

No. 686.



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JAMAICA

WEATHER REPORT.

FOR THE MONTH OF

DECEMBER, 1933.

The Bar. pressure at all the Stations, except the Hill Gardens, are reduced to the standards of Kew, 32°, gravity at Lat. 45° mean sea-level. The bar. at Hill Gardens is reduced to the first three standards only. Thermometers are exposed in Stevenson's screen; their readings have been corrected for instrumental errors.

The miles of Wind per diem are measured by Robinson's Anemometers, the factor 3 being assumed correct for the small four-cup instruments used and for the small velocities measured.

The amount of Cloud is given in tenths of the whole sky; the Lower clouds are for the most part fracto-stratus; the Middle clouds cumulus; the Upper clouds, cirrus and cirro-stratus.

The rainfall is measured at 7 a.m., and entered as having fallen on the previous day.

The 7th Meridian Time West of Greenwich adopted from 1st February, 1912.

METEOROLOGICAL RESULTS.

STATIONS.	Elevation.	Bar. Pressure		Temperature.				Extreme Temperature.					
		7 a.m.	3 p.m.	7 a.m.	3 p.m.	Max.	Min.	Range.	Max.	Date.	Min.	Date.	Range.
	ft.	ins.	ins.	°	°	°	°	°	°	°	°	°	°
Orant Point Light House	8	30.004	29.970	78.6	80.9	82.4	75.8	6.6	84.2	3	63.5	9	20.7
Kingston	24	29.979	29.929	70.1	82.6	85.2	68.0	17.2	87.7	2	63.1	9	24.6
Regril Point Light House	33	29.997	29.948	71.9	82.6	84.9	69.3	15.6	87.9	4	64.6	9*	23.3
Castleton Gardens	496			68.1	76.9	79.9	67.1	12.8	84.0	6	57.0	9	27.0
Hope Gardens†	668	30.029	29.949	69.0	80.5	82.6	65.4	17.2	85.0	8*	62.0	10*	23.0
Con Hall	970												
Hill Gardens	4,900	25.242	25.218	60.8	62.7	66.7	55.0	11.7	70.0	7	53.0	29	17.0

STATIONS.	Elevation.	Dewpoint and Humidity.				Rainfall.	Wind per diem.	Wind: direction from and miles per hour.				Amount of Cloud. Lower, Middle and Upper.					
		7 a.m.		3 p.m.				7 a.m.	3 p.m.	7 a.m.		3 p.m.		7 a.m.		3 p.m.	
	ft.	°	%	°	%	ins.	Mls.		m.		m.	L.	M.	U.	L.	M.	U.
Orant Point Light House	8	71	77	71	74	2.67	339	N.E.	16.0	N.N.E.	15.0	2.0	2.2	0.9	1.0	2.9	1.1
Kingston	24	66	88	70	66	0.90	130	N	4.5	S.S.E.	7.8	3.6	1.9	0.5	3.7	1.0	1.3
Regril Point Light House	33	68	87	71	68	1.13	227	N.E.	8.0	N.N.E.	13.0	1.2	1.2	2.7	1.8	3.7	0.9
Castleton Gardens	496	66	95	73	88	54.63											
Hope Gardens	668	65	87	69	71	5.53											
Con Hall	970																
Hill Gardens	4,900	56	89	59	92	34.28											

*And on other days. † Hope Gardens Bar. read at 9 a.m. and 3 p.m.

National Oceanic and Atmospheric Administration

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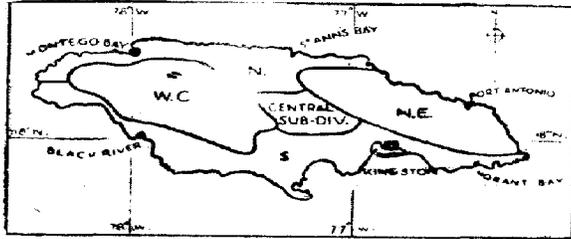
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March 28, 2002

THE RAINFALL.

The first four columns contain all the information relating to the Rainfall for the month received for publication up to the time of sending this report to press; the last column contains the corresponding Rainfall average for the month according to "The Rainfall of Jamaica from about 1870 to the end of 1919." In obtaining the mean Rainfall for the month only those stations are considered for which the average Rainfall has been also given in the last column so that the results derived from these two columns are comparable for each Division. These results are given in the comparative table at the end of this Rainfall Return so as to arrive at the mean for the whole Island, embracing the four Divisions.

The Northern Division comprises the northern shores from Port Maria to Davis' Cove, including the central part of the Island which forms the Central Sub-divisions; the Southern Division comprises the southern shores from Holland Bay to South Negril; the North-Eastern and West-Central Divisions are the remaining parts of the Island bounded by the sea and the other Divisions.

A Map showing these Rainfall Divisions is published in Mr. Maxwell Hall's "Rainfall of Jamaica," following page 27, 1911 Edition, and of page 20 of 1923 Edition, an outline of which is given below.



December, 1933.

