

Diseased meat sold in Edinburgh, and meat inspection in connection with the public health and with the interests of agriculture : a letter to the Right Hon. the Lord Provost of Edinburgh / by John Gamgee.

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DISEASED MEAT

SOLD IN EDINBURGH,

AND

MEAT INSPECTION,

IN CONNECTION WITH

THE PUBLIC HEALTH,

AND WITH THE

INTERESTS OF AGRICULTURE.

A Letter

TO THE

RIGHT HON. THE LORD PROVOST OF EDINBURGH.

BY

JOHN GAMGEE,

LECTURER ON ANATOMY AND PHYSIOLOGY IN THE EDINBURGH VETERINARY
COLLEGE, LATE LECTURER ON VETERINARY MEDICINE AND SURGERY
IN THE CAMDEN HALL, LONDON, ETC.

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In the Appendix will be found some letters, with a short article published in the *Scotsman*, on the subject of Diseased Meat and Meat Inspection.

DISEASED MEAT,

ETC.

TO THE RIGHT HON. THE LORD PROVOST OF EDINBURGH.

MY LORD,—A proclamation issued by yourself and the Magistrates of this city, regarding the sale of unwholesome meat, confirmed what I had before exposed in a letter to the *Scotsman*, which appeared on the 28th of February last, that the carcasses of diseased animals eluded the vigilance of the inspectors, and are retailed in the butchers' shops, or are otherwise prepared, to be eaten by Edinburgh citizens.

That my letter was well-timed and appropriate, has been amply proved by the large number of seizures and convictions made since—by the Zoological Gardens being better supplied than heretofore with carcasses, and by the fact that no attempt has been made to contradict my statements.

If true, as I can prove it to be, that the mortality of cows in Edinburgh is about 30 per cent. annually—that by far the larger number of cows slaughtered for, or dying

of disease enter the butcher's shop—that the dressed or pickled carcases of diseased animals are brought into Edinburgh in large quantities, and that the present inspectors are not fitted in any way for the onerous duties imposed upon them,—I say, if this be true, it is important that radical measures be resorted to for the protection of the public health.

It is not likely that the evil will be efficiently met by rules framed on a vague and limited knowledge of the subject under consideration. I beg leave, therefore, to draw your attention, *1stly*, To evidence recently obtained, proving how accurate my calculations have been from the first with reference to the amount of diseased meat sold; *2ndly*, To motives for urging, that to put a stop to such trade, inspectors of a very different class, and more in number, than those at present in office, should be appointed.

The case tried before Bailie Blackadder on the 11th inst.,—a very flagrant and suggestive one,—disclosed that a diseased animal was offered for sale, for the sake of the Cattle Insurance Company, that there was some probability that under ordinary circumstances the cow would never have been thus disposed of; but it is a condition on which the lives of cattle are insured, that as soon as they manifest symptoms of disease, the Inspector of the Company is called in to identify the animal, and generally either to order it to be slaughtered, or to submit it to medical treatment. As it is to the interest of

the owner of the diseased animal, as much as to that of the Insurance Company, that much be realized by it, if at all in good condition, it is usually sold to the butcher.

I am informed that a large number of animals so insured are annually slaughtered in consequence of disease, and while it is well known that a proportion of them have been consumed in Edinburgh, many of them have been sent to London. The cows kept in the dairies in Edinburgh are rarely insured, the mortality amongst them being so great that the Insurance Companies lose by them, notwithstanding the exorbitant premiums charged. The rate of mortality is as great in Edinburgh as in London, where I have had better opportunities to ascertain, from direct observation, that, what with animals dying or slaughtered for disease, it amounts to about 30 per cent. annually.

Notwithstanding what has been said of diminution of disease of late years, the only statistical data at hand, and which are possessed by the Cattle Insurance Companies, prove that the rate of mortality is as great now as it ever has been. For Edinburgh itself, I am assured that it is even greater than it was three or four years back. This can be proved by the rate of mortality so far as the Cattle Insurances are concerned. I am informed by Mr Finlay Dun, late lecturer in the Edinburgh Veterinary College, who made extensive observations in the dairies of Edinburgh, when pleuropneumonia was raging with great virulence, that, about three years since, when

he drew up a report (which he has unfortunately lost), so far as his memory serves him, "there were about 3000 cows in and about Edinburgh; that fully four times as many had perished by pleuropneumonia, or been sold for what they would bring during its incipient stages; that during 1854, the loss had amounted to 400 or 500, but the disease was neither so prevalent nor fatal as it had been. The condition in which many of the cows were kept," says Mr Dun, "was terrible, and I used often to wonder that pleuropneumonia and every other disease were not greatly more rife than they are." If Cattle Insurance Offices cannot bear such losses, how is it cowfeeders do? Common sense suggests, and experience proves, that the milk is made the most of, chiefly by dilution, and that butchers give a good price for diseased animals.

