

This letter is but one out of a large number equally interesting and instructive, but from the private nature of most of them, and also because the writers are still living, I do not deem their publication to be proper.

The symptoms arising from solitary vice are well sketched in the above letter, though they are often much more severe, and many are experienced which are not there mentioned.

The *hospital*, the *lunatic asylum*, and the *grave* would tell fearful tales respecting this habit, if their records were truly written.

The immediate effects of this vice are, great lassitude and depression of spirits. This is followed, after a time, by other symptoms, many of which are never suspected to arise from this cause. Most generally the memory soon begins to fail, and the mind cannot be directed to one thing for any length of time, but wanders continually; sometimes it even becomes unsettled altogether, and complete fatuity results. The senses are very apt to fail, particularly the eyes, which become affected in various ways, from mere weakness to every degree of inflammation, and even blindness. The hearing will often become affected, and the head will be subject to a distressing fullness, with dizziness, noises, and soreness all over. The individual becomes excessively nervous, full of apprehension, irritable, and wretched. He dislikes society, from mere incapability of exertion, becomes at last melancholy, or mad, and often terminates his existence by suicide. The different organs become more or less deranged, and perform their functions imperfectly: this is particularly the case with the digestive apparatus, the kidneys, and bladder. In males, the genital organs themselves begin to fail; they shrink away, the gratification becomes less, and finally complete impotence and aversion follow.

All these symptoms are, it is true, seldom found in one person, but more or less they characterize every case. Some persons will begin to experience them very soon, while others will not for a long time. It is but rare, however, that any one who practices abuse will miss them altogether.

I do not hesitate to say that a very large portion of the human race are guilty of this excess, probably the great majority, and that a large portion of the evils and suffering which afflict society are produced by it. Indeed, I believe that licentiousness, in one form or other, is the cause of nearly all the disease, both of body and mind, which exists!

Solitary vice, however, is much more prevalent than any other form of licentiousness, and much worse in its effects. Dreadful as are the consequences of excess, in the natural way, they are but trivial compared with those which follow from solitary vice; nor do I think they can, under any circumstances, equal them.

Most persons are aware that this practice prevails, and that it is injurious, but it is only those who have long been familiar with it, as a subject of practice and study, that can be aware of its great extent and fearful effects. The truth, in fact, can scarcely be believed by those not familiar with it. My own opportunities for acquiring information have been very great, so as to make me acquainted with this terrible evil in every particular, and I do not hesitate to say that it is *the master evil* of the present day! I am firmly convinced that it leads to more disease of body and mind, more suffering and premature decay, *than all other causes put together!* Here I make no reservation, nor do I exaggerate, but, on the contrary, I feel convinced that my statement is under rather than over the truth.

This vice is *almost universal*, the exceptions to it being very rare, particularly in

the rising generation. I believe it may be safely asserted that *ninety-nine out of every hundred are addicted to it!* And such are the circumstances in which young people are now placed, that, instead of its decreasing, it is every day becoming more confirmed and extended.

I have reason to suppose that it is as general in the one sex as the other. If there be any difference, it is possible that females practice it most; but simply because they less frequently have natural indulgence in their power.

It is often commenced in extreme youth—nay, even in childhood. I have known instances of children not more than eight years of age, and even younger, being addicted to it. In most of these cases no such thing was suspected, and the poor victims were fast hurrying to an untimely grave. Even when told, their guardians could scarcely believe the statement, till their own observation convinced them it was true. They were then extremely anxious to have the evil removed, which, fortunately, was in most cases accomplished. It is not merely an error of youth, however, but becomes a confirmed and growing habit, to which the individual is a victim all his days. I have known middle-aged, and even old persons, who had never been able to emancipate themselves from it.

With regard to the commencement of this practice, some persons have supposed that it must always be learned from another, or at least that some intimation must be had of its nature before it is begun. This, however, I know is not always necessary. From various causes, most of which we have stated in a former part of this work, the genital organs become precociously developed, and highly sensitive. This produces slight irritation and uneasiness, to relieve which the hand is directed to them, the friction of which produces a new and pleasant sensation before unknown. When once this has been experienced, the desire to create it again becomes irresistible, and with each new indulgence the habit strengthens and becomes more confirmed. In most cases the individual is completely ignorant of the nature of this new indulgence, and knows nothing of its probable consequences. This knowledge, if given in time, would often destroy the habit, but it is seldom given till too late to be of service; indeed, in most cases, the victim has to find it out by dear-bought experience.