STATIONS.	Total Fall.	Greatest fall in 24 hours.		Days on which 0.01 or more fell.	Average.
		Amount.	Date.		
NORTH-EASTERN DIVISION. (N.E.)					
Manchioneal	7.08	1.02	24	20	7.25
Priestman's River	8.10	1.30	27	10	5.59
Bath	17.85	4.14	27	16	8.68
Barrett's Gap	25.07	4.05	31	25	..
Millbank	47.28	5.61	27	22	..
Moore Town	35.80	4.10	28	26	23.75
Port Antonio	12.03	1.50	24	24	12.43
Passley Garden	10.02	2.66	26	18	..
Fellowship	13.39	3.50	1	15	18.25
Johnson River Br.	5.88	2.00	31	13	4.73
Trinity Ville	7.01	3.50	31	11	..
Shrewsbury	40.71	5.35	12	26	19.87
Hope Bay	16.72	2.60	13	27	..
Cedar Valley	11.16	5.07	31	24	4.29
Moy Hall	15.56	7.20	31	14	5.56
Paradise	39.22	5.25	12	26	..
Lennox	20.44	3.82	29	26	..
Greenvale	53.39	7.45	11	25	22.57
Spring Garden	14.96	1.30	1	24	8.06
Hill Gardens	34.28	9.12	31	18	9.68
Buff Bay	18.17	3.12	12	23	11.80
Orange Vale	38.45	4.85	13	23	..
Belvedere, Portland	23.57	3.50	11	15	13.85
Windsor Castle, do.	18.06	3.03	12	21	11.68
Balcarres	70.46	9.50	11	23	..
Mt. Holstein	58.76	10.64	31	25	19.56
Cedar Hurst	42.22	11.05	31	22	..
Hardware Gap	39.14	10.03	31	19	6.29
Rose Hill	5.26	1.19	1	16	5.06
Hermitage	10.46	3.75	31	15	..
Mount James	46.20	11.89	31	19	..
Stony Hill Ind. Sch.	9.29	3.20	31	11	3.81
Boon Hall	13.49	5.20	31	16	..

STATIONS.	December, 1933.				
	Total Fall.	Greatest fall in 24 hours.		Days on which 0.01 or more fell.	Average.
		Amount.	Date.		
NORTH-EASTERN DIVISION, contd.					
Brandon Hill	37.37	7.15	31	15	..
Iter Boreale	..	..	..	..	..
Enfield	27.69	3.95	12	21	..
Agualta Vale	18.09	3.09	12	23	9.48
Castleton Gardens	54.63	9.85	31	22	12.79
Water Valley	17.70	2.97	12	23	9.46
Albany	13.13	2.50	14	24	9.41
Lawrence Tavern	19.80	5.50	31	15	4.36
Richmond, St. Mary	20.59	3.00	11	18	9.83
Quebec, St. Mary	..	..	..	..	9.47
Above Rocks	10.54	3.75	31	10	..
Glengoffe	21.93	4.33	31	11	..
Carew Castle	15.28	3.80	31	11	4.70
Hampstead, St. Mary	21.78	3.00	30	26	11.86
Windsor Castle do.	21.03	4.05	14	22	..
Troja	21.72	3.70	14	17	..
Pear Tree Grove	21.81	3.40	30	17	..
Guy's Hill	22.78	4.10	14	20	7.42
Lucky Hill	23.75	4.88	14	20	10.23
Rio Hoe	22.32	5.33	14	15	8.45
Unity Valley	18.35	3.23	14	22	7.25
Moneague	16.08	3.72	14	19	7.25
Claremont	22.31	3.95	30	17	7.78
Averham Park	30.21	6.50	30	22	10.25
Albion	20.12	4.00	30	20	7.86
NORTHERN DIVISION (N).					
Port Maria	12.90	2.00	25	22	7.05
Wentworth	..	..	..	..	..
Eden Park	..	..	..	..	..
Oracabessa	13.19	2.25	13	19	..
Huddersfield	5.65	1.10	22	8	..
Ocho Rios	10.84	2.37	14	13	6.62
Bogue, Ocho Rios	14.19	1.84	14	14	8.11
Drax Hall	10.04	1.60	28	19	8.04
Rockfield	22.37	3.67	14	16	9.39
Liberty Hill	12.63	1.60	14	13	7.86
St. Ann's Bay	13.46	2.78	30	15	7.25
Seville	9.83	2.20	23	12	7.30
Richmond Estate	5.86	1.08	28	18	7.92
Llandoverly	..	..	..	..	7.83
Runaway Bay	5.95	1.35	14	15	3.39
Knapdale	24.71	3.65	16	19	..
Alexandria	9.66	3.00	14	9	2.67
Bel-Air	10.15	2.25	14	20	..
Brown's Town	23.83	3.78	14	21	8.42
Watt Town, St. Ann	3.35	0.40	1	14	2.06
Home Castle	19.00	4.35	12	16	7.53
Richmond Pen	..	..	..	..	4.42
Arcadia	6.75	1.65	14	23	6.65
Vale Royal	6.42	2.17	14	16	7.38
Harmony Hall	6.69	1.80	13	13	5.85
Duncans	6.76	1.80	14	15	..
Clark's Town	10.40	2.64	14	10	..
Falmouth	3.31	1.12	14	7	4.53
The Hague	5.56	1.50	28	15	..
Wales	6.90	1.50	2	9	..
Canaan	..	..	..	..	4.96