On conversing with influential and well-informed persons as to the desirability that Cattle Insurance Companies should consider the interest of the public as well as their own, and that, in fact, they might benefit themselves by proving a great boon to the nation, one gentleman said, he believed nearly half of the meat sold in Edinburgh was from animals in any thing but a healthy state; adding, however, that it was not the duty of the Insurance Company to stop the sale of diseased animals, and that these would have to be disposed of some other way, if inspectors were more active and knew more what they were about. If an animal was pronounced by an inspector unfit for the butcher, the hide

only was sold, but the carcase buried; and in proof of this, my informant added that, as to all animals said to have died of quarter-ill, the salvage only amounted to a few shillings, the value of the hides. This is not entirely explained by the fact, that quarter-ill is considered, and justly so, a disease which renders the flesh of animals unwholesome meat, but because it is a disease of young stock, in no way fit for the butcher, although in good condition. I have known older animals affected with quarter-ill dressed in the London slaughter-houses, and to my knowledge, when a beast is of such an age, and in such condition as to render it marketable, it is not buried, but cut up and sold.

Farmers and graziers have long maintained, and it has often been held out to me, that if all the animals that took disease were condemned, breeders and feeders must be ruined. Though somewhat foreign to the object of this letter, still it may be right to show that such an argument, if admitted, is of no weight when met by others in favour of just and enlightened inspection of markets. If we consider the enormous income of farmers and graziers, taken as a body, throughout the kingdom, and the very insignificant loss, even supposing the diseased animals to be buried—not even the hides being sold—the argument has no foundation.

Let us take as an example a country devastated by the cattle plague. A country, in fact, in which the rate of mortality amongst live stock is at its highest, and where

no animal is allowed to be disposed of, but is killed and buried whole at several feet below the surface, so as to prevent infection or contagion. Such an example is offered us by the Austrian Empire, from the month of January 1849 to the month of March 1851. As I have said elsewhere, "Elaborate and accurate statistical tables, shewing the absolute and relative loss of cattle, and the loss of capital, have been published. They shew that, taking the number of head of cattle in the empire at 11,480,000 during the before-mentioned period, 208,076 animals took the disease, of which 108,677 died, 1220 were slaughtered, and 98,119 recovered. Thus $1\frac{2}{3}$ per cent. of the whole neat stock of the empire became affected with the contagious typhus, and the loss was 1 per cent. on the whole number. In the infected districts 3 per cent. of the neat stock suffered, of which $1\frac{2}{3}$ per cent. died. Limiting our observations to the infected places, it results that 26 per cent. were attacked, and 14 per cent. fell victims to the malady. This shews how far the loss was felt locally, and to what extent the nation suffered. The calculated loss of capital amounted to £554,780."* If the animals of the Austrian Empire had been insured on the principle upon which cattle are at present insured in Great Britain, at the smallest premium charged—which is far too high, and should certainly never be exceeded either for town or country—the sum realized by premiums would be £2,870,000 ; or

* North British Agriculturist, May 20th, page 359.

calculating that the cattle were insured at the rate of 6d. in the pound, considering the average value of the animals at £10 a-head, the net profit for insurance would have been at least 80 per cent. It is very clear that half the rate of premium would more than have met double the loss sustained by the country, and still left a handsome profit in favour of the Insurance Company. Admitting it impracticable to get all the stock of the land insured, still all encouragement should be given to institutions which will further the good of the public and protect private interest.

The great reason why Cattle Insurance Companies cannot insure the lives of animals at a low and uniform rate is, that farmers only begin to insure when disease is close at hand. Before insuring, the mortality is no greater than the average under ordinary circumstances; but the Insurance Societies are called upon to sustain *extraordinary, and not ordinary losses, over a limited extent of country, and not throughout the land.* The statistical account given above proves, therefore, that if they take good with bad, the premium for insurance will be low; but if farmers insure to a limited extent, and when disease is most rife, the Societies must suffer. I am informed that the most accurate rates of mortality for Great Britain and Ireland, as yet obtained, are higher than that above represented for the Austrian Empire, during the period when the cattle plague raged to such a fearful extent. There is a difficulty then to render Cattle Insurance general.

There are two ways by which this may be effected, and it will be my endeavour, with my brother's cooperation, to draw the attention of Government to them. The first method I propose is a system of general inspection of live stock throughout the land, together with the registration of all the stock of the country. This will bring every beast under notice, and so often prevent its entering a slaughter-house. The proper inspection of markets and slaughter-houses in large towns necessarily constitutes an important part in this system. Individuals often cannot sustain the losses they have to incur under existing circumstances, where there is a ready sale for their diseased beasts, how much less will they sustain them if general inspection and registration comes in force; farmers will then be compelled to insure against them.

