

MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No. 621-622	Press Mis.
213. 215	
Dated	13-4-191864

Not to be folded or roughly handled

*Proceedings of the Madras Government, Revenue Department,
13th April 1864.*

No. 213. Read the following letter from S. C. BAYLEY, Esq., Junior Secretary to the Government of Bengal (General), to the Secretary to the Government of Fort Saint George, dated Fort William, the 3rd March 1864, No. 1,097 :—

SIR,

* From Officiating Commissioner of Assam, No. 4, dated 19th January 1864.
From Commissioner of Chittagong, No. 11, dated 20th January 1864.
From Commissioner of Bardwan, No. 13, dated 8th February 1864, with enclosure.
From Commissioner of Bhaugulpore, No. 43, dated 8th February 1864.
From Commissioner of Rajshahye, No. 24Ct., dated 22nd February 1864, with enclosure.
From Commissioner of Patna, No. 40, dated 27th February 1864, with enclosure.
From Secretary, Agricultural and Horticultural Society, dated 1st February 1864, with enclosure.

1. I am directed by the Lieutenant-Governor of Bengal to acknowledge the receipt of your letter No. 1,932, dated 27th October last, with its enclosures, relative to the Cattle Murrain at present raging in some parts of the Madras Presidency, and in reply to forward the accompanying copies of Reports* which have been received from the Divisional Commissioners in the Lower Provinces, and from the Agricultural and Horticultural Society, containing information regarding the nature of the disease prevalent among Cattle in the Bengal Presidency.

2. I am to add that the Lieutenant-Governor will cause further enquiry to be made on the subject, and I am to request that, with the permission of His Excellency the Governor of Madras, you will be so good as to furnish any further information that may be available relating to the disease in that Presidency.

No. 214.

ORDER THEREON, 13th April 1864, No. 621.

* To be returned.

Ordered to be communicated together with the enclosures to the Board of Revenue. A copy* of these papers will also be furnished to Veterinary Surgeon J. Thacker.

(True Extract.)

(Signed) C. G. MASTER,
Deputy Secretary to Government.

To the Board of Revenue.
To Veterinary Surgeon J. Thacker.
To the Military Department.

Exd. S. T. Augustin.

25
REVENUE DEPARTMENT.
FORT SAINT GEORGE,
13th April 1864.

No. 622.

No. 215.

From

J. D. SIM, Esq.,

Secretary to the Government of Fort Saint George,

To

The Secretary to the Government of Bengal.

SIR,

1. I am directed to acknowledge the receipt of Mr. Junior Secretary Bayley's letter of the 3rd ultimo, No. 1,097, and to convey the thanks of this Government for the papers therewith forwarded, relative to the cattle disease prevalent in your Presidency.

2. With reference to paragraph 2 of the letter under reply, I am to state that the requisition therein made will be borne in mind and complied with in due course.

I have the honor to be,

Sir,

Your most obedient servant,

(Signed) J. D. SIM,

Secretary to Government.

Exd. S. T, Augustin.

From MAJOR W. AGNEW, Officiating Commissioner of Assam, to the Junior Secretary to the Government of Bengal,—(No. 4, dated the 19th January 1864.)

SIR,

I HAVE the honor to acknowledge the receipt of your letter No. 5331, dated 20th November last, forwarding copy of a Despatch from the Secretary to the Government of Fort St. George, relating to the cattle murrain which is at present raging in Madras, regarding any similar disease to which information is asked for.

2. In reply I beg to say that, from the replies I have received from District Officers, it appears that a cattle pestilence, resembling in its symptoms the disease described by Captain Nelson, has at various intervals within the last ten years made its appearance in the different Districts of this Province, but it does not seem that measures have ever been adopted by any one to ascertain how it could be successfully treated.

3. I beg to send the following extracts from the Reports I have received on the subject:—

Lieutenant Sconce says:—"A cattle murrain, apparently similar to that mentioned in the correspondence accompanying your Memorandum No. 123, dated 5th instant, has been known in this District during the past eight years, in the months of April and May, and in September and October, but no steps have ever been taken to check it. The treatment of the disease is not understood and therefore it is neglected."

Lieutenant Andrew, Deputy Commissioner of Durrung, observes:—"In 1861 the same disease visited the District, but was less destructive than in 1862, and it is deserving of remark that the tracts visited in 1860 were those in which the disease made least havoc in its next visit; this and the fact tolerably well known to the Natives of one attack conferring immunity from a second renders it highly probable that the disease is, if not small-pox itself, at all events closely allied to it."

Lieutenant Campbell, Deputy Commissioner of Nowgong, states:—"On referring to the records of this Office I find that in the year 1853, from January to June, no less than 21,625 head of cattle died. During the above period cholera was raging to a great extent and carried off 9,060 persons, consequently the Natives who I have asked about it say it was the same disease that carried off the cattle. The symptoms appear to have been a swelling of the tongue which protruded from the mouth, great purging, and the animal was generally dead in two days. I cannot discover that there was any resemblance to small-pox as appears to be the case in Madras."

Lieutenant Gregory says:—"There has been no epidemic amongst cattle in this District since the year 1856 when the mortality was very great. The symptoms appear to have been the same as those described by Captain Nelson with the addition of violent thirst, and that the period between the animal being attacked and its death was not so long as described by him; in some cases death ensuing in a few hours, and few survived the third day.

"Various remedies were tried, but none were efficacious.

"Domestic animals alone were not attacked, as deer and other wild animals were found dead in the jungle with the same symptoms."

[Exd. N. Penheiro.]

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"Various remedies were tried, but none were efficacious."

"Domestic animals alone were not attacked, as deer and other wild animals were found dead in the jungle with the same symptoms."

[Exd. N. Penheiro.]

From W. GORDON YOUNG, Esq., Commissioner of Chittagong, to the Officiating Secretary
to the Government of Bengal,—(No. 11, dated the 20th January 1864.)

