

CATTLE PLAGUE IN EGYPT IN 1903-04-05.

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BEFORE referring to the present outbreak of cattle plague in Egypt, I propose to indicate the channels by which I believe cattle plague was introduced into Africa, and to point out the constant danger Egypt runs of re-infection from trading with countries to the east and the south.

The first invasion of Africa during the last twenty years was undoubtedly due to the introduction of cattle either from Arabia through Aden, or to shipments from Bombay to Massowah in the winter of 1887 and 1888, during the war between Italy and Abyssinia. From Massowah the disease rapidly spread over Italian territory, and thence to Abyssinia. We have no definite information as to whether the disease entered the now Anglo-Egyptian Soudan at that time, but if such was the case the losses must have been small, as there were large numbers of cattle in the Soudan when it was occupied by the Anglo-Egyptian Forces a few years later. In 1888-89 an expedition under the late Major Von Wiessmann started for the interior from German East Africa, and the cattle for the expedition were bought from either the ports of Aden or Bombay, although Major Von Wiessmann did his utmost to obtain suitable cattle locally, as he was informed by me before starting of the results of Italian importation of cattle into Massowah. On his return to Egypt he described to me the symptoms of a disease from which his imported cattle suffered, and which in my opinion resembled cattle plague; he further stated that his losses were so great that it materially hampered the movements of his expedition.

Whether the disease spread from German East Africa, or from Abyssinia to Central Africa, and thence on to South Africa, is not known; probably it spread from both centres.

In 1898 the Eastern Soudan was infected with cattle plague by cattle from Italian territory passing down the khors (valleys) and by the river Atbara; and this happened again in the beginning of the present year (1905).

The Anglo-Egyptian Soudan will undoubtedly be exposed to constant risk of infection with cattle plague from its neighbours in the Italian Soudan and Abyssinia until these countries adopt measures which will entail its suppression, as controlling the movements of cattle from one territory to another is an extremely difficult matter where the frontiers are so large and the countries so semi-civilised. In order that the Anglo-Egyptian Soudan may be able to trade with Egypt without being hampered with vexatious restrictions, it will be necessary for them to either induce their neighbours to stamp out cattle plague or to establish a frontier under such conditions that no animals can possibly pass. I hope, for the credit of the two countries, that the former measure will be adopted.

Egypt's permanent danger in trading with the (south) Soudan (Anglo-Egyptian) is not so much for the Soudan itself, where cattle plague occurs from time to time and is apparently controlled, but to the constant source of infection in the Italian and Abyssinian terri-

tories, where cattle plague exists in permanence (from which the Soudan is constantly threatened), and might pass on the infection to Egypt before it made itself felt in the Soudan. The far greater danger for Egypt comes, however, from the East, *i.e.*, from Turkey in Asia, where not only cattle plague but also pleuro-pneumonia and anthrax have found a permanent home. It is to this side of the country that the energies of the Government have been constantly directed, and will, I hope, in the future be more successfully carried out, as everything to my mind points to the importation of cattle from Syrian ports as the most probable origin of the present outbreak of cattle plague in Egypt. It may be asked why, if cattle trade with Syrian ports is so dangerous, does the Egyptian Government allow it? The reply must be that Egypt requires a certain amount of imported cattle, as the country cannot quite supply the necessary number for food and labour. If cheap cattle were not imported the fellaheen would probably sell for the butcher their more valuable working animals, which would ultimately produce such a scarcity that the working of land would suffer.

Whether other countries cannot come to the rescue of Egypt, with a slight advance in prices, remains to be seen. Should they do so there is no doubt that a far better quality of meat will be supplied, for the Asia Minor cattle (particularly those from the Bagdad district, which pass through the Euphrates Valley and are finally shipped from Alexandretta to Egyptian ports) are of inferior quality.

Previous to the outbreak of (1903-04-05) cattle plague, the following precautionary measures were adopted: All cattle and sheep arriving from Asia Minor, Russia, and any other countries suspected of cattle plague were landed at a special point and marched about 500 yards along the coast to the Alexandrian Quarantine Station, where they were retained until slaughtered in a special part of the abattoir. All stomachs, heads, feet, etc., of animals slaughtered were boiled, refuse buried, and skins disinfected by being placed for twelve hours in tanks containing a solution of carbolic acid. All butchers and other persons entering this part of the abattoir were provided with special garments in which they worked, and changed before leaving the abattoir, at the same time disinfecting their hands and feet. All meat was carefully inspected by two qualified European veterinary surgeons. In the quarantine stations similar measures were adopted, and, in addition, all the manure and dead animals were burnt.

