

Mauritius. Royal Alfred observatory.

RESULTS

OF

METEOROLOGICAL OBSERVATIONS

TAKEN AT

PORT LOUIS, MAURITIUS.

QC
994.5
.R38
1865

1865.

FROM THE "BLUE BOOK."

National Oceanic and Atmospheric Administration

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March 04, 2010

METEOROLOGICAL OBSERVATORY.

PORT LOUIS.

Lat. 20° 9' 56" South.

Long. 57° 29' 30" East.

RESULTS OF OBSERVATIONS TAKEN IN 1865.

The Barometer and Thermometers are 30 feet above the sea-level. The Barometer, which has a diameter of .564 inch, is by Newman; the Thermometers are by Casella. The direction and force of the wind are recorded by Osler's Anemometer. The Rain-Gauge is 40 feet above the ground.

In ordinary weather, five observations on the pressure and temperature of the air, the direction and force of the wind, the amount and character of cloud, &c., are taken daily, viz., at 3½ A. M., 9½ A. M., Noon, 3½ P. M., and 9½ P. M., and, in unusual weather, and on the 21st of each month, hourly observations. The readings of the Self Registering Thermometers and Rain Gauge are recorded daily at 9½ A. M. Two ozone test-papers are used in the course of the twenty-four hours; one from 9½ A. M. to 9½ P. M., and the other from 9½ P. M., to 9½ A. M.

OBSERVATIONS.	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	MEAN OF YEAR.
BAROMETER.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
<i>(Corrected for altitude and capillarity, and reduced to 32° Fah.)</i>													
Mean of month	30·007	29·836	29·960	29·990	30·080	30·190	30·237	30·221	30·196	30·136	30·085	29·935	30·073
Mean at 3½ A. M.	29·991	29·820	29·933	29·970	30·057	30·167	30·223	30·198	30·180	30·119	30·070	29·910	30·053
Mean at 9½ A. M.	30·026	29·863	29·990	30·021	30·117	30·226	30·271	30·260	30·230	30·168	30·110	29·960	30·103
Mean at noon	30·008	29·841	29·958	29·978	30·075	30·190	30·234	30·217	30·191	30·133	30·080	29·940	30·070
Mean at 3½ P. M.	29·970	29·795	29·920	29·947	30·042	30·150	30·198	30·180	30·149	30·092	30·040	29·902	30·032
Mean at 9½ P. M.	30·040	29·862	29·995	30·020	30·105	30·217	30·257	30·247	30·227	30·164	30·121	29·967	30·102
Highest reading	30·142	30·037	30·088	30·071	30·218	30·400	30·382	30·355	30·375	30·288	30·231	30·081	30·222
Lowest reading	29·875	29·511	29·757	29·871	29·941	29·971	30·111	30·073	29·964	29·823	29·962	29·650	29·876
Range in month	0·267	0·526	0·331	0·200	0·277	0·429	0·271	0·282	0·411	0·465	0·269	0·431	0·347
Range from 3½ A. M. to 9½ A. M.	0·035	0·043	0·057	0·051	0·060	0·059	0·048	0·062	0·050	0·049	0·040	0·050	0·050
Range from 9½ A. M. to 3½ P. M.	0·056	0·068	0·070	0·074	0·075	0·076	0·073	0·080	0·081	0·076	0·070	0·058	0·071
Range from 3½ P. M. to 9½ P. M.	0·070	0·067	0·075	0·073	0·063	0·067	0·059	0·067	0·078	0·072	0·081	0·065	0·070
Range from 9½ P. M. to 3½ A. M.	0·049	0·042	0·062	0·050	0·048	0·050	0·034	0·049	0·047	0·045	0·051	0·057	0·049
Mean diurnal range	0·052	0·055	0·066	0·062	0·061	0·063	0·053	0·064	0·064	0·060	0·060	0·057	0·060
TEMPERATURE OF AIR													
<i>(Dry Bulb Ther. in Shade.)</i>	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
Mean of month	82·2	82·1	80·9	80·5	76·7	72·9	71·7	71·8	72·9	75·3	78·9	79·3	77·1

C.S.C.-6-IV-12

METEOROLOGY.—Continued.