SIR,

IN reply to your letter No. 5331, dated the 20th November last, with enclosure, I have the honor to give the following information on the subject of cattle murrain in this Division :—

2. In Chittagong, where cattle are not numerous, no such murrain has apparently ever occurred. In Noakally about the months of September and October a disease in some respects similar in symptoms to the cattle murrain frequently appears, and in Tipperah it has been for many years past very destructive among the cattle.

3. It is mostly local and is not highly infectious. The symptoms are generally similar to those described in the enclosure of the letter under reply. No treatment is held to be of avail when a bloody flux supervenes. In some parts great care in housing the animal and attention to diet are frequently efficacious; plantains and rice are sometimes given with good results, and warm water applied externally and given internally is said to be sometimes effective. Inoculation has never been practised in any of the Districts of this Division.

4. It is known by the name of "Burra Pera" in some places, and in others "Boshonto." The cases in which the cattle recover from this disease are rare.

5. I should be glad to be informed of any remedial measures which may be devised in consequence of the enquiries now being made by Government on the subject.

[Exd. J. H. Mendies.]

From A. H. BLECHYNDEN, Esq., Secretary to the Agricultural and Horticultural Society, to
S. C. BAYLEY, Esq., Junior Secretary to the Government of Bengal,—(dated the 1st
February 1864.)

SIR,

I HAVE now the honor to acknowledge receipt of your letter of the 20th November last, No. 5331, with an enclosure, relative to the cattle murrain which is at present raging in some parts of the Presidency of Madras, and requesting any information which the Society may be able to obtain on the subject.

2. No time was lost, after receipt of your communication, in circulating it to the Members of the Council, and to others interested in the rearing of cattle; and I am now directed to submit, for the information of the Lieutenant-Governor, the result of such enquiry.

3. I may mention that the subject of cattle diseases of various kinds* have been from time to time submitted to the Society, as a reference to their publications will shew, and of which copies can be supplied if required.

* On the contagious disease called bosonto, which attacks the cattle of Bengal. By H. Piddington.
(Transactions, Volume III., page 126.)
Additional remarks on the above.
(Transactions, Volume V., page 217.)
Remarks on the prevailing epidemic on cattle in Ceylon in 1842. By J. Lambert.
(Journal, Volume I., page 235.)
Correspondence relative to a murrain amongst cattle, which recently prevailed in parts of Assam.
(Journal, Volume VIII., page 270.)

4. Dr. Barry's and Mr. Sawers' communications are annexed in *extenso*; the former gentleman's remarks, I may observe, may be considered as very valuable, inasmuch as he was also in Assam in the year 1853, when a disease amongst cattle was raging in that Province; the disease alluded to in Volume VIII. of the Society's Journal, and to which reference is made by him as being, in his opinion, quite distinct from the cattle murrain in the Madras Presidency.

5. Mr. Grote, the President of the Society, remarks that "the symptoms described by Captain Nelson are precisely those of a disease which carried off four of my cattle in 1862. The Natives called it "ghooty," and this year I lost four more of a similar disease; more than this number were taken ill, but I brought them round by repeated drenches of Suttoo and water. The disease appeared to have its course in some five or six days, the animal's tongue becoming sore and swollen at the root, it is unable to eat and sinks. Apparently the Natives are aware of no remedy; the Gwalas told me they never attempted to give any; they allow their patients to take their chance. The result of my observations this year was to expect recovery if the patient could be supported by liquid food through the crisis of the disease."

"I have shewn the Madras letter to Mr. Floyd of the Allipore Farm, and he considers the ghooty of Bengal to be different from the epidemic therein described."

6. Mr. Beckwith, the Secretary of the Landholders' and Commercial Association, is of opinion that "it is obviously desirable that vaccination should be tried, and that an experiment should be made in a District where the murrain is prevalent by vaccinating a certain number of healthy cattle, and by placing them afterwards in such contact with diseased animals as to test the efficacy of the remedy. The disease amongst sheep in England has prevailed since my return to India, and I do not know the facts connected with it, but the steps which were found efficacious for checking the sheep murrain at Home should be adopted here as far as circumstances permit."

7. Mr. Caleb Ladd, who has much practical experience of cattle, observes to the following effect:—That about two years ago a disease was prevalent in Calcutta, from the effects of which he lost some of his best cows. It was much the same as described in Captain Nelson's letter. Most of his cattle died with it. The only mode of treatment he could think of was to remove the cattle to another house at once and keep them quite separate from the diseased animals. He requested a Veterinary Surgeon to examine some of them after death and to attend on them before, but he could not afford any satisfaction. The Surgeon believed it to be a perfect blood disease, and he could not devise any remedy for allaying it; so the only chance was to remove the healthy from the unhealthy animals, and burn all the old straw and manure about the cow house, and to burn straw in the house and the house as well. He then removed the unattacked animals to a new house on the other side of his garden and the plague was stayed. So he arrived at the conclusion that this was the best way of meeting the disease. The way the disease commenced was with a dull appearance and downcast look, ears cold, and eyes and nose discharging water very freely for the first day; on the second they refused all food, and in three or four days they died, though two lived for five or six days. The animal which the Surgeon attended lived six days, but the day before she died she smelt very offensively, so much so that the Surgeon could not approach near to her, so he (Mr. Ladd) came to the conclusion that it was the black murrain such as appeared in North America at different times, but not to such an extent as in India, until the past two years, during which period there has been a great mortality, for which there appears to be no certain cure that he has heard of. They adopt the plan above recommended, that is, to remove all the stock as soon as one is attacked, and if the disease should follow then remove to another place, burning all the refuse of each place. If these precautions were strictly adopted in every instance he thinks the disease would altogether disappear.

8. Should any additional information on this important subject be submitted to the Council they will not fail to communicate it.

MINUTE BY DR. J. B. BARRY.

I HAVE perused Captain Nelson's paper on the subject of the disease now prevailing among the cattle at Madras. The symptoms prove clearly that the disease is "ghooty," a very different disease from that discussed in Volume VIII, from pages 270 to 318, by Dr. Long, in his able Report on the cattle disease which ravaged Assam in 1853.

