Going to look at it again a short while afterwards, he found that the entrance to the nest had been stopped up, and in consequence accused the children of having broken their promise ; but they protested that they had neither touched the nest nor disturbed the old bird, though they admitted that they had frequently taken a look at it. On examination, it was found that while the original entrance

¹ Mrs. Lee, *Anecd. of Birds*, p. 194.

² 'Gleanings,' vol. i. p. 111.

had been stopped, another had been made at the back part,—showing that the bird, disliking to be watched, yet unwilling to forsake her eggs, had taken this precaution against the inconvenience or peril to which she considered herself exposed; another proof of animals' sagacity and foresight.¹

Among small birds, swallows and martins have proved on various occasions that they have their wits about them. The affair of the sparrow that was walled up in a swallow's nest, of which it had taken possession, by other swallows that came in a body with their bills full of clay, and deposited their contributions in concert at the orifice of the nest, is well known. It is said to have taken place at the front of an uninhabited house in Merrion Square, Dublin; where the nest was exhibited to several persons with the dead sparrow in it. Mr. Jesse² says that he received the account of the occurrence from a trustworthy person who witnessed the whole of the proceedings. In this operation there was shown, not only much of the reasoning faculty, but also the power of communicating desires among individuals of the same species. There is an older story of the same kind told by Father Bougeant in his '*Amusement Philosophique sur le Langage des Bêtes,*' published in 1739.

This was combination for revenge. The following story, told by Mrs. Lee and others, exhibits them assisting one another for a different purpose:—"A swallow's nest, built in the corner of a window facing the north, and containing a brood of fine young ones, had been so much softened by long-continued beating of rain against it, that it was unable to support the weight of

¹ Jesse's '*Gleanings,*' vol. ii. p. 294.

² *Ib.* p. 99.

its contents. At length it fell down into the lower corner of the window, and was broken to pieces, leaving the brood exposed to a tempest which was then blowing furiously. To save the little creatures from death, the owner of the house benevolently caused a covering to be thrown over them. In a while, when the storm had somewhat subsided, many other swallows, in company with the parents, gathered about the spot, fluttering round and round, and hovering over the temporary covering, which prevented them from seeing whether the young ones were alive or dead. When the tempest had altogether passed off, the covering was removed, and the whole group, as they beheld the young ones unhurt, manifested the utmost delight. After the old birds had fed them, the entire body seemed to arrange themselves in working order, and each taking its part, and bringing mud in its bill, they had before nightfall, by their united exertions, completed an arched canopy over the brood where they lay, and this effectually secured them against any further severity of weather. From the time that it took the whole flock to execute this piece of architecture, it was evident that the young must have perished of cold and hunger before the two parents could have completed the tenth part of the undertaking."¹ Such a performance shows, not merely instinct that acts always in the same manner under the same conditions, but a portion of reason that devised means of action in circumstances in which it could never have been placed before.

Another account of a contention between some swallows and a pair of sparrows shows that swallows will retain the recollection of an injury till an opportunity

¹ Jesse's 'Gleanings,' vol. ii. p. 96.

offers of resenting it. A pair of swallows in 1832 built their nest under the ledge of a house at Hampton Court. But as soon as it was completed, a pair of sparrows drove them from it, though they made a vigorous resistance, and even brought other swallows to aid them. The sparrows were then left in possession unmolested, until they were both obliged to go forth to seek food for their young. During their absence, a number of swallows came and broke down the nest, leaving the young sparrows to die on the ground. As soon as the destruction of building and life was completed, the old swallows began to reconstruct the nest for their own use. The whole proceeding was witnessed by a gentleman living close to the spot.¹

No small intelligence was shown by a pair of martins against a wren in the following affair:—Two martins had a box or cage fixed against the house of a Mr. Simpson, at Wilton, in North America; but one morning they were observed by him flying round and round near the box, and making repeated attempts to get into it without success. It appeared that, during their temporary absence, the box had been occupied by a wren, which, after awhile, flew out, and went off to some distance. The martins took the opportunity of returning to their abode; but their stay in it was short; for their little adversary came again, and forced them to retire from it. The contention went on through the whole day; but the wren secured the box for the night. The following morning, however, when the wren went out, the martins instantly took possession of their mansion, and, breaking up their nest, proceeded to barricade the entrance with the materials.

¹ Mrs. Lee's Anecd. of Birds, p. 68.

When the wren reappeared, she found that there was no admittance for her; she attempted to storm the fortress, but could not succeed; the martins, abstaining from food nearly two days, persevered during the whole of that time in defending the entrance; and the wren at last left the martins in quiet possession of their dwelling.¹

Communities of swallows are considered to be in general peaceable and friendly with each other. But an instance of contention among them is related by a gentleman of Blois, in France. He states that a nest was built in a corner of one of his windows by a pair of swallows, of which one at least had visited the place in the preceding year, as he recognized it by a remarkable white feather in one of its wings. As soon as the nest seemed finished, the gentleman's attention was attracted by a great noise and bustle about it; and, on looking out, he found that the disturbance was caused by another swallow trying to force its way into the nest while the rightful tenants were within; and at length, in spite of their united efforts, he succeeded in entering and driving them out. But as he could not always remain within, the pair took advantage of his absence to reinstate themselves, only, however, to be again expelled; and these alternate dispossessions continued day after day for at least a week. But one day he perceived the owners of the nest very busy outside, and found that they were engaged in lessening the diameter of the entrance, which they gradually reduced so much that they could scarcely force their way into it singly; and, as soon as their work was completed, one or other of them constantly placed itself at the

¹ Bingley's 'Animal Biography,' vol. ii. p. 210.

orifice, with its bill visibly protruding; and though the adversary persisted in making regular attacks on them for another week, he could never afterwards make any impression on them, but was compelled to leave them to enjoy the result of their sagacity and forethought.¹

The male swallow of a pair, as Captain Brown relates, was shot by a sportsman; and the female was so enraged at his loss, that she flew at the slayer, and struck him in the face with her wing, and continued to flit around him for a long time, screaming with anger. Nor was she content with acting thus once only, but whenever he walked out, she never failed to make similar attacks on him, except, indeed, on Sundays, when, as he was differently dressed, it is supposed that she did not recognize him.

The swallow has been always noted for its courage; and a writer in the 'Magazine of Natural History' gives a proof of it similar to that which is told above. Swallows used to build their nests in out-houses belonging to the writer's father, near which the house-cat would often bask in the sun; and the swallows, when they saw her there, would testify their enmity to her by flying down over her head, at times almost touching her, and appearing to signify their hatred by shrieks. The cat would attempt to annoy them in return by catching at them as they passed; and they would then sometimes fly in front of her, sometimes behind her, making her oscillate from side to side. Now and then, as if provoked at their pertinacity and her own want of success, she would spring up at them with her utmost vigour; but she was never known to catch one of them.

¹ Mrs. Lee's Anecd. of Birds, p. 64.

A remarkable instance of the sense and reflection of the swallow was communicated to Mr. Jesse by a nobleman distinguished for veracity. A pair of swallows proceeded to make their nest under the arch of a lime kiln, at a point from which three chimneys branched off, and where the heat was so great that the hand could not long be held on the wall without a sensation of pain. Yet this was the spot which the swallows chose for their nest, which was nearly completed when the heat caused it to crumble and fall to the ground; and a second and a third nest, which they persisted in building in the same place, shared the same fate. A fourth nest was then constructed, which stood perfectly firm, although the heat of the kiln was by no means diminished; and in this nest they hatched and reared their young. The following year they built another nest there, which stood the heat equally well; and the third year they did the same with equal success. The fourth year they did not appear, having possibly, as Mr. Jesse observes, perished. On the occurrence, of which the most satisfactory proof, he says, can at any time be presented, he makes the following remarks:—

1. The swallows, finding that the earthy composition which they first used would not stand the heat, must have discovered and worked up another sort of composition which would stand it.

2. Instinct alone would not have taught them to do this.

3. When they returned to the kiln the second and third years, they must have kept in their recollection, not only that the earth which they commonly used for building their nests would not resist the heat there,

but also the sort of composition which was necessary for them to use.¹

Another anecdote is given by the same writer,² indicating equal intelligence in the swallow in the construction of its nest. A swallow, in a gentleman's garden in Northumberland, wishing to build her nest in a corner formed by two walls at right angles, and finding no ledge or projection on either of the walls large enough to support the nest, fixed a small bracket of clay on each wall at a little distance from the corner; she then brought a stick, and laid it across with the ends resting on the brackets; and on this foundation she constructed her nest in perfect security. The gentleman to whom the garden belonged watched the progress of the building, and spoke of the contrivance with the greatest admiration. In making and fixing her brackets she probably made use of the strongest glutinous matter, for swallows can make clay of such stickiness as to adhere firmly to glass.

¹ Jesse's 'Gleanings,' vol. ii. p. 96.

² Ib. vol. iii. p. 4; see also p. 197.

CHAPTER XXXIII.

BIRDS. — COMMUNICATION OF IDEAS. — RESEMBLANCE BETWEEN BIRDS AND HUMAN BEINGS IN THEIR CONJUGAL RELATIONS.—PARROTS.

WE have seen how dogs and other quadrupeds communicate their thoughts and notions one to another; we may now see how the feathered tribe make like intercommunications. Something of this kind we have already noticed among swallows; and more examples of it might easily be produced. We cannot omit the instance of combination among these birds given by Lord Brougham, in his 'Dialogues on Instinct,'¹ from the 'Animaux Célèbres' of Autun, to whom it was communicated by Dupont de Nemours, who witnessed the occurrence. A swallow had accidentally put its foot into the noose of a cord attached to the spout of the pump of the Collège des Quatre Nations, of Paris, and all its attempts to extricate itself had no other effect than that of drawing the knot tighter. Its strength being exhausted, it uttered piteous cries, which drew a multitude of swallows to the spot. For a time they crowded together, as if engaged in consultation.

¹ Dial. iii.

At length one of the number darted towards the string and skimmed over it so as to strike it with its beak in passing; another and another did the same, till every one, as it seemed, had taken his turn; but it was not till they had continued their efforts for half an hour that the cord was severed, and the captive set free. For some time afterwards they continued to hover together, chattering among themselves, as if in delight at their success.

A goose also will communicate its wishes to another goose. It is related by a Mr. Brew, of Ennis, that an old goose, which had been sitting on her eggs in a farmer's kitchen for a fortnight, was observed to be unwell; and that shortly after her condition was noticed, she left her nest, and went to an outhouse, where there was a young goose, only a year old, which she brought with her into the kitchen, and which straightway scrambled into the nest, and continued to sit on the eggs; while the old goose, as soon as the young one had taken her place, sat down by the side of the nest, and shortly after died. As the young goose had never been a visitor to the kitchen before, there seems no way of accounting for the proceeding, observes the narrator, than by supposing that the old one, sensible of being no longer able to perform her duty, had some mode of communicating her feelings and troubles to the other, and inducing her to become her substitute. The young goose conscientiously discharged what she undertook, for she hatched the eggs and brought up the brood.¹

As for rooks, an instance of the concord which they maintain among themselves, as well as of their regard

¹ Mrs. Lee's 'Anecdotes of Birds,' p. 222.

for each other, is given by Dr. Percival, the author of the 'Dissertations.' A large colony of rooks had subsisted for many years in a grove on the banks of the river Irwell, near Manchester. One summer evening, the doctor occupied himself in watching their employments and pastimes. Most of them amused themselves with chasing each other in endless evolutions, making the air resound, at the same time, with an infinity of discordant noises. In the midst of these exercises it happened that one rook struck his beak violently against the wing of another, which fell disabled into the river. A general cry of distress arose. "The birds hovered," says the doctor, "with every expression of anxiety over their distressed companion. Animated by their sympathy, and perhaps by the language of animals, known to themselves, the wounded one sprang into the air, and by one strong effort reached the point of a rock which projected into the river. The joy became loud and universal; but alas! it was soon changed into notes of lamentation, for the poor wounded bird, in attempting to fly towards his nest, dropped again into the river and was drowned, amid the moans of his whole fraternity."

It is observed that rooks, when they are sitting together on their trees, often salute members of their fraternity, as they return from distant parts, with loud cries, as if asking for news; and that after each fresh arrival fresh chattering takes place.¹

In Jamaica there is a crow which, being very talkative, is called the jabbering crow. The sounds which it makes, and which the negroes fashion into words, seem intended to attract others of its own kind, for,

¹ Mrs. Lee's 'Anecdotes of Birds,' p. 108.

if there is one within hearing, it comes and joins the chatterer in its jabbering.¹

The proceedings of a community of rooks are rather perplexing to us. It is evidently their desire to live in society; but they have some rules about the arrangement of places for their nests which we do not understand; when they begin to build, some employ a large portion of their time in pulling to pieces the nests of others. If a pair, desiring to be at peace, offers to build on a separate tree, their nest is demolished at once; and some unhappy couples, it is observed, are not permitted to finish a nest till the rest have all entirely constructed theirs; for as soon as they put a few sticks together, a party comes and scatters them abroad; and their nest is at last completed only by one of the pair keeping guard while the other fetches materials. As to strangers that offer to join a community, they are generally beaten and driven away; an instance of which violence was seen at Newcastle in 1783, when a pair of rooks, wishing to unite themselves to a rookery near the Exchange, and being driven off, built their nest, though not even then without interruption from other rooks, on the weathercock.

“In the northern parts of Scotland,” says Dr. Edmonson, “and in the Faroe Islands, extraordinary meetings of crows are occasionally known to occur. They collect in great numbers, as if they had all been summoned for the occasion; a few of the flock sit with drooping heads, and others seem as grave as judges, while others again are exceedingly active and noisy; in the course of about one hour they disperse, and it is not uncommon, after they have flown away, to find one or two

¹ Gosse's 'Account of the Birds of Jamaica.'

left dead on the spot. These meetings will sometimes continue for a day or two before the object, whatever it may be, is completed. Crows continue to arrive from all quarters during the session. As soon as they have all arrived, a very general noise ensues; and, shortly after, the whole fall upon one or two individuals, and put them to death. When the execution has been performed, they quietly disperse."¹

Various questions may be asked, as Garratt observes, about this proceeding. How do the rooks know when all that are required to form the council have arrived? What are the crimes committed, and how do they become known through the whole body of birds? Are the criminals aware of what is about to be done? and are they guarded, or how is it that they make no effort to escape, even in the night? None of these questions is it likely that any human being will ever be able to answer. We see what takes place, but not the secret springs and motives that bring it to pass.

Sparrows are said to act in a similar way, but without proceeding to so great a length. Sometimes, it is stated, a force of about half-a-dozen sparrows may be seen in great agitation, clustering tumultuously together in the air, apparently engaged in a sharp conflict, but in reality punishing an offender. The operation, which is attended with great clamour, is soon over, and it is observed that the sufferer, after having endured the penalty, is allowed to associate with the others as before. Such is the account given, but it seems to require confirmation.²

Hérons, also, seem to hold councils, but the object of them is not so apparent as that of the meetings

¹ Garratt's 'Marvels of Instinct,' p. 189.

² *Ib.* p. 190.

among crows. A large assembly of herons takes place at certain times of the year at Richmond Park; fifty or sixty have been counted by Mr. Jesse at a time. "Sometimes they may be seen on the tops of trees, and at other times on the ground at a distance from the ponds, appearing perfectly motionless till they are disturbed. The assemblage is very curious. The nearest heronry from Richmond Park is the one near Walton-on-Thames, and the other in Windsor Great Park, both of which would scarcely furnish the number above mentioned. There seems to be no reason why they should congregate and remain for so long a time in the listless manner in which I have seen them; nor can we give a probable reason why the birds from two heronries should meet at the same time in a place so far distant from their usual haunts. It is seldom that one sees more than two or three herons together in the same place, and then only when they are watching for their prey."¹

That ravens will act in concert to take revenge when they are injured or annoyed, is shown by a paragraph that appeared in the 'Stanford Mercury' of December 25th, 1766. A blacksmith at Bridgewater, in Somersetshire, named Duddridge, went out, a few days previous to that date, to amuse himself with his gun. As he was out in the fields, a large flight of ravens passed over his head, when he fired up among them, and shot two. The sight of their companions falling so irritated the rest, that they came down upon him in a body, and mangled his head and face with their claws and bills to such a degree that he died a few days afterwards.

¹ Jesse's 'Gleanings,' vol. i. p. 212.

That storks communicate with one another, and arrange proceedings in concert, appears from various accounts. Captain Brown relates the following story:— A tame stork had lived some years in the college-yard at Tübingen; and on a neighbouring house was a nest, in which other storks, that annually resorted to the place, used to hatch their eggs. At this nest, one day in autumn, a young collegian fired a shot, by which the stork that was sitting on it was probably wounded, for it did not fly out of the nest for some weeks afterwards. It was able, however, to take its departure at the usual time with the rest of the storks. But in the ensuing spring a strange stork was observed on the roof of the college, which, by clapping his wings and other gestures, seemed to invite the tame stork to come to him; but, as the tame one's wings were clipped, he was unable to accept the invitation. After some days the strange stork appeared again, and came down into the yard, when the tame one went out to meet him, clapping his wings as if to bid him welcome, but was suddenly attacked by the visitor with great fury. Some of the neighbours protected the tame bird, and drove off the assailant, but he returned several times afterwards, and incommoded the other through the whole summer. The next spring, instead of one stork only, four storks came together into the yard, and fell upon the tame one; when all the poultry present—cocks, hens, geese, and ducks—flocked at once to his assistance, and rescued him from his enemies. In consequence of this serious attack, the people of the house took precaution for the tame stork's security; and he was no more molested that year. But in the beginning of the third spring came upwards of twenty

storks, which rushed at once into the yard and killed the tame stork before either man or any other animal could afford him protection.

A similar occurrence took place on the premises of a farmer near Hamburg, who kept a tame stork, and, having caught another, thought to make it a companion for the one in his possession. But the two were no sooner brought together, than the tame one fell upon the other and beat him so severely that he made his escape from the place. About four months afterwards, however, the defeated stork returned with three others, who all made a combined attack upon the tame one and killed him.¹

The two following anecdotes show not only the power of communication existing among storks, but prove that they have also a large portion of moral sense, and concert to execute punishment on such individuals of their communities as offend against their notions of right. A French surgeon at Smyrna, wishing to procure a young stork, and finding great difficulty in doing so, on account of the extreme veneration in which they are held among the Turks, stole all the eggs out of a stork's nest, and replaced them by those of a hen. In the course of time the young chickens came forth, much to the astonishment of the two old birds. Shortly afterwards the male went off, and was not seen for two or three days; but at the end of that time he returned with a great crowd of his companions, who all assembled in a circle, taking no notice of the numerous spectators which so unusual an occurrence had attracted. The female stork was then brought forward into the midst of them, and, after some seeming

¹ Bingley's Anim. Biog. vol. ii. p. 289.

consultation, the whole flock fell upon her, and tore her to pieces. They then dispersed, and the nest was for ever abandoned.¹

A similar case occurred on the estate of a gentleman of landed property near Berlin. A pair of storks had built a nest on one of the chimneys on his premises, to which he climbed up, and found one egg, which he took away, leaving a goose's egg in its stead. The storks appeared unconscious of the change, and the egg was hatched, when the male bird, perceiving the difference between that which was and that which ought to have been, flew round and round the nest with loud screams, and then disappeared for three days, during which time the female took care of the strange offspring. But early on the fourth morning, the inmates of the house were disturbed by loud and discordant cries in a field in front, where, on looking out, they saw at least five hundred storks assembled, of whom one, standing about twenty yards before the rest, was apparently making a harangue, to which the others seemed to listen with evident emotion. At length he was silent, another came forward, and seemed to address the assembly; and he was followed by several in succession, till about eleven o'clock, when they all rose together, uttering dismal cries. The female, in the meantime, had remained on her nest, and was thought to be watching their proceedings with apprehension. In a little while the body of the storks made towards her, headed by one bird, supposed to be her mate, who struck her vehemently three or four times with his beak, and knocked her out of her nest, after which the whole mass followed up the attack,

¹ Mrs. Lee's *Anecd. of Birds*, p. 190.

till they had not only destroyed the female stork, who made no attempt at escape or defence, but also the young gosling, and had utterly removed every vestige of the nest itself. Since that time no stork has been seen in that neighbourhood.¹ Thus a cock takes vengeance on his hen for whatever he supposes to convict her of conjugal infidelity. Dr. Percival, in his 'Dissertations,' relates an incident that occurred in confirmation of this point, at the house of a gentleman near Berwick. "My mowers," says he, "killed a partridge on her nest, and brought the eggs, fourteen in number, to the house. I ordered them to be put under a large beautiful hen, her own being taken from her. They were hatched in two days, and the hen brought up the young ones perfectly well till they were five or six weeks old. During this time she was kept in a secluded out-house, with her supposititious brood, without being seen by any of the other poultry; but at the end of that time the door happened to be left open, and the cock got in. The housekeeper heard cries of distress from the hen, and, running to see what was the matter, found her dead; for the cock, having found her with a brood, not of chickens, but of what were to him monsters, had fallen upon her, and killed her; and when the housekeeper came up, he was tearing her with his beak and claws, although she was then senseless. This hen had previously been the cock's greatest favourite."²

A great proof of good understanding and feeling among birds is, that inconstancy in their conjugal connexions is, unless observers of their habits are much mis-

¹ Mrs. Lee's Anecd. of Birds, p. 191.

² Bingley's An. Biog. vol. ii. p. 241.

taken, often punished. This is said to have been exemplified in the case of two magpies which had built their nest near the house of a person that paid great attention to their habits and proceedings. One morning early, the female magpie, during the absence of her mate, flew off into a neighbouring field, where she was joined by a stranger of the opposite sex. The mate returned, and, in looking about for his partner, discovering her hopping about familiarly with another mate, darted upon them both immediately with the utmost fury, put them to flight, and pursued them. Whether he killed his faithless spouse is not known; but she was never seen again at the nest, and the deserted widower, after visiting the spot at times for a day or two, at last disappeared altogether.¹

Mr. Jesse observes that those who breed canary birds, and have opportunities of watching their peculiar dispositions, find as great a variety in their tempers as in those of human beings. "The mate of a canary bird which was sitting on her eggs was more intent on serenading than on feeding her. When this was the case, she would quit her nest, and chase him round and round the cage, pecking him violently with her beak, and showing her anger in a variety of ways. She would then return to her nest without attempting to feed herself, and the male would then, like a meek, obedient husband, immediately attend to her wants, carrying her a plentiful supply of seed, groundsel, and egg. He then resumed his song, and she resumed her discipline when his notes were too much prolonged."²

¹ Mrs. Lee's 'Anecdotes of Birds,' p. 112.

² Jesse's 'Gleanings,' vol. iii. p. 143.

Pigeons, also, in their conjugal relations, may be seen to act similarly to human beings. A male pigeon, deserted by his mate, and the mate who deserted him, are mentioned by Captain Brown as having behaved exactly, as a husband and wife among mankind might have done. The male, when his partner left him, was twelve years old, and seemed deeply affected by her inconstancy, but abstained from forming any new connexion. When he had remained thus widowed for two years, his faithless mate returned, and wished to share his abode again. But he refused her admittance, though she tried every means of effecting it, and evidently exerted all her arts to revive affection in him. As she became insufferably importunate, he pecked her severely, and drove her off; but in the course of the following night she somehow contrived to effect a lodgment with him. At dawn he appeared somewhat reconciled, and allowed her a share of his abode; but soon afterwards she died. Seeming sensible that by her death he was placed more at liberty than when she had voluntarily left him, he in a while took wing, and returned a few hours afterwards with a new partner.

Professor Kalm, in his 'Travels into America,' says that a very respectable lady and her children related to him the following story respecting a pair of swallows, assuring him at the same time that they were all eye-witnesses to the fact:—"A couple of swallows built their nest in the stable belonging to the lady; and the female laid eggs in the nest and was about to brood them. Some days afterwards the people saw the female still sitting on the eggs; but the male, sometimes flying about the nest, and some-

times settling on a nail, was heard to utter a very plaintive note, which betrayed his uneasiness. On a nearer examination, the female was found dead in the nest; and the people flung her body away. The male then went to sit upon the eggs; but after being about two hours on them, and perhaps finding the business too troublesome, he went out, and returned in the afternoon with another female, which sat upon the nest, and afterwards fed the young ones till they were able to provide for themselves.”¹

A female pigeon, says Mr. Jesse,² which had been confined and made to pair with another, on being released, forsook him and her two young ones, which were only eight days old, in order to return to a former partner. Although flying about in the neighbourhood, she never again came near her offspring.

The ill-feeling of stepmothers among human beings towards their step-children is proverbial; and in this feeling they are often abetted or encouraged by their husbands. A resemblance to mankind in this respect may be found in birds and other animals. A strange manifestation of such immoral perversity in a pair of turkeys is recorded by Bishop Stanley in his ‘Book on Birds.’ “A female turkey was shot just after her young had been hatched, and were not quite fledged. For a time the father of the brood hovered about the nest, uttering loud and menacing croakings, whenever anybody approached. At length, however, he disappeared, and absented himself for two or three days; he then returned with another mate, when the poor

¹ Bingley’s ‘Animal Biography,’ vol. ii. p. 203.