But, perhaps, it would be more easy to carry into execution, though not superseding the above system, for intelligent landowners, who have the public interest at heart, to introduce a clause into their leases compelling tenants to insure their stock, just as they are compelled to insure the farm-steadings from fire. It is true that the farm-steadings is the landlord's property and the cattle are not, but how much more certain will the landlord be, as a general rule, of his rent. If a farmer incurs serious loss by death amongst his beasts, it is often the case that the rent is not forthcoming at the time it is due, whereas he might have secured the money from the Cattle Insurance Company.

I think these statements will suffice to shew that farmers need not suffer, if authorities decide on setting to work with all energy to protect the public from traffic in diseased beasts.

I am now to consider, in the second place, the existing system of inspection, and especially to point out that too much is required of the inspectors, so that not only the public suffers, but more is demanded of these officers than they can possibly manage.

That the inspectors do not belong to the class of men they should, is proved, 1stly, by the difficulties they encounter in exercising their authority; 2ndly, by their opinions not being looked upon as decisive, so that if any question be mooted as to the wholesomeness of the flesh of an animal, a jury of fleshers is appointed to decide it, each flesher probably bringing less knowledge to bear on the question than the inspector himself; 3rdly, that the opinion of a medical man, or veterinary surgeon, is sought in preference to any other, and is always admitted as conclusive in our police courts, being, in fact, more rational and logical, because based on enlightened acquaintance with the appearances of the dead body in health and disease. But inspectors do not belong to this class.

The arguments always used by a flesher when a carcase is condemned are, that the disease was local, that the system was not affected, and the flesh very good-looking and wholesome. If the inspector attempt to reject an

animal in which the diseased changes are not very extensive, and the appearance of the beef not much modified from what it is in a healthy condition, he cannot act against persons who may join to oppose him, and carry their point.

It is most essential to remember, that the extent of carcase-disease is often no indication of the benignant or malignant nature of the malady under which an animal has laboured. Convincing proof of this is readily obtained, and an incident which occurred to me about a fortnight back, will bear me out. It was on the morning of Wednesday the 6th, that, in company with a medical friend, I visited the slaughter houses and walked through them with the Inspector, whose attention and disinterested conduct, I have often had to remark and thank him for. The scene was not such a busy one as that I have witnessed before my letters appeared in the *Scotsman*, but a fair amount of work was being done. I found two diseased livers, the one full of abscesses, the other containing some hydatids of the species *Echinococcus Veterinorum*. The first liver was frightful to look at, but the second appeared healthy, with the exception of a few bladders containing a clear transparent fluid. I asked the Inspector what he would do with the two livers; the first, he said, would be thrown away, but as to the second, the diseased parts would be removed, and the remainder sold. It so happens that the first liver might probably have been eaten without danger, however re-

volting the idea, but that to eat of the second liver would be at the risk of the introduction of the germs of tape-worm into the stomach,—a very different opinion to that of the Inspector, of whom we cannot expect an opinion based on a knowledge of medical science.

In conclusion, my Lord, allow me to draw your attention to the inexpediency of taxing the Inspector of the Dead Meat Market with far more than it is reasonable to believe he can accomplish. I understand that he has to be in attendance daily in the Dead Meat Market, that he has to visit butchers' shops, be on the look-out at Railway Stations, call twice daily at the Police Office, and, in addition, is expected to draw up a Report (which it is not in his power to do), giving the number and state of the byres and their inmates, to visit thereafter these byres, to see if there be any sick animals in them, and should he find any, to watch them narrowly, to ascertain how their carcasses are disposed of. I venture to trust that simply directing your attention to this matter is sufficient for the purpose at present, and that, in the event of your deeming the foregoing arguments and suggestions tenable and appropriate, you will act on them, in so far as they are framed in consideration of the best interests of the public.

I have the honour to be, MY LORD,

Your most obedient humble Servant,

JOHN GAMGEE.