† No suspicious cases of cattle plague were observed in either establishment before or for some time after the disease was declared to exist in Egypt, which was done on 17th June 1903, by Mr Miller, acting Chief Veterinary Inspector. One naturally wondered why, with all the care taken both at the quarantine and at the abattoir, no cases of cattle plague were detected, but the reason was discovered later on, when a better acquaintance with the disease was made. It was then found that Asia Minor cattle, those spoken of as Bagdadli, or coming from the Bagdad district, would often be affected with cattle plague without showing any clinical symptoms, more particularly during the summer. The disease in these could only be detected by a careful examination of the stomachs and intestines, and during the inspection of meat this is rarely done, as the inspector is too fully occupied to

have time carefully to open up the stomach and intestines of every animal. Moreover, during life these animals exhibited no symptoms to indicate that the digestive tract was diseased. Some animals retained a few days in quarantine showed fever with diarrhœa, but no deaths occurred; the classical lesions of cattle plague were not observed, and the number of animals indisposed was never sufficient to lead the inspector to suspect the existence of cattle plague. This statement may sound strange from what one reads of the disease, but it is nevertheless a fact that cattle from Asia Minor (Bagdadli) are affected at times with a mild form of cattle plague which is not recognisable in the living animal, as no suspicious clinical symptoms are present. It is only on careful *post-mortem* that the existence of cattle plague can be detected, and this is rendered at times more difficult, as these animals suffer from a form of malarial fever which causes certain lesions in the stomach and intestines. Thus one can easily conceive of meat from infected animals being allowed to pass from the abattoir to the butchers' shops, and meat containing blood, as nearly all meat does, is, I believe, the very essence of cattle plague virus.

Again, the difficulty of controlling and thoroughly disinfecting all persons who have been in contact with imported animals is such that the possibility of some escaping the disinfection is easily understood, and during the last six months before the outbreak of cattle plague occurred imported animals could not pass along the coast to the quarantine station, for, as this isolated route was required for railway purposes, the animals had to make a slight detour inland, and possibly came in contact with other animals, or other animals may have passed over the same ground.

The existence of this disease was first declared on 17th June 1903 in the north of Egypt (Behera Province, near Alexandria), and it continued during the summer to make steady progress in Lower Egypt and Ghiza Province. From this province cattle were taken south by trade route from Bedrashein to Tamai in Fayoum, which province then became infected. Cattle dealers taking the trade route down the Bahr-el-Youssoufy to Lahoun and on to Beni-Souef soon infected that province. The next outbreak in Upper Egypt occurred in Samallout, a butcher having purchased a diseased animal from a travelling dealer who was passing with his animals along the Ibrahimieh Canal. Efforts were made to stop the movements of animals along the Ibrahimieh and Bahr Youssof, but it was of no avail; the disease arrived near Assiout, and from there it proceeded south down the Souhagieh to Girgeh Province, where a case was detected at Souhag amongst cattle arriving from Assiout Moudirieh. Kena did not become infected until the early summer, 1904.

The controlling of the movement of animals, which is of the utmost importance in preventing the spread of animal diseases, was a new form of legislation, and of such magnitude that the authorities were unable to cope with it. It required a trained army of officials, and the people at first did not understand or believe in its importance; but after a year or more of the severest education it was generally believed in, though even now the people often evade the regulations when possible. To enforce regulations which are distasteful is a very difficult task; it is only when they are believed in by the people and these will help in every way that successful results can be obtained.

In suppressing outbreaks of cattle plague regulations such as those now in existence will undoubtedly check the spreading of the disease, and they should be applied over a very extensive area ; no interests should be considered, but everything done with the single object of checking the disease.

The first difficulty was to obtain information. This has improved, and cases during the last year and a half were being reported, but often only when several deaths had occurred and the villagers began to be afraid of being found out.

The next difficulty which the Inspector had to encounter was the finding of a piece of land suitable for isolation purposes. If no waste land exists near the village, every site is opposed, as the owner wants it for cultivation purposes, and it is only with the greatest tact that the land is obtained, as no rent is paid, nor do I think it should be, except by the village. In practice I have found it best to inform the Omda that the site selected must be obtained, and leave him to arrange with the proprietor.