Nevertheless, this practice is most generally acquired from others, and for this reason prevails in nearly all institutions where young persons are congregated; nor can this be prevented under present arrangements. Many conductors of these establishments are unacquainted with the existence of the evil; others use every means they can devise to prevent or suppress it, though often without success. From the nature of the practice it cannot be prevented, when there is a disposition to it, unless the offender is kept under *constant surveillance!*

In my public lectures I have always made this a special topic, speaking the truth upon it without reserve, but in charity, and with a sincere desire to do good. This has made me the confidant of hundreds, who would never have disclosed their failings to any one else, and has enabled me to gather more facts bearing on the subject than, perhaps, ever came in the way of any one individual before. It is neither useful nor just, however, to expose the weaknesses of human nature, more than is necessary for their correction: I shall, therefore, only make use of the information I have thus acquired in a general way, and for that purpose.

When in New York City, a few years ago, I was accosted, after my lecture on this subject, by an old gentleman, who desired to speak with me in private. When

we were alone, he said to me: "Doctor, you are the first person I ever heard speak plainly on this evil practice, and as I am, unfortunately, aware, by sad experience, of the truth of your assertions, I felt much interested in your discourse, and resolved, if you thought fit, to communicate the details of a case with which I am but too familiar." I thanked him for his confidence, and he gave me the following particulars:

He had a son, a fine, healthy, lively child, about eleven years old, whom he sent to a celebrated academy for young gentlemen, in the suburbs of a neighboring city. For the first six months he continued to receive the most flattering accounts of his son's progress, and was highly pleased with him when he returned home at the vacation. In a short time after he was surprised and grieved to hear that his health was failing, and that he was much more backward than formerly. Medical advice was sought immediately, and the assurance was given that there was nothing serious the matter, and that he would probably rally in a short time. The child kept on in this manner for twelve months longer, gradually becoming worse, until at last he was brought home. The father described his condition at this time as most distressing. He was thin as a skeleton, weak in body and mind, and completely sunk in a deep despondency, from which nothing seemed permanently to rouse him. At last he took to his bed, and died before he was thirteen. One night, however, while he was sick, the father was sitting up with him, and, being weary, leaned back in his chair, with his eyes closed, as if asleep. While in this state, some motion of his son partially roused him, and through his half-open eyes, he saw him in a situation which left no doubt that he was practicing masturbation. The feelings of the father can better be conceived than described. Being a man of information, he partly knew the consequences of this vice, and immediately the idea rushed upon him that this was the cause of his son's sickness, and he at once resolved to discover if his suspicions were true. In the morning after, he began to talk with his child about his school-fellows, asking him as to their practices in play, etc.; and at last fixing his eyes upon him, he asked him if any ever practiced this habit before him? The child burst into tears, and laid his head in his bosom. By a little gentle management he led him to confess that he had been addicted to this vice ever since he went to school, having been taught it by a playmate. Sometimes he practiced it three or four times in a day. He also assured his father that there was not one he knew in the school but what did the same, it being considered a meritorious thing, and one which every boy should aim at. The poor fellow had become partly aware, himself, that it was causing his misery, and wished he had not done it; but it had become so much a part of his nature, he could not refrain. The father felt as if a thunder-bolt had broken upon him. Here was his only child stricken before his eyes, and nobody suspecting the cause till it was too late. Said he to me—"I hope my sad experience may enlighten some one else in time."

A short time after, while lecturing at the city where his son was sent, I was introduced to the principal of the very school, whom he had already mentioned to me by name. Finding him a man of intelligence, I commenced talking on the subject of solitary vice, and observed that he appeared much interested. As confidence became established, he at last confessed that the prevalence of this practice among his pupils was a constant annoyance to him.

"I know," said he, "that my establishment is only like others, for I do not think there is one in which it does not prevail more or less; but as I know how baneful it

is, I am deeply concerned about it. I find it impossible to prevent it altogether, do what I will. All our scholars sleep separate, and we keep a constant eye upon them, but still I know the evil exists; and by some accident or other, each new-comer becomes tainted with it. I am firmly convinced that there is no institution where young people are brought together but in which the practice may be found, and I have no faith in any means preventing it but such as you propose."

Numerous indeed are the melancholy instances of this kind daily to be met with. Many a youth, robust with health, and with every indication of the highest talents, is sent by his parents to some seminary to complete his education, and returns after a time debilitated in mind and body, and without either hope, energy, or capability. They mourn over his ruin, but never dream of what caused it; and even if told, could not, in many cases, understand how it had been brought about. I have a case of this kind in my mind now. It is that of a young man who had made the highest attainments, and who gave promise of being one day among the first and greatest in the land. His friends looked upon him with pride and confidence, and gloried in the prospect of his future exaltation. But alas! a blight came over their hopes; he began to fade, his mind became imbecile, and at last he sank far below the ordinary standard, without even the desire to rise. He was pointed out to me by a relative, who also told me that it was the practice of solitary vice, learnt at college, which had made him the melancholy wreck he was.

