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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. <u>1577</u>	Press Mis.
<u>587-588</u>	
Dated <u>25-5-</u>	<u>18/57</u>

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
25th May 1867.*

No. 587. Read the following Proceedings of the Madras Government in the
Military Department :—

Communicating certain correspondence relative }
to the construction of sheds for Government } (Here enter 16th May 1867, No. 1,804.)
elephants.

No. 588. ORDER THEREON, 25th May 1867, No. 1,577.

MILITARY WORKS, No. 41.

Communicated to the Superintend-
ing Engineers.

(True Extract.)

Colonel, R. E.,
Secretary to Government.

MILITARY DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following papers:—

EXTRACT from the Proceedings of His Excellency the Governor General of India in Council, in the Military Department, under date the 5th April 1867, No. 212.

Read the following correspondence, relative to the construction of sheds for Government elephants:—

From the Secretary to the Government of India, Public Works Department, to the Officiating Secretary to the Government of India, Military Department, No. 212M, dated 22nd February 1866, with enclosures.

From the Assistant Secretary to the Government of India, Military Department, to the Adjutant General, and Commissary General, Nos. 88 and 89, dated 2nd March 1866.

From the Commissary General, to the Officiating Secretary to the Government of India, Military Department, No. 2477, dated 7th July 1866.

From the Officiating Secretary to the Government of India, Military Department, to the Adjutant General, No. 180, dated 23rd July 1866.

From the Officiating Assistant Secretary to the Government of India, Military Department, to Sir G. U. Yule, c. b., Resident at Hyderabad, Colonel A. P. Phayre, c. b., Chief Commissioner British Burmah, Rangoon, Lieutenant Colonel R. J. Meade, c. s. i., Agent to the Governor General for Central India, Indore, and Lieutenant Colonel W. F. Eden, Agent to the Governor General for the States of Rajpootana, Aboo, Nos. 62, 63, 64 and 65, dated 5th September 1866, and to the Military Secretary to the Government of the Punjab, No. 66 of the same date.

From the Adjutant General, to the Secretary to the Government of India, Military Department, No. 1184E, dated 25th October 1866, with enclosure.

From Sir G. U. Yule, c. b. and k. c. s. i., Resident at Hyderabad, to the Secretary to the Government of India, Military Department, Simla, No. 1826, dated 26th September 1866.

From the Military Department, to the Secretary to the Government of Bengal, and Chief Commissioner Oude, Nos. 627 and 628, dated 26th October 1866.

From the Assistant Secretary to the Government of India, Military Department, to the Commissary General, No. 667, dated 30th October 1866.

From Colonel A. P. Phayre, c. b., Chief Commissioner, British Burmah, No. 1989, dated 23rd October 1866.

From Lieutenant Colonel R. J. Meade, c. s. i., Agent Governor General for Central India, to the Secretary to the Government of India, Military Department, No. 1201, dated 28th January 1867.

From Lieutenant Colonel W. F. Eden, Agent Governor General, Rajpootana, to the Secretary to the Government of India, Military Department, No. 1232, dated 28th September 1866.

From the Secretary to the Government of the Punjab, Military Department, to the Secretary to the Government of India, Military Department, No. ⁶⁴/₅₆₁, dated 5th March 1867.

From the Under Secretary to the Government of Bengal, No. 824, dated 5th February 1867, with enclosure.

From the Officiating Junior Secretary, to the Chief Commissioner, Oude, No. 4205, dated 15th December 1866.

ORDERED—that a copy of the correspondence be sent to the Public Works Department, with the intimation that, in the opinion of the Government of India, in the Military Department, it is desirable that sheds, something on the plan suggested by Sir George Yule, should be provided for elephants at those stations where the mortality has been great and where there is no good tree shelter, a return of which will be called for from the Commissary General.

Pending the receipt of this information, it seems advisable in the Military Department that the Inspector General of Military Works should be asked to prepare a standard plan for the sheds.

Ordered also, that a copy of the above Order and correspondence be sent to the Commissary General, with a request that he will submit early a return of the stations where the mortality among the Government elephants has been great, and where, from want of sufficient tree shelter, it would appear advisable to erect sheds; and also, that he will cause a memorandum, embodying the information contained

MEMO. No. 1311.

The Brigade Major Mhow will be so good as to forward to this office, for the Major General's information, what correspondence there is in his office on the subject herein referred to.
To be returned.

Mhow,
4th November 1865.

(By order,)

(Signed) W. V. SHEWELL, Major,
Asst. Qr. Mr. Genl., Mhow Division.

From Major F. MACGOWAN, Major of Brigade, Mhow, 21st June 1865, No. 1204; to the Officer Commanding 21st Brigade, Royal Artillery, Mhow.

I am desired by the Major General Commanding to return your letter, No. 189 of the 19th instant, with his enfacement thereon, in view to its being attached to a requisition on the Public Works Department in the usual form, and forwarded to the Executive Engineer, who will then take the necessary steps for obtaining sanction to an estimate for erecting an open-sided shed for the elephants belonging to the Heavy Field Battery before the next hot season sets in.

No. 2186 of 4th November 1865.

True copy forwarded to the Assistant Quarter Master General, Mhow Division, as requested in his memorandum No. 1311 of this day, with intimation that this being the only correspondence in the Brigade Office.

(Signed) F. T. CORNEWALL, Captain,
Major of Brigade.

From the Superintending Engineer, Rajpootana Circle, Camp Neemuch, 12th December 1865, No. 2639; to the Assistant Quarter Master General, Mhow.

In connection with the application lately made by the Officer Commanding Royal Artillery at Mhow for elephant sheds, I have the honor to forward copy of Secretary to Government's letter No. 1301M, dated 28th November, on the subject, and to request that the opinion of His Excellency the Commander-in-Chief of Bombay Army may be obtained regarding the necessity of these sheds.

From the Secretary to the Government of India, Public Works Department, Fort William, 28th November 1865, No. 1301M; to the Agent Governor General, Central India.

In reply to your letter No. 27, dated 15th November 1865, requesting sanction to the construction of a shed for the shelter of the elephants attached to the Heavy Battery at Mhow, I am directed to draw your attention to Standing Order No. 43 of 1865, and to intimate that the requisition of the local Military Authorities should be primarily submitted to the Quarter Master General, for the opinion of His Excellency the Commander-in-Chief of Bombay, and the case would then be submitted to the Government of India for orders, if desired by the Bombay Government.

As it appears from a report from Colonel Petrie, Commanding Artillery at Mhow, that several of the elephants suffered considerably from exposure during the late hot season, and that three of them died, I consider it would be desirable that open sheds should be constructed for these animals.

(Signed) M. W. SMITH, Major General.

No. 1593.

Forwarded to the Quarter Master General of the Army, for the opinion of His Excellency the Commander-in-Chief.

