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MADRAS RECORD OFFICE.

Government of Madras.

Public DEPARTMENT.

G.O. No.	<i>370</i>	<u>Pres</u> <u>Mis</u>
Dated	<i>26-2-</i>	<i>1867</i>

Not to be folded or roughly handled

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27/2/26

*Proceedings of the Madras Government, Public Department,
26th February 1867.*

No. 138. Read the following letter from the Sanitary Commissioner for Madras, to the Chief Secretary to Government, Fort Saint George; dated Kurnool, 17th November 1866, No 280.

I have the honor to forward, for submission to Government, the accompanying Mortuary Report of the Town of Madras for the 3rd Quarter in 1866.

Madras Mortuary Report for the 3rd Quarter of 1866.

The 3rd Quarter is, as a general rule, the most disagreeable as well as the most unhealthy season of the year in Madras, a reputation which has been fully upheld, during the period under review, by the very large increase in the mortality which has taken place.

2. The number of deaths registered from all causes has amounted to 4168, being an increase on the mean of the corresponding quarters of ten previous years of 1866.

3. The average number of deaths during the 3rd Quarter of five previous years, as shown in the margin, is 3203; there has, therefore, been an increase during the past quarter of nearly a thousand deaths, or, to be accurate, 964.

1861.....	4291
1862.....	3553
1863.....	2497
1864.....	2450
1865.....	3226
Mean.....	3203

4. Contrasted with the 1st and 2nd Quarters of the current year, there has been an increase on the former period of 1208 deaths, and on the latter 1242.

5. There has been a larger mortality amongst the European and East Indian communities than usual; 80 deaths have occurred amongst the former, and 153 amongst the latter, being an increase of 47 and 99 deaths, respectively, on the five year average.

6. Nearly half the deaths (33) amongst the Europeans are children of the Military and Civil residents. Of the remaining deaths amongst the adult population, 21 are Civilians, 17 Military, and 9 Seamen.

7. Of the deaths amongst the East Indians, more than half (77) are those of young children.

8. Taking the population at 4,50,000, as has been done in previous reports, the death-rate per annum during the past quarter is 36 per mille.

9. The increased mortality noted above has been almost entirely due to Miasmatic diseases. During the 3rd quarter of five previous years, the average mortality from this order of diseases has been 1733, and that of deaths from other causes 1469. During the past quarter, however, there have been 2667 deaths from Miasmatic diseases alone, and 1501 from other causes. The actual increase in the mortality is, therefore, 933 from Miasmatic diseases, and 32 from other causes.

10. This increase in the Miasmatic order of diseases, is entirely due to the great prevalence of cholera in different parts of the town during the quarter, there having been a decrease in the deaths from all the other diseases which constitute this order.

11. *Fevers.*—On examining the Returns of deaths registered under the principal diseases, which make up the Miasmatic order, it is found that 500 are attributed to fever; thus showing a decrease of 53 deaths from this cause on the average of the corresponding quarters of five previous years. An examination of the chart shows that during the entire quarter, the wave line of deaths from this cause only rose above

1861.....	544
1862.....	625
1863.....	521
1864.....	498
1865.....	579
Mean.....	553

the average during the first two weeks of July. It reached its maximum during the week ending July 6th, and its minimum in that ending August 3rd, at which periods 51 and 23 deaths, respectively, were registered.

Diarrhœa.—12. The deaths from diarrhœa have been 172, or 91 less than the average. During

1861.....	309
1862.....	290
1863.....	201
1864.....	227
1865.....	315
Mean..	266

the whole quarter the wave line of these deaths has never once risen above the mean. The minimum number of deaths in one week occurred in that ending the quarter, namely, 8, and this at a period when the deaths from dysentery reach their maximum. The greatest number of deaths occurred in the previous week, when those registered amount to 20.

Dysentery.—13. The deaths from dysentery amount to 285, which is 20 below the five year average, as shown in the margin; until the eighth week of the quarter, or that ending August the 11th, the wave line of deaths is below the average. At this point, however, it reaches the mean, and after making a slight descent in the following week, rises gradually to the end of the quarter,

1861.....	369
1862.....	333
1863.....	293
1864.....	257
1865.....	281
Mean...	305

attaining a maximum of 39 deaths in the last week.

