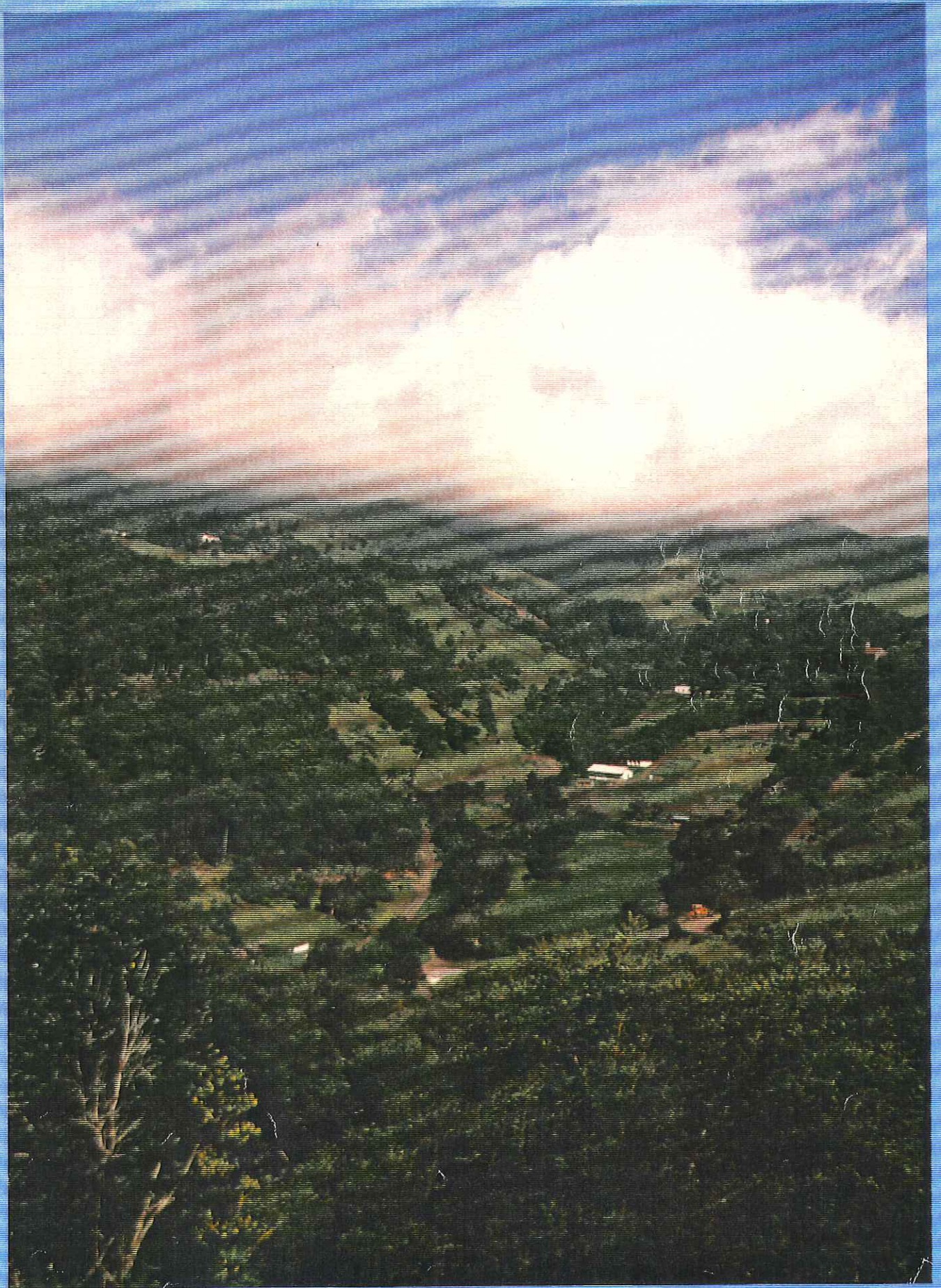


1. K. M.

La Madhuera



The Agricultural Climate
of
St Helena
(with reference to Ascension)

by
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London

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Agriculture and Forestry
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UNITS OF MEASUREMENT