Mhow,
23rd December 1865.

(Signed) M. W. SMITH, Major General,
Commanding M. D. A.

From the Assistant Secretary to the Government of India, Military Department, Fort William, 2nd March 1866, No. 88; to the Adjutant General.

The Public Works Department having submitted a correspondence from the Agent to the Governor General for Central India, having reference to a project of providing elephant sheds for the Commissariat and Ordnance elephants at Mhow, I am directed to request that you will move His Excellency the Commander-in-Chief to cause Government to be informed whether, as a rule, sheds are provided for the elephants of the Heavy Batteries serving in Bengal, and whether their provision is considered expedient.

From the Assistant Secretary to the Government of India, Military Department, Fort William, 2nd March 1866, No. 89; to the Commissary General.

The Public Works Department having submitted a correspondence from the Agent to the Governor General for Central India, having reference to the project of providing elephant sheds for the Commissariat and Ordnance elephants at Mhow, I am directed to request you will inform Government whether, as a rule, sheds are provided for the Commissariat elephants in the Bengal Presidency, and whether their provision is considered expedient.

From the Commissary General, Fort William, 7th July 1866, No. 2477; to the Officiating Secretary to the Government of India, Military Department.

I beg to acknowledge your docket No. 531 of the 23rd June 1866, forwarding copy of a letter addressed to me on 2nd March last, (No. 89) in which Government requested to be informed whether, as a rule, sheds are provided for Commissariat elephants in the Bengal Presidency, and whether their provision is considered expedient.

2. In reply, I beg to state, that it appears to have been at one time usual to provide sheds for elephants, as in the General Order of 22nd December 1809, constituting the Commissariat Department and laying down rules for its guidance, in the notes relating to the purchase and keep of elephants, it is enjoined, "the sheds will be constructed and repaired by the Executive Commissariat Officer, upon the usual report and estimate to be transmitted to the Military Board."

3. There are now no sheds for elephants at any station.

4. It is however matter for consideration whether the mortality among elephants may not in some, if not in a great measure be owing to the want of such shelter, or to the exposure they have to suffer.

5. In 1863, my predecessor Colonel J. C. Scott, having noticed the great mortality among the elephants, drew the attention of the officers of the Department to it, and impressed on them the importance of looking more carefully after these valuable animals.

6. The Circular was construed by some officers to require some explanation or notice from them, and all who did thus notice it, attributed the mortality to exposure chiefly. An abstract of their letters is annexed.

7. Departmental Orders require elephants to be picketed under trees or other shade; but at many stations there are not trees in sufficient number in the vicinity of cantonments to afford proper shelter; further the shelter of trees is a protection only from the heat and sun of summer, but not from the rains or from the cold of winter.

8. For myself, I am of opinion that the provision of sheds for elephants is expedient.

9. For Bengal and at stations in the north-western Provinces where tree shade is available, sheds may be erected for the shelter of only a certain proportion of the elephants. But in the Punjab where both heat and cold are so severe, sheds should be erected for all elephants.

10. The sheds need not be brick-built buildings; plain mud walls with chopper roofs, will, it is believed, answer very well.

11. As elephants are kept chiefly at stations having Moveable Columns, the establishments of these columns when not required for other work, could be employed in running up the walls. The only expense will be the roofing, but it will not be heavy. Rupees 12,000 (twelve thousand) will, I think, cover it.

12. Should the erection of sheds be sanctioned, careful estimates might be called for before orders are issued for their being commenced upon.

Abstract of the reports of some Executive Commissariat Officers on the mortality among elephants.

Major A. MACQUEEN, dated Mooltan, 26th December 1863.

Most of the elephants that have been lost, died from apoplexy caused by exposure to the heat of a summer sun; elephants suffer greatly when exposed to the rays of a hot sun, and if left to themselves for a little, will, if they possibly can, get out of it; in their wild state they feed during nights only to avoid the sun, and are found during the heat of the summer days in the best sheltered spots they can find. Sheds should be erected for the protection of elephants from the sun at those stations where there were no trees for them to take shelter under during summers.

Captain H. R. BRADFORD, dated Jullunder, 15th January 1864.

Having had no experience myself with these animals, I am unable to offer any suggestion as to their treatment. Sub-Conductor Armstrong attributes much of the mortality among elephants to their exposure in all weathers, especially during the rains, without sheds.

Major G. S. MACKBEAN, dated Saugor, 23rd January 1864.

But prevention is better than cure, and I am of opinion that stables and sheds would save more than physic. The primary cause of most of the sickness is want of shelter. Their standing in the open in all weather and seasons is directly opposed to what they did in their natural state. In their forest home they not only found their food, but good shelter, from wind, rain, cold, or sun.

Colonel Turner, C. B., at this station with eight years' experience of elephant shooting in Ceylon, tells me that he never found them expose themselves to one or the other. What must it be then to these animals to be tied by the leg exposed to all in turn to be chilled and pelted by the wind and rain, to shiver all night, and to have their skin blistered by the sun. If stables cannot be given them, they should at least be given as good a covering as is allowed to bullocks. A taut jhool lined with blanket (not made of the remnants of condemned bullock jhools and only when they are procurable) and a tarpaulin painted white in the rains. I have always taken great interest in my elephants, and watched them in many favorable opportunities, and I am satisfied that the little things I now recommend should add greatly to their efficiency and health.

Major W. C. R. MYLNE, dated Umballa, 28th January 1864.

I consider that as a general rule the Government elephants are not sufficiently cared for by being properly sheltered; they should in these provinces be provided with jhools in the cold weather, and protected from the intense heat of summer; as it is, there is scarcely a station in this country, certainly not one in the north-west (where most required) that any shelter whatever is afforded. Summer and winter they are picketed on the open plain, the utmost that is ever done to protect them from cold is to provide them with a few old and condemned bullock jhools!!! At every station where elephants are kept there should be sheds erected for them and every where out of Bengal proper, they should be provided at least with a jhool similar to those issued to bullocks. Surely if the latter require protection, born and bred as they are on the out-skirts of the desert, and exposed on the plains of Hissar, without any covering natural or artificial, elephants require such in a much greater degree, as they naturally inhabit moist warm jungles where they never feel extremes of either heat or cold, but when brought on the rolls for Government service, they are exposed to both. Rich natives who keep elephants always provide some shelter for them, if it is not more than picketing them on the lee side of a wall, and in the cold weather they are invariably covered with *warm* jhools. I am certain that many casualties arise from the want of shelter, especially in the Upper Provinces, where the extremes of heat and cold are so marked. It is generally difficult to get permission even to resort to the shade of any groves of trees which may be adjacent to the elephant lines as some protection from the fiery heat of the summer sun, as some injury of course is done by the boughs being broken. In all practicable cases, I am of opinion that elephants should, for this reason, as well as that of economy, be kept at graze in the jungles, which more nearly approaches to their natural state.

