

METEOROLOGY.

Rainfall—Rabaul District.

Climatological conditions have a decided influence on the successful cultivation of many agricultural crops, as for example a dry season is required at blossoming time for the successful cultivation of mangoes and at harvesting time for kapok, coffee, maize, cacao, tea, &c.

Combined with a consideration of soil conditions, a sound knowledge of climatological factors will permit of defining areas in which certain crops are likely to be more successful than others, and where some crops are likely to be entirely unsatisfactory. Altitude will, of course, limit the successful cultivation of certain crops.

Such considerations are well recognized factors in the technicalities of tropical agriculture and should be carefully studied by all those proposing to launch into agricultural pursuits.

Much more and fuller data on meteorological questions have yet to be obtained for this Territory before its full application can be utilized for agriculture, and in this connexion valuable assistance can be rendered by non-official observers in different parts of the Territory, as has been done in some cases, by supplying rainfall figures and other data enabling us to correlate the various parts of the several districts.

It may be added that the Dutch East Indies have long recognized the value of accurate meteorological data, and as a result of their correlations have been enabled to indicate definite climatic zones in Java suited to particular crops.

From time to time it is proposed to publish in this *Gazette* meteorological information as to how it affects different parts of this Territory, and in this issue tables of the rainfall in the Rabaul District of New Britain appear.

The central recording station is at Rabaul, the capital of New Guinea, which is situated $4^{\circ} 12'$ south latitude by $152^{\circ} 11'$ east longitude in the well sheltered horseshoe-shaped Simpson Harbour. Rabaul is outside the cyclone and typhoon belt. Its mean temperature is 81.5° Fahrenheit, with a humidity by 9 a.m. readings of 76%. It has no cool season and rain falls throughout the year.

The altitude where the meteorological instruments and the rain gauge are kept in the Rabaul Botanic Gardens is approximately 40 ft. above sea level.

The rainfall in the Rabaul District is comparatively low compared with other parts of the Territory, and would no doubt be less were it not for the presence of the surrounding hills such as Mt. Mother (Kabin) 2,247 ft., North Daughter (Balauataman) 1,768 ft., South Daughter (Turanguna) 1,621 ft., and Mt. Varzin (Vunakokor) 1,985 ft.

This district has two clearly defined seasons, the north-west monsoons from December to April, known as the wet season, and the dry season, May to November, when the south-east trade winds prevail and conditions occasionally approaching a drought are experienced as existed in 1914, when the Australian troops took possession, and in 1917 and 1931.

In the township of Rabaul well-water is available to augment the natural rain supply during any dry periods, but this well-water obtained from seepage is not suitable for drinking purposes unless sterilized.

At present tank storage water collected from the roofs of buildings constitutes Rabaul's only supply of drinking water for household purposes, but for the gardens a successful means of watering is that of the sprinkler type operated by a Macson pump, as used by the Rabaul Bowling Club, from a well.

PHASES OF THE MOON, 1936.

RABAU.

