

(1) Number of pages _____

(2) Date of repair _____

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MADRAS RECORD OFFICE.

Government of Madras.

Public work DEPARTMENT.

G.O. No. 2144	Press ~~Mis.~~
414-15	
Dated 16. 7	1867.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
16th July 1867.*

No. 414. Read the following Proceedings of the Madras Government in the Military Department, dated 4th July 1867, No. 2,436.

Read the following papers :—

From Major C. M. FITZGERALD, for Commissary General, Fort William, 28th May 1867, No. 1,927; to the Assistant Secretary to the Government of India, Military Department.

1. With reference to your No. 524, dated 13th April 1867, I have the honour to forward fifty copies of a Memorandum on the management of elephants, drawn up from the papers received with Government, Military Department docket, No. 213, dated 5th April 1867. As the Memorandum had to be printed for circulation to the officers of this department, I thought it advisable to order the above number, instead of sending you a single copy.

2. To add to the information to be furnished to Commanding Officers, I have also had printed extracts from some notes in the possession of the Commissariat Department regarding elephants, and do myself the pleasure to forward fifty copies of that paper also.

3. Information has been called for in respect to tree shelter available at each station, and on receipt of it, a return of the nature required in the concluding paragraph of the extract from Proceedings received with your No. 213, dated 5th April 1867, will be submitted.

MEMORANDUM.

Valuable information regarding elephants has been furnished to Government by the gentlemen named in the margin, and Government has

Sir G. Yule, C. B. and K. S. I., Resident of Hyderabad.
Mr. Perry, Deputy Magistrate of Purneah.
Maharajah Sir Joy Mungul Sing, K. C. S. I., of Girdhore, in
Monghyr.
Maharajah Diegbijoy Sing, K. C. S. I., Rajah of Bulrampore.

requested that a Memorandum on the subject be drawn up for the guidance of Executive Commissariat Officers.

The subjects treated of are—

I.—Cause of disease.

The majority.

Want of shelter from extreme heat and cold, excessive rains and storms of wind and rain.

Sir G. Yule.

Want of sleep owing to inattention to the importance of giving them their food in the early part of the evening.

Mr. Perry.

Violence in the use of the "Guzboy," which induces a running of the eyes, which turns into sore eyes.

Mr. Perry.

Heating fodder, which also produces running of the eyes.

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Bark and leaves covered with birds' dung, which brings on spasms. In cutting trees for fodder this should be guarded against.

Mr. Perry and Maharajah Diegbijoy Sing.

Giving elephants grain when they are suffering from worms. The presence of worms is indicated by the animals eating mud.

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Exposure to the sun, the effect of which on the brain renders them liable to "Surzah;" a

tremor comes suddenly over the animal, and it falls down and dies.

*Proceedings of the Madras Government, Public Works Department,
16th July 1867.*

Mr. Perry.

General causes.—Neglect of Mahouts and

Coolies ; inattention to their food, which should be clean, wholesome, and sufficient ; omission to bathe them daily, particularly in the hot weather and rains ; overwork and bad driving.

II.—Treatment.

Mr. Perry.

When there is a running of the eyes, the eyes should be washed with salt and water and a cooling salve applied around the orbits.

Mr. Perry and Maharajah Diegbijoy Sing.

Mr. Perry and Maharajah Diegbijoy Sing. Mud is the natural physic for worms. For four days after eating it, no grain should be given. On the third day an aperient, and after all signs of the mud have disappeared, half the usual quantity of grain should be given for a day or two until the animal appears quite well.

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To prevent "Surzah"—there being no cure for it—a cotton wadded covering an inch thick should be placed over that part of the head which is oiled. This is only necessary when the animals are employed at midday.

III.—General care.

Sir G. Yule.

Elephants require sleep, though not much.

When an elephant has had enough to eat, and is not prevented by noise, want of room, uneven ground, &c., &c., he 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 daylight to finish his fodder. It takes a considerable time for him to satisfy the first cravings of hunger, and if the fodder is not given in time to enable him to do so by midnight or thereabouts, he will go on eating all night and not 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 forelegs 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 late in the evening ; then the animal has to be, or ought to be, bathed, then get his grain or chuppattees, 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. If this sort of thing does not kill him directly, it so weakens his constitution that he is not fit for any real work again. 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 sunset 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 seldom sleeps four hours, though sometimes after very great fatigue and a good meal he will lie nearly all night. Early feeding should be insisted on.