² Jesse, ‘Gleanings,’ vol. ii. p. 288.

half-starved nestlings were attacked without mercy by the step-mother; who, after severely wounding, precipitated them from the nest. Two, however, were found at the foot of the tree with signs of life, and with great care and attention were reared at the rectory, about half a mile distant, and after being slightly pinioned, were allowed their liberty; but they seldom quitted the lawn or offices, roosting on a tree in the shrubbery. Here, however, they were soon discovered by the unnatural pair, who, for a long time, used to come at early dawn and pounce upon them with fierce cries.”¹

We have as yet said nothing of parrots in connexion with sagacity or intelligence. Most of the parrot kind, however well they utter words, evidently do not refer what they say to any object. I have listened to a parrot that said, with the utmost distinctness, “Give poor Poll a bit of bread,” seven consecutive syllables, but these syllables it would reiterate just as freely when it was in no want of food as when it was eager for it. There have been, however, some few exceptions; some that have connected the sounds that they uttered with something that was before them. Smellie tells us of a parrot whose cage hung at a window near which a woman passed every morning crying “Salt!” The parrot soon learned to imitate the call. But after a time, he would, as soon as he caught sight of the woman, though she had as yet uttered no sound, call out “Salt!” In this case the object and the sound were evidently connected in the mind of the animal.²

¹ Mrs. Lee, *Anecd. of Birds*, p. 157.

² Smellie's *Philosophy of Nat. Hist.* vol. i p. 458.

If the account of the answers made by a Brazilian parrot to questions put to it by Prince Maurice, as related by Sir William Temple,¹ and copied by Mr. Locke,² were true, we might indeed expect at some time to see birds of that kind exhibiting great powers of reasoning and speech. Prince Maurice, having heard extraordinary stories of the parrot, sent for it, and, when it was first brought into the room, where the prince was with a great many Dutchmen about him, it said, "What a company of white men are here!" They asked it, what it thought that man was, pointing at the prince; it answered, "Some General or other." When they brought it close to him, he asked it, "D'où venez-vous?" It answered, "De Marinnan." The prince: "A qui este-vous?" The parrot: "A un Portugais." Prince: "Que fais-tu là?" Parrot: "Je garde les poules!" The prince laughed, and said, "Vous gardez les poules!" The parrot answered, "Oui, moi, et je sais bien faire," and made the chuck three or four times that people use to make to chickens when they call them. "I set down," adds Sir William Temple, "the words of this dialogue in French, just as Prince Maurice said them to me. I asked him in what language the parrot spoke; and he said, "In Brazilian." I asked whether he understood the Brazilian. He said No, but he had taken care to have two interpreters by him, the one a Dutchman that spoke Brazilian, and the other a Brazilian that spoke Dutch; that he asked them separately and privately, and both of them agreed in telling him just the same thing that the parrot said. . . I dare say this

¹ 'Memoirs of Christendom from 1672-1679.'

² 'Essay on the Human Understanding,' book ii. ch. 27.

prince believed himself in all that he told me, having ever passed for a very honest and pious man. I leave to naturalists to reason, and other men to believe as they please upon it." But from the way in which Sir William Temple speaks of the story, it is quite clear that he did not believe it; nor, we may be assured, did Mr. Locke; and we may feel certain that the prince was deceived by the Brazilian people, who wished to make a wonder of their parrot, and to play upon his credulity.

Another much extolled parrot was one that belonged, in the last century, to Dennis O'Kelly, called in his day Colonel O'Kelly, or sometimes Count O'Kelly, from the showiness of his dress. He was an Irishman of the lower order, who made his way to London in 1743, and earned his living as a carrier of sedan-chairs, in which capacity his Herculean frame attracted the notice of a lady of title, who enriched him so far that he was enabled to bet on the turf, and at length became owner of the horse 'Eclipse,' and purchased an estate called Cannons on the Edgware Road. He also entered the Westminster Militia, of which he became Lieutenant-Colonel. His parrot he purchased for fifty guineas at Bristol, where it is said to have been born. The account given of the bird in an ill-written catch-penny memoir of its master is this:—"It not only repeats all things, but answers almost everything; and so strong is its retention that it sings a variety of tunes with exquisite melody. It beats time with all the appearance of science, and, wonderful to relate, so accurate is its judgment, that, if by chance (for it is merely so when it happens) it mistakes a note, it reverts to the bar where the mistake occurred, corrects itself, and, still

beating regular time, goes through the whole with miraculous exactness. In addition to this we must add that it sings whatever air is desired, and intimates an express knowledge of every request."¹ In the 'Gentleman's Magazine' for 1787,² in a notice of O'Kelly's death, we find the parrot spoken of in nearly the same words, with the remark, "The account is so extraordinary that, to those who have not seen and heard the bird, it may appear fabulous, but the fact is unquestionable." In the same magazine for the year 1802, where the death of the parrot is recorded, it is said that "it sang with the greatest precision the 104th Psalm, 'The Banks of the Dee,' 'God Save the King,' and other favourite songs; and, if it blundered in any one, instantly began again, till it had the tune complete." It died apparently of old age.

Mr. Jesse, having heard of another extraordinary parrot, which had been brought from Brighton to Hampton Court, and which appeared to rival O'Kelly's in power of imitating sounds, made inquiry about it from the sister of the lady to whom it belonged, and received from her the following account, which he gives in her own words:³

"As you wished me," she says, "to write down whatever I could collect about my sister's wonderful parrot, I proceed to do so, only promising that I will tell you nothing but what I can vouch for having myself heard. Her laugh is quite extraordinary, and it is impossible to help joining in it one's self, more especially when in the midst of it she crics out, 'Don't make

¹ 'Genuine Memoirs of Dennis O'Kelly, Esq.,' Lond. 1788.

² Page 1197.

³ 'Gleanings,' vol. ii. p. 232.

me laugh so—I shall die, I shall die!’ and then continues laughing more violently than before. Her crying and sobbing are curious, and if you say, ‘Poor Poll, what is the matter?’ she says, ‘So bad, so bad, got such a cold;’ and after crying for some time will gradually cease, and, making a noise like drawing a long breath, say, ‘Better now,’ and begin to laugh.

“The first time I ever heard her speak was one day when I was talking to the maid at the bottom of the stairs, and heard what I then considered to be a child call out ‘Payne’ (the maid’s name), ‘I’m not well, I’m not well;’ and on my saying, ‘What is the matter with that child?’ She replied, ‘It is only the parrot; she always does so when I leave her alone, to make me come back.’ And so it proved, for on her going into the room the parrot stopped, and then began laughing quite in a jeering way.

“It is singular enough that, whenever she is affronted in any way she begins to cry, and when pleased, to laugh. If any one happens to cough or sneeze, she says, ‘What a bad cold!’ One day, when the children were playing with her, the maid came into the room, and on their repeating to her several things which the parrot had said, Poll looked up, and said quite plainly, ‘No, I didn’t.’ Sometimes, when she is inclined to be mischievous, the maid threatens to beat her, and she often says ‘No, you won’t.’ She calls the cat very plainly, saying ‘Puss, Puss,’ and then answers ‘Mew.’ But the most amusing part is, that whenever I want to make her call it, and to that purpose say ‘Puss, Puss,’ myself, she always answers ‘Mew’ till I begin mew-ing, and then she begins calling ‘Puss’ as quick as possible. She imitates every kind of noise, and barks so naturally

that I have known her to set all the dogs on the parade at Hampton Court barking, and I dare say, if the truth was known, wondering what was barking at them ; and the consternation I have seen her cause in a party of cocks and hens, by her crowing and clucking, has been the most ludicrous thing possible. She sings just like a child, and I have more than once thought it was a human being ; and it is most ridiculous to hear her make what one should call a false note, and then say ‘ Oh la ! ’ and burst out laughing at herself, beginning again in quite another key. She is very fond of singing ‘ Buy a Broom ! ’ which she says quite plainly, but, in the same spirit as in calling the cat, if we say with a view to make her repeat it, ‘ Buy a Broom,’ she always says ‘ Buy a *brush*,’ and then laughs as a child might do when mischievous. She often performs a kind of exercise which I do not know how to describe except by saying that it is like the lance exercise. She puts her claw behind her, first on one side and then on the other, then in front, and round over her head, and, whilst doing so, keeps saying ‘ Come on, come on ! ’ and, when finished, says ‘ Bravo, beautiful ! ’ and draws herself up. Before I was as well acquainted with her as I am now, she would stare in my face for some time, and then say ‘ How d’ye do, ma’am ? ’ This she invariably does to strangers. One day I went into the room where she was, and said, to try her, ‘ Poll, where is Payne gone ? ’ and to my astonishment, and almost dismay, she said ‘ Downstairs.’ I cannot at this moment recollect anything more that I can vouch for myself, and I do not choose to trust to what I am told, but from what I have myself seen and heard she has almost made me a believer in transmigration.”

It is observed of parrots that they prattle, as dogs bark, in dreams, repeating what they have committed, or have been trying to commit, to memory, in the day-time.¹

¹ *Marcgrave*, cited by *Bingley*, *Anim. Biog.*, vol. ii. p. 80.

CHAPTER XXXIV.

DISTINCTION OF TIME BY ANIMALS.—CON-
SIDERATIONS ON THE SUBJECT.

HAVING given so much attention to birds, we shall, before proceeding to notice certain miscellaneous matters, bestow some consideration on the ability, which is seen in the more intelligent animals, of distinguishing times and seasons, as one day of the week from another. In this, as in most other indications of understanding, we shall find the dog most to be regarded. But it is not to be supposed, as Mr. Jesse would intimate,¹ that the dog, or any other animal, notes the days by counting, and registering in his mind, the numbers one, two, three, and so on, but rather that he knows when a particular day, whether Sunday or any other, has come round, by certain signs and changes of appearances, which he observes in the things or persons around him. This view of the matter, however, still allows full credit to the animal's understanding; he observes, and draws conclusions from his observations. Thus Dr. Davy relates that when he was at Ceylon, Sir Robert Brownrigg had a dog which always attended him when he went out, except when he was

¹ 'Anecdotes of Dogs,' p. 24; 'Gleanings,' vol. i. p. 19.

going to church, or to council, or to inspect the troops, on all which occasions he wore his sword; so that, when the dog saw the sword buckled on, he would go with Sir Robert no further than the outer door. By similar means it is that dogs distinguish Sundays; they see the family going out earlier, perhaps, than they go out on other days; or they observe prayer-books got ready, or hats brushed, or notice other matters, possibly very trivial to us, and of which we think them utterly regardless; and thus they understand that it is the day on which they are not taken out as on other days.

Mr. Bell relates the following instance of a sense of time, which fell under his own observation:—A Newfoundland dog, which was kept at an inn in Dorsetshire, was accustomed every morning, as the clock struck eight, to take in his mouth a basket, placed ready for him, and containing a few pence, and carry it across the street to a baker's, who took out the money, and replaced it by the proper number of rolls. With these the dog hastened back, and deposited his charge in the kitchen, but, what was well worthy of remark, says Mr. Bell,¹ he never attempted to take the basket, or even approach it, on Sunday mornings. But surely the basket and money would not be placed for him on Sunday mornings; for it would appear, from the tenor of the account, either that the baker did not sell rolls on Sundays, or, if he did, that the people of the inn did not use any; and if the basket were occasionally set, in order to try him, there would be signs by which he would judge that it was not the time for him to carry it.

We have alluded to Mr. Jesse's notion that "ani-

¹ 'History of British Quadrupeds,' p. 244.

mals *can* count time.”¹ He supports it as dwelling on the fearlessness of rooks and other birds on Sunday; on a fact, which he had himself witnessed, of four horses, that had been regularly driven together six days in the week, showing the strongest dislike to start, and resisting even force, on the day on which they had been accustomed to rest; and on the habit of the monkeys of Gibraltar assembling on Sundays, and on Sundays only, at a spot overlooking the ground on which the church parade is held, as is well known to all officers that have been quartered in that fortress. But the fact on which he lays most stress is the following:—A farmer had a favourite dog which accompanied him wherever he went except on a Sunday, when he could never be prevailed upon to leave the house. But in the middle of one week there occurred a fast day, on which the farmer, putting on his best clothes, set off for church; the dog, as was his custom on week-days, followed him, but seemed aware that something in his master’s habits was out of course; and after attending him for some distance, he looked up in his face with an appearance of anxiety and distrust, and then slowly walked back to the house. The farmer called to him, and he returned, but as the church bells happened then to begin ringing, he seemed all at once to comprehend what was going on, and went off home without further delay or concern. But, in truth, this anecdote shows that the difference in the dog’s conduct on Sundays proceeded, not from “measuring time,” or counting days, but from the alteration which he perceived in his master’s dress and proceedings.

¹ ‘Gleanings,’ vol. ii. pp. 10, 11.

Mr. Blaine says that a dog which was "several weeks" under his care in the infirmary attached to his premises, being visited every Sunday by his master, who had no leisure to see him at any other time, learned to distinguish Sunday from the other days of the week, and would take his station at the door on the morning of that day, and not stir from it till his master had paid his accustomed visit. There was nothing particular, Mr. Blaine says, done on that day to enable the dog to distinguish it from any other. But this we must take leave to doubt.

Let us throw together a few more anecdotes on this subject, which those who think that dogs can *count time*, may use, if they please, in support of their own notion. We believe that they will rather be found to favour our own view of the matter, which however does not, as we said, disparage the animal's understanding.

In the family of Mrs. Lee's father, when she was a girl, were two Scotch terriers, named Bruin and Pincher, who, when they saw any of the family equipped for a walk on week-days, were most clamorous to be allowed to accompany them, but on Sundays never expressed any such desire; on the contrary, they would retire under the sofa. "They knew," she says, "when we went, and generally came to meet us on our return, sometimes venturing as far as the gate of the churchyard, which was a mile distant, but never within the inclosure."¹ In this case the dogs probably knew that the ladies, on Sunday forenoons, were leaving the house at an hour when they were not usually taken out with them.

¹ Mr. Lee's 'Anecdotes of Animals,' p. 142.

It would be the same, too, with the dog mentioned in the following anecdote, given by the Rev. Charles Williams,¹ who says that he, some years ago, visited a gentleman in Suffolk, Mr. J. W. S——, whose house he reached on a Saturday. In the latter part of the day he proceeded to take a stroll with his friend; and, when they were taking down their hats, he observed Mr. S——'s terrier in an ecstasy, bounding forward to accompany them on their ramble. But the following morning, when they took their hats to go to church, he looked at them without manifesting any concern, and left them at the door to pursue their way by themselves. Mr. Williams made a remark to Mr. S—— on the dog's apathy, and was answered, "Oh yes, it is always so on Sunday; Turk knows very well that on that day he is never taken out."

The same writer states that a clothier in Wiltshire, with some of whose family he was acquainted, always knew the two days in each week on which his master's wagon would come home, and regularly went several miles on the road to meet it. A brother of Lord Truro, he also states, had a dog that invariably distinguished Saturday night, from the custom adopted by the family of tying him up for the Sunday, which he greatly disliked. He observes, too, that a dog named Tom, some time after being domesticated in a certain family, was missing one day at dinner-time, and did not return till the day after the next. On inquiring, it was found that he had spent the intervening day at a neighbouring village fair, which he continued to visit every year on the same day as long as he lived. But in this case the dog was probably reminded of

¹ 'Dogs and their Ways,' p. 60.

the day by some preparations which he saw for the celebration of it ; travelling caravans, or extraordinary numbers of cattle or people on the road, might easily excite in his mind a recollection of what had been, and a consequent expectation of what would be.

Southey, in his 'Omniaria,' states that he knew a dog which had belonged to an Irishman, and which had been sold by him in England, that always refused to "touch a morsel of food" on a Friday. I must say that I cannot receive this account without distrust ; I cannot but suppose that Southey was in some way deceived. Who can believe that a dog would voluntarily abstain from food every seventh day ? Who can credit that if a mutton chop had been offered him a Friday, he would long have withheld himself from falling upon it ?

Southey also speaks, in the same passage, of a dog belonging to his grandfather, "which trudged two miles every Saturday to cater for himself in the shambles." The dog doubtless knew, by some signs that he noted, that the day for finding abundance at the market town was come ; he would see more traffic on the road, and perhaps people that he knew passing.

A story is told of a dog at Locoyaine, a village in France, who used to set out from home every Saturday, precisely at two o'clock, to go to Hennebon, a town about three miles distant. He had discovered that on that day the butchers cut up a great deal of meat, and his object was to visit their shops, in the hopes of obtaining a plenteous feast of offal.

A Mr. Ripshaw, formerly master of Ipswich Gaol, had a favourite dog which used to accompany him in his walks, and always went with him to the assizes,

held alternately at Ipswich and Bury, where he was obliged regularly to attend. At last, as the dog grew old, his master, one day when he was going to Bury, determined not to take him, as he thought the journey too much for his strength, and desired the ostler in the morning to shut him up; an order which the ostler faithfully obeyed. But Mr. Ripshaw, on reaching Bury, was accosted, to his great surprise, by one of the officials, with the remark, "We have been expecting you these two hours, for it is full that time since your dog arrived." Such was the case; but how the dog knew that that was the day of the assizes, or how he escaped from the ostler's custody, he could never discover. As to the day, however, it is probable that the dog ascertained it from some preparation which he saw his master making, perhaps on the preceding evening.

We have a remarkable example of the distinction of time by a dog in Dr. Brown's '*Horæ Subsecivæ*,' in an account of one which, though of the female sex, was named Wylie, and was purchased by Dr. Brown, when he was a young man, from an old shepherd who was retiring from his employment. She was brought to his father's, and "was at once taken," he says, "to all our hearts; and though she was often pensive, as if thinking of her master, and work on the hills, she made herself at home, and behaved in all respects like a lady. When out with me, if she saw sheep in the streets or road, she got quite excited and helped the work, and was curiously useful; she being so, making her wonderfully happy. And so her little life went on, never doing wrong, always blithe and kind and beautiful. But some months after she came, there was a mystery about her; every Tuesday evening she disappeared;

we tried to watch her, but in vain ; she was always off by nine P.M., and was away all night, coming back next day wearied, and all over mud, as if she had travelled far. She slept all next day. This went on for some months, and we could make nothing of it. Poor dear creature, she looked at us wistfully as she came in, as if she would have told us if she could, and was especially fond, though tired.

“ Well, one day I was walking across the Grass-market, with Wylie at my heels, when two shepherds started, and looking at her, one said, ‘ That’s her ; that’s the wonderful wise bitch that naeboddy kens.’ I asked him what he meant, and he told me that for months past she had made her appearance by the first daylight at the ‘ buchts ’ or sheep-pens in the cattle-market, and worked incessantly, and to excellent purpose, in helping the shepherds to get their sheep and lambs in. The man said, in a sort of transport, ‘ She’s a perfect meeracle ; flees about like a speerit, and never gangs wrang ; wears but never grups, and beats a’ oor dowgs. She’s a perfect meeracle, and as soople as a mawkin.’ He related how they all knew her, and said ‘ There’s that wee fell yin ; we’ll get them in noo.’ They tried to coax her to stop and be caught ; but no ; though so gentle, she was off ; and for many days ‘ that wee fell yin ’ was spoken of by these rough fellows. She continued this amateur work till she died.”

In the following story, told by Mr. Broderip¹ in his amusing way, we have another instance of a dog marking Sunday, doubtless by such signs as we have already intimated.

In the west of England, not far from Bath, there

¹ Zool. Recreations, p. 184.

lived, towards the close of the last century, a worthy, learned, and benevolent clergyman. He had a turnspit, named Toby, a fine dog, with stout legs fit for his work, and enabling him to follow his master about hour after hour,—sometimes indeed to his annoyance, but he was of too kind a disposition to repulse him. At length he became so persevering, and even presuming, in his attendance, that he would venture into the reading-desk on a Sunday morning. This the clergyman tolerated for a time, but thinking that he saw a smile, at Toby's appearance, on the face of some of his congregation, he began to fear that he was injudiciously indulgent, and ordered Toby, on the following Sunday morning, to be locked up in the stable. But he was locked up to no purpose, for he forced his way out through the leaded casement, and presented himself at the reading-desk as usual. Against the next Sunday, however, it was determined to take further precaution, and accordingly, when the dog had done his part on the Saturday towards roasting the beef which was to be eaten cold on Sunday, he was not suffered to go at large as on other occasions, but was bolted up in the wood-house, where there was no window to allow of escape. He continued, therefore, in confinement, testifying his uneasiness by barking and howling during the greater part of the day of rest, but it was hoped his discomfort would be a warning to him to avoid the church. Being let out on Sunday evening, and left at liberty for the rest of the week, he passed the days in his usual fashion, did his duty in the wheel whenever he was wanted, and showed not the least sullenness or discontent. But at twelve on Saturday, when his services were required for the spit,

Toby was not to be found; servants were dispatched in all directions in quest of him, but without effect; it was supposed that he must have been stolen, and the cook and the master were alike in despair. On Sunday morning the clergyman went to church, free from Toby's officious devotion, but concerned at his unaccountable disappearance. His reappearance, however, was equally unexpected; for as his reverence entered the reading-desk, he saw Toby's eye twinkle a morning salutation in his usual corner. After this, no opposition was offered to Toby's Sunday movements, but he was allowed to go to church as he pleased, with the unanimous approbation of the rector and the whole parish. In this case, if the dog did not reckon days, he showed excellent powers of calculation for his own ends.

The following is, I think, the most wonderful instance that I have ever read of a dog noting time:—

There were two intimate friends, fathers of families, one living in London and the other at Guildford, and for many years it had been the custom for the London family to pass their Christmas at Guildford, arriving in time for dinner the day before, and bringing with them a large spaniel, which was equally a favourite with both families. But after the lapse of seven years the two families had a misunderstanding, which occasioned an omission of the usual Christmas invitation. As the gentleman at Guildford, however, was standing at his window on Christmas Eve, about an hour before dinner, he saw the spaniel trotting towards the house, and exclaimed to his wife, "Well, my dear, the W——s are determined on reconciliation, for they are coming though we did not invite them, and Cæsar is advan-

cing to announce them." As he finished speaking, the dog came up to the door, and was admitted as usual into the parlour. The lady, in full expectation of soon seeing the W——s, gave orders to prepare beds, and to keep back the dinner; but no W——s arrived, either on that day or any other. As for Cæsar himself, he stayed the same number of days as on previous occasions, and then set off for his home, which he reached in safety. His visit led to some correspondence between the friends, and finally to a renewal of their intercourse; and Cæsar, as long as he lived, had the satisfaction of annually accompanying his master and mistress to Guildford.¹

But we cannot suppose that in this case the dog counted three hundred and odd days to learn the day for starting on his excursion. He doubtless saw something in what was going on around him to awaken in him recollections of the past, and to stimulate him to do what he had done in previous years when he noticed the same occurrences. But it is strange that he should have gone off without his master and mistress; it might rather have been expected that he would have made signs, in his way, to induce them to go, and not have left them until he had failed to prevail upon them. But the story does not intimate that he made any such previous attempts.

A bull-dog, says M. Blaze,² was always present at prayers in a certain family, and, when the last *Pater* was commenced, he got up and stood at the door ready to go out the instant it was opened. We suspect with the 'Quarterly Reviewer' who comments on the story, that the animal was instructed here by a slight move-

¹ Jesse's 'Gleanings,' vol. iii. p. 36. ² Hist. du Chien, p. 37.

ment in the circle, or by a variation in the pitch of reading ; and not, as M. Blaze infers, by his abilities to count the number of *Paters*.¹

M. Blaze gives us also another account of a dog that observed Sunday. He tells us that he went out on that day of the week, accompanied by his friend M. Guillemain, with permission to shoot wild ducks on the preserved water near Versailles. They had but one dog between them, but, soon after the first shot was fired, a fine spaniel ran up to them, which fawned upon M. Guillemain, and seemed to offer them his assistance. The gentlemen pursued their sport during the whole day, and the dog constantly attended them and proved of great use. When the sport was over, he darted away at full gallop, and they saw him no more. They spoke of him to the keeper of the water, who told them that the dog belonged to a gentleman residing two leagues off, who was at the time laid up with the gout. "But the dog knows," he added, "that persons come to shoot here every Sunday, and on that day regularly makes his appearance on the banks of the water, when he attaches himself to the first sportsman that he meets, and serves him till he finds he is no longer wanted, when he forthwith returns to his master."

The faculty of marking times and seasons by certain signs is observed in the cat and the horse, and in other animals, though less frequently and conspicuously than in the dog. Mr. Jackson² speaks of a cat at Stoke Newington belonging to a lone widow woman, who shuts up her house on Sundays. But the cat does not like this solitary confinement every seventh day, and

¹ 'Quarterly Review,' vol. ci. p. 510.