STATIONS.	December, 1933.					STATIONS.	December, 1933.				
	Total Fall.	Greatest fall in 24 hours.		Days on which 0.01 or more fell.	Average.		Total Fall.	Greatest fall in 24 hours.		Days on which 0.01 or more fell.	Average.
		Amount.	Date.					Amount.	Date.		
NORTHERN DIVISION, contd.	Ins.	Ins.			Ins.	WEST-CENTRAL DIVISION, contd.	Ins.	In.			Ins.
Grange	6.58	1.23	12	15	..	Mandeville	0.96	0.30	20	10	2.95
Adelphi	4.00	0.85	12	10	3.95	Ulster Spring	5.77	0.86	14	11	4.08
Success	5.07	0.90	12	12	4.64	Marshall's Pen	1.08	0.32	4	6	2.81
Rose Hall	4.32	0.85	12	13	4.66	Greenvale	0.84	0.38	26	10	..
Cinnamon Hill	3.20	0.60	12	10	3.28	Albert Town	4.03	1.00	30	9	3.71
Tryall	4.01	1.00	12	12	4.73	Craig Head	3.06	1.00	13	7	..
Running Gut	4.15	1.10	11	9	4.51	Warsop	2.89	0.69	30	11	..
Spring Estate	5.09	1.54	12	14	2.88	Troy	3.12	1.00	6	5	3.05
Friendship	4.56	1.30	30	14	2.94	Wallingford	1.50	0.48	26	8	2.26
Retirement	3.25	0.41	12	16	..	Balaclava	0.99	0.45	27	5	2.16
Rose Mount	3.21	0.57	1	14	4.26	Wakefield	4.17	0.82	14	13	..
Montego Bay	1.47	0.38	29	9	2.85	Maggotty	1.24	0.71	26	4	2.88
Anchovy	1.63	0.42	12	10	..	Lacovia	2.87	1.53	26	5	..
Bamboo-Hanover	2.26	1.00	2	9	2.32	Ipswich	1.00	0.58	26	5	..
Blue Hole	0.65	0.15	2	5	3.04	Kempshot	4.70	0.82	30	16	5.03
Kew	2.02	0.38	1	14	3.37	Garlands	..	..	..	..	..
Lucea	1.73	0.45	3	7	3.17	Mocho, St. James	2.97	0.68	12	10	..
Haughton Court	0.54	0.32	12	5	..	Bandon Pen	4.24	0.82	1	11	..
Cousins Cove	0.82	0.48	22	4	2.14	Catadupa	1.33	0.33	12	10	2.88
Green Island	0.42	0.20	22	4	..	Cambridge, St. James	1.71	0.42	1	9	2.26
Haughton Hall	..	..	..	..	..	New Market	2.16	0.87	24	4	2.01
CENTRAL SUB-DIVISION.	..	..	..	..	..	Kew Park	0.63	0.20	1	5	2.56
Knollis	7.18	1.36	1	7	..	Montpelier	..	..	..	..	1.75
Highgate	7.82	2.20	31	18	..	The Bog	2.18	0.75	24	9	2.79
Rio Magno	..	..	..	..	..	Bethel Town Dist.	0.86	0.27	1	6	2.19
Riversdale	12.91	2.00	31	13	..	Burnt Ground	2.14	0.95	21	5	2.99
Headworks, R.C.C.	2.13	1.40	23	6	2.00	Haughton Grove	3.40	1.85	22	6	2.95
Bog Walk	5.49	1.62	31	9	..	Darliston	1.42	1.17	27	5	2.96
Linstead	6.42	1.35	1	11	3.37	Bluefields	3.75	1.34	23	7	2.67
Ewarton	7.17	1.46	15	13	..	Whithorn	1.52	0.84	1	5	2.49
Cave Valley	2.92	0.95	13	12	3.05	Water Works Pen	2.38	2.15	22	6	2.21
Guanaboa Vale	2.11	0.80	31	6	..	Askenish	0.50	0.25	30	3	2.33
Point Hill	4.79	1.27	31	11	4.43	Grange Hill	0.74	0.38	26	4	3.01
Brown's Hall	1.92	0.55	30	6	3.31	King's Vale	1.47	1.00	29	2	2.93
Bellas Gate	1.15	0.65	27	3	0.98	SOUTHERN DIVISION (S.)	..	..	..	..	..
Rock River	1.18	0.73	26	4	..	Morant Point L.H.	2.67	0.51	22	14	5.58
Crofts Hill	4.84	1.09	1	12	2.16	Golden Grove	5.69	1.60	24	12	..
Far Enough	4.76	1.55	1	11	..	Pleasant Hill	7.77	1.66	25	12	4.39
Suttons	1.29	0.40	26	9	..	East Prospect	9.29	2.83	31	17	4.65
Colonel's Ridge	1.99	0.59	1	9	..	Morant Bay	7.16	2.00	31	15	3.96
Chapelton	1.24	0.62	24	6	2.32	Aeolus Valley	..	..	..	..	..
Crooked River	1.32	0.41	1	8	..	Yallahs	..	..	..	..	..
James Hill	2.35	1.07	14	4	..	Easington	2.01	0.81	31	9	2.63
Frankfield	1.98	1.00	26	8	2.04	Mavis Bank	13.68	7.00	31	13	..
WEST-CENTRAL DIVISION (W.C.)	..	..	..	..	..	Bull Bay	1.68	0.95	26	3	1.07
Mocho, Clarendon	0.98	0.55	14	3	2.00	Dallas Castle	4.79	1.18	31	13	..
Clarendon Park	0.90	0.36	25	6	..	Gordon Town	11.63	4.88	31	9	2.93
Porus	1.71	0.88	24	6	..	Irish Town	17.48	7.52	31	17	3.11
Borobridge	3.42	1.12	1	6	..	Hope Gardens	5.53	2.11	31	14	2.58
Spaldings	1.40	0.44	12	6	2.13	Waireka	..	..	..	..	..
Williamsfield	2.07	0.58	26	13	..	Ivor	..	..	..	..	..
Brokenhurst	1.51	0.47	14	6	3.04	Barbican	6.21	2.48	28	11	..
Shooters Hill	1.65	1.15	24	4	2.16	Plumb Point L. H.	0.25	0.18	14	3	1.31
Lowe River	4.54	1.28	30	8	3.29	King's House Gar.	4.97	1.32	31	9	1.91
Christiana	2.18	0.45	1	11	2.93	Upper Kingston	2.95	1.32	28	10	0.73
Clifton Hill	1.40	0.67	1	4	1.57	Kingston P.W.O.	0.90	0.65	28	6	1.41
Kendal, Manchester	0.80	0.50	3	3	2.50	Halfway Tree	5.17	2.07	28	11	1.70
Moreworth	2.00	0.80	28	8	..	Clifton Pen	1.55	0.64	28	7	1.10
..	..	..	..	..	..	Red Hills	5.27	3.00	31	7	..