Jan. 2 First Quarter ..	1.15 a.m.	July 5 Full Moon ..	3.34 a.m.
9 Full Moon ..	4.15 a.m.	12--Last Quarter ..	2.28 a.m.
17 Last Quarter ..	5.41 a.m.	19--New Moon ..	1.19 a.m.
24--New Moon ..	5.18 p.m.	26--First Quarter ..	10.36 p.m.
31--First Quarter ..	9.36 a.m.	12--Perigee ..	7.6 a.m.
15 Apogee ..	9.48 a.m.	26--Apogee ..	1.6 a.m.
27 Perigee ..	3.30 a.m.		
Feb. 7--Full Moon ..	9.19 p.m.	Aug. 3--Full Moon ..	1.47 p.m.
16--Last Quarter ..	1.45 a.m.	10--Last Quarter ..	6.59 a.m.
23 New Moon ..	4.42 a.m.	17--New Moon ..	1.21 p.m.
30 First Quarter ..	7.28 p.m.	25 First Quarter ..	3.49 p.m.
12 Apogee ..	4.6 a.m.	7--Perigee ..	1.48 a.m.
21 Perigee ..	8.24 a.m.	22--Apogee ..	7.12 p.m.
Mar. 8--Full Moon ..	3.13 p.m.	Sept. 1--Full Moon ..	10.47 p.m.
16--Last Quarter ..	6.35 p.m.	8--Last Quarter ..	1.14 p.m.
23 New Moon ..	2.14 p.m.	16--New Moon ..	3.41 a.m.
30--First Quarter ..	7.22 a.m.	24--First Quarter ..	8.12 a.m.
10--Apogee ..	2.18 p.m.	3--Perigee ..	6.48 p.m.
23--Perigee ..	7.24 a.m.	19--Apogee ..	10.42 p.m.
Apr. 7--Full Moon ..	8.46 a.m.	Oct. 1--Full Moon ..	7.1 a.m.
15--Last Quarter ..	7.21 a.m.	7--Last Quarter ..	10.28 p.m.
21 New Moon ..	10.32 p.m.	15--New Moon ..	8.20 p.m.
28--First Quarter ..	9.16 p.m.	23--First Quarter ..	10.53 p.m.
6 Apogee ..	3.36 p.m.	30--Full Moon ..	3.58 p.m.
21 Perigee ..	6.12 a.m.	2--Perigee ..	1.12 a.m.
		16--Apogee ..	6.30 p.m.
		30 Perigee ..	12.36 p.m.
May 7--Full Moon ..	1.1 a.m.	Nov. 6--Last Quarter ..	11.28 a.m.
14--Last Quarter ..	4.12 p.m.	14--New Moon ..	2.42 p.m.
21 New Moon ..	6.34 a.m.	22--First Quarter ..	11.10 a.m.
28--First Quarter ..	12.46 p.m.	29--Full Moon ..	2.42 a.m.
3 Apogee ..	10.24 p.m.	12--Apogee ..	7.48 p.m.
19 Perigee ..	12.36 p.m.	26 Perigee ..	12.42 a.m.
31--Apogee ..	12.54 p.m.		
June 5--Full Moon ..	3.22 p.m.	Dec. 6--Last Quarter ..	4.20 a.m.
12--Last Quarter ..	10.5 p.m.	14--New Moon ..	9.25 a.m.
19--New Moon ..	3.14 p.m.	21--First Quarter ..	9.30 p.m.
27 First Quarter ..	5.23 a.m.	28--Full Moon ..	2.0 p.m.
16--Perigee ..	7.0 a.m.	10--Apogee ..	6.6 a.m.
28 Apogee ..	6.36 a.m.	26--Perigee ..	6.36 a.m.

(Apogee--The point in the moon's orbit farthest from the earth.)
 (Perigee--The point in the moon's orbit nearest the earth.)

ECLIPSES, 1936.

There will be four Eclipses during 1936, two of the Sun and two of the Moon.

I. --A total Eclipse of the Moon, January 9th; visible in the Indian Ocean, Australia, Polynesia and the western part of the Pacific Ocean. Magnitude of Eclipse, 1.022. (Moon's diameter, 1.0.)