Maharajah Diogbijoy Sing.

there is nothing for them to do, they should be sent a distance of five or six cos to bring in their own and working fellows' fodder. They should start very early in the morning and return before 3 o'clock. After an hour's rest, they should be washed and left at leisure during the night, their

IV.—Diet.

Sir G. Yale.

More attention should be paid to giving elephants fodder enough, and eatable fodder, not 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.

*Proceedings of the Madras Government, Public Works Department,
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The grain given is rice or flour. Water should be given twice a day, and the elephant bathed daily.

V.—Fodder.

Maharajah Sir Joy Mungul Sing

The descriptions of fodder given are —

1. Green charah growing in jheels.
2. Goolur.
3. Banian or burgud.
4. Jack tree.
5. Plantain.
6. Sugarcane.
7. Peepul.
8. Pakur.
9. Sæmul.
10. Amrah.
11. Purme.
12. Dried dhan plant.
13. Nurkut plant.
14. Grass of every kind.
15. Bamboo.
16. Kurean.
17. Khans, a kind of weed.
18. Dhan with its plant.
19. Jowar plant.
20. Mundwa.
21. Ooree.
22. Dul.

All are not, however, of one opinion in respect to the qualities of the fodder. The plantain* and jheel* grass (thothee) pakur† and peepul† while recommended by some gentlemen are condemned by others. Maharajah Sir Joy Mungul Sing is also of opinion that fodders 2, 3, 5, 8, 9, 10, 11, 12, 13, 14 should be given during the summer season; 4, 6, 7, 12, 14, 15, 16, 17, 18 during the cold season; and 3, 7, 12, 14, 17, 19, 20, 21, 22 during the rainy season.

- Condemned as likely to weaken the frame, making it susceptible to every disease on the slightest over-work or exposure. Jheel grass also produces worms.
- † Condemned as too heating and causing a running of the eyes.

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VI.—Remarks of value by gentlemen who recommend shelter, in respect to housing, description of sheds, &c.

Officer Commanding Royal Artillery, Meean Meer, recommends long sheds on a raised terrace with a strong wall running down the centre; canvas curtains to be hung outside to keep out rain and as a protection from cold.

Officer Commanding Royal Artillery, Meerut, recommends an open shed with pent roof on a pukka floor.

Officer Commanding Assam Local Artillery thinks that sheds for sick elephants are necessary, and a raised masonry platform to protect their feet from damp for all.

Commissary General remarks that, though trees are protection from heat and sun of summer, they are not from rain and the cold of winter. Tree shelter not being available at all stations, recommends that in Bengal and North-Western Provinces where tree shade is available, sheds for a proportion only of the elephants be erected, but that in the Punjab where heat and cold is so severe sheds be erected for all. The sheds to be of mud walls with chupper roofs, the walls being run up by movable column establishments; also submits opinions of Majors Macqueen, Macbean, and Mylne, that if sheds cannot be provided, the elephants should get proper covering.

Proceedings of the Madras Government, Public Works Department.

16th July 1867.

Sir G. Yule states that housing elephants at head quarters does not render them liable to suffer from even lengthened exposure when away from home, and recommends that housing be tried at two or three stations in Bengal, where there has been considerable mortality. The elephants should be placed in double rows in the sheds, giving 15 feet square to each, the roof to be beyond reach of their trunks and with only slope enough to throw off the water. Posts to be of solid palm (tal) tree, beams and rafters of half and quarter palm trees roughly split. The elephants to be head to head, but sufficiently apart to prevent their stealing each others fodder.

Mr. Perry considers shade during the heat of the day essential to the healthiness of elephants.

Maharajah Sir Joy Mungul Sing thinks that in summer they should be kept in sheds during the day, and in open places during the night. In the cold season during night they should be kept in sheds or under shade of trees, and during the day either under shade or in the sun. In the rainy season they may be kept both night and day in open places.

Mr. Robinson, Officiating Commissioner of Rajshahye Division, is of opinion that where the shade of trees is not available, sheds should be provided. The floor of the shed should be raised two or three feet, and planks for the elephants to stand upon (both fore and hind feet,) as wet soil, urine, &c., gives the elephants bad feet which is difficult to cure. When kept under the shade of trees, planks for them to stand on should still be provided, with a drain under the plank on which the hind feet rest, to carry off urine.

