

Feuchtwanger THE (L.)

M A D D O G: *Box*

OR

HYDROPHOBIA,

WITH ALL ITS VARIOUS

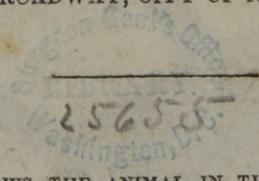
SYMPTOMS, CAUSES, AND REMEDIES, MINUTELY
DESCRIBED:

BY

DR. LEWIS FEUCHTWANGER;

CHEMIST AND DRUGGIST,

No. 320 BROADWAY, CITY OF NEW-YORK.



THE ENGRAVING SHOWS THE ANIMAL IN THE LAST STAGE OF THIS
DREADFUL MALADY.

NEW-YORK:
PUBLISHED BY WM. APPLGATE,
17 ANN-STREET.

.....
1840.

MAD DOG

OR

NEW YORK

WITH ALL ITS VARIANTS

SYMPTOMS CAUSES, AND REMEDIES MINUTELY DESCRIBED

Entered according to Act of Congress, in the year 1840, by

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THE EMPLOYER SHOWS THE ANIMAL IN THE LAST STAGE OF THIS

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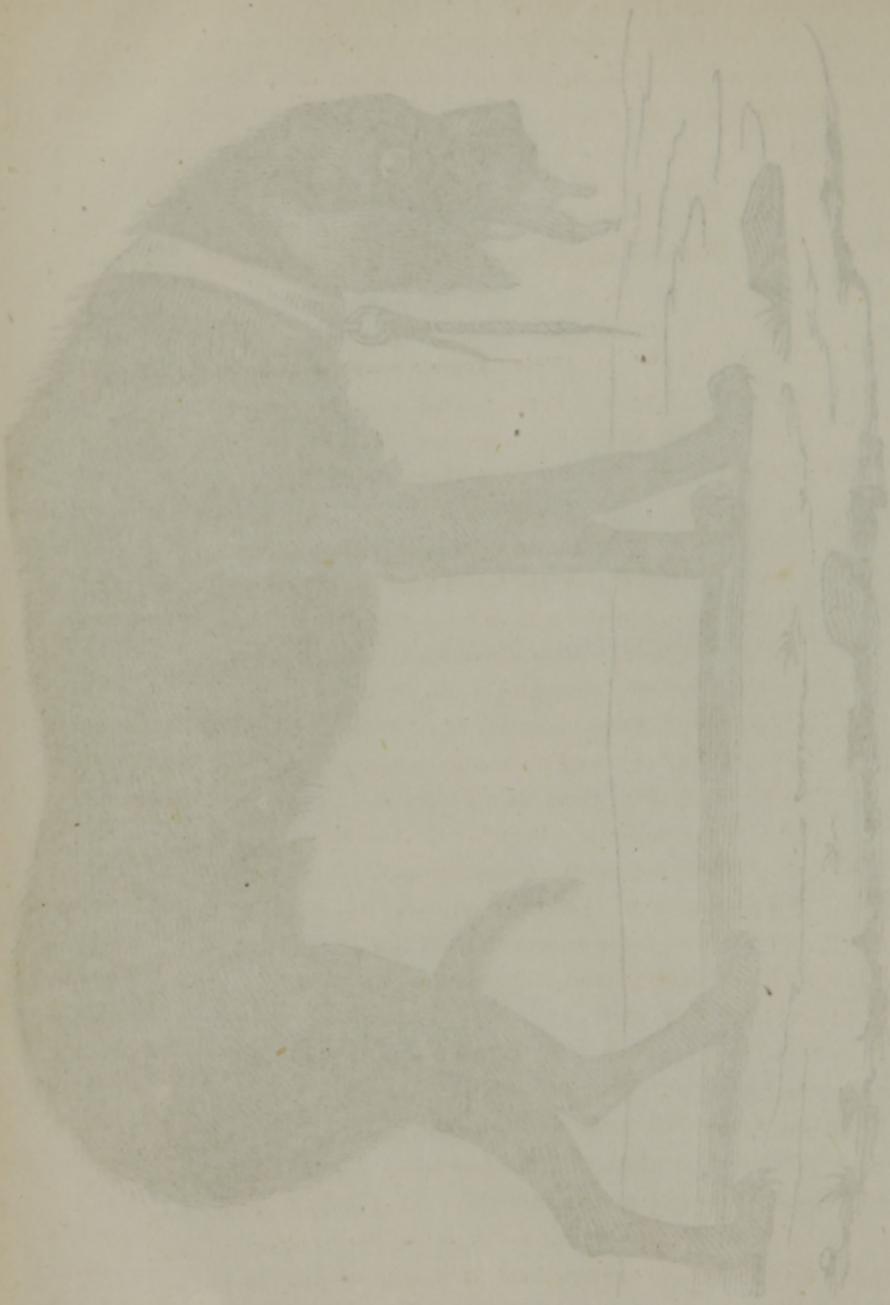
11 NASSAU-STREET.