On another occasion, an old man spoke to me after my lecture, and told me that he had a son who had long been in a desperate condition, whose cause of complaint he had never been able to ascertain. "But," said he, "from what you say of the effects of this practice, I think that must be it; I will, however, ascertain if possible immediately." The next week I saw him again, and he told me that he had asked the medical man, who had his son in charge, whether he thought such was the case, and he immediately replied, "Yes! now you have asked me I can tell you. It is that practice, and nothing else, which has brought your son to his present pitiable condition. I did not like to mention it to you before, for fear you might be, like many others, merely offended with me for speaking the truth; but since you ask, I presume you desire to know." The young man was then so weak he could scarcely stand, and so much affected in his mind that a person was kept with him continually, to prevent him committing suicide. I saw the father, a little time after, again, and he told me, with tears in his eyes, that his son had died in the mean time. "Had it not been for you," said he, "I should never have known what killed him. I have now another child, much younger, who might have died in the same way; but now I know the evil, I trust I shall be able to prevent it."

Another case, somewhat similar, came under my notice of a little girl, who had been taught the practice by a female servant with whom she slept. The mother fortunately discovered it before the evil was gone too far, and by a proper course of moral and medical treatment it was soon suppressed altogether, and she perfectly recovered.

In one instance I knew a boarding-school where fourteen young females resided, which had to be entirely broken up on account of this practice. One after another fell sick, and all eventually were sent home; previous to which, the principal ascertained, from the confession of one among them, that for a length of time they had all been addicted to this vice. Nine out of these fourteen died in less than five years after!

## CHAPTER LVIII.

### INTERESTING FACTS RELATING TO PAIRING AND COURTSHIP.

THE very lowest beings have more in common with man than most people imagine. Not only have they the same bodily organs and functions, and the same emotions; but they have also the same mental powers, and moral impulses, though of course infinitely less in degree. Even love itself, with all its toying and dalliance, to say nothing of mere sensual pleasure—may be experienced by creatures so far down in the scale as to be scarcely considered sentient.

The accounts given elsewhere of the *snail* and its amours, will prove this, but we will also give some further illustrations, both for their interest, and also because they will serve to broaden our views of life in general, and show that man has not a monopoly either of mind or of the finer feelings.

In regard to the snails, Agassiz remarks, that no one who has seen them, during their amours, can have the least doubt that they allure and excite each other by appropriate movements before the embrace; and Mr. Lonsdale stated a fact to Mr. C. Darwin, which would show that they are even capable of some degree of permanent attachment. He placed a pair of these animals, one of which was quite feeble, in a small garden, not well provided with food for them. The strong one in a short time climbed over the wall into a better provided garden on the other side, leaving his sickly companion behind; apparently it was deserted; but strange to say, twenty-four hours after, the truant returned, and the two then went over the wall together. It would seem as if the strong one went to explore, and really returned with the news of better quarters to its weakly companion.

Among some of the cuttle-fishes a very singular mode of impregnation takes place. The whole of the male element accumulates in one of the arms, or tentacles, which is then cast off, and becomes an independent being, which attaches itself to the female by its sucker, and lives so for a considerable time, till the impregnation is fully effected, when it falls off and dies. This cast-off fragment is so much like a real separate animal that Cuvier actually described it as a parasite, and named it the *hectocotyle*. There are several instances known, however, in which the male organ in hermaphrodites becomes a separate being by itself, living an independent life of its own.

In many of the crustaceans, like crabs and lobsters, the male has certain of his limbs peculiarly shaped, as hooks, or pincers with which he can hold the female during the copulation. He also often carries her about with them for weeks together, as if to fully secure her to himself. These singular organs appear to be used solely in connection with the generative act, as no other use for them has been discovered. It is probable, however, that they are often used to fight with, for the male crustaceans, like those of the higher animals, will fight over their females.

As a rule, these singular parts are not fully developed till the male is full grown; while he is immature they resemble the corresponding parts in the females.

Mr. Bate tells us that he once took a male and female sand-hopper, such as we find on the seashore, who were together, and separated them, putting the female with a crowd of others in a vessel. Some time after, he put the male in the same vessel, and he at once dashed in among them, selected out his own partner, and took her away; this showed memory, recognition, and attachment, even in this humble being.

Indeed the mental power shown by some of the crustaceans is quite marked. Mr. Gardner tells us of a burrowing crab which he once watched, and down whose hole he had rolled a shell. The crab not only brought out the shell and carried it to a safe distance, but seeing two others so near his hole that there was danger they also would fall in, he carefully removed them also. Now this showed both appreciation of danger, and reason enough to take precautionary measures against it.