During the fifth week, or that ending August 3rd, the deaths fell to 5.

Small Pox.—14. The deaths from small pox do not show such a marked decrease on the average as has been noticed on previous occasions; but still the Register shows a decrease of 25 deaths on the five year average, the mortality having been 29.

1861.....	162
1862.....	75
1863.....	16
1864.....	3
1865.....	14
Mean ...	54

One of these deaths occurred in a European 19 years of age at the General Hospital.

There have been 24 deaths amongst the Hindoo, and 4 amongst the Mahomedan population.

During the month of August, the wave line of deaths from this cause runs almost parallel with that of the average. In the seventh week ending August 17th, 5 deaths are registered.

Cholera.—15. The deaths registered from cholera have numbered 1655, giving an increase of 1102 to the average mortality of the past five years.

The deaths from this cause, as compared with those registered during the 1st and 2nd quarters of the current year, show an increase of 1386 and 1335 respectively.

1861.....	158
1862.....	590
1863.....	15
1864.....	139
1865.....	455
Mean...	553

16. During the whole of last quarter, cholera was never absent from Madras; but it was not till the second week of that under review, that a marked increase took place at any one time in the mortality from this cause.

In the week ending the 13th July, the deaths suddenly rose from 40 to 157, and during the rest of the quarter never once fell below a hundred per week.

A glance at the diagram shows better than can be described, the increment and decrement of the mortality during the past thirteen weeks.

The increased number of deaths took place in Peddoo Naick's Pettah, Triplicane, Chintadripettah, Choolay, Pursewalkum, and Washer-

Peddoo Naick's Pettah.....	214
Triplicane.....	117
Chintadripettah.....	132
Pursewalkum.....	184
Washer-man's Pettah.....	144
Total..	821

man's Pettah. Five out of these localities, as shown in the margin, are those which continued to suffer most severely throughout the quarter, and alone contributed more than half the total number of deaths from cholera registered.

17. To those acquainted with these portions of Madras, no surprise will be excited by the notoriety they have attained from the constant prevalence of Miasmatic diseases, and for the excessive mortality which occurs in them during cholera epidemics.

18. Chintadripettah suffered most severely during the month of July, when 95 deaths were registered. As many as 18 deaths occurred in a single day, viz., the 12th of July, 13 and 10 deaths were also registered on the 11th and 16th of the same month.

19. This locality is undoubtedly one of the most unhealthy districts in the whole of Madras, a fact which may to some extent be accounted for by its being encircled by a loop of the Cooum river, a geographical feature of a most objectionable nature, when looked at in a sanitary point of view, and one which is peculiar to this portion of the town.

20. During the season of the year when the Cooum is at its lowest, the people in the neighbourhood are in the habit of collecting shell-fish from its bed, for the purpose of burning the shells into lime.

In doing this the mud of the river is stirred up, together with its accumulated deposits of sewage, and mephitic odours set free, thus poisoning the atmosphere of the immediate neighbourhood and generating a fertile source of Miasmatic diseases.

The shells are heaped up on the banks of the river, while their contents, which have been only partially eaten, are left to putrefy in the sun. It is to this additional source of disease that Chintadripettah is peculiarly exposed, while it suffers in common with many other places, and especially those noted above, from bad drainage, an impure water supply, and narrow, ill-ventilated, over-crowded streets.

21. The meteorological condition of Madras during the past quarter will be best understood by an inspection of the chart.

Atmospheric Pressure.—22. There have been no very remarkable changes in the rise and fall of the barometer during the quarter. The mean atmospheric pressure has been 29.749°, reduced to 32° F., which is about the usual average. A slight fall took place during the second and seventh weeks, but the wave line keeps very much to the usual average.

Temperature.—23. The temperature throughout the quarter has been greater than the average, and the wave line of mean temperature only once descends below the twenty year average, viz., in the fifth week ending August 3rd.

The mean temperature for the thirteen weeks has been 85.4°, or about 2 degrees higher than the average.