1840.



CHARACTERISTIC SYMPTOMS:

The eyes are fixed and watery ; the tongue is pendant from the mouth ; the dog has a creeping walk, with reeling and stiff legs ; his head hangs downward, the hair in bristles, he foams at the mouth, and his tail is contracted between his legs.



CHARACTERISTIC SYMPTOMS!

The creature fierce and voracious; the tongue is pendant from the mouth; the dog has a croaking walk, with rolling and still legs; his head hangs down; when the hair is pulled he howls in the mouth, and his tail is curled; he is very fat.

New-York, June 22d, 1840.

To the HON. ISAAC L. VARIAN,

President of the Board of Health, and Mayor of the City of New-York.

SIR,

The undersigned, for the last twelve years a resident in this city, takes the liberty to address you on a subject of vital importance to the inhabitants of New-York; in the hope, that, with your accustomed magnanimity the communication may be presented for the consideration of the Board of Health.

It is well known that man bitten by a mad dog is attacked with that disease called Hydrophobia; for the cure of which among the various nostrums of the day, nothing radical has as yet been discovered, and the only resource that appears to be left us by Providence to prevent the occurrence of so ravaging a disease, is in the old adage, that "a grain of preventive is worth a pound of cure."

Having at hand the laws of the Prussian government on the same subject, he takes pleasure in translating the Royal Edict *verbatim*, and although the free government under which we live, in this happy country, does not give the authorities power to inflict such severe penalties as those enforced by a monarchical Potentate; yet you may perhaps, after a perusal, devise similar wholesome laws without personal punishment; and by that means, save the lives of many an innocent victim during the season. The Edict reads as follows;

"We, &c., &c., &c., do ordain that every proprietor of a dog, or one who has the charge of a dog either for feeding, dressing or other purpose, on discovering the symptoms of the first stage of madness, shall kill him immediately; in case of neglect, and the dog being seen at large, when in the second stage of madness, the proprietor or guardian of the dog when detected; although the dog should not have produced mischief, shall be fined in the sum of twenty-dollars, and if unable to pay, to be imprisoned for four weeks, and no pretence whatever shall be accepted in mitigation of this our Edict; the same fine shall be imposed upon any one who was aware that his dog was bitten by a mad dog and refuses or neglects to kill the same; and if he transfers such a dog to another person; as the shepherds frequently do; the fine shall be increased to triple the amount."

Having a manuscript on theoretic exposition or Treatise on Hydrophobia ; with some suggestions of a speedy remedy ; I shall be happy to have it printed with your sanction.

Very respectfully yours,

L. FEUCHTWANGER.

New-York, June 22d, 1840.

To the Hon. Isaac L. VAN RANSTEN,

President of the Board of Health, and Mayor of the City of New-York.

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HYDROPHOBIA.

THE SYMPTOMS, REMEDIES AND CAUSES.