STATIONS.	December, 1933.					STATIONS.	December, 1933.				
	Total Fall.	Greatest fall in 24 hours.		Days on which 0.01 or more fell.	Average.		Total Fall.	Greatest fall in 24 hours.		Days on which 0.01 or more fell.	Average.
		Amount.	Date.					Amount.	Date.		
SOUTHERN DIVISION, contd.	Ins.	Ins.			Ins.	SOUTHERN DIVISION, contd.	Ins.	Ins.			Ins.
Quarantine Station	0.12	0.5	25	4	0.79	Great Valley, Man.	4.64	3.00	25	5	2.41
Hematine	2.63	1.36	23	9	1.34	Alligator Pond	2.16	0.75	28	4	1.97
Spanish Town	2.55	1.40	24	9	1.79	Fairfield	2.90	0.93	26	14	2.43
The Stewartry	2.47	0.51	31	9		Lititz	5.81	1.85	26	5	1.22
Hog Hole, St. Cath.	4.17	1.11	26	14	1.98	Myersville	3.44	1.40	14	8	
Old Harbour	2.90	1.00	2	5	2.33	Southfield, St. Eliz.	2.41	0.85	26	8	1.61
May Pen	1.11	0.38	1	4	2.00	Munro					
Glen Muir	1.50	0.60	14	4		Windsor, St. Eliz.	3.50	1.20	26	14	
Cottage	0.61	0.32	2	4		Torrington	3.21	1.10	23	8	2.42
Belle Plain	2.69	0.97	25	4		Santa Cruz	3.53	1.53	23	7	2.60
Milk River	0.73	0.48	29	2	1.82	Pedro Plains	5.73	1.44	14	5	1.44
Retrieve	2.15	0.65	25	4	1.25	Mountainside	2.94	1.50	26	3	1.29
Hog Hole, S. Man.	3.70	1.70	28	4	1.83	Fort Charles	3.22	0.84	23	8	
Stone's Hope	1.83	0.86	23	4	2.54	Black River	1.03	0.39	24	4	2.22
Newport, Man.	3.41	1.68	26	9	3.02	Font Hill	3.55	1.40	2	8	1.99
						Mount Edgecombe	2.63	1.37	2	8	2.36
						Sweet River	0.35			2	2.22
						Sav.-la-Mar	0.67	0.60	1	2	1.96
						Little London	0.43	0.22	1	4	2.17
						Retreat	0.61	0.53	24	3	2.21
						Negril Point L.H.	1.13	0.38	26	6	1.97

NOTES.

SHOCKS OF EARTHQUAKE IN DECEMBER, 1933.

COMPARATIVE TABLE OF RAINFALL AND RAINY DAYS.

DIVISIONAL AND ISLAND RAINFALL.	December.				Date.	Standard Time (Approx.)	Intensity.	Notes: where, etc.
	Rainfall.		Rainy Days.					
	1933.	Ave.	1933.	Ave.				
	Ins.	Ins.					None reported.	
North-Eastern	22.20	10.33	19	14				
Northern	6.57	5.02	12	9				
West-Central	2.08	3.26	7	7				
Southern	3.49	2.22	8	6				
The Island means	8.53	5.21	12	9				

N.B. IT IS PARTICULARLY REQUESTED TO SEND ALL RAINFALL POSTCARDS IN NOT LATER THAN THE 6TH EACH MONTH.

THE ISLAND—DECEMBER.

The mean monthly rainfall was, for the seventh consecutive month, above the average which was exceeded in all Divisions except the West-Central.

The greatest total fall for the month was 70.46 ins. at Balcarres in the North-Eastern Division and the heaviest fall in 24 hours was 11.89 ins. at Mount James in the same Division on the 31st.

The mean number of rainy days was 12, the average for the month being 9. The greatest number was 27 at Hope Bay in the North-Eastern Division.

The greatest precipitation appears to have occurred about the middle of the month and again towards the end, particularly on the 31st.

The mean rainfall in each parish is given below:—

		Inches.			Inches.
Kingston	..	1.37	St. James	..	3.76
St. Andrew	..	14.47	Hanover	..	1.48
St. Thomas	..	9.69	Westmoreland	..	1.37
Portland	..	29.44	St. Elizabeth	..	2.83
St. Mary	..	20.84	Manchester	..	2.13
St. Ann	..	15.16	Clarendon	..	2.02
Trelawny	..	5.52	St. Catherine	..	8.35

THE ISLAND RAINFALL FOR THE YEAR 1933.