OBSERVATIONS.	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	MEAN OF YEAR.
TEMP. OF AIR. (Continued).	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
Highest reading	89.0	90.0	88.0	88.0	85.0	79.5	77.0	78.0	80.0	81.5	86.0	87.0	84.0
Lowest reading	75.6	75.5	76.5	76.0	71.9	67.8	67.6	68.0	68.0	69.0	73.6	74.0	72.0
Range in month	13.4	14.5	11.5	12.0	13.1	11.7	9.4	10.0	12.0	12.5	12.4	13.0	12.0
Mean of highest daily readings	86.9	86.9	85.0	84.9	81.0	76.4	75.5	75.7	77.2	79.6	83.6	83.6	81.4
Mean of lowest readings	78.8	79.5	78.7	78.0	74.0	70.9	69.7	69.8	70.0	72.9	75.7	77.0	74.6
Mean diurnal range	8.1	7.4	6.3	6.9	7.0	5.5	5.8	5.9	7.2	6.7	7.9	6.6	6.8
Greatest diurnal range	12.4	11.0	9.0	10.0	10.9	7.0	7.1	7.6	10.5	10.0	10.0	9.3	9.6
Least diurnal range	6.0	4.0	3.9	4.0	3.6	4.0	3.5	3.0	3.8	3.9	3.9	3.0	3.9
TEMPERATURE OF EVAPORATION. (Wet Bulb Ther. in Shade.)													
Mean of month	74.8	75.8	73.9	73.0	69.0	66.0	64.8	65.0	65.6	68.0	71.5	73.4	70.0
Highest reading	80.1	81.5	80.0	78.2	77.6	73.0	69.0	71.0	72.4	74.1	76.7	78.0	76.0
Lowest reading	66.4	68.0	67.5	66.0	61.6	59.1	60.0	59.0	59.9	62.9	67.0	68.1	63.8
Range in month	13.7	13.5	12.5	12.2	16.0	13.9	9.0	12.0	12.5	11.2	9.7	9.9	12.2
Mean of highest daily readings	76.9	78.2	75.7	75.2	71.4	68.0	66.6	66.7	67.9	70.3	73.8	75.4	72.2
Mean of lowest readings	72.0	73.2	71.7	70.6	66.4	64.0	62.7	62.5	63.1	66.0	69.4	71.3	67.5
Mean diurnal range	4.9	5.0	4.0	4.6	5.0	4.0	3.9	4.2	4.8	4.3	4.4	4.1	4.4
DEW POINT (Deduced)													
Mean of month	71.0	72.4	70.5	69.2	65.4	62.3	61.1	61.4	61.9	64.4	67.7	70.5	66.5
Mean at 3½ A. M....	70.2	72.2	70.0	68.5	64.8	62.1	61.0	60.8	61.5	64.3	67.6	70.4	66.1
Mean at 9½ A. M....	71.0	72.8	70.4	69.8	65.5	62.5	61.5	61.4	61.8	64.7	67.5	70.5	66.6
Mean at 3½ P. M....	71.9	72.8	70.6	69.4	65.4	62.8	61.2	61.7	62.5	64.7	67.5	70.5	66.7
Mean at 9½ P. M....	71.2	72.3	70.4	68.9	65.0	62.0	60.9	61.5	61.6	63.9	68.0	70.7	66.4
ELASTIC FORCE OF VAPOUR (Deduced).	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches
Mean of month ....	.754	.790	.738	.710	.629	.570	.544	.549	.558	.607	.674	.741	.655
Mean at 3½ A. M....	.735	.784	.730	.697	.618	.564	.543	.538	.552	.602	.674	.739	.648
Mean at 9½ A. M....	.752	.799	.739	.725	.632	.572	.550	.550	.557	.613	.671	.741	.658
Mean at 3½ P. M....	.775	.800	.745	.716	.630	.576	.545	.557	.571	.613	.668	.740	.661
Mean at 9½ P. M....	.757	.785	.738	.703	.623	.568	.540	.552	.553	.595	.682	.746	.653