The disease known as Hydrophobia, Rabies Canina, Lyssa and Water-dread, belongs to that class of complaints which affects the muscles and is a spasmodic constriction of the muscles of the chest, supervening the bite of a rabid animal and is preceded by a return of pain and inflammation in the bitten part, and producing great restlessness, horror and excitement of mind ; rabid animals which can communicate this disease to the human race, are the dog, cat, wolf, fox, hog, horse, ass, ox, and also chickens, or ducks, and according to the name of the animal which is so attacked with this disease it receives the name of either canine, feline or other madness. An animal attacked with the eutasia lyssa, becomes weak, indolent, murmurs constantly, seeks darkness, refuses food and shuns the water ; hangs the head and tail downward, walks crooked, keeps the mouth open and foaming, its eyes are steady, glistening and wild, and bites every thing before him, displays a dread of polished substances and bright colours. The symptoms of hydrophobia in man generally manifest themselves at a certain period after the wound is apparently healed, but generally a few weeks elapse between the bite and the commencement of the disease and produces a sudden and deep inspiration, the diaphragm is at once descending, he feels uncomfortable, sighs a good deal, is severely agitated by the impression of cold air, the glare of a mirror, the noise of a pump, the sound of water, and has a crawling sensation from the spot where he was bitten up to the throat ; after the pains ascend to the head and the stomach, vomiting is produced ; when asleep, he is constantly disturbed by frightful dreams ; the extremities become cold, fainting and delirium ensues, and the face often exposes a distracted appearance ; fiery sparks appear to the diseased to fly before his eyes, the passages and voice are suppressed, and the latter is particularly attended with great pain ; the pulse is weak, he is tormented with thirst, but dares not drink, for the sight, or even the idea of liquids make him shudder ; bright colours, strong light, acute sounds, particularly that of water poured from basin to basin, even a simple agitation of the air by a movement of the bed curtains will often produce a paroxysm of general convulsions and spasms from chest to throat ; his mouth is filled with a tenacious saliva in which the poisonous miasma is concealed, and which the patient is constantly endeavoring to hawk up, and the sound which is hereby produced is of a singular nature, somewhat like the barking or yelping of a dog ; the restlessness is extremely great, if the patient lies down to compose himself, he instantly starts up again and looks wildly around him in unutterable anguish. The symp-

toms of the disease change in the animal according to periods. There are three distinct stages from the beginning ; increase and complete development of the lyssa or hydrophobia are to be discriminated which I am about distinctly to describe.

First Stage.

The suspicion of a dog getting mad is excited, when he ceases to be friendly and scarcely wags his tail, notwithstanding the repeated flatteries of those whom he used to obey ; he appears tired and very indolent and instead of his wonted pleasantness and playfulness he becomes morose and sorrowful, and creeps into dark corners, avoiding the light, does not care for his food, smells at it and goes off, refuses a drink, ceases to bark, he growls to every thing before him and leaps at it at once ; the eyes become dark and the ears and tail hang down ; he obeys yet his master, recognizes him, wags his tail at the call ; he is tempted yet for sporting or any other pursuit he was accustomed to, but with force and grunting ; if irritated he bites all around him and creeps quick into dark corners from where nobody, even the master not excepted, can bring him away without grunting, but without barking.

In this stage the animal remains but a short time, say from half a day to a whole day, and great care has already to be taken, as the bite may be poisonous ; particularly in certain climates and certain seasons of the year ; either in a hot zone, dry weather, excessive heat or cold, and may have been brought on when the dog received bad or putrid food, or, was in want of drink or, if bitten by a mad dog.

Second Stage.

All the former symptoms increase ; the dog ceases to obey any call from whomever it may come ; he avoids every body ; he languishingly stretches his tongue without gratifying his thirst, as he dreads every liquid ; he suffers no body around him ; does not bark, but grunts occasionally with a hoarse voice, and attacks every one approaching him by his bite, which communicates the deadly disease. He is seen constantly chewing, and the resinous saliva is running down from his tongue and the mouth is continually open and foaming.