(True abstracts.)

(Signed) J. D. MACPHERSON, Colonel,
Commissary General.

From the Officiating Secretary to the Government of India, Military Department, Simla, 23rd July 1866, No. 180; to the Adjutant General.

With reference to your memorandum No. 456, dated 14th June 1866, subject as per margin,

Regarding the provision of sheds for elephants of the Commissariat and Ordnance Departments, I am directed to state that the Commissary General's report has been received, but he has evidently understood that the letter from this Department, No. 88 of 2nd March 1866, copy of which is annexed for easy reference, was transferred to him for opinion as to the provision of sheds for the elephants of his department only. I am therefore to request to be favored, under

His Excellency's orders, with early information whether, as a rule, sheds are provided for the elephants of the Heavy Batteries serving in Bengal, and whether their provision is considered expedient, and if so, to what extent and of what nature.

2. The report by the Commissary General is forwarded in original for His Excellency's information, and I am to request its return with your reply.

From Major W. M. LEES, Officiating Assistant Secretary to the Government of India, Military Department, to Sir G. W. YULE, C. B., Resident at Hyderabad, Colonel A. P. PHAYRE, C. B., Chief Commissioner British Burmah, Rangoon, Lieutenant Colonel R. J. MEADE, C. S. I., Agent to the Governor General for Central India, Indore, and Lieutenant Colonel W. F. EDEN, Agent to the Governor General for the States of Rajpootana, Aboo,—(Nos. 62, 63, 64 and 65, dated Fort William, the 5th September 1866.)

The Government of India having under consideration the question of erecting sheds for the protection of their elephants, are desirous of obtaining from every likely source information on the subject; and I am therefore directed to request that you will be so good as to favor Government with your opinion, experience, and any information in your power of the practice of Native Courts, where elephants are at times in considerable numbers and much prized, which would tend to shew the expediency of the measure.

From the Officiating Assistant Secretary to the Government of India, Military Department, Fort William, 5th September 1866, No. 66; to the Military Secretary to the Government of the Punjab.

The Government of India having under consideration the question of erecting sheds for the protection of their elephants, are desirous of obtaining from every likely source information on the subject; and I am therefore directed to request that you will be so good as to move the Honorable the Lieutenant-Governor to favor Government with his opinion, experience, and any information in his power of the practice of Native Courts, where elephants are at times in considerable numbers and much prized, which would tend to shew the expediency of the measure.

From the Adjutant General, Head Quarters, Simla, 25th October 1866, No. 1184E; to the Secretary to the Government of India, Military Department.

The Adjutant General has the honor to forward, for submission to Government, the enclosed precis of replies received from the Officers Commanding Batteries of Heavy Artillery, to a letter addressed to them containing the enquiries on the subject of elephant sheds, suggested in Military Department, No. 180 of 23rd July last. The Commissary General's letter is returned.

[Statement]

PRECIS of replies to letters on the subject of elephant sheds.

Battery and station.	Whether sheds are provided for elephants of Heavy Batteries.	Whether their provision is considered expedient.	To what extent and of what nature.	Remarks.
Officer Commanding Royal Artillery, Gwalior.	No—the elephants feel the sun in the hot weather.	Yes...	A lightly constructed open shed sufficiently large to hold ten elephants in two rows.	General Officer thinks such a shed would not stand the severe storms by which the station is visited.
Officer Commanding 3-22nd Royal Artillery, Lucknow.	No—the elephants cannot stand exposure without falling off in condition.	Yes...	An open shed 210 feet long. 20 feet wide. 16 „ high front. 14 „ „ back. Wooden pillars preferred to masonry.	
Officer Commanding 4-22nd Royal Artillery, Peshawur.	No—nor at Meerut where the Battery was formerly quartered; the elephants cannot stand exposure without suffering, and it becomes necessary to remove them a considerable distance from Lines for the shelter of trees.	Yes...	Open shed with good roof.	Colonel Kaye does not recommend construction of sheds at Peshawur, as he believes the Battery is to be removed to Rawul Pindee.
Officer Commanding 2-24th Royal Artillery, Meer.	No—the elephants do not suffer much from exposure. Their feet suffer from damp.	Yes...	A long shed on a raised terrace with strong wall 30 feet in height running down centre, a light roof 25 feet would be sufficient for each stall, height from eaves to ground 24 feet. Canvass curtains to be hung outside the shed to keep out rain, and as a protection from cold in winter.	General Officer Commanding recommended.
Officer Commanding 3-24th Royal Artillery, Meerut.	No—nor at Peshawur.	Yes...	Open shed with pent roof, built in a pukka floor.	General Officer Commanding Division. Private individuals and Native Chiefs put their most valuable elephants under sheds.
Assam Local Artillery, Debrooghur.	No.	No...	Recommends the construction of an open Hospital for sick elephants built on masonry. Recommends a slightly raised platform of masonry for each animal to stand on, to prevent their constantly standing on damp ground.	Recommends the platform.

(Signed) H. E. LONGDEN, Colonel,
Adjutant General.

From the Resident of Hyderabad, 26th September 1866, No. 1826; to the Secretary to the Government of India, Military Department, Simla.

I have the honor to acknowledge the receipt of Government letter, No. 62, of the 5th instant, requesting my opinion regarding the question of erecting sheds for the protection of Government elephants, and to state that I have kept elephants for the last twenty-six or twenty-seven years now, and my stud consisted usually of nine or ten animals, and never of less than four or five until I came here. So long as I remained in the districts of Eastern Bengal on the left bank of the rivers which now carry the waters of the Berhampooter to the sea, I did not house the animals generally, though I occasionally put a favorite, or an unseasoned animal, under a shed in the hot weather, and though I lost some few, I had no reason to think that the deaths were in any degree due to exposure. One died I recollect from intussusception of the bowels, proved by a post mortem examination—another of cold and fatigue in crossing one of the large rivers abovementioned, while otherwise in a weak state of health from over-work, &c., &c. But when after seven or eight years, I was removed to Purneah across the Berhampooter, I lost in the first year nearly the whole of my stud, and the survivors with one exception, became for a time very ill. As the disease appeared to me connected with the head and nervous system, and not with the bowels and digestive system, for two of the beasts fell down dead suddenly without previous symptoms of illness, and the others had so far as I now recollect, trembling fits with loss of power in the trunk and limbs, while the bowels remained apparently quite right. I ascribed the cause mainly to the exposure of the preceding six months of hot weather and rains, and I began to house by elephants, and since that time, about 48-49, I have not lost a seasoned animal, though two or three unseasoned or sickly beasts bought on speculation died.