OBSERVATIONS.	JAN.	FEB.	MAR.	APRIL	MAY	JUNE.	JULY	AWG.	SEPT.	OCT.	NOV.	DEC.	MEAN OF YEAR.
HUMIDITY (<i>Deduced</i>) (<i>Compl. Sat.=1.</i>)	Rel.	Rel.	Rel.	Rel.	Rel.	Rel.	Rel.	Rel.	Rel.	Rel.	Rel.	Rel.	Rel.
Mean of month	·702	·738	·717	·696	·692	·713	·708	·713	·701	·705	·701	·759	·712
Mean at 3½ A. M. . . .	·728	·765	·739	·719	·718	·729	·735	·734	·736	·742	·748	·789	·740
Mean at 9½ A. M. . . .	·684	·739	·710	·696	·686	·710	·715	·705	·682	·694	·677	·748	·704
Mean at 3½ P. M. . . .	·675	·705	·687	·666	·662	·690	·672	·680	·670	·670	·653	·722	·679
Mean at 9½ P. M. . . .	·724	·747	·730	·707	·704	·724	·714	·733	·716	·713	·724	·776	·726
TEMPERATURE IN SUN'S RAYS.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
Highest reading of Black Bulb Ther. in vacuo	130·0	125·1	122·0	118·2	112·0	109·8	108·6	114·0	113·0	118·5	123·0	124·5	118·2
Lowest do. do.	109·0	85·2	104·0	97·0	87·0	94·0	96·0	80·0	99·0	98·4	103·5	83·0	94·7
Mean of month	117·9	115·0	115·2	112·1	106·2	102·3	100·9	102·9	105·9	111·5	116·0	113·2	109·9
CLOUD.—(10·0).	Rel.	Rel.	Rel.	Rel.	Rel.	Rel.	Rel.	Rel.	Rel.	Rel.	Rel.	Rel.	Rel.
Mean of month	4·6	5·5	5·9	3·8	4·3	5·1	4·1	5·4	4·1	5·5	4·3	7·3	5·0
Mean at 3½ A. M. . . .	3·2	4·5	4·4	2·6	3·6	4·3	3·5	4·6	3·6	4·2	2·8	6·2	4·0
Mean at 9½ A. M. . . .	5·7	5·7	6·5	4·9	4·8	5·8	4·8	6·8	4·8	7·3	5·9	8·0	5·9
Mean at 3½ P. M. . . .	6·4	7·3	7·3	5·6	5·9	6·1	5·3	5·8	5·6	7·0	6·4	8·3	6·4
Mean at 9½ P. M. . . .	3·1	4·4	5·4	2·2	3·0	4·3	2·7	4·5	2·5	3·5	2·2	6·8	3·7
RAIN. (<i>Inches in depth.</i>)	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Fall in month	3·270	15·543	3·170	0·770	0·220	0·777	2·354	3·280	0·600	0·818	1·842	12·093	44·737 3·728
No. of days on which rain fell.	16	18	13	9	6	11	10	12	11	14	13	21	154 13
WIND.													
Prevailing direction {	S. E. to East.	S. E. to East.	S. E. to E.	S. E. to E.	S. E. to E. S. E.	S. E. to East.	E. S. E.						
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
Mean Max. Force in lbs. per square foot	1·10	1·88	1·59	0·78	1·34	2·52	2·28	2·60	1·79	0·83	0·71	1·03	1·54
Mean Force of month	0·32	0·57	0·32	0·20	0·28	0·47	0·96	0·35	0·27	0·26	0·24	0·29	0·33
Mean Force at 3½ A. M.	0·27	0·40	0·27	0·15	0·33	0·60	0·30	0·59	0·25	0·19	0·10	0·31	0·31
Mean Force at 9½ A. M.	0·35	0·54	0·28	0·21	0·27	0·42	0·45	0·25	0·34	0·29	0·22	0·26	0·32
Mean Force at 3½ P. M.	0·36	0·70	0·31	0·24	0·28	0·36	0·29	0·24	0·28	0·35	0·38	0·33	0·34
Mean Force at 9½ P. M.	0·30	0·65	0·44	0·20	0·25	0·50	0·40	0·32	0·23	0·20	0·26	0·25	0·33
OZONE. (<i>Schonbein's Ozono-</i> <i>meter 0·10.</i>)						Rel.	Rel.	Rel.	Rel.	Rel.	Rel.	Rel.	Rel.
Mean during day.						5·8	5·4	5·5	4·7	4·6	3·9	2·5	4·6
Mean during night						6·5	6·2	6·3	5·7	5·4	4·7	3·3	5·4
Mean in 24 hours						6·1	5·8	5·9	5·2	5·0	4·3	2·9	5·0

Hours of Observation.	WIND.—Number of times it blew from																	
	North.	N. to N. E.	N. E.	N. E. to E.	East.	E. to S. E.	S. E.	S. E. to S.	South.	S. to S. W.	S. W.	S. W. to W.	West.	W. to N. W.	N. W.	N. W. to N.	Calm.	Variable.
3½ A. M.	0	0	1	6	41	119	89	20	2	2	2	1	0	2	3	0	85	0
9½ A. M.	4	2	3	27	64	115	64	32	3	1	2	3	3	11	18	6	8	0
Noon	2	4	7	35	45	110	57	38	2	1	1	1	7	19	17	14	4	0
3½ P. M.	7	1	4	33	32	108	67	46	3	1	4	1	6	25	12	12	7	0
9½ P. M.	0	0	3	5	24	113	70	34	2	2	2	1	0	4	0	0	83	1
TOTAL	13	7	18	106	206	565	347	170	12	7	11	7	16	61	50	32	187	1

THUNDER AND LIGHTNING.

- February. 3.—Lightning at W. N. Wrd. near horizon, at 3 A. M.
 „ 4.—Lightning at N. Wrd. at 3 A. M.
 „ 5.—Some loud peals of thunder at Erd. and S. Erd. at noon.
 „ 6.—Faint lightning at S. S. Erd. at 3 A. M.
 „ —Loud thunder at Erd. at 1½ P. M.
 „ 7.—Loud thunder at S. S. Erd. at 2 P. M.
 „ —Heavy peals of thunder at Erd. at 6:10 P. M.
 „ 10.—Lightning and thunder at Nrd at 7½ P. M.
 „ 12.—Much loud thunder and vivid lightning from the Zenith to N. Wrd. and W. at 8 P. M.
 „ 13.—Some faint flashes of lightning at N. Wrd. at 8 P. M.
 „ 17.—Thunder at S. S. Erd. at 1½ P. M.
 „ 18.—Faint lightning at S. Wrd near horizon at 3 A. M.
 „ 19.—Lightning at Erd. and E. N. Erd. at 9½ to 10 P. M.
 March. 2.—Some distant thunder from 2 to 3 P. M.
 „ 3.—Much loud thunder at Srd from 4 to 6½ P. M.
 „ —Lightning at Wrd. at 9 P. M.
 „ 10.—Some faint lightning at 8½ P. M.
 April. 25.—Lightning at Nrd. near horizon at 9½ P. M.
 „ 26.—A thunder storm at 7.25 A. M. at Wrd. and S. Wrd.
 May. 11.—Lightning and heavy peals of thunder at Wrd. and Nrd. at 1.50 P. M.
 „ 17.—Lightning at N. Erd. and Wrd. at 8 P. M.
 November 19.—Thunder at Erd. at 2 P. M.
 „ 20.—Lightning at Wrd. on horizon at 9 P. M.
 December 19.—Some thunder at N. Wrd. at 1½ P. M. At 2¼ P. M. thunder at Srd.
 „ —One or two peals of thunder at Wrd. at 2.30 P. M.
 „ 27.—Thunder at N. W. and S. Wrd. at 0.40 P. M.
 „ —Distant thunder at Wrd. all evening with lightning.