The mean maximum has been 91.8° F., and the mean minimum 79.5°; being 3.8° F. and 1.6° F. respectively, higher than the average.

The temperature falls rapidly to the end of the fifth week of the quarter, when it takes a sudden rise during the seventh week, or that ending August 17th. It falls to the tenth week, suddenly rises during the eleventh, and again falls slightly to the end of the quarter. At these periods changes in the increment and decrement of mortality are noticed in this report.

Humidity.—24. The percentage of humidity has averaged 67 during the quarter, being 4 degrees below the mean.

During July and August the wave line of humidity runs below the average, and only rises above it during the ninth and tenth weeks, after which it again falls.

Rain-fall.—25. As in the last quarter so in this, the rain-fall has been below the average.

The average rain-fall for the 3rd quarter is 12.05 inches. During that which has past, only 7.96 inches have been registered. There is, therefore, a deficiency of 4.09 inches.

The total rain-fall since the 1st of January 1866, is 8.96 inches, which is 10.73 below the average.

It will be observed from the chart that what rain has been registered during the past quarter, fell within the last six weeks, heavy showers occurring during the week ending the 24th August.

Velocity and direction of the Wind.—26. The direction of the wind has, as usual at this season of the year, fluctuated between the south and westerly points.

26th February 1866.

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Its daily velocity has averaged 213 miles, which is 32 miles greater than the average.

It will be observed that the mean line of velocity steadily falls throughout the quarter. The greatest average daily velocity took place during the week ending July 13th, when it rose to 302 miles, after which it suddenly fell to 216 during the week ending July 27th. A sudden decrease in the movement of the air took place during the eighth week ending August 24th.

27. Amongst the various causes which may have influenced the mortality of the past quarter, to one meteorological element must be attributed a large proportion of the increase in sickness, and that is, the deficiency in rain-fall experienced not only in the Madras District, but also generally throughout the Presidency.

28. The universal drought by leading to the destruction of the crops, and to the deaths by starvation of thousands of heads of cattle, has had the effect of raising the prices of nearly all the necessaries of life to almost famine rates, and as a natural consequence, the old, the young, the infirm, and in fact all those classes of the population who have been unable to work, if they have not been actually starved, have been predisposed to disease and death by a reduced amount of food.

29. The price of labor has not risen with the price of food, and pestilence has gone hand in hand with this (to the poorer classes) practical scarcity of grain.

30. In examining the chart of mortality from Miasmatic diseases, it is to be observed that there are periods at which the wave line of deaths has shown marked changes in its course.

31. During the first week, in which no marked meteorological changes are noticed, except a sudden decrease in the rate of movement of the air, all the deaths, excepting cholera, show an inclination to rise; but after this time there is a general fall to the fifth week ending August 3rd, in the wave line representing the deaths from the principal Miasmatic diseases, cholera being again exceptional.

32. In the meteorological chart, it is to be observed that this change is exactly that followed by the wave lines of temperature. Miasmatic diseases culminate about the seventh week ending August 17th, so does the wave line of the temperature. Other similarities in the curves of these lines may be traced towards the end of the quarter, as has also been noticed in previous reports: but at present it would be unsafe, till more extended observations have been made, to attempt any theoretical deductions on the subject in question.

33. It is interesting to observe how the wave line of cholera mortality seems to run on its course, apparently entirely independent of all meteorological changes. It rapidly ascends in the second week, while other diseases are falling, and does not descend till the sixth week ending August 10th, that is, just a week later than the turning point which has characterised the increment and decrement of other diseases generally, and which has already received notice.

OFFICE OF SANITARY COMMISSIONER,
MADRAS,
1st November 1866.

(Signed) W. A. SMITH, M. D.,
Offg. Secy. to Sanitary Commissioner for Madras.

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TABLE showing the Mortality in Madras, during the 3rd Quarter of 1866.