$$1 \text{ mm} = 0.039 \text{ inches}$$

$$1 \text{ m} = 3.28 \text{ feet}$$

$$1^{\circ}\text{C} = 1.8^{\circ}\text{F}$$

$$\text{Degrees C} = \text{Degrees F} \times 1.8 + 32$$

$$1 \text{ km/day} = 0.624 \text{ miles/day}$$

$$1 \text{ km/hr} = 0.624 \text{ miles/hour}$$

$$= 0.5396 \text{ knots}$$

$$= 0.28 \text{ m/sec}$$

$$1 \text{ m/sec} = 2.24 \text{ miles/hour}$$

$$1 \text{ ha} = 2.47 \text{ acres}$$

$$1 \text{ MJ (mega joule)} = 1.1 \text{ kw hours} = 3754 \text{ Btu}$$

>

$$1 \text{ MJ/m}^2 = 0.275 \text{ kwh/m}^2$$

WEATHER RECORDS

	St Helena		Ascension	
	quantity	date	quantity	date
Most rainfall in 24 hrs (mm)	112.5	31.7.1964	317.0	4.3.1984
in one month (mm)	346.2	3.1957	523.0	6.1859
in one year (mm)	1450.0	1961	1427.0	1887
Least rainfall in one month (mm)	0.0	many times	0.0	many times
Least rainfall in one year (mm)	84.1	1860	-	-
Most raindays in one year	291	1903	-	-
Least raindays in one year	34	1860	-	-
Highest av annual temp (°C)	24.9	1886&1888	26.4	1934
Lowest av annual temp (°C)	15.4	1932	-	-
Absolute Maximum (°C)	33.3	1987	35.0	-
Absolute Minimum (°C)	7.2	1986	-	-
Highest monthly windrun (km/day)	856	10.1980	-	-
Lowest monthly windrun (km/day)	31	2.1990	-	-
Highest gust (km/hour)	103	1977&1978	-	-
Most sunshine hours in one month	246	2.1989	308	3.1957
Least sunshine hours in one month	22	10.1978	101	9.1969
Most sunshine hours in one year	1941	1989	2875	1934
Least sunshine hours in one year	1116	1978	2302	1958

Note: The above extremes are abstracted from the appendices to this report. The records vary from a data set of short duration for a single or few locations (wind and sunshine) to long duration for several locations (rainfall).

SUMMARY

The report provides a record of all climatic data available for St Helena (excluding pressure and upper atmosphere observations). It is primarily intended for agricultural planning and management purposes but the data are of relevance to all investigations requiring a detailed knowledge of St Helena weather. A short section covers Ascension Island weather.

Climate Controls and Weather Recording

The climate of both islands is controlled by the South Atlantic High Pressure Cell and the Equatorial Trough. The South-East Trade Winds blow from high to low almost continuously. A Temperature inversion produces a stable climate upon which the topography of both islands exerts a major influence. Most rain is caused by orographic lift but can also be due to frontal activity on St Helena and atmospheric disturbances on Ascension.

Weather recording began on St Helena in 1840 and on Ascension in 1853 but the nineteenth century weather records are fragmentary on both islands. Both islands currently have recording stations run by the Meteorological Office and make upper atmosphere recordings. On St Helena there is also an extensive recording network organised and mainly run by the Government.

Precipitation

Annual rainfall on St Helena ranges from 175mm to 1050mm compared to 130mm to 660mm + on Ascension. Rainfall is related to elevation and exposure. Rainfall is about 30% higher on St Helena than Ascension at the same elevation.

March and July are the wettest months on St Helena with the driest weather occurring in October and November (which are also cool and cloudy). Rainfall is variable on a monthly basis with the 80% probability level for any month only half the mean while on an annual basis there is less variability with the 80% probability corresponding to 80% of the mean. Rainfall intensities are generally low (seldom in excess of 25 mm/hr) by an average of 220 rain days per annum in the wettest area; falls of more than 50mm in 24 hours are rare in any part of the island.

On Ascension rainfall peaks in April but is otherwise relatively evenly distributed. Intensities can be much higher than at St Helena with days receiving 50 mm relatively common even in the low parts of the island.

Mist Interception is an important source of precipitation on both islands. Little recording has been done. In areas above the 500 m contour mist could increase precipitation by at least 50% given the right type of vegetation.

Both islands exhibit long term rainfall trends. St Helena has a drought cycle of about 15 years interspersed with much longer periods of drought free higher rainfall lasting up to 50 years. The Ascension cycle is shorter at about ten years, but there is inadequate data to determine longer term trends. There is little evidence on either island for a long term change in rainfall amounts or distribution outside these cycles. There is a weak link between rainfall occurrence on St Helena and on Ascension on an annual basis.

Temperature and Relative Humidity

Annual temperature range in Jamestown is 20-29°C and in Georgetown 22-30°C. Absolute temperatures expand the range by 2-3°C in either direction for both places. While summer temperatures in Jamestown are only 1-2°C less than Georgetown winter temperatures show a 4°C difference. Annual mean temperatures are 24.2°C and 25.7°C respectively.

Diurnal variation on both islands is about 6°C but seasonal range is much greater on St Helena at about 6°C than on Ascension at about 2-3°C. Seasonality does not occur on Ascension in the way that it does on St Helena.

On St Helena temperature decreases by about 1.3°C per 100 metre rise and on Ascension by about 1°C.

There is some evidence of annual temperature oscillation of 1-2°C on St Helena possibly related to movement of the South Atlantic High Pressure Cell.

Relative humidities are almost constant throughout the year on both islands. At Jamestown humidities are generally 75-80% rising by about 5% for higher inland areas. At Georgetown humidity is normally around 69%.