The "ghooty" is highly infectious and contagious, and spreads rapidly through the herd. There can be no doubt that inoculation (vaccination might be tried as an experiment) would, as suggested by Captain Nelson, be attended with the most beneficial results, particularly if care were taken to confine the infection, to remove the healthy, and destroy the carcasses of the dead.

In the way of treatment I would suggest the use of liquid food, in which was dissolved a couple of drachms of Borax in each meal. This medicine has a most soothing action on the mucous surface, and when there is such extensive irritation and ulceration of the intestinal canal would, I believe, be followed by the best results. This article is to be found in all the bazars of India, is cheap, and within the reach of all classes.

The "murrain" that infested Assam ten years ago was, as shewn most clearly by Dr. Long, to be a blood disease produced by malarious agency. It occurred at a time when a severe form of fever and epidemic cholera were decimating the population of the Province.

Having given much attention to the treatment of malarious diseases as they occur in the human subject, I have been induced of late years to rely almost entirely on the use of Arsenic. Cases which would not yield to Quinine, Beberine (in heroic doses) quickly gave way to the action of Arsenic. I am in the habit of advising men visiting the Soonderbuns and the Eastern Districts to take small doses of Arsenic during those months when fevers abound, and I am convinced that when my advice has been followed that they have escaped. For the type of fevers which now ravage Lower Bengal it is particularly suited in the incipient form of the disease, as well as a prophylactic. Where it has been tried it has quite fulfilled my expectations.

Judging from analogy I would suggest in parts of the country where a murrain allied to that which assailed the cattle of Assam that small doses of Arsenic, say from one to three grains, three times a day, be administered during the prevalence of the epidemic to all the cattle as a prophylactic measure. We all know that Arsenic is a cheap article procurable in every bazar of India, so that the remedy comes within the reach of the poorest person. One Rupee worth of the drug would suffice for one hundred cattle.

I offer these remarks with some diffidence, as I perceive all the Departments of the State have been addressed on the subject. I would, to prevent misunderstanding, beg to say that they are merely suggestive, and intended to elicit discussion on a subject which is fraught with the greatest interest to the whole of India.

The 6th January 1864.

Extract of a letter from A. SAWERS, Esq., to A. GROTE, Esq., dated Culna, the 16th December 1863.

With reference to your letter of the 11th, and the copies of correspondence regarding the existence of a murrain among cattle in the Kurnool District of the Madras Presidency, as reported by Captain Nelson, there is no doubt, I think, that the disease is the "ghooty," or small-pox known with us. The symptoms and progress are exactly the same, viz., two or three days strong fever with dullness of the eye and drooping depression of the head followed by purging of an aqueous fluid eventuating in blood. On the fourth or fifth day the pustules appear on the body, which in mild cases may continue to fifteen days, but in severe and fatal cases the progress of the disease is much more rapid and death takes place in five to eight days.

2. The disease has not been known in this District over twenty-five to thirty years, and by the Natives here is believed or supposed to have been imported from the North-West by the bullocks of the cartmen who, previous to the opening of the Railway, carried on an extensive carrying trade between Calcutta and Allahabad. Now the disease is a resident and established epidemic of the District varying in its intensity according to different years, but what peculiar feature in the climate of the year tends to aggravate the disease I cannot yet say. This year it has been in a mild form, while last year it proved most destructive, but all admit that the disease is always worst in the months of April and May (Choitro and Boisaek).

3. The Natives know of no cure for it; the disease is therefore allowed to take its course, and is always found to be most fatal when the pustules appear in largest quantity in the region of the chest.

4. From the commencement of the disease there is an entire loss of appetite, the animal refuses all food, and eventually has a difficulty in swallowing liquids. Cold water should never be given. The system adopted by the Natives of my neighbourhood to impart a degree of nourishment, and to moisten the throat is to soak some ripe plantains in ghee and rub the same on the tongue.

5. The disease is, I think, both infectious and contagious, consequently Natives deem it unnecessary, on its appearing in a herd of cattle, to remove the diseased animals, but this is, I think, absurd. The disease appeared six weeks ago in a herd of forty-six of my buffaloes two were attacked. I immediately detached these two and removed the entire herd from the locality; only one more case occurred.

6. But there is a murrain among cattle known in this quarter, which, when it appears, is much more destructive than "ghooty," it is called "puchomee," and proves fatal in twenty-four to forty-eight hours. Almost instantaneously the animal is seized with a swelling of the gland of the throat and the head becomes very much enlarged, and in some instances the stomach becomes greatly swelled; violent purging ensues, then death: recovery from this disease is almost unknown; it is not infectious, but is, I think, contagious.

I feel very much inclined to believe that inoculation would very much mitigate if not entirely check the ravages of ghooty; as with small-pox in the human subject so with "ghooty," a second attack is almost unknown.

(True Copies)

Thoma
Registrar, Bengal Secretariat

[Exd. N. Penheiro.]

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4/28/64

2. All the Districts of this Division have suffered more or less from this disease.

4. Mr. Erskine, a resident at Beerbroom with whom the Magistrate was in communication on the subject, reported that the disease has periodically appeared, and that he has never heard of any successful remedy. He, however, mentioned that in the early stage of the disease, and before purging has commenced, "moya" fish, generally known by the name "mourilla," is sometimes given in a raw state; and that when the scourge appears, it is customary to give this fish to all the cattle, in the village as an antidote. What the peculiar properties of this fish may be (which is also used as a medicine in cases of sickness amongst human beings) is a point worthy of enquiry by those who are capable of analyzing it.

6. *Bancoorah*.—The Magistrate reports that about four years since the disease was somewhat virulent in the Bancoorah District, but is now comparatively rare.

8. Besides this a decoction, composed of the ingredients marginally noted, as also a gruel of rice and water kept standing for a longtime, are given to the diseased cattle.