The comparative Table (A) attached gives the mean monthly rainfall in each Division, with the respective totals, compared with the 60-year average, and shows a total excess of 42.89 inches.

The mean number of rainy days is also given and shows an excess of 16 over the 35-year average.

The mean rainfall per rainy day was 0.85 inch.

In the first half of the year the rainfall was 9% below the average, but in the second half it was 105% above—or more than double the average.

The following records were established during the year:—

- (1) The month of February, with a mean rainfall of 0.48 inch, was the lowest recorded for any month during the past 63 years.
- (2) The mean rainfall for July (11.44 ins.) is the highest recorded for that month in the past 63 years.
- (3) The mean rainfall for August (14.49 ins.) is the highest recorded for that month during the past 63 years.
- (4) The month of October with 28.43 ins. showed the highest mean recorded for any month during the past 63 years.
- (5) The total mean rainfall for the Island (116.53 ins.) is the highest recorded for the past 63 years the previous highest being 106.22 in 1916.
- (6) For the first time during the past 63 years the mean monthly rainfall exceeded the average for seven consecutive months—the previous highest being 3 months.
- (7) On the night of August 15–16 at Kingston, between 12.15 and 1.15 a.m. 4.35 inches fell, which is the highest recorded fall for 1 hour.

Table (B) gives the mean rainfall in the 14 parishes each month: Portland with 183.94 inches had the highest total for the year, St. Thomas was next with 145.43 inches, and St. Andrew third with 143.20 inches. Kingston with 78.46 inches was the lowest.

Table B, which has been prepared for the fourteen parishes, will be found to have small differences with Table A for the respective Divisions. Table B shows the mean rainfall for the year 1933, as 114.78 ins., whereas Table A shows the total as 116.53 ins. Likewise with those figures relating to the several months, such discrepancies are inevitable. Table B however, gives the parish rainfall totals which enables a summary to be given below, shewing the totals in consecutive order starting from the greatest and terminating with the least, in order that the incidence of the distribution of the respective heavy rainfalls may be more satisfactorily studied. In addition to these figures are given the approximate percentages either above or below that of the 1933 mean total rainfall of 114.78 ins.

Summary shewing the consecutive order of Parish Rainfall.

Parish.	Mean total Rainfall for the year 1933.	Percentage above the 1933 mean, Approx.	Percentage below the 1933 mean, Approx.
	Ins.		
Portland	183.94	60%	..
St. Thomas	145.43	26	..
St. Andrew	143.20	24	..
Manchester	126.31	10	..
St. Mary	123.75	8	..
St. Catherine	115.07	1%	..
Clarendon	113.30	..	1%
Westmoreland	108.91	..	5
St. Ann	98.15	..	15
Hanover	96.41	..	16
St. James	91.94	..	20
St. Elizabeth	91.42	..	21
Trelawny	90.53	..	21
Kingston	78.46	..	32%

As a matter of comparison if the parishes of, say, Portland, St. Thomas, St. Andrew, St. Mary and St. Catherine of the eastern section of the Island be combined, it will be readily apparent that the precipitation for the year was about 50 per cent. greater than any five parishes of the western section, combined.

It will be noted, from this summary, that every parish has experienced a record of rainfall total in excess of the 60-year annual mean for the whole Island of 73.64 inches.

WEATHER DISTURBANCES.

Under this heading reference should be made to the individual Weather Reports, from the month of June to October, 1933, for particulars. It may, however, be stated that there were fifteen hurricanes or weather disturbances threatening this region during the 1933 hurricane season. No parallel weather condition is to be found in all past records.

CITY OF KINGSTON.

In the month of December the total rainfall amounted to 0.90 inch, shewing about 64% of the 60-year average of 1.41 inch. There were 6 rainy days, as against the 49-year average of 4.6. The greatest fall in 24 hours was 0.65 inch on 28th. The upper boundary of Kingston gauged 2.95 ins., with 10 rainy days. Distant rain was observed to northward on 8 days, to northeastward on 5 days and to eastward on one day. Moderate SE rainsquall on 28th.

The mean barometric pressure was 29.968 ins., and the 33-year normal 29.941 ins., shewing 0.027 inch above the normal. The highest barometer reading was 30.041 ins. on 19th at 3 p.m., and the lowest 29.882 ins. on 6th at 7 a.m. (corrected for diur. var.).

The mean monthly temperature, based upon four observations per day, was 76.0 degs., the 33-year normal being 76.8 degs., shewing 0.8 deg. below the normal. Highest maximum temperature 88.2 degs. on 17th, and the lowest minimum was 63.1 degs. on 9th, on the other hand the lowest maximum was 80.9 degs. on 1st, and the highest minimum was 71.8 degs. also on 1st. The 1st December was overcast for the most part. The greatest range of temperature was 23.3 degs. on 9th and the least range 9.1 degs. on 1st. The maximum was below 90 degs. throughout, and the minimum was below 70 degs. on 25 days.

Mean daily miles of wind registered was 130: the 20-year normal being 182, shewing about 72% of the normal. Fresh "northers" on 8th, 10th and 11th.