Wind Speed and Direction

Both islands are in the direct path of the South-East Trade winds which blow constantly throughout the year. Wind run is controlled by exposure and ranges from site averages of 160-700 km/day on St Helena compared to about 400 km/day at Georgetown (a leeward site).

Gales are very rare on both islands although gale force gusts are relatively common and on St Helena where topography causes a strong eddying effect considerable damage can be caused by gusting.

Wind direction is from the south-east quadrant for most of the year although opposite winds occur for short periods on St Helena.

Sunshine and Cloud Cover

St Helena is a very cloudy island. At Jamestown annual cloud cover is about 65% compared to 48% at Georgetown. At Hutts Gate annual cloud cover is about 87%. There are no data for Green Mountain.

Day length varies by nearly two hours on St Helena but by only half an hour on Ascension. The maximum sunshine hours received on St Helena in a year is about 45% of maximum dropping to a minimum of about 20% at Hutts Gate. On Ascension the maximum is about 56%.

Sunshine hours do not show great variation between years on either island. On a monthly basis the sunniest months are February and March on both islands when the temperature inversion is at its weakest. At this time Georgetown receives about 70% of maximum sunshine and Jamestown about 60%. The respective figures drop to about 40 and 30% in November.

Crop Water Demands

Potential Evapotranspiration (Eto) ranges between 1000-1750 mm on St Helena and 1400-2500 mm on Ascension. The seasonal variation of Eto is greater on St Helena than Ascension.

The Potential Soil Moisture Deficit (PSMD) on St Helena from -1625 mm to zero mm and on Ascension -750 mm to -2300 mm. The area of zero PSMD is only about 100ha on St Helena but is of considerable hydrological significance.

It is not possible to grow any crops on any part of Ascension with any degree of confidence without irrigation. On St Helena winter planted crops (May to August) above the 800 mm isohyet will not normally require irrigation. But crops planted at any other time of the year will require additional water to give full potential.

Conclusions

The principal climatic limitations to agriculture on St Helena are highly variable monthly rainfall and shortage of rainfall over the whole island outside the winter and over the lower levels during winter also. The most predictable factor about St Helena's rainfall is its unpredictability.

Of secondary importance in some areas is exposure to the wind and shortage of sunlight.

St Helena and Ascension climate are similar in many respects. The main differences are lack of seasonality on Ascension, a lower rainfall, a large PSMD over the whole island and less sunshine on St Helena. That most activity on Ascension is undertaken near to sea level while much activity on St Helena is undertaken above 400m serves to exaggerate the perception of the climatic differences of the two islands.

1. INTRODUCTION

The variability of climate within such a small area is one of St Helena's most surprising attributes. The locals have always talked about the island's climate changing but in practice the most predictable aspect of the island weather is its unpredictability. Frequently wet, cool and cloudy, it is often difficult to imagine that Jamestown is little more than 1000 miles south of the equator.

Throughout its history travel writers have commented on the island's extraordinarily mild climate. An absence of extreme temperature and a constant breeze makes for a healthy environment that is all the more beneficial at the end of a long, poorly provisioned voyage from the Far East.

In 1902 Mr J. Homagee the police magistrate commented

" A splendid climate for consumptives...two gentlemen here... in a critical condition when they arrived - one 22 years ago and the other three years since - are now quite recovered ... no sign of their former illness"

This comment is typical of the perception of the climate and indeed in 1879 Benjamin Grant was moved to write a paper advocating St Helena as a health resort.

Perhaps the only visitors to have made serious complaint about St Helena's climate were Napoleon and his entourage. But even Napoleon was unable to be totally condemnatory when he observed that

"The Rock of St Helena is wild and sterile, no doubt, the climate monotonous and unhealthy, but the temperature, it must be admitted, is mild and agreeable"

The experience of the French highlighted the cyclical nature of the climate. Throughout the eighteenth and twentieth centuries particularly, droughts have occurred roughly every 15 years (see section 3.6). Not only were the French unfortunate in being placed at Longwood, one of the most exposed parts of the island, but they were also on the island during the wettest part of the cycle.

The change from drought to flood can occur in a relatively short time and perhaps explains why there is so little agreement, even among islanders, about the nature of their climate. In fact most of the climatic variables on the island are remarkably constant; it is only rainfall that is highly variable but its extremes distorts the overall perception of the weather.

The object of this report is first to provide a source for weather data and second to interpret the data in terms of agricultural production. A short section also deals with the climate of Ascension and draws comparisons between the two islands. Historically low or variable rainfall has been cited as a major if not the major physical constraint on agricultural production.

The bulk of the report comprises appendices of all the weather data that came to hand during a two year stay on the island. A large number of sources have been used but probably the most important are the reports by Kopec in 1969 and Brown in 1982, the Met Office Library and Archives in Bracknell which contain many of the references cited, the Blue Books in the Government Archives in Jamestown and miscellaneous records held by the Agriculture and Forestry Department (A & F) and Public Works and Services Department (PW & SD) on the

island.