The madness increases now with every hour, the dog runs away and flees from his master, and snaps after every thing in his way ; he runs at first slow, but increases his course with the disease, at the same time bowing down his head, and hanging his ears loosely and his tail contracted between the legs ; he very frequently runs a great distance and cross-ways with great rapidity, the moment he however, spies water or any thing brilliant, he flees anxiously from it.

Third Stage.

The eyes are red as fire ; turning with the head, stiff and solid, the tongue hangs from the mouth and is of a lead color. The sound dogs meeting a

mad dog do not bark at him, but run from him, and if they cannot flee, they do not resist, but lay down tremblingly and flatter him. The strength of the mad dog is now giving way, he runs very slow, creeping, and at last reeling; the water runs frequently from his eyes, his hair is raising and bristling, the head sinks deeper, the tongue becomes dark, and the foam increases in the mouth. He snaps and bites constantly at every thing that comes in contact with him; he falls down to the ground, raises himself again with difficulty and breathes painfully; convulsions ensue at last, and he falls down and dies.

Cases often occur wherein dogs die while in the first stage of hydrophobia, sometimes on the 2d, 3d, or 4th day, or the first stage may have continued longer and from its virulence the dog has died from it. Mad dogs may swim through water and yet have all the symptoms of hydrophobia. In order to describe fully the symptoms of Rabies, I have thought best to extract from Good's Study of Medicine, p. 297, the following remark:

"Whatever be the exciting cause, the wounded part almost always, though not universally so, takes the lead in the train of symptoms and becomes uneasy; the cicatrix looking red or livid, often opening afresh and oozing forth a little coloured serum, while the limb feels stiff and numb; the patient is next oppressed with anxiety and depression, and sometimes sinks into a melancholy, from which nothing can arouse him. The pulse and general temperature of the skin do not at this time vary much from their natural state. A stiffness and painful constriction are however felt about the chest and throat; the breathing becomes difficult and is interrupted by sobs and deep sighs, as the sleep is, if any can be obtained, by starts and frightful dreams. Bright colors, a strong light, acute sounds, the sound of water poured from basin to basin, even a simple agitation of the air, by a movement of the bed curtains are sources of great disturbance, and will often bring on a paroxysm of general convulsions or aggravate the tetanic inclination. The patient is tormented with thirst, but dares not drink; the sight or even idea of liquids making him shudder; his eyes are haggard, glassy, fixed and tinged with blood from the violence of the struggle; his mouth is filled with a tenacious saliva in which lurks the secreted and poisonous miasm; and he is perpetually endeavoring to hawk it up and spit it away from him in every direction, after desiring those around him to stand aside, as conscious that he might hereby injure them; the sound which is thus made from the great oppression he labors under and from his vehement effort to excrete the tough and adhesive phlegm, is often of a very singular kind, and being sometimes more acute than at others, as well as quick and sudden, and also frequently repeated like every motion of the body, has occasionally to a warm and pre-possessed imagination seemed to be a kind of barking or yelping, and hence probably, the vulgar idea that a barking like that of a dog is a common symptom of the disease. The restlessness is extreme, and if the

patient attempts to lie down to compose himself, he instantly starts up again and looks wildly around him in unutterable anguish." The patient, then exhausts, expires at about the third day of his attack.