Distant lightning at night to northward 3 times. Distant thunderstorm to north once. Moderate local thunderstorm on 15th intense on 31st.

Mean relative humidity, 80% the normal being 80%. The mean 7 a.m. 88%, and mean 3 p.m. 66%. Lowest 7 a.m. 74% on 9th, and lowest 3 p.m. 42% on 18th.

The sky was overcast in the forenoon on 17 occasions, and in the afternoon on 14.

The total evaporation for the month was 5.48 ins., the 10-year normal being 4.37 ins.

Mean daily number of sunshine hours 6.9.

CITY OF KINGSTON, METEOROLOGICAL RESULTS FOR YEAR 1933.

The recurrent Table (C), giving the meteorological results for the year 1933, is appended. The mean barometric pressure for 7 a.m. was 29.931 ins. and for the 3 p.m. 29.877 ins. By applying the corrections for the diurnal variation to each, a mean of 29.915 ins. is derived, which is 0.017 inch below the 33-year normal of 29.932 ins.

The year 1933 has shewn, consistently, for each month, with the exception of February and December, a barometric pressure below the normal as tabulated below:

	Inch.		Inch.
January	- 0.025	July	- 0.027
February	+ 0.013	August	- 0.027
March	- 0.015	September	- 0.025
April	- 0.034	October	- 0.061
May	- 0.012	November	- 0.025
June	- 0.043	December	+ 0.027

These figures give a mean for the whole year 1933, of 0.017 inch below that of the 33-year normal. The rainfall for February and December being so very deficient, evidently increased the barometric pressure. There were marked departures in June of 0.043, and in October of 0.061 inch; the heaviest rains were recorded during these two months.

Almost similar barometric conditions prevailed in the years 1931 and 1932.

The month of February recorded the highest mean pressure of 29.994 ins., and October, the lowest mean of 29.804 ins., owing to a weather disturbance appearing to the south of Jamaica, during the early days of the month, also to the hurricane crossing western Jamaica on 29th October.

The mean annual temperature, based upon four observations per day, was 78.3 degs., or 0.4 deg. below the 33-year normal of 78.7 degs. The highest maximum temperature was 92.3 degs. on April 13th, and the lowest minimum temperature 63.1 degs. on December 9th. The greatest monthly extreme range was 25.6 degs. in March, and the lowest range 19.7 degs. in October. The mean monthly extreme range was 23.0 degs., or 0.2 deg. greater than the year previous.

The anemometer records shew a mean total miles of wind per day of 177, as compared with the 20-year normal of 182. The months of February, April and October were above the normals. The months of January, June, August, September, November and December were below, and the months of May and July registered normals. The maximum mean of 227 miles occurred in July, and the minimum mean of 125 occurred in November.

The mean relative humidity for the 7 a.m. observations was 83%, which shews one per cent. above the normal of 82%, and the 3 p.m. shews 68%; the normal being 69%. The general mean for the year gives 79%, which corresponds with the 33-year normal of 79%.

The total rainfall for the year, as registered at the Public Works Building, Port Royal Street, Kingston, was 73.53 ins.; the 60-year normal being 31.57 ins. It will be seen that the year 1933 gauged more than double the normal. For the past 63 years there was not to be found such a high record. The next totals below are given as 69.34 ins. in the year 1879, and 68.11 ins. in the year 1909 when there were excessive floods in November.

The year 1933 will, therefore, now claim to be the greatest rainfall year on record. From January to May, as well as December the rainfall was, however, very deficient, for during these six months the aggregate shews only 5.29 ins., whereas from June to November (6 months) a total of 68.24 ins. fell. There were numerous weather disturbances reported to be active in these waters, from June to October. October gauged the greatest total fall of 17.98 ins., and February had no rain. The month of October has recorded higher totals, such as in the year 1879 with 30.67 ins. 1898 with 23.45 ins. and 1904 with 21.65 ins.

The total number of rainy days was 105, as against the 49-year average of 79. The greatest number of rainy days in one month was in October shewing 18 and February had no rain. The upper boundary of Kingston (143½ East Street) which is about one mile to the NE of the raingauge at the Public Works Building in Port Royal Street, registered a total of 85.93 ins., with 117 rainy days.

The amount of cloudiness for the year was about 10% above the normal.

The total evaporation for the year 1933 was 64.43 ins., as compared with the 10-year average of 71.71 ins.

General notes appertaining to weather conditions, each month, are to be found at the end of Table (C).

CAYMAN ISLANDS.

Government House, Georgetown, Grand Cayman.—Total rainfall for December, 1933, 0.23 ins. Greatest fall in 24 hours 0.23 in. on 30th with 1 rainy day.

J. F. BRENNAN,
Government Meteorologist.

Kingston, January 20th, 1934.

TABLE (A)—THE ISLAND RAINFALL, 1933 (In Inches).

