

Veterinary Department.

Rabies or Canine Madness.

RABIES, canine madness or rabies canina, is a nervous disorder produced by the peculiar poison from the bite of a mad dog. Dogs, and their congeners, cats, foxes, and wolves, suffer most frequently, but cattle, sheep, and horses are also attacked, even fowls are reported to have been affected; whilst in man the disease likewise occurs, and from its inducing a horror of water, is termed Hydrophobia. In all animals it invariably proves fatal.

It is very important to distinguish the very earliest symptoms of so dangerous a disorder. Mr. Youatt who had extensive opportunities of observing the disease, and has recorded his experience of it in a work entitled "Canine madness" published in London in 1830, mentions that the dog in whom rabies is showing itself licks and scratches very constantly and determinedly at any bitten part, and becomes sullen, dull and depressed, or restless, quarrelsome, and excited. He is always nervous and easily roused, and if annoyed becomes much excited, bites at his chain, his kennel, and at other dogs, or at cats if he can get near them. Even when undisturbed, and tolerably quiet, he snaps at intervals at visionary objects. His bark is greatly altered, and resembles a howl, its earlier sounds are prolonged and dolorous, and its concluding strains harsh and rough. His appetite is depraved, wood, straw, leather, and even excrement are devoured. The dog is very thirsty; unlike the man with hydrophobia, he has no dread of water, will swim through it and eagerly lap it; but the swelling about the throat, and the paralysis of the muscles of the throat, interfere with swallowing, especially in the more advanced stages of the disease. About the throat and mouth thickened viscid mucous adheres which is endeavoured to be removed by the choking rough spasmodic cough, and by diligently rubbing the lips with the paws. The animal's general appearance is changed, he has a vacant pre-occupied stare, saliva drips from his mouth, his under jaw somewhat paralysed, is inclined to drop, his eyes are reddened, his breathing hurried, he looks thin and tucked up, walks with an uncertain sidling gait, and usually carries his tail despondingly between his legs. To the last, however, he remains conscious, recognises his master, and will often endeavour to do his bidding. Death occurs in from four to eight days, usually from exhaustion, occasionally from suffocation or apoplexy.

After death the blood is found dark coloured, imperfectly coagulated, deficient in fibrine, and causing straining of adjacent structures. The mucous membranes and glands about the throat are swollen, congested, and inflamed, and the inflammatory redness extends alike along the respiratory and digestive mucous membranes, sometimes reaching in the latter tract as far as the jejunum. In the stomach and bowels are found quantities of straw, dirt, and indigestible matters. The secretions in the bowels are discoloured, being of a chocolate, brown, or dirty green hue. As in so many other nervous disorders, the nervous system does not after death exhibit any very definite abnormal appearances. In a few cases engorgement of the vessels of the brain and medulla oblongata have been observed.

Professor Dick, the late Sir Isaac Pennington, Professor of Physic at Cambridge, and a few other good authorities consider that rabies has nothing to do with the bite of a dog; that it is merely a violent inflammation of the mucous membrane of the nostrils and throat, extending thence to the brain, and thus developing the notable nervous derangement; that it prevails like influenza as an epizootic; and that in man the peculiar symptoms of hydrophobia are the result mainly of a disordered imagination. These views are, however, untenable. Neither rabies in animals nor hydrophobia in man ever occur without the patient having been inoculated by the peculiar poison produced within the body of a rabid animal. In the large proportion of cases there is good evidence of the patient having been bitten by a mad dog. In 1810 a mad dog in the neighbourhood of Senlis bit fifteen persons, three of whom died of hydrophobia. A dog in Lord Fitzwilliam's kennels bit several of his fellows, and in five days died mad; six others of those bitten afterwards became affected, the first in twenty-three days, the last only after 183 days. Wolves, jackals, and foxes have bitten hundreds of people, and of those bitten nearly one-half have died of hydrophobia. The saliva from a man labouring under hydrophobia has produced rabies in dogs. A groom died of hydrophobia from having his hands scratched by the tooth of a rabid horse, to which he was giving a ball. Not only the saliva, but even the

blood from mad dogs has been found by Hertwig to propagate the disease. The poison requires however to be brought in contact with an abraded surface. Upon the sound skin or even on a healthy unbruised mucous surface it is probably perfectly harmless. Dogs appear more susceptible to the influence of the specific poison than any other animals. Hertwig produced the disease in 14 out of 59 inoculated: Youatt gives even a larger proportion, stating that two out of three dogs bitten die mad. Of the horses bitten by mad dogs or wolves, a large proportion, fully one-half perish. Sheep and cattle, from the abundance of their woolly covering and the looseness of their skins, although bitten in large numbers, suffer in lesser numbers than dogs. The clothing of men affords a great protection against the bite of a rabid dog, for the venomous tooth is thus wiped before it reaches the flesh, and hence the chances of inoculation are greatly reduced. The famous John Hunter records an instance in which twenty-one persons were bitten, and only one became affected with hydrophobia.

It appears that the poison remains for a variable time locked up as it were in the wound produced by the tooth. Hertwig found that in dogs about fifty days elapsed between the animal being bitten or inoculated, and his becoming rabid. Of sixty recorded cases in man, the average period between the bite, and the appearance of the disease varied from four to seven weeks; fifteen days was the shortest time, and nine months the longest. Such facts indicate the importance of at once cauterizing the bite inflicted by a mad dog. With nitrate of silver the lacerated surfaces should be freely run over. Where practicable, a still safer remedy is the removal of the injured part with the knife. Even where the wound has been made for several days the knife or caustic may still prove serviceable. When once the symptoms of the complaint have shown themselves, treatment is perfectly hopeless. The animal should be carefully chained up; if he has injured no one he should at once be destroyed; and if sufficient care were taken to destroy all mad dogs, and all dogs bitten by them, there is no doubt that within a few months this dreadful disorder could be entirely exterminated, and in England we might enjoy that immunity which Egypt, Isle of Cyprus, Madeira, and South America still have from rabies and hydrophobia.—*North British Agriculturist*.