	Euro-peans.		East In-dians.		Hindoos.		Mahome-dans.		Total.		General total of both sexes.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Fevers.....	7	0	6	5	208	223	26	25	247	258	505
Diarrhoea.....	0	5	5	4	65	67	18	8	88	84	172
Dysentery.....	2	2	1	6	106	128	21	19	130	155	285
Small Pox.....	1	0	0	0	15	9	2	2	18	11	29
Cholera.....	19	13	29	25	660	689	106	114	814	841	1655
Other Miasmatic diseases.....	0	0	0	1	13	9	3	0	16	10	26
Total Miasmatic....	29	20	41	41	1067	1125	176	168	1313	1354	2667
Total of all other diseases.....	22	9	33	38	607	509	154	129	816	685	1501
Total....	51	29	74	79	1674	1634	330	297	2129	2039	4168
Mean Mortality of ten 3rd Quarters, from 1856 to 1865.											
Miasmatic diseases.	13.1	5.4	15.1	20.8	675.4	624.3	107.2	106.2	810.8	756.2	1567.0
Other diseases.....	16.0	7.0	25.2	25.5	546.4	499.4	113.4	110.5	701.0	633.4	1334.4
Total....	29.1	12.4	40.3	45.8	1221.8	1123.7	220.6	207.7	1511.8	1389.6	2901.4
Increase.....	38.5		66.9		962.5		198.7				1261.2
Decrease.....	...		...		...		...				...

*Proceedings of the Madras Government, Public Department,
26th February 1867.*

Table showing the mortality from Miasmatic Diseases in the last 13 Weeks, as illustrated by the accompanying Diagram.

	6th July.	13th July.	20th July.	27th July.	3rd August.	10th August.	17th August.	24th August.	31st August.	7th Septem-ber.	14th Septem-ber.	21st Septem-ber.	28th Septem-ber.	Total.
Fevers.....	51	43	36	31	23	33	36	38	44	33	37	47	42	494
Diarrhoea.....	17	11	12	14	9	9	14	11	17	11	18	20	8	171
Dysentery.....	17	18	18	18	11	19	18	22	18	23	27	31	39	279
Small Pox.....	1	1	2	4	2	3	5	4	2	1	1	1	3	29
Cholera.....	40	157	152	150	129	103	128	121	144	130	118	111	140	1623
Other Miasmatic Diseases.....	3	4	2	6	...	1	2	4	...	2	3	...	1	28
	129	234	222	223	174	168	203	200	225	200	204	210	232	2624

Average of the corresponding Weeks for five previous years.

Fevers.....	41.2	37.6	43.4	41.0	42.6	37.4	39.2	42.6	41.8	45.6	48.0	48.4	48.2	557.0
Diarrhoea.....	16.2	19.4	18.8	19.0	19.4	18.4	19.4	18.8	24.2	21.4	22.8	22.6	24.4	264.2
Dysentery.....	24.0	19.2	21.0	22.2	22.6	21.4	21.6	22.4	23.0	21.8	27.2	29.4	25.2	301.0
Small Pox.....	4.2	4.0	4.6	3.2	4.6	4.4	4.0	2.4	3.4	6.0	4.4	4.0	3.8	53.0
Cholera.....	17.0	14.0	11.6	22.2	35.8	64.4	69.4	56.0	40.6	53.6	74.8	61.0	54.4	575.4
Other Miasmatic Diseases.....	4.0	2.6	4.2	3.2	5.2	4.2	3.0	4.2	2.6	3.8	3.4	2.6	2.0	45.0
	106.6	96.8	103.6	110.8	130.2	150.2	156.6	146.4	135.6	152.2	180.6	168.0	158.0	1795.6

Mean Meteorological Observations for the past 13 Weeks.