The building of a shelter of boos (stalks of Indian corn) occasions another difficulty, although the boos may be found on the roofs of all the houses in the villages ; still, with a strong Omda this difficulty disappears.

In my opinion it should be compulsory for every village, when cattle plague or other diseases of cattle break out, to reserve land and erect necessary shelters. This would be no hardship on any person, while it would assist the Government in dealing with the cattle diseases, and undoubtedly save in the village alone the cost of the shelter many times over.

Burying of Animals.—This was always a difficulty, as land was not easy to obtain except when a piece of Government land existed in the village. Owners of land objected, as no payment was made for the land used, and people objected to dig graves for the same reason ; but these difficulties were easily met when the Omda had sufficient authority over the villagers to make it clear to them that it was in their interest to have a special burying ground, and that the Government did not intend to pay for the cost of labour or cost of land used.

In future cases of cattle diseases it would be advisable for the Government to insist on every village immediately providing itself with a burial ground for dead animals, and a law should be passed providing for this.

Markets.—One of the most important measures to be adopted in assisting the arrest of the spread of cattle plague is undoubtedly the closing of cattle markets, and keeping them closed for some time after the disease is believed to have been suppressed. They ought to be opened very gradually, where necessary serumising all cattle on payment, and controlling their movements by issuing permits.

On 13th September 1903 I reported on the question, as everybody considered the restrictions imposed worse than the disease. I pointed out that "it resolved itself into a question of helping cattle trade at the expenses of the farmer, or assisting the farmer to stamp out a disease which injured his herds at the expense of the cattle trader and markets holder." Two markets were opened as a tentative measure, and as no harm apparently resulted others were gradually

opened. The harm done was not immediately felt, but later on the mistake made was demonstrated beyond a doubt, and every effort was made to recover the lost ground. The opening of the cattle markets not only assisted the spread of the disease, but also had a bad moral effect on the people, as they thought that the danger was over, and that the Government was taking no further interest in the matter.

During the winter months (of 1903-04) it was absolutely necessary to keep open certain markets in Upper Egypt and allow movement of cattle in order to supply Cairo with meat, as no foreign meat was available except to supply Alexandria and Port Said. It then became a question of starving Cairo and carrying out regulations in Upper Egypt, or feeding Cairo and taking the risks of assisting cattle plague to spread.

Slaughtering of Diseased Animals for Food.—In view of the fact that cattle attacked with cattle plague were being slaughtered for food in most of the public abattoirs, the same permission was given to infected villages, as it was considered inadvisable to destroy so large a quantity of food with a consequent loss to the people. This facility to dispose of cattle had undoubtedly a very bad effect, and assisted very materially in spreading the disease from village to village, because as soon as one village in a district was infected it immediately became the centre of attraction to all the butchers in the surrounding villages, who came and bought the cattle plague meat at a cheap rate, taking it back with them, distributing the meat to the villagers and disease to their cattle. During the year 1903-04, more particularly during the winter months, this method of propagating the disease was brought to my notice, and next to diseased cattle travelling I consider the transport of meat one of the most frequent causes of spreading the disease in the villages.

It is not in my opinion a wise measure to allow the killing of diseased animals, and whenever an outbreak of the disease occurs in a village killing of cattle should be stopped in the district unless they can all be carefully *post-mortemed* by a capable veterinary inspector.

Serum.—There is no doubt that the injection of serum when obtainable in sufficient quantities is the very best treatment possible, but at the beginning of an outbreak and for some months afterwards only small quantities are available, as it takes time to make. Animals in contact with diseased and those showing temperatures should, in my opinion, receive a double dose. In Egypt in the summer months a great deal can be done by carefully isolating infected and contact cattle out in the open with a simple shelter against the sun, and thus the serum can be stored for the cold weather when cattle plague assumes a more virulent form.