Bark of Sal Tree (সালের গাছের ছাল।)	
Panful Tree (পানিকল গাছ।)	

10. Both in 1863 and the previous year the cattle of this District suffered considerably from this malady. It is believed to be infectious as well as contagious, and no cure for it, the Magistrate reports, is known to the Natives. When it appears amongst a herd the Natives make no attempt to prevent its disseminating by separating the cattle attacked, and consequently the disease spreads rapidly.

11. Mr. Sawers of Culna, a gentleman who has given much attention to cattle, has informed the Magistrate that about two months since the disease appeared in a herd of forty-six of his buffaloes, two were attacked and immediately separated, whilst the remainder were removed to another locality, and only one other case occurred. This goes to prove that the disease, although infectious and contagious, can be checked by adopting prudent measures.

12. The Natives of this place are in the habit of soaking plantains in ghee and rubbing it on the tongue of the diseased cattle, as also feeding them with warm "conjee" water. This treatment, together with application of external fomentation, has been found to be beneficial.

13. There is another cattle disease prevalent in Burdwan by name of "puchecma," which is more fatal than the one under notice. The immediate symptoms are loss of appetite, swelling of the glands of the throat, difficulty in breathing, enlargement of the head, and occasionally of the stomach also. The progress of the disease is very rapid, and death generally ensues in about forty-eight hours.

14. *Midnapore*.—In Midnapore the disease is reported to be a very common one, and Mr. Terry, the Manager of Messrs. Watson and Company who appears to have had much insight into the subject, is of opinion that inoculation, a proper supply of green food, if procurable, and due attention to cleanliness, are the only remedial measures that could be adopted with any success. Mr. Terry's original Report is herewith submitted for reader reference.

15. *Hooghly*.—The Magistrates of Hooghly and Howrah having had no experience of the disease have not been able to furnish any information on the subject, but the latter Officer has submitted the accompanying original letter from Mr. J. Stalkartt of Ghoserry, a gentleman known to have had much experience as an owner and breeder of cattle.

16. It has, however, been ascertained from enquiries instituted, and it is admitted by one and all, that both in its symptoms and fatal consequences the disease is somewhat similar to small-pox, and, as it is accompanied by a total loss of appetite and swelling of the glands of the throat, the chief difficulty is to sustain life by compelling the animal to partake of nourishment.

17. The treatment, it would appear, is not the same everywhere, and what is more to be regretted is that it has been found on experience to be generally unsuccessful.

18. Medical skill and supervision of the professional cow leech appear to me to be indispensably necessary for checking the progress of this fatal disease, and I would suggest, as proposed by Mr. Stalkartt, that a reference on the subject be made to the Veterinary Surgeons of Calcutta, and to Messrs. Hunter and Company specially, through whose treatment, it is reported, a large number of cattle belonging to Mr. Cowie of Seebpore, in Howrah, were saved last year.

From J. W. TERRY, Esq., Mofussil General Manager of the Southern Division of Messrs. R. Watson and Company, to A. SMITH, Esq., Officiating Magistrate of Midnapore, —(dated the 25th January 1861.)

THE disease of cattle written about by Captain Nelson is a very common one in this District; it is called bussunt or gooty. I have myself lost three hundred head of cattle in a season; it is precisely as Captain Nelson states. There is also another bad complaint called homsa: this is a soreness in the mouth and latterly in the foot. With care this yields to treatment. I strongly recommend inoculation, and would willingly try it if Government would order the Government Vaccinator to assist. From long experience I find diseases among cattle begins when green food is scarce. If green food was available at the commencement of the attack the animal would derive much benefit. Cleanliness is never thought about. I have invariably seen the greatest neglect shewn to all sick cattle, and this is the chief cause of so many dying. If proper food was given not a fourth would die that do.

From JOHN STALKARTT, Esq., Ghoserry, to E. C. CRASTER, Esq., Magistrate of Howrah, —(dated the 12th January 1861.)

MY DEAR MR. CRASTER,
I THINK this a very important subject and well deserving the utmost attention of Government. This or other murrain breaks out every three or four years, and denudes the District of cattle. Its depressing influence upon both European and Native cultivators is excessive: large cattle for plough and draught are preferred, but in purchasing

cattle an eye is always had towards the chance of this disease, and invariably leads to the purchasing of the cheapest cattle, so that if murrain breaks out the loss is not much felt; of course the lands are ill ploughed, bad crops result, &c., &c. A disease of this kind, violent purging, (said to be small-pox,) has broken out several times in the last few years, the cattle rarely living beyond the second day; the skin is not altered, but the purging excessive, so as to carry away the inner coats of the stomach. We have invariably attributed this to the machinations of the Chamars, and so have lost but one animal at a time. In my homestead I lost one cow three years and another two years ago; my brother a fine cow last year, and a bull the year before; but by not permitting the Chamars to have the skin by burying it in the compound no other animal of that year was affected. The Native Goalahs all attributed it to the Chamars.

Mr. Cowie of Seebpore lost last year three-quarters of his very fine breed of cows: the remainder were saved by Messrs. Hunter and Company, to whom I must refer for the description of the disease, also the remedies employed. The fine Native breed at Sulkea was completely lost or destroyed last year. Mr. D. Ezra of Dooimtollah, in Calcutta, of the Jewish persuasion, lost last year his studd of unequalled Arabian Cows, all said to be killed by small-pox.

Several others lost their cows in Calcutta, and I must beg reference be made (as I have said before) to Messrs. Hunter and Company and the other Veterinary Surgeons of Calcutta for information on the subject. I have seen this disease very virulent Up-Country; but as there were no Government regulations on the subject it was impossible to check it. There it had the true form of small-pox (gooty), and the ravages it made were very great; it is held in great dread, and prevents the Planter from buying the cattle most suitable for his work. I do not think the Government could confer a greater benefit in large upon the public than in passing regulations, the same as in England, for confining it to the town or hamlet in which it has broken out. I have known it to be tried in this country with success. If inoculation will prevent it it should at once be carried, and all diseased cattle killed and buried.

[Exd. J. H. Mendies.]