² 'Our Dumb Companions,' p. 128.

accordingly leaves the house of her mistress every Saturday night for that of a neighbouring gentleman, with whom she remains throughout Sunday, and returns home regularly every Monday morning. We are not to suppose that the cat keeps an account of the days, and prepares to migrate when it has reckoned seven; we must consider that it understands when the day of confinement is coming by certain appearances and preparations that it sees around it.

The instances found of observation of time in the horse, however, are but few. We have noticed the case of the newsman's horse, that stopped of his own accord at the house of each of two customers on alternate Sundays; and we have heard two or three accounts of coach-horses that have refused to be put in harness on Sunday, and have successfully resisted all attempts to coax or coerce them to draw a carriage on that day. But, on the whole, the horse seems less remarkable for regular attention to times than for accurate observance of places.

A Mr. Hill, of St. Domingo, gives an account of a tame pelican, which, as it had its wings plucked to keep it within bounds, and consequently was unable to catch fish for itself, was dependent for sustenance on the fish given it by the fishermen of the beach; but as Sunday was not a fishing day with them, there was on that day no supply for the pelican. In time it became so well aware of the recurrence of this fast-day, that, though on other days it went regularly to the seaside to wait the return of the canoes, it never stirred on the seventh day from the trunk of a tree on which it roosted in the yard. It is a bird that can endure long fasting; but, as to discrimination of time, it probably abstained from

going to the beach on a Sunday because it understood from certain signs that the boats had not gone out on that day.

We have thus given our notions on this subject, with such examples as we have thought sufficient from among those which we have collected. We consider that animals, in these cases, exercise understanding and reason, though we do not believe, with Mr. Jesse and M. Blaze, that they count time as human beings count it.

CHAPTER XXXV.

MISCELLANEOUS ILLUSTRATIONS OF INTELLIGENCE.—OX, SHEEP, PIG.

ANIMALS of the ox tribe are not in general considered to have much understanding, but, if, we look into works that treat of them, we shall find indications that they possess more intelligence than they have commonly been allowed.

The Devonshire oxen and cows, according to Mr. Bell, are said to be more docile and sagacious than those of any other part. The following occurrence was witnessed by a lady nearly related to that gentleman :— A Devonshire cow, which was feeding tranquilly in a pasture, the gate of which was open to the road, was much annoyed by a mischievous boy, who amused himself by throwing stones at the peaceful animal ; who, after bearing with his impertinence for some time, at length went up to him, hooked the end of her horn into his clothes, and, lifting him from the ground, carried him out of the field, and laid him down in the road ; she then returned calmly to her pasture, leaving him quit for a severe fright and a torn garment.”¹

¹ Bell's 'British Quadrupeds,' p. 417.

The following anecdote, showing that the cow or ox, like the horse or dog, will ask assistance of man, I received from my friend Mr. Joseph West. A friend of his, Mr. Watt, the eminent engraver, was walking through a field, somewhere in Gloucestershire, when a cow came up to him with an earnest kind of look, and after gazing in his face for a moment or two, turned her head back. He paid no attention to her movements at first, but observing that she repeated them, he concluded that she wanted to draw his attention to something. He therefore walked round behind her, and observed a large stinging insect fixed on her loins, just in the part where she could reach it neither with her tail nor her nose. The cow stood still, and he at once removed the insect; and she then walked quietly off into the field to resume her feeding.

When Mr. Watt told Mr. West this story, Mr. West recollected a similar act which he had himself seen in a horse belonging to a *vetturino* on the shores of the Lago Maggiore. He had engaged the *vetturino*, who was driving him along the coast of the lake, when his horse, which seemed a quiet well-conducted animal, suddenly stopped, and stood stock-still, but endeavouring to turn his head back. "Ah!" said the driver, "I know what's the matter; he always stops and looks in that way when he wants a certain service to be done for him." The man then jumped down, and removed a large gadfly from the horse's back, when the animal proceeded onward at the same steady pace as before.

A striking instance of sagacity in a bull is given by the author of 'Instinct Displayed,'¹ and by Dr.

¹ Letter xxxiv.

Hancock, in his 'Essay on Instinct,'¹ as a well-attested fact :—" A gentleman in Scotland, near Laggan, had a bull which grazed with the cows in the open meadows. As fences are scarcely known in this part, a boy was kept to watch, lest the cattle should trespass on the neighbouring fields and destroy the corn. The boy was fat and drowsy, and was often found asleep; he was of course chastised whenever the cattle trespassed. Warned by this, he kept a long switch, and with it revenged himself with an unsparing hand if they exceeded their boundary. The bull seemed to have observed with concern this consequence of their transgression; and as he had no horns, he used to strike the cows with his hard forehead, and thus punish them severely, if any one crossed the boundary. In the meantime he set them a good example himself, never once entering upon the forbidden bounds, and placing himself before the cows in a threatening attitude, if they approached it. At length his honesty and vigilance became so obvious, that the boy was employed in weeding and other business, without fear of their misbehaviour in his absence."

A buffalo, relates Mr. Jesse, kept at the Zoological Farm on Kingston Hill, a ferocious animal, which it was necessary to keep well under control, had a strong iron ring passed through the cartilage of its nose, to which was attached a chain of about two feet long, with another larger ring, three or four inches in diameter, at the other end, by which he might be caught and held. In grazing, the buffalo, unless he took great care, must occasionally have set his foot on the larger ring, and thus have given it a jerk which would have

¹ Letter xxxiv. p. 90.

caused him pain; and it must have been at all times inconvenient to him to drag or carry. To avoid such annoyance, he had the sense to put his horn through the larger ring, and thus relieve his nose in a great measure from the weight of it. Mr. Jesse says that he has seen him do this in a most deliberate manner, putting his head on one side till he got his horn through the ring, and then shaking his head till the ring rested at the bottom of the horn.¹

Mr. Jesse observes, we may here remark, a similar instance of sagacity in a raven:—"I saw a raven lately," says he, "at the inn at Lyndhurst, in the New Forest, which had a chain of about three feet long fastened to a ring round its neck. Whenever the bird flew or hopped about, it always gathered up the chain in its mouth, to prevent the weight of it hurting his neck."

So an ape was seen to act with a chain by Dr. Abel, who had opportunities of observing his habits during a voyage from Borneo to England. The animal, being fastened by a chain to a staple, and having succeeded in detaching it, ran about with the chain dragging behind him, but, finding himself impeded by its length and weight, he coiled it up, and threw it over his shoulder.²

The buffalo, in his wild state, gives tokens of intelligence. When he is hunted, he becomes, if wounded, extremely furious, and will turn in the utmost rage upon his assailant, who, if he should climb a tree in order to escape, is far from being out of danger, for the animal will run with violence at the tree, and strike

¹ Jesse's 'Gleanings in Natural History,' vol. ii. p. 226.

² 'Naturalist's Library,' vol. ii. p. 73.

it with his massy horns, which cover as with a helmet the crown of his head, and of which the stroke will so shake the largest trees as to require a firm hold indeed to prevent the person from falling to the ground, and being consequently tossed into the air by the horns of the enraged beast.¹

Oxen are susceptible of much improvement, in regard to their understanding, if it were thought worth while to take pains with them for that purpose. "In all the southern provinces of Africa and Asia, there are many wild bisons, or hunched oxen, which are taken when young and tamed. They are soon taught to submit, without resistance, to all kinds of domestic labour. They become so tractable, that they are managed with as much ease as our horses. The voice of their master is alone sufficient to make them obey, and to direct their course. They are shod, carried, caressed, and supplied abundantly with the best food. When managed in this manner, these animals appear to be different creatures from our oxen. The oxen of the Hottentots are favourite domestics, companions in amusements, assistants in all laborious exercises, and participate the habitation, the bed, and the food of their master. As their nature is improved by the gentleness of their education, by the kind treatment they receive, and the perpetual attention bestowed upon them, they acquire sensibility and intelligence, and perform actions which one would not expect from them. The Hottentots train their oxen to war. In all their armies there are considerable troops of these oxen, which are easily governed, and are let loose by

¹ 'Travels in South Africa,' by Rev.-John Campbell, a Dissenting Missionary, 1815.

the chief when a proper opportunity occurs. They instantly dart with impetuosity upon the enemy. They strike with their horns, kick, overturn, and trample under their feet everything that opposes their fury. They run ferociously into the ranks, which they soon put into the utmost disorder, and thus pave the way for an easy victory to their masters. These oxen are likewise instructed to guard the flocks, which they conduct with dexterity, and defend them from the attacks of strangers and of rapacious animals. They are taught to distinguish friends from enemies, to understand signals, and to obey the commands of their master. When pasturing, at the smallest signal from the keepers, they bring back and collect the wandering animals. They attack all strangers with fury, which renders them a great security against robbers. These *brackeleys*, as they are called, know every inhabitant of the kraal, and discover the same marks of respect for all the men, women, and children, as a dog does for those who live in his master's house. These people may therefore approach their cattle with the greatest safety. But if a stranger, and particularly a European, should use the same freedom, without being accompanied by one of the Hottentots, his life would be in imminent danger."²

Nor are the oxen tribe without sensibility. Many animals,² remarks Mr. Jesse, show a pride in any distinction bestowed upon them, and cannot bear to feel humbled by being deprived of it. This is the case not only with the elephant, the horse, and the gamecock, but it is a curious and well-known fact in Switzer-

¹ 'Voyage de Cap,' par Kolbe, tome i. pp. 160, 307; Smellie, i. 457.
 'Gleanings,' vol. iii. p. 122.

land that if the bull which is fixed to the leading cow of a herd (and the finest and largest is generally selected for the purpose) is removed, the cow is frequently seen to pine away and die.

Sheep at times show that they are not without intelligence. One mode in which they exhibit it is by asking assistance, like many animals besides, of man or of other creatures, when they are in difficulties. A gentleman travelling in a gig in a lonely part of the Highlands, was met by a ewe, which came up to him with piteous bleating. She increased her cries as she drew near to him, and looked up in his face as if to ask assistance. He alighted; she went back in the direction from which she had come, and he followed her. She led him to a little hill at a considerable distance from the road, where he found a lamb wedged in between two large stones, struggling, with its legs uppermost, to extricate itself. He removed one of the stones, raised the lamb, and placed it on the green grass; and the mother, in a long-continued bleat, seemed to pour forth thanks.¹

“About the middle of last April,” says a writer in the ‘Magazine of Natural History,’² “I observed a young lamb entangled among briars. It had, seemingly, struggled for liberty until it was nearly exhausted. Its mother was present, endeavouring with her head and feet to disentangle it. After having attempted in vain, for a long time, to effect this purpose, she left it, and ran away baa-ing with all her might.

¹ Brown’s ‘Popular Natural History.’ Mrs. Lee’s ‘Anecdotes of Animals,’ p. 370.

² Mrs. Lee, *Anecd. of Animals*, p. 370; see also Blaine’s *Encycl. of Rural Sports*, p. 225.

We fancied there was something peculiarly doleful in her voice. Thus she proceeded across three large fields, and through four strong hedges until she came to a flock of sheep. From not having been able to follow her, I could not watch her motions when with them. However, she left them in about five minutes, accompanied by a large ram that had two powerful horns. They returned speedily towards the poor lamb, and, as soon as they reached it, the ram immediately set about liberating it, which he did in a few minutes, by dragging away the briars with his horns." The anecdote is further illustrated by the following ingenious observations:—"Now it may be asked what analogy, even in the remotest degree, had the actions mentioned in the above anecdote to the operations of instinct? Was 'it an 'involuntary desire' that induced the sheep to endeavour to liberate her young one, when she observed it imprisoned amongst briars? Was she urged by an 'involuntary desire,' or did she act 'without motive or deliberation,' when she ran across three large fields, and surmounted four strong thorn-hedges, in search of its relief, which, by these means, she must have known, or at least hoped, that she could obtain? Did the ram act 'without motive or deliberation,' when he returned with her, of course according to her request, and effected what she desired? Or is it not infinitely more probable, is it not indeed indisputable, that these, and a thousand actions of a similar nature, which are daily observable in our domesticated animals, are 'perfectly free,' are the result of volition, are, in short, neither more nor less than the operations of reason? If we can entertain the contrary conclusion, our *reason* must have gone most wofully astray."

It is interesting, says Cuvier, to remark how animals, in similar situations, communicate their wants and their distresses. An anecdote illustrating this is told of a number of sheep who surrounded a cow, as if they wished to bespeak her favour for a poor grassed ewe, which was unable to recover herself from her miserable situation, until the cow, advancing towards her, placed the tip of her horns beneath her side, and gave her a slight but dexterous toss, which instantly replaced the sufferer upon her feet.¹

To these particulars respecting the sheep we may add, from Mrs. Lee,² the following anecdote of the intelligence of a goat:—"A goat and her kids frequented a square in which I once lived, and were often fed by myself and servants,—a circumstance which would have made no impression, had I not heard a thumping at the hall door, which arose from the buttings of the goat when the food was not forthcoming, and whose example was followed by the two little things. After a time this remained unheeded, and to our great astonishment, one day the area bell used by the tradespeople, the wire of which passed by the side of one of the railings, was sounded. The cook answered it, but no one was there save the goat and kids, with their heads bent down towards the kitchen window. It was thought that some boy had rung for them; but they were watched, and the old goat was seen to hook one of her horns into the wire, and pull it. This is too much like reason to be ascribed to mere instinct."

To these illustrations of understanding in the ox,

¹ Griffith's 'Cuvier,' vol. iv. p. 37; Swainson's 'Habits and Instinct of Animals,' p. 24.

² Anecd. of Animals, p. 366.

sheep, and goat, we will add a few particulars regarding another domestic animal, the hog, to whose character, as to that of the ass, justice has by no means been done either by writers or by people in general. One of the earliest authors that thought of speaking favourably of him was Gilpin, who, in his 'Forest Scenery,' says, "He is commonly considered an obstinate, headstrong beast, and he may perhaps have a degree of positiveness in his temper, but if properly managed, he is, or may be made, an orderly docile animal. When your meanings are fair and friendly and intelligible, he may be led with a straw, nor is he without his social feelings, when he is at liberty to indulge them." "In a native state," says Mr. Youatt,¹ "swine seem by no means destitute of natural affection; they are gregarious, assemble together in defence of each other, herd together for warmth, and appear to have feelings in common; no mother is more tender of her young than the sow, or more resolute in their defence. Besides, neglected as this animal has been by authors, there are not wanting records of many anecdotes illustrative of their sagacity, tractability, and susceptibility of affection. How often among the peasantry, where the pig is, in a manner of speaking, one of the family, may this animal be seen following his master from place to place, and grunting his recognition of his protectors!" In Minorca the hog is employed in conjunction with oxen, horses, and asses, to draw carriages and plough the land.

The docility of the learned pig, which was taught to pick up letters, written on pieces of card, and form them into words, is well known. It should not be for-

¹ 'The Pig,' p. 17.

gotten, however, that the showman admitted that three pigs had died under the training. But on the other hand, it is to be recollected, in favour of the pig's teachableness, that the original learned pig has had several successors, though no one of them had attracted such attention as the first, and perhaps no one has been equal to him either in natural or acquired talent.

Another remarkable testimony to the pig's docility, is the account of the sow which was trained by Richard Toomer, a man eminent as a marksman and a cricketer, to find game, and to back and stand; an account which was first given in Bingley's 'Memoirs of British Quadrupeds,' from a narrative of Sir Henry Mildmay, which he drew up for Bingley.² Toomer and his two brothers were King's keepers in the New Forest, in which the sow, a black one, was born, and kept for the purpose of breeding. The Toomers were engaged in breaking pointers and setters, some for themselves and some for gentlemen in the neighbourhood, but of those that were sent to them many proved intractable, and incapable of being properly trained. As the brothers were talking one day of their ill success in this occupation, one of them observed that any other animal might be made to point at game as well as such stupid dogs. Just as he was speaking the sow came by, and they remarked how handsome an animal she was. Richard Toomer then threw her a piece of oatmeal roll, at which she seemed pleased, and approached towards him; and he resolved on trying to make her a sporting pig. He gave her the name of Slut, to which she ever afterwards answered. He

² Bingley, 'Memoirs of British Quadrupeds,' p. 452.

found her so docile that within a fortnight she would find and point partridges or rabbits, of which there was abundance near his lodge. In a few weeks she would retrieve birds that had run as well as the best pointer; and the brother declared her scent to be superior to that of the best pointer they had ever possessed. She hunted chiefly on the moors and heaths, and has stood at partridges, black-game, pheasants, snipes, and rabbits, in the same day; hares she was never known to point. She would sometimes join the sportsmen when out with their pointers, and continue with them several hours. She has sometimes stood at a jack-snipe when all the pointers had passed it. But the dogs did not like her company, being jealous apparently of her greater keenness of scent, and she was in consequence but seldom taken out with them. She always showed great pleasure when game, dead or alive, was set before her. She has frequently stood at a single partridge at forty yards distance, with her nose in an exact line towards the bird, and would continue in that position till the game moved, when, if it took wing, she would come up to the place from whence it sprang, and put her nose to it two or three times; if it ran off, she would follow shortly after it, and, when the bird stopped, would stand at it as before. Richard Toomer's lodge was about seven miles from his brother Thomas's, and the sow often went by herself from one lodge to the other, as if to solicit one or other of the brothers to take her out with him. When she was about five years old, her trainer, Richard Toomer, died; and as Sir Henry Mildmay wished to have her, she was sent to his seat, Dogmersfield Park, where she remained some years. At ten years of age she be-

came fat and heavy, but could still point game as well as ever. She was killed on suspicion of having destroyed lambs, and, when dead, was found to weigh seven hundred pounds.¹

Colonel Thornton, also, had a sow similarly accomplished, able to hunt, quarter the ground, and take part with the pointers.²

About fifty years ago, it was stated in the public papers that some gentleman had trained swine to draw his carriage, and had driven four-in-hand through London with them. Subsequently, an eccentric old farmer near St. Alban's drove into the market-place of the town with a similar team, which he had been six months, he said, in training. In Minorca, as Pennant relates, swine are often made to draw vehicles; and it is not uncommon to see hogs and asses drawing together, or two young horses, a cow, and a sow, yoked to a plough, the sow being the most efficient drawer of the four.

Henderson, too, in his 'Practical Grazier,' tells how he and his brothers, when they were boys, trained swine to carry their baggage when they went out, and broke them in to be ridden.

An anecdote of an American sow's intelligence is related by a Mr. Craven. She had a numerous litter of pigs, with which she passed her days in the woods, but returned to the house in the evening to share a supper with her family. But one of her offspring, when it was old enough, was taken away to be roasted, and a little while after a second and a third. The next time she came to her evening meal, she was alone; and, as her

¹ Youatt, 'On the Pig,' p. 17; Daniel's Encycl. Rural Sports.

² Youatt, *ib.*

owners were anxious to know what was become of her brood, she was watched on the following evening, and observed driving back her pigs at the extremity of the wood, with much earnest grunting, while she went off to the house, leaving them to wait for her return. It was evident that she had noticed the diminution of her family, and had adopted this method to save those that remained.¹

In the 'Naturalist's Library' we find another anecdote indicative of no small intelligence in the pig. A pig, which had been kept a close prisoner in his sty for several days, was let out that it might be cleaned. He was no sooner at liberty than he ran to the stable, from which he carried several trusses of straw to his abode, to make himself a comfortable bed. The straw, being intended for another purpose, was carried back, but the pig, watching for a second opportunity, regained possession of it, to the extreme amazement of those who witnessed his operations.

Of the attachment of which a pig is capable a striking instance is quoted by Youatt² from a M. de Dieskau, who tells us that a young wild-boar, which he attempted to tame, formed such an attachment to a young lady in his house that he followed her wherever she went, and even slept upon her bed. He once, in her defence, attacked her maid when she was undressing her, and, had he been strong enough, would have done the girl some severe injury. He showed no affection for any other person in the house, and at last fretted himself to death because a fox, which was to be tamed, received a portion of her attentions.

We think the pig much more indelicate than he really

¹ Youatt, 'On the Pig,' p. 20.

² P. 21.

is. He lives, when left to himself, chiefly on vegetables, which he selects with great nicety, and it is only when pressed by hunger that he devours putrid carcases. He has the senses of smelling and taste in great perfection ; no animal has more sympathy for those of his own kind ; the moment one of a herd gives a signal of distress, all within hearing rush to its assistance ; and they have been known to gather round a troublesome dog and kill him on the spot. Enclose a male and female in a sty when young, and the female will decline from the instant that her companion is removed, and probably die of a broken heart.¹

The pig is fond of a dry bed, and will secure one for himself if possible. Hartlieb, in his 'Last Legacie,' says that he "is the cleanliest of all creatures, and will never dung or stale in his bed if he can get forth." As to his rolling in the mud, he rolls in it only like the elephant and rhinoceros, to cool himself and keep off flies, as savages in hot climates cover themselves with grease. The cleaner he is kept, the more healthy he will be. An old woman who kept pigs near Bath some years ago, used to carry for sale to that city the finest and most delicious pork that had ever been seen there. The butchers, and every one else, wondered by what arts she brought her pork to such excellence. She kept her secret for some time, to enhance the price of her meat, but, when the means of her success were discovered, they were found to be merely soap, water, and a scrubbing-brush.

¹ Bingley's An. Biog. vol. i. p. 513.

CHAPTER XXXVI.

MISCELLANEOUS ILLUSTRATIONS OF INTELLIGENCE.—DEER, HARES, WOLF, LION, TIGER, GLUTTON, RACCOON, BEAVER.—FISHES: CARP, MULLET, SALMON, EELS, WALRUS.

THE intelligence of the stag is shown chiefly in the arts by which he endeavours to escape when pursued. In order to deceive the hounds, he will return twice or thrice upon his former steps. He seems aware that he is followed by the scent, and will try, as he flees, to excite hinds or younger stags to come after him, and draw off the dogs from his track. If he succeeds in this attempt, he will often spring away in a side course, and sometimes lie down on his belly, as well to rest as to conceal himself. It is not till he has exhausted all his artifices that he goes into the water to cut off the scent; the swimming exhausts him, and he is obliged to stand at bay, and often does much mischief, till one of the huntsmen cuts his hams.¹

Mr. Jesse² relates a remarkable instance of sagacity

¹ Smellie's *Philos. of Nat. Hist.* vol. i. p. 401. Bewick's '*History of Quadrupeds*,' p. 147.

² '*Gleanings*,' vol. ii. p. 20.

for self-preservation which he witnessed in a stag. It had been turned out before a pack of hounds, and, being hard pressed, he saw it go twice among a flock of sheep, in both cases doubling back, evidently with the intention of baffling the dogs in pursuit, and thus making it appear that he was aware of being followed by scent, not by sight; and, if such were the case, it affords, he observes, another indication that animals are possessed of something beyond instinct.

Deer sometimes show their sagacity in other ways. "I have often been much delighted," says the same writer,¹ "with watching the manner in which some of the old bucks in Bushy Park contrive to get the berries from the fine thorn-trees there. They will raise themselves on their hind legs, give a spring, entangle their horns in the lower branches of the tree, give them one or two shakes, which make some of the berries fall, and they will then quietly pick them up."

Hares, also, are extremely artful in making their escape when hunted. They double frequently, and the female, being weaker, more frequently than the male. In order to conceal themselves more effectually, they lie down between clods of the same colour as their own hair. Smellie² quotes the following passage from Fouilloux:—"I have seen a hare so sagacious that, after hearing the hunter's horn, he started from his form, and, though at the distance of a quarter of a league, went to swim in a pool, and lay down in the rushes in the middle of it, without being chased by the dogs. I have seen a hare, after running two hours before the dogs, push another from his seat, and take possession of it. I have seen others swim over two or three ponds, the

¹ 'Gleanings,' vol. ii. p. 20.

² Philos. of Nat. Hist. vol. i. p. 404.

narrowest of which was eighty paces broad. I have seen others, after a two hours' chase, run into a sheep-fold, and lie down among them. I have seen others, when hard pressed, run in among a flock of sheep, and would not leave them. I have seen others, after hearing the noise of the hounds, conceal themselves in the earth. I have seen others run up one side of a hedge, and return by the other, when there was nothing else between them and the dogs. I have seen others, after running half an hour, mount an old wall six feet high, and climb down in a hole covered with ivy. Lastly, I have seen others swim over a river, of about eighty paces broad, oftener than twice in the length of two hundred paces."