Barometer reduced to 32° F.....	29.753	29.686	29.714	29.704	29.737	29.807	29.734	29.745	29.756	29.782	29.752	29.761	29.809	29.749
Mean Maximum Temperature.....	100.9	98.3	97.7	96.8	91.9	95.5	97.0	92.3	91.5	89.0	94.7	94.3	92.7	94.8
Mean Minimum Temperature.....	82.8	82.7	80.8	80.9	78.8	78.6	80.3	76.4	77.5	77.9	79.2	79.4	78.7	79.5
Mean Temperature.....	88.6	88.4	87.0	85.7	83.7	85.1	86.5	83.4	83.4	82.7	85.6	85.3	84.7	85.4
Mean Humidity.....	59	54	66	66	61	66	65	75	75	73	67	70	72	67
Prevailing Wind.....	S.	S.W.	S.S.	S.W.	W. by S.	S.W.	S.W.	S.W.	S.W.	W. by S.	S.W.	S.W.	S.	S.W.
Mean Velocity in Miles.....	245	302	247	216	228	222	246	160	176	193	203	188	143	213
Rain-fall.....	...	0.18	0.41	0.83	0.07	0.70	0.17	2.35	0.93	0.69	0.79	0.84	...	7.97

Table showing the mean half Monthly Meteorological condition of Madras for 20 years past.

	Half month ending 15th July.	Half month ending 31st July.	Half month ending 15th August.	Half month ending 31st August.	Half month ending 15th September.	Half month ending 30th September.	Total.
Barometer reduced to 32° F.....	29.708	29.721	29.749	29.753	29.763	29.796	29.748
Mean Maximum Temperature.....	92.6	91.9	91.6	90.3	90.5	89.6	91.0
Do. Minimum do.....	78.8	78.4	78.1	77.7	77.8	77.1	77.9
Mean Temperature.....	84.3	83.9	83.5	82.8	82.9	82.2	83.2
Mean Humidity.....	69	69	71	73	72	76	71
Prevailing Wind.....	S. W.	S. W. by S.	S. W. by S.	S. W.	S. W. by S.	S. S. W.	S. W.
Mean Velocity in Miles.....	215	207	183	175	168	140	181
Rain-fall.....	1.93	1.98	2.03	1.78	2.08	2.20	12.05

*Proceedings of the Madras Government, Public Department,
26th February 1867.*

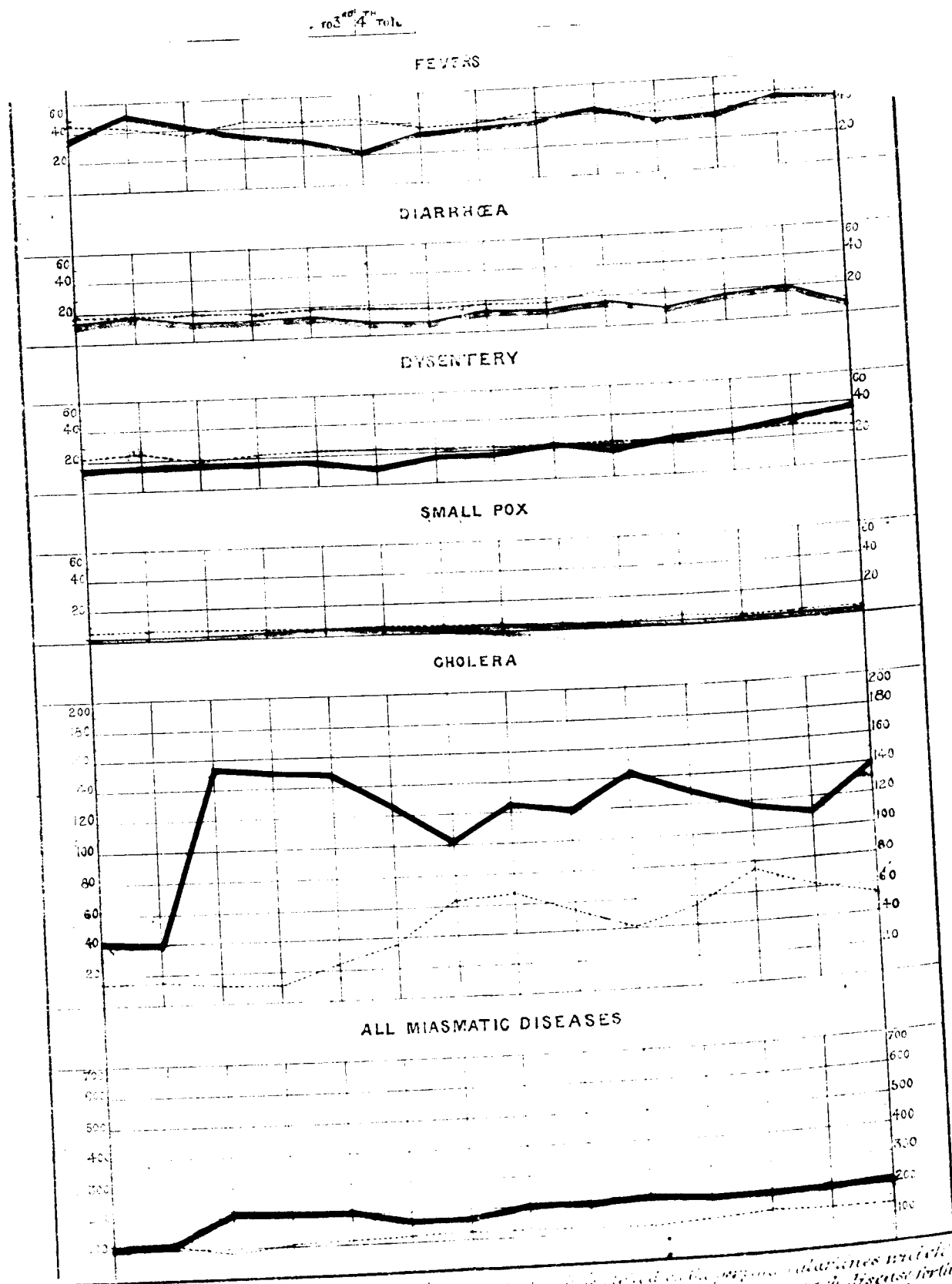
No. 139. ORDER THEREON, 26th February 1867, No. 210.