METEORS &c.

Very few meteors were observed, though often looked for—especially in August and November.

June 21.—A meteor of planetary light, as large as Venus, at E. N. Erd., travelled from S. Wrd. to N. Erd. for about two seconds at 10.45 P. M.

July 28.—A small shooting star travelling from Erd. to Wrd. at 3½ A. M.

At 10 P. M. on the 23rd July, Mr Connal, C. E., observed at the distance of a few feet before him on the Palma road a flash of pale blue light which seemed to rise from the ground to the height of 5 or 6 feet. No noise was heard. He immediately associated the phenomenon with that of shooting stars several of which he had observed during the previous hour. Dr Finnimore, of Mahebourg, afterwards informed him that at that time a blaze of light was seen in the sky in the direction in which Mr Connal stood. The night was very clear and fine.

A vivid meteor is said to have exploded at Mahebourg, with a loud noise, about 9 P. M. on the 9th October.

From 11 A. M. to 1 P. M. on the 20th November, a beautiful halo of 12° in diameter was observed round the sun as he shone through a thin layer of *cirri*.

GALES AND HURRICANES AT SEA.

Mauritius was not visited by a hurricane, or any violent gale, during this year ; but one or two hurricanes, and some gales, took place at sea ; and, as in previous years, the barometer and weather at Port Louis indicated the existence of these hurricanes and gales, though the distance of some of them was considerable.

January.—On the 10th and 11th, a gale was experienced by H. I. F. M. S. *Lynx* off St. Mary's (Madagascar); the *Anna Héloïse* in 18° 12' S. and 52° 00' E.; and the *Melbourne* in 14° 14' S. and 56° 43' E. The *Melbourne* had the force of the gale from 8 P. M. on the 10th to 2 P. M. on the 11th, the wind veering from South to S. S. W., West, North, and N. W., and then back to North and N. N. E., her barometer at 7 A. M. standing at 29·400 inches. With the *Anna Héloïse* the wind blew strongly from E. S. E., from about noon on the 11th to 4 A. M. on the 12th ; and with the *Lynx* from South to S. S. W., and then from S. E. and East, from 6 A. M. on the 11th to 4 A. M. on the 12th. The lowest reading of the barometer of the *Lynx* was 29·706 inches at 1 P. M. on the 11th.

From the 5th to the 9th, the barometer at the Observatory fell ·144 inch, with light Northerly and N. Wly winds; but in the evening of the 9th, a breeze springing up from S. E., it began to rise and continued rising until the 13th. From the 13th to the 16th it again fell ·128 inch. The S. E. breeze gradually increased in force till it reached its maximum pressure (8·6 lbs. on the square foot) at 11·15 A. M. on the 11th. It veered very little. On the 11th, a slight Northerly swell set in, which increased considerably on the 12th.

On the 21st and 22nd, the barque *Good Hope* had a gale in 32° S. and 59° E. The wind veered from N. E. to N. W., West, and S. W., and the barometer fell to 29·50 at noon on the 21st.—At Port Louis, the barometer fell from 30·180 on the 19th to 30·054 on the 21st, with fine weather, and light winds from E. S. E. to N. E. and N. W.

February.—At 9½ A. M. on the 4th February, the barometer at Port Louis stood at 30·138 inches (uncorrected reading), from which it fell to 29·608 at 4 P. M. on the 12th (lowest reading for the year). It then commenced to rise, but not nearly so fast as it fell on the 11th and 12th.

The wind till the 9th was light and variable from East to N. E. and N. W. From the 9th to the 12th it was light from S. E. to East. At 1 P. M. on the 12th it suddenly increased from N. E. b. E. to a force of 4·0 lbs on the square foot. Its greatest force was 7·5 lbs at 3·15 P. M. By 6 P. M. it was again light, and continued so till towards midnight, when it increased to 3·0 lbs. From 1 to 5·30 P. M. it veered from N. E. b. E. to N. W., and remained at N. Wrd. till the 17th.

The rainfall at the Observatory was as follows :—

9½ A. M. on the 10th to 9½ A. M. on 11th	.....	2·225 inches.
" " " 11th " " " 12th	.....	2·750 "
" " " 12th " " " 13th	.....	7·460 "
" " " 13th " " " 14th	.....	0·120 "
Total rainfall in four days		..... 12·555 inches.

When the wind came round to North and N. W. dense masses of vapour covered the mountains down to their bases, and rain fell in torrents, especially from 7 to 9 P. M. during a thunder-storm.