9.

From A. MONEY, Esq., C. B., Commissioner of Bhaugulpore, to the Junior Secretary to the Government of Bengal,—(No. 48, dated the 8th February 1864.)

SIR, IN reply to your letter No. 5331, dated 20th November last, I have the honor to report as follows:—

2. *Bhaugulpore and Monghyr*.—In these Districts although cattle often fall a victim to a disease very similar in its nature to that described by Captain Nelson, yet it cannot be said to assume the character of murrain, and enquiry does not shew it to be of a very infectious nature.

3. Towards Teghra the cattle disease is called "hurna," and the medicine applied is the following:—

"Twelve chittacks of the bark of the Gumbhar tree, and five or six twigs of the white okmun are pounded together and boiled in four seers of water till the mixture becomes thick. This is given two or three times a day. For application to the sores some of the 'gundh pershar luttee' is boiled in five or six seers of water; the mixture is applied warm."

"In Sheikpoorah the disease is called dhoorka; cautery is applied to the sores on the body of the affected animal, and then to heal the burns vermilion powder (sindoor) and mustard oil are applied. A mixture of pepper, kutcha ole, and mustard seed oil are administered to the animal internally."

"In the south of the District a mixture of onion, chillies, turmeric, and musk is given."

4. In some part of the District the disease is called small pox, and in others chechuck. All the above remedies do not appear to have much effect.

5. In the District of Purneah the disease is called agia, and the remedy applied is a plaster made of the ashes of the common agia grass and mustard seed oil. The agia is said to be the common lemon grass (*andropogon schonau-thus*). The disease mainly attacks the cattle which are driven at certain seasons to graze in the jungles of Nepal. The chief symptom is the peeling off of the skin when touched, especially about the rump and tail.

6. A similar disease breaks out among the cattle in the Sonthal Pergunnahs. The Sonthals drive the infected animals into the jungle, give them cooling medicines, and keep them apart from the other cattle. The Bengalees keep the animals without water for three days, and offer up poojahs for the recovery of their sickness.

[Exd. N. Penheiro.]

10

From R. J. Scott, Esq., Commissioner of Rajshahye, to the Junior Secretary to the Government of Bengal,—(No. 24Ct., dated the 22nd February 1861.)

SIR,

I HAVE the honor to forward the Report called for in your letter No. 5331 of the 20th of November.

2. Cattle murrain or small-pox appears to be prevalent in the Districts marginally noted, and to be generally fatal in effects.

Dinagopore,
Moorsshedabad,
Maldah.

Rajshahye.
Rungpore.

3. The Civil Surgeon of Maldah gives an interesting Report on this subject, which I transcribe in the following paragraph:—

4. "Murrain has visited this District more or less severe periodically, commencing in the month of August, "Bhadro," and extending up to the end of April, fluctuating in its severity and carrying off a great many cattle. The disease is very infectious, and may be kept up if the clothing, feeding troughs, and feeding places are not well cleansed or destroyed, fresh cattle going over the recently used pasturage grounds soon become affected.

"The disease manifests itself in the refusal of food, fever, urgent thirst, slight asthmatic cough, the ears and head droops, violent purging comes on, postules break out on the lips, inside of the mouth, and all down the throat, in some the whole body is covered, the tongue is much swollen, covered with sharp points, and the animal rapidly sinks. Most of those that have the postules well marked externally are said to have a better chance of recovery. The treatment chiefly consists in separating the diseased cattle at once, and putting them on the free use of plaintain tree stocks chopped very fine and small; the heart of the tree is considered the best, also bamboo leaves partially scorched. The pulp of the Diospyros Embryopteris is looked upon as an effectual remedy, probably from its containing a very large quantity of tonic acid. Water is on no account given, there being sufficient juice in the plaintain stocks to allay thirst, but those who can afford it give butter-milk and dhye and water.

"The Natives attribute the cause to severe and sudden transition of weather. But from my own observations the disease comes round regularly, and prevails most when cattle are fed upon grass from lands that have been submerged, and when freely fed in the month of August, *Bhadro*, upon fresh cut paddy straw universally given by the Ryots without the admixture of any other sort of grain, and without a moment's thought of the great damage they are doing, producing most likely the incipient stage of the disease which rapidly spreads and afterwards is found so obstinate to control. Nearly all Gowallas are aware that cows fed on fresh cut paddy straw, "powalla," reduces the milk 50 per cent., almost immediately making it thick and ropy.

"It is a well known fact that the Natives of Bengal will not themselves use new Bhadro chowl if they can possibly avoid it from its producing on man obstinate aphtha, derangement of the digestive function and alimentary canal, and when thus affected use dhye and butter-milk freely.

"The use of new rice in Jails has been strictly prohibited as being highly prejudiced to health of the prisoners, and is therefore worthy of further investigation as being probably the cause of so much mortality among the cattle throughout the Lower Provinces of Bengal."

5. The Magistrate of Moorshedabad reports that a disease resembling small-pox is prevalent in his District; he adds:—

"That from enquiries made both from Gowallas and European residents in the interior I find that no remedies are adopted either for prevention or cure; when cattle are attacked the owner will sometimes give plaintain leaves as a cooling food, but this is admitted by themselves to be perfectly valueless, and sometimes Toolsee, the sacred balsam, is administered as a charm; I need hardly add with equal want of success.

"The number of cattle which die annually from this disease is very great."

6. The Magistrate of Rungpore states that—

"That a number of cattle die in Rungpore every year from disease. From what I can learn it appears that this disease is a kind of small-pox followed up by diarrhoea lasting from two to six days when death ensues. The Natives apparently know of no remedy, and attempt none."

I have also received a Report of a similar nature from the Magistrate of Dinagepore.

7. The Magistrate of Rajshahye reports that small-pox was epidemic among the cattle of his District eight years ago, but he does not speak of it as now prevalent.