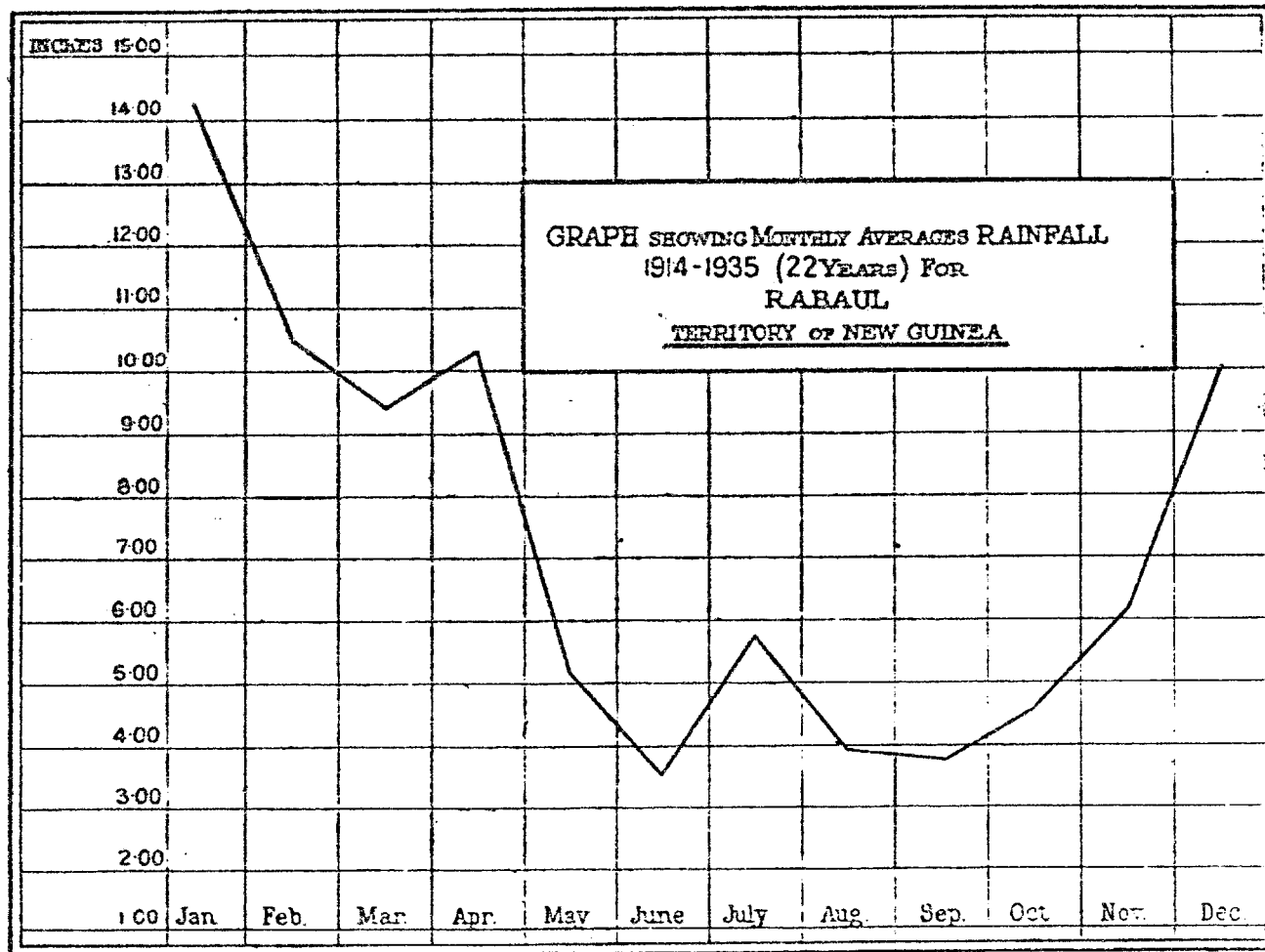
II. --A total Eclipse of the Sun, June 19th; not visible in Australia.

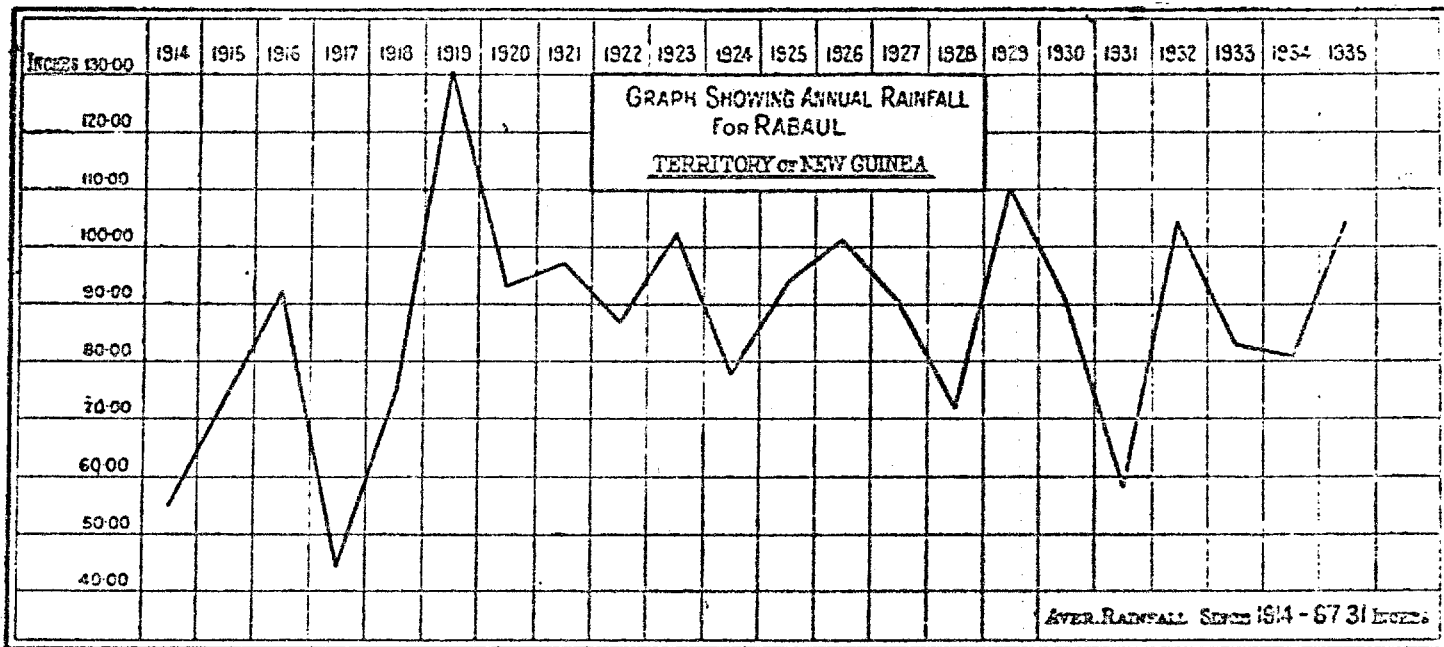
III. --A partial Eclipse of the Moon, July 5th; visible in the Indian Ocean, Australia and south-western parts of the Pacific Ocean. Magnitude of Eclipse, 0.272. (Moon's diameter, 1.0.)