21 DUBLIN STREET, 25th May 1857.

1871

1. The first of the three main branches of the
theory of the origin of life is the theory of
spontaneous generation. This theory holds that
life can arise from non-living matter under
certain conditions. It was first proposed by
the ancient Greeks, and was later revived by
Lavoisier and Laplace in the 18th century.
It was then widely accepted until the middle of
the 19th century, when it was disproved by
the experiments of Pasteur and others. The
theory of spontaneous generation is now
generally regarded as a discredited hypothesis.
2. The second of the three main branches of
the theory of the origin of life is the theory
of biogenesis. This theory holds that life
can only arise from pre-existing life. It was
first proposed by the ancient Greeks, and was
later revived by Lavoisier and Laplace in the
18th century. It was then widely accepted
until the middle of the 19th century, when
it was disproved by the experiments of Pasteur
and others. The theory of biogenesis is now
generally regarded as a discredited hypothesis.
3. The third of the three main branches of
the theory of the origin of life is the theory
of abiogenesis. This theory holds that life
can arise from non-living matter under
certain conditions. It was first proposed by
the ancient Greeks, and was later revived by
Lavoisier and Laplace in the 18th century.
It was then widely accepted until the middle
of the 19th century, when it was disproved
by the experiments of Pasteur and others. The
theory of abiogenesis is now generally regarded
as a discredited hypothesis.

APPENDIX.

I.—UNWHOLESOME MEAT.

TO THE EDITOR OF THE SCOTSMAN.

21 DUBLIN STREET, *February 25, 1857.*

SIR,—I trust you will allow me space in your columns for an expression of opinion, and a brief exposition of facts relating to a most important subject—the unwholesome meat that is daily partaken of by the Edinburgh people.

Whence may bad meat find its way into the butcher's shop or public meat market? *1st*, From the dairies in Edinburgh; *2nd*, From neighbouring or distant farms. It is an acknowledged fact, that may be further substantiated by evidence at once conclusive and readily obtained, that dead or dying animals are disposed of to butchers, and thoughts are rarely entertained of burying cattle, sheep, or swine, if it be possible to render them marketable. The mortality among these animals is always great, and in town dairies the lowest average is about 30 per cent. annually, so that the number of sick animals to be cut up by the butcher is constantly considerable.

How can bad meat be disposed of? The cows that die in Edinburgh were for some considerable time (probably ever since meat inspectors have been appointed) bought up and taken to Corstorphine, dressed and brought in for sale, completely eluding detection. This was heard of, meat inspectors and policemen were set on the watch, and the individual who conveyed the carcasses into town was prosecuted. Since then it appears the trade has taken a turn; the cattle are still taken out to Corstorphine, but from there on to Glasgow.

All the dead or dying cows are not and were never taken to Corstorphine or other such place; for in case of disease or death amongst these animals, the owner calls in an Inspector of Markets, and inquires whether, in the opinion of such inspector, the disease be such as to render the meat unwholesome, or whether the carcass may be marketable. The animals decidedly unfit are mostly taken to the Zoological Gardens, or sent out to Corstorphine, or got rid of some other way; those which the Inspector of Markets looks upon as wholesome are retailed, unless by some accident they are subjected for examination to a jury of fleshers. If the jury of fleshers decide that the meat is unwholesome, the owner of the diseased beast loses the carcass, but he is not fined, as he has acted in accordance with the advice of a meat-inspector.

The animals that are sent to Edinburgh from a distance by train or other conveyance enter the town by any station or road, and can only be detected by the inspector at such station or road, or in the meat market. Many of the carcasses decidedly bad looking are salted even by farmers themselves, but are often so bad as not

to resist decomposition for any length of time in the salting tub.

Are means adequate to the extent and importance of the evil employed for its suppression? According to the Edinburgh Police Act, steps should be taken "that no carcase, or part of the carcase, of any animal which may appear to have died of, or been killed in consequence of disease, is dressed, prepared, or kept in markets and slaughter-houses." And the law applies to every article of food exposed for sale in markets, shops, stalls, or other places. To enforce this law, two inspectors are appointed—one in the dead meat market, and the other for the slaughter-houses; both act under the direct guidance of a committee of gentlemen of the Council, and the first is likewise under the influence of the Superintendent of Police. I know both the inspectors, and, so far as I have been able to observe, they discharge their respective duties to the best of their ability. Both inspectors were originally fleshers, and their competency to undertake the recognition of unwholesome meat is based on their experience as fleshers. Now, is this sufficient? I unhesitatingly say no!—1st, It would not be difficult to prove that as fleshers they are rather disqualified than rendered fit for the office of inspectors, being accustomed to certain practices peculiar to such trade, which almost precludes them having a strict and unprejudiced notion of what is really lawful and justifiable, and what is not; 2nd, All those conscious of the difficulty attendant on the performance of *post mortem* examinations and the recognition of morbid lesions, can only give evidence to the effect that a scientific man can alone undertake the task of determining the nature and importance of

appearances in the dead bodies of diseased animals. I need insist but little on this point, but as proof I may mention having observed the extravasations of blood and acute phlegmons occurring in the malignant "black quarter" of cattle, have been looked upon as simple bruises, and the carcasses passed as wholesome, the animals being young and fat; and the tubercles characteristic of phthisis passed over as unimportant, because of common occurrence, and, provided the meat was marketable—viz., fat enough—the diseased parts were cut away, and the carcasses sold.