All the records in the appendices are held on disk both by the author and by A & F. A & F now maintain the islands weather records and make entries of all current daily recordings onto spreadsheet. Monthly summaries are sent to the local newspaper for publication and annual summaries are included in the Departments annual report.

While temperature, humidity and windspeed are reasonably well documented and predictable across the island, precipitation and solar radiation are not. Of particular importance is a better understanding of rainfall intensity and its effect on soil erosion, the effectiveness of mist interception for increasing stream flow and the effects of variable solar radiation levels on crop production. Work is continuing in these areas.

A substantial effort has been made to improve weather recording during 1988-90 and it is necessary to maintain the momentum by ensuring instruments are well maintained, amateur raingauge keepers encouraged and the records kept up to date. It should be possible to update various aspects of this report every two or three years.

2. CLIMATE CONTROLS AND DEVELOPMENT OF WEATHER RECORDING ON ST HELENA

2.1 Climate Controls

St Helena is situated in the heart of the South-East Trade Wind belt. Fig 2.1 shows the position of the controlling South Atlantic High Pressure Cell in January and July. In addition the climate of the island is influenced by the Trade Winds blowing across the cool Benguela current as shown in Fig 2.1. Sea temperatures at St Helena average 23°C and at Ascension 25°C and show only small annual variation.

Globally a series of high pressure cells run between latitude 20°-40° south and St Helena, located at 15.5°, lies to the north of the South Atlantic High Pressure Cell. The Trade Winds originate from these high pressure cells and blow towards the equator; the motion of the earth gives the winds a westerly component and hence they blow from the south-east.

The South Atlantic High Pressure Cell is one of several sub-tropical high pressure zones that form part of the equatorial atmospheric system. These cells move north in winter and south in summer. In its simplest form hot air rises at the equator and moves southward to be replaced by cool air brought in by the Trade Winds. The result of this is a temperature inversion which occurs at varying heights but over St Helena is in the region of 1800-2000 m. The inversion produces a stabilising effect upon the climate since, although considerable cloud can develop beneath it, cloud cannot develop any depth. The inversion is at its weakest during summer when the South Atlantic High is farthest south; at this time the underlying cloud can disperse more quickly and the clearest weather occurs on both St Helena and Ascension. Under the inversion conditions a strato-cumulus sheet with a high water content forms for much of the time. Uplift over land causes the lower levels of the cloud to become saturated and rain results over both Ascension and St Helena.

Near the equator the South-East Trades meet the North-East Trade Winds and a zone of convergence is formed known as the Intertropical Convergence Zone (ITCZ). The ITCZ is not a continuous feature and moves north and south with the seasons. It is associated with instability and rainfall and is largely responsible for the April rainfall peak on Ascension.

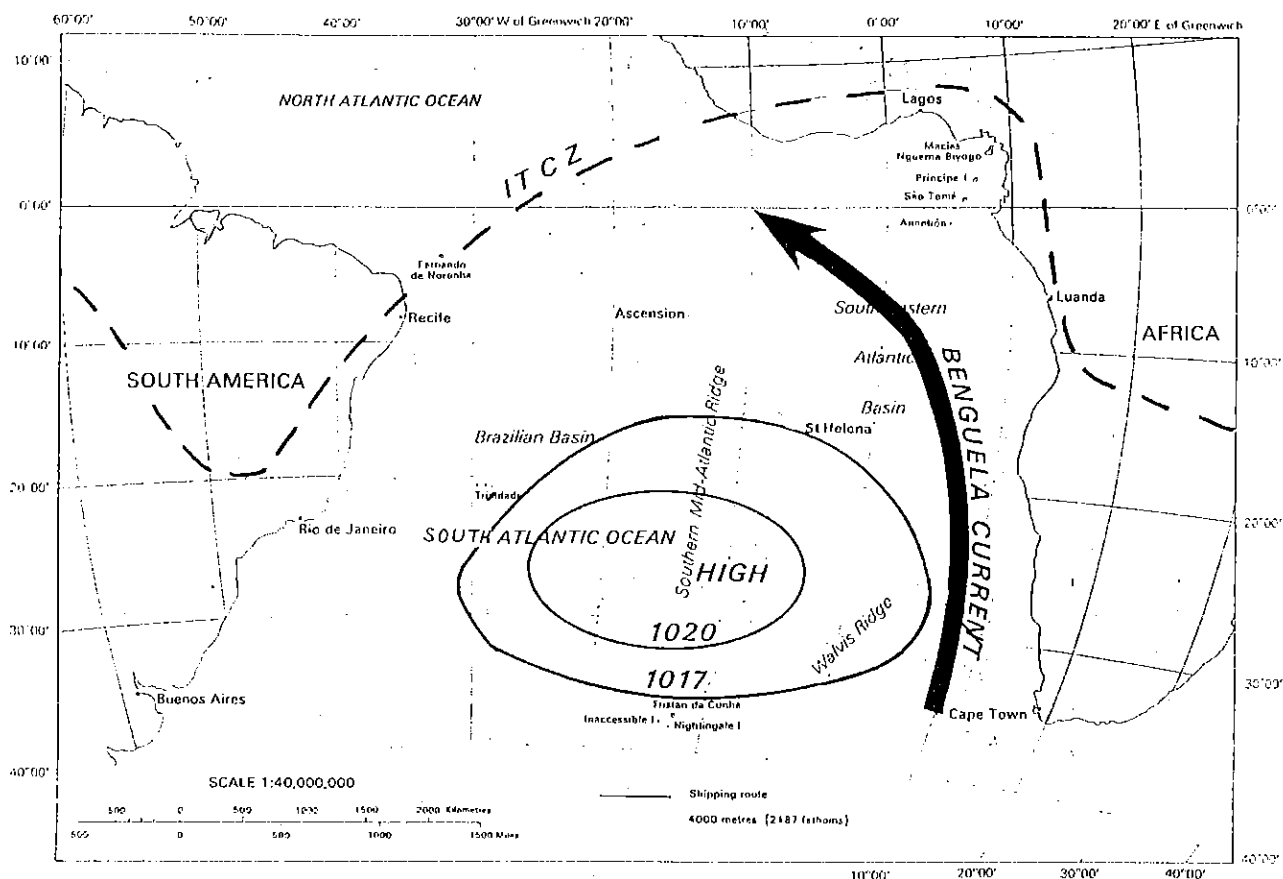
Within this apparently stable system St Helena's climate would appear to be almost entirely orographically controlled. However recently it has become apparent that weak frontal activity affects St Helena. These fronts are the remnants of systems originating in the Southern Ocean and probably give rise to extremely wet periods on the island.