The craftiness of the hare had been noticed in the days of Plutarch. Hares, he says, when they have taken out their young to feed, are said frequently to bring them back by different ways, sometimes leaving a hundred feet distance between them, so that if a man or a dog comes in that direction, they may not be all in equal danger of being caught; and the hare herself will often return several times upon her own footsteps, so as to render the direction of her course uncertain to pursuers; and then, when she approaches her sleeping-place, she will make the last leap into it a very long one, in order to leave as little trace of her feet near her abode as possible. The bear is said to use similar caution with regard to his footsteps when he retires into his hole for the winter.¹

With wolves people have not been so intimately acquainted as to note many instances of intelligence in their proceedings. But we find a testimony to the

¹ Plutarch, 'De Solertiâ Animalium,' c. 16.

wolf's sagacity in the account of one of Sir John Franklin's voyages to the North. Wolves prey upon the moose, or red deer, but are unable to catch them by speed of foot. In consequence, a number of wolves will combine together to encompass a herd of deer on large plains bounded by steep cliffs. While the deer are grazing, the wolves will form a crescent round them, and creep stealthily forward, so as to alarm them as little as possible at first; but when they see that they have fairly hemmed them in, and cut off their retreat, they begin to move more quickly, and at last, rushing on with loud yells, they terrify the deer, and urge them to flee towards the precipice, as if they knew that when the herd is once put to its speed, some of them must be driven over the cliffs, the hindmost forcing on those in front. When several have thus been precipitated, the wolves go down at their leisure and feast upon their mangled bodies. Sir John Franklin and his party were sometimes glad to support themselves on portions of the carcasses which the wolves had left. The formation of a crescent is the usual mode in which packs of wolves prevent the escape of strong or swift objects of prey.

There is a story told, too, of the cunning of a wolf, in a work called 'The Philosopher's Banquet,' published in 1614, in 8vo, so remarkable that it well deserves attention. The author of the book gives his initials as W. B., and says that he had his information from a friend of his, long resident in Ireland, in whom he could put trust. A man was travelling one evening between two towns in that island, at least three miles distant one from the other, when he was three times attacked by a wolf, which he every time repulsed with

his sword. As he drew near to the town to which he was going, he met a friend who was bound for the town from which he came, but who was quite unarmed. He told his friend of the peril which he had encountered, and how he had saved himself; and as he deemed himself secure through his proximity to the town, he lent his friend his sword for his defence. The wolf, who had halted at some distance, was preparing to attack the second man as he came up, but, observing him armed with the other's sword, immediately quitted him, and made off after the first man at his utmost speed, and, overtaking him before he got into the town, fell upon him, defenceless as he was, and killed him.¹ It were to be wished that we knew the names of the persons to whom this occurred; but what we read of the cunning of other animals renders it by no means incredible; and we can as easily believe that the affair took place, as that any one deliberately invented it.

As to other savage beasts, we find but few pleasing gleams of intelligence among them, with the exception of what is seen in the intercourse of Androclus and the lion, the truth of whose story has been doubted; but it rests, assuredly, on better testimony than most of the accounts of animals which the ancients have transmitted to us; for Apion the grammarian, Josephus's antagonist, from whom Aulus Gellius translated the narrative, says that he himself witnessed the lion's recognition of the man at an exhibition of wild beasts at Rome before the Emperor, whether Tiberius or Caligula is now uncertain; and

¹ See 'Notes and Queries,' 3rd Ser. vol. iii. p. 46.

that the man, being summoned to the Emperor's presence, told his story then and there as we now have it. Apion adds that Androchus was at once pardoned, presented with a sum of money, and allowed to keep the lion as his own property; and that he himself afterwards saw the man leading the lion in a string about the streets, and showing him at the shops, in the city of Rome.

Mr. Jesse gives an anecdote that may well be considered as supporting the credibility of that of Apion; an account of a lion recognizing his old master in the Tower of London. The lion, when very young, had become the property of an English gentleman, who had treated it kindly, and kept it some time with him abroad. Returning to England, he brought it over with him, and not knowing what else to do with it, sent it to the Tower. Here the beast became exceedingly fierce, so that he was regarded by the keeper as untameable. When the gentleman, however, at the end of two or three years, called at the Tower to inquire for his old acquaintance, the animal immediately recognized him with such symptoms of pleasure, that he went boldly into the cage and caressed him.¹ There is a similar story told, I know not on what authority, of Sir George Davis, Consul at Naples, in the seventeenth century, being recognized, after three years' separation, by a lion in the menagerie of the Grand Duke of Tuscany.²

Nor can I give the authority for the following anecdote of gratitude in a lioness, which I find in a book on animals:—"Part of a ship's crew being sent on shore

¹ Jesse's 'Gleanings,' vol. i. p. 92.

² 'Traits and Anecdotes of Animals,' Bentley, 1861.

on the coast of India, for the purpose of cutting wood, one of them was led by curiosity to explore the country at a considerable distance from the rest. As he was rambling, he was much alarmed at the appearance of a huge lioness, which he saw making straight towards him. But, as she came up, he was agreeably surprised to observe her crouch at his feet, looking up earnestly into his face, and then towards a tree a little way off. After glancing thus several times, she arose, and proceeded towards the tree, looking back several times, as if asking the sailor to follow. At length he ventured to go after her, and, on coming to the tree, perceived sitting among its branches a huge baboon, with two smaller animals in its arms, which he soon concluded to be the cubs of the lioness, as she lay down at the foot of the tree like a cat, and turned her eyes wistfully up towards them. The man being afraid to ascend the tree, decided, as he had his axe with him, on cutting it down, and set actively to work to do so, the lioness all the while watching his operations with great anxiety. At last the tree fell, and brought down the three animals together, when the lioness sprang upon the baboon and tore him to pieces; she then turned round and caressed her cubs with extreme delight; and next she walked up to the sailor, and tried to express her gratitude by fawning upon him, and rubbing her head fondly against him. At last, she took up her cubs one by one, and carried them away; and the sailor, delighted with the termination of the adventure, returned to his companions."

Little that is amiable is told of the tiger, but an instance is given by Captain Williamson of one that had sense enough to respect spirit in an animal weaker

than himself, and good feeling enough to spare the animal for its courage. In the Carnatic, tigers are often kept in cages, and whenever a pariah dog is caught in the neighbourhood, it is a common practice to throw it into one of the cages, as an easy means of supplying the tiger with food, and of getting rid of a troublesome cur. The larger animal generally made short work of the smaller; but "I knew an instance of one dog," says Captain Williamson, "standing on the defensive in a manner that completely astonished both the tiger and the spectator. He crept into a corner, and whenever the tiger approached, seized him by the lip or neck, making him roar most piteously. The tiger, however, impelled by hunger—for all supply of food was purposely withheld—would renew the attack. The result was ever the same. At length the tiger began to treat the dog with more deference, and not only allowed him to partake of the mess of rice and milk furnished daily for his subsistence, but even refrained from any attempt to disturb him. The two animals at length became reconciled to each other, and a strong attachment was formed between them. The dog was then allowed ingress and egress through the aperture, and, considering the cage as his home, he left it and returned to it just as he thought proper. When the tiger died, he mourned the loss of his companion for a considerable period."¹

The glutton is thought but a dull animal, but his mode of catching deer shows much the same portion of intelligence as that which is exhibited by the Arctic fox when he arranges cods' heads as baits to catch crows. He is said to climb into a tree in the neigh-

¹ Youatt, 'On the Dog,' p. 18.

bourhood of a herd, carrying up with him a quantity of a kind of moss of which the deer are fond ; and, when he sees any one of the herd approaching, he lets a portion of the moss fall. If the deer stops to eat, the glutton instantly descends on its back, and torments it, by tearing out its eyes and other violence, to such a degree, that, either to get rid of its enemy, or to put an end to its sufferings, it beats its head against the trees till it falls down dead ; for, when the glutton has once fixed himself by his claws and teeth, it is impossible to dislodge him. After killing the deer, he divides the flesh into convenient portions, and conceals them in the earth for future provision.¹

The cunning of the Arctic fox for enticing waterfowl with his tail is also rivalled by similar art in the raccoon, which, when desirous to catch crabs, will stand at the side of a swamp, and hang its tail over the water, of which the crabs, hoping it may be some kind of food, lay hold ; and the raccoon, as soon as he feels them pinch, pulls them out with a sudden jerk. In eating them, too, it is observed that he is always careful to get them crosswise into his mouth, lest he should suffer from their nippers.

A raccoon that was kept in confinement, and partially domesticated, by M. Blacquart des Salines, would play, when chained up, sad tricks with the fowls around him: he would allow them to take portions of his food, and use every artifice to make them familiar with him; and then, after making them confident that they had nothing to fear from him, he would suddenly snap up one, and tear it in pieces. His mode of opening oysters, too, showed great intelligence: he would pass

¹ Bingley's 'Animal Biography,' vol. i. p. 326.

an oyster under his hind paws, and feel with his fore paws for the weakest part; and then, pressing his paws on the spot, he would separate the shells and take out the fish with the utmost ease.¹

As to the beaver, Lord Brougham very well observes that it "may be called, in respect of its works, the bee of quadrupeds," but when he adds, "or, if you will, of intelligent animals," his remark is hardly so just, for almost all that the beaver does, though seemingly the result of sense and judgment in the animal, appears to be done from instinct, not from any thought or reflection of its own. Yet there is one part of its proceedings which is wonderful in its variety and adaptation to the different circumstances in which it may be placed. The communities of beavers in North America, for instance, build their houses either on lakes or ponds, or on the narrow creeks connecting the lakes together, but evidently prefer running water; and if the stream is likely to sink below a convenient point, they provide against that evil by constructing a dam across it, varying the shape of the dam according to the character of the water; for if the current is slow and weak, they run the dam across in a straight line, but if it is rapid and forcible, they form the dam in a curve, with the convex side towards the upper part of the stream. This curved form is just what a man would adopt for the sake of strength, after he had seen the beaver's use of it; but it is questionable whether many men would think of it from their own contemplation. Nor is it apparent how the beavers understand when the water is likely to fail so as to make a dam necessary; a man would judge from the marks of the

¹ Bingley's 'Animal Biography,' vol. i. p. 331.

water along the banks, but how the beaver gets his knowledge we shall in vain try to discover. Yet that all their operations are instinctive is evident from their uniformity among all societies of beavers; all construct dams, and all alike construct them straight or curved as the nature of the water requires.¹

How much intelligence or sagacity fishes, at least the higher kinds of them, may possess, we can have but very little knowledge, through our inability to follow them in the element in which they live. "But their general character," says Smellie, "is stupidity, joined to a voracious and indiscriminating appetite for food. In opposition to an almost general law of nature which subsists among other animals, fishes devour, without distinction, every smaller or weaker animal, whether it belongs to a different species or to their own. In animals of a much higher order, voracity of appetite is seldom accompanied with ingenuity or elegance of taste. When the principal attention of an animal is engrossed with any sensual appetite, it is a fair conclusion that the mental powers are weak, because they are chiefly employed upon the grossest of all objects. If this observation be just, fishes must be ranked among the most stupid animals of equal magnitude and activity."²

At a meeting of the Literary and Philosophical Society of Liverpool, however, in February, 1850, Dr. Warwick communicated an account of a pike which seems to indicate that fishes may have a greater portion of intelligence than is generally supposed. When Dr. Warwick was residing at Durham, the seat of the

¹ Garratt's 'Marvels of Instinct,' pp. 130-137.

² Smellie, Philos. of Nat. Hist. vol. i. p. 205.

Earl of Stamford and Warrington, he was walking one evening by the side of a fish-pond in the park, and observed a large pike, of about six pounds weight, which darted hastily away, and, in so doing, struck its head against a tenter-hook in a post, and fractured, as it afterwards appeared, its skull, and turned aside the optic nerve. It seemed to be in great agony; it first rushed to the bottom of the water, and bored its head into the mud, thickening the water so that it was for a time lost to the sight; afterwards it plunged about hither and thither, and at last threw itself completely out of the water upon the bank. The doctor examined it, and found that a small portion of the brain was protruding from the skull, and succeeded, with the aid of his tooth-pick, in replacing it, and then put the fish into the pond again. At first it seemed relieved, and was quiet, but in a few minutes darted about again till it threw itself out of the water a second time. Again the doctor did what he could for it, and put it back into the water; but it was still furious with pain, and afterwards threw itself out of the water several times. At last, with the assistance of the keeper, the doctor contrived a bandage for its head, and left the fish in the water to its fate. He however took care to visit the pond on the following morning, when the pike came up towards him, close to the edge, and, as he said, actually laid its head on his foot. He examined the fish's skull, and found it likely to do well. Afterwards he walked backwards and forwards along the bank of the pond, for some time, and the fish continued to follow his movements, turning as he turned. Next day he took some friends to see it; it came up to him as before; and at length it grew so docile that it would

approach whenever he whistled, and feed out of his hand, though to other persons it continued shy.¹

So carp, which are frequently kept in fish-ponds, and fed by persons who come about them, may be attracted to the bank for food by a whistle. "Sir John Hawkins was assured by a clergyman, a friend of his, that at the abbey of St. Bernard, near Antwerp, he saw a carp come to the edge of its pond, at the whistling of the person who fed it."²

The carp, it may be observed, is said to have a larger brain, in proportion to the size of its body, than any other fish, approaching nearly to that of the elephant, namely, 1 to 500, while that of the tunny is only 1 to 37,000; and in many fishes scarcely any brain can be detected.

The following account shows something of intelligence in a mullet:—A person of the parish of Sennan, in Cornwall, says Borlase, the Cornish historian, observed a seal in pursuit of a mullet, which turned to and fro, and led its pursuer such a zigzag chase as a hare leads a greyhound. At last it found that it had no way to escape but by running into shoal water, into which it accordingly betook itself, and the seal pursued. The mullet then, to get the better out of danger, threw itself on its side, and then darted into shallower water than it could have entered in its natural position; and by this means it placed itself in security.³

So the salmon, when they are making their way up rivers from the sea, to deposit their spawn, will, when

¹ Mrs. Lee's Anecd. of Birds, Reptiles, and Fishes.

² Bingley's An. Biog. vol. iii. p. 79.

³ Bingley's An. Biog., vol. i. p. 175.

they find themselves in shallow water, or are checked by sandbanks, turn on one side, and in that position work themselves into the deeper water beyond.¹

Both salmon and trout, when they are hooked, will frequently throw themselves out of the water, and endeavour, by falling upon the line with their whole weight, to break it.²

Eels, it is well known, migrate, in order to deposit their spawn, from fresh water to brackish, from which the young eels return as soon as they are strong enough to make their way up rivers. They are thought to ascend the Thames as far as Oxford, or further. So strong is their migratory propensity that few obstacles will stop their progress. At Teddington and Hampton they have been seen ascending the large posts of the flood-gates, when they have been shut longer than ordinary; here some die in the effort, and stick to the posts; others, which climb a little higher, meet perhaps with the same fate, until a sufficient layer is formed of the dead to enable the living to overcome the difficulty of the passage. But the most remarkable instance that has been seen of their artful perseverance is observed annually at a place near Bristol, where, adjoining a stream, there is a large pond, into which the branches of a spreading tree hang down; and up these branches the young eels ascend into the tree, which at times seems quite alive with them, and thence let themselves drop into the stream below; a process which a friend of Mr. Jesse's witnessed.³

Walruses, we may add, are gregarious, and are

¹ Bingley's *An. Biog.* vol. iii. p. 51.

² Jesse's 'Gleanings,' vol. ii. p. 20.

³ Jesse's 'Gleanings,' vol. ii. p. 47.

known to combine together for mutual aid. If one is wounded by the fisherman, it will often dive into the water, and rise up again suddenly with multitudes of others, which will unite to attack the boat from which the violence proceeded.¹

¹ Bingley's An. Biog. vol. i. p. 165.

CHAPTER XXXVII.

ANIMALS PLACING SENTINELS AND LEADERS.—
COUNTERFEITING DEATH.

BEFORE we proceed to speak of the intelligence of bees and other insects, we would notice two proceedings, which are observed among many animals, but of which it may be doubted whether they are the offspring of instinct or of reason. I mean that of placing sentinels, and that of feigning death to escape danger.

As to placing sentinels, it is common to many animals of the same species, and may therefore be considered rather to have its origin in instinct; but if such is the case, the mode in which the animals go about the operation gives many indications of reasoning. "In the forests of Tartary and South America," says Lord Brougham,¹ "where the wild horse is gregarious, there are herds of five or six hundred, which, being ill-prepared for fighting, or indeed for any sort of resistance, and knowing that their safety is in flight, when they sleep, appoint one in rotation who acts as sentinel, while the rest are asleep. If a man approaches, the sentinel walks towards him, as if to re-

¹ 'Dialogues on Instinct,' dial. iii.

connoitre and see whether he may be deterred from coming near; if the man continues, he neighs aloud and in a peculiar tone, which rouses the herd, and all gallop away, the sentinel bringing up the rear. Nothing can be more judicious or rational than this arrangement, simple as it is."

These horses, too, have not only a sentinel, but also a leader, who directs their movements, and has some art, which we do not understand, of making his wishes known to the entire community; and under him their union is so effectual for repelling carnivorous animals, that the wolf, the jaguar, and the puma, are powerless against their combined strength. Wild deer also are said to have such a leader, though how he is placed in office, or how he influences those under him, is beyond our conception. So the large white-legged pecaries, a kind of wild hogs, sometimes three feet and a half in length, which abound in Guiana, congregate and travel in large bands, sometimes amounting to a thousand, under the direction of a leader, who keeps his place in front. Should they come to a river, the chief stops for a moment, as if to see whether all is safe for crossing, and then plunges into the stream, followed by all the rest of the troop, for all can swim over the broadest and most rapid stream with the greatest facility. If they meet with anything unusual in their way, they stop, with terrific chatting, as if discussing whether there is danger, and do not proceed till they think that all is safe. Should a huntsman attack them when they are thus in force, he would be torn to pieces with their tusks, unless he gets out of their reach by climbing a tree.¹ So, among birds, the vul-

¹ 'The Gardens and Menagerie of the Zoological Society,' vol. i. p. 62.

tures have a leader, or king; and Mr. Byam, in his 'Travels in Central America,' relates that he had an opportunity of seeing how he was adored by the other vultures; and how they abstained from the carcass of a mule till they saw that he was satisfied.

But with regard to the appointment of a sentinel, it is seen in the African apes, which often go in a body to attack gardens or plantations, but, before they commence plundering, always send one of their party to the top of an adjacent rock or tree, to give notice of any appearance of peril, and, if he perceives any person approach, he gives a loud shriek, at which the whole troop immediately run off, carrying with them whatever they have seized.¹ The monkeys in Brazil set a guard during their time of repose; and such is said to be the practice of the chamois and other species of antelope.²

So the bobacs, a sort of marmot found in some parts of Poland and Russia, which form extensive burrows in the ground, and live together in large numbers, always place a sentinel to give notice of danger during the time that the rest are engaged in feeding. The same is told also by Dr. Richardson, in his 'American Fauna,' of the marmots called whistlers, whose sentinels give a whistle at the approach of danger, and the rest catch up the sound.

So, too, the sheep in the mountainous parts of Wales, which are rendered partially wild by the liberty they enjoy, sometimes graze in parties of from eight to a dozen, of which one is stationed as a sentinel, and

¹ Bingley's 'Animal Biography,' vol. i. p. 70.

² Smellie's 'Philosophy of Natural History,' vol. i. p. 100; Swanson's 'Habits of Animals,' p. 24.

when he observes any person approach nearer than about a hundred yards, he gives notice, it is said, by a loud hiss or whistle, twice or thrice repeated, at which the whole party scour away into the least accessible parts of the heights.¹

So it is said that when crabs make the annual change of their shells, and retire for that purpose into cavities of rocks and under stones, a hard-shelled crab always stands sentinel, to prevent sea-insects from injuring the rest in their defenceless state, and, from his appearance, the fishermen know whereabouts to look for others.²

Among birds, also, the placing of sentinels is extremely prevalent. Thus the shags, a kind of cormorant frequenting the Shetland Isles, go about, and also sleep, in flocks on the ledges of the precipices, but, before they go to rest, they place two, three, or more of their number, as sentinels, to prevent them from being surprised by men who attempt to catch them; and though these sentinels are often deluded and ensnared, and many of their charge captured, yet the posting of a guard, however insufficient, shows a portion of intelligence even in their limited capacity of thought.³

Thus also the flamingoes, a gregarious bird, which, when the Europeans first visited America, were tame and gentle, and allowed themselves to be shot one after another without making any attempt to escape, now regard man with aversion, and, wherever they haunt, one of the flock is always appointed to stand sentinel while the rest are feeding, and, as soon as he

¹ Bingley, vol. i. pp. 388, 463.

² *Ib.* vol. iii. p. 380.

³ Edmonson's 'View of the Zetland Isles,' vol. ii. p. 53; Fleming's 'Philosophy of Zoology,' vol. i. p. 236.

perceives the least danger, he utters a loud scream, like the sound of a trumpet, in which all the rest immediately join, and at the same time fly off into the interior with all speed.¹

The wild swans, too, in the countries bordering on the Black Sea, always fly in long lines, and stop to feed in shallow water ; and while they are feeding one is always on the watch, and abstains from feeding till another takes his place ; and, if any danger is dreaded, the sentinel gives notice by a loud cry.

As to rooks, they appear to have a language amongst themselves, understood by the whole community, as well as a knowledge and foresight most extraordinary. "A peculiar note," says Mr. Jesse,² "from a bird set to watch, and warn them of approaching danger, is quite sufficient to make them take flight, and always in an opposite direction to that from which the danger is apprehended." The same writer³ also thinks that among swallows particular birds give notice, by cries of peculiar shrillness, where insects, more abundant than usual, are to be found, and assemble the others, by the same means, when the time comes for migrating.

We shall now notice a few instances of the other peculiarity in animals which we mentioned, that of feigning death to escape danger ; a contrivance which has perhaps more of the appearance of proceeding from reason, and not from instinct, than that of placing sentinels ; for it is adopted by individual animals, and is not the offspring of any gregarious influence. One of the most remarkable examples of this practice is related by Sir Emerson Tennent, in the case of a cap-

¹ Bingley's 'Animal Biography,' vol. ii. p. 317.

² 'Gleanings,' vol. i. p. 57. ³ *Ib.* vol. ii. p. 106.

tured elephant.¹ One of these animals, he says, will, when made prisoner, sometimes pretend to be dead in order to regain its freedom. He himself was witness to an instance of this deceit. An elephant, which he had seen taken, was led along, as usual, between two tame elephants, and had proceeded a considerable distance towards the place of its destination, when, as night began to close in, and the torches were lighted, it refused to go any further, apparently from weakness, and at last sank down on the ground, and seemed to give up the ghost. Mr. Cripps, one of the party, who had the charge of the proceedings, ordered the fastenings to be removed from its legs; and endeavours were then made to raise it. But when all attempts for this purpose failed, he felt so convinced that the animal was dead, that he directed that all the ropes should be taken off from it, and the carcase abandoned. While this operation was being performed, Mr. Cripps and another gentleman of the company leaned against the animal to rest, without any suspicion that they were pressing on a body with life in it. But when they had all taken their departure, and proceeded a few yards on their route, the elephant, to their astonishment, started up with the greatest alacrity, and fled away towards the jungle, screaming at the top of its voice, as if in triumph at having deceived its oppressors, and making its cries audible long after it had disappeared in the shades of the forest.

The opossum displays cunning in the same way. If an opossum, when pursued, be overtaken, it will feign itself dead, and, if taken up in that state, will, accord-

¹ 'Sketches of the Natural History of Ceylon.'

ing to M. du Pratz, exhibit no signs of life even though placed on a red-hot iron. Whenever it has thus pretended to be lifeless, it never moves till the assailant of whom it is in dread has either gone away, or concealed himself; when it endeavours to scramble as fast as possible into some hole or bush. The opossum's tenacity of life, and variety of stratagems to secure it, have given rise to the North Carolina proverb, "That, if a cat has nine lives, an opossum has nineteen."¹

The following instance of similar artfulness in a fox is given by a Mr. Mudie in 'Partington's Cyclopædia.' One morning a man in the north was going early to his work, that of mending the roads, through some furze on a common, and came upon a fox stretched out at full length, apparently lifeless, under one of the bushes. He drew the animal out by the tail, by which he swung him round, and then threw him on the earth; but no symptom of life was elicited from him. The man, therefore, never doubted that the animal was dead, and, being willing to have his skin for a cap, threw him over one of his shoulders, carrying his mattock at the same time over the other. The animal was quiet for a time, but as the point of the mattock happened to jog against his side, he became discontented; and, resolving to rescue himself while his ribs were yet whole, he gave a decisive snap, such as a fox well knows how to give, on a sensitive portion of the labourer's rear. The man, startled and pained, let go the fox, and turned round to face whatever foe was molesting him, when he beheld Reynard scampering off at full speed into the brake.

¹ Bingley's 'Animal Biography,' vol. i. p. 336.