Recently there have been two or more distinct exceptions to the general efficacy of serum as a means of suppressing outbreaks of cattle plague both in native and imported animals, but all other inoculations done at the same time and with serum prepared at Abbassieh have given excellent results. It is possible that the serum when injected into imported animals does not afford the same protection against cattle plague as when used amongst native herds, more especially if these animals are exposed to adverse conditions, such as travelling long distances with very little food or water, cold

weather, etc. A similar occurrence was suspected in animals arriving from the Soudan in March 1904, when, notwithstanding a large dose of serum, some of them showed symptoms of cattle plague; these cases were mixed with a form of malaria. I pointed them out to Professor Koch, who replied that if these animals had not received 150 cc. of serum a month previous he would have been of the same opinion, but he believed that the serum in the doses mentioned would protect cattle against cattle plague. Recent experience has not supported his view, more particularly in imported Cyprus animals.

The first injection of serum was practised near Nahia, in Ghizeh Moudirieh, where a relative of the Omda of the village offered to have his animals injected, and the villagers agreed to have theirs serumised the following week if no bad results occurred. The village was infected with cattle plague and was losing cattle daily. The results were satisfactory, the villagers of Nahia believed in the serum, and after this very little difficulty was experienced in Ghizeh Moudirieh. The serum was then tried in Menoufieh and Galioubieh with equally good results. Some difficulty was experienced at first in Upper Egypt (Beni-Souef), and at the outset it was necessary to guarantee payment of some animals, as the owner strongly believed that death would be the result. However, when it was found that the serum did no harm, but good, its efficacy was soon the talk of the province, and in many instances villagers came requesting to have their cattle serumised. In one village, in order to test whether the serum was poisonous or not, it was suggested with the greatest seriousness that I should drink some of it, and, if there were no bad results, they would allow their cattle to be injected.

Bile.—From a very limited experience I am of the opinion that bile when carefully selected and used with discretion does not communicate cattle plague, but does confer an immunity against this disease. Among nearly 200 cows and calves in Cairo injected with bile taken from cattle plague animals in the Ghizeh Moudirieh, no cases of cattle plague resulted. It is greatly to be regretted that the use of bile could not be continued, but, after the heavy losses from blood and serum injection, the people absolutely refused to allow their animals to be injected, and in many cases strongly objected to their temperatures being taken.

Blood and Serum.—In Egypt this treatment could never be carried out on a large scale in the villages, but it might with great care be applied to herds where competent supervision is available. It would not, I think, be advisable to adopt this treatment in non-infected districts, as it might be the means of introducing cattle plague into them. In carrying out this treatment one must be certain, (1) that the blood is really active, (2) that it does not contain the germs of malaria, (3) that a correct reaction takes place in injected animals, and (4) that all animals to be injected are carefully weighed or their weight correctly estimated, so that correct doses can be given and serum of known strength used.

At first it was almost impossible to convince the villagers that an animal which had had the disease and recovered was of considerable value and should be kept; they much preferred to sell the "salted" animal, as they found him weak for some time after the attack and consequently unsuited for work. Unfortunately large numbers of

these salted animals found their way to the abattoirs and were slaughtered. If the large proprietors had acted on the advice frequently offered during the summer of 1903, they might easily, with a very small outlay, have stocked their farms with salted cattle, and thus have saved a large number which were so readily bought up cheap by the village butcher.

Heat and Sun.—These undoubtedly have a modifying effect on the virulence of cattle plague; for animals that contracted the disease during the summer months and were kept in the open with a slight shelter recovered in large numbers. It would further appear that animals contracting the disease out in the open during the summer had a milder form than those stabled. The greatest mortality was experienced in the winter months. Of course, any adverse circumstances would turn the mild form of the disease (the summer form) into a very acute form, as was experienced in the Kenh Moudirieh, where a very large percentage died in the early summer. There the reasons for the rapid spread and high death rate were not far to seek; I inspected the infected district in May 1904, and a more overworked underfed lot of cattle it would be difficult to find. In one day's hard riding I only saw one bullock receiving an allowance of beans; all the other cattle were eating the worst and dirtiest tibn¹ obtainable. The healthy cattle were skeletons, and those affected with cattle plague never had a fair chance to recover. Cattle were all hard at work threshing the corn and cutting up the straw, and many were worked until they were so ill that they could hardly move; they were then placed in the cordon. The disease passed more rapidly through the cattle of the villages in upper Egypt than it has ever done in lower or middle Egypt, and this, I think, is due to the fact that they were more in direct contact. When the Nile was high and the villages were surrounded with water there was very little room for the animals, and when the Nile was low the drinking water was only obtained from wells, morning and evening the animals were herded together, and drank practically out of the same pail or trough.