In other parts of the island the rainfall on the 12th was much greater than at Port Louis, having been 18·307 inches at *Lx Gaieté* in Flacq, 13·11 inches at *Lucia* in Pamplémousses, 14·65 at *Croft-an-Righ* in Moka, and 11·62 inches at *Trianon* in Plaines Wilhems.

The rivers and streams rose rapidly : bridges and causeways were swept away, stores inundated, and several lives lost.

It appears from a number of log-books that no *revolving* gale occurred at sea on this occasion.

On the 9th, the S.E. trade-wind prevailed from 30° S. to 6° S., generally in fresh breezes, with fine weather.

At noon on the 10th, the trade-wind was decreasing on its equatorial side, with hot sultry weather, and the barometer inclining to fall ; but, in 32° to 26° S. and 40° to 52° E., the trade blew in strong breezes and gales.

By noon on the 11th, the trade-wind existed only from 30° to 20° S., blowing in strong breezes and gales near the former parallel ; while to the North of 20° S. calms and light Northerly winds prevailed.

At noon on the 12th, light to fresh breezes from North to N. W. and West prevailed from near the equator to 17° S. ; while in 31° to 27° S. and 40° to 54° E., there was a fresh gale from S.E. to East and N.E.

By noon on the 14th, the wind from the equator to 20° S. had increased and become more settled from North to N.W. ; while in 32° to 26° S. it had become light and moderate.

The *Joshua*, (Capt. Stevenson), from $19^{\circ} 59'$ S. and $62^{\circ} 20'$ E., on the 11th, to $19^{\circ} 54'$ S. and $60^{\circ} 33'$ E. on the 14th, had strong breezes from N.E. to North and N. W., with rain, which, on the 13th, fell at times "almost in a complete sheet." Her barometer fell to 29.65 at 5 P.M. on the 13th.

At Rodrigues, the wind veered as it did with the *Joshua* and at Port Louis, blowing at times in strong gales with heavy squalls. The sea was high. The rainfall on the 12th was 1.83 inch and on the 13th 1.00 inch. The lowest reading of the barometer was 29.860 at $3\frac{1}{2}$ P.M. on the 14th.

Much rain fell also at Reunion.

On the whole, it would appear, that, under the influence of the high temperature which prevailed in the end of January and beginning of February, the S.E. trade-wind on its equatorial side died away, and was replaced by the N.W. monsoon ; the two winds coming into collision in about 20° S., where the accumulated vapour was suddenly condensed into rain.

Although the barometer at Port Louis began to rise in the afternoon of the 12th, and continued rising till the 17th, yet it did not recover its previous height. At $9\frac{1}{2}$ A.M. on the latter day, it stood at 29.956, and again gradually fell to 29.730 at 4 P.M. on the 21st, after which it rose to 29.992 at $9\frac{1}{2}$ A.M. on the 25th.

On the 17th, the wind came round to Erd., and on the 18th to S.Erd., where it remained till the 24th, when it fell light, and passed to the N.Wrd. Its maximum force was 13.5 lbs on the square foot on the 21st.

The barometer, wind, and weather indicated the existence of a hurricane to the N. Erd., and a notice to that effect was published in the newspapers.

From log-books afterwards received it was ascertained that, from the 20th to the 25th, stormy weather prevailed from 12° to 23° S., and 86° to 56° E., and that within that time and space two or three revolving gales occurred between the adjacent confines of the N. W. monsoon and the S. E. trade-wind.

On the 21st, the S. S. *Norna* (Capt. Hall), in $11^{\circ} 50'$ S. and $56^{\circ} 35'$ E., was hove to with a strong gale from N.W. The barque *Cambrian*, (Capt. Simpson), was on the same day in $20^{\circ} 34'$ S. and $85^{\circ} 07'$ E., with a hurricane from E.S.E., the wind afterwards veering to East. On the following day, the wind veering to N.E., she was dismasted. Her barometer fell to 28.90.

The barque *Jehangeer* (Capt. Mc Dermott) had a hurricane from S. S. E. on the 22nd, in $18^{\circ} 57'$ S. and $62^{\circ} 40'$ E. The wind veered to South and S.W. The barometer fell to 29.38.

On the 23rd, the *Glenlee* (Capt. Dunn) had a hurricane in $20^{\circ} 17'$ S. and $68^{\circ} 24'$ E. The wind veered from S.E. to East, North, &c. The barometer fell to 29.36.

At Rodrigues, the barometer fell from 30.028, at $9\frac{1}{2}$ P.M., on the 16th, to 29.520 at $9\frac{1}{2}$ P. M. on the 22nd. There were two gales ; one on the 19th and 20th, in which the wind veered from E.S.E. to N.E. and N.W. ; and another on the 22nd, 23rd, and 24th, in which the wind veered from S.E. to South and W.S.W.

March.—From $9\frac{1}{2}$ A.M. on the 7th to $3\frac{1}{2}$ P.M. on the 12th, the barometer at the Observatory fell from 30.144 to 29.876 (lowest reading in the month). The wind was squally from S.Erd. till the 10th, when it decreased, passing on that and the two following days to East and N. E. Its greatest force was 7 lbs on the square foot at 11.30 P. M., on the 8th. The total rainfall was 2.630 inches.