A similar occurrence took place at Kilmorac, a parish in Inverness-shire, the minister of which had a well-stocked poultry-yard. A friend of ours, says the narrator, had spent a night with the divine, who was very hospitable, and some new-laid eggs were wanted for breakfast in the morning. The female servant accordingly went off with her basket to the hen-house to get a supply; but, when she opened the door, a direful scene of havoc presented itself; numbers of dead hens were lying on the floor, and in the midst of them a large fox, seemingly as dead as the other animals around him. The servant thought that he must have died of gorging himself, and, taking him up by the tail, hurled him into a receptacle for garden compost. Here he fell on soft material, and lost no time in starting up, and scampering off, to the woman's utter consternation, into the covert of the wood.¹

One of the most cunning tricks of rats, also, is that of pretending to be dead when they find themselves in danger of being killed. In Ceylon, where rats abound, and will gather about the houses, and seat themselves on chairs and screens, and scarcely retreat when missiles are thrown at them, a traveller one evening saw his dogs set upon a rat, and made them let it go. As it appeared to be dead he took it up by the tail, the dogs leaping up after it, and carried it into his dining-room to look at it by the light of the lamp. He laid it on the table, where it remained as if totally lifeless; its limbs stretched out, and not a muscle moving. After letting it rest about five minutes, he threw it among the dogs, which were still in a state of excitement; but, as it reached the ground, it alighted on its

¹ Garratt's 'Marvels of Instinct,' p. 124.

legs, and made off with such speed as baffled all its pursuers.¹

Snakes, too, will pretend to be dead, and lie motionless, as long as they think they are observed, and in danger, but, when they believe that all foes have withdrawn, and they are out of peril, they will glide away with the greatest speed into the nearest hole or covert.²

Among birds, the corncraik has been most remarked for this species of art. The author of 'The Natural History of the Corncraik' relates that one of these birds was brought to a gentleman by his dog, to all appearance quite dead. The gentleman turned it over with his foot, as it lay upon the ground, and was convinced that there was no more life in it. But after a while he saw it open one eye; and he then took it up again, when its head fell, its legs hung loose, and it once more appeared to be certainly dead. He next put it into his pocket, and before long felt it struggling to escape; he took it out, and it seemed lifeless as before. He then laid it on the ground and retired to a little distance to watch it, and saw it, in about five minutes, raise its head warily, look round, and decamp at full speed.³

Of the smaller animals, the spider is said most frequently to try this stratagem, rolling itself up in a ball as if lifeless. "In this situation," says Mr. Smellie, "I have pierced spiders with pins, and torn them to pieces, without their discovering the smallest

¹ Mrs. Lee's *Anecd. of Animals*, p. 258.

² Jesse's '*Gleanings*,' vol. iii. p. 80.

³ Quoted in Jesse, '*Gleanings*,' vol. ii. p. 139; also in Mrs. Lee's *Anecd. of Birds*, p. 193.

marks of pain. This simulation of death has been ascribed to a strong convulsion or stupor occasioned by terror. But this solution of the phenomenon is erroneous. I have repeatedly tried the experiment, and uniformly found that, if the object of terror be removed, in a few seconds the animal runs off with great rapidity." Some beetles, too, he adds, will counterfeit death, and allow themselves to be gradually roasted in this condition without moving a single joint.¹ This stratagem is also said to be practised by the common crab, which, when it apprehends danger, will lie as if dead, waiting for an opportunity to sink itself into the sand, keeping only its eyes above it.²

To these instances we will add an anecdote of a monkey feigning itself dead, not for the purpose of escaping from danger itself, but for that of taking vengeance for certain annoyances that it had received. It was of the species called by Buffon the Talapoin; had been trained by a native of Hindostan, and was kept chained to a pole thirty feet high, which he could ascend or descend at pleasure, the chain being attached to a ring that encircled the pole. But when he was at the top of the pole, the crows of the country, which are remarkable for audacity, would often make a descent on his food which lay at the bottom, and carry it off. Nothing that he could do to frighten them was of any effect; but one morning, when the birds had been particularly troublesome, he appeared to be seriously indisposed; closing his eyes, hanging down his head, and exhibiting other symptoms of illness, though he still kept his position at the top of the pole. When his provisions were placed at the bottom of it as usual,

¹ Bingley's 'Animal Biography, vol. iii. p. 358.

² *Ib.* p. 380.

the crows, making a descent according to their practice, began to seize on them. The monkey slid down the pole with great slowness, as if the effort were painful to him, and as if his strength was scarcely equal to it. When he reached the ground, he rolled about for some time, as if in great agony, until he got close to the vessel containing the food, which the crows had now almost devoured. He now stretched himself out apparently powerless and insensible, and one of the crows, bolder than the others, presuming upon his seeming helplessness, advanced to seize the small portion of food that was left. No sooner did the bird's beak touch the vessel, than the monkey started up and caught it by the neck, chattering and grinning with every expression of triumphant gratification. The other crows gathered round about, cawing and screaming, as if they would fain rescue their captive companion. But to deliver him was hopeless; the monkey grinned at them awhile in mockery; and then taking the prisoner between his knees, began to pluck the feathers off it with all a monkey's gravity. Having completely stripped it, with the exception of the large feathers in the wings and tail, he threw it into the air as high as he could, and the bird, after flapping its wings for a few seconds, fell to the ground with a shock that stunned it. Its fellows immediately surrounded it, and pecked it, according to the fashion of birds, to death. The monkey manifested the utmost signs of joy at the sight, and ascended his pole with alacrity to enjoy a quiet repose. Whether his food was ever again attacked the account does not tell us.¹

¹ Oriental Annual for 1836; Garratt's 'Marvels of Instinct,' p. 80.

CHAPTER XXXVIII.

BEES.—ANTS.—SPIDERS.—BEETLES.

It remains for us to consider, as we draw towards a conclusion, how much of reason or intelligence is apparent in those operations of bees, ants, and some other small creatures, which many regard as proceeding wholly from instinct.

Abundance of observations have been made on bees, to show that, however closely they may in general be moved by instinct, they are not without something of reason to assist them in extraordinary emergencies. To Mr. Jesse, to whom we are obliged for so many interesting remarks on animals, bees as well as others, we are indebted for the following anecdote illustrative of this point:—Into a large glass hive, in which the operations of the bees could be distinctly seen, a large brown slug had made its way. The bees killed the slug, but, being unable to get it out of the hive, covered it with the thick resinous substance called propolis, and thus prevented it from becoming a nuisance to the colony. Into the same hive one of the common brown-shelled snails also gained admittance, but, as this had already a covering, they merely fixed it to the bottom

of the hive with a plastering of propolis round the edge of the shell.

“I have in my possession,” says Mr. Jesse, “a regular fortification made of propolis, which one of my stocks of bees placed at the entrance of their hive, to enable them the better to protect themselves from the attacks of wasps. By means of this fortification a few bees could effectually guard the entrance, by lessening the space of admission.”¹

Bees also show great ingenuity in obviating the inconvenience which they experience from the slipperiness of glass hives, by fixing on the glass, before they begin to construct their combs, a number of small bits of wax at regular distances from each other, to serve as rests or stepping-places. This contrivance was noticed both by Mr. Jesse and Dr. Bevan. Dr. Brown also, in his book on the bee, gives another illustration of the reasoning power of bees, observed by a friend of his. A centre comb in a hive, being overburdened with honey, had parted from its fastenings, and was pressing against another comb, so as to prevent the passage of the bees between them. This accident excited great bustle in the colony, and as soon as their proceedings could be observed, it was found that they had constructed two horizontal beams between the two combs, and had removed enough of the honey and wax above them to admit the passage of a bee, while the detached comb had been secured by another beam, and fastened to the window with spare wax. But what was most remarkable was, that, when the comb was thus fixed, they removed the horizontal beams first constructed, as being of no further use.

¹ Jesse's Gleanings in Nat. Hist. vol. i. p. 21.

These operations occupied about ten days. Human reason could not have devised a better course of proceeding. Something similar is told by Huber. "The bee," says Lord Brougham, "upon being interrupted by Huber in her operations, shortened the length of her cells; diminished their diameter; gradually made them pass through a transition from one state to another, as if she was making the instinctive process subservient to the rational, and, in fine, adapted her building to the novel circumstances imposed upon her; making it, in relation to these, what it would have been in relation to the original circumstances, if they had continued unaltered."¹

The plan which bees pursue, also, to ventilate their hives in hot weather, and preserve such a temperature as will prevent the wax from melting, is supposed to be a conception of their own, as, in their natural state, they are probably not in so confined a space as they are in our hives, or exposed so much to the sun's heat. In hot weather, says Mr. Jesse,² a great many bees, (the number being probably regulated by the state of the atmosphere,) may be observed busily employed at the bottom of the hive, moving their wings with so much rapidity that the motion is almost imperceptible, in order to produce a current of air. If, while this action is going forward, a lighted candle should be held at an opening at the top of the hive, it will immediately be blown out,—a fact by which we may form some notion of the stream of air which these insects can create. But he has known instances, he says, in extremely hot weather, when all the efforts of

¹ Lord Brougham's 'Dialogues on Instinct,' dial. iii.

² 'Gleanings,' vol. i. p. 23.

the bees to preserve a just temperature have failed, and a part of the wax has melted; in such a case they are in a state of extreme irritation, and it is dangerous to go near the hive.

Dr. Darwin gives an instance of reasoning in a wasp. Walking one day in his garden, he observed a wasp upon the gravel-walk, turning about a large fly, nearly as big as itself, which it had caught. Kneeling down, he distinctly saw it cut off the head and abdomen of the fly, and then, taking up the trunk, to which the wings remained attached, fly away. But a breeze of wind, acting upon the wings of the fly, impeded the wasp, and forced him to wheel about. Upon this it alighted again on the gravel walk, sawed off the two wings, and then, the cause of its embarrassment being removed, flew off with its booty.¹

It has been said that there is no surer proof of reason in an animal than if, after having tried one method of accomplishing an object, and found it inefficient, it has recourse to another that seems to promise success; and, if this position be true, it can hardly be denied, by those who read the particulars just given, that there is a portion of reason in bees.

It may well be considered an indication of reason in bees that they know, as is confidently asserted, their master, or the person who chiefly attends to them. A singular statement to this effect is given in Stedman's 'Voyage to Surinam.'² I was visited at my hut, says Mr. Stedman, whose words I abridge, by a neighbouring gentleman, who had no sooner entered, than

¹ Darwin's 'Zoonomia,' sect. xvi.

² Vol. ii. p. 246, cited in Swainson's 'Habits and Instincts of Animals,' p. 34.

he leaped out again, roaring like a madman with pain, and ran off to the river to plunge his head into the water. The cause of his distress was, that, being a tall fellow, he had struck his head against a large nest of wild bees which had built in the thatch. I, apprehensive of a similar attack, withdrew immediately from the hut, and ordered the slaves to demolish the bees' nest without delay. They were just going to do so, when an old negro came up, and declared that the bees would never sting me personally, offering to undergo any punishment if one of them ever did so. "Massa," said the negro, "they would have stung you long ago, had you been a stranger to them, but, being your tenants, and allowed to build upon your premises, they know both you and yours, and will never hurt either you or them." This Mr. Stedman found to be the case, for even after shaking the nest, the bees would sting neither him nor his negroes. The same old negro told Mr. Stedman that he had lived on an estate on which there was a large tree, in which there had been, as long as he could remember, a society of birds, and another of bees, living together in the greatest amity; for if any strange birds molested the bees, the birds on the spot drove them off in a body; and if strange bees came near the birds' nests, the native bees attacked them and stung them to death. The family of the owner, he said, had so much regard for the harmonious colonies, that they considered the tree sacred.

"My bees," observes Mr. Jesse, "are a constant source of amusement to me; and the more I study them, the more I am led to admire their wonderful instinct and sagacity. Few things, however, surprise me more than the power which they possess of com-

municating what I can only call 'intelligence' to each other. This I observe to be almost invariably the case before they swarm. Some scouts may then be observed to leave the hive. In a little while the new swarm quits it, and settles on the branch which had been previously fixed upon by the scouts."¹

The same faculty of communication, remarks the same writer, may also be observed in the ant, upon whom we may next bestow a little attention. "I have often put," he says, "a small green caterpillar near an ants' nest; you may see it immediately seized by one of the ants, who, after several ineffectual efforts to drag it to its nest, will quit it, and go up to another ant, and they will appear to hold a conversation together by means of their antennæ, after which they will return together to the caterpillar, and, by their united efforts, drag it where they wish to deposit it.

"I have also frequently observed two ants meeting on their path across a gravel walk, one going from, and the other returning to the nest. They will stop, touch each other's antennæ, and appear to hold a conversation; and I could almost fancy that one was communicating to the other the best place for foraging, which Dr. Franklin thought they have the power of doing."²

Dr. Franklin formed his opinion on the following occurrence which came under his own knowledge, and of which we take the account from Bingley's 'Animal Biography.'³ Believing that these little creatures had some art of intercommunication, and wishing to satisfy himself on the subject, he put a little earthen pot, containing some treacle, into a closet, where a number of

¹ Jesse's 'Gleanings,' vol. i. p. 14.

² Lord Brougham's 'Dialogues on Instinct,' dial. iii. ³ Vol. iii. p. 296.

ants soon congregated, and began to prey on the contents. When it was all eaten, the doctor cleared the pot of the ants, and, putting some fresh treacle into it, suspended it by a string from a nail in the ceiling. By chance a single ant remained in the pot, which ate as long as it thought proper; but, when it wanted to get away, it could not for some time find the means. It ran about the outside of the pot in perplexity; but at last it found the way up the string to the ceiling, along which it ran to the wall, and so to the ground. It had scarcely been half an hour gone, when a numerous swarm of ants came into the closet, climbed up the wall to the ceiling, and then descended by the string into the pot. There they continued to eat till the treacle was all devoured, each taking his departure when he was satisfied, and one party running up the string and the other down.

This power of intercommunication among ants was observed as long ago as the time of Plutarch, in whom we find the following account.¹ A certain Cleanthes related that he had seen ants go from one ant-hill to the mouth of another, carrying a dead ant; when ants would come up out of the ant-hill towards which the body was borne, meet the others, and then go down again; a proceeding which would be repeated two or three times; till at last those from below would bring up, as a ransom for the corpse, a worm, which the others would receive and carry off, leaving the dead behind them.

To this account we may very well append that of the funeral of a bee, which a correspondent of 'Notes and Queries'² cut from the 'Glasgow Herald.' "Whilst

¹ 'De Solertiâ Animalium,' c. 11. ² Third Ser. vol. viii. p. 324.

walking with a friend in a garden near Falkirk, says the writer, we observed two bees issuing from one of the hives, bearing betwixt them the body of a defunct comrade, with which they flew for a distance of ten yards. We followed them closely, and noted the care with which they selected a convenient hole at the side of the gravel walk, the tenderness with which they committed the body, head downwards, to the earth, and the solicitude with which they afterwards pushed against it two little stones, doubtless *in memoriam*. This task being ended, they paused for about a minute, and then flew away." The person who communicates this paragraph says that he had certainly never seen the funeral of a bee, but that he had seen bees bury wasps, which, having penetrated into their hives with evil intent, they had killed there. Two bees would bring out the body, fly over a neighbouring brick wall with it, and deposit it on the other side.

Ants, like bees, show that, in particular cases of difficulty, they are not without power to reason. A gentleman of Cambridge one day observed an ant dragging along what, in reference to the size and strength of the animal, might be denominated a piece of timber, while several others were engaged in their own occupations in the vicinity. Presently he came to an ascent, where the weight of the wood seemed to be too much for him; but he did not remain long in perplexity, for three or four others came behind him, and helped him to push it up. Having got it on level ground, they went off again to their own affairs, and left it to his management. It happened to be considerably thicker at one end than at the other, and the

shape of it caused him a new difficulty ; for he unhappily lodged it between two other bits of wood, through which, after several fruitless efforts, he found that it would not pass. In this dilemma, he acted just as the most ingenious of human beings would have acted ; he pulled it back, and turned it on its edge, and then, running to the other end, drew it through with ease.¹

The people in Plutarch's time were not unobservant, as we have remarked, of the ways of ants, and had noticed that they would bite off portions of their burdens, as Dr. Darwin saw the wasp doing, to make them easier of conveyance. They were also aware of the ants' practice of biting off the germinating end of the grains of corn which they lay up :² an operation, however, which seems to be merely the result of instinct.

Let us glance from the ant to the spider and the beetle.

The spider, though mostly regarded as a very contemptible little animal, shows great sagacity in the way that it constructs and fastens its web, and deals with the flies that are caught in it. It may be thought that in these proceedings it is prompted merely by instinct ; but it is not always so ; it at times shows that it can think for itself and devise means of opposing difficulties and extricating itself from unexpected emergencies. The Rev. J. G. Wood,³ from whom we have already borrowed an anecdote or two, relates a remarkable instance of a spider's ingenuity. One of his friends, he says, " used to shelter a number of garden spiders under a large verandah, and was much in-

¹ Bingley's An. Biography, vol. iii. p. 293.

² Plutarch, ' De Solertiâ Animalium,' c. 11.

³ ' Glimpses into Petland.'

terested in watching their habits. One day a violent storm arose, and the wind beat so furiously through the garden, that, even though protected by the verandah, the spiders suffered terribly. In one case, one or two of the guy-ropes, as sailors would call them, were broken, so that the web flapped about like a loose sail in a storm. The spider did not attempt to make new guy-ropes, but had recourse to a remarkable expedient. It lowered itself to the ground by a thread, crawled along the ground to a spot where were lying some fragments of a wooden fence that had been blown down, the wood being quite decayed. To one of these fragments it attached its line, re-ascended, and hauled the piece of wood after it to the height of nearly five feet, suspending it by a strong line to its web. The effect was wonderful; for the weight of the wood was sufficient to keep the net tolerably tight, while it was light enough to yield to the wind, and so prevent further breakages. The wooden weight was just two inches and a half in length, and about the diameter of a goose quill.

“On the following day a careless servant struck her head against it, and knocked it down, but in a few hours the spider had found and replaced it, *thus proving that the occurrence was not accidental*. After the stormy weather had ceased, the spider mended the web, cut the rope, and let the wooden weight fall to the ground.”

An anecdote of the sagacity of a beetle is published by the Hon. Grantley Berkeley, in his ‘Life and Recollections.’¹ “In walking over the heath [near Bournemouth] the other day,” says he, “the white,

¹ Vol. ii. p. 356.

narrow, sandy path at my foot, my observation was called to a beetle that was bearing aloft in his mouth, carrying it so as to prevent its being any impediment to progress, some heavy insect he had captured. By kneeling down, I discovered that this game was a large brown spider, its legs gathered up and collapsed in death. The beetle had wings, and his sides were of a bright orange or scarlet colour; the rest was of a sombre hue. He was rather fly-like in shape, and more than half an inch long. As small blades of grass occasionally thwarted his progress and caused him to back or go round them, I placed the point of my stick in his way, and when he had ascended it with his burden, I lifted him up to a nearer view. While undergoing this inspection, the weight of the spider overwhelmed him, and he and his burden fell to the path, separating ere they came to the ground. Apparently the beetle was in no way alarmed by the idea of human interference, for the moment he came to his legs, he commenced a hurried search for his game, which lay about a foot off, and then I saw that a beetle has a nose as well as a dog. Having made two or three circles without finding it, he passed down wind, and then went straight to his prey.

“It was perfectly obvious to me that the spider had been a dangerous enemy, for the beetle, on getting up to him, avoided his head, and by putting out a fore-leg and touching the insect’s side, ascertained that life was extinct. Having convinced himself on this point, he again seized his prey, and commenced once more to bear him eagerly away.

“Resolved to watch the issue, I interfered no further. After carrying his burden about a couple of feet

along the path, he set it down, and went on without it. Now it was obvious to me that it was by no means his intention to leave his burthen when he had set it down ; so on my hands and knees I followed him, and saw him quit the sandy path and climb up to the top of several sprigs of heather. From the last of them he quickly descended, and retraced his steps direct to where he had left the quarry, again possessed himself of it, and bore it on to the foot of the sprig up which I had just observed him climb. On coming to its root he set down his burthen to rest ; presently picking it up again, he climbed to the top, and deposited the dead game in the fibres he had previously ascertained to be adapted to hold it and to keep it safe. This done, he again descended, and I saw him go off among the roots of the heather, as if in search of more game.

“By kneeling down, and giving a very minute inspection to these several sprigs of heather, I discovered that the only one that could have held the spider had been selected. The beetle, in short, had hung up his dead game in the most artistic manner, and in order to test the soundness of his judgment, I waved the twig of heather to and fro as violently as any breeze of wind could have done, yet the spider remained unshaken.

“Now who will deny to the insect brain the faculty of reasoning ? The beetle thought that if he did not hang up his game, it might fall a prey to the other predatory creatures, and took all the trouble I have described to secure for it the best and safest larder.”

CHAPTER XXXIX.

CONCLUDING REMARKS.

WE have now sought for indications of reason and understanding through the inferior animal creation from the elephant to the ant and the beetle. We find signs of intelligence in various creatures ; intelligence quite distinguishable from the mere promptings of instinct. We have observed how the "half-reasoning elephant" shows his good sense and good feeling in innumerable ways. We have noticed how dogs distinguish themselves by their general sagacity and perception of things ; how skilful they are in assisting and protecting man ; how they ask help of man and of one another ; how they communicate their notions and feelings ; how they use their memory for conferring benefits or inflicting revenge ; how they discriminate between persons and property ; and how they manifest, in many ways, a sense even of right and justice. We have seen how the same qualities are manifested, though in a less degree, in the horse. We have attended to the exhibitions of sagacity and artfulness in monkeys and rats, cats and foxes, in many other four-footed animals, and in birds. We have seen, too, how

insects, impelled mostly by instinct, are not wanting in intelligence to meet difficulties, or remedy accidents, in the process of their works. With all these particulars before us, may we not say of many of the animals of the present day, as Milton made the angel say of those in Paradise,

“ They also know,
And reason not contemptibly ? ”

The ways of instinct are at all times, from necessity, the same, but in the instances which we have been contemplating we plainly behold the uncontrolled variations of reason. If man is pre-eminently endowed with the rational faculty, some portions of it are nevertheless bestowed on his humbler fellow-beings.

Man has been justly said to be supreme over the other creatures as the tool-making and tool-using animal. We observe, however, some efforts at the use of tools, though but imperfect, in the elephant, who carries a leafy branch in his trunk to shade himself from the sun; in the ape, who puts a stone into an open oyster to prevent it from closing, or lifts a stone to break nuts, or beats the elephant's trunk, or his fellow-apes, with a stick, or takes the cat's paw, if the story be true, to extract chestnuts from the fire; in the fox, who spreads cods' heads as a bait to catch gulls, or immerses himself in the water, and holds a bough over his head to deceive the hunters; in the raccoon, who captures deer with pieces of moss; in the bear, who, as told in the account of Cook's third voyage, rolls down pieces of rock to crush stags; in the rat, when he leads his blind brother with a stick; in the bee, which uses propolis to cover a slug that has died in the hive; in the spider, which attaches a piece of

wood to its web to steady it; and in the nymphæ of water moths, which select straws in which they may float, putting in a bit of wood if it be too heavy or a bit of gravel if it be too light. Indeed it has been said that there is nothing that man effects with all his tools, and all his skill in the use of them, of which some indication may not be seen in the brute or the insect. Thus the beaver and the bee give examples of construction, the spider of weaving, and the little nautilus of sailing. But there is one purpose to which man applies tools, of which there appears in the lower creatures no conception. The art of using tools for writing language, though some of the humbler animals have a notion of language, is to that class of existences utterly unknown.

Barter is said to be one of the things in which man maintains a superiority. The nearest approach to it among the lower creation is made by the elephant, who, when any extra labour is to be performed, may be induced to apply himself to it by the exhibition of some favourite food or drink, which he readily comprehends that he is to receive in return for extraordinary exertion. There may be some shadowy conception of it in other animals, when they are rewarded with any gratification for something done; as when a dog is presented with a biscuit after putting himself in certain required attitudes. The giving of a worm by the ants of one nest to those of another, in exchange for the dead body of a comrade, as we have mentioned on Plutarch's authority, is, we fear, fabulous.

Something of it is also understood by dogs which have been sent to the baker's with a penny to ex-

change it for a roll ; but this they have, not of their own thought, but from man's teaching.

Locke¹ was not unwilling to allow beasts a portion of reason, for though, he says, they have no power of abstraction, or use of language, to increase their ideas, yet, if they are not mere machines, we cannot deny them to have some reason, and for his own part, he adds, "it seems as evident that they do some of them in certain cases reason, as that they have sense." Bishop Butler and Dr. Thomas Brown are of the same opinion, as well as Cuvier, and Dr. Fleming, the author of the 'Philosophy of Zoology.' All such actions of brutes, indeed, as have not for their object the preservation of the animal, or the propagation of its species, must be considered as the offspring of reason. "That animals should be found," says Southey, "to possess in perfection every faculty which is necessary for their well-being is nothing wonderful; the wonder would be if they did not; but they sometimes display a reach of intellect beyond this."