Canestrini assures us that the female spider will often choose one out of a number of males, that have been fighting for her favors, and drive the rest away. In doing so she probably discerns some points of perfection in the chosen one, which make him more pleasing to her. It is often, however, a very perilous thing to be the favorite, for not unfrequently the lady makes a meal of her paramour.

As a rule, male spiders are remarkably small, and to this they no doubt often owe their safety. Compared with the females, they frequently resemble small parasites rather than animals of the same kind, and literally can hide themselves about her limbs and body. In fact, nature appears to have reduced them to little more than moving male organs, intended solely to serve the purpose of impregnation. They seem to be fully aware of the danger they run in making amorous advances, but, as in most other beings, the sexual impulse is too strong to be resisted. Still they display great caution, skill, and agility in their approaches, and know when to seize the most favorable moment.

Some others of the same order of beings have suckers with which they hold the female during the act of coition; and in some insects the females are so provided, and hold the males.

In short these contrivances for enabling the sexes to be conjoined, in the act of copulation, are very varied, and often remarkably curious. Sometimes the jaws are modified to serve this purpose, and at other times some of the limbs; thus the males of some insects resembling dragon flies have immense jaws, smooth and toothless, with which they hold the female without hurting her. In some wasps also there is the same peculiarity, while the females use the same parts to burrow in the ground with, to make their nests.

The females of some water-beetles have their wing cases deeply grooved, or covered with hairs, or sometimes with holes in them, to give the males better hold; the males themselves being provided with parts adapted for using these aids.

It is common with insects for the male to be smaller than the female, and sometimes remarkably so, as in the case of the spider. The cocoon of the male silkworm is so much smaller than that of the female that they can be separated by weighing; and a similar disparity is found in other cocoons. Still there are exceptions to this rule, especially among the beetles and dragon flies, and in those males who have to carry the female in the air, during the copulative act, as some do.

It would be a great mistake to suppose that only the larger, more perfect, or

handsomest among the lower beings show signs of sentiment in their loves. Sir J. Lubbock tells us that the males of certain little, ugly, misshapen, dull-colored insects pay the most assiduous court to females, coquetting with them in the most amusing manner; running round them, and butting heads with them, playfully. The female, for her part, pretends to run away, and the male runs after her, gets in front, and faces her; while she, as if bashful, turns away, and he faces her again. Then they whip one another with their antennæ, and toy together in all kinds of amusing ways. Evidently they enjoy this, and it seems certain that the enjoyment is the same as that which is experienced by the males and females of beings higher in the scale.

It is supposed that the peculiar note of the male of some insects, as the locust for instance, is uttered for the purpose of attracting the females, and indeed they have been seen to flock around a male while thus singing. This is particularly noticeable in the seventeen-year locust, the male of which only drums, and evidently for the purpose of calling the females to him, and probably exciting them. They may also be frequently seen to select, or choose, one particular female out of the number so called.

The male cricket will also place himself at the entrance to the burrow in which is the female, and sing in a peculiar manner till she appears, when he caresses her with his antennæ, and in other ways shows his admiration.

M. Fabre, in describing the *cerceris*, a wasp-like insect, tells us that he has frequently seen the males fighting for the possession of some particular female, she all the while looking on, and when the fight was over flying away with the conqueror—all which is very human like. The same insects recognize each other, even when they have been long separated, and show real attachment. Huber tells us that ants which had been separated for four months, recognized, and caressed each other when they met, though mixed with strangers.

The ticking noise of the common *death-watch* is made by the female to call the male, and the males may often be called to a particular spot by imitating the noise. It is probable that they are thus often attracted by the ticking of a watch.

Butterflies are very demonstrative in their amours. The males will fight fiercely for possession of the females, and often mutilate each other's wings in their combats. The females will also coquet with their admirers, refusing some and encouraging others. A pair will often spend an hour or more in dalliance before copulation.

During the marriage flight, the males of some kinds support the females, but in others the females support the males. This is owing to difference in structure.

Several kinds of fishes, especially sharks and rays, which copulate, are provided with claspers to hold the female; and an old fisherman, who had often watched them, assured me that the act is often prolonged for half an hour or more, in sharks.

The capelin does not copulate, but the males assist the female in a very curious way in laying the spawn. They are provided with a ridge of close-set scales, like a stiff brush, and one of them will get on each side, so as to support her, and then both together run her swiftly over the sandy beach, where the spawn is deposited. The brush-like scales enable them to hold her, and to keep her up, she being heavier than the males on account of the spawn.