8. Mr. James Cockburn, Manager of extensive Estates in the Rajshahye District, has sent me a table of diseases to which cattle are subject in this part of Bengal. The information which it contains may be useful. I have therefore ventured to forward it, though it includes other diseases besides the one specially referred to in your letter.

9. I have also received a letter from Mr. Holm, a Zemindar of the Dinagepore District, in which he states:—

"From the description given of this disease by Captain Nelson, I believe it identical with one often prevailing in this part of the country, and known as thacoorany or goonty, a species of small-pox, which often sweeps off herds of cattle.

"I have consulted several Natives upon the subject, who unanimously agree that, as they themselves know no cure, it would be beneficial to try inoculation."

DISEASES to which Cattle are subject.

Name of disease & symptoms.	Treatment followed by Natives.	Period of illness.	REMARKS.
"BOSUNTO." Small-pox or cow-pox, a contagious disease shewn by refusal of food, hot and inflamed skin, eruption of the skin, terminating in sores, and in some cases purging, but not always.	No water allowed; fed with dhye (or curdled milk), ripe plantains, and pulp of boiled Jow; very few recoveries under this treatment.	Fatal in five or six days; in some cases ten to twelve; not above 25 per cent. of the cattle attacked recover from this disease.	This disease prevails throughout Bengal, and judging from its ravages in this part of the country it may be said to occur at intervals of from two to four years, causing immense loss to Ryots and other cultivators, and with many checking the desire to improve the common breed by the importation or purchase of superior stock; it also retards, and in many instances puts a stop to, cultivation. The disease seems to be on the increase during the past three or four years.
"BUTTUSSIA." This may be translated "palsy," the whole body becoming paralyzed.	No treatment known ...	When fatal death ensues in two or three hours, but it is not generally so.	This disease is of recent date, being only known for the last twelve or fifteen years.
"KHOOREA." Sores in the mouth and feet	Keeping the animal standing in soft mud for several days, also applying coal tar.	Curable in about ten days by careful treatment.	Occurs generally in the rainy season; not a fatal disease.
"BADLA." A description of fever. Loss of strength and appetite, shivering, and the teeth becoming loose.	Linseed, bhoosee, cottonseed, and long pepper pounded and boiled administered through the nose; water prohibited.	Can be cured with careful treatment; not generally fatal.	Of common occurrence; at no particular season.
"GOLA-HAR." Ulcerated sore throat ...	No treatment known ...	Generally fatal ...	Not of frequent occurrence.
"TEPAMINA." Swollen stomach ...	Purging or tapping ...	Not generally fatal.	
"SOOKMINA." Or withering. The animal dries up and dies through exhaustion.	No treatment known ...	Not generally fatal; the disease continues for several months.	
"ROSSBATT." Rheumatism, pain, and swelling of the joints.	Firing, sulphur and oil linament.	Of frequent occurrence, rendering the animal useless for months, at times for longer periods, but not fatal.	
"DAAD." Ring-worm ...	Sulphur and oil ...	Easily cured ...	Most cattle have this disease.
"SAMKAL." Sudden swelling of parts of the body with sores.	Firing around the swelling	If not perceived and treated on the very first appearance the disease proves fatal, and death ensues in five or six days.	The disease not of frequent occurrence.
"BHAIL." Cholera One or two motions accompanied by contraction of the bowels and copious emission of saliva.	Hot fomentations ...	Generally fatal in one or two days.	This disease has only appeared within the past few years; it is not of frequent occurrence.

From G. F. COCKBURN, Esq., Commissioner of Patna, to the Officiating Secretary to the Government of Bengal,—(No. 40, dated the 27th February 1864.)

SIR,

I HAVE the honor to acknowledge receipt of letter No. 5331, dated 20th November last, from S. C. Bayley, Esquire, Junior Secretary, on the subject of "cattle murrain," and in reply to submit, for the information of Government, as follows:—

2. I called on the several District Officers for reports with the following result:—

3. *Shahabad and Tirhoot*.—The Collectors of Shahabad and Tirhoot state that no disease of the kind has come to their notice.

4. *Chumparun*.—From the Collector of Chumparun I have had no reply as yet, but the Civil Assistant Surgeon of the District, Dr. Coates, has informed me as follows:—

"I saw a public letter about the cattle murrain some weeks ago oddly enough. I had made enquiries about it two years ago in hopes of doing good, but was stopped by the caste objections.

"If any Hindoo allowed his calves to be inoculated, and they or any one of them died, the unfortunate owner would immediately be outcasted for cow-murder, and for this most horrible of crimes in the estimation of Natives he would have to appease the gods and the Brahmins by an immense outlay in feasting the priests and in buying back his caste: no one will risk this. It might be introduced by Planters and by enlightened Rajahs, but not among the people. If Government would only buy the services of the Native Pachne-wallahs of the respective Districts, instead of our Vaccinators, vaccination would flourish instead of be the languid unsuccessful thing it is.

"The symptoms of the murrain are, *first*, thirst; the cow rushes to the water and stays there drinking and keeping herself cool.

"*Second*, fever; this lasts for eight or ten days, until, *third*, the popules, which begin on the face and then spread all over the body, have turned into postules.

"These often run together, and worms form in them, rendering the sight a most disgusting one, and the suffering great.

"The mouth, palate, and alimentary canal also are attacked with these postules, a dangerous complication, for those so suffering almost always die.

"Gati prevails in the rains, but may remain the whole year in a herd.

"It is contagious among cattle, cows, buffaloes, sheep, goats, and even horses have it, but it is never transferred from cattle to man; two-thirds of those attacked, as a rule, die.

"Those who survive are not again attacked. The Native treatment consists in kodo-ki-ganje for the mouth sores, and powdered holdi for the skin. The sufferers are kept standing in smoke, and offerings and Poojahs are made and done to Debi.

"*Note*.—Whenever murrain has appeared in cattle it has always done so in herds.

"It originates here in herds; the petty Ryot's couple bullocks do not suffer except by contagion.