It is certain that the inspector in the dead meat market has it in his power to be of essential service, especially as persons find it best to resort to him for an opinion than risk the being caught and prosecuted; but, on his own testimony, I can asert that, supposing he had the requisite knowledge to recognise disease, he could never see all the bad meat that enters Edinburgh, unless it were a rule to ensure that all meat be first subjected to inspection before it can be exposed for sale, and this might easily be done if persons were prosecuted for not subjecting their meat to be examined at one or other of certain stations.

Any one who has formed any just notion of the evil I am striving to expose must shudder at hearing that, during the last five years, all the cases brought under notice at the Police Court in Edinburgh average but twelve per annum, and half these refer to rotten cheese, fish, poultry, &c., and not to diseased meat. The nose of common policemen and fleshers is all that may be required to detect putrefaction, but as morbid signs are recognised alone by men accustomed to the study of disease, the startling fact just alluded to is readily explained.

To eradicate the evil it is essential that talent and the power of a wise administration be brought to bear, and the two combined will do for Edinburgh what has been done for hundreds of towns on the continent of Europe ; and the consumption of unwholesome meat will be reduced to its minimum.

I am well aware that from some few butchers in Edinburgh there is little danger of obtaining bad meat, because they only buy cattle in the best condition, and respecting which there can scarcely be a doubt. I have, however, no hesitation in saying that they too are sometimes unconsciously selling what may prove more or less injurious to the consumers, and if any butcher buys cut-up carcasses he may get good-looking beef, but he cannot possibly be certain as to what he hangs on his hooks.

Apologising for the length of this epistle, but firmly believing that it is my duty to speak openly and without reserve on a matter so much affecting the public good, I am, &c.,

JOHN GAMGEE,

Professor of Anatomy and Physiology in the
Edinburgh Veterinary College.

II.—UNWHOLESOME MEAT.

TO THE EDITOR OF THE GLASGOW HERALD.

SIR,—When the health of 400,000 persons is concerned, it may be considered imperative on any one acquainted with fruitful but preventable sources of disease,

to enforce the latter and suggest remedies. I trust, therefore, that you will enable me to show the Glasgow people how far they are, and how effectually they might be, protected from intolerable fraud and ever-prevalent maladies.

Every one admits that the sale of diseased animals, alive or dead, should be stopped. Agriculturists in Scotland are aware that each sale is a great source of contamination of their stock, so much so, that some of the most extensive breeders set up a quarantine for inbought cattle; and it is a certain fact, that farms occupied by cattle dealers are *foci* of contagious maladies. I have heard farmers of great experience say that persons should be prosecuted for exposing diseased animals at public sales, and that this was the only means to check the spread of pleuropneumonia, which now so seriously affects the interests of British agriculturists. So far as the prepared carcases of diseased animals are concerned, it is assuredly against all law of propriety and economy, as well as seriously to the danger of the health of the people, that they should be retailed for general consumption.

This is not the occasion to discuss the peculiar injurious influences resulting from an active, and I may say daily increasing, commerce in corrupt food. My object is to show how the trade goes on in Glasgow, as I have done for Edinburgh and Aberdeen, and as I am doing, in conjunction with my brother, for London and other parts of the United Kingdom.

In Glasgow there is no dead meat market, but three slaughter-houses. There is an Inspector of Markets, an active, intelligent, but not a scientific man, and policemen in general are on the look-out for offenders against clauses

194, 195, of the Police Act. How efficiently they are enabled to fulfil the duties thus entrusted them transpires by the absurdly small number of prosecutions compared to the enormous sale of live stock and dressed meat. I am told that within the last year there have been only three cases or thereabouts of punishments for sale of diseased meat.

How is this to be explained? Cattle are admitted into the slaughter houses without inspection, but as butchers have occasionally been fined for having carcasses of diseased animals in their possession, the Inspector is sometimes called, and he pronounces whether the flesh is wholesome or not. Be it remembered the Inspector has no knowledge of disease, except what he may have acquired when a private in the Dragoon Guards, or during his earlier lifetime when engaged on a farm. If a jury of learned men might differ in opinion on such questions, how is it that the word of a police officer or of a jury of fleshers is to be admitted as conclusive and incontrovertible?

In a letter, by myself, published in the *Scotsman* for February the 28th, I say that in town dairies the average mortality amongst cows is about 30 per cent. annually, so that the number of sick animals to be cut up by the butcher is constantly considerable. In Glasgow, as in Edinburgh, the Inspector is sometimes called in by the dairyman to decide whether the flesh of an affected animal be wholesome and marketable, or the contrary. The chemical works at Port-Dundas get what, in Edinburgh, is sent to the Zoological Gardens.