On Ascension storms of much greater severity than those experienced on St Helena occur quite frequently (the maximum daily fall recorded on Ascension is 317 mm, treble the maximum recorded on St Helena). Recent work by Hall (1989) has shown that heavy storms on Ascension are produced by westward moving waves of disturbance that have their origin in central equatorial Africa. A forecasting model has been developed because of the effects of these storms on air traffic.

Because of the relatively low level of the temperature inversion cumulo-nimbus storm clouds are rare as are thunderstorms on both islands. On St Helena the record of thunderstorms is shown in Table 2.1.

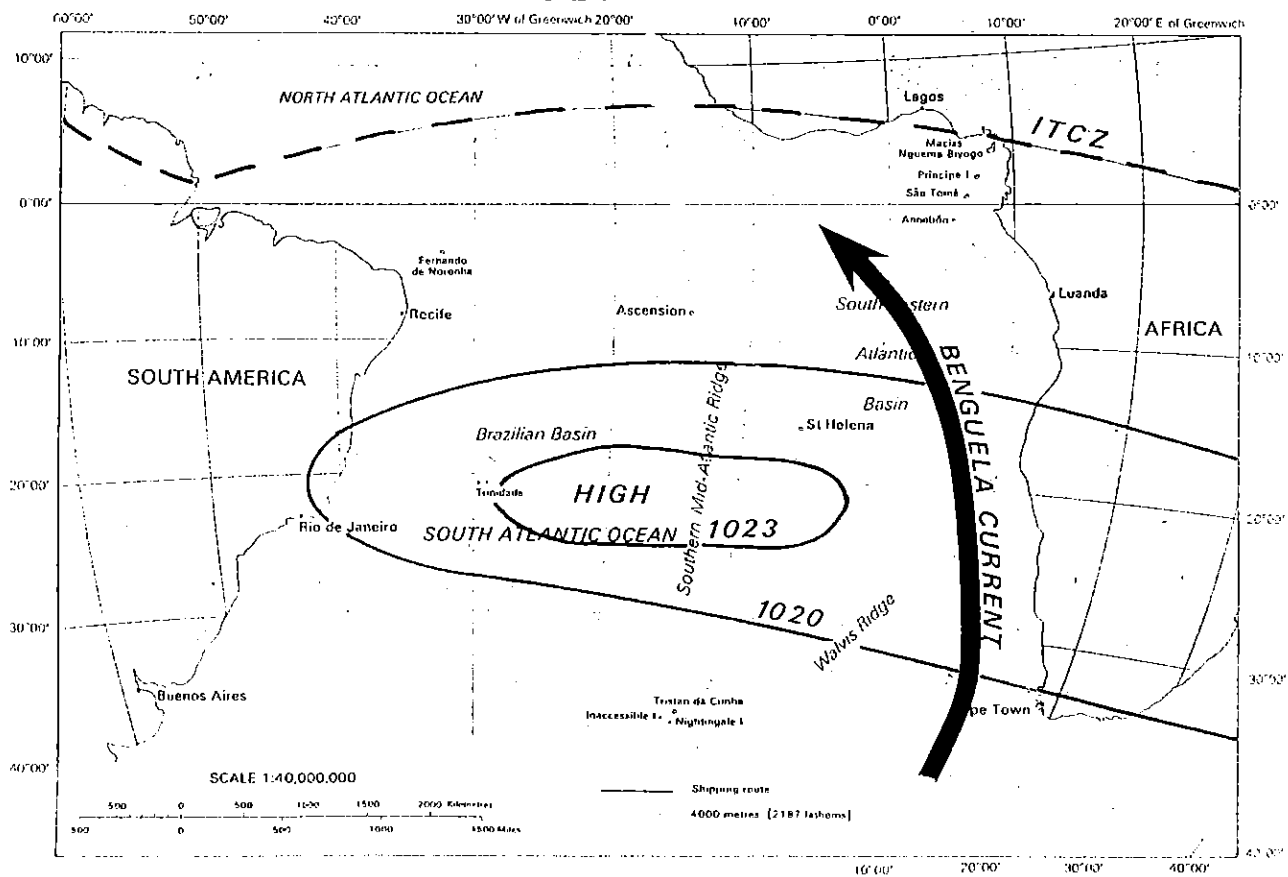
Fig. 2.1 Position of the South Atlantic High Pressure Cell