HOOF OR COLTS.—The feet of unshod colts should be pared down as often as they need it, since, if neglected, they may become permanently misshapen, and the unnatural strain upon the pastern, caused by the excessive length of the toe, is very apt to produce ringbone.—*Ohio Farmer*.

The Apiary.

Management of the Apiary in September.

BY J. H. THOMAS.

By the middle of this month, the fall honey harvest will be past, and bees will add no more to their stores. All honey boxes not removed before should now be taken off. All late or small swarms should now be put together, for one strong stock is better than three weak ones, especially if they are to be wintered out of doors. All stocks that have not sufficient honey to carry them through the winter, should now be fed in order to have them store it in the combs, and seal it over while the weather is warm. About 30 lbs. of honey are required to winter a strong stock safely in the open air; but half that quantity would winter a good stock if housed in a proper place. If moveable-comb hives are used, weak stocks may be strengthened by exchanging frames with a strong stock, or a frame containing honey may be given them.

Now is the time to feed bees, and not wait until winter. It is bad policy to disturb bees during the winter. A syrup made of common sugar will answer for feed where honey cannot be had; white sugar is equally as good as honey. All stocks that are fed should be carefully guarded against robbers by contracting the entrance so that only a bee or two can pass at a time. In properly constructed moveable-comb hives there is not the least difficulty in feeding. All queenless stocks should now be taken up, or supplied with a queen. Stocks in common hives that are to be taken up, should be attended to now, as they will add no more to their stores. Moveable-comb hives may be examined, and if milder grubs are found in the combs, they should be removed.

If grubs are in the combs, a number of cells in different places will be uncapped, exposing the young bees. This is done by the bees in search for the grubs; in other places the caps of the cells will be removed, exposing the web or gallery of the grub, which is formed directly over the heads of the young bees and looks white where it is exposed by the bees: in this a grub will generally be found. By touching these places lightly with a knife, the grub will be seen to move under the web, and its exact locality will thus be discovered. It may then be easily removed with the point of a knife, saving the bees much trouble. In common hives this cannot be done, though if nests are formed they may sometimes be seen by turning up the hive and looking in between the combs, and may often be removed with a knife. Let it be remembered that stocks that have cast five or six swarms are very apt to be queenless or so reduced in bees as to be almost worthless. In such a case give them more bees, or a queen, as the case may require.

Chinese Mode of Taking Honey.

MR. FORTUNE, the well-known English botanist, thus describes the mode adopted by the Chinese for taking honey from bee-hives. He says: "The Chinese hive is a very rude affair, and looks very different from what we are accustomed to use in England; yet, I suspect, were the bees consulted in this matter, they would prefer the Chinese to ours. It consists of a rough box, sometimes square and sometimes cylindrical, with a moveable top and bottom. When the bees are put into a hive of this description it is rarely placed on or near the ground, as with us, but is raised eight or ten feet, and generally fixed under a projecting roof of a house or out-building. No doubt the Chinese have remarked the partiality which the insects have for places of this kind, when they choose quarters for themselves, and have taken a lesson from this circumstance. My landlord, who had a number of hives, having determined one day to take some honey from two of them, a half-witted priest, who was famous for his powers in such matters, was sent for to perform the operation. This man, in addition to his priestly duties, had charge of the buffaloes which were kept on the farm attached to the temple. He came round in high glee, evidently considering his qualification of no ordinary kind for the operation he was about to perform. Curious to witness his method of proceeding with the business, I left some work with which I was busy, and followed him and the other priests and servants of the establishment to the place where the hives were fixed. The form of the hive in this instance, was cylindrical; each was about three feet in length, and rather wider at the bottom than the top. When we reached the spot where the hives were placed, our operator jumped upon a table there for the purpose, and gently lifted down one of the hives and placed it on its side on the table. He then took the moveable top off, and the honeycomb, with which the hive was quite full, was exposed to our view. In the meantime an old priest, having brought a large basin, and everything being ready, our friend commenced to cut out the honeycomb with a knife apparently made for the purpose, and having the handle almost at right angles with the blade. Having taken out about one-third of the contents of the hive the top was put on again, and the hive elevated to its former position. The same operation was repeated with the second hive, and in a manner quite satisfactory. But, it may be asked, 'Where were the bees at this time?' and that is the most curious part of my story. They had not been killed by the fumes of brimstone, for it is contrary to the doctrine of the Buddhist creed to take animal life; nor had they been stupefied with fungus, which is sometimes done at home; but they were flying about over our heads in great numbers, and yet, although we were not protected in the slightest degree, not one of us was stung; and this was the more remarkable as the bodies of the operator and servants were completely naked from the middle upwards. The charm was a simple one; it lay in a few dry stems and leaves of a species of *Artemisia*, (wormwood), which grows wild on these hills, and which is largely used to drive that pest, mosquito, out of the dwellings of the people. This plant is cut early in the summer, sun-dried, then twisted into bands, and it is ready for use. At the commencement of the operation which I am describing, one of the substance was ignited, and kept burning slowly as the work went on. The poor bees did not seem to know what to make of it. They were perfectly good-tempered, and kept hovering about our heads, but apparently incapable of doing us the slightest injury. When the hives were properly fixed the charm was put out, and my host and his servants carried off the honey in triumph."