Mr. Cumming of Muttrapore writes that if sufficient shade can be procured, it is better than a roof, but either artificial or natural shade is necessary, because glare is injurious to the eye of the elephant. Their feet require to be kept dry. The standing place under the trees should therefore be raised to enable urine, &c., to drain off.

Maharajah Diegbijoy Sing is of opinion that unless exposed continuously, sheds are not necessary, except perhaps for elephants in a week state, but if sheds are erected, Sir G. Yule's plan would be the best, though 20 feet square should be allowed for the larger animals.

Extracts from a Memorandum of Notes in possession of the Commissariat Department.
Health.

The skin should be of a colour approaching to black, and the feel of it should be bristly. A pale coloured elephant with the hair on it downy, instead of bristly, is not in good health; such an appearance would denote dry zabirbad.

An elephant in good health is always in motion, swinging the well stretched trunk and flapping the ears; a listless state with the trunk more or less gathered up betokens seediness and ill-health.

The inside of the mouth and the tongue should be of a rich pink color, without any black spots on the palate or roof of the mouth.

The light spots on the head of the trunk and neck and ears should show bloom and health in them. They are as it were the complexion of the animal or beauty spots. Too pale a color in these spots denotes poorness of health, and too high a color betokens an overheated state of body and feverishness. The animal will then require cautious treatment and strict attention.

The eye of an elephant in good health should appear as large in the evening as in the strong light of the morning. When an elephant becomes overheated in blood, it will affect the eye, and create a scum over it very difficult to cure. Fresh butter or good sweet ghee with the rations is as good as any thing for them in this state.

Proceedings of the Madras Government, Public Works Department.
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Ailments.

Hard lumps found on the belly or round the sides of the animal are of two kinds. One sort (called by the natives "Butorie") break of themselves, and are the effect of an overheated state of body, throwing itself off in superficial eruption. This sort is not dangerous, but when the lumps are hard, and won't break, they are the forerunners of zabirbad, and if the disease be not nipped in the bud, it will carry off the elephant in the long run.

The usual season for the male to become "must" is during the monsoon, and it remains so for three months. This season may be shortened by "Kuteela" and other cooling medicines. While

"Must."

"must" he will have a discharge of water from two small orifices at each side of the jaw and under the eye.

Inside and under the nails are liable to sores, and so tender does the foot become that pressure of a finger on the spot will make the animal wince. This disease is called "Kandee" by the natives, and if the sore does not get vent downwards, it will eat upwards, and perhaps even cause the nail to fall off. It is a most troublesome disease, and takes months to cure. Most elephants when in perfect health show a moisture or kind of perspiration at the junction of the toe nail with the flesh of the foot.

Nails and toes.

The lower part of the foot and above the nails are subject to formations of rough or scaly pieces of flesh. They become very troublesome in wet weather, and are likely to get into sores. The

Scaly formations on feet.

natives call it "Chajoon." These superfluities should be pared off.

Elephants when troubled with worms eat mud, and when eating it, should go "Naga" or without rations; if this occurs oftener than once a month, it is a proof that the mussalahs are not

Worms—eating mud.

suitable to the animal, and the animal will fall off. A good mahout will pay great attention to the dung, urine, thirsty or unthirsty state of the animal. Caution is required, and they must be watched narrowly when an unusual state of health is indicated. Naga elephants eating rations are purged to death. To stop the purging, bamboo leaves should be given. They should not also be bathed or washed.

Remedies.

Tumours and abrasions or skin cuts are invariably caused by negligence or ignorance on the part of the mahouts. The mahouts after loading their elephants will often displace part of the

Sore backs.

load to stow away in concealment some private bundle or other of their property, but too often the negligence consists in the slovenly and insufficient manner of stuffing the pads. It is hard work to do it properly, but a good pad is the best preservative against a sore back.

When a tumour is discovered, a mahout will generally counsel its being pressed away; the effect of this is most deleterious, and will cause the sinuses to run deeper and further into the

Tumours.

skin; apply a poultice of Neem leaves for two or more days till the skin becomes somewhat soft, and the tumour rises near the surface, and then rip it open freely, cutting it on either side down the ribs, but never across the back bone.

Treatment of incised tumours.

There are two modes of dealing with the wound after the pus has escaped, and both are equally efficacious.