JANUARY



TEXT MAP 1 Location Map

JULY



TEXT MAP 1 Location Map

Table 2.1 Reports of Thunderstorms on St Helena

Date	Source of Report	Comment
1816	Beatson records only two flashes recalled in previous 60 years	
10.8.1827	St Helena Records	
26.8.1827	St Helena Records	
30/31.10.1886	Original Records	
22.11.1874	Blue Book	
2.10.1888	Blue Book	
21.10.1897	St Mathews Vic.	Continued to 23/10 off and on Hail fell on 21st.
4.11.1945	Hutts Gate	
11.1953	Hutts Gate	
11.1954	Hutts Gate	
10.1957	Hutts Gate	
11.10.1960	Hutts Gate	
10.6.1981	Bottom Woods	From 0610-1700 off and on
20.11.1985	Bottom Woods	

2.2 Development of Weather Recording on St Helena

Apart from mention in the records of unusual climatic events the first account of the Island's weather was produced in "A Description of the Island of St Helena" written by Duncan in 1805. The description is rather subjective by an author who made a short visit to the island.

Beatson, governor from 1808-13, made a more detailed examination of rainfall as part of his agricultural experimentations. His Tracts, published in 1816 contain rainfall statistics at Plantation from 1806-14 although the record is not complete.

In February 1840 Sir James Clarke Ross's expedition to the Antarctic called at St Helena to drop a detachment of the Royal Artillery charged with establishing a magnetical and meteorological observatory on the island. This observatory formed part of a global network of magnetical observatories under the supervision of the astronomer Sir Edward Sabine.

The observatory was built at Longwood (now St Marks Church see Fig 2.2) and results of the recordings from 1840-45 were published by Sabine in 1847 and continued until 1848. Unfortunately the rainfall records appear to be inaccurate (see Section 3.6.2) and so only the temperature and humidity data are of any real relevance to this study.

From 1853-62 the Royal Engineers maintained a station at "Ladder Hill" although the observations were probably taken in Jamestown. Rainfall and temperature records were maintained although some of the data are incomplete.

Resumption of rainfall recording at Longwood occurred in 1882 and lasted until 1901 but under whose control is not clear. In addition rainfall totals published in the St Helena Almanack for Jamestown in 1848 and for Plantation in 1847 suggest that other records were maintained but no other trace of these has been found.

In 1889 an American eclipse expedition visited the island and stressed to the Governor the importance of re-establishing a meteorological observatory. Accordingly the Meteorological Council lent equipment to the island and an observatory was established at St Mathews Vicarage in 1892 under Mr A. Hands. A

continuous record of weather data has been maintained since this date although unfortunately not always at the same place. The official Meteorological Station was moved from St Mathews Vicarage to Hutts Gate (essentially from the bottom to the top of a small hill) in 1925 and again from Hutts Gate to its current position at Bottom Woods in 1976.

Several writers commented that for periods of its life the Hutts Gate station was poorly maintained and some of the readings possibly inaccurate.

The island is now fortunate that the Meteorological Office maintains the station at Bottom Woods. This station forms part of the World Weather Watch network and makes daily upper atmosphere recordings of pressure, temperature humidity and wind speed, using a radio-sonde and balloon (see page 26), in addition to the normal ground level observations.

In addition to starting the long term record on the island Hands made the first serious attempt to record the variability of weather on the island. He established official rainfall recording points at Mount Pleasant (1896-1904), Jamestown (1896-1902), Oakbank (1901-1908) and St Pauls Vicarage (1905-08). A private record was also kept at Woodlands West (now a ruin) from 1887-1899.

During the twentieth century the island has owed much to private individuals recording the weather. Official attempts to record weather (mainly by A & F) have been sporadic and have tended to fade out after a few years. A particular effort was made by Brown in the mid-1970s and by the present author at the end of the 1980s.