2. But in order to enable you to judge of the value of my opinion regarding the effect of exposure, it is necessary to explain, that soon after beginning to keep elephants, I became disgusted with the regular professional Mahouts, and employed savages from Assam and plucky coolies with a fancy for the work, and thus I was obliged to pay great attention to the beasts, to treat them myself when sick or wounded, to see carefully to their feeding, &c., and I am quite ready to allow that possibly some of the deaths may have been avoided, had I had the services of a good professional Mahout, an advantage which I secured some five or six years after I had taken to housing the animals, and that fact may have had something to do with their health subsequent to his employment.

3. I have said that I considered the disease which attacked the animals at Purneah as mainly due to exposure. The explanation of this is, that on the left bank of the Berhampooter, the principal fodder consisted of reeds and grass from the numerous jheels, and of the plaintain trees which are very abundant in most parts of the districts referred to, while tree fodder given occasionally at all times, was given largely only preparatory to, and during hard work. But in the districts across the Berhampooter, and especially in Purneah and Bhagulpore, tree fodder was the rule, and I am inclined to think that the change from the generally watery cool diet to a drier and more stimulating one, rendered the animals more liable to be effected by heat; it may possibly have been the sole cause of the disease, but this was contradicted by the symptoms mentioned above as I understood them. At Lucknow, I did not house my elephants, as I was there temporarily, and neither do I house them here, as the two I have, find sufficient shelter under large trees.

4. You will see that in talking of exposure, I refer only to exposure to heat, to the sun's rays, in fact, I never saw reason to attribute injury to rain alone, and I frequently had my animals taken out of their sheds in rain and tied up in the open air, but they were brought back as soon as the sun came out. But storms of wind and rain, if of any duration, are very apt to be injurious to elephants, causing inflammation of the eyes, and even total blindness as I have seen, and troublesome swellings of the limbs.

5. Lastly, I may remark that the housing my elephants at Head Quarters seemed in no degree to render them liable to suffer from exposure at work away from home, as they generally were, for six months in the year, between November and June, when for weeks together, and in the hottest period, they did not have the shade of a tree. This it may be said shows that housing is superfluous; but I hold to the general belief, that work is good for man and beast. Stagnation of mind and body agrees with the domestic pig; and perhaps the bullock, animals given to man as food,

though he perversely sometimes turns them into deities or the reverse, but those animals which become the servants of man, the elephant and horse, and dog, are always the better for doing their work, it is during rest chiefly that they are liable to disease.

6. With regard to the practice of Native States in regard to housing, I am acquainted with this State only, and here, it has always been the practice to keep all the elephants unhoused, and I cannot speak in praise of their condition generally. The State and Minister's own elephants have been 179 in number during the past year, and thirteen deaths have occurred among them, or a little over seven per cent. The most common diseases are Zuhbad and Bavoo. The former is well known by the same name in Bengal and the North-West—I never had a case of it in my stud. The latter is I think known by a different name in the Bengal side, where it is not unfrequent, and I have had many cases of it. Small sores break out on the head and trunk and fore-quarters and run into each other, until sometimes the whole of the parts mentioned become one continuous row; but it seemed to me only a troublesome, not a dangerous disease, though if the eyes became badly inflamed as they were apt to do, the sight of one or both might be seriously injured. Salar Jung informs me that his Mahouts think their animals would be better if kept under cover. Whether the diseases mentioned are due in any degree to exposure I cannot say.

7. I have seen a good deal however of the treatment of elephants by Native Zemindars, especially by some who used to join my shooting expeditions in former days, and as a rule, they did not house their animals, except perhaps a pet howda or suwarree one, kept at home. While the others, save when required for work, were kept wherever fodder was most plentiful, changing from one place to another as the resources of each were consumed, and perhaps this custom may explain why it was not the custom to house. All my friends just referred to are dead now, or it might have been worth while to get their opinions, and I don't know a man in Bengal at the present day competent to form an opinion on the subject, except Maharaja Jymungul Sing, K. C. S. I. of Gidhore in Monghyr, who is a very intelligent well informed man, and used to have a fair stud of elephants. But the best private stud in India perhaps is that of Diergejoy Sing, K. C. S. I., Maharajah of Bulrampore in Oude, whose animals are kept in excellent condition, and his opinion might be useful.

8. But on the whole, I suspect you will not get facts enough to form a decided opinion upon one way or the other, and I would venture to suggest that the experiment of housing be tried at two or three stations out of Bengal, and where there has been considerable mortality among the elephants. I found the best plan was to have a double row of elephants in a shed, giving about 15 feet square to each, the roof high enough to be beyond reach of their trunks, and with only slope enough to throw off the water—the posts of solid palm (tâl) trees, the beams and rafters of $\frac{1}{2}$ and $\frac{1}{4}$ ditto roughly split. Elephants to stand head to head, but as far apart as the space admits, so as to prevent their stealing each other's fodder. But I must say, that I do not think housing alone will do the Government elephants much good, unless more attention is paid than has seemed to me to be the case to the two all-important points of giving the beasts fodder enough, and eatable fodder, not rubbish, and giving it them in time to allow them to lie down and sleep after eating. No amount of grain will compensate for a continued short allowance of good fodder; an elephant requires a belly full of fodder more even than a horse does of grass, and when not at work and good fodder is plentiful, his grain may be safely reduced one half if the Mahouts can be trusted, otherwise, it will be cheaper to continue the full allowance and let the Mahouts take their usual share of it.—2ndly, elephants require sleep like other animals, though not so much. An elephant which has had enough to eat, and is not prevented by noise, want of room, uneven ground, &c., &c., will lie down before midnight, sleep for a couple of hours or so, get up and eat a little, and then lie down on the other side, rising finally two or three hours before day-cravings of hunger, and if the fodder is not given in time to enable it to do so by midnight or thereabouts, it will go on eating all night and lie down at all, and very few elephants can stand this want of rest for any time. But what is the practice of Government Mahouts on a march? After the march is over, the elephant is tied to a tree, or his fore legs being fastened together, he is left in the sun, while the Mahout eats and smokes and sleeps, till he thinks it is cool enough to take or send his animal for fodder; that is brought in late in the evening, then the animal has to be or ought to be bathed, then get his grain or chuppatees, and then, unless he has had a bath

before dinner, be watered, so that he does not begin on his fodder till eight or nine o'clock, and then voraciously hungry, he eats steadily on till the camp is awake again. Many of the poor brutes stand this practice, existing I suppose since they were first put to human use; but how many succumb in the training! I firmly believe that the mortality which sometimes occurs in Government studs is due to this custom more than to any other cause—if it does not kill them directly, it so weakens their constitutions that they are not fit for any real work again, and give in when it comes. An hour at furthest after the march is over, the elephants should go for fodder, be well washed, or allowed to wallow in water, before sun set get a little fodder and then the grain, and be fastened for the night with the night's fodder before them by seven o'clock at latest. An hour then is of great importance, for it gives them an hour to lie down and sleep, and that is a great deal to a beast who, so far as I have observed, seldom sleeps four hours, though sometimes after very great fatigue and a good meal, they will lie nearly all night. I always insisted on this early feeding with my own elephants, and tried it with a line of 80 which I had out for several months in 1857-58, with a good deal of hard work, and it was the general remark that the animals were in better condition when I returned them to their owners, than when I received them, and during the whole time, I had not one sick, or incapable of work.