I am assured that a percentage of diseased animals enters Glasgow alive; and I can perfectly understand this

when, from a limited number of stations, I can calculate 4000 head of live cattle weekly introduced into the Manchester of the north. But how many enter dead, and even pickled, it is hard to state, though it would not be impossible to discover. In the letter above referred to I have spoken of a place near Corstorphine to which the dead or dying cows of Edinburgh are taken. Months back these animals were returned to us, but the trade this way is now stopped, and Glasgow suffers. On the farm near Corstorphine a large number of pigs is kept to eat those portions of the diseased cattle which are decidedly unsightly, and cannot be exposed on a flesher's stall. Were I asked how could we powerfully contribute to render diseased meat injurious, I would answer, by feeding pigs on it, and condemning man to eat the latter! A carnivorous pig liable to diseases from the propagation of parasitic animals is no dainty and innocuous morsel, though as palatable, according to the refined taste of an epicure, as the flesh of rotten sheep or braxy mutton.

But Corstorphine is not the only place throughout the whole of our land. Farmers slaughter and salt those animals that cannot walk to the train to be transported alive. Much salt meat, a large proportion of which there is every reason to believe is the prepared flesh of diseased animals, is brought to Glasgow by steam from Belfast, Londonderry, and other Irish or Scotch ports.

The conclusion I come to with reference to the animal food supplied for consumption by the Glasgow population is, that much of it is unwholesome and deteriorated by disease. I shall add little more to this letter, but briefly advert to the remedy for this gigantic evil. It is clear that scientific men can alone, as I have said elsewhere,

aspire to the title of "guardians of the public health;" so that in Glasgow a proper inspector should be appointed, and raised by a competent salary to a position above policemen and others who should act under his guidance. We should have throughout the United Kingdom a system of registration, so that we might know the number of cattle and other animals born, and the number that die of disease or are sold for slaughter.

If every market town had an appropriate scientific inspector, like every town in France; if slaughtering in private places were entirely suppressed in town or country, and if all were made aware how many are doomed to a life of disease and misery for having innocently eaten what was fraudulently given them as food, I believe we should strike at the root of the evil and eradicate it.

My brother, Mr Joseph S. Gamgee, is drawing the attention of the authorities of the Home Department to this question, and I trust we shall ere long not be far behind our continental brethren on the subject of meat inspection.

This letter has already exceeded the limits I had intended to confine it to, but I hope this will not interfere with the object in view—that it may appear in the *Glasgow Herald* to open the eyes of the Glasgow people.—I am, Sir, your obedient servant,

JOHN GAMGEE,

Lecturer on Anatomy and Physiology in the
Edinburgh Veterinary College.

DUBLIN STREET, EDINBURGH,
March 25, 1857.

III.—UNWHOLESOME MEAT.

TO THE EDITOR OF THE ABERDEEN HERALD.

SIR,—In the *Scotsman* of February 28, and in the *Glasgow Herald* for March 27, were published letters of mine on the subject of the sale of unwholesome meat. Impressed as I have been in London, Edinburgh, and other large towns, that the sale of such meat is not only a fraud on the public, but *fons et origo* of much disease in man, I long since determined to expose the evil here, and help to do so elsewhere.

I visited Aberdeen, for the first time in my life, last autumn, when on a scientific excursion through the greater part of Kincardineshire and Aberdeenshire, to study the distribution of disease amongst our domestic animals in both counties. I inquired into that which interests both medical men and veterinarians, seeking for evidence respecting the spread of contagious disorders from animals to man. I obtained abundant information on this point in Aberdeen, and was painfully struck on witnessing as much heedlessness there, regarding the sale of diseased meat, as anywhere else in Great Britain. I therefore trust you will give publicity, through the columns of your journal, to the following statements:—

Aberdeen offers unusual facilities for the traffic in unwholesome meat. It is most important to suppress such traffic there, in consideration of the public health, and because Aberdeen is one of the chief ports where meat is shipped for the London market.

I found that in Aberdeen there was no special slaughter-

house; that most of the butchers in the suburbs, in whose stalls the diseased meat is chiefly sold, live in the country, and it is on their farms that the cattle are dressed for the Aberdeen or London market. The diseased animals are bought up, and are either driven or transported in carts to such farms, and removed into town on Friday and Saturday, more than on other days.