IV. --An annular Eclipse of the Sun, December 14th; visible in Australia. The Eclipse begins at sunrise and will be visible in the eastern portion of Australia as a partial Eclipse only.

MONTHLY AND YEARLY RAINFALL TOTALS AT RABAU.
(IN POINTS) STATION—BOTANIC GARDENS.

Year.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly Total.
1914	1,168	1,281	803	453	356	79	9	103	32	62	228	866	5,472
1915	922	1,265	..	482	627	646	518	369	638	224	266	1,428	7,325
1916	3,774	780	607	445	342	150	126	217	648	481	703	952	9,236
1917	936	399	777	838	96	207	104	170	140	79	220	480	4,432
1918	477	1,017	1,128	269	576	657	940	344	95	221	686	993	7,403
1919	2,754	1,407	2,223	1,647	1,088	618	44	326	603	383	340	1,622	13,059
1920	478	1,046	391	1,253	1,081	461	537	625	502	739	650	1,568	9,329
1921	1,423	338	452	1,626	487	168	893	202	715	1,171	1,400	881	9,756
1922	1,109	964	871	1,173	316	224	930	604	362	143	1,002	1,000	8,698
1923	1,595	2,334	1,999	425	666	778	333	401	71	532	571	480	10,225
1924	2,336	1,184	611	454	104	240	370	36	543	295	946	713	7,838
1925	839	1,792	979	1,837	539	366	312	738	242	460	230	1,008	9,362
1926	1,374	643	1,369	1,137	780	424	1,221	738	417	485	721	736	10,065
1927	1,224	1,579	564	1,044	265	172	692	590	398	676	439	1,308	9,051
1928	970	463	463	1,061	513	222	493	589	463	1,186	311	568	7,250
1929	848	1,234	1,231	933	1,075	762	558	673	458	1,078	999	1,006	10,975
1930	846	898	939	901	1,127	114	1,800	361	88	88	283	1,612	8,997
1931	875	727	903	1,017	148	310	160	242	101	93	444	577	3,801
1932	1,867	1,978	532	1,613	74	266	837	268	280	649	796	1,322	10,442
1933	2,920	882	959	1,664	250	211	178	314	294	140	173	366	8,349
1934	838	395	837	913	592	346	386	327	688	507	792	1,477	8,118
1935	1,639	512	2,010	1,292	236	152	1,367	438	472	386	1,329	819	10,852
Average for 22 years	14.23	10.53	9.42	10.21	5.15	3.54	5.82	3.89	3.75	4.68	6.12	9.98	87.30





METEOROLOGICAL RECORDS.

KEHAVAT DEMONSTRATION PLANTATION (NORTH COAST, ON KEHAVAT RIVER AND WEBERDAFEN).