The canine rabies is much more aggravated than the feline or that produced by a cat; and in order to illustrate it better, it may be best to quote a case as it is described in the transactions of the Medical Society of London, which proved fatal in seventy-four days from the time of receiving the injury and fifty-eight hours from the commencement of the disease, all the symptoms moreover exhibiting less violence than usually occur in canine madness, with little or no water dread, and consequently an ability to drink fluids till the close of the disease, though the muscles of deglutition as well as those of the chest, evinced always some degree of constriction with occasional exacerbations; the patient was a young lady of eighteen years of age; the attack was made in the month of January, with both claws and teeth, by a domestic cat that was lurking under the bed, and which, though not known to be ill, had for some time before been observed to be wild and had been roving in the woods; the lacerated parts of the patient were incised and purposely inflamed by the application of spirits of turpentine; the wound healed and the general health of the patient continued perfect till the beginning of the ensuing April, when she was suddenly frightened by looking out of a window and seeing a mad dog pursued by a crowding populace, and this proved the exciting cause; she instantly expressed alarm, anxiety and dejection of mind; in the afternoon she complained of an unusual stiffness in the moving her left arm and its sense of feeling was impaired; she discovered an aversion to company; the irritations of noise, heat and light were offensive to her; she avoided the fire and forbade a candle to be brought near her. The rigidity and insensibility of the affected arm seemed to shoot in a line from the middle finger which had been lacerated and was accompanied with an acute pain which terminated in the glands of the axilla, wherein she complained of a considerable swelling. Yet neither of the hands (for both had been injured) was affected with discoloration, tension, tumefaction or any other mark of local injury, though a degree of lividity had been observed upon the lacerated part of the finger a short time before the disease made its appearance. She had a painful constrictive sensation in her chest and the respiration was interrupted by frequent sighings; the spasmodic symptoms increased and at length the whole system, especially the lungs, was affected with violent convulsions; the breathing was exquisitely laborious, but the paroxysm subsided in about two minutes. Frequent sickness and vomiting followed, the convulsive spasms about the throat obliged her to gulp what she swallowed—she showed a slight reluctance, but nothing more than to handling a glass goblet; the pulse was one hundred and thirty-two strokes in a minute; the skin was cool, the tongue moist, the bowels open, the thirst urgent without any tendency to

delirium ; she was worn out however, by sensorial exhaustion and distress, and at last expired calmly.

There is a considerable difference in many of the symptoms which characterise the progress of this malady, derived from difference of age, idiosyncrasy or some other casualty, so that it is possible no two cases are in every respect precisely parallel.

The remedies, antidotes and mode of treatment are ample, but without being specific, that much we know, that, there is nothing yet discovered upon which may be depended after the disease has made its appearance, and if proper means are employed at the time of the bite, the patient will and may recover, but after a certain time has elapsed and the disease breaks out ; few, very few instances indeed can be proved of a certain recovery, and it is therefore yet left for some genius to discover an arcanum.

Dioscorides already recommends cauterization by means of hot iron ; lunar caustic or caustic soda have been employed likewise as a cautery by the early physicians, such as Van Helmont, Morgagni, Stahl and Schenk, Ponteau and Moseley ; afterwards excision in connection with the cautery ; a tight ligature to the affected part ; the application of a powerful cupping glass over the wound ; the excision, and immediate re-application of the cup ; aqua ammonia (spirits of hartshorn) and camphor, and powerful stimulants, likewise various kinds of pepper, oil of cajeput, different preparations of tin, copper and iron which are all stimulants, have been recommended by those physicians whose object it was to stimulate and support the vital power ; on the other hand those physicians who consider hydrophobia an inflammatory disease, have recommended severe bleedings and exhaustion ; application of ice according to Celsus and to be kept first in a cold bath and after that in a warm oil bath, strong drastic purgatives. Bleeding was recommended 1753, by Dr. Nugent, with musk and other anti-spasmodics ; the plan of evacuation was also adopted, acids and alkalis, particularly sulphuric and muriatic acids. Wendel, a physician of the last century, recommends the patient to drink vinegar, theriac and rue, the spirits of hartshorn stands however at the head of those remedies ; externally as well as internally, the *eau de luce*, a caustic ammonia with rectified oil of ambre. Mercury being a specific in syphilis was likewise highly extolled as a certain and infallible remedy ; and it was mostly given in pills made from Turpeth mineral.