This assistance to the females in laying the eggs is paralleled by other beings, as by some frogs for instance, as explained elsewhere. It is quite probable also that the action may cause the male to emit the sperm at the same time, and thus insure fertilization of the ovæ.

The males of many fishes fight for the females, and some of them pair in single

couples. The male stickleback also makes the nest, in which the female lays her eggs, and conducts her to it with most undoubted indications of pride in his work, and admiration and love for his partner. The combats between the male sticklebacks over the females are most furious, and often result in serious injury.

The male salmon is even worse in this respect than the stickleback, and numbers of them are killed every season while fighting over the females. The conquerors always drive away the defeated ones, and guard the wives they have fought for with the greatest jealousy.

M. Carbonier gives some curious details as to the courtship of a Chinese fish, the *macropus*, which he kept in confinement for the purpose of studying them.

The males are most brilliantly colored, and seem to take great pleasure in displaying themselves before the females; while these, as if to show their appreciation, swim slowly around, and evidently derive pleasure from contemplating them.

It is not all mere play, however, for the males contend with each other fiercely for the possession of the females, and each seeks to obtain one for himself. When he has succeeded, he waits upon his bride when she emits the eggs, and cares for them in a very curious manner. He blows air from his mouth into the water, so as to make a little disk of froth, which floats on the surface. In this raft of froth he deposits the eggs, taking care to keep it always in good order, and watching it till the young are fairly hatched.

The males of some other fishes retain the eggs in their mouths till they develop into young.

In these instances, as in some others which have been mentioned, the male plays the principal part in the actual hatching of the eggs, and caring for them. He in fact does much that usually falls to the female's share in the higher animals.

It is worthy of especial note, that though the eggs of the female fish can be impregnated artificially, without any association whatever with the male, as in our fish-breeding establishments, still, naturally, the two sexes do seek each other at the time of spawning, and seem to delight in the association. It appears from observation that, as a rule, the female never deposits her eggs, if she can avoid it, except in presence of the male, and he, on his part, never fertilizes them except in her presence.

This proves that all animals, during the pairing time, even cold-blooded fishes, are amatively excited, the two sexes evidently seeking each other's company, and deriving pleasure from the association.

The males use force, artifice, and allurements of various kinds to obtain female partners, and these, on their part, exhibit caprice, choice, or dislike, and coquet just like human beings themselves. In short, it is *love* and *courtship* in the lowest beings as in the highest. Even where there is no actual union of the two sexes—no bodily contact of any kind—there is evidently some form of pleasure in the mere act of bringing the sperm and germ together, as in the case of the fishes last mentioned. With them there is evidently a gratification in each other's presence, or close proximity merely, at the time when impregnation occurs.

Some of the male sticklebacks are also excellent nurses of the young, taking the fondest care of them till able to fully shift for themselves. They will gently take them back to the nest when they stray too far, and constantly guard it against all enemies. The female, on the contrary, would destroy her own young if the male did not drive her away. In this instance, therefore, as in many others that have been noticed, the two sexes seem to change characters and duties.

Some of the pipe-fishes and sea-horses possess pockets, or sacs, in which the eggs are hatched, similar to the pouches of marsupial animals. But, strange to say, in some species the female has the pouch, and hatches the eggs, while in others it is the male. So curiously do the different offices, in the process of reproduction, change places between the two sexes.

Reptiles would seem, to most people, still more unlikely to give any exhibition of love-making; nevertheless they often do so, and sometimes very remarkably. Some of them also have parts of their structure curiously modified, to enable them to hold the female, and these modifications may be temporary, occurring only in the pairing season. Thus, in the common newt (*Triton palmipes*), the hind feet are usually webbed, so that he swims well, but in the pairing season the web disappears, leaving the claws free, which enables him to hold the female more securely in the act of cohabiting. He is very eager in his pursuit of his partner, and makes a great display of himself before her, by vibrating his broad tail, and elevating the crest on his back. This crest also, it is worthy of remark, is only developed during the pairing season.

The male crocodiles also, like their small brethren the newts, make a great display of themselves before their female partners, by fighting together fiercely, and by splashing and pirouetting around them in the water; at the same time emitting a powerful musky odor.

Indeed most animals, at such times, emit a peculiar odor, which probably attracts the other sex, and may thus enable them to find each other. It may also cause excitement.

The male lizards are very pugnacious, and fight fiercely for the females during the pairing season. Very frequently one will lose his tail in the combat, and when this happens the victor always swallows it.

Birds are very gallant, and practice many curious habits in their amours. Some of these exhibit both intellect and taste in a remarkable degree. The *bower bird* for instance, makes a real bower, often of considerable size, and ornaments it with all the bright and curious objects it can find. It is not a nest, nor a dwelling-place, but simply a play-place, where the birds resort at certain times, especially in the pairing season, for the purpose of amusement and amative enjoyment. The neatness, taste, and real beauty of some of these love-bowers is really surprising.