The Governor in Council requests that the Commissioner of Police will report on the practice of collecting shell-fish in the Cooum, stating in whom the right of collecting such fish, and of granting that right, vests, and the number of persons who earn their living by following the occupation, and in what way it may be put a stop to.

(True Extract.)

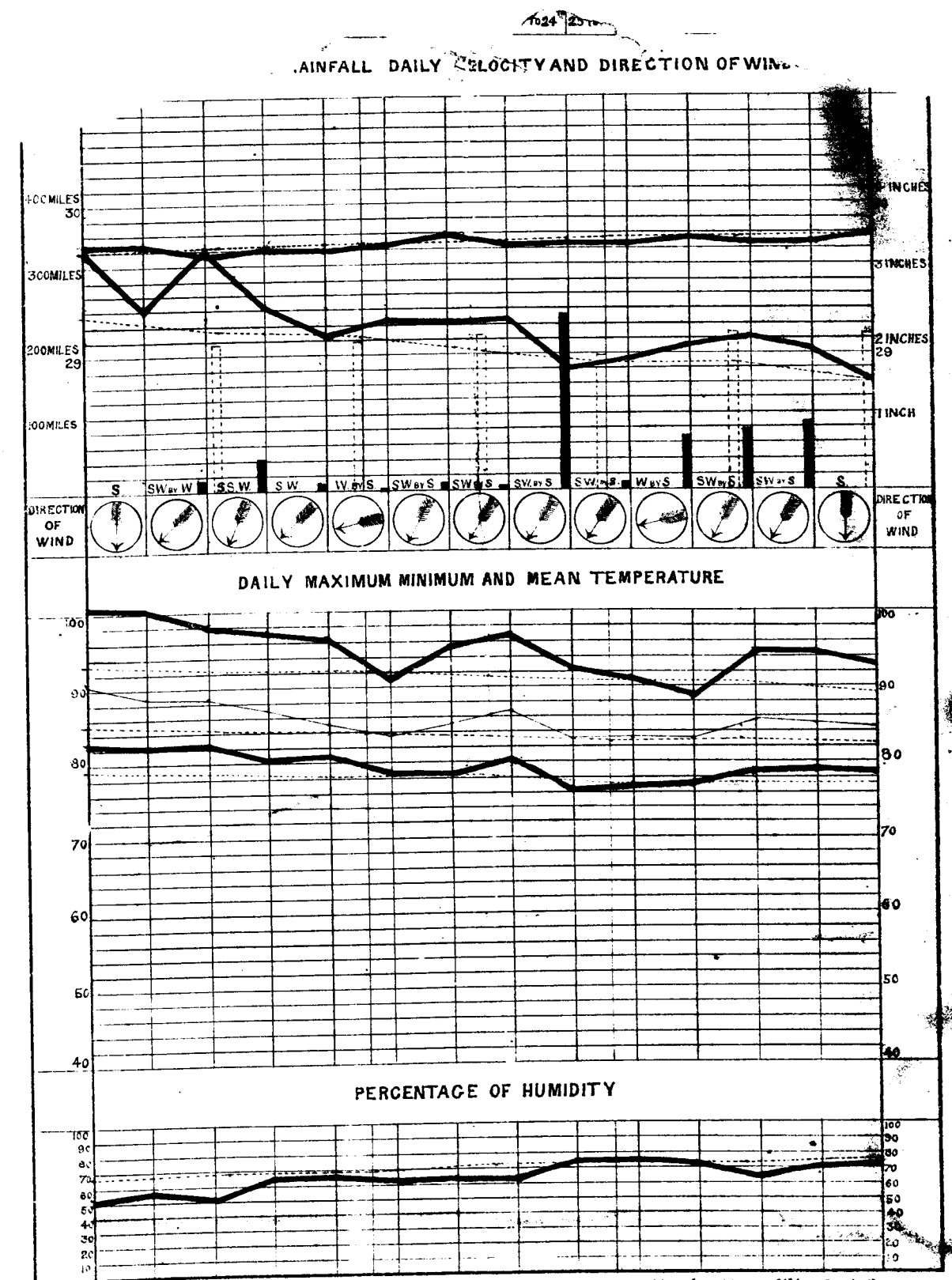
Chief Secretary.