Diuretics, particularly the cantharides in substance, have been strenuously recommended in preference to opium, camphor, musk, belladonna, and tobacco, nux vomica and stramonium have likewise been employed in India with success. From two to eight grains of the extract of opium were injected into the veins with much success, as also the extract of belladonna. The musk (16 grains of musk and 48 grains cinnabar) mixed in a gill of arrack taken in one dose has been considered the only and best remedy. The ashcoloured liverwort, the preparations of arsenic,

likewise the following recipe, composed of powdered chalk, half an ounce Armenian bole 3 drachms, alum 10 grains, powdered Elecampane 1 drachm and oil of annis 6 drops, had its day, the butcher's broom (*genista*) and side-leaved scull caps—the latter has particularly found a favorable reception and general application in this country. Chlorine has of late been considered a safe antidote for hydrophobia; in fact there are more than three hundred remedies recommended as specifics for this disease, and yet not one which is applicable in all cases.

The author of these pages likewise attempts to recommend substances which, in his humble opinion, exceed in strength all stimulants hitherto employed; it is the Kreosote, which is so powerful and profused a stiptic that if applied externally, it will after one application coagulate the blood and taken internally, will cleanse the whole system. The author would recommend the following directions in any emergency of hydrophobia, or as soon as the bite of a mad dog has been known to have taken place.

1. First of all, undress the person bitten by a mad dog, and throw the clothing in water, for preventing a miasmatic effect upon another person.

2. Let it bleed, if it is a fresh bite, very freely; press it, in all directions, for extracting all the blood from the surrounding part, and wash the wound with pure kreosote; and if the wound is not deep and small, enlarge the same by a pistori, and press it freely, and apply afterwards the kreosote.

3. The wound must be well irritated, and some large cups applied to it, and a considerable quantity of blood taken from it.

4. Cauterise the wound by means of a hot iron, or oil vitriol, or lunar caustic, or moxa, which must be introduced deep into the wound; and if there are more than one wound, cauterise them all, and begin from the uppermost, or nearest to the head.

5. Apply (six or seven hours after the cauterization) a strong vesicatorial plaster on the wound, where it may remain for twelve hours; and keep the wound open, either by an issue or strong mezereon and cantharides ointment, for six or eight days; and unless you are perfectly satisfied that the cauterization has entered as deep as the poison of the mad dog, repeat the cauterization and vesication.

Sudorifics—such as Minderer's Spirit, Dover's Powders, &c.—have to be immediately applied, and a pure decoction of Sarsaparilla has to be administered for a length of time. A very weak solution of Strychnine may likewise be administered in intervals.

The guaco, a powerful antidote against animal poisons, particularly the bite of rattlesnakes, used along the gulph of Mexico and South America, may with benefit be likewise used internally and externally in case of hydrophobia, particularly when immediately applied to the fresh wounds.

The leopard's bane, or arnica flowers, a capital remedy for sprains and bruises, may likewise prove efficient as an external application, for it is a powerful stimulant in spasmodic contractions of the limbs.

CAUSES.

As to the causes of Hydrophobia, the opinions vary much among the most experienced professional men; and neither the proximate nor the remote or predisposing causes, have as yet been either pathologically or physiologically fully understood or explained. All that can be said is, that Hydrophobia depends upon a peculiar virus, which is capable of producing and communicating specific effects, and that there are but few animals that have a power of originating this virus, viz: the dog, fox, wolf, and the domestic cat, and a few others; that the excitement of vehement rage, putrid food, long-continued thirst, severe and pinching hunger, hot and sultry atmosphere, are the only probable and most natural causes; but, on the other hand, it is proved that dogs have died, on long sea voyages, of thirst and hunger, without any signs of madness; and that Hydrophobia appeared, in a spontaneous origin, under all meteorological changes of the weather, and that the disease is by far less common in hot and tropical regions than in those of a moderate temperature, as it is unknown in South America, but very seldom in the West Indies, Syria and Egypt, and at the Cape of Good Hope, and in the Interior, where the Caffres spend their days on no other food but putrid meat. The specific virus of Hydrophobia is never found diffused in the atmosphere, and is, therefore, not epidemic; it is less volatile than any other morbid poison, and less indecomposable, and is, therefore, capable of remaining in a dormant and unaffected state in any part of the system, and that it requires in man an excitement to enable it to carry out the process of assimilation; and, according to John Hunter, the disease which is afterwards called forth is generated in the wounded part from the germ first deposited there by the teeth of the rabid animal. According to Mr. Trollet, one of the best authorities on this subject, the virus does not permeate a round skin, but it is only contained in the frothy matter communicated from the lips, and neither the blood nor the secretions of any kind are tainted with it; that it is capable of propagation from the human subject to any animal even by inoculation. It is likewise certain that the nervous system is the immediate cause of disturbance. It has also been said, by Dr. Francis of this city, that Hydrophobia may be spontaneously generated by violent emotions of the mind—sorrow, fear, rage, fright, the want of food, extreme fatigue, &c.