"The best and most useful plan is that of preventing the spread of the disease; when one is found to suffer she should be separated from the others and placed in a high dry byre, away from all other cattle, and the herd should be scattered about and not huddled together at night as is usual. The sufferers should be allowed as much milk to drink as they will, and the most nourishing slops given to support them through the attack: in this way nine-tenths of the herd will be saved."

5. *Sarun, Behar, and Patna.*—The Reports from Sarun, Behar, and Patna contain much that is interesting and useful to know on the subject, and are submitted in original as per margin.

Sarun No. 33, dated 22nd February.
Behar " 1239, " 8th
Patna " 208, " 22nd

From C. J. JACKSON, Esq., Civil Surgeon, Sarun, to J. J. GREY, Esq., Magistrate and Collector of Sarun,—(No. 33, dated the 5th February 1864.)

SIR,

In reply to your letter No. 113 of 1863-64, containing enquiry as to the prevalence or otherwise in this District of the cattle murrain which has been so fatal in Madras Presidency, I have the honor to state that no such disease prevails here, or has ever been known.

2. There has been latterly a more than usual mortality among sheep and goats in the District from a disease known among the Natives as *berooa*, the symptoms being first a swelling of the glands of the neck, debility, and rapid purging. Staggers, or an analogous disease, has also prevailed, probably due to unhealthy feeding in ground more or less marshy, the rainfall during the past year having been so excessive; but I have been unable to get information of any such disease as that concerning which enquiry is made.

3. Should anything of the kind occur and come to my knowledge I will at once report it, and also make enquiry into it myself.

Memorandum from J. J. GREY, Esq., Magistrate and Collector of Sarun,—(No. 165, dated the 22nd February 1864)

Copy of above Report forwarded to Commissioner in reply to his communication noted.*

* Letter from Government of Bengal, No. 6331, dated 20th November 1863, with enclosures, and Commissioner's Circular Docket No. 237, dated 30th idem, referring to cattle murrain.

I referred to Dr. Jackson, the Civil Surgeon, both with reference to the nature of the enquiry, and also because from his long residence in the District, and acquaintance with the people, I thought his information would be valuable.

2. Dr. Jackson's Report, it will be seen, speaks of an illness, of which he describes the symptoms, and which he says is called *berooa* amongst the Natives; but I think he must mean a glandular disease, something like "glanders" in horses, and called not "*berooa*," but "*khoortia*."

3. Besides this disease a report furnished by the Collectorate Nazir shews clearly that there is another disease frequently prevalent amongst the cattle of this District called "*seetla*," or "*matta*," or "*chenchuck*," and of which the symptoms are similar to those of the cattle murrain prevailing in the Madras Presidency, namely, refusal of food, running from the eyes, mouth, and nostrils, and purging, but postules are said to appear only slightly and occasionally.

4. How far, therefore, the disease is the same as that spoken of in Madras is a point I must leave to be determined elsewhere; but it is worthy of notice that the names given above are the same as for small-pox in human beings, which would go to shew that it is the same disease as that in Madras.

5. It is described as contagious. Last year it seems chiefly to have attacked buffaloes.

6. I may add that my own enquiries from other sources also go to prove the existence of the disease.

From A. HOPE, Esq., Collector of Behar, to the Commissioner of Patna,—(No. 1238, dated the 6th February 1864.)

SIR,

In reply to your Circular No. 237, dated 30th November last, calling for a report on the cattle murrain, I beg to state that information has been demanded from all possible sources on the subject in question, and that the following conclusion have been arrived at:—

2. That for the last six or seven years the small-pox has been prevalent to an alarming extent among cattle in this District; that it attacks the animal every year or every other year most violently at the conclusion of the hot weather and beginning of the rains, and less violently or not at all at this period of the year; that it spreads rapidly and fatally; and that large herds have in consequence been diminished by more than half, and their owners considerably impoverished.

3. That the growth of cattle is stunted on account of the disease, and their price increased to double. That agriculturalists are reduced to great distress by the increased value of bullocks, and are ruined by their death from the disease.

4. That the symptoms are the same as those described in Captain Nelson's Report, violent purging being the first sign, followed by a passing of blood, sores inside the mouth, water running from the eyes, and postules all over the body, accompanied with high fever till death intervenes generally between the fifth and tenth days.

5. That the Hindoo look upon it as an expression of displeasure and wrath on the part of some god, or ascribe it to a spell exercised by some enemy; that in the former case they abandon themselves to worship, and in the latter to acts of violence on the person of the supposed exorcist.

6. That inoculation would be of the greatest service, but that it must be mooted and performed with great care and discretion.

7. These conclusions have been arrived from valuable information furnished by the Deputy Magistrates of Newadeh and Sherghotty, and from personal enquiry on my own part. The Reports of those Officers are filed with the correspondence, but I do not think it necessary unless you desire it to forward them.

From H. W. ALEXANDER, Esq., Magistrate of Patna, to the Commissioner of Patna,—(No. 208, dated the 22nd February 1864.)

SIR,

With reference to your Circular Docket No. 237 of the 30th November last

Deputy Magistrate of Barh to Magistrate, No. 189, dated 7th December 1863.
Cantonment Joint Magistrate to Magistrate, No. 218, dated 9th December 1863.
Deputy Assistant Commissary General of Dinapore to Cantonment Joint Magistrate, No. 451, dated 8th December 1863.

I have the honor to submit, in original, the correspondence noted on the margin, and to state that Captain Chalmers, Deputy Assistant Commissary General of Dinapore, has so fully entered into the subject of the cattle disease and its treatment that I myself have hardly anything else to add.

2. From enquiries made through the District Superintendent of Police it does not appear that the disease has prevailed to any extent in this District at any time; but, as the Deputy Magistrate, Mr. Cole, truly observes, it would be no matter for surprise if it did break out, as very little trouble is taken to feed the cattle properly, every available bit of land being made use of for cultivation, no ground being set apart for general grazing purposes.

3. I regret the delay in submitting this Report owing to the delay in the receipt of the Police Reports, and to my subsequent illness.