On the 12th, the barque *Eleanor Dodson*, in $32^{\circ} 23'$ S. and $59^{\circ} 10'$ E., had a strong gale from S. S. W. and South, with a high cross sea ; and the gale continued (from S. S. E. to E. S. E.) till the 15th, when the vessel was in $23^{\circ} 38'$ S. and $59^{\circ} 37'$ E. The barometer stood at about 30.00 throughout.

The barque *Sea Ripple* (Capt. Pringle) had, on the 12th, a hard gale, terrific sea, and much rain, in $36^{\circ} 59'$ S. and $69^{\circ} 29'$ E. The wind commenced at N. E. and veered to North, N. W., West, and S. S. W. The barometer fell from 30.00 to 29.58 with the northerly winds, and then rose to 30.20 with the southerly winds on the 13th, 14th and 15th.

At Rodrigues the barometer fell from 30.100 on the 7th to 29.902 on the 12th, with heavy squalls and much rain. The wind was from E. S. Erd. till the 11th, on which day it was variable from N.

E. to N. W. It then passed to S. S. W. and South, and on the 14th blew a fresh gale from the latter quarter. The rainfall in four days was 4.66 inches.

The ship *Early Morn* (Capt. Molt) had strong gales from S. E. to East with heavy rain, on the 11th and 12th, in about 25° S. and 84° E.

From $9\frac{1}{2}$ A. M. on the 21st to $3\frac{1}{2}$ P. M. on the 23rd, the barometer again fell from 30.168 to 29.990, and remained unsteady till the end of the month. The wind was squally from E. S. E. to S. S. E.: its maximum force was 3 lbs. on the square foot on the 26th. Only 0.025 inch of rain fell.

On the 22nd and 23rd the ship *Sultana* (Capt. Williams) had a hurricane from N. W. to N. E. in $12^{\circ} 38'$ S. and $85^{\circ} 19'$ E. She was in the central calm at 2.30 A. M. on the 23rd, and sustained considerable damage.

On the 24th, the French ship *Charles* (Capt. Pascal), in $14^{\circ} 39'$ S. and $85^{\circ} 01'$ E., had a strong gale from East to E. N. E. with violent squalls, thunder, and torrents of rain. At 5 P. M., she was hove to. On the following day, the wind veered to North, and the barometer fell to "20 millimeters below tempest." The weather then improved.

The ship *Beau Monde* (Capt. Campbell) was on the 24th in $13^{\circ} 38'$ S. and $84^{\circ} 50'$ E., with a strong gale from N. E., before which she ran to the S. Wrd, till, at 10.30 P. M. on the 25th, she broached to, with her head to S. E. She was then hove to under the maintry sail. At 3 A. M. on the 26th, she was on her beam ends. At noon on that day, in $18^{\circ} 03'$ S. and $82^{\circ} 22'$ E., her barometer was at 28.75, and the hurricane at its height. No mention is made of the wind having veered.

On the 26th, the ship *Sharpshooter* (Capt. Cockroft) had a hurricane in $19^{\circ} 45'$ S. and $80^{\circ} 52'$ E. The gale commenced at S. E., and at noon the ship was almost on her beam ends. At 11 A. M. the barometer was 29.20, and not long after (time not stated) at 28.00. About $3\frac{1}{2}$ P. M. it was observed that the mercury had fallen an inch in twenty minutes. At 4 P. M. the ship was quite on her beam ends, and the sails were blowing in ribands from the yards, although doubly fastened with gaskets. Cut away the topmasts. At 4.30, the barometer was at 27.07. Heavy seas broke on board and into the cabin, destroying the binnacle and compass, chronometer, barometer, &c., &c. From 9.30 to 10.30 P. M., the central calm passed over the ship. The hurricane then burst upon her from N. W., and blew with great fury till 2.30 A. M.

At Rodrigues, the barometer fell from 30.154 at $9\frac{1}{2}$ A. M. on the 21st to 29.972 at $3\frac{1}{2}$ P. M. on the 24th, the wind being very squally from S. E.

April.—From $9\frac{1}{2}$ A. M. on the 13th to $3\frac{1}{2}$ P. M. on the 17th, the barometer fell from 30.182 to 29.990 (lowest for the month) with the wind squally from East to S. S. E.; and a notice of the probable existence of a gale to the N. Erd. was published in the newspapers.

On the 14th, the ship *Garibaldi* (Capt. Showers), in $9^{\circ} 05'$ S. and $75^{\circ} 44'$ E., had a strong gale from N. W. by N., with hard squalls and heavy rain.

The Dutch barque *Johanna Maria* (Capt. Wilhelmie), in $22^{\circ} 03'$ S. and $72^{\circ} 49'$ E., experienced on the 16th a hurricane from East to S. E. and South; and on the 17th the French ship *Harmonie* (Capt. Tréal), had a violent gale in 22° S. and 80° E.—The barometer of the *Johanna Maria* fell from 30.00 to 29.65.

There was also a heavy Westerly gale on the 19th and 20th in 44° S. and 18° E.

At Rodrigues, the barometer fell from 30.096 on the 12th, to 29.900 on the 17th, with the wind squally from S. Erd., and a fresh gale from S. S. Erd. on the 16th and 17th.