1st.—Pigeon dung and salt, or root of Madar tree and salt in equal proportions should be put into the sore for a few days after being cut open, to clear away any proud or bad flesh inside, and the wound should be kept warm by a bit of padded stuff over it. After the above has done its duty for a few days, get two-thirds of a bottle of country sweet oil (meeta tel) and one-third of a bottle of good spirits of turpentine, with about four ounces of clean good camphor (the light sort)

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Put them all into a quart bottle to dissolve the camphor. It must not be too thick, or the wound will close too quickly and before the inside is well healed. It would then be necessary to cut it open again. There is no better ointment than this for curing elephant sores.

2nd.—Fill up the wound with Neem leaves after bruising them in a small quantity of hot water, and remove this plugging twice a day for three days; and then syringe out with a decoction of blue vitriol, until the wound assumes a healthy appearance. Gundabirosa may then be applied, care being taken that the lips of the wound are kept open, and that the granulation fills up from the bottom.

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Abrasions or skin cuts require to be washed clean and smeared with camphor oil to prevent annoyance from flies. Take the animal off work, and such sores will soon heal.

Treatment of abrasions.

Clear away the vicinity of the sore, wash it well with decoction of blue vitriol forcibly squirted with a syringe till the offensive smell be overcome, then apply

Sore toes or feet.

Chloride of lime... .. 2 chittacks.
Common lime (best) 4 „

mix both into a paste and plaster the wound, which must be closed with cotton or rag to prevent intrusion of dirt. The same may be applied to Whitlows or Chajoon sores.

Caustic lotion used with syringe whenever there is any inflammation apparent. For a white film, syringe the eye with a solution of half an ounce of alum in a pint of water.

Sore eyes.

Green Fodder.

The best kinds are dull, beernah grass, null, ghone, khebantal, plantain leaves, fresh paddy straw, doomraicelah (a shrub), branches of [goolur, kooksa, jeal, bur, and paukur. Peepul may be given moderately and cautiously, but it is of too heating a nature to be given continually, and affects the eyes of elephants.

Crossing rivers.

When elephants are in a heated state it is apt to give them a disease called "Chowrung," if they be permitted to get a chill. Extreme cold has the same effect occasionally. The sinews of

Chills.

the neck, chest, and limbs become cramped and contracted, and the animal can barely move. A dram of liquor or a few warm mussallahs may prevent the disease, but months of care will hardly cure it, and the animal will be more pre-disposed to it for the future. When an elephant gets

Quicksands.

into a quicksand, give him an ample supply of branches, young trees, and water to loosen the sand. Wherever they may be suspected, unload the animals before crossing.

MILITARY DEPARTMENT, THE 6TH JUNE 1867.

No. 137.

Copy of the above and of its accompaniments forwarded to the Secretary to Government, Fort Saint George, Military Department, for the information of the Right Honourable the Governor in Council, in continuation of docket from this department, No. 214 of the 5th April 1867.

(By Order,)

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

Communicated to Departments concerned.

(True Extract.)

(Signed) R. HAMILTON, Colonel,
Deputy Secretary to Government.

*Proceedings of the Madras Government, Public Works Department,
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No. 415. ORDER THEREON, 16th July 1867, No. 2,144.

ESTABLISHMENT, No. 36.

Communicated to the Superintending Engineers.

(True Extract.)

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government.

To the Superintending Engineers.
To Captain Kennedy.

Exd. S. T. Augustin.

MILITARY DEPARTMENT.
PROCEEDINGS OF THE MADRAS GOVERNMENT.

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Exposure to the sun, the effect of which on the brain renders them liable to "Surzah;" a tremor comes suddenly over the animal, and it falls down and dies.

General causes.—Neglect of Mahouts and Coolies; inattention to their food, which should be clean, wholesome, and sufficient; omission to bathe them daily, particularly in the hot weather and rains; overwork and bad driving.

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On the 3rd day an aperient, and after all signs of the mud have disappeared, half the usual quantity of grain should be given for a day or two until the animal appears quite well.

To prevent "Surzah"—there being no cure for it—a cotton wadded covering an inch thick should be placed over that part of the head which is oiled. This is only necessary when the animals are employed at midday.

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III.—General care.

Elephants require sleep, though not much. When an elephant has had enough to eat, and is not prevented by noise, want of room, uneven ground, &c., &c., he 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 daylight

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to finish his fodder. It takes a considerable time for him to satisfy the first cravings of hunger, and if the fodder is not given in time to enable him to do so by midnight or thereabouts, he will go on eating all night and not 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 forelegs 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 late in the evening; then the animal has to be, or ought to be, bathed, then get his grain or chuppattees, 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. If this sort of thing does not kill him directly, it so weakens his constitution that he is not fit for any real work again. 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 sunset 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 seldom sleeps four hours, though sometimes after very great fatigue and a good meal he will lie nearly all night. Early feeding should be insisted on.