Carefully conducted inquiry has enabled me to find out when and how the meat enters Aberdeen, and eludes the vigilance of the inspector. As to the inspector, I am informed that he is *inspector of weights and measures, collector of the rents of the city Established churches*, and has other laborious duties to perform besides holding the inspectorship of meats. He is an active man, but his pursuits in former years were not those calculated to render him an efficient inspector of meats. He certainly does not encourage fraud, and whatever cases are brought under his notice are decided by a veterinary surgeon, whom he calls in to his assistance. That he does resort to a veterinary surgeon is satisfactory, but enormous quantities of meat are sold which he never sees, and the fleshers do not fear him, and feel quite safe when their unwholesome article has entered the shops or the dead meat market. It is the policemen walking at night about Aberdeen that these men fear, and they artfully seduce such officer out of their road by hurrying him off to a row occurring close at hand, or the system of bribery is carried on, and the night-watchman enters a public-house with an individual who always precedes the load of polluted flesh. The latter is in carts provided with wooden axles, and it thus wheels through the streets unheard and unsuspected.

I have heard of cows that have died of parturient fever, pleuropneumonia, and other diseases, being conveyed in such carts from places 10 or 15 miles from Aberdeen. If the diseased animals are placed under the care of a veterinary surgeon, they may, and often do receive large doses of tartar emetic, arsenic, or strychnine, all of which accumulate in the flesh, and yet these animals are sold. How will people argue that the meat is not unwholesome, when it sometimes contains deadly poison, and, under some circumstances, in noxious doses.

Many questions referring to the injurious effects of meat taken from diseased animals must yet be settled, but it is folly and recklessness to delay in the adoption of efficient measures to stop the trade, and when these have been considered, the necessary scientific inquiries may be made.

Meat inspectors must be scientific men, who, by learning and position, may lay claim to the honoured title of guardians of the public health. Suitable slaughterhouses should be erected, policemen rendered efficient in this part of their services by proper superintendence. Science must be brought to bear on this, as on every branch of sanitary legislation, and the day is not far distant when we shall know what we pay for, and absolutely what we are condemned to swallow.—I am, Sir, your obedient servant,

JOHN GAMGEE,

Lecturer on Anatomy and Physiology in the
Edinburgh Veterinary College.

21 DUBLIN STREET, EDINBURGH,
March 28, 1857.

IV.—UNWHOLESOME MEAT.

(*From the Daily Scotsman for March 24, 1857.*)

TO THE EDITOR OF THE SCOTSMAN.

SIR,—Being in Edinburgh to make an unofficial inquiry into the advantages and disadvantages of the famous Water Meadows, my attention has been called to the alleged unhealthiness of the cows fed upon the grass growing upon them.

It appears undoubted that the cows do suffer an unusual amount of illness, but I incline to attribute that to other circumstances than peculiarity of food. The chief of these are overcrowding, defective ventilation, and excessive dirtiness—influences which are apt to be unusually injurious to animals very highly fed in order to produce large supplies of milk.

I noticed in a letter by Mr Gamgee, published in the *Scotsman* of February the 28th ult., that that gentleman estimates the loss of cows from sickness at about 30 per cent., which is not, I think, an over-estimate, enormous as it appears; for I find the dairymen are in the habit of killing off all their cows soon after they become dry, and I noticed that a large proportion—perhaps one in ten or twelve—of those which I saw were evidently suffering from disease. It is but fair to assume that the cows which do become diseased are first selected to send to the slaughter-house. That this is the case I have received confirmatory evidence. It is impossible, as

is asserted by the fleshers, that many diseases do not render the flesh of animals unfit for food, but many diseases certainly do render it unwholesome, and almost all must impair its nutritive qualities. The latter being the case, the unqualified sale of such meat is evidently a fraud on the buyer; nor must we conclude that because much flesh of diseased animals is eaten without apparent injury, that that practice is free from danger, for the history of all epidemics proves that many more than the actual sufferers may be exposed to the cause of disease. It would be surely prudent to adopt every means within our reach—1st, for ascertaining which, if any, of the diseases of cattle do not render meat dangerous for food; and, 2nd, rigidly to exclude from the market all which such inquiry leads us to condemn. It is clear that such research is far beyond the ability of an ordinary flesher, however experienced; besides which, such a person is likely to have sympathy with those whose malpractices he ought to control—nor would his decisions, if adverse, be so readily submitted to by them as that of a scientific man would be.

Edinburgh offers unusual facility for bringing all the meat under examination, and thereby excluding from its market all that is improper. No meat is allowed to be slaughtered in the city except at one place, and all cattle there slaughtered might, at little expense of labour, be carefully examined by persons accustomed to zootomical research, and well acquainted with the morbid appearances of animals. Such persons could therefore easily separate the unquestionably wholesome from the doubtful and injurious meat, and, by carefully conducted inquiries, determine whether any of that meat described as doubt-

ful may be safely used with common cooking, or could be made safe by any peculiar process.

