

# MADRAS RECORD OFFICE.

Government of Madras.

*Leelie* DEPARTMENT.

|          |        |                          |
|----------|--------|--------------------------|
| G.O. No. | 1290   | Press<br><del>Mis.</del> |
| Dated    | 20-12- | 1965.                    |

Not to be folded or roughly handled

*WJ*  
13-9-36

*20th December 1865.*

No. 70. Read the following letter from the Secretary to the Meteorological Committee, Calcutta, to the Secretary to the Government of Madras; dated 29th November 1865, No. 12.

With reference to your letter, No. 686, dated 26th June, and to the previous correspondence noted in the margin, I have the honor to solicit that a single telegram of the Meteorological observations taken at the Madras Observatory at the usual hours of maximum and minimum barometric pressure (9 h. 30 or 10 h. A. M., and 3 h. 30 or 4 P. M.) may be forwarded daily, at the latter hour, to the Meteorological Committee in Calcutta. It would be very desirable that the telegram should be prepared according to the form adopted by the Meteorological Committee for the similar telegram which is received daily from Kandy, as specified in the enclosed rules.

2. I have further the honor to suggest, for the consideration of the Madras Government, that it may be of interest to the Government Meteorologist, and to the Mercantile community of Madras, to obtain a copy of the Kandy telegram in transit through the Madras Telegraph Office. The Kandy observations are taken by an accomplished observer, and are thoroughly reliable, and the Committee have on two occasions received warning of storms passing Ceylon, with the intimation that Coast stations should be warned. The unavoidable delay that is incurred in the transmission of the message to Calcutta, and in that of a return message, renders it impracticable for the Committee to act on the information they thus receive, so as to benefit the stations on the Madras Coast, but the information might be valuable were a copy transmitted to the Government Observatory from the Madras Office, while in transit.

#### REGISTRY AND TELEGRAPHING.

Forms for registry of the meteorological observations are issued with the instruments, by the Meteorological Committee. These are to be filled up in duplicate; one copy to be kept by the Observer, the other to be forwarded weekly, or (in the case of the light ships, &c.,) when opportunity offers, addressed to the

SECRETARY OF THE METEOROLOGICAL COMMITTEE,  
*Surveyor General's Office,  
Park Street,  
Calcutta.*

2. In the register table, the name of the station, the month, period of register, and year to be entered at the top of the form, as shown in the accompanying specimen, and the days of the month to be entered opposite to the brackets in the left hand columns. The observations taken at the hours printed in the hour column to be entered on the same line. Any observations taken at other times may be entered on the intervening lines, or on a separate form, if necessary. In the barometer column, the height of the mercury *as observed* is to be entered, followed by the reading of the thermometer attached to the barometer. In the two following columns are to be entered the readings of the dry and wet bulb thermometers, and in the 7th column the direction of the wind; the direction being written in figures (not letters) as directed in the rules for Anemometric observations. In the same

*Indian Division, with 12*

column, but separated by a dash, will be entered the estimated force of the wind. The direction in which the clouds are moving is to be entered in the 8th column. In the 9th column, the quantity of rain that has been collected in the rain gauge since the last report is to be entered. In the column for remarks may be entered any notes on the character of the wind or weather, such as 'squalls,' 'heavy to South-west' 'distant thunder in west,' 'squall coming up from south,' &c. These should be made as brief as possible.

3. The telegraphic reports are to be despatched at the hours directed in each case, as soon as possible after the observations have been taken. All telegrams to be repeated to insure accuracy.

Rules for telegraphing.

Any sudden change in the weather, accompanied by a falling barometer (indicating apparently the approach of a storm), and occurring between the usual hours of observation and despatch of telegrams, should be at once telegraphed, for information, to the Surveyor General's Office.

4. The telegrams will consist of three groups of figures, and occasionally words, as follows:—

The first gives the reading of the barometer, omitting the first figure, and neglecting decimal points, also the reading of the attached thermometer, making five figures in all. Thus the telegrams of the observations on the specimen sheet will be

96784

95890

The second group will likewise usually consist of five figures, and will give the reading of the dry bulb thermometer, the difference of the wet bulb and the rain-fall in inches and tenths, omitting the smaller decimals. The

Telegrams.

readings on the specimen sheet will thus be telegraphed:—

85502

921000

The third group will consist of five figures, the first two giving the direction of the wind, putting a zero (0) before the figure if less than 10; the third giving the force of the wind, and the two last the direction from which the clouds are moving. If there be no cloud, these two last figures will be zeros. The telegrams of the specimen sheet will be

18120

04200

General remarks as above (rule 2) are to be telegraphed as briefly as possible. In most cases, they will not be required. The Observer must exercise his discretion in this matter.

### ANEMOMETRY.

The wind vane must be so erected (where choice can be exercised) as to be free from the influence of eddies produced by neighbouring objects, as high, or nearly as high, as itself. It should be not less than four (better six), feet above the roof of the building on which it is fixed.