Month.	Divisions.				The Island.		Rainy Days.	
	N.E.	N.	W.C.	S.	1933.	Average for 60 years	Means for 1933.	Average for 35 years.
January	1.86	0.90	1.65	1.32	1.43	4.00	5	8
February	0.85	0.25	0.50	0.32	0.48	3.13	3	7
March	7.60	3.06	3.53	2.91	4.30	3.35	9	8
April	0.68	1.12	2.60	1.08	1.37	4.77	4	9
May	4.62	4.50	12.33	3.60	6.26	8.52	11	12
June	15.84	12.19	14.17	12.82	13.76	6.60	17	10
July	12.93	8.09	12.62	12.11	11.44	4.76	11	9
August	18.98	12.14	14.72	12.10	14.49	6.93	16	11
September	12.29	7.63	15.58	12.12	11.91	7.94	16	13
October	31.60	21.51	34.33	26.28	28.43	10.14	17	14
November	25.04	11.32	10.95	9.23	14.13	8.29	17	12
December	22.20	6.37	2.08	3.49	8.53	5.21	12	9
Total 1933	154.49	89.08	125.16	97.38	116.53	..	138	..
Total, 60-year average	99.75	55.65	87.50	51.64	..	73.64	..	122

CORRIGENDA.

W.R., 677 May, 1933, Page 1, Maximum temperature read 91.4° instead of 94.4°.

From W.R. 673, January, 1933, to W.R. 680, August, 1933, Page 4, "Comparative Table of Rainfall" read 1933 instead of 1932.

TABLE B—MEAN RAINFALL, IN INCHES FOR EACH PARISH FOR THE YEAR 1933.

Parish.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Kingston	0.49	0.02	1.04	0.08	2.44	12.43	11.08	14.14	9.31	20.04	6.02	1.37	78.46
St. Andrew	0.91	0.06	3.17	0.60	5.79	14.93	13.49	21.09	13.99	36.32	18.38	14.47	143.20
St. Thomas	1.38	0.91	3.78	1.00	4.15	20.38	18.52	18.82	16.03	33.02	17.55	9.69	145.43
Portland	3.32	1.77	12.33	0.48	4.17	16.67	15.39	17.56	12.46	32.81	37.54	29.44	183.94
St. Mary	1.96	0.90	6.48	0.45	3.36	14.10	6.65	16.07	9.81	24.30	18.83	20.84	123.75
Ann	1.60	0.51	4.36	0.80	4.59	9.68	7.22	13.97	6.76	20.58	12.92	15.16	98.15
Trelawny	0.69	0.16	1.96	1.16	6.78	12.77	7.69	10.66	6.76	25.11	11.27	5.52	90.53
St. James	0.22	0.15	2.66	2.17	8.05	12.67	7.00	11.03	10.92	21.26	12.05	3.76	91.94
Hanover	0.43	0.17	2.93	2.66	12.44	15.40	9.71	12.40	9.58	18.61	10.60	1.48	96.41
Westmoreland	2.44	0.55	6.90	2.74	11.41	14.71	10.12	11.42	12.90	25.19	9.16	1.37	108.91
St. Elizabeth	1.99	0.64	3.73	1.73	6.32	10.49	7.86	8.99	11.78	26.30	8.76	2.83	91.42
Manchester	1.51	0.39	1.95	1.40	5.85	13.65	16.98	15.22	19.81	37.03	10.39	2.13	126.31
Clarendon	0.54	0.17	2.58	1.16	5.60	14.05	17.91	13.62	12.15	34.72	8.78	2.02	113.30
St. Catherine	0.77	0.28	4.25	1.12	4.42	15.31	11.37	19.16	9.64	29.58	10.82	8.35	115.07
Means	1.30	0.48	4.15	1.25	6.10	14.10	11.50	14.58	11.58	27.49	13.79	8.46	114.78

KINGSTON, JAMAICA.—TABLE (C)—METEOROLOGICAL RESULTS FOR THE YEAR 1933.

(FOR ELEVATIONS, SEE FOOT NOTE.)

Month.	Barometer Pressure.		TEMPERATURE. (FAH).						Extremes for Month.			Dewpoint and Relative Humidity.			Rain-fall.	Rainy Days.			
	7 a.m.	3 p.m.	Mean.	7 a.m.	3 p.m.	Max.	Min.	Range.	Max.	Min.	Range.	7 a.m.	3 p.m.	%			°	%	
	Ins.	Ins.	°	°	°	°	°	°	°	°	°	°	°	°			°	°	No.
January	29.966	29.905	76.2	68.8	84.4	85.9	67.7	18.2	89.9	64.8	25.1	63	82	69	60	69	0.67	2	
February	30.010	29.950	76.2	68.5	84.7	86.2	67.4	18.8	89.5	65.1	24.4	62	81	69	59	69	0.00	0	
March	29.967	29.914	77.2	71.4	84.1	86.1	69.1	17.0	91.2	65.6	25.6	65	80	69	62	69	0.82	6	
April	29.928	29.870	78.9	74.8	85.2	86.9	70.7	16.2	92.3	67.7	24.6	66	75	70	62	70	0.05	2	
May	29.916	29.869	80.4	78.3	84.6	87.7	73.2	14.5	91.4	67.6	23.8	69	74	72	67	72	2.85	7	
June	29.901	29.864	80.2	77.8	84.4	87.3	73.5	13.8	91.2	70.2	21.0	72	84	74	72	74	11.83	14	
July	29.935	29.907	80.7	77.5	85.7	88.0	73.5	14.5	92.4	69.3	23.1	71	81	74	69	74	9.86	10	
August	29.903	29.878	79.9	76.7	83.9	87.9	73.2	14.7	90.8	69.7	21.1	72	84	74	74	74	13.50	11	
September	29.968	29.837	78.7	75.0	83.1	86.2	72.4	13.8	90.9	69.1	21.8	71	89	74	76	74	8.98	14	
October	29.814	29.770	78.3	75.1	82.1	85.2	72.7	12.5	90.0	70.3	19.7	72	90	74	77	74	17.98	18	
November	29.880	29.829	76.9	72.5	82.2	84.5	70.4	14.1	88.5	67.1	21.4	70	91	73	74	70	6.09	15	
December	29.979	29.929	76.0	70.1	82.6	85.2	68.0	17.2	88.2	63.1	25.1	66	88	70	66	70	0.90	6	
Mean	29.931	29.877	78.3	73.9	83.9	86.4	70.9	15.5	90.5	67.5	23.0	68	83	72	68	72			
Totals																		73.53	105