May.—The greatest barometric fluctuation in the course of this month took place between the 13th and 22nd, and amounted to .264 inch. The wind was from S. E. to East till the 17th, when it fell light and passed to W. N. Wrd. On the 18th it came back to E. S. Erd. where it remained till the 23rd. On the 16th and 17th the sky was overcast, and the weather showery, with some lightning on the 17th. At sunset on the 16th the clouds at Westward assumed a brick red colour, and on the 17th a yellowish ash colour.

On this occasion violent and destructive gales took place from 28° to 43° S. and the meridian of Greenwich to 49° E. These gales travelled from Westward to Eastward, and one of them caused much loss of life and property in Table Bay on the 17th.

June.—From the 9th to the 12th, the French ship *Sidonie* (Capt. Pineau) had a heavy gale in 39° S and 17° E. to 39° S. and 21° E. The gale began at E. S. E. and ended at W. N. W., the wind veering by the North.

On the 8th and 9th, the bark *Bessie Stanton* (Capt. Cole) had "a perfect hurricane" from S. W., terrific squalls, and tremendous sea, in 36° S. and 71° E.

The French ship *Sesame* (Capt. Bara) had a gale from S. S. W. to South, on the 14th and 15th, in 38° S. and 44° E.

A number of vessels experienced a heavy gale from S. Wrd., in about 14° N. and 89° E., from the 9th to the 16th.

At Port Louis, the barometer fell from $30\cdot364$ at $9\frac{1}{2}$ A. M., on the 8th, to $30\cdot060$ (lowest for the month) at $3\frac{1}{2}$ P. M. on the 14th. The wind was squally from S. E. to East, and the weather cloudy and showery.

From the 27th to the end of the month, the ship *Fathe Salem* (Capt. Williams), in 1° to 6° S. and 94° E., had strong gales from N. Wrd., with hard squalls, lightning, and wild appearance.

July.—On the 1st, the ship *Victoria Cross* (Capt. Mills) had a severe gale from W.N.Wrd. in 7° $22'$ S. and 93° $25'$ E.

The ship *Hypathia* (Capt. Thompson) on the same day, in 17° S. and 69° E., had a strong gale from S. E., with "terrific squalls and every appearance of a cyclone."

On the 30th June and 1st July, the French ship *Daquerre* (Capt. Lepart), in about 21° S. and 65° E., had a hard gale from E.S.E., with very violent squalls and a heavy sea from Southward.

The French ship *Villa Eugénie* (Capt. Defoy) had, also on the 30th June and 1st July, a violent gale from N.W. to West, in about 7° S. and 92° E.

While this gale prevailed to the N.Erd. of Mauritius, there was another to the S.Wrd. of it, from 34° to 39° S. and the meridian of Greenwich to 16° E., as shown by the log-books of the *Trossachs*, *Blencathra*, *Reunion*, and other vessels.

The barometer at the Observatory (Port Louis) fell from $30\cdot482$ at $9\frac{1}{2}$ A. M. on the 30th June to $30\cdot272$ at $3\frac{1}{2}$ P. M. on the 2nd July, with the wind squally from S.Erd. and the weather showery. On the 30th June, the anemometer recorded a maximum pressure of $12\cdot5$ lbs. on the square foot.

At Rodrigues, the barometer fell, as at Port Louis, with a S. Ely. gale.

From the 12th to the 17th, the *Reunion*, in 39° to 36° S. and 49° to 67° E., had hard gales and squalls from W. N. Wrd., with at times violent thunder and lightning. Her barometer fell from $30\cdot08$ to $29\cdot37$.

On the 12th and 13th the ship *Racer* (Capt. Hodgson), in 37° S. and 70° E., had a strong gale also from W. N. Wrd.

The barometer at Port Louis fell from $30\cdot434$ at $9\frac{1}{2}$ A. M., on the 8th, to $30\cdot216$ at $3\frac{1}{2}$ P. M., on the 16th, with the wind squally from E. S. Erd.

Another heavy gale took place from the 24th to the end of the month, in 30° to 40° S. and the meridian of Greenwich to 30° E. It was experienced by the *Numa Vidal*, *Loretto*, *Hermione*, and other vessels.

On this occasion, the barometer here fell from $30\cdot388$ on the 25th to $30\cdot204$ (lowest for the month) on the 30th, with the wind squally from S. Erd. and the weather showery.

August.—From the 15th to the 22nd, heavy S. Wly. gales prevailed from 12° to 15° N. and 85° to 90° E., accompanied with hard squalls, thunder, lightning, and rain.

The brig *Crown* had a violent gale in 37° S. and 117° E, from the 18th to the 20th.

At Port Louis, the barometer fell from $30\cdot418$ on the 17th to $30\cdot180$ on the 19th, with the wind squally from S. Erd., and the weather overcast and rainy from the 18th to the 23rd.

A hard gale, with heavy squalls, and much rain, took place from the 25th to the 30th, in 30° to 40° S. and 6° to 50° E. The wind veered from N. E. to N. W., and S. W.