Habitual work and a sound and timely rest are necessary to keep elephants in health. When there is nothing for them to do, they should be sent a distance of five or six eos to bring in their own and working fellows' fodder. They should start very early in the morning and return before 3 o'clock. After an hour's rest they should be washed and left at leisure during the night, their chief time for eating and sleeping.

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Mr. Robinson, Officiating Commissioner of Rajshahye Division, is of opinion that where the shade of trees is not available, sheds should be provided. The floor of the shed should be raised 2 or 3 feet, and planks for the elephants to stand upon (both fore and hind feet,) as wet soil, urine, &c., gives the elephants bad feet which is difficult to cure. When kept under the shade of trees, planks for them to stand on should still be provided, with a drain under the plank on which the hind feet rest, to carry off urine.

Mr. Cumming of Muttrapore writes that if sufficient shade can be procured, it is better than a roof, but either artificial or natural shade is necessary, because glare is injurious to the eye of the elephant. Their feet require to be kept dry. The standing place under the trees should therefore be raised to enable urine, &c., to drain off.

Maharajah Diegbijoy Sing is of opinion that unless exposed continuously, sheds are not necessary, except perhaps for elephants in a weak state, but if sheds are erected, Sir G. Yule's plan would be the best, though 20 feet square should be allowed for the larger animals.

EXTRACTS from a memorandum of notes in possession of the Commissariat Department.

Health.

The skin should be of a colour approaching to black, and the feel of it should be bristly. A pale colored elephant with the hair on it downy, instead of bristly, is not in good health; such an appearance would denote dry zahirbad.

Appearance and feel of the skin.

An elephant in good health is always in motion, swinging the well stretched trunk and flapping the ears; a listless state with the trunk more or less gathered up betokens seediness and ill health.

Lively or dull movements.

The inside of the mouth and the tongue should be of a rich pink color, without any black spots on the palate or roof of the mouth.

Colour of mouth and tongue.

The light spots on the head of the trunk and neck and ears should show bloom and health in them. They are as it were the complexion of the animal or beauty spots. Too pale a color in these spots denotes poorness of health, and too high a color betokens an overheated state of body and feverishness. The animal will then require cautious treatment and strict attention.

The eye of an elephant in good health should appear as large in the evening as in the strong light of the morning. When an elephant becomes overheated in blood, it will effect the eye, and create a scum over it very difficult to cure. Fresh

butter or good sweet ghee with the rations is as good as any thing for them in this state.

Eye.

Ailments.

Hard lumps found on the belly or round the sides of the animal are of two kinds. One sort (called by the natives "Butorie") break of themselves, and are the effect of an overheated state of body, throwing itself off in superficial eruption.

Lumps.

This sort is not dangerous, but when the lumps are hard, and won't break, they are the forerunners of zahirbad, and if the disease be not nipped in the bud, it will carry off the elephant in the long run.

The usual season for the male to become "must" is during the monsoon, and it remains so for three months. This season may be shortened by

"Must."

"Kuteela" and other cooling medicines. While "must" he will have a discharge of water from two

small orifices at each side of the jaw and under the eye.

Inside and under the nails are liable to sores, and so tender does the foot become that pressure of a finger on the spot will make the animal wince. This disease is called "Kandee" by the natives, and if the sore does not get vent downwards, it will eat upwards, and perhaps even cause the nail to fall off. It is a most troublesome disease, and takes months to cure. Most elephants when in perfect health show a moisture or kind of perspiration at the junction of the toe nail with the flesh of the foot.

Nails and toes.

The lower part of the foot and above the nails are subject to formations of rough or scaly pieces of flesh. They become very troublesome in wet weather, and are likely to get into sores. The natives call it "Chajoon." These superfluities should be pared off.

Scaly formations on feet.

Elephants when troubled with worms eat mud, and when eating it, should go "Naga" or without rations; if this occurs oftener than once a month, it is a proof that the mussalahs are not suitable to the animal, and the animal will fall off. A

Worms—eating mud.

good mahout will pay great attention to the dung, urine, thirsty or unthirsty state of the animal. Caution is required, and they must be watched narrowly when an unusual state of health is indicated. Naga elephants eating rations are purged to death. To stop the purging, bamboo leaves should be given. They should not also be bathed or washed.