We must here bestow a passing notice on the faculty which some have attributed to dogs, in cases where three objects are presented to them, of rejecting two by an application of sense and adopting the third, if it suits their purpose, by a deduction of reason. A dog, for instance, falls behind his master and loses sight of him; he pursues him by scent till he comes to a place where three roads meet; he smells at the first, and finding no trace of his master, forbears to follow it; he smells at the second, with a like result; and then, deciding on the third, without smelling to it, hurries forward along it. This supposed power of in-

¹ 'Essay,' b. ii. chap. ii. § 11.

ference in dogs is mentioned by Southey; by some writer who says that an instance of it was seen on Sudbury Common; and by the American John Randolph, of Roanoke, who seems to have been thoroughly persuaded of the dog's possession of it. But I do not believe that any manifestation of such power was ever witnessed in a dog. A dog trusts his smell rather than his sight, and will not, I conceive, take the third of the three ways unless his scent satisfies him that his master, or whatever else he may be pursuing, has taken it before him. I have a dog which, when he sees me at a distance, will run to meet me; but he never seems satisfied that I am really the person whom he expects till he has finally convinced himself by his sense of smell. The notion of such power of ratiocination residing in dogs is as old as the time of Plutarch,¹ who alludes to it with derision, but whose remarks St. Basil² nevertheless adopts as statements of absolute fact. "Logicians," says Plutarch, "declare that a dog, in pursuit of a hare or other animal, coming to a place where the road divides into three branches, uses that process of reasoning which consists in rejecting two terms of a series to the adoption of the third. The animal, he says to himself, has gone either this way, or that way, or the third way; but I find that he has not gone this way or that way; therefore he has gone the third way; as if sense gave him no assistance, but reason argued from premises to a conclusion. But the dog's intelligence," he adds, "needs no such extraordinary attestation, which is indeed groundless and fanciful, for his scent and his observation of the animal's

¹ De Solert. Anim. c. 13.

² Opera, Paris, 1721, tom. i. p. 84; M. Blaze, Hist. du Chien, pp. 41, 45.

footsteps indicating the direction which it has taken, afford him ample satisfaction as to what he has to do, without any aid from syllogistic inference. His good sense and good feeling may be fully understood from numbers of his ordinary acts and proceedings, without recourse being had to that which has no basis but in imagination."

What has rendered some people reluctant to allow the lower animals something of intellect, observes Dr. Abercrombie,¹ is that the admission would tend to establish an immaterial principle in them like that of man. "To such objectors," he adds, "I have only to say, Be it so," and observes that this immaterial principle will certainly be "something entirely different from the properties of matter." So, too, Sir Benjamin Brodie² says that the minds of inferior animals "belong to the same mode of existence, and are of the same essence, as the mind of man," and remarks that he does not see how any one, who reasons about the habits of animals at all, can arrive at any other conclusion, unless, like Descartes, he regards them as unconscious machines. But, if the minds of the inferior animals are thus similar to man's, have they not also something, not only of man's intelligence, but of his moral feeling? Sir Benjamin admits that in many animals, especially the elephant and the dog, such moral feeling is clearly apparent; and Bishop Watson, after reading Bingley's 'Anecdotes of British Quadrupeds,' observed that he could not imagine how any one could deny brutes a portion of moral feeling.

Dr. Abercrombie, in admitting that brutes have an

¹ 'On the Intellectual Powers,' p. 28.

² 'Psychological Inquiries,' pref. and dial. iv.

“immaterial principle” in them, entirely distinct from matter, does not say that this principle, or soul, will live, like the spirit of man, after death. This opinion, however, has not wanted advocates, both in ancient and in modern times. Mr. Broderip, in his ‘Zoological Recreations,’¹ has occupied a page or two in adverting to ancient poets and philosophers, Jewish Rabbis, and Christian Fathers, that have held this doctrine. Virgil gives his heroes horses to drive in the Elysian fields; and the Greek poets gave Orion his dogs. Rabbi Manasseh, speaking of the resurrection, says that brutes will then enjoy a much happier state of being than they experienced here; and Philo Judæus foretells that ferocious beasts will in a future state be deprived of their savageness. Among the men of our day, Dr. John Brown, in his ‘Horæ Subsecivæ,’² boldly says, “I am one of those who believe that dogs have a next world; and why not?” Dr. Maitland declares himself of the same belief in his ‘Eruvin.’ And the Rev. J. G. Wood,³ in one of his most recent publications, has the following passage:—

“Much of the present heedlessness respecting animals is caused by the popular idea that they have no souls, and that when they die they entirely perish. Whence came that most preposterous idea? Surely not from the only source where we might expect to learn about souls—not from the Bible, for there we distinctly read of ‘the spirit of the sons of man,’ and immediately afterwards of ‘the spirit of the beast,’ one aspiring, the other not so. And the necessary consequence of the spirit is a life after the death of the

¹ P. 303.

² P. 211.

³ ‘Common Objects of the Country,’ p. 21.

body. Let any one wait in a frequented thoroughfare for one short hour, and watch the sufferings of the poor brutes that pass by. Then, unless he denies the Divine Providence, he will see clearly that unless these poor creatures were compensated in another life, there is no such quality as justice."

But of the probability or improbability of this theory I say nothing, leaving every one to form his own opinion.



INDEX.

- Abercrombie, Dr., his opinion of the lower animals, 462, 463.
- Animals, inferior, general intelligence of, 459; how far they use tools, 460; some allow them 'an immaterial principle,' and a next world, 463.
- Addison, not inclined to allow the inferior animals reason, 2; his remarks on instinct, 9.
- Ælian, his anecdotes of elephants, 15-17; of a dog, 164; of apes, 274, 275.
- Alexander the Great's horse, 233.
- Anacreon, his dog, 164, 165.
- Androclus and the lion, 208, 425.
- Ants, intercommunication among, 452.
- Apes, *see* Monkeys.
- Aristotle, his opinion of the faculties of brutes, 2.
- Arriau's account of his greyhound, 217.
- Ass, good qualities of, 242-245; one that found his way two hundred miles, 328.
- Barter, scarcely practised among the inferior animals, 461.
- Beaver, intelligence in, 430.
- Bees find their way readily, 337; something in them beyond instinct, 447.
- Bell, Mr., his anecdote of a dog, 165.
- Berkeley, Mr. Grantley, his two deer greyhounds, 170; his observation of a spider, 456.
- Bewick, his anecdotes of dogs, 79, 99, 172.
- Birds, their intelligence, 340, *seqq.*; communication of ideas among, 372; their conjugal relations, 381.
- Blaine, Mr., his anecdote of a butcher's dog, 100; of a Newfoundland dog, 117; of dogs understanding man, 139; of dogs guarding, 174.
- Blaze, M., his eulogy of the dog, 218.
- Bonaparte, Napoleon, his praise of the horse, 232.
- Broderip, Mr., his remarks on the intelligence of elephants, 37; his anecdote of a monkey, 279; his remark on Landseer's picture of the cat's-paw, 286.
- Brodie, Sir Benjamin, allows moral feeling to dogs, 208, 462.
- Brougham, Lord, knows not why brutes should be denied a portion of reason, 5.
- Brown, Dr., his account of "Rab," 182; thinks that animals have a next world, 463.
- Brutes, why men are unwilling to allow them a portion of reason, 2.
- Buckland, Mr. Frank, his remarks on canine sagacity, 66; his account of some rats, 295.

- Buffon allows beasts no portion of reason, 4.
- Butler, Bishop, his opinion of the lower animals, 462.
- Carbasson, Père, his extraordinary monkey, 278.
- Cat, 247-258; sagacity in finding way, 322, *seqq.*
- Cats have discovered murderers, 252-254.
- Catlin, Mr., tells how horses are tamed by the North American Indians, 239.
- Cellini, Benvenuto, intelligence of his dog, 152.
- Celsus claims reason for brutes, 10.
- Chabert, the fire-king, his sagacious dog, 146.
- Chemical affinities, 7.
- Chimpanzee, *see* Monkeys.
- Cock's revenge, 381.
- Condillac allows something of reason to beasts, 5.
- Constantinople, dogs of, 212.
- Cops, Mr., his sagacious orang-outang, 287.
- Cornoraik, feigning death, 444.
- Corse, Mr., his account of an elephant, 46.
- Cow, finding way from place to place, 329.
- Cranes, intelligence of, 352.
- Crocodiles, young, run to the water when hatched, 8.
- Croker, Crofton, his account of the Whisperer, 240.
- Crows, their sagacity, 342; *see* Rocks.
- Cuvier, Frederick, allows great intelligence to beasts, 5.
- Darwin, Dr., allows beasts a portion of reason, 5.
- Davy, Dr., his experiment on a young crocodile, 8.
- Deer, intelligence in, 422.
- Descartes, his notion that the lower animals are mere machines, 3, 68.
- Dog, his general intelligence, 60, *seqq.*; Newfoundland breed, 71, *seqq.*; punishment of small dogs by larger, 79, *seqq.*; shepherd's dog, 83, *seqq.*; Spaniel, Pointer, Terrier, 106, *seqq.*; saving life, 116, *seqq.*; dogs of St. Bernard, 126; communication of thought from one dog to another, 128, *seqq.*; asking assistance of man, understanding man's language, 136, *seqq.*; memory, 150, *seqq.*; distinctions of persons and property, 159, *seqq.*; intelligence in guarding, 174, *seqq.*; in finding lost articles, 184, *seqq.*; how much he may be taught, 197-207; moral feeling and sense of justice, 208-218; M. Blaze's eulogy of, 218; Blind dog finding his way, 320.
- Dogs acting in concert, 130-132, 134; sometimes capricious in their attachments, 161; detection of hostility towards their masters, 178, 179; recognizing portraits, 194; dogs of Constantinople and Egypt, 212-216.
- Drew, Samuel, his story of a dog, 144.
- Eagle, good sense of one, 349.
- Egypt, dogs of, 215.
- Eldon, Lord, his dog's epitaph, 78.
- Elephant, intelligence of 13, *seqq.*; his mode of taking revenge, 19, *seqq.*; love of regularity and order, 28, *seqq.*; docility and judgment, 40, *seqq.*; memory, 46, *seqq.*; self-government in the wild state, 56, *seqq.*
- Faber, Joannes, his account of a dog, 204.
- Ferret, combat of one with a rat, 299.
- Feigning death, stratagem of animals, 440.
- Finding way from place to place, sagacity of animals in, 309, *seqq.*
- Fish find their way from place to place, 334; what sagacity fish may possess, 431.

- Flourens, his distinction between beasts and men, 10.
- Fox, its qualities, 259-270; feigning death, 442.
- Foxes, Arctic, extraordinary craftiness of, 268-270.
- Galen's experiment on a kid, 7.
- Giraldus Cambrensis, his anecdote of a dog, 151.
- Glutton, stratagem of, 428.
- Goat, intelligence of, 414.
- Godfrey's, John, dog, its temperance, 67.
- Goldfinches, ingenuity of, 362.
- Good, Dr., his account of sagacity in a cat, 248.
- Goose, sagacity of, 351, 353.
- Gorilla, its effective use of a stick, 272.
- Grenville, Lord; his Latin epitaph on a dog, 173.
- Guat, Le, his notice of an ape in Java, 287.
- Hallam, his verses on Sir W. Scott's dogs, 158.
- Hancock, Dr., his remarks on the act of a Newfoundland dog, 80.
- Hares, intelligence of, 422.
- Harrington, Sir John, his dog, 168.
- Helvetius, allows reason to beasts, 5.
- Henderson, Dr., his account of the Arctic foxes, 469.
- Herculaneum, dog's collar found at, 124.
- Heron, sagacity of, 351; councils of herons, 376.
- Hogg, James, his accounts of the shepherd's dog, 83, *seqq.*
- Hobbes, remarks that man could have formed no society without speech, 282.
- Horse, intelligence and good feeling of, 220-242; sagacity in finding his way, 327.
- Horses, in a race, their intelligence, 224; their sensibility to kind treatment, 228-230; good memory of, 234, 236; sometimes revengeful, 236.
- Hughes, comic actor, his dog, 166.
- Humboldt allows reason to beasts, 5; his remarks on young turtles running to the sea, 8.
- Instinct defined, and distinguished from reason, 6.
- Jease, Mr., thinks that animals count days, 392.
- Knight, Miss, tells of a cat that discovered a murderer, 252.
- Lamartine's anecdote of an Arabian horse, 227.
- Lark protecting its nest, 363.
- Lavater, his remark on human liberty, 9.
- Lawrence, distinction in his 'Lectures' between man and the ape, 280.
- Lee, Mrs., her account of the extraordinary performances of two dogs, 201-203; her remarks on the gravity of monkeys, 283.
- Leibnitz allows beasts a certain portion of reason, 4; his account of a dog that uttered thirty words, 11, 204.
- Lion, good feeling in, 424-427.
- Léonard, Mons., his accomplished dogs, 199.
- Locke allows animals a certain portion of reason, 462.
- Ludolphus, Job, his account of apes in Æthiopia, 276.
- Magpies, their artfulness, 348.
- Man, savage, finds his way through unknown parts by a kind of instinct, 338.
- Marcgrave's account of the preaching monkeys, 277.
- Mice, instances of their sagacity, 305; Iceland mice, 307.
- Monbodo, his comparison of monkeys with man, 279.
- Monkeys and apes, general qualities of, 271-288; 409.
- Monkeys, their use of tools, 271, 272;

- dexterity of a chimpanzee, 273 ; faculty of imitation in monkeys, 274 ; *ouarines*, or preaching monkeys, 277 ; the monkey's brain, 281 ; monkey that committed suicide, 282 ; feigning death, 445.
- Montaigne allows thought to the inferior animals, 3.
- Montargis, dog of, 151.
- Morritt, Mr., Sir W. Scott's friend, his two terriers, 112.
- Mule, its good qualities, 245.
- Müller, Max, observes that speech sets man high above beasts, 11.
- Napier, Sir Charles, anecdote of his boyhood, 120.
- Newton, Bishop, his account of the sagacity of a horse in a combat of wild beasts, 226.
- Opossum, feigning itself dead, 441.
- Ottley, Mr. W. Young, his anecdote of a dog, 168.
- Ouarines, *see* Monkeys.
- Owen, Professor, his account of a dog's intelligence, 190 ; pronounces man not to be a developed monkey, 279.
- Ox, intelligence in, 406-412.
- Parrots, what intelligence they possess, 385 ; Prince Maurice's parrot, 386 ; Dennis O'Kelly's, 387 ; another extraordinary one, 388.
- Partridge, sagacity in protecting its nest, 362.
- Pidcock, of Exeter Change, offends his elephant, 28.
- Pigeons, their power of finding their way, 332.
- Pliny, his praise of the elephant, 13, 14.
- Plutarch, his anecdotes of elephants, 14, 15, 16 ; of dogs, 150, 151, 176, 197 ; of the horse, 233 ; of mules, 245, 246 ; of a fox, 262.
- Pontoppidan, his relation of the Arctic foxes, 270.
- Poynder, Mr., remarkable account of his dog, 311.
- Pyrard, Francis, his notion of monkeys in Sierra Leone, 287.
- Pyrrhus, king of Epirus, discovers two murderers by the aid of a dog, 150.
- Raccoon, sagacity of, 429.
- Rats, instances of their ingenuity, 289, *seqq.* ; how they act in combination, 295-299 ; blind rat, 301 ; theatrical performance by rats, 304 ; feigning death, 443.
- Raffles, Sir Stamford, his monkey that committed suicide, 283.
- Rarey, the horse-tamer, 242.
- Reason distinguished from instinct, 6, 7.
- Réaumur allows intelligence to the lower animals, 4.
- Redbreast, intelligence of, 358.
- Rooks, communities of, 373, 440.
- Rose, Right Hon. W. G., his account of the dogs of Constantinople, 213.
- Rousseau, J. J., inclined to think man a developed monkey, 279.
- St. John, Mr., his account of a fox, 260.
- Salmasius thought that beasts have something of reason, 4.
- Schoutton, his notice of apes, 287.
- Scott, Sir Walter, anecdote of his horse Daisy, 29 ; his accounts of dogs taught to steal, 91, 205 ; of a dog that saved his master from fire, 122 ; his dog Camp, 138 ; his remarks on the dog, 157 ; on the cat, 247.
- Seneca, his opinion of beasts as compared with man, 3 ; denies beasts memory, 11.
- Senior, Nassau, his anecdote of a dog's sagacity, 68.
- Sentinels placed by animals, 436.
- Serpent finding its way a hundred miles, 331.
- Sheep finding way from place, 330 ; intelligence in, 412.
- Shipp, Captain, incurs the vengeance of an elephant, 20 ; his

- account of the efficacy of elephants in military operations, 34.
- Sirr, Mr., his account of elephants in Ceylon, 44.
- Sirrah, the Ettrick Shepherd's dog, 83-87; 92, 93.
- Skinner, Major, his observation of a troop of elephants, 57.
- Smellie thought beasts partakers of reason, 5; his praise of the sheep-dog, 104; his cat, 256.
- Smith, Colonel Hamilton, his praise of shepherds' dogs, 102; of the cattle dogs of Cuba, 103; of water-dogs, 116; of dogs distinguishing property, 168.
- Southey allows animals reason, 462.
- Spider, ingenuity of, 454.
- Storks, how they act in concert, 378.
- Sullivan, the Whisperer, his mastery over horses, 239-241.
- Swallows, ingenuity of, 365; communities of, 368.
- Swine finding way from place to place, 330; intelligence of, 415; sow trained to point at game, 416.
- Tavernier kills a female ape, 275.
- Terry relates how elephants may be trained, 24, 43.
- Thales, his experiment on a mule, 245.
- Tiger, respects a spirit in a dog, 427.
- Time, how animals distinguish, 392-405.
- Tomtit, its artfulness, 361.
- Tools, how far used by the inferior animals, 271-273.
- Tortoise finding its way from the English Channel to the Ascension Island, 336.
- Turkey, sagacity in a, 353.
- Turnspit dogs, sagacity of, 68.
- Turtle, young, run to the sea, 8.
- Tzetztes, his anecdotes of dogs, 151, 165.
- Walsh, Dr. Edward, his dog, 192.
- Watson, Bishop, his remark on domestic animals, 208.
- Weasel, ingenuity of, 292.
- Wenzel, his account of intelligence in a cat, 251.
- Westcott, Mr., his anecdote of a dog deserting his master, 211.
- Whisperer, *see* Sullivan.
- Wilkinson, Sir Gardner, his account of the dogs of Egypt, 215.
- Wolf, anecdote of intelligence in a, 424.
- Wood, Rev. J. G., his anecdote of a dog, 185; his intelligent cat, 247; his opinion that animals have 'a next world,' 464.
- Yonatt, Mr., his advice on the treatment of dogs, 206; his remark on the dog's feelings and faculties, 209; gives an anecdote of dog's affection, *ib.*; his remarks on the horse, 231, 234, 238.

L. REEVE & CO.'S

PUBLICATIONS IN

Botany, Conchology, Entomology,

CHEMISTRY, TRAVELS, ANTIQUITIES,

ETC.

"None can express Thy works but he that knows them;
And none can know Thy works, which are so many
And so complete, but only he that owes them."

George Herbert.



LONDON :

L. REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.

1870.

CONTENTS.



	PAGE
NEW SERIES OF NATURAL HISTORY	3
BOTANY	5
FERNS	11
MOSSES AND LICHENS	12
SEAWEEDS	12
FUNGI	13
SHELLS AND MOLLUSKS	14
INSECTS	16
ANTIQUARIAN	18
MISCELLANEOUS	20
RECENTLY PUBLISHED	24
FORTHCOMING WORKS	24

All Books sent post-free to any part of the United Kingdom on receipt of a remittance for the published price.

Post-Office Orders to be made payable at KING STREET, COVENT GARDEN.

LIST OF WORKS

PUBLISHED BY L. REEVE & CO.

L. REEVE AND CO.'S NEW SERIES OF NATURAL HISTORY FOR BEGINNERS.

** A good introductory series of books on Natural History for the use of students and amateurs is still a *desideratum*. Those at present in use have been too much compiled from antiquated sources; while the figures, copied in many instances from sources equally antiquated, are far from accurate, the colouring of them having become degenerated through the adoption, for the sake of cheapness, of mechanical processes.

The present series will be entirely the result of original research carried to its most advanced point; and the figures, which will be chiefly engraved on steel, by the artist most highly renowned in each department for his technical knowledge of the subjects, will in all cases be drawn from actual specimens, and coloured separately by hand.

Each work will treat of a department of Natural History sufficiently limited in extent to admit of a satisfactory degree of completeness.

The following are now ready:—

BRITISH BUTTERFLIES AND MOTHS; an Introduction to the study of our Native LEPIDOPTERA. By H. T. STAINTON. Crown 8vo, 16 Coloured Steel Plates, containing Figures of 100 Species, engraved from Natural Specimens expressly for the work by E. W. ROBINSON, and Wood-Engravings, 10s. 6d.

BRITISH BEETLES; an Introduction to the Study of our Indigenous COLEOPTERA. By E. C. RYE. Crown 8vo, 16 Coloured Steel Plates, comprising Figures of nearly 100 Species, engraved from Natural Specimens, expressly for the work, by E. W. ROBINSON, and 11 Wood-Engravings of Dissections by the Author, 10s. 6d.

BRITISH BEES; an Introduction to the Study of the Natural History and Economy of the Bees indigenous to the British Isles. By W. E. SHUCKARD. Crown 8vo, 16 Coloured Steel Plates, containing nearly 100 Figures, engraved from Natural Specimens, expressly for the work, by E. W. ROBINSON, and Woodcuts of Dissections, 10s. 6d.

BRITISH SPIDERS; an Introduction to the Study of the ARANEIDÆ found in Great Britain and Ireland. By E. F. STAVELEY. Crown 8vo, 16 Plates, containing Coloured Figures of nearly 100 Species, and 40 Diagrams, showing the number and position of the eyes in various Genera, drawn expressly for the work by TUFFEN WEST, and 44 Wood-Engravings, 10s. 6d.

BRITISH GRASSES; an Introduction to the Study of the Grasses found in the British Isles. By M. PLUES. Crown 8vo, 16 Coloured Plates, drawn expressly for the work by W. FITCH, and 100 Wood-Engravings, 10s. 6d.

BRITISH FERNS; an Introduction to the Study of the Ferns, LYCOPODS, and EQUISETA indigenous to the British Isles. With Chapters on the Structure, Propagation, Cultivation, Diseases, Uses, Preservation, and Distribution of Ferns. By MARGARET PLUES. Crown 8vo, 16 Coloured Plates, drawn expressly for the work by W. FITCH, and 55 Wood-Engravings, 10s. 6d.

BRITISH SEAWEEDS; an Introduction to the Study of the Marine ALGÆ of Great Britain, Ireland, and the Channel Islands. By S. O. GRAY. Crown 8vo, 16 Coloured Plates, drawn expressly for the work by W. FITCH, 10s. 6d.

Other Works in preparation.

BOTANY.

—◆—

BRITISH WILD FLOWERS, Familiarly Described in the Four Seasons. A New Edition of 'The Field Botanist's Companion.' By THOMAS MOORE, F.L.S. One volume, Demy 8vo, 424 pp. With 24 Coloured Plates, by W. FITCH, 16s.

An elegantly-illustrated volume, intended for Beginners, describing the plants most readily gathered in our fields and hedgerows, with the progress of the seasons. Dissections of the parts of the flowers are introduced among the Figures, so that an insight may be readily obtained not only of the Species and name of each plant, but of its structure and characters of classification.

~~~~~

**HANDBOOK OF THE BRITISH FLORA**; a Description of the Flowering Plants and Ferns indigenous to, or naturalized in, the British Isles. For the Use of Beginners and Amateurs. By GEORGE BENTHAM, F.R.S., President of the Linnean Society. New Edition, Crown 8vo, 680 pp., 12s.

Distinguished for its terse and clear style of description; for the introduction of a system of Analytical Keys, which enable the student to determine the family and genus of a plant at once by the observation of its more striking characters; and for the valuable information here given for the first time of the geographical range of each species in foreign countries.

~~~~~

HANDBOOK OF THE BRITISH FLORA, ILLUSTRATED EDITION; a Description (with a Wood-Engraving, including dissections, of each species) of the Flowering Plants and Ferns indigenous to, or naturalized in, the British Isles. By GEORGE BENTHAM, F.R.S., President of the Linnean Society. Demy 8vo, 2 vols., 1154 pp., 1295 Wood-Engravings, from Original Drawings by W. FITCH, £3. 10s.

An illustrated edition of the foregoing Work, in which every species is accompanied by an elaborate Wood-Engraving of the Plant, with dissections of its leading structural peculiarities.

~~~~~

**OUTLINES OF ELEMENTARY BOTANY**, as Introductory to Local Floras. By GEORGE BENTHAM, F.R.S., President of the Linnean Society. Demy 8vo, pp. 45, 2s. 6d.