9. I hope I shall be excused for writing so much. I am deeply interested in the subject, having such regard for the noble animals; but with the present system of management under Commissariat Officers who, no blame to them, know for the most part nothing of the beasts, and, with their desk work, have little time to apply knowledge if they had it, I have very slight hope of any improvement being effected.

Military Department, Fort William.—(Dated the 26th October 1866.)

Enter the following documents, having reference to the question of erecting sheds for the protection of Government elephants.

Letter No. 62, dated 5th September 1866, to Sir G. W. Yule, C. B., Resident, Hyderabad.

His reply No. 1826, dated 26th September 1866.

No. 627.

Copy of the above forwarded to the Secretary to the Government of Bengal, with a request that he will be so good as to move His Honor the Lieutenant Governor to cause the Government of India to be favored with the opinion of Maharajah Sir Joymungul Sing, K. C. S. I., of Gidhore in Monghyr, on the question of providing sheds for the protection of elephants, and any information in his power regarding their care and keep.

No. 628.

Copy of the above forwarded to the Chief Commissioner, Oude, with a request that he will be so good as to cause the Government of India to be favored with the opinion of Maharajah Sir Diergejoy Sing, K. C. S. I., of Bulrampore in Oude, on the question of providing sheds for the protection of elephants, and any information in his power regarding their care and keep.

By order,
(Signed) W. M. LEES, Major,
Asst. Secy. to the Govt. of India.

From the Assistant Secretary to the Government of India, Military Department, Fort William,
30th October 1866, No. 667; to the Commissary General.

The Government of India is collecting data regarding the care, &c., of elephants, and as possibly the information contained in a letter from Sir George Yule, Resident at Hyderabad, No. 1826, dated 26th September 1866, may be useful to the Officer who may be deputed to bring up elephants from Burmah, I am directed to forward a copy for his use.

2. Copies of all the information received on this subject will be forwarded hereafter.

From the Chief Commissioner of British Burmah, and Agent Governor General, Promé, 23rd October 1866, No. 1989; to the Assistant Secretary to the Government of India, Military Department, Fort William.

I have the honor to acknowledge the receipt of your letter No. 63, dated the 5th ultimo, relative to the question of erecting sheds for elephants, and requesting information as to the practice of Native Courts regarding the care of elephants.

2. Elephants are kept in large numbers by the Burmese Authorities. But I do not think I ever saw one under a shed, except the white elephant at the capital, which is kept with great care, not to say reverence. The Burmese elephants are kept, as far as possible, in a state of nature. But then it must be remarked they are for the most part kept in shady places where trees abound. Except when being actually used for purposes of State, they are not exposed to the sun. They are never heavily laden, and I have never seen a Burmese elephant (in the Burmese territory) have a really hard day's work.

3. Elephants with us on the contrary, are frequently hard worked, and exposed to the sun, which they can stand less than most animals. Numbers of Government elephants in Burmah have died apparently from apoplexy consequent on hard work with heavy loads in the sun. On the whole, although neither the Burmese Government nor private owners of elephants in this part of the British territory, generally speaking, put their elephants under sheds, yet I feel assured that it is a prudent plan to protect them from the weather in that way when not at work.

4. I addressed a letter upon the subject to Lieutenant Colonel Benson, Assistant Commissary General in this province, and I beg herewith to submit a copy of his reply, No. 272, dated the 27th ultimo.

From the Assistant Commissary General, Rangoon, 27th September 1866, No. 272; to the Secretary to the Chief Commissioner of British Burmah, Rangoon.

In reply to your memorandum, No. 1922, 4th September, and the copy of letter, No. 63, from the Officiating Secretary to the Government of India, I have the honor to state that I am unacquainted with any Native Princes at whose Courts in this country a number of elephants are kept.

I conclude from the Officiating Secretary's letter that the information required is not in reference to the particular kind of shed, size and dimensions, but the necessity of erecting sheds at all for the protection of the elephants.

The elephants kept by the Karens in this country are never, as far as my experience goes, kept in sheds.

The animals' habits approach as near as possible to those of the wild elephants; they are hobbled by a rattan partially binding the fore-legs together, and then allowed to stray into the jungles to graze; they seek in the hot weather the shady places, and lie in pools of water, and are thus protected from the heat of the sun.

The habits of the elephant when with Government necessarily become changed. The animal is not allowed to graze at discretion in the jungles and swamps, and as fancy dictates, choose the shade or water; but kept in the cattle lines, frequently exposed to the direct rays of the sun in the dry climate of India. This I believe to be detrimental to the animal, and it is absolutely necessary that artificial shade or covering should be secured to the animals.

The elephants from Burmah are in reality only half tamed, their food is with rare exceptions the green grass and jungle trees they select themselves, whereas with Government they are placed on a heavy feed of rice, and sometimes dry forage. Thus the animals pass from an almost natural to an artificial existence.

I have no hesitation in saying I consider sheds essentially necessary for the well being of elephants, more especially in a climate like Bengal. The Government must not forget that elephants are becoming scarcer and consequently more valuable, and deserving of the best care.

From the Agent Governor General for Central India, Camp Purra, 28th January 1867, No. 1201; to the Secretary to the Government of India, Military Department.

Adverting to your office letter No. 64, dated 5th September last, calling for information as to the practice of Native Courts in providing shelter against the weather for their elephants, and also for my own opinion on the subject, with reference to a proposition before Government for the erection of sheds for this purpose, I have the honor to forward, for submission to His Excellency the Viceroy and Governor General in Council, a statement shewing the practice on this head that obtains in the principal States of the Central India Agency; and to add that in my opinion, no artificial shelter is necessary, if the animals can enjoy the protection of suitable and well-foliaged trees; but that, where this is not the case, a shed consisting of a roof supported on posts or pillars and open on all sides, ought to be provided for the purpose.

2. The delay that has occurred in the submission of this report, has been caused by the necessity for awaiting the replies from the several Native States, which have only now reached me; and will, I trust, be excused.

TABULATED statement of the reports from Political Officers of the Central India Agency, regarding the protection of elephants by sheds, as called for in Circular No. 64, Military Department, dated 5th September 1866.