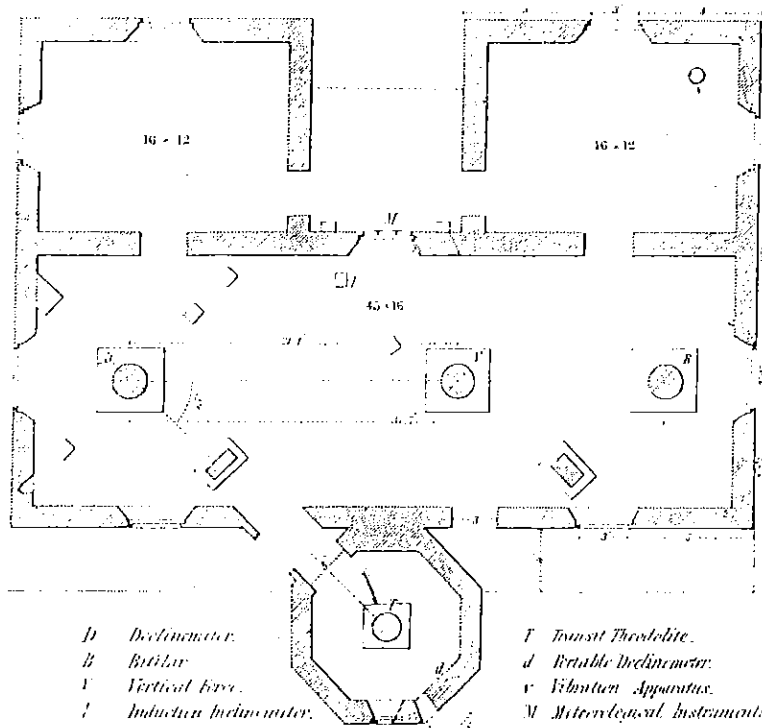
The extent of rainfall records for the main stations is shown in Fig 2.3. and the extent of other data is discussed as appropriate in the text.

Fig 2.2 Magnetical Observatory Constructed 1840

Magnetical Observations at S.^t Helena

Magnetical Observatory at S.^t Helena.

Ground Plan Shewing the disposition of the Instruments.



Scale 1 Inch to 10 Feet

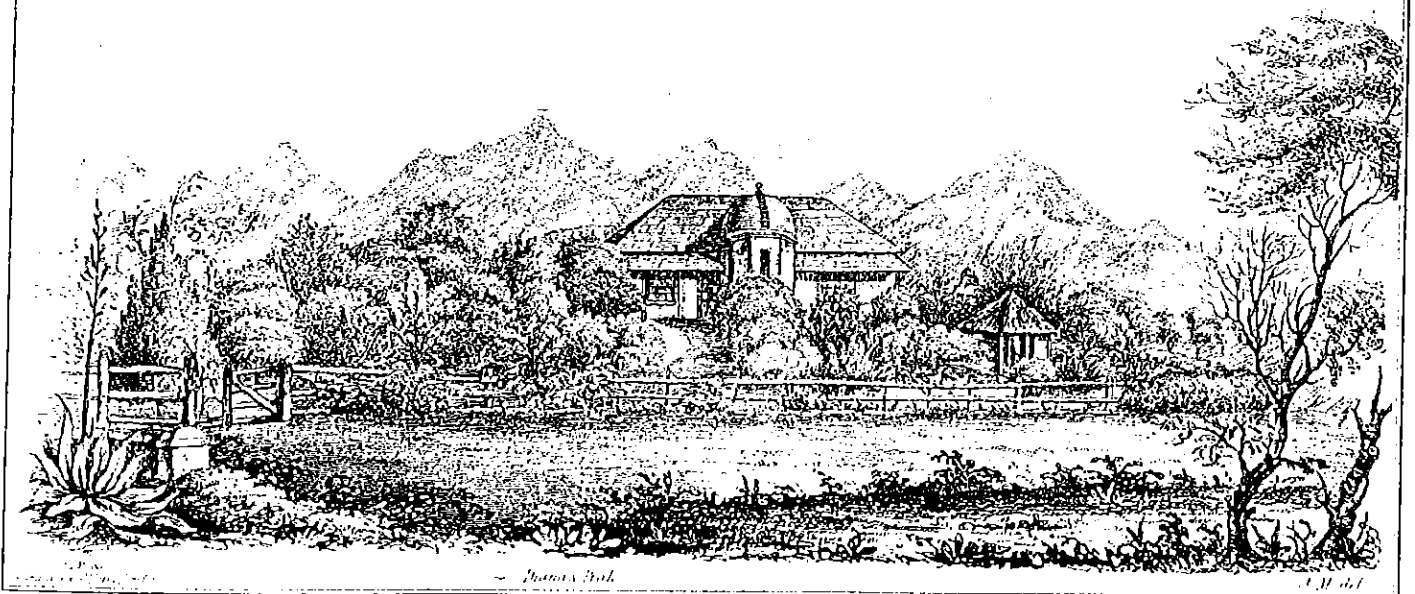
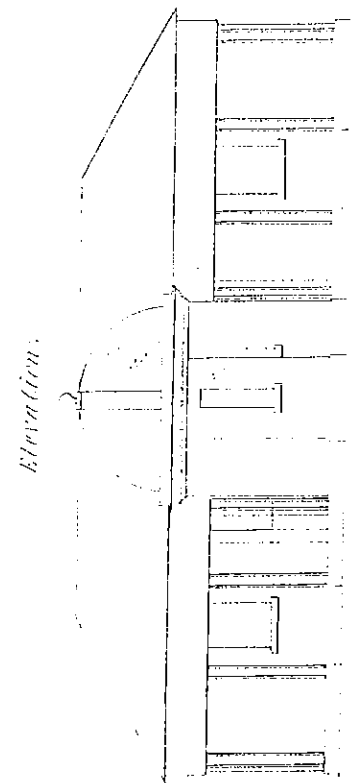