Other birds even plant *gardens* before their places of assemblage, and keep them always full of flowers. They begin by carefully removing every weed, stick, and stone, so as to have a perfectly smooth bed, which they carpet with moss, and then bring flowers and arrange them with great taste. As fast as they wither new ones are brought, so that the garden is always bright and fresh. This also is prompted by gallantry, and by the desire to have their love-making, in every way, as pleasing as possible.

Some birds sing only at the pairing season, and others assume their most brilliant colors at that time, the object apparently being to attract their partners, and to cause mutual admiration.

No animals fight more fiercely for the favors of the females than do birds of all kinds, and sometimes they have special weapons for the purpose.

The males of the beautiful and tiny humming-birds even will fight, in the love-season, with the most reckless ferocity. Not unfrequently indeed death ensues from their combats. The same thing occurs with many other birds, and often the excite-

ment of battle so carries them away that they can be readily captured by their enemies. Usually in such encounters, the female looks placidly on, and goes off with the victor. This, however, is not always the case, for sometimes she will watch the fight between two of her admirers, and when they are both exhausted, or one dead even, she will quietly take herself off with some new-comer, who has not fought at all.

The males of some birds, as the polygamous ruff, for instance, are so remarkably pugnacious, especially in the spring, that whole companies of them will fight together in the fiercest manner, so as often to kill one another. These fields of battle are always at the places where the females are about to lay their eggs; and the ground will often be so trampled during the fight that the fowlers easily find it, and as the birds come day after day to fight at the same place, they are easily caught.

Some birds, however, it is said, never fight. Audubon particularly mentions one of our woodpeckers (*Picus Auratus*), the males of which never fight, though several of them may be courting a female at the same time. These peaceable wooers are, however, very exceptional, for as a rule the males always fight, and especially in pairing time.

The *capercailzie*, and the *black cock*, like the ruff, fight in companies, assembling daily for the purpose, for weeks together. The black cock also practices a peculiar love-dance, and sings a peculiar love-song, which the Germans call *balz*, in pairing time. In fact, the bird seems crazy from amative excitement. He utters the strangest noises, and indulges in the most curious antics, jumping about, often in circles, spreading and flapping his wings, stretching out his neck, and rubbing his head along the ground. So absorbed does he become in these capers that he seems both blind and deaf, and may be shot readily, or even caught by the hand.

After these curious dances are over, the combat begins, and often rages furiously for several hours; very often the same dancing-places are visited year after year, and a very victorious male will frequently make a kind of triumphant tour from one to another, in a single day, fighting at each.

Grouse also fight in companies, in the same way, but only in the breeding season.

Audubon tells us that the female of the Virginia goat-sucker holds a kind of court, where she calls around her a number of male admirers, and from among them makes her choice; the favored one then fights the others and drives them away. Contrary to the usual course, in this case, the pairing comes first, and the combat afterwards.

Some good observers, however, assure us that the male birds often make *sham* fights only, just to display themselves before the female, so that she may the better choose among them. Audubon indeed says, that after one of these make-believe combats, both victors and vanquished will go off together to seek the female, and if she does not at once make a choice, the fictitious struggle recommences. The male field-starlings will often fight fiercely in flocks, but if the female appears they cease fighting at once, and all rush after her as if they were crazy.

The male birds of many species have a peculiar song, or call, during the breeding season, by which they attract, and appear to charm the female. And what is very remarkable, certain parts either grow, or change in form, at that season, to enable them to make these songs or calls.

The male turkey scrapes his wings on the ground, the peacock rattles his wings,

and the male grouse drums, to call or please the female; that this is so is proved by the fact that after one has made this drumming noise the females near will all fly to him.

Our common grouse, it is well known to hunters and naturalists, perform a very curious love-dance, during the pairing season. They will assemble in large numbers on some level place, and then run round and round, in a regular circle, some to the right and some to the left, till they wear the ground quite bare. During the dance, they indulge in the most comical antics, and the most extravagant gestures. Hunters call them partridge dances.

The solemn long-legged heron even makes himself equally ridiculous by his absurd capers, while courting; and of all birds the disgusting carrion vulture makes himself as ludicrous as any of his fellows, at such a time.

That the female bird makes a *choice* from among her admirers is beyond doubt, and probably this is usually determined by some real or fancied superiority in their singing, or greater splendor in their plumage; but sometimes it is merely the conqueror in battle that wins her affections. Very frequently, as stated before, the males meet and fight, or practice their peculiar dances, for many days, or even weeks, before the actual pairing takes place. Thus our partridge dances often last over a month, and so with snipes, who frequent the same ground often for many years in succession.