No cases were observed in sheep or camels.

Cattle Census, Showing Losses of Cattle and Buffaloes.—It has always been considered inadvisable to attempt to collect the statistics of the animal population in Egypt, as it was thought that the owners would fear that it was the intention of the Government, in obtaining this information, to establish an animal tax, and that innumerable difficulties would be raised.

During the outbreak of cattle plague it became necessary that the Omdas of villages should obtain lists showing the number of cattle and buffaloes in their respective villages, and an order was then sent out that all villages should send in their lists to their Moudirs. This was readily done, the Moudirs forwarding these lists to the Ministry of the Interior, and thus an approximate estimate of the animal population was obtained.

The first returns were collected some time in August 1903, when 959,669 cattle and 718,023 buffaloes were shown to exist. Up to that date cattle plague had done very little harm to the country. During January 1904 returns were again obtained, and they showed a shortage of 155,051 cattle and 47,218 buffaloes; in August 1904

¹ Chopped grain.

there was a further shortage of 199,596 cattle and 25,009 buffaloes, making a total of 354,647 cattle and 72,227 buffaloes.¹

These returns showed that the Moudiries, which were the most badly attacked with cattle plague, had lost most cattle and buffaloes, thus agreeing with the reports of the inspectors of this service. Kena Province showed in six months an increase, until it was attacked, when within six months a diminution of at least 50 per cent. was registered.

It must not, however, be supposed that this shortage was due entirely to deaths from cattle plague, for it was largely increased by the indiscriminate slaughtering of cattle throughout the districts when cattle plague appeared in the neighbourhood. Never during the last eighteen years has meat been eaten so extensively. Unprincipled butchers and dealers were busy going from village to village alarming the people by telling them that cattle plague was in the next village, and that they had better sell their animals. When cattle plague appeared in a village animals were slaughtered at once by their nervous owners, who reasoned that if their cattle were attacked with plague they would be buried and thus they would lose all, while if they were sold and killed they would at least make £3 or £4 off them. Numbers of healthy animals worth £10 were sold for £3 or £4, and even less. The villages have undoubtedly suffered severely by their cattle plague loss, but never in their lives have they enjoyed so much animal food.

The *Official Cattle Plague Returns* show up to date about 100,000 deaths.

In the beginning of 1904 it became apparent that unless some very active measures were adopted the country would be very short of cattle when the outbreak was over—would, in fact, if the towns were to be supplied with meat, and the cultivation to proceed, have insufficient numbers to meet their demands. A Commission, under the presidency of the Adviser of the Ministry of the Interior, and composed of delegates from the Sanitary Department and Agricultural Society, was then appointed by the Government to consider the question.

It was finally recommended that, if possible, quarantine restrictions against importation of cattle into the interior should be modified, so as to allow working cattle to be imported. This was carried out for nearly a year, but very few imports were made, and it became necessary to rescind this order in reference to cattle coming from Asia Minor, owing to the appearance of contagious pleuro-pneumonia amongst them. It was further proposed that a few hundreds of native cattle should be secured and subsequently sold to the fellahen in districts where they had lost heavily. This was done, most of the cattle being protected by blood and serum inoculation, which resulted in a small loss, I believe under 10 per cent., and that principally among animals which had the disease in them at the time of inoculation, or were suffering from malarial fever, which, in addition to the reaction from cattle plague inoculation, caused their deaths. Owing to the presence of Texas fever and another form of bovine malaria, it was considered advisable, as a tentative measure, to pur-

¹ Returns are now (August 1905) being collected, and I have every reason to believe that a considerable increase will be registered.

chase a few foreign animals from districts where a form of malaria (Texas fever) was believed to exist ; consequently, cattle were purchased from Italy, Russia (Southern), Hungary, and Roumania.

The animals were to be placed under the ordinary conditions of the country, and one could then observe if they were able to withstand the tick fever.

The animals in most cases arrived rather late for the worst attacks of ticks, and it may therefore be suggested that they were not properly exposed to the danger. In any case, the loss from fever was small, and their survival satisfactory, but there was little or no sale for them, the natives not liking their appearance, and apparently being able to do without them. Experience soon demonstrated that the above measures would not suffice to maintain a sufficient number of animals for working purposes, but the working of the land was also helped by machinery, imports of mules, working of camels, donkeys, buffaloes, mules, and horses.