The following letter of Dr. Anderson of this city, in regard to the pathology of Lyssa, may gratify some readers:—

New York, 1st June, 1840.

TO DR LEWIS FEUCHTWANGER,

DEAR SIR,—As you are about to call public attention, in a pamphlet form, upon the subject of Hydrophobia, I will comply with your wishes in rendering my views of the pathological nature of that disease.

The term “Mad Dog,” so much in common use, seems at once to

invade the real nature of the malady ; and that there is a poison secreted in the mouth of the animal, which, when introduced under the skin of a human being produces a like disease, I will undertake to contradict.

A mad dog must certainly, previously to his affection, have been a very serious, intelligent, and rational dog ! The idea is preposterous, and a profound specimen of popular ignorance.

Such animals as insert a poison by their bite have a special organization, both for the creation of the poisoning fluid and a means for its ejection. The Rattle-snake has, at the root of its canine teeth of the upper jaw, a membranous bag lined with a secreting surface, which makes the poison from the blood of the animal, and these teeth in that snake are hollow from the points to the roots, having connection with the bags by which, as in the case of biting, the teeth are pressed upon, and the poison is inserted into the injured part. Now, this is the natural means of defiance in these animals.

The dog, also, has long teeth in the upper jaw, and these are his means of defiance ; his action being notified with or without barking.

In the summer season, in this region, the human constitution is much increased in its natural irritability ; so that of dogs, as well of animate nature generally ; the matter of habits and diet may increase this state, in connexion with other circumstantial causes. Thus, we have diseases of debility, nervousness, biliousness, &c. all which add much to animal susceptibility, and with the dog equally with man.

When dogs bite men, in for instance, the fleshy part of the thigh, the wound, in almost every instance, is easily healed, and symptoms of hydrophobia are not apprehended ; but when the bite takes place in the arm, below the elbow, or leg, below the knee, in the most cases we have a punctured wound of *TENDONS* which in almost all instances produces the necessary symptoms accompanying the wound of *tendons*, which are analogous to those accruing from a wound by a *nail* in the *sole of the foot*, &c.

It appears to me, that Hydrophobia, as understood by the books upon medical science, and among practitioners, is a *professional delusion*.

I must add, that, your quotations from Dr. Good's Study of Medicine prove hydrophobia to be without cure ; just as much as every other disease would be, when its nature is misunderstood. In regard to the quotation from the London Morning Post of last July ; you may see in my edition of Samuel Cooper's Surgical Dictionary, of 1823, a detailed account from Dr. Marochetti, of St. Petersburg Russia, to the purpose.

I am, respectfully,

WILLIAM ANDERSON, M. D.

New York, 4th July, 1840.

In conclusion, a letter of a Mr. Belinaye to the Editor of the London Morning Post, in regard to the treatment of the Hydrophobia, may not be uninteresting, as the remedy therein prescribed, is one of the most simple of all others hitherto known.

[From the London Morning Post of July 18.]

HYDROPHOBIA.

