

est in the extinction of a malady that may for centuries, if left unheeded now, harass the stock raisers of the entire continent and bring poverty and ruin to many thousands of families."

In November 1878, Commissioner Leduo, the energetic Commissioner of Agriculture at Washington, on information supplied by professional investigation, addressed a report to the President, in which he says, with reference to Pleuro-pneumonia, "At present, the disease seems to be circumscribed by narrow limits and could be extirpated with but little cost in comparison with the sum that would be required should the plague be communicated to the countless herds west of the Alleghany Mountains. The disease is of such a destructive nature as to have called forth for its immediate extirpation the assistance of every European government in which it has appeared, many of them having found it necessary to spend millions of dollars in its suppression. The interests involved in this case are of so vast a character and of such overshadowing importance, both to the farming and commercial interests of the country, as to require the active intervention of the Federal Government for their protection, and for this reason the considerate attention of congress is respectfully asked to this important matter."

Professor James Law, of Cornell University, has unceasingly called the Government's attention to the danger of neglecting preventive measures, more especially in a pamphlet published by him in 1879, as well as in agricultural papers. In explaining the danger of infection of unfenced stock ranges, he says, "It is needful to note the insidious progress and stealthy invasions of the Lung Fever and to contrast them with the more prompt and open manifestations of the other animal plagues in order to show the great peril to which we are subjected by the presence in our midst of a pestilence which literally walketh in darkness. Let us now consider the prospective infection of our great stock ranges.

That this is inevitable, though slow at the present rate of progress in the plague, has been sufficiently shown. That it might occur any day by an animal infected on an eastern farm or stock yard or in a railroad car in which it was sent for the improvement of western herds must be abundantly evident to every one who has read this article. If we now add the fact that more than one thoroughbred Ayrshire and Jersey herd have been infected by this disease during the past year we are at once confronted with a strong probability of an early western infection."

Among the earnest workers in endeavouring to arouse the Government's attention on this matter must always be prominently mentioned J. W. Gadsden, M.R.C.V.S., Philadelphia, and L. McLean, M.R.C.V.S., Brooklyn, N.Y., both of whom rendered me valuable assistance in investigating Pleuro-pneumonia in 1879, and both have since lost no opportunity of urging protective measures to prevent it reaching the great herds of the west.

In this connection too should be mentioned Professor Lyman, of Harvard Veterinary College, and various writers in the American Veterinary Review, so forcible, clear and often repeated, have been the warnings of the profession through the above named members of it that no blame can be attached to it for the present deplorable condition of the Western States to-day in this connection.

How then comes it that this fell plague has been allowed to make its slow but certain progress westward? simply this—gigantic railroad enterprises here at an enormous cost in money covered the United States as with an iron network, and in many instances the bulk of their earnings is derived from the live-stock trade. Besides, wealthy corporations are organized and not large profits from stock yards, any hindrance such as quarantine regulations properly enforced would necessarily

produce, was consequently opposed by such corporations, and thus the fight went on, the carrying companies and stock-yard owners opposing any interference with the free and untrammelled movement of stock from west to east or from east to west, had always influence enough to override the feeble efforts made by a few stockmen—as so far no united effort has been made by the cattle men of the west as they have not even yet been sufficiently aroused to exert their influence in the protection of their hundreds of millions of property, but they will soon find it necessary to do so, or see themselves beggared by the results of their own too long suffering carelessness, in allowing carrying companies to sacrifice their property. It is true also that complications present themselves in applying federal regulations which are not seconded by states legislation, but true it is that when the cattle men of the west get awakened to a sense of their danger they will bring such influence to bear that no government can stand in opposition to their wishes.

With reference to the contagious diseases, Foot and Mouth Disease, and Pleuro-pneumonia,—Foot and Mouth, is unimportant so long as it is confined to domestic herds, and attacks them during the summer, it will run its course usually in about fifteen days, often so mildly as to escape the attention of the owner, but very contagious as well as infectious, the vesicles continuing not more than five days, and the feet only being affected in some cases. Hence cattle owners who hear so much of the dreadful Foot and Mouth Disease, are at a loss to believe that the mild fever, the faint vesicles in the mouth, the absence of foot eruptions can be genuine foot and mouth, at all. We had several instances of such even in professional men, one at a United States quarantine station where the Inspector even after being told that it was foot and mouth, did not believe it till it had spread from the imported stock and infected 600 outside animals, and even at our own quarantine the same owner did not quite believe the correctness of the diagnosis till two weeks had elapsed and he saw it spreading and the symptoms becoming more marked in new cases. Even a Professor, himself an Inspector who visited the quarantine, was so disappointed by the mildness of the symptoms, as compared with what he supposed they should be, that he concluded that it was not Foot and Mouth, and went so far as to suggest to the school of Cavalry camped a few miles off that they should send for the milk and use it. Their own good sense however prevented them from being refused not only milk but admission to the quarantine.

The unimportant character of the disease however changes when we consider it as occurring on a range where in many cases they have considerable travelling to do in gathering their food as well as in going to water. Affected by this disease, we can understand that they would suffer severely for want of water and their sufferings would be aggravated should it occur in winter. Its great contagiousness both by direct and intermediary objects is a marked feature of the disease. Railway cars, steamboats, cattle yards, wharves, men's clothing, hay, halters, bags, &c., &c., are all media of communication of the disease to other herds.

Pleuro pneumonia is slower in its progress and more defined in symptoms, an experienced veterinarian who wants to give a correct opinion need make no mistake in this disease, if he sees the animal living and makes an autopsy at the time of death. There is no other disease of the bovine lungs exactly similar to it either in the clinical manifestation or the post mortem lesions. Its contagiousness, its progressive stages, pathognomonic symptoms, and the characteristic pathological lesions are all so well marked as to leave no excuse but ignorance for an erroneous opinion of the disease.

Yet, strange to say, men occupying high positions in the profession, have argued that the lung disease of the United