From A. N. COLE, Esq., Deputy Magistrate of Barh, to H. W. ALEXANDER, Esq., Magistrate of Patna,—(No. 189, dated the 7th December 1863.)

SIR,

In reply to your Memorandum No. 1129, dated 4th instant, calling for early report on the papers therewith forwarded, relative to the existence of any cattle disease of the nature therein described, I have the honor to report that to the best of my belief no such murrain has actually prevailed within the Barh Sub-Division. I have, however, a perfect recollection that last year it was a common topic of conversation amongst the Natives as to a species of small-pox having broken out amongst the cattle on the Tirhoot bank of the Ganges, and said to be carrying off vast numbers. That any disease of this nature should break out, however, in this District would, I hold, be in no degree surprising; it is a constant subject of remark by me, when in the District, as to the large herds of cattle attached to each village in miserable condition, no provision appearing to be made, or thought taken, how to feed them, every available bit of land is under cultivation, no grazing ground allowed for, consequently the cattle are in so debilitated a state that they have no stamina to resist disease, and I should imagine a want of proper nourishment would of itself suffice to create a disease of this nature, or, at all events, preclude the possibility of a strong and healthy breed being kept up.

From MAJOR J. EMERSON, Cantonment Joint Magistrate of Dinapore, to the Magistrate of Patna,—(No. 218, dated the 9th December 1863.)

SIR,

I HAVE the honor to inform you that on receipt of your communication, (Memorandum No. 1128, dated 4th December 1863,) on the subject of the cattle murrain in the Madras Presidency, I opened a correspondence with Captain Sidney Chalmers, the Commissariat Officer at this Station, the result of which will be found in his letter, to my address,* herewith enclosed.

2. I have had no experience myself in the matter, but Captain Chalmers evidently has, and his communication appears to me to be one of some value.

From CAPTAIN S. CHALMERS, Deputy Assistant Commissary General, Dinapore, to MAJOR J. EMERSON, Cantonment Joint Magistrate of Dinapore,—(No. 451, dated the 8th December 1863.)

SIR,

I HAVE the honor to return, herewith, the copy of correspondence relative to the murrain among cattle stated to be now prevalent in many Districts of the Madras Presidency, and to offer you my best thanks for its perusal. It is fortunate indeed that you thought of sending the papers to me, as I am not without some experience on the subject gleaned from

the adjoining Districts (in which the disease referred to has been recently very destructive), as also in five or six cases which have occurred within the last six weeks among the Government cattle at this Station.

2. The symptoms of the disease, styled murrain in the correspondence, are exactly similar to those exhibited in cow-pox (vernacular gotee), for which I may, humanly speaking, safely assert that I am in possession of a most effectual remedy, if not indeed an infallible specific. This consists of nothing more than the black salt of the country (karee neemuck), which in grave cases should be administered twice a day in doses of one ounce each. I have found too that its effect is much strengthened by the addition of Tartar emetic (given with only one of the daily doses) in the proportion of sixty grains Tartar emetic to one ounce karee neemuck.

3. The above are the largest doses that should be given and only in severe cases. The karee neemuck will be found a most effectual preventive also, and where one case appears it should be given daily to all the bullocks in the lines or pastures in doses of from quarter to half ounce.

4. An Indigo Planter in the Tirhoot District informed me of the above remedy, and stated at the same time that he had lost no less than forty bullocks out of a herd of 180 by the disease previously to his employing karee neemuck as a remedy, when not a single subsequent case proved fatal. In like manner, though the cases that have occurred under my notice have been more sporadic in character, and several have proved fatal during my absence, I may confidently state, however, that in no case in which the remedy has been fairly tried by me has it failed in a successful effect.

5. The precautionary measures to be taken against contagion will readily suggest themselves to every intelligent owner of cattle according to circumstance, position, and locality, and I need not, therefore, perhaps offer any remarks thereupon here, but merely state, as a warning to the incautious, that one hour's delay in taking them will certainly be attended with the most dangerous results.

P. S.—The following recipe, which may be safely used in milder cases and generally as a useful alterative, I am indebted for to a Medical Officer of great experience of the subject:—

Tartar Emetic	... 20 grains.
Ajwain	... 2 drams.
Calomel	... 20 grains.
Arsenic	... 2 "

Revenue Report

No 622.

To the Secretary to the Govt of Bengal.

Sir,

I am directed to acknowledge the receipt of Mr. Junior Secretary Bayley's letter of the 3rd inst. 10/10/97 and to convey the thanks of this Government for the papers therewith forwarded, relative to the cattle disease prevalent in your Presidency.

With reference to para 2 of the letter under reply, I am to state that the requisition therein made will be borne in mind and complied with in due course.

Yours faithfully,
J. H. George
13th April 1898

J. H. George

2 Copies Dept. Secy.

No. 27 Date 16.3.10 @ 315

Rev. 1864. Date of Govt. P. 158.

From the Junior Secy. to the Govt. of Bengal.

Dated 3.3.1864. Received 23.3.1864.

No. 1097.

No. 621.

Ordered to be communicated together with the enclosures to the Board of Revenue - Copy of these papers will also be furnished to the Secretary of the Bengal & Chittagong Division.

From H. E. George
13th April 1898

14 Board of Revenue. Dept. Secy. to the Govt. of Bengal & Chittagong Division. 1 Secretary Bengal & Chittagong Division. 1 Military Department. 1 Secy. to the Govt. of Bengal & Chittagong Division.

Forwarding copies of the reports of the Divisional Officers, District Officers, and the District Officers, regarding the prevalence of the disease, and the measures taken for its prevention, to the Secretary to the Govt. of Bengal & Chittagong Division.

No. 27 Date 16.3.10 @ 315

Order is issued

Revenue 1864 Sept.
No. of Govt. for Sept.

C No 622.

To The Secretary to the
Govt of Bengal
At 13th April/64.

Enclosed (the)
Memorandum of the Governor
in view for the papers
forwarded, relative
to the Calcutta, &c.
revenue in Bengal.

No 215.