From the commencement of the outbreak attention was directed to importation of cattle for meat, and great facilities were given to meat being sent to the towns in the interior, as it was thought possible to supplant the native supply by competition, and so save the native animals. Previous to the outbreak of cattle plague about 10,000 to 15,000 cattle were imported yearly, and about 120,000 sheep for slaughtering ; in 1903 the number increased to about 33,000 cattle and 186,000 sheep. There was also imported about 5500 horses, mules, and donkeys, 46,000 camels, and 470 pigs. There were imported in 1904 about 74,000 cattle, 368,000 sheep, 56,000 camels, 4000 pigs, and 12,000 horses, mules, and donkeys.

In the beginning of 1904 it was found that if more encouragement were given to the foreigners, in time a still greater supply of cattle would be forthcoming, and the following measures were adopted. No native cattle were allowed to be slaughtered without permission in infected districts (it was necessary to declare the whole of Egypt an infected district), and, further, permission was very rarely given, except in cases of old and useless animals, and to buffalo bull calves. The latter are very little use except for food, and, the buffalo having shown considerable immunity against cattle plague, the movement of these animals did not apparently offer the same danger as moving cattle. Besides, butchers in buying calves rarely went themselves or sent their men, but bought through the local dealers, whereas in buying the larger animals they always found it necessary to see the animals themselves, and so the village visited ran the risk of infection from them.

Foreign cattle were entrained and sent direct to the different abattoirs in the country. Now Asia Minor and Soudan cattle are only admitted to the ports and Cairo ; Russian, Roumanian, and others to other towns. Sheep are allowed to enter free from Syria after forty-eight hours' observation, being clipped and dipped in an antiseptic wash, as it was thought that this would reduce the risk of introducing anthrax. No sheep of an infected or contaminated lot are allowed to come up country, all being slaughtered in quarantine.

These measures have undoubtedly saved the country an enormous number of cattle which will be suitable for working purposes, and, in addition, they have removed all inducements for butchers buying and

moving stock, which has been of the greatest assistance in controlling the disease.

The restrictions are and will remain in force, and are helping the country to recover itself, as a large number of calves are born daily in the country; and, if during two years the people of the towns can be fed from outside, there will be no necessity to interfere with the local animal. Of course, during the importation of Syrian cattle, which frequently results in cattle plague being brought in, the country runs the risk of re-infection; but, as very little movement of native cattle is allowed, and a large number having had the disease, the risk to the country is worth the supply at present. As soon, however, as movement and slaughtering of native cattle is allowed, then the imports of Syrian and other suspicious cattle to the interior must cease.

MALARIAL CATARRHAL FEVER (BLUETONGUE) OF SHEEP IN SOUTH AFRICA.

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THE following is an account of a disease which I believe to be peculiar to South Africa. My original description of the disease and many experiments in connection therewith appeared in the *Agricultural Journal* of the Cape Colony in April 1902. As I think it has not received the attention which it deserves, I have endeavoured in this article to describe it more fully, and by the addition of further experimental results to bring the subject up-to-date.

So far, I believe, the only account of this disease which has appeared in English professional literature is a note by the Colonial Veterinary Surgeon, Mr Hutcheon, in the *Veterinary Record* of 12th April 1902. Although its clinical aspect was very accurately described at the Cape by Mr Hutcheon as far back as the year 1880 in his Annual Report, it was not till late in 1900 that Mr R. W. Dixon, M.R.C.V.S., under instruction from his chief, began to make investigation into the nature of this disease with a view to the finding of some means of preventive inoculation. When I took over the work from him in May of the following year he had demonstrated its ready inoculability and the very remarkable fact that the blood of a sick sheep could be preserved so as to maintain its virulence for some considerable time. Starting with these data, and without any previous knowledge of the disease, I was soon able to demonstrate many interesting facts which will be set down in due course, but I think it desirable before going further to give a description of the nature, symptoms, and other circumstances connected with outbreaks of this disease.

Nomenclature.—The Colonial Veterinary Surgeon has given the name "Malarial Catarrhal Fever" to this disease, and by this name is it well known in the Cape Colony, at any rate, being often styled simply "Fever." Later it will be shown that the word "malarial," as at present understood, is not now applicable to this disease. A very common name, and perhaps the best pending the discovery of the