Mr. Darwin shows admirably how this process of selection operates to effect improvement, or change, in many ways. Thus the best fighters and singers, and the handsomest in plumage, being constantly preferred, will in consequence propagate more than the less favored ones, and, by the law of heredity, transmit their superior qualities to their offspring.

It does not appear that the males show any particular preference in regard to the females, except in some few instances, but take them as they find them.

Some birds in Australia make regular hillocks on which to fight, and others scratch large hollows for the same purpose.

Either from disparity of numbers in the two sexes, or from mere caprice, there are frequently unpaired birds, both male and female, and these, though coming together, do not always mate, which would seem to show that one, or both, are difficult to please.

Although, when paired, the two birds usually remain together during the whole breeding season, yet it is not always so. A very close observer assures me he has frequently seen a quarrel, apparently about the nest, followed by a separation, the male going off, and the female finding a new mate. As a rule, when the male is killed, the female soon obtains another, or even several in succession. In one case, when the males were shot, the widow got three new ones the same day.

Sometimes if the female be killed, after the eggs are laid, the male will find a new partner, and they will rear the brood between them.

Although the usual habit is for birds to pair, still we sometimes find two, or even three females to one male, and one nest; and still more rarely, two or more males to one female.

In polygamous birds, as the common fowl for instance, it is the best fighter who monopolizes several females for his own use, and drives the other males away.

In connection with their young also, birds show more of real human feeling or sympathy, and more intelligence too, than they commonly get credit for. Darwin

mentions a case where a game-keeper killed all the young hawks in a nest, except one, whose wings he clipped. This he did so that the old birds might still come to the nest and be shot. They were shot, and then two others came to feed the poor solitary orphan, and they too were shot; but still others came, till three pairs had been thus killed, one after the other. Should not the bird's nature have full credit for this?

With many kinds of birds, when paired, if one dies the other always pines away, refusing to be consoled. And a bird fancier assures me that when two birds have long been kept together, if one be taken away the other often refuses to eat, and dies. That those who have long been together can recognize each other, when again put together, after a long separation, is well known, and they often show unmistakable delight at the reunion. Their memories are undoubtedly good, for pigeons will return to their old homes even after they have been kept away from them many months.

Birds are not only kind to young ones, to others as well as to their own, but often to each other. Thus blind birds have been fed and protected by their fellows; and when crippled have been carefully tended till well.

There are, therefore, more of the elements of humanity in the bird than is usually supposed, both sympathetic and intellectual. Even caprice, jealousy, and coquetry are plainly shown by them, and also sudden attachment, or love at first sight. Thus Darwin gives an instance where a wild duck, reared in captivity, left her mate, of her own kind, instantly, when a male pintail was put in the water with her. Something in the new-comer took her fancy at once, and she divorced herself without scruple from her legitimate spouse, in order to enjoy his society, though he seemed at first both shy and afraid of her.

On the contrary, some females cannot be made to accept certain males by any means whatever. They may be confined with them, and kept away from all others, but to no purpose;—that particular one they will not have. Some male birds, however, like certain men, appear attractive to all the females they meet with, and are invariably preferred before all their fellows. Breeders call them *gay birds*, and they often are obliged to confine them when their particular breed is not wanted.

Many instances are recorded where females have deserted males who had lost their gay feathers, and taken others who still retained them. Albinos, it is stated, are never chosen by their own kind for partners, but this may be only from their strangeness.

It is not always the male that courts the female, though usually so; but in some instances the female courts the male. This is the case with the pea fowl; and according to Audubon, with the older wild turkeys. The female capercaillies also maneuver round the male while he is dancing, and evidently try to attract him. The females will also fight over the males, with some kinds, reversing the usual practice.

Some female birds are also much larger and fiercer than the males, and when this is the case, it is the male that sits on the nest and hatches out the young, while the female feeds him, and fights, if necessary, for the protection of her partner and progeny. This is the case with the Australian emu, but, strange to say, the female here has also an irresistible tendency to destroy her young, and the male, who has battled and cared for them, has to defend them against the mother the best way he can. This rage seems to last even for some time after nesting, so that if the two come together they almost always fight, and the female is usually the victor. This

seems singular love-making and parentage, but is probably as pleasing to them as other modes are to other birds. To show the singular contrasts nature presents us with, in regard to these matters, the male ostrich is much larger and more powerful than the female, and yet he also takes the whole care of the eggs and young, equally with the small gentle emu.