Agency.	Description of the sheds where used.	Remarks where sheds are not used
Gwalior.....	Sheds formerly used; pulled down 12 years ago, have not been rebuilt.	The elephants are picketed in the open air, generally close to trees.
Dhopal.....	Roomy sheds of pucca masonry for use during night and day in the rains, are recommended.	The elephants may be picketed out in the cold season, during the day time.
Bundelcund...	Stables with stout walls, roof flat (i. e., pucca) or tiled, for the animals during the hot weather.	Shelter of trees given where there are no sheds. Elephants are considered to enjoy wet weather.
Western Malwa.....	Ditto ditto	No other shelter than that afforded by trees.
Bheel Agency...	Ditto ditto	Ditto. ditto
Dy. Bheel Agency.....	A large covered shed is used at Burwance.	
Goona.....	A building of the form of a chut-tree open on four sides with the platform well raised recommended for the hot and rainy seasons.	No shelter but trees.
Indore.....	Ditto. ditto.	Ditto ditto.
Dewass.....	Ditto. ditto.	

(Signed) R. J. MEADE,
Agent Govr. Genl. for Central India.

INDORE RESY., CAMP PURRA, }
28th January 1867.

From the Agent Governor General, Rajpootana, Camp Arrah, 28th September 1866, No. 1232; to the Secretary to the Government of India, Military Department.

I have the honor to acknowledge your letter No. 65 of the 5th instant. Judging from the practice observed in the States under this Agency, I am certainly of opinion that there is no necessity whatever to provide elephants with sheds at places where they can be picketed in the shade of trees.

2. At the Native Courts, except perhaps for a favorite, the elephants are picketed in the open, though during the heat of the day in the hot weather they are generally placed under trees which afford a measure of shade. Beyond this no care whatever is taken of them; and from my experience, I think, they are as healthy and in as good condition as could be wished for.

3. There can be no doubt but that elephants feel extreme heat very much, so that unless the shade of trees can be obtained, I would recommend open sheds being provided for them.

Copy of memorandum from the Secretary to Government, Civil Department, Punjab, 1st March 1867, No. 529; to the Secretary to Government, Military Department, Punjab.

Reply to his No. 2105, dated 24th September—forwards abstract of replies received from Vakeels of Native States, shewing the measure adopted for protecting elephants.

Abstract of replies received from the Vakeels of the Native States, regarding the mode of keeping elephants.

At Fareed-kote, elephants are in summer kept under the shade of trees during the day, and in the open air at night. In winter they are covered with jhools at night, and are kept uncovered during the day.

At Nabah, elephants covered with jhools are kept in the open air both day and night during the winter. But during the summer they are tied under trees in the day time.

At Jummoo, some of the Maha Rajah's elephants are kept in sheds covered with jhools and gadelas during the winter months, while others remain in the open air. They are tied under trees during the summer.

At Kuppeorthalla, elephants are kept in the open air all the year through, except those which are sick; the latter are protected by sheds during the winter and rainy months.

At Jheend some of the elephants are kept during the rainy season under sheds, and others covered with jhools, are tied under trees at night.

At Patiala, elephants are kept under trees at night during the winter, and during the day in summer. Sick elephants are kept under sheds during the rainy season, but the healthy ones are kept in the open air; no measures are taken for protecting them from rain.

No. ⁶⁴/₅₆₁.

Copies forwarded to the Secretary to the Government of India, Military Department, for information, in reply to No. 509, dated 27th February 1867.

LAHORE,
5th March 1867.

(Signed) S. BLACK, Major,
Secy. to Govt., Punjab, Mil. Dept.

From the Under Secretary to the Government of Bengal, Fort William, 5th February 1867, No. 824; to the Assistant Secretary to the Government of India, Military Department.

From Officiating Commissioner of Bhaugulpore, No. 34, dated 14th July 1866, with enclosure.

From Officiating Commissioner of Raishahy, No. 38, dated 24th January, with annexure.

I am directed to acknowledge the receipt of your memorandum No. 327, dated the 26th October last, and in reply to submit herewith, for the information of His Excellency the Governor General in Council, a copy of the papers noted in the margin, on the subject of the proper treatment of elephants.

From the Officiating Commissioner of the Bhaugulpore Division, 14th January 1867, No. 34; to the Under Secretary to the Government of Bengal, Fort William.

In answering your letter, No. 5048 of the 6th November last, I have the honor to state that, I have personally no knowledge of the habits of the elephant or of the diseases to which it is subject, and I am unable to express any opinion on the subject of the necessity or otherwise of sheltering these animals from the sun and rain, to which without sheds they are necessarily exposed.

2. I have the honor, therefore, without further comment, to attach a literal copy of Maha Rajah Sir Joymungul Singh's report on the subject, and at the same time to forward the reply received from Mr. Perry of Purneah, whose long experience of the animal will in itself make what he has said very valuable.

From B. R. PERRY, Esq., Deputy Magistrate, Purneah, 6th December 1866, No. 1372; to the Collector of Purneah.

I have the honor, in compliance with your memorandum, No. 831, to submit my opinion and experience regarding the care and treatment of elephants, as required by the Commissioner, for the information of the Government of Bengal on the subject.

My practical knowledge in the care of elephants dates from the year 1814, when I first kept my own, and I had the advantage of studying the animal in its wild state during sixteen years that I was partner in a timber concern, residing for the greater portion of the year in the forests, surveying from Jaulnah on the western bank of the Teesta river to the Junnuckpore hills, also from being the proprietor of a large kheddah for noosing elephants, the Fundites usually catching from 100 to 200 animals annually.

I consider shade during the heat of the day essential to the healthiness of elephants, having always met with the wild herds under the shade of trees while the sun's rays were hot, but in the morning and evening out in Jurah and Nuskut jungle feeding in the swampy places of the open parts of the forest; at night again their resting place was under thickly foliated trees. My own stud, 7 sawaree and 19 thoomkys, on coming from work, or even bringing charah, would of their own accord, so soon as the load was removed, walk into the sheds made for them where feasible, or under the shade of trees during the heat of the sun. I seldom lost newly caught elephants if tied under the shade of trees while being tamed, but if exposed to the influence of the sun, several

died. It is only when necessity compels that the owners of Kheddahs thus expose their animals on account of being near the water and where the best fodder is found for them that grows in the jheels.

The anterior of the cranium of the elephant is very thin, and lazy mahouts by wounding and knocking with the heavy iron "Guzboy" upon it induce one disease of the eye very difficult to cure. Elephants get heated in the sun, and because they slacken their pace squirting water over their bodies, the lazy mahouts instead of driving in the proper way with their feet only, using the "Guzboy" when necessity requires, urge them on by beating, &c., on the head with it, bringing on a running of eyes that turns into "sore eyes" much more difficult than that induced by feeding on heating kinds of charah.

The green "charah" growing in the "jheels" is the best food for elephants, when that is not obtainable. The next best kinds are the ficus species of tree, of which five kinds called "goolus" and the banian are all good, the jack tree, the plantain tree, the leaves being more nutritious the top than the base of the stem, and the sugar-cane, in fact the fresh stems, &c., of most germinacious plants.