The barometer at Port Louis, fell from $30\cdot392$ on the 23rd to $30\cdot168$ (lowest in the month) on the 27th, with a decreasing breeze from S. E. to East, and fine weather.

September.—In the course of this month there were two periods of bad weather at sea, the one from the 4th to the 9th, and the other from the 18th to the 27th.

During the former period, there was a hard gale from N. W. to S. W. in 35° to 40° S. and 30° to 46° E., as shown by the logs of the *Peony*, *Clémentine*, &c.

The barometer at the Observatory fell from 30.362, on the 4th, to 30.182 on the 9th, the wind veering from S. E. to East and N. W., and decreasing, as it veered, from a strong breeze to light airs. The weather was fine.

During the latter period, there was a succession of violent gales in 36° to 41° S. and 110° to 117° E.; a strong gale in 19° S. and 67° to 64° E.; and also a strong gale in 36° to 40° S. and 18° to 37° E.

At Port Louis, the barometer fell from 30.450, on the 19th, to 30.062 (the lowest reading in the month), on the 25th. The wind veered from S. E. to East, N. E., and N. W., and on the 19th and 20th blew from E. S. Erd. with a maximum force of 7 lbs and 7.5 lbs on the square foot. The weather was showery.

The barometer at Rodrigues also fell from the 19th to the 25th, with similar winds and weather.

October.—A strong Westerly gale occurred in 36° to 40° S. and 20° to 50° E., from the 3rd to the 7th. It was encountered by the *Sea Breeze*, *Mathilde*, and *Olive Branch*.

The *Hanna Nicholson* (Capt. Bicknell) experienced a severe gale from the 5th to the 8th, in 38° S. and 117° to 128° E. The wind was chiefly from S. Wrd. The barometer fell to 29.38.

At Port Louis, the barometer fell from 30.386, on the 4th, to 30.224 on the 6th, with light Easterly winds and fine weather.

From the 20th to the 24th a heavy gale, in which the *Argali*, *Express*, and other vessels were more or less involved, took place in 30° to 40° S. and 20° to 40° E. The wind veered from N. W. to West and S. W.

The barometer at Port Louis, fell from 30.246, on the 19th, to 29.924 (lowest reading in the month) on the 24th, the wind veering from S. E. to East and North, with overcast, gloomy, rainy weather on the 23rd, 24th, and 25th, and a Northerly swell breaking on the reefs on the 24th and 25th.

A similar fall of the barometer occurred at Rodrigues.

November.—From the 1st to the 6th, the ships *Delungle* and *Rachel* had hard N. Wly. gales, with terrific squalls, and very high sea, in 38° S. and 20° to 30° E.

The barometer at the Observatory fell from 30.308 on the 3rd, to 30.150 on the 6th. The wind was at first squally from S. Erd, and then decreased as it came round to East.

From the 11th to the 17th, a strong gale was encountered by the *Coral Isle*, *Bonne Marie*, *Bury St. Edmunds*, &c., in 30° to 40° S. and 10° to 30° E.; and, from the 7th to the 12th, the *Mary Nicholson* had "terrific" gales in 36° S. and 118° E. There were also strong winds and heavy squalls, with a low barometer, in 8° to 10° S. and 80° to 90° E.

The barometer at Port Louis, fell from 30.256, on the 8th, to 30.068 (lowest for the month) on the 15th. The wind was from E. S. Erd. till the 12th, when it passed to N. Wrd. On the 13th it set in at S. S. Erd., and attained a maximum force of 7.5 lbs. on the square foot, veering on the 15th and 16th to East, North and N. N. W., with rain.

On the 28th and 29th, the ship *Cadichonne* had a strong gale from N. Wrd. in 33° S. and 56° East.

At Port Louis, the barometer fell from 30.210, on the 24th, to 30.092 on the 28th, with moderate Easterly winds.

December.—The *Romp* and *Vistula* had a strong gale from the 6th to the 8th, in 10° to 13° S. and 53° to 60° E. With the *Romp* the wind was from West to W. S. W., and with the *Vistula* it veered from S. E. to South and S. W.

On the 11th, the *Clara Sayers* had strong winds with threatening weather in 20° 02' S. and 58° 20' E. The wind veered from S. E. to South and S. S. W. The barometer fell to 29.60.

At Rodrigues, the barometer fell from 30.146, on the 6th, to 29.850 on the 11th, the wind veering in fresh gales from E. S. E. to N. E. and N. W.

At Port Louis, the barometer fell from 30·150 on the 7th to 29·764 on the 11th (lowest for the month). The wind was squally from E. S. E. to S. S. E. from which it passed to W. S. W. on the 11th and 12th. Its maximum force was 4 lbs.

A heavy gale occurred from the 27th to the 30th in 38° to 40° S. and 15 to 40° E., as shown by the logs of the *Belle Alliance*, *Spirit of the Storm*, &c. The barometer fell to 29·20.

The barometer at Port Louis fell from 30·148, on the 22nd, to 29·908 on the 27th, with light Easterly winds, and much rain, 9·045 inches falling from the 22nd to the end of the month.

Detailed accounts of these hurricanes and gales will appear in the Transactions of the Meteorological Society.

C. MELDRUM,

Government Meteorological Observer.