Among the mammalia, till we ascend to civilized man, the male almost always wins the female by the law of battle, or by simple violence. The very weakest and most timid, when excited by the erotic fever, will combat for female favors. Even two male hares have been known, when so stimulated, to fight till one was killed. Moles, squirrels, beavers, and sheep are equally pugnacious and daring at such times.

In fact, fighting is the rule, and many animals are provided with special weapons, such as horns and tusks of various kinds, which seem to be used only or chiefly in these sexual struggles. The victor drives away his rivals, or kills them, and enjoys his bride or harem alone. It is seldom that the males, in the season of heat, will tolerate each other's company at all; and yet instances have been known of two or more, acting in concert against a common rival too powerful for either to master alone.

A gentleman residing at the Faulkland Islands, imported an English stallion, with some brood mares; there were also two droves of wild mares on the Island, each with their wild stallion, and these in turn attacked the English horse, and tried to get his mares away from him, but failed. They were then seen to come together, and while the one fought with him the other endeavored to make off with the coveted females. They were however all captured together, by running them into a corral, the wild stallions refusing to leave the mares.

The bony horn of the narwhal, and the prodigious tusks of the elephant, are both used in fighting for possession of the females. Even the male ornithorhynchus has a kind of spur on his fore leg, with which he apparently fights, and which is provided with a bag of fluid, like that at the root of a snake's poison fang; but it is quite harmless. This spur, however, serves another purpose in all probability, for there is a hollow in the corresponding part of the female's leg, in which the spur fits, and most likely this enables him to hold her better during copulation.

It is singular that the stag, if castrated, never renews his horns, showing the connection they have with his sexuality. With the male reindeer, however, it is not so, for he may be castrated and still renew his horns as before. Eunuchs, it is well known seldom have beards. Rams when castrated do not always lose their horns entirely, but even when they retain them they become smaller.

Captain Bryant, gives us some very interesting details in regard to the wooing of seals, who are naturally very intelligent. Their tendency appears to be polygamous, each male keeping as many females to himself as he possibly can. The Captain says: "Many of the females, on their arrival at the island where they breed, appear to be desirous of returning to some particular male, and frequently climb the outlying rocks to overlook the rookeries; calling out and listening, as if for a familiar voice; then changing to another place they do the same again. . . . As soon as a female reaches the shore, the nearest male goes down to meet her, making a noise meanwhile like the clucking of a hen to her chickens. He bows to her, and coaxes her, till he gets between her and the water, so that she cannot escape him. Then his manner changes, and with a harsh growl he drives her to a place in his harem, and this continues till the lower row of harems is nearly full. Then the males higher up

select the time when their more fortunate neighbors are off their guard to steal their wives. This they do by taking them in their mouths and lifting them over the heads of the other females, and carefully placing them in their own harem, carrying them as cats do their kittens. Those still higher up pursue the same method, until the whole space is occupied. Frequently a struggle ensues between two males for the possession of the same female, and both seizing her at once pull her in two, or terribly lacerate her with their teeth. When the space is all filled, the old male walks complacently around reviewing his family, scolding those who disturb or crowd the others; and fiercely driving off all intruders."

The male of the common fowl, it is well known will commonly run down and capture the hen by main force; but he will also use stratagem, when it suits his purpose better. He will pretend to find something to eat, and call the females round him to have it, but when they have all come he changes his note, and at once seizes one without further ceremony. A young cock, who is obliged to keep away from the flock for fear of the old ones, will often adopt this stratagem.

The power of the amative mania in dogs is well known; while under its influence they have no regard for anything but the object of their pursuit, and will endure anything rather than abandon it. Still, Mr. Mayhew assures us, the females will often make a decided choice from among a crowd of suitors; evidently showing a preference for some particular dog. The females of small breeds, he says, almost always choosing a large male. Breeders also notice that sometimes particular animals always pair together, and will not do so with others. Mr. Cupples even gives an instance where a female, who had been separated from her favorite male, would never after associate with another, although in condition. Whether the male showed equal constancy is not stated; but most probably not. Instances have been known, however, of male dogs refusing to associate with strange females, when kept apart from those they had been accustomed to. Stallions and mares, bulls and cows, and even boars and sows, have been known to show a marked individual preference, and to exhibit much constancy in their attachments.

One strange peculiarity about the sea seal, may here be mentioned. During the breeding season the nose becomes lengthened, sometimes to a foot or more, and is capable of being erected like a trunk. What purpose this serves is unknown, but as it occurs at that season, it is doubtless in some way or other connected with pairing. It would be interesting to know if this would occur in males that had been castrated; the probability is it would not; for the males of several animals that have scent bags, as the musk-deer for instance, fail to develop them when they are castrated, and castrated deer, as before stated, develop no antlers.