Month.	1934.		Rainfalls.		Wet Days.	
	Rainfall.	Wet Days.	Period.	Average.	Period.	Average.
			Years.		Years.	
January	735	12	5	11.07	5	20.4
February	412	18	5	8.16	5	19.
March	413	15	5	7.71	5	19.4
April	931	20	5	12.52	5	22.2
May	706	23	5	6.83	5	20.8
June	742	19	5	6.28	5	17.8
July	1,044	30	5	7.51	5	20.
August	601	24	5	4.48	5	17.6
September	1,368	24	5	6.64	5	15.6
October	1,226	21	5	8.31	5	17.4
November	1,828	25	5	11.83	5	20.4
December	967	23	5	8.65	5	22.8

Average Annual Rainfall for 5 years, 1930 to 1934—90.99 inches. Rainfall for 1934—110.63 inches.

KOKOPO (GOVERNMENT SUB-STATION, SOUTH COAST).

Month.	1934.		Rainfalls.		Wet Days.	
	Rainfall.	Wet Days.	Period.	Average.	Period.	Average.
			Years.		Years.	
January	960	10	8	10.86	8	15.1
February	226	8	8	70.9	8	15.2
March	233	8	8	10.74	8	16.1
April	410	9	8	7.41	8	15.7
May	536	10	8	6.04	8	11.0
June	513	10	8	4.30	8	9.2
July	274	11	8	6.68	8	12.7
August	593	10	8	7.26	8	11.5
September	318	10	8	3.44	8	8.5
October	418	7	8	4.03	8	8.9
November	439	11	8	6.24	8	10.9
December	881	15	8	11.94	8	12.7

Average Annual Rainfall for 8 years, 1927 to 1934—86.03 inches. Rainfall for 1934—5,801 inches.

RAPOPO PLANTATION (2 MILES EAST OF KOKOPO).

Month.	1934.		Rainfalls.		Wet Days.	
	Rainfall.	Wet Days.	Period.	Average.	Period.	Average.
			Years.		Years.	
January	1,178	10	2	13.21	2	12.5
February	416	9	2	5.34	2	7.5
March	583	10	2	6.54	2	9.0
April	788	11	2	8.20	2	13.0
May	581	12	2	4.34	2	8.0
June	563	11	2	5.10	2	9.0
July	461	17	2	2.84	2	11.0
August	914	11	2	8.47	2	10.5
September	660	12	2	4.46	2	8.5
October	485	8	2	2.79	2	5.5
November	600	14	2	3.62	2	9.5
December	1,157	12	2	8.27	2	11.5

Average Annual Rainfall for 2 years, 1933 to 1934—73.16 inches. Rainfall for 1934—83.80 inches.

TOBERA PLANTATION (ON HEIGHTS BEHIND KOKORO).

Month.	1934.		Rainfalls.		Wet Days.	
	Rainfall.	Wet Days.	Period.	Average.	Period.	Average.
			Years.		Years.	
January	848	13	4	8.00	4	19.2
February	638	11	4	8.68	4	17.2
March	779	15	4	7.43	4	20.2
April	459	15	4	11.07	4	20.2
May	613	17	4	3.20	4	11.5
June	436	13	4	3.28	4	13.
July	502	22	4	7.18	4	15.
August	606	16	4	4.94	4	10.5
September	463	19	4	3.58	4	12.5
October	431	9	4	3.05	4	9.05
November	716	18	4	6.71	4	16.7
December	853	21	4	7.08	4	19.2

Average Annual Rainfall for 4 years, 1931 to 1934—75.14 inches. Rainfall for 1934—73.44 inches.

WATNABARA, DUKE OF YORK ISLANDS (METHODIST MISSION STATION).

Month.	1934.		Rainfalls.		Wet Days.	
	Rainfall.	Wet Days.	Period.	Average.	Period.	Average.
			Years.		Years.	
January	535	9	11	12.41	11	21.
February	452	10	11	10.46	11	17.2
March	868	8	11	9.79	11	18.3
April	403	12	11	11.75	11	18.2
May	646	11	11	7.63	11	15.1
June	533	15	11	9.16	11	18.8
July	1,144	20	11	10.95	11	19.1
August	1,030	18	11	10.60	11	17.2
September	1,051	16	11	8.06	11	14.1
October	705	16	11	8.74	11	13.6
November	756	10	11	7.56	11	13.7
December	1,360	15	11	9.06	11	14.9

Average Annual Rainfall for 11 years, 1924 to 1934—116.06 inches. Rainfall for 1934—95.37 inches.