Note.—Observations were made at 148½ East Street as follows—Barometer 111 ft. above sea-level. Thermometers 107 ft. above sea-level, and 4 ft. above ground (since the year 1907); also clouds and their directions. At Public Works Building, Port Royal Street as follows:—Elevation above sea-level rain gauge 57.28 ft. Anemometer 69.38 ft. wind vane 70.88 ft. Standard Barometer at Public Works Building 24 ft. 75th Meridian Time adopted.

KINGSTON, 1933—MEAN RESULTS, contd.

Month.	Wind Miles per diem.	Wind from and Miles per hour.			Clouds: in Tenths.						Weather Conditions, etc.
		7 a.m.	3 p.m.	11 p.m.	Lower.		Middle.		Upper.		
					7 a.m.	3 p.m.	7 a.m.	3 p.m.	7 a.m.	3 p.m.	
January	156	N. 4.4	S.E. 13.3	N. 5.1	2.4	0.9	2.2	0.5	2.6	0.4	Rainfall somewhat below normal. Distant rain to northward and north-eastward on two days and to S.E. on one day.
February	181	N. 3.9	S.E. 15.4	N. 4.2	0.7	1.7	0.6	1.7	1.4	0.9	There was no rainfall in February and such is of rare occurrence. During the last 63 years it occurred only twice; in 1897 and 1901. Distant lightning to northward.
March	196	N. 6.2	S.E. 14.2	N. 5.3	2.7	2.9	1.0	1.9	0.5	0.2	Rainfall below normal. Distant rain to northward observed on 7 days, to N.E. on 3 days and to eastward on 1 day.
April	193	E.N.E. 4.6	S.E. 14.2	N.E. 4.8	0.4	1.8	1.1	1.7	0.4	0.4	Rainfall much below normal (1.17 inch).
May	208	E.N.E. 4.5	S.E. 17.7	S.E. 5.4	1.0	3.7	0.6	1.1	1.6	2.0	Rainfall below the normal (4.02 inches). Distant rain to N on 8 days, N.E. 5 days, and to N.W. on 3 days, S.E. wind continued after 7 p.m. on 11 occasions and throughout on the 16th S.E. rainsqualls on 14th and 15th.
June	185	E.S.E. 4.2	S.E. 14.1	S.E. 4.3	2.9	4.5	0.8	0.8	1.8	1.9	Rainfall over three times the normal (3.51 ins.) giving the greatest fall for the month of June since 1915, when 14.51 inches were registered. Distant rain to N. 6 days, to N.E. 2, E.S.E. 1, to S.E. 3, S. 1, and S.W. 1.
July	227	E. 5.8	S.E. 16.2	S.E. 5.4	2.1	2.9	0.9	1.1	2.5	3.2	Rainfall over 6 times the normal of 1.54 inch. This is the greatest fall in July for the past 63 years. Distant lightning to ENE on 2 days. Distant thunderstorm to N. on 5 days. Intense local thunderstorm on 1st and 16th.
August	166	E.N.E. 4.6	S.E. 12.6	E. 4.9	2.3	4.7	2.5	1.8	2.5	3.0	Rainfall considerably in excess of normal (3.60 inches). The total 13.50 inches for the month of August was exceeded only by August, 1879, when 13.83 inches fell. Intense local thunderstorm lasting for about 5 1/2 hours on night of 15th and 16th.
September	176	N.E. 5.2	S.E. 11.0	N.E. 4.6	2.8	4.5	0.8	1.3	2.7	3.2	Rainfall more than double the 60-year normal of 3.87 ins. Distant rain to N. on 13 days, to N.E. 7 days, E. 1 day, to S. 1 day and N.W. 2 days, S.E. rainsqualls on 7th, 8th, 9th, 16th and 19th. Heavy sea to S on 8th and 9th.
October	177	S.E. 6.4	S.S.E. 9.9	N.E. 5.3	4.3	5.7	0.4	1.1	1.5	1.8	Rainfall more than double the 60-year normal of 7.11 inches. Greater totals for the month of October were recorded only in the years 1879, 1897 and 1905.
November	125	N. 4.9	S. 8.2	N. 4.0	3.3	5.2	0.1	2.1	1.3	0.6	Rainfall more than twice the normal. Distant rain to northward on 15 days, to N.E. on 9 days and to eastward on 3 days. moderate local thunderstorm on 2 days. Moderate "norther" on 12th.
December	130	N. 4.5	S.S.E. 7.8	N. 4.7	3.6	1.9	0.5	3.7	1.0	1.3	Rainfall about three-fifths of normal. Distant rain to northward 8 days, N.E. 5, and to E. 1. Moderate rainsquall to S.E. on 28th.
Means	177	N.E. 4.9	S.E. 12.0	N. 4.8	2.4	3.4	1.0	1.6	1.6	1.6	Rainfall for the year more than double the normal.