To the Commissioner of Police.



The mean weekly Meteorological elements are plotted on the perpendicular lines. The dotted wave lines show the bimonthly average for twenty years from observations kept at the Madras Observatory.

Govt Litho Press, Chepauk
Madras April 1865



The mean weekly Meteorological elements are plotted on the perpendicular lines. The dotted wave lines show the bimonthly average for twenty years from observations kept at the Madras Observatory.

Govt Litho Press, Chepauk
Madras April 1865

Read the following letter from the Sanitary Commissioner, Madras,
dated Rangoon 17th November 1886. No. 280.

Order Korum.

The practice of collecting shell-fish
in that part of the Cooum which
encircles Chintadripett, appears
very objectionable, and must,
as remarked in the foregoing
report, be a fertile source of
miasmatic disease.

2. It is imperative that this practice
be put a stop to: and as fishing
in any part of that river below
the Munro Bridge is not only
objectionable as stirring up
the mud and deposit, but as
providing the people with an
unwholesome article of food,
the Government desire to take
measures for preventing this
also.

3. The Commissioner is requested to
submit a report showing with
whom the right to fish, and
the grant of that right, exists,
and the number of persons who
earn their living by pursuing
this occupation.

4. Mr. Ellis will consult with the Commissioner of Police, and report, as to the best means for abating the nuisance without causing unnecessary hardship or loss to those concerned.

5. The paragraphs in the present report are not numbered: the Commissioner is requested to have this omission rectified in future reports.

PROCEEDINGS of the MADRAS GOVERNMENT.

Read the following letter from the Sanitary Commissioner for Madras Municipal.

Here enters by leave 26 Dec 1902.

Order thereon 26 February 1903.

The Governor in Council requests that the Commissioner of Police will report on the practice of collecting shell-fish, ^{in the harbour} stating in whom the right of collecting such fish and of granting that right, ~~acts~~, and the number of persons who earn their living by following the occupation, and in what way it may be put a stop to.

JP

WOL

To the Commr of Police disp 2/3. 4/3/-

Sanitary Commissioner

Public 1862. Department.

No. 210.

PROCEEDINGS OF GOVERNMENT.

-117 247

Dated 26th February 1862.