Remedies.

Tumours and abrasions or skin cuts are invariably caused by negligence or ignorance on the part of the mahouts. The mahouts after loading their elephants will often displace part of the load to

Sore backs.

other of their property, but too often the negligence consists in the slovenly and insufficient manner of stuffing the pads. It is hard work to do it properly, but a good pad is the best preservative against a sore back.

When a tumour is discovered, a mahout will generally counsel its being pressed away; the effect of this is most deleterious and will cause the sinuses to run deeper and further into the skin;

Tumours.

apply a poultice of Neem leaves for two or more days till the skin becomes somewhat soft and the tumour rises near the surface, and then rip it open freely, cutting it on either side down the ribs, but never across the back bone.

There are two modes of dealing with the wound after the pus has escaped, and both are equally efficacious.

Treatment of incised tumours.

1st.—Pigeon dung and salt, or root of Madar tree and salt in equal proportions should be put into the sore for a few days after being cut open, to clear away any proud or bad flesh inside, and the wound should be kept warm by a bit of padded stuff over it. After the above has done its

duty for a few days, get $\frac{2}{3}$ ds bottle of country sweet oil (meeta tel) and $\frac{1}{3}$ rd bottle of good spirits of turpentine, with about 4 ounces of clean good camphor (the light sort). Put them all into a quart bottle to dissolve the camphor. It must not be too thick, or the wound will close too quickly and before the inside is well healed. It would then be necessary to cut it open again. There is no better ointment than this for curing elephant sores.

2nd.—Fill up the wound with Neem leaves after bruising them in a small quantity of hot water, and remove this plugging twice a day for three days; and then syringe out with a decoction of blue vitriol, until the wound assumes a healthy appearance. Gundabirosa may then be applied, care being taken that the lips of the wound are kept open, and that the granulation fills up from the bottom.

Abrasions or skin cuts require to be washed clean and smeared with camphor oil to prevent annoyance from flies. Take the animal off work, and such sores will soon heal.

Treatment of abrasions.

Sore toes or feet.

Clear away the vicinity of the sore, wash it well with decoction of blue vitriol forcibly squirted with a syringe till the offensive smell be overcome, then apply.

Chloride of lime... .. 2 chittacks.

Common lime (best) 4 ..

mix both into a paste and plaster the wound, which must be closed with cotton or rag to prevent intrusion of dirt. The same may be applied to Whitlows or Chajoon sores.

Caustic lotion used with syringe whenever there is any inflammation apparent. For a white film, syringe the eye with a solution of $\frac{1}{4}$ oz. alum in a pint of water.

Sore eyes.

Green Fodder.

The best kinds are dull, beernah grass, null, ghone, khebantal, plantain leaves, fresh paddy straw, doomraicelah (a shrub), branches of goolur, kooksa, jeal, bur, and paukur. Peepul may be given moderately and cautiously, but it is of too heating a nature to be given continually, and affects the eyes of elephants.

Crossing Rivers.

When elephants are in a heated state it is apt to give them a disease called "Chowrung," if they be permitted to get a chill. Extreme cold has the same effect occasionally. The sinews of the neck, chest, and limbs become cramped and contracted, and the animal can barely move. A dram of liquor or a few warm mussallabs may prevent the disease, but months of care will hardly cure it, and the animals will be more pre-disposed to it for the future. When an elephant gets into a quicksand, give him an ample supply of branches, young trees, and water to loosen the sand. Wherever they may be suspected, unload the animals before crossing.

Chills.

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Quicksands.

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MILITARY DEPARTMENT, THE 6TH JUNE 1867.

No. 137.

Copy of the above and of its accompaniments forwarded to the Secretary to Government, Fort Saint George, Military Department, for the information of the Right Honorable the Governor in Council, in continuation of docket from this department, No. 214 of the 5th April 1867.

(By Order,)

(Signed) W. M. LEES, Major,

Asst. Secy. to the Govt. of India.

ORDER, No. 2436, 4th July 1867.

Communicated to departments concerned.

(True Extract.)

Macmillan Colonel,

Deputy Secretary to Government.

To the Quarter Master General.

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

for information. *With 20 spare Copies*

Ed. J. E. Cashart.

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