The peepul and pakur trees should not be the food of elephants, it is too heating, always brings on a running of the eyes, which if neglected and the eyes are not washed with salt and water with a cooling salve applied around the orbits, ophthalmia ensues not readily cured.

I have known more elephants to die from the neglect of mahouts and the carelessness of their mates than from any other cause.

1st.—The cutting trees for charah, the bark and leaves of which are covered with guano; if any quantity of this charah is eaten even for one day, it brings on spasms and kills the elephant.

2nd.—If the elephant eats any quantity of mud while out in charge of the mate, and he does not inform the mahout of it, who in his turn does not trouble himself to observe if the animal looks in health, and grain is given to it in the evening as usual, it will bring on spasms and inflammation, no medicine will take effect, therefore the animal is sure to die: but sometimes it fortunately happens that the elephant only eats a little mud at first, and if grain is given, though it brings on a spasmodic cholera, the malady can be arrested by medicine. Owners of elephants ought to warn mahout and mates to carefully observe when their elephants eat mud (their natural physic), and for four days after eating it no grain must be given; on the 3rd day, an aperient medicine, and after all signs of the mud has disappeared, half the usual quantity of grain should be given for a day or so, until the animal appears quite well.

Elephants exposed to the heat of the sun are liable to the attack of a deadly disease called "surzah," the effect of the sun on the brain—its symptom is a great tremor that suddenly comes on the elephant, then it falls down and dies, no cure as yet has been found for it. I observed in the wild state when the elephants were feeding in the weedy swamps and the sun began to feel hot, they always threw upon their heads a quantity of weeds and kept it there, and any tame elephant tied out in the sun throws mud and leaves upon its head, but this the elephant while at work at the sun is unable to do. I should strongly recommend when it is necessary to employ them at midday, the use of a covering wadded with cotton an inch thick made to cover the whole of that part of the animal's head that it is requisite to keep oiled.

My hours for working the elephants were from 3 A. M. to 9 or 10 A. M., inclusive of the time for bringing "charah," and from 4 P. M. to 8 or 9 P. M., and I sent them on dak by night only, for I found them able to work better and faster; they stand the heat of the sun worse than buffaloes.

I have personally attended to the dietary and medical treatment of elephants for fifty years, and can assert that neglect is especially the cause of more deaths than the ordinary diseases that elephants are subject to. All ignorant mahouts and lazy mates should be discharged, and active ones well looked after, then Government would be saved the loss of a number of valuable animals that would re-pay all expenditure if kept in good condition, by working steadily and well. The main points to affect this are clean wholesome food in sufficient quantity, daily ablution particularly in the hot weather and rains, enough time for rest, and not worked beyond the strength of the animal, and a proper style of driving, otherwise the elephants becomes lean and weak, which added to working in the heat of the sun induces numerous deteriorating diseases. This animal is

the finest of the dum creation, peculiarly sensitive to kindness, ready in attaching itself affectionately to man, that it is deserving of far greater care and kindness than I have usually observed native employes willing to bestow.

Accompanying are the original papers regarding elephants you forwarded to me for perusal.

MEMORANDUM No. 889.

Forwarded with the papers to Commissioner, by his obedient servant.

(Signed) J. B. WARGAN,

O. C.

The 7th December 1866.

Translation of Maharajah Sir JOYMUNGUL SING's, Urzee.

SIR,

I have the honor to acknowledge the receipt of your purwanahs, dated 24th November and 14th December 1866, enquiring as to the mode of keeping and feeding elephants, and in reply beg to enclose a memorandum, shewing the way in which elephants are fed and taken care of—dated 24th December 1866.

MEMORANDUM.

In order to protect elephants from heat, they should be kept in sheds during the day and in open places during the night. Rice and fodder as detailed below should be given to them.

Branches of Burgad (Banian) tree.

Ditto of Seemul tree.

Ditto of Goolus.

Ditto of Amrah.

Ditto of Purme.

Ditto of Punkur.

Plantain tree.

Dried dhan plant.

Nurkut plant.

Grass of every kind.

They should be washed and water given to them twice a day.

COLD SEASON.

During night, elephants should be kept in sheds, or under shade of trees, and during the day either under shade or in the sun.

They should have rice or flour to eat, and fodder as follows :—

Branches of Peepul trees.

Ditto of Jack fruit trees.

Leaves of bamboo plant.

Aakh or sugar cane.

Kurean.

Kans, a kind of weeds.

Dhan with its plant.

Dried dhan plant.

Grass of every description.

RAINY SEASON.

Elephants may be kept both night and day in open places. Their diet should be either rice or flour, and fodder as detailed below :—

Branches of Peepul tree.

Ditto. of Burgad (Banian) tree.

Jowar plant.

Mundwa plant.

Ooree.

Kans.

Dul.

Dried plant of dhan.

Grass of every kind.

Musalahs should be given to them according to their diseases. The mahouts have not furnished to me their names. There is a book called "Gujnamah," from which names of musalahs can be got. If required I can give the names.

Translation.

(Signed) R. P. JENKINS.

From the Officiating Commissioner of the Rajshahy Division, Berhampore, 24th January 1867, No. 33 ; to the Under-Secretary to the Government of Bengal, Calcutta.

In reply to your No. 5049 of 5th November last, I have the honor to forward you a copy of a letter from Mr. Cumming to the Magistrate of Maldah, regarding the necessity of sheltering elephants from the heat of the sun.

2nd.—The letter of Sir G. U. Yule of 26th September last, is so full and explicit, and that gentleman has had so much experience in keeping elephants in this part of the country, that I do not know that I can add any thing to it in the way of valuable information on the subject. I may however state that the invariable answer to the question of whether elephants require shelter, has been—yes, that they do require shelter of some sort from the heat of the sun.

3rd.—It is not perhaps absolutely necessary that they should be kept in sheds if there are good trees handy to afford real shade for them, but where there is not that natural shade available, there can, I think, be no doubt that the animals from their habits in a wild state would be more comfortable and do better under sheds than out in the open and exposed to alternate heat and wet.

4th.—Where sheds are erected, the floor should be raised 2 or 3 feet, so as to be dry, and planks should be provided for the elephants to stand upon (both fore and hind feet) so that their feet may be kept from sinking in wet soil, urine, &c., than which nothing is more likely to give an elephant bad feet, and perhaps there is nothing more difficult to cure than that.

5th.—Where sheds are not provided, but the animals are kept under the shade of trees, the same precautions should be taken as pointed out in Mr. Cumming's letter, otherwise the ground on which the elephants stand becomes saturated with urine, and bad feet are the result ; a small drain being left under the plank on which the animal's hind feet rest, will allow the urine to run off, and though I believe few native proprietors of elephants take the trouble to adopt the arrangement, I have always seen it adopted by European gentlemen keeping private studs of elephants, and have always made use of it myself when I have had an elephant, the result having been always satisfactory, and the plan being a very simple and inexpensive one, I trust I am justified in recommending it.