Position of vane.

2. The reading should be made on a dial within the building. The dial to be fixed firmly on a fixed table, and set by compass, the directions being made to correspond with the true not the magnetic meridian. The wind direction will be indicated by a pointer firmly keyed to the rod which moves with the vane, and adjusted so that the dial pointer corresponds accurately with the vane.

Precautions in fixing dial, &c.

After heavy winds the dial pointer should be compared with the vane, to ascertain that their relative position has not been altered.

3. The readings of the wind directions to be taken in numbers, not letters, viz., as follows:—

|                |             |    |               |    |
|----------------|-------------|----|---------------|----|
| Wind Notation. | N. by E...  | 1  | S. by W...    | 17 |
|                | N. N. E...  | 2  | S. S. W...    | 18 |
|                | N. E. by N. | 3  | S. W. by S.   | 19 |
|                | N. E. ...   | 4  | S. W...       | 20 |
|                | N. E. by E. | 5  | S. W. by W.   | 21 |
|                | E. N. E.    | 6  | W. S. W...    | 22 |
|                | E. by N.    | 7  | W. by S...    | 23 |
|                | East...     | 8  | West...       | 24 |
|                | E. by S.    | 9  | W. by N...    | 25 |
|                | E. S. E.    | 10 | W. N. W...    | 26 |
|                | S. E. by E. | 11 | N. W. by W... | 27 |
|                | S. E...     | 12 | N. W...       | 28 |
|                | S. E. by S. | 13 | N. W. by N.   | 29 |
|                | S. S. E...  | 14 | N. N. W...    | 30 |
|                | S. by E...  | 15 | N. by W...    | 31 |
|                | South...    | 16 | North...      | 32 |

which numbers are to be entered in the wind column of the register. The dials issued by the Meteorological Committee have the above figures on the dial plate, in addition to the usual letters.

4. If the vane be swerving from side to side, as is usual in squally weather, the mean of the extreme oscillations is to be taken as the reading, and the character of the weather may be entered in the column for general remarks.

Unsteady winds.

5. The force of the wind (in the absence of an anemometer) to be recorded as follows:—

|                        |     |     |     |   |
|------------------------|-----|-----|-----|---|
| Light wind to moderate | ... | ... | ... | 1 |
| Moderate to fresh      | ... | ... | ... | 2 |
| Fresh to strong        | ... | ... | ... | 3 |
| Strong to heavy        | ... | ... | ... | 4 |
| Heavy to violent       | ... | ... | ... | 5 |
| Violent (hurricanes)   | ... | ... | ... | 6 |

Persons unaccustomed to judge of wind force should, if possible, obtain the assistance of some experienced seaman in the first instance in estimating the force of the wind according to the above scale, remembering that landmen

Estimation of wind force.

are not accustomed to attach so definite a meaning to the above terms as seamen. It will be but rarely that numbers higher than 3 will be required. The wind pressures corresponding to the above numbers are the squares of the numbers expressed in lbs. per square foot; thus—

|   |   |    |      |
|---|---|----|------|
| 1 | = | 1  | lb.  |
| 2 | = | 4  | lbs. |
| 3 | = | 9  | "    |
| 4 | = | 16 | "    |
| 5 | = | 25 | "    |
| 6 | = | 36 | "    |

The number expressive of wind force to be entered in the wind column of the register, immediately after that indicating its direction.

6. The direction in which the clouds are moving should always be noted, as it frequently differs from that of the wind. This may be judged by the eye. The direction of not less than eight distant objects having been previously

Observation of cloud direction.

ascertained by compass, to serve as indices of direction (N., N. E., E., S. E., &c.), the observer should direct his eye to the masses of clouds near the zenith, and note their movement towards his position and from it. Then, carrying his eye to the horizon, he will note whether the apparent motion of the clouds is from or towards one of his index objects or intermediate. The direction from which the clouds move is to be registered, the direction being expressed by numbers as in the case of the wind.



Public Department.

PROCEEDINGS of the MADRAS GOVERNMENT.

Read the following letter from the  
Secretary to the Meteorological Committee Calcutta.

Received 29<sup>th</sup> November 1865 No. 12)

Order thereon 20 December 1865 No. 1290.

Resolved that copies of  
the foregoing letter and of its enclosures  
be forwarded to the Government Secre-  
tary and to the Director of Tele-  
graphs, Southern Division, in view  
to their jointly giving effect to  
the suggestions of the Meteorological  
Committee, Calcutta.

To the Gov<sup>rs</sup> Secretaries  
with Pw: 26<sup>th</sup> June 1865 No. 686.  
" Director of Telegraphs,  
Southern Division, with 1-

despd 22/12

*Public* 1865. Department.

No. 1290.

PROCEEDINGS OF GOVERNMENT.

*Dated 20 December 1865.*

70-31