~~~~~

LAWS OF BOTANICAL NOMENCLATURE adopted by the International Botanical Congress, with an Historical Introduction and a Commentary. By ALPHONSE DE CANDOLLE. 2s. 6d.

BRITISH GRASSES; an Introduction to the Study of the Gramineæ of Great Britain and Ireland. By M. PLUES. Crown 8vo, 100 Wood-Engravings, 6s.; with 16 Coloured Plates by W. FITCH, 10s. 6d.

One of the 'New Series of Natural History,' accurately describing all the Grasses found in the British Isles, with introductory chapters on the Structure, Cultivation, Uses, etc. A Wood-Engraving, including dissections, illustrates each Species; the Plates contain Coloured figures of 43 Species.

CURTIS'S BOTANICAL MAGAZINE, comprising New and Rare Plants from the Royal Gardens of Kew, and other Botanical Establishments. By Dr. J. D. HOOKER, F.R.S., Director of the Royal Gardens. Royal 8vo. Published Monthly, with 6 Plates, 3s. 6d. coloured. Vol. XXV. of the Third Series (being Vol. XCV. of the entire work) now ready, 42s.

Descriptions and Drawings, beautifully coloured by hand, of newly-discovered plants suitable for cultivation in the Garden, Hothouse, or Conservatory.

THE FLORAL MAGAZINE, containing Figures and Descriptions of New Popular Garden Flowers. By the Rev. H. HONYWOOD DOMBRAIN, A.B. Imperial 8vo. Published Monthly, with 4 Plates, 2s. 6d. coloured. Vols. I. to V., each, with 64 coloured plates, £2. 2s. Vols. VI. to VIII., 48 coloured plates, 31s. 6d. each.

Descriptions and Drawings, beautifully coloured by hand, of new varieties of Flowers raised by the nurserymen for cultivation in the Garden, Hothouse, or Conservatory.

THE TOURIST'S FLORA; a Descriptive Catalogue of the Flowering Plants and Ferns of the British Islands, France, Germany, Switzerland, Italy, and the Italian Islands. By JOSEPH WOODS, F.L.S. Demy 8vo, 504 pp., 18s.

Designed to enable the lover of botany to determine the names of any wild plants he may meet with while journeying in our own country and the countries of the Continent most frequented by tourists. The author's aim has been to make the descriptions clear and distinct, and to comprise them within a volume of not inconvenient bulk.

ILLUSTRATIONS OF THE GENUS CAREX. By FRANCIS BOOTT, M.D. Part IV. Folio, 189 Plates, £10.

JOURNAL OF BOTANY, BRITISH AND FOREIGN.

Vols. I. to VII. Edited by BERTHOLD SEEMANN, Ph.D., F.L.S., F.R.G.S. Beautifully illustrated by FITCH. Price £1. 5s. each; a Complete Set, £3. 10s.

These seven volumes are illustrated by One Hundred Plates (mostly coloured) and numerous Wood-Engravings, and are a faithful record of botany in all its branches during the last seven years. All the leading botanists of the day, both in the Old and New World, have contributed original articles, and as so many hundred new genera and species have first been described in its pages, this Journal will be indispensable to every botanical library. To students of the British Flora it recommends itself particularly for having published every new plant that has been discovered in the British Islands during the last eight years.

A SECOND CENTURY OF ORCHIDACEOUS PLANTS,

selected from the subjects published in Curtis's 'Botanical Magazine' since the issue of the 'First Century.' Edited by JAMES BATEMAN, Esq., F.R.S. Complete in 1 Vol., royal 4to, 100 Coloured Plates, £5. 5s.

During the fifteen years that have elapsed since the publication of the 'Century of Orchidaceous Plants,' now out of print, the 'Botanical Magazine' has been the means of introducing to the public nearly two hundred of this favourite tribe of plants not hitherto described and figured, or very imperfectly so. This volume contains a selection of 100 of the most beautiful and best adapted for cultivation. The descriptions are revised and in many cases re-written, agreeably with the present more advanced state of our knowledge and experience in the cultivation of Orchidaceous plants, by Mr. Bateman, the acknowledged successor of Dr. Lindley as the leading authority in this department of botany and horticulture.

~~~~~

**MONOGRAPH OF ODONTOGLOSSUM, a Genus of the**  
Vandeous Section of Orchidaceous Plants. By JAMES BATEMAN, Esq., F.R.S. Imperial folio. Parts I. to IV., each with 5 Coloured Plates, and occasional Wood Engravings, 21s.

Designed for the illustration, on an unusually magnificent scale, of the new and beautiful plants of this favoured genus of *Orchidaceae*, which are being now imported from the mountain-chains of Mexico, Central America, New Granada, and Peru.

~~~~~

SELECT ORCHIDACEOUS PLANTS. By ROBERT WARNER, F.R.H.S. With Notes on Culture by B. S. WILLIAMS. In Ten Parts, folio, each, with 4 Coloured Plates, 12s. 6d.; or, complete in one vol., cloth gilt, £6. 6s.

Second Series, Parts I. to VII., each, with 3 Coloured Plates, 10s. 6d.

~~~~~

**THE RHODODENDRONS OF SIKKIM-HIMALAYA;**

being an Account, Botanical and Geographical, of the Rhododendrons recently discovered in the Mountains of Eastern Himalaya from Drawings and Descriptions made on the spot, by Dr. J. D. Hooker, F.R.S. By Sir W. J. HOOKER, F.R.S. Folio, 30 Coloured Plates, £4. 14s. 6d.

Illustrations on a superb scale of the new Sikkim Rhododendrons, now being cultivated in England, accompanied by copious observations on their distribution and habits.

~~~~~

GENERA PLANTARUM, ad Exemplaria imprimis in Her-

bariis Kewensibus servata definita.' By GEORGE BENTHAM, F.R.S., President of the Linnean Society, and Dr. J. D. HOOKER, F.R.S., Director of the Royal Gardens, Kew. Vol. I. Part I. pp. 454. Royal 8vo, 21s. Part II., 14s.; Part III., 15s.; or Vol. I. complete, 50s.

This important work comprehends an entire revision and reconstruction of the Genera of Plants. Unlike the famous 'Genera Plantarum' of Endlicher, which is now out of print, it is founded on a personal study of every genus by one or both authors. The First Vol. contains 82 Natural Orders and 2544 Genera.

FLORA VITIENSIS; a Description of the Plants of the Viti or Fiji Islands, with an Account of their History, Uses, and Properties. By Dr. BERTHOLD SEEMANN, F.L.S. Royal 4to, Parts I. to IX. each, 10 Coloured Plates, 15. To be completed in 10 Parts.

This work owes its origin to the Government Mission to Viti, to which the author was attached as naturalist. In addition to the specimens collected, the author has investigated all the Polynesian collections of Plants brought to this country by various botanical explorers since the voyage of Captain Cook.

FLORA OF THE ANTARCTIC ISLANDS. By Dr. J. D. HOOKER, F.R.S. Royal 4to, 2 vols., 574 pp., 200 Plates, £10. 15s. coloured. Published under the authority of the Lords Commissioners of the Admiralty.

The 'Flora Antarctica' illustrates the Botany of the southern districts of South America and the various Antarctic Islands, as the Falklands, Kerguelen's Land, Lord Auckland and Campbell's Island, and 1370 species are enumerated and described. The plates, which are executed by Mr. FITCH, and beautifully coloured, illustrate 370 species, including a vast number of exquisite forms of Mosses and Seaweeds.

FLORA OF TASMANIA. By Dr. J. D. HOOKER, F.R.S. Royal 4to, 2 vols., 972 pp., 200 Plates, £17. 10s., coloured. Published under the authority of the Lords Commissioners of the Admiralty.

The 'Flora of Tasmania' describes all the Plants, flowering and flowerless, of that Island, consisting of 2203 Species, collected by the Author and others. The Plates, of which there are 200, illustrate 412 Species.

ON THE FLORA OF AUSTRALIA, its Origin, Affinities, and Distribution; being an Introductory Essay to the 'Flora of Tasmania.' By Dr. J. D. HOOKER, F.R.S. 128 pp., quarto, 10s.

FLORA HONGKONGENSIS; a Description of the Flowering Plants and Ferns of the Island of Hongkong. By GEORGE BENTHAM, P.L.S. With a Map of the Island. Demy 8vo, 550 pp., 16s. Published under the authority of Her Majesty's Secretary of State for the Colonies.

The Island of Hongkong, though occupying an area of scarcely thirty square miles, is characterized by an extraordinarily varied Flora, partaking, however, of that of South Continental China, of which comparatively little is known. The number of Species enumerated in the present volume is 1056, derived chiefly from materials collected by Mr. Hinds, Col. Champion, Dr. Haucc, Dr. Harland Mr. Wright, and Mr. Wilford.

FLORA OF TROPICAL AFRICA. By DANIEL OLIVER, F.R.S., F.L.S. Vol. I., 20s. Published under the authority of the First Commissioner of Her Majesty's Works.

This important and much-needed work embodies the researches of a long list of explorers, the results of whose labours have been accumulating at the Royal Gardens, Kew, and other museums, for many years past. The present volume contains the Orders *Ranunculaceæ* to *Connaraceæ*.

HANDBOOK OF THE NEW ZEALAND FLORA; a Systematic Description of the Native Plants of New Zealand, and the Chatham, Kermadec's, Lord Auckland's, Campbell's, and Macquarrie's Islands. By Dr. J. D. HOOKER, F.R.S. Demy 8vo. Part I., 16s.; Part II., 14s.; or complete in one vol., 30s. Published under the auspices of the Government of that colony.

A compendious account of the plants of New Zealand and outlying islands, published under the authority of the Government of that colony. The first Part contains the Flowering Plants, Ferns, and Lycopods; the Second the remaining Orders of *Cryptogamia*, or Flowerless Plants, with Index and Catalogues of Native Names and of Naturalized Plants.

FLORA AUSTRALIENSIS; a Description of the Plants of the Australian Territory. By GEORGE BENTHAM, F.R.S., President of the Linnean Society, assisted by FERDINAND MUELLER, F.R.S., Government Botanist, Melbourne, Victoria. Demy 8vo. Vols. I. to IV., 20s. each. Published under the auspices of the several Governments of Australia.

Of this great undertaking, the present volume, of nearly two thousand closely-printed pages, comprise about one-half. The materials are derived not only from the vast collections of Australian plants brought to this country by various botanical travellers, and preserved in the herbaria of Kew and of the British Museum, including those hitherto unpublished of Banks and Solander, of Captain Cook's first Voyage, and of Brown in Flinders', but from the very extensive and more recently collected specimens preserved in the Government Herbarium of Melbourne, under the superintendence of Dr. Ferdinand Mueller. The descriptions are written in plain English, and are masterpieces of accuracy and clearness.

FLORA OF THE BRITISH WEST INDIAN ISLANDS.

By Dr. GRISEBACH, F.L.S. Demy 8vo, 806 pp., 37s. 6d. Published under the auspices of the Secretary of State for the Colonies.

Containing complete systematic descriptions of the Flowering Plants and Ferns of the British West Indian Islands, accompanied by an elaborate index of reference, and a list of Colonial names.

**CONTRIBUTIONS TO THE FLORA OF MENTONE,
AND TO A WINTER FLORA OF THE RIVIERA, INCLUDING
THE COAST FROM MARSEILLES TO GENOA.** By J. TRAHERNE
MOGGIDGE. Royal 8vo. Parts I., II., and III., each, with 25 Coloured
Plates, 15*s.*

In this work a full page is devoted to the illustration of each Species, the drawings being made by the author from specimens collected by him on the spot, and they exhibit in vivid colours the beautiful aspect which many of our wild flowers assume south of the Alps.

**ILLUSTRATIONS OF THE NUEVA QUINOLOGIA
OF PAVON, with Observations on the Barks described.** By J. E. HOWARD,
F.L.S. With 27 Coloured Plates by W. FITCH. Imperial folio, half-
morocco, gilt edges, £6. 6*s.*

A superbly-coloured volume, illustrative of the most recent researches of Pavon and his associates among the Cinchona Barks of Peru.

**THE QUINOLOGY OF THE EAST INDIAN PLANTA-
TIONS.** By J. E. HOWARD, F.L.S. Folio, 3 Coloured Plates, 21*s.*

**REVISION OF THE NATURAL ORDER HEDERA-
CEÆ, being a reprint, with numerous additions and corrections, of a series
of papers published in the 'Journal of Botany, British and Foreign.'** By
BERTHOLD SEEMANN, Ph.D., F.L.S. 8vo, 7 Plates. 10*s.* 6*d.*

THE LONDON JOURNAL OF BOTANY. Original
Papers by eminent Botanists, Letters from Botanical Travellers, etc. Vol.
VII., completing the Series. Demy 8vo, 23 Plates, 30*s.*

JOURNAL OF BOTANY AND KEW MISCELLANY.
Original Papers by eminent Botanists, Letters from Botanical Travellers,
etc. Edited by Sir W. J. HOOKER, F.R.S. Vols. IV. to IX., Demy 8vo.
12 Plates, each £1. 4*s.*

ICONES PLANTARUM. Figures, with brief Descriptive
Characters and Remarks, of New and Rare Plants, selected from the
Author's Herbarium. By Sir W. J. HOOKER, F.R.S. New Series, Vol. V.
Royal 8vo, 100 plates, 31*s.* 6*d.*

FERNS.

BRITISH FERNS; an Introduction to the study of the FERNS, LYCOPODS, and Equiseta indigenous to the British Isles. With Chapters on the Structure, Propagation, Cultivation, Diseases, Uses, Preservation, and Distribution of Ferns. By M. PLUES. Crown 8vo., 55 Wood-Engravings, 6s.; with 16 Coloured Plates by W. FITCH, 10s. 6d.

One of the 'New Series of Natural History for Beginners,' accurately describing all the Ferns and their allies found in Britain, with a Wood-Engraving of each Species, and Coloured Figures of 32 of the most interesting, including magnified dissections showing the Venation and Fructification.

THE BRITISH FERNS; or, Coloured Figures and Descriptions, with the needful Analyses of the Fructification and Venation, of the Ferns of Great Britain and Ireland, systematically arranged. By Sir W. J. HOOKER, F.R.S. Royal 8vo, 66 Plates, £2. 2s.

The British Ferns and their allies are illustrated in this work, from the pencil of Mr. FITCH. Each Species has a Plate to itself, so that there is ample room for the details, on a magnified scale, of Fructification and Venation. The whole are delicately coloured by hand. In the letterpress an interesting account is given with each species of its geographical distribution in other countries.

GARDEN FERNS; or, Coloured Figures and Descriptions, with the needful Analyses of the Fructification and Venation, of a Selection of Exotic Ferns, adapted for Cultivation in the Garden, Hothouse, and Conservatory. By Sir W. J. HOOKER, F.R.S. Royal 8vo, 64 Plates, £2. 2s.

A companion volume to the preceding, for the use of those who take an interest in the cultivation of some of the more beautiful and remarkable varieties of Exotic Ferns. Here also each Species has a Plate to itself, and the details of Fructification and Venation are given on a magnified scale, the Drawings being from the pencil of Mr. FITCH.

FILICES EXOTICÆ; or, Coloured Figures and Description of Exotic Ferns, chiefly of such as are cultivated in the Royal Gardens of Kew. By Sir W. J. HOOKER, F.R.S. Royal 4to, 100 Plates, £6. 11s.

One of the most superbly illustrated books of Foreign Ferns that has been hitherto produced. The Species are selected both on account of their beauty of form, singular structure, and their suitableness for cultivation.

FERNY COMBES; a Ramble after Ferns in the Glens and Valleys of Devonshire. By CHARLOTTE CHANTER. *Third Edition.* Fcp. 8vo, 8 coloured plates by FITCH, and a Map of the County, 5s.

MOSSES AND LICHENS.

HANDBOOK OF BRITISH MOSSES, containing all that are known to be Natives of the British Isles. By the Rev. M. J. BERKELEY, M.A., F.L.S. Demy 8vo, pp. 360, 24 Coloured Plates, 21s.

A very complete Manual, comprising characters of all the species, with the circumstances of habitation of each; with special chapters on development and structure, propagation, fructification, geographical distribution, uses, and modes of collecting and preserving, followed by an extensive series of coloured illustrations, in which the essential portions of the plant are repeated, in every case on a magnified scale.

LICHENES BRITANNICI, seu Lichenum in Angliâ, Scotiâ, et Hiberniâ Videntium Enumeratio, cum eorum Stationibus et Distributione. Scripsit Rev. JACOBUS M. CROMBIE, M.A., Societatum Linuæi et Geologiæ apud Londinum Socius. 4s. 6d.

SEAWEEDS.

BRITISH SEAWEEDS; an Introduction to the Study of the Marine ALGÆ of Great Britain, Ireland, and the Channel Islands. By S. O. GRAY. Crown 8vo, 6s.; with 16 Coloured Plates, drawn expressly for the work by W. FITCH, 10s. 6d.

One of L. Reeve and Co.'s 'New Series,' briefly but accurately describing, according to the classification of the best and most recent authorities, all the Algæ found on our coasts.

PHYCOLOGIA BRITANNICA; or, History of British Seaweeds, containing Coloured Figures, Generic and Specific Characters, Synonyms and Descriptions of all the Species of Algæ inhabiting the Shores of the British Islands. By Dr. W. H. HARVEY, F.R.S. Royal 8vo, 4 vols., 765 pp., 360 Coloured Plates, £7. 10s.

This work, originally published in 1851, is still the standard work on the subject of which it treats. Each Species, excepting the minute ones, has a Plate to itself, with magnified portions of structure and fructification, the whole being printed in their natural colours, finished by hand.

PHYCOLOGIA AUSTRALICA; a History of Australian Seaweeds, comprising Coloured Figures and Descriptions of the more characteristic Marine Algæ of New South Wales, Victoria, Tasmania, South Australia and Western Australia, and a Synopsis of all known Australian Algæ. By Dr. HARVEY, F.R.S. Royal 8vo, 5 vols., 300 Coloured Plates, £7. 13s.

This beautiful work, the result of an arduous personal exploration of the shores of the Australian continent, is got up in the style of the 'Phycologia Britannica' by the same author. Each Species has a Plate to itself, with ample magnified delineations of fructification and structure, embodying a variety of most curious and remarkable forms.

NEREIS AUSTRALIS; or, Algæ of the Southern Ocean, being Figures and Descriptions of Marine Plants collected on the Shores of the Cape of Good Hope, the extratropical Australian Colonies, Tasmania, New Zealand, and the Antarctic Regions. By Dr. HARVEY, F.R.S. Imperial 8vo, 50 Coloured Plates, £2. 2s.

A selection of Fifty Species of remarkable forms of Seaweed, not included in the 'Phycologia Australica,' collected over a wider area.

FUNGI.

—◆—

OUTLINES OF BRITISH FUNGOLOGY, containing Characters of above a Thousand Species of Fungi, and a Complete List of all that have been described as Natives of the British Isles. By the Rev. M. J. BERKELEY, M.A., F.L.S. Demy 8vo, 484 pp., 24 Coloured Plates, 30s.

Although entitled simply 'Outlines,' this is a good-sized volume, of nearly 500 pages, illustrated with more than 200 Figures of British Fungi, all carefully coloured by hand. Of above a thousand Species the characters are given, and a complete list of the names of all the rest.

THE ESCULENT FUNGUSES OF ENGLAND. Containing an Account of their Classical History, Uses, Characters, Development, Structure, Nutritional Properties, Modes of Cooking and Preserving, etc. By C. D. BADHAM, M.D. Second Edition. Edited by F. CURREY, F.R.S. Demy 8vo, 152 pp., 12 Coloured Plates, 12s.

A lively classical treatise, written with considerable epigrammatic humour, with the view of showing that we have upwards of 30 Species of Fungi abounding in our woods capable of affording nutritious and savoury food, but which, from ignorance or prejudice, are left to perish ungathered. "I have indeed grieved," says the Author, "when reflecting on the straitened condition of the lower orders, to see pounds of extempore beefsteaks growing on our oaks, in the shape of *Fistulina hepatica*; Puff-balls, which some have not inaptly compared to sweetbread; *Hydnum*, as good as oysters; and *Agaricus deliciosus*, reminding us of tender lamb-kidney." Superior coloured Figures of the Species are given from the pencil of Mr. FITCH.

ILLUSTRATIONS OF BRITISH MYCOLOGY, comprising Figures and Descriptions of the Funguses of interest and novelty indigenous to Britain. By Mrs. T. J. HUSSEY. Royal 4to; First Series, 90 Coloured Plates, £7. 12s. 6d.; Second Series, 50 Coloured Plates, £4. 10s.

This beautifully-illustrated work is the production of a lady who, being an accomplished artist, occupied the leisure of many years in accumulating a portfolio of exquisite drawings of the more attractive forms and varieties of British Fungi. The publication was brought to an end with the 140th Plate by her sudden decease. The Figures are mostly of the natural size, carefully coloured by hand.

SHELLS AND MOLLUSKS.

ELEMENTS OF CONCHOLOGY; an Introduction to the Natural History of Shells, and of the Animals which form them. By LOVELL REEVE, F.L.S. Royal 8vo, 2 vols., 478 pp., 62 Coloured Plates, £2. 16s.

Intended as a guide to the collector of shells in arranging and naming his specimens, while at the same time inducing him to study them with reference to their once living existence, geographical distribution, and habits. Forty-six of the plates are devoted to the illustration of the genera of shells, and sixteen to shells with the living animal, all beautifully coloured by hand.

CONCHOLOGIA ICONICA; or, Figures and Descriptions of the Shells of Mollusks, with remarks on their Affinities, Synonymy, and Geographical Distribution. By LOVELL REEVE, F.L.S. Demy 4to, published monthly in Parts, 8 Plates, carefully coloured by hand, 10s.

Of this work, comprising illustrations of Shells of the natural size, nearly 2000 Plates are published, but the plan of publication admits of the collector purchasing it at his option in portions, each of which is complete in itself. Each genus, as the work progresses, is issued separately, with Title and Index; and an Alphabetical List of the published genera, with the prices annexed, may be procured of the publishers on application. The system of nomenclature adopted is that of Lamarck, modified to meet the exigencies of later discoveries. With the name of each species is given a summary of its leading specific characters in Latin and English; then the authority for the name is quoted, accompanied by a reference to its original description; and next in order are its Synonyms. The habitat of the species is next given, accompanied, where possible, by particulars of soil, depth, or vegetation. Finally, a few general remarks are offered, calling attention to the most obvious distinguishing peculiarities of the species, with criticisms, where necessary, on the views of other writers. At the commencement of the genus some notice is taken of the animal, and the habitats of the species are worked up into a general summary of the geographical distribution of the genus.

CONCHOLOGIA ICONICA IN MONOGRAPHS.