6th.—Where sheds are erected, nothing can be better than the plan described in paragraph 8 of Sir G. U. Yule's letter, and his remarks on the whole subject appear to me to exhaust it, it would in fact be impossible for me to add any thing to his knowledge, because what I know myself on the subject I acquired from him during the many years I served under him.

7th.—I may add that the elephants of His Highness the Nawab Nazim here are not kept under sheds, but I cannot say much for their condition the last time I saw them ; however that was some years ago.

From W. CUMMING, Esq., to J. H. RAVENSHAW, Esq., Magistrate of Maldah, —(dated Muttrapore, the 8th January 1867.)

In reply to a letter from your office, containing memorandum No. 426, dated 29th November 1866, carrying out Government instructions contained in letter No. 5049, from the Under-Secretary to the Government of Bengal, to the Commissioner of Rajshahy, I have much pleasure in placing the result of my experience on the housing and keeping of elephants at the service of Government—first stating that my experience is confined to Lower Bengal, where I had found, if sufficient shade can be procured, they are better without being under any roof ; in their wild state they seek the densest shade, light or glaze being supposed to injuriously affect the delicate eye of an elephant, it follows of course that where such natural shade does not exist, they must be kept under a roof. The feet of elephants require to be kept quite dry, so the standing place under trees should be raised sufficiently to enable urine &c. to drain off, and if a puka drain were built all round the standing place, so as to convey all moisture clear away, it would tend to preserve the trees which otherwise get killed by the urine and fodder of the animals remaining long in one place.

If any further information is required on this subject, I shall be most happy to afford every assistance in my power.

From His Highness Maharaja DIBBEJOY SING, K. C. S. I., Rajah of Bulrampore, Lucknow, the 30th November 1866; to the Officiating Secretary to Chief Commissioner of Oude.

I have the honor to acknowledge the receipt of your communication in Urdu, dated the 12th of November, requesting my opinion on the question of providing sheds for the protection of Government elephants, and any information in my knowledge regarding their care and keep, and to state that since my very infancy this noble animal has been the only object of fondness to me, as have all my predecessors had for the last four or five generations; so that I have undeniably had ample opportunities of observing the most intimate habits of the animal, and it will be my heartfelt pleasure to lay before you, for Government's information, all my knowledge of the subject as briefly as I possibly can.

2. I know no one throughout India, excepting Maharajah Sir Jung Bahadoor, K. G. C. B., of Nepal, who has a better knowledge of this subject than my most esteemed friend Sir G. U. Yule, C. B. and K. C. S. I., and I perfectly concur with him in his views of the matter. Experience has decidedly proved to me that elephants never require shelter of any kind whatever unless when exposed to the hottest rays of a tropical sun during mid-summer or continuous rain of some days duration. My stud has for the last 25 years never consisted of less than 40 or 50 elephants, and I have never observed any injury resulting from exposure to these animals. The mortality which my above named friend seems to attribute to this cause, in the Trans-Berhampooter district of Purnea, I would think rather the consequence of a change of fodder from a stimulating and dry to a cool and watery one.

3. Habitual work and a sound and timely rest are the two surest ways to keep the elephants in an excellent state of health, and to ensure this, I have made this my rule, that when my animals have nothing to do, they are every day sent out for their and their working fellows fodder to a distance of about five or six kos, and this makes up their want of work. Such elephants are always sent out very early in the morning, and return before 3 o'clock in the afternoon, when after an hour's rest at the furthest, are well washed, and thus remain quite at leisure during the night, the chief time of their eating and sleeping. While such as have had work to do the whole day, share the fodder brought by their workless brothers, or where such cannot be had, waggons are appointed to keep their fodder ready for them in time.

4. I think it not out of place to mention the different kinds of tree fodder that do good to these animals during the different seasons of the year. For instance the peul tree fodder is never wholesome to elephants except in the month of Poos, whereas Bargud and Pakur are always wholesome. The Indian fig (Goolus) and Semur are wholesome during the summer months only. The plantain and the jheel grass (Thothee) are always injurious to the elephant, as they by degrees tend to weaken the whole frame of the animal, and thus make it susceptible of every disease on the slightest over-work and exposure. In these parts this jheel grass produces worms in the intestines of these animals. It is an instinctive tendency of elephants to eat mud as soon as they come to know that they have worms in their bowels, which knowledge too, is imparted to them by instinct, and after a perfect expulsion of the worms they leave off eating mud and become once more healthy and fit for work, and it is during this time that their grain allowance should be entirely stopped.

5. To return to the shed question, I have only to say that with the exception of some one or two elephants which were my favourites, I have never housed any of them, though I have always kept about sixty or seventy, and yet have always found them in the most excellent condition of health. To those in a weak state of the frame, it would do some good. But such a state is the result of long and continued sickness, too much over-work, and the cool and watery fodder; I must not at the same time leave out the continuous rain and hard wind, when they undeniably require shelter.

6. If after all Government is really intent upon the erection of sheds, I would very gladly recommend the plan laid down by my most esteemed friend Sir G. U. Yule, K. C. S. I., as the most prudent and inexpensive one. I would at the same time venture to recommend a little more space, say 20 feet square for the larger animals, as 15 feet square would only be sufficient for the ordinary sized ones.

7. In my opinion no one in India is so fond of elephants as Maharajah Sir Jung Bahadoor, K. G. C. B., of Nepal, who has the largest number of them in his stud, which enables him to catch and train a number of wild animals every year. It is a long time since there exists a most friendly intercourse between him and myself, and I have had ample opportunities of seeing the various studs he has in Catamandoo too, and though the heat and cold are always very severe there, I have always found them tied in the open air. He has some very able and reliable works too on the training, keeping and treatment of these animals in his Library.

No. 4205 of 1866.

Copy of the foregoing forwarded to the Assistant Secretary to Government of India, Military Department, with reference to his No. 628, dated 26th October 1863.

LUCKNOW,
15th December 1866.

(Signed) F. CURRIE,
Offg. Junior Secy. to Chief Commr., Oude.

ORDER, No. 1804, 16th May 1867.

Communicated to the Commander-in-Chief, (Quarter Master General's Department) and Commissary General.

(True Extract.)

McMillan Colonel,
Deputy Secretary to Government.

To the Quarter Master General.

- .. Commissary General.
- .. Public Works Department, ...
- .. Controller of Military Accounts,

for information. *16th 20 June 1867*

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A. 2004

Concerning certain correspondence, relative to the construction of sheds for Government Elephants

no. 1547-2572, May 1867.

With an order

No. 587-588