TO THE EDITOR—*Sir*: For the following official document, published by command of the Austrian War Department, I am indebted to the kindness of my superiors at his Imperial Majesty's Embassy in London. I think that, at a season when that dreadful and hitherto irremediable malady, Hydrophobia, is most prevalent, it is a duty to make public the following remedy; such being, besides, the philanthropic object of its official promulgators, who have written the original account with a view to be generally intelligible. On perusing the document, the remedy would not appear, *a priori*, to a medical eye, a powerful antidote; but opinions are nothing in presence of facts, and those facts, I am informed, are briefly the following:—

A schoolmaster, named Lalie, residing on that boundary of Hungary, toward Turkey, where the military colonies are located, having the established reputation of possessing a cure for Hydrophobia, the Minister of War, to whose department the government of this territory belongs, instituted an inquiry. Two Hydrophobia patients were placed under the care of the military medical officers until they despaired of them. They were then entrusted to the care of the schoolmaster, and were cured. A liberal gratification being given to this person, he is to receive adequate rewards if, after two years' exercise of his remedy, under medical *surveillance*, his discovery is proved to be of sterling value. The root of which M. Lalie has recognised the efficacy is the *gentiana cruciata*. It is an abundant natural product.

“Treatment in the earliest stage of the disease:—

“When the first symptoms arise, the mouth must be examined, and beneath the tongue the *venæ raninæ*, or sublingual veins, will be found turgescient. This turgescence is at first confined to the neighborhood of the frænum, and it appears under the form of black spots, resembling the heads of flies; but later, the disease having developed itself, the swelling affects the whole of the veins. At this period, the following is the treatment to be adopted:—The tongue is to be grasped with a wooden fork, and inverted, and the sublingual veins to be opened with a lancet. The tongue being then liberated, the bleeding must be allowed to continue until it ceases of itself. Then is to be given the first dose of the remedy. Three-quarters of an ounce (one and a half loth) of the *gentiana cruciata* are to be given as a maximum dose; the root being first pounded and then macerated in water, so as to form a thin paste. This must be repeated every morning for nine days. At the same time, the wound is to be treated in the following way:—When fresh, it is to be washed with the

spirit of rosemary, and then a poultice is to be applied, composed of two portions of rye flour and one of juniper-berries, mixed with the strongest spirits of wine, to form into a paste. If the wound is closed, it must be opened and scarified.

“Treatment in advanced stages of the disease :—

“When the disease has already reached its most violent paroxysms, the patient being properly secured, one ounce of the root is to be administered; and, to do this, a straight jacket being put on the patient, two strong men must be employed to overcome his resistance. His mouth must be opened with two wooden wedges, the nasal air passage being hermetically closed until he has swallowed. If, after three hours, the patient's paroxysms continue to recur, an entire root must be introduced into the mouth, and there secured until bitten away and dissolved. The sublingual veins are to be opened at the first lucid interval; and after the bleedings, a little broth may be administered.

“After this, the patients, in general, take water without opposition, and fall into a gentle slumber for eight or ten hours, and are cured. During sleep, mucus is secreted in the mouth, of the consistency of white of egg, of a slight yellow color; it is very adhesive, and is only ejected with difficulty. * * * It is important the patient should be made to throw up this phlegm. This secretion characterizes the first three days of the malady, and great care must be taken to remove it, principally, before the remedy is administered. * * * When the bleeding has not been sufficient, it may be resorted to again, after five days, in violent attacks, and the decoction given when slight relapse has shown itself after nine days; and an aperient, after three days' interval, is to be resorted to.”

The above is a greatly abridged translation of a very circumstantial document. I must repeat that, however incompetent the remedial resources may appear, they may still prove effective. The most powerful remedies have not been discovered by *savans*, and the most valuable of our specifics was due to an Indian, who, in a paroxysm of ague, chanced to slake his thirst in a stagnant pool, in which lay the branches of the cinchona tree, another bitter, though differing so much from the gentiana.

HENRY BELINAYE.

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JUNE 14.

THE END.