I am informed that diseases involving the liver, even when amounting to abscess, are not considered by the fleshers to render the meat unfit for human food. Now, we know that cattle are very subject to the attacks of parasites, which chiefly accumulate in the liver. These are hydatids or bladder-worms; and we are told upon high authority that these parasites develop into tape-worms on entering the system of other animals. Men are, indeed, less liable to be thus injured, inasmuch as their meat is generally cooked; but abundant facts are at hand to prove that imperfect cooking may fail to destroy the vitality of the embryo tape-worm.

I find it very hard to believe that animals dying with extensive disease of the liver can yield wholesome flesh. At all events, all will agree that as long as there is any doubt about the matter, such meat should not be unconditionally offered for public sale. There is, perhaps, one exception—viz., fluke in the liver, which is prevalent in the great majority of sheep slaughtered, and its innocence, so far as the flesh is concerned, may be assumed.

Trusting that this important subject will receive due consideration from the enlightened inhabitants of Edinburgh, I am, &c.,

P. H. HOLLAND,

Burial Acts Inspector for the Home Office.

V.—THE CATTLE DISEASE.

(From the *Daily Scotsman* of Tuesday, April 28, 1857.)

Public attention continues to be directed to this subject—in its double aspect of disease existing at home, and the risk of further importation of an epidemic from abroad. We learn that, since increased vigilance in the inspection of cattle and carcases has been exercised here, the Zoological Gardens have been unusually well supplied with the sort of beef which is better adapted for feeding wild beasts than sober citizens. It is no doubt the true interest of the respectable portion of the cattle and meat trade to prosecute thoroughly the inquiry now begun, and to do all that in them lies to put down the nefarious system of dealing in unwholesome meat, out of which some of their members have been making a disgraceful profit. Indeed, we learn that many families, since the recent disclosures of the systematic manner in which this dangerous traffic is carried on, have excluded beef from the list of their dishes, so that the trade will ultimately be materially affected if some reassurance be not given of its being restored to a healthy condition.

The medical journals have taken up the subject zealously. In the *Medical Times* of Saturday last, several articles, &c., are devoted to its discussion. In one the risks of the system at present extensively practised, of high and premature feeding, and its bad effects on the flesh of beasts subjected to it, are temperately discussed; in another, “on the connections and relations of epidemic diseases in man and the lower animals, we

find the following passage, which is particularly instructive and applicable at the present time:—

“Knowing that man derives his food both from the animal and the vegetable world, he is exposed to the injurious effects which may result from eating the flesh of animals diseased, or of unwholesome vegetables. It is also to be remembered that the higher animals which furnish food for man are themselves vegetable feeders, and the injurious effects which may follow the use of their flesh as food may be due not alone to their flesh or fluids as injured by the existence and course of diseases in the animals themselves, but as being the medium of transmitting poisonous principles from the vegetable world, on which they feed with impunity.

“In this inquiry, the following questions present themselves for our consideration:—

“1. What are the diseased structures; what are their characters; and from what epizootics do they come which may convey disease to the human body receiving the parts of such diseased animals as sustenance?

“2. Under what circumstances does the milk of cows, of goats, or of asses, become unfit to be used as food for man?

“In the absence of judiciously devised and well-directed experiments to illustrate the pernicious influence of the flesh of diseased animals used as food, we have evidence entirely of a circumstantial kind, which is not only highly significant of itself, but which leaves no doubt that the flesh of animals which are killed during the course of a disease in them, of a prevalent epizootic kind, is unfit for human food.

“The circumstantial evidence to which we refer is derived from the following considerations. It is an historical fact that great numbers of the cattle labouring under the fever of peripneumonia were slaughtered, and that the meat was sold in the metropolis and other large towns for human food.

“It is also a recorded fact in the history of some of the epizootics, that dogs and carnivorous birds which were fed on the flesh of kine that died of the ‘murrain,’ sometimes died as if under the influence of poison.

“On looking over the records of epidemics and epizootics which have existed as concomitant events, the remarkable prevalence of diarrhœa, of dysentery, and of scurvy in the human population cannot fail to be remarked.

“We know also how extensive is the sale of animal food in such large towns as London, and when no one officially recognises amongst these animals what number of them were healthy, and what diseased, we have information on which we can rely, that a very large amount of flesh sold as food belongs to the carcasses of beasts which have been killed and sold for food merely to realize their mercantile value as such before the natural course of the disease shall terminate in death, and so diminish the chance of a successful sale. The physician who is accustomed to take a wide and comprehensive view of the origin and progress of diseases, will not fail to put a fair share of value upon such a fact, in explanation of the comparatively large amount of cases of diarrhœa which constantly prevails in England, and, more especially, in the metropolitan towns.”

In a letter from Paris, Dr Minturn gives an account of endemic disease that prevails frequently in many parts of the United States, caused by diseased milk and meat.