Genera.	Plates.	£.	s.	d.	Genera.	Plates.	£.	s.	d.
ACHATINA	23	1	9	0	IANTHINA	5	0	6	6
ACRATINELLA	6	0	8	0	IO	3	0	4	0
ADAMSIELLA	2	0	3	0	ISOCARDIA	1	0	1	6
AMPHIDESMA	7	0	9	0	LAMPANIA	2	0	3	0
AMPULLARIA	26	1	15	6	LEIOSTRACA	3	0	4	0
ANASTOMA	1	0	1	6	LEPTOPOMA	8	0	10	6
ANATINA	4	0	5	6	LINGULA	2	0	3	0
ANOILLARIA	12	0	15	6	LITHEODOMUS	5	0	6	6
ANOULOTUS	6	0	6	0	LITTORINA	18	1	3	0
ANOMIA	6	0	10	6	LUCINA	11	0	14	0
ARCA	17	1	1	6	LUTRARIA	5	0	6	6
ARGONAUTA	4	0	5	6	MACEA	21	1	6	6
ARTEMIS	10	0	13	0	MALLEUS	3	0	4	0
ASPERGILLUM	4	0	5	6	MANGELIA	8	0	10	6
AVICOLA	13	1	3	0	MARGINELLA	27	1	14	6
BUCCINUM	14	0	12	0	MELANIA	59	3	14	6
BULIMUS	89	5	12	0	MELANOPSIS	3	0	4	0
BULLIA	4	0	5	6	MELATOMA	3	0	4	0
CALYPTERA	8	0	10	6	MEROE	3	0	4	0
CANCELLARIA	18	1	3	0	MESALLA & EGLISIA	1	0	1	6
CAPSA	1	0	1	6	MESODESMA	4	0	5	6
CAPSELLA	2	0	3	0	META	1	0	1	6
CAEDITA	9	0	11	6	MITRA	39	2	9	6
CAEDIUM	22	1	8	0	MODIOLA	11	0	14	0
CARINARIA	1	0	1	6	MONOCEROS	4	0	5	6
CASSIDARIA	1	0	1	6	MUREX	37	2	7	0
CASSIS	12	0	15	6	MYADORA	1	0	1	6
CERITHIDEA	4	0	5	6	MYOCHAMA	1	0	1	6
CERITHIUM	20	1	5	6	MYTILUS	11	0	14	0
CHAMA	9	0	11	6	NASSA	29	1	17	0
CHAMOSTEBA	1	0	1	6	NATICA	30	1	18	0
CRITON	33	2	2	0	NAUTILUS	6	0	8	0
CRITONELLUS	1	0	1	6	NAVICELLA & LATIA	6	0	10	6
CHONDROPOMA	11	0	14	0	NEBITA	19	1	4	0
CIECE	10	0	18	0	NEBITINA	37	2	7	0
COLUMBELLA	37	2	7	0	NISO	1	0	1	6
CONCHOLEPAS	2	0	3	0	OLIVA	30	1	16	0
CONUS	56	3	11	0	ONISCIA	1	0	1	6
COREULA	5	0	6	6	ORBICULA	1	0	1	6
CRANIA	1	0	1	6	OVULUM	14	0	18	0
CRASSATELLA	3	0	4	0	PALUDINA	11	0	14	0
CRENATULA	2	0	3	0	PALUDOMUS	3	0	4	0
CREPIDULA	5	0	6	6	PARTULA	4	0	5	6
CRUCIBULUM	7	0	9	0	PATELLA	42	2	13	0
CYCLOPHORUS	20	1	5	6	PECTEN	35	2	4	6
CYCLOSTOMA	23	1	9	0	PECTUNCULUS	9	0	11	6
CYCLOTUS	9	0	11	6	PELUM	1	0	1	6
CYMBIUM	26	1	13	0	PERNA	6	0	6	0
CYPRÆA	27	1	14	6	PHASIANELLA	6	0	6	0
CYPRICARDIA	2	0	3	0	PHORUS	3	0	4	0
CYTHÆEA	10	0	13	0	PINNA	34	2	3	0
DELPHINULA	5	0	6	6	PIRENA	2	0	3	0
DIONE	12	0	16	6	PLACUNANOMIA	3	0	4	0
DOLIUM	6	0	10	6	PLEUROTOMA	40	2	10	6
DONAX	9	0	11	6	POTAMIDES	1	0	1	6
EBURNA	1	0	1	6	PSAMMOEIA	6	0	10	6
EBATO	3	0	4	0	PSAMMOTELLIA	1	0	1	6
EULIMA	6	0	6	0	PTEROCERA	6	0	8	0
FASCIOLARIA	7	0	9	0	PTEROXYCLOS	5	0	6	6
FIGULA	1	0	1	6	PURPURA	13	0	16	6
FIGURELLA	16	1	0	6	PYRAMIDELLA	6	0	8	0
FUSUS	21	1	6	6	PYRAZUS	1	0	1	6
GLAUCONOME	1	0	1	6	PYRELLA	9	0	11	6
HALIA	1	0	1	6	RANELLA	8	0	10	6
HALIOTIS	17	1	1	6	RICINULA	6	0	8	0
HARPA	4	0	5	6	ROSTELLARIA	3	0	4	6
HELIIX	210	13	5	0	SANGUINOLARIA	1	0	1	6
HEMIPecten	1	0	1	6	SCARABUS	3	0	4	0
HEMISINUS	6	0	8	0	SIGARETUS	5	0	6	6
HINYNITES	1	0	1	6	SIMPULOPSIS	2	0	2	0
HIPPOTUS	1	0	1	6	SIPONARIA	7	0	9	0

Genera.	Plates.	£.	s.	d.	Genera.	Plates.	£.	s.	d.
SOLARIUM	3	0	4	0	TRITON	20	1	5	6
SOLETELLINA	4	0	5	6	TROCHITA	3	0	4	0
SPONDYLUS	18	1	3	0	TROCHUS	16	1	0	6
STROMBUS	19	1	4	0	TUGONIA	1	0	1	6
STRUTHIOLARIA	1	0	1	6	TURBINELLA	13	0	16	6
TAPES	13	0	16	6	TURBO	13	0	16	6
TELESCOPIUM	1	0	1	6	TURRITELLA	11	0	14	0
TERRERA	27	1	14	6	TYMPANOTONOS	2	0	3	0
TERRIBELLUM	1	0	1	6	UMBRELLA	1	0	1	6
TERRERATULA & RY- CHONELLA	11	0	14	0	VENUS	26	1	13	0
THRACIA	3	0	4	0	VERTAGUS	5	0	6	6
TORNATELLA	4	0	5	6	VITINA	10	0	13	0
TRIDACNA	8	0	10	6	VOLUTA	22	1	8	0
TRIGONIA	1	0	1	6	VULSELLA	2	0	3	0
					ZIZYPHINUS	8	0	10	6

CONCHOLOGIA SYSTEMATICA; or, Complete System of
Conchology. By LOVELL REEVE, F.L.S. Demy 4to, 2 vols. pp. 537,
300 Plates, £10. 10s. coloured.

Of this work only a few copies remain. It is a useful companion to the collector of shells, on account of the very large number of specimens figured, as many as six plates being devoted in some instances to the illustration of a single genus.

THE EDIBLE MOLLUSKS OF GREAT BRITAIN AND
IRELAND, with the modes of cooking them. By M. S. LOVELL. Crown
8vo, 5s.; with 12 Coloured Plates, 8s. 6d.

INSECTS.

CURTIS'S BRITISH ENTOMOLOGY. Illustrations and
Descriptions of the Genera of Insects found in Great Britain and Ireland,
containing Coloured Figures, from nature, of the most rare and beautiful
species, and, in many instances, upon the plants on which they are found.
Royal 8vo, 8 vols., 770 Plates, coloured, £21.

Or in separate Monographs.

Orders.	Plates.	£.	s.	d.	Orders.	Plates.	£.	s.	d.
APHANIPTERA	2	0	2	0	HYMENOPTERA	125	4	0	0
COLEOPTERA	256	8	0	0	LEPIDOPTERA	193	6	0	0
DERMAPTERA	1	0	1	0	NEUROPTERA	13	0	9	0
DICTYOPTERA	1	0	1	0	OMALOPTERA	6	0	4	6
DIPTERA	103	3	5	0	ORTHOPTERA	5	0	4	0
HEMIPTERA	32	1	1	0	STREPSIPTERA	3	0	2	6
HOMOPTERA	21	0	14	0	TRICHOPTERA	9	0	6	6

'Curtis's Entomology,' which Cuvier pronounced to have "reached the ultimatum of perfection," is still the standard work on the Genera of British Insects. The Figures executed by the author himself, with wonderful minuteness and accuracy, have never been surpassed, even if equalled. The price at which the work was originally published was £43. 16s.

BRITISH BEETLES; an Introduction to the Study of our Indigenous COLEOPTERA. By E. C. RYE. Crown 8vo, 16 Coloured Steel Plates, comprising Figures of nearly 100 Species, engraved from Natural Specimens, expressly for the work, by E. W. ROBINSON, and 11 Wood-Engravings of Dissections by the Author, 10s. 6d.

This little work forms the first of a New Series designed to assist young persons to a more profitable, and, consequently, more pleasurable observation of Nature, by furnishing them in a familiar manner with so much of the science as they may acquire without encumbering them with more of the technicalities, so confusing and repulsive to beginners, than are necessary for their purpose. In the words of the Preface, it is "somewhat on the scheme of a *Delectus*; combining extracts from the biographies of individual objects with principles of classification and hints for obtaining further knowledge."

BRITISH BEES; an Introduction to the Study of the Natural History and Economy of the Bees indigenous to the British Isles. By W. E. SHUCKARD. Crown 8vo, 16 Coloured Steel Plates, containing nearly 100 Figures, engraved from Natural Specimens, expressly for the work, by E. W. ROBINSON, and Woodcuts of Dissections, 10s. 6d.

A companion volume to that on British Beetles, treating of the structure, geographical distribution and classification of Bees and their parasites, with lists of the species found in Britain, and an account of their habits and economy.

BRITISH SPIDERS; an Introduction to the Study of the ARANEIDÆ found in Great Britain and Ireland. By E. F. STAVELEY. Crown 8vo, 16 Plates, containing Coloured Figures of nearly 100 Species, and 40 Diagrams, showing the number and position of the eyes in various Genera, drawn expressly for the work by TUPPEN WEST, and 44 Wood-Engravings, 10s. 6d.

One of the 'New Series of Natural History for Beginners,' and companion volume to the 'British Beetles' and 'British Bees.' It treats of the structure and classification of Spiders, and describes those found in Britain, with notes on their habits and hints for collecting and preserving.

BRITISH BUTTERFLIES AND MOTHS; an Introduction to the Study of our Native LEPIDOPTERA. By H. T. STANTON. Crown 8vo, 16 Coloured Steel Plates, containing Figures of 100 Species, engraved from Natural Specimens expressly for the work by E. W. ROBINSON, and Wood-Engravings, 10s. 6d.

Another of the 'New Series of Natural History for Beginners and Amateurs,' treating of the structure and classification of the Lepidoptera.

INSECTA BRITANNICA; Vols. II. and III., Diptera. By FRANCIS WALKER, F.L.S. 8vo, each, with 10 plates, 25s.

ANTIQUARIAN.

SACRED ARCHÆOLOGY; a Popular Dictionary of Ecclesiastical Art and Institutions, from Primitive to Modern Times. Comprising Architecture, Music, Vestments, Furniture Arrangement, Offices, Customs, Ritual Symbolism, Ceremonial Traditions, Religious Orders, etc., of the Church Catholic in all Ages. By MACKENZIE E. C. WALCOTT, B.D. Oxon., F.S.A., Præcentor and Prebendary of Chichester Cathedral, Demy 8vo, 18s.

Mr. Walcott's 'Dictionary of Sacred Archæology' is designed to satisfy a great and growing want in the literature of the day. The increased interest taken by large classes of the community in the Ecclesiastical History, the Archæology, the Ritual, Artistic, and Conventual Usages of the early and middle ages of Christendom has not been met by the publication of manuals at all fitted by their comprehensiveness, their accuracy, and the convenience of their arrangement to supply this highly important demand. To combine in one the varied and general information required by the cultivated reader at large with the higher and more special sources of knowledge of which the student of ecclesiastical lore has need, is the object which has been kept in view in the compilation now offered to the public. In no work of the kind has the English public, it is confidently believed, had presented to it so large and varied a mass of matter in a form so conveniently arranged for reference. One valuable feature to which attention may be invited is the copious list of authorities prefixed to Mr. Walcott's Dictionary. The student will here find himself put readily upon the track for following up any particular line of inquiry, of which the Dictionary has given him the first outlines.

A MANUAL OF BRITISH ARCHÆOLOGY. By CHARLES BOUTELL, M.A. Royal 16mo, 398 pp., 20 Coloured Plates, 10s. 6d.

A treatise on general subjects of antiquity, written especially for the student of archæology, as a preparation for more elaborate works. Architecture, Sepulchral Monuments, Heraldry, Seals, Coins, Illuminated Manuscripts and Inscriptions, Arms and Armour, Costume and Personal Ornaments, Pottery, Porcelain and Glass, Clocks, Locks, Carvings, Mosaics, Embroidery, etc., are treated of in succession, the whole being illustrated by 20 attractive Plates of Coloured Figures of the various objects.

SHAKESPEARE'S SONNETS, Facsimile, by Photo-Zinco-graphy, of the First Printed edition of 1609. From the Copy in the Library of Bridgewater House, by permission of the Right Hon. the Earl of Ellesmere. 10s. 6d.

BEWICK'S WOODCUTS. Impressions of Upwards of Two Thousand Woodblocks, engraved, for the most part, by THOMAS and JOHN BEWICK; including, Illustrations of various kinds for Books, Pamphlets, and Broadsides; Cuts for Private Gentlemen, Public Companies, Clubs, etc.; Exhibitions, Races, Newspapers, Shop Cards, Invoice Heads, Bar Bills, etc. With an Introduction, a Descriptive Catalogue of the Blocks, and a List of the Books and Pamphlets illustrated. By the Rev. T. HUGO, M.A., F.R.S.L., F.S.A. In one large handsome volume, imperial 4to, gilt top, with full length steel Portrait of Thomas Bewick. £6. 6s.

Among these Cuts, distributed in 247 Plates, will be found the Engravings of a large number of the most celebrated Works illustrated by these Artists, and a unique assemblage of Cuts for Private Gentlemen, Public Societies and Companies, Amusements, Newspapers, Shop Cards, Invoices, Bar Bills, and other miscellaneous purposes. The Volumes referred to are, in general, rare and costly, while of most of the Miscellaneous Engravings very few impressions are known to exist. Not only to Bewick Collectors, but to all persons interested in the progress of Art, and especially of Wood Engraving, this Volume, exhibiting chronologically the Works of the Fathers of that Art in England, cannot fail to be of the highest interest.

THE BEWICK COLLECTOR AND SUPPLEMENT. A

Descriptive Catalogue of the Works of THOMAS and JOHN BEWICK, including Cuts, in various states, for Books and Pamphlets, Private Gentlemen, Public Companies, Exhibitions, Races, Newspapers, Shop Cards, Invoice Heads, Bar Bills, Coal Certificates, Broadsides, and other miscellaneous purposes, and Wood Blocks. With an Appendix of Portraits, Autographs, Works of Pupils, etc. The whole described from the Originals contained in the Largest and most Perfect Collection ever formed, and illustrated with 292 Cuts from Bewick's own Blocks. By the Rev. THOMAS HUGO, M.A., F.S.A., the Possessor of the Collection. 2 vols. demy 8vo, price 42s.; imperial 8vo (limited to 100 copies), with a fine Steel Engraving of Thomas Bewick, £4. 4s. The SUPPLEMENT, with 180 Cuts, may be had separately; price, small paper, 21s.; large paper, 42s.; also, the Portrait on imperial folio, price 7s. 6d.

MAN'S AGE IN THE WORLD ACCORDING TO
HOLY SCRIPTURE AND SCIENCE. By an ESSEX RECTOR. Demy
8vo, 264 pp., 8s. 6d.

The Author, recognizing the established facts and inevitable deductions of Science, and believing all attempts to reconcile them with the commonly received, but erroneous, literal interpretation of Scripture, not only futile, but detrimental to the cause of Truth, seeks an interpretation of the Sacred Writings on general principles, consistent alike with their authenticity, when rightly understood, and with the exigencies of Science. He treats in successive Chapters of The Flint Weapons of the Drift,—The Creation,—The Paradisiacal State,—The Genealogies,—The Deluge,—Babel and the Dispersion; and adds an Appendix of valuable information from various sources.



THE ANTIQUITY OF MAN; An Examination of Sir
Charles Lyell's recent Work. By S. R. PATTISON, F.G.S. Second Edition.
8vo, 1s.



WHITNEY'S "CHOICE OF EMBLEMES;" a Facsimile
Reprint by Photo-lithography. With an Introductory Dissertation, Essays
Literary and Bibliographical, and Explanatory Notes. By HENRY GREEN,
M.A. Post 4to, pp. lxxxviii., 468. 72 Facsimile Plates, 42s.

A beautiful and interesting reproduction by Photo-lithography of one of the best specimens of this curious class of literature of the sixteenth century. An Introductory Dissertation of eighty-eight pages traces the history of Emblematic Literature from the earliest times, and gives an Account of the Life and Writings of Geoffrey Whitney, followed by an Index to the Mottoes, with Translations and some Proverbial Expressions. The facsimile reproduction of the 'Emblems,' with their quaint pictorial Illustrations, occupies 230 pages. Then follow Essays on the Subjects and Sources of the Mottoes and Devices, on Obsolete Words in Whitney, with parallels, chiefly from Chaucer, Spenser, and Shakespeare; Biographical Notices of some other emblem-writers to whom Whitney was indebted; Shakespeare's references to emblem-hooks, and to Whitney's emblems in particular; Literary and Biographical Notes explanatory of some of Whitney's emblems, and of the persons to whom they are dedicated. Seventy-two exceedingly curious plates, reproduced in facsimile, illustrate this portion of the work, and a copious General Index concludes the volume.

MISCELLANEOUS.

THE BIRDS OF SHERWOOD FOREST; with Observations on their Nesting, Habits, and Migrations. By W. J. STERLAND. Crown 8vo, 4 Plates. 7s. 6d. coloured.

THE NATURALIST IN NORWAY; or, Notes on the Wild Animals, Birds, Fishes, and Plants of that Country, with some account of the principal Salmon Rivers. By the Rev. J. BOWDEN, LL.D. Crown 8vo, 8 Coloured Plates. 10s. 6d.

CALIPHS AND SULTANS; being Tales omitted in the ordinary English Version of 'The Arabian Nights Entertainments,' freely rewritten and rearranged. By S. HANLEY, F.L.S. 6s.

LIVE COALS; or, Faces from the Fire. By L. M. BUDGEN, "Acheta," Author of 'Episodes of Insect Life,' etc. Dedicated, by Special Permission, to H.R.H. Field-Marshal the Duke of Cambridge. Royal 4to, 35 Original Sketches printed in colours, 42s.

The 'Episodes of Insect Life,' published in three series some years since, won from the late Prince Consort a graceful acknowledgment in the presentation to the Author of a copy of a book, 'The Natural History of Deeside,' privately printed by command of Her Majesty the Queen. The above Work comprises a series of Thirty-five highly imaginative and humorous Sketches, suggested by burning Coals and Wood, accompanied by Essays, descriptive and discursive, on:—The Imagery of Accident—The Fire in a New Light—The Fire an Exhibitor—The Fire a Sculptor.

SUNSHINE AND SHOWERS: their Influences throughout Creation. A Compendium of Popular Meteorology. By ANDREW STEINMETZ, Esq. Crown 8vo, Wood Engravings, 7s. 6d.

This Work not only treats fully all the leading topics of Meteorology, but especially of the use of the Hygrometer, for which systematic Rules are now for the first time drawn up. Among other interesting and useful subjects, are chapters on Rainfall in England and Europe in general—Wet and Dry Years—Temperature and Moisture with respect to the health of Plants and Animals—The Wonders of Evaporation—Soil Temperature—The Influence of Trees on Climate and Water Supply—The Prognostication of the Seasons and Harvest—The Characteristics and Meteorology of the Seasons—Rules of the Barometer—Rules of the Thermometer as a Weather Glass—Popular Weather-casts—Anemometry—and finally, What becomes of the Sunshine—and what becomes of the Showers.

THE REASONING POWER IN ANIMALS. By the Rev.
J. S. WATSON, M.A. 480 pp. Crown 8vo, 9s.

The object of the above treatise is to trace the evidences of the existence in the lower animals of a portion of that reason which is possessed by man. A large number of carefully-selected and well-authenticated anecdotes are adduced of various animals having displayed a degree of intelligence distinct from instinct, and called into activity by circumstances in which the latter could have been no guide.

METEORS, AEROLITES, AND FALLING STARS. By
Dr. T. L. PHIPSON, F.C.S. Crown 8vo. 25 Woodcuts and Lithographic Frontispiece, 6s.

A very complete summary of Meteoric Phenomena, from the earliest to the present time, including the shower of November, 1866, as observed by the Author.

MANUAL OF CHEMICAL ANALYSIS, Qualitative and
Quantitative; for the Use of Students. By Dr. HENRY M. NOAD, F.R.S.
Crown 8vo, pp. 663, 109 Wood Engravings, 16s. Or, separately, Part I.,
'QUALITATIVE,' New Edition, 6s.; Part II., 'QUANTITATIVE,'
10s. 6d.

A Copiously-illustrated, Useful, Practical Manual of Chemical Analysis, prepared for the Use of Students by the Lecturer on Chemistry at St. George's Hospital. The illustrations consist of a series of highly-finished Wood-Engravings, chiefly of the most approved forms and varieties of apparatus.

PHOSPHORESCENCE; or, the Emission of Light by Minerals, Plants, and Animals. By Dr. T. L. PHIPSON, F.C.S. Small 8vo,
225 pp., 30 Wood Engravings and Coloured Frontispiece, 5s.

An interesting account of the various substances in nature—mineral, vegetable, and animal—which possess the remarkable property of emitting spontaneous light.

THE ZOOLOGY OF THE VOYAGE OF H.M.S. SAMARANG, under the command of Captain Sir Edward Belcher, C.B., during the Years 1843-46. By Professor OWEN, Dr. J. E. GRAY, Sir J. RICHARDSON, A. ADAMS, L. REEVE, and A. WHITE. Edited by ARTHUR ADAMS, F.L.S. Royal 4to, 257 pp., 55 Plates, mostly coloured, £3. 10s.

In this work, illustrative of the new species of animals collected during the surveying expedition of H.M.S. Samarang in the Eastern Seas in the years 1843-1846, there are 7 Plates of Quadrupeds, 1 of Reptiles, 10 of Fishes, 24 of Mollusca and Shells, and 13 of Crustacea. The Mollusca, which are particularly interesting, include the anatomy of *Spirula* by Professor Owen, and a number of beautiful Figures of the living animals by Mr. Arthur Adams.

TRAVELS ON THE AMAZON AND RIO NEGRO;
with an Account of the Native Tribes, and Observations on the Climate,
Geology, and Natural History of the Amazon Valley. By ALFRED R.
WALLACE. Demy 8vo, 541 pp., with Map and Tinted Frontispiece, 18s.

A lively narrative of travels in one of the most interesting districts of the
Southern Hemisphere, accompanied by Remarks on the Vocabularies of the
Languages, by Dr. R. G. LATHAM.

**A SURVEY OF THE EARLY GEOGRAPHY OF
WESTERN EUROPE,** as connected with the First Inhabitants of Britain,
their Origin, Language, Religious Rites, and Edifices. By HENRY LAWES
LONG, Esq. 8vo, 6s.

LITERARY PAPERS ON SCIENTIFIC SUBJECTS.

By the late Professor EDWARD FORBES, F.R.S., selected from his Writings
in the 'Literary Gazette.' With a Portrait and Memoir. Small 8vo, 6s.

THE GEOLOGIST. A Magazine of Geology, Palæontology,
and Mineralogy. Illustrated with highly finished Wood-Engravings.
Edited by S. J. MACKIE, F.G.S., F.S.A. Vols. V. and VI., each, with num-
erous Wood-Engravings, 18s. Vol. VII., 9s.

GUIDE TO COOL-ORCHID GROWING. By JAMES
BATEMAN, Esq., F.R.S., Author of 'The Orchidaceæ of Mexico and Gua-
temala.' Woodcuts, 1s.

THE STEREOSCOPIC MAGAZINE. A Gallery for the
Stereoscope of Landscape Scenery, Architecture, Antiquities, Natural His-
tory, Rustic Character, etc. With Descriptions. 5 vols., each complete
in itself and containing 50 Stereographs, £2. 2s.

THE ARTIFICIAL PRODUCTION OF FISH. By PIS-
CARIUS. Third Edition. 1s.

EVERYBODY'S WEATHER-GUIDE. The Use of Me-
teorological Instruments clearly Explained, with Directions for Securing at
any time a probable Prognostic of the Weather. By A. STEINMETZ, Esq.,
Author of 'Sunshine and Showers,' etc. 1s.

RECENTLY PUBLISHED.



- BEWICK'S WOODCUTS. By the Rev. T. HUGO. Imp.
4to. £6. 6s.
- NOAD'S QUALITATIVE ANALYSIS. New Edition, 6s.
- CROMBIE'S LICHENES BRITANNICI. 4s. 6d.
- STERLAND'S BIRDS OF SHERWOOD FOREST. 7s. 6d.
- BOWDEN'S NATURALIST IN NORWAY. 10s. 6d.
- STAINTON'S BRITISH BUTTERFLIES AND MOTHS.
16 Coloured Plates, 10s. 6d.
- GRAY'S BRITISH SEAWEEDS. 16 Coloured Plates,
10s. 6d.
- THE FLORA OF TROPICAL AFRICA. By D. OLIVER.
Vol. I., 20s.
- WALCOTT'S SACRED ARCHÆOLOGY. 18s.

FORTHCOMING WORKS.



- DOMESTIC BOTANY. By J. SMITH.
- THE YOUNG COLLECTOR'S HANDY BOOK OF BO-
TANY. By the Rev. H. P. DUNSTER.
- THE YOUNG COLLECTOR'S HANDY BOOK OF RE-
CREATIVE SCIENCE. By the Rev. H. P. DUNSTER.
- MONOGRAPH OF ODONTOGLOSSUM. By JAMES
BATEMAN, Esq. Part V.
- FLORA VITIENSIS. By Dr. SEEMANN. Part X.
- FLORA AUSTRALIENSIS. By G. BENTHAM. Vol. V.
- FLORA OF INDIA. By Dr. HOOKER and Dr. THOMSON.
- THE LAND AND FRESHWATER SHELLS OF
BRITISH INDIA. By S. HANLEY and Wm. THEOBALD.
- INSECTS. By E. F. STAVELEY.
- NATURAL HISTORY OF PLANTS. By Prof. BAILLON.

LONDON:

L. REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.