Fig 2.3 DATA COVERAGE OF PRINCIPAL AND SECONDARY RECORDING STATIONS

Station	1840	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990
PRINCIPAL STATIONS																
Plantation *																
Briers																
Hutts Gate																
St Mats Vic																
Janestown																
Longwood Field																
Longwood Lawn																
Hallams																
Scotland																
SECONDARY STATIONS																
Bottom Woods																
Harpers																
Oakbank																
St Pauls Vic																
Sunnyside																
Farm Buildings																
Woodlands Field																
Mt. Pleasant																
Rose Cottage																
TERTIARY STATIONS																
Farm Lodge																

* Plantation also has data for 1812-14



Photo 1 Mist Interception. Note wet road.

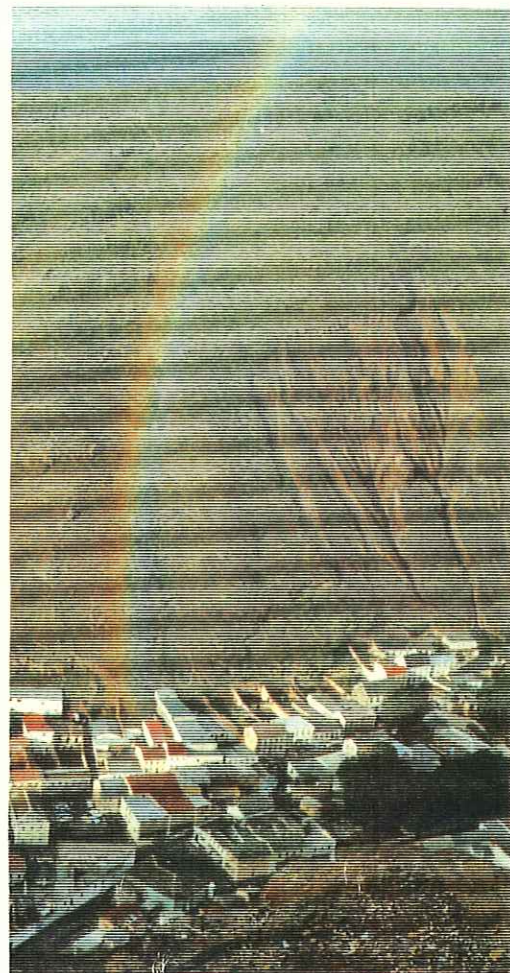


Photo 2 Rainbows; common over Jamestown in summer



Photo 3 The Agro-meteorological Station at Scotland

3. PRECIPITATION

3.1 Introduction

3.1.1 Recording Stations

A total of 48 different sites have been used for recording rainfall on St Helena although only 28 of these are currently in use. Table 3.1 divides the stations on the basis of the length and reliability of the record. Principal stations are those with at least 20 years of continuous records; Secondary stations are based upon either a record of around ten years, intermittent records spanning a longer period or recordings during periods when few other stations were in operation - particularly at the end of the last century. Tertiary stations are the remaining stations where at least some data are available although in some cases its accuracy may be doubtful.

The large number of stations reflects the highly variable nature of the rainfall; the network largely relies upon amateur recorders but in general the reliability is fairly high.

Full data for each station are contained in Appendix 1.

3.1.2 Reference Stations and the 25 Year Mean

In attempting to define annual rainfall distribution it has been necessary to reduce data from each station to a common standard. This has been taken as the rainfall over the last 25 years (1965-89). A longer period than this leads to an increasing dependence on a very few stations to act as reference points, causing undue bias. Also a longer record will show the influences of higher rainfall in the first half of the century (see Section 3.6).

In determining the 25 year rainfall equivalent for a secondary or tertiary station the total rainfall for the recording period has been compared to that of the nearest Principal station and the resulting ratio applied to the Principal's 25 year mean to arrive at an equivalent mean for the station in question. In some cases it has been more appropriate to compare one tertiary station with another one situated close by. A list of all 48 stations and the reference stations used for each site are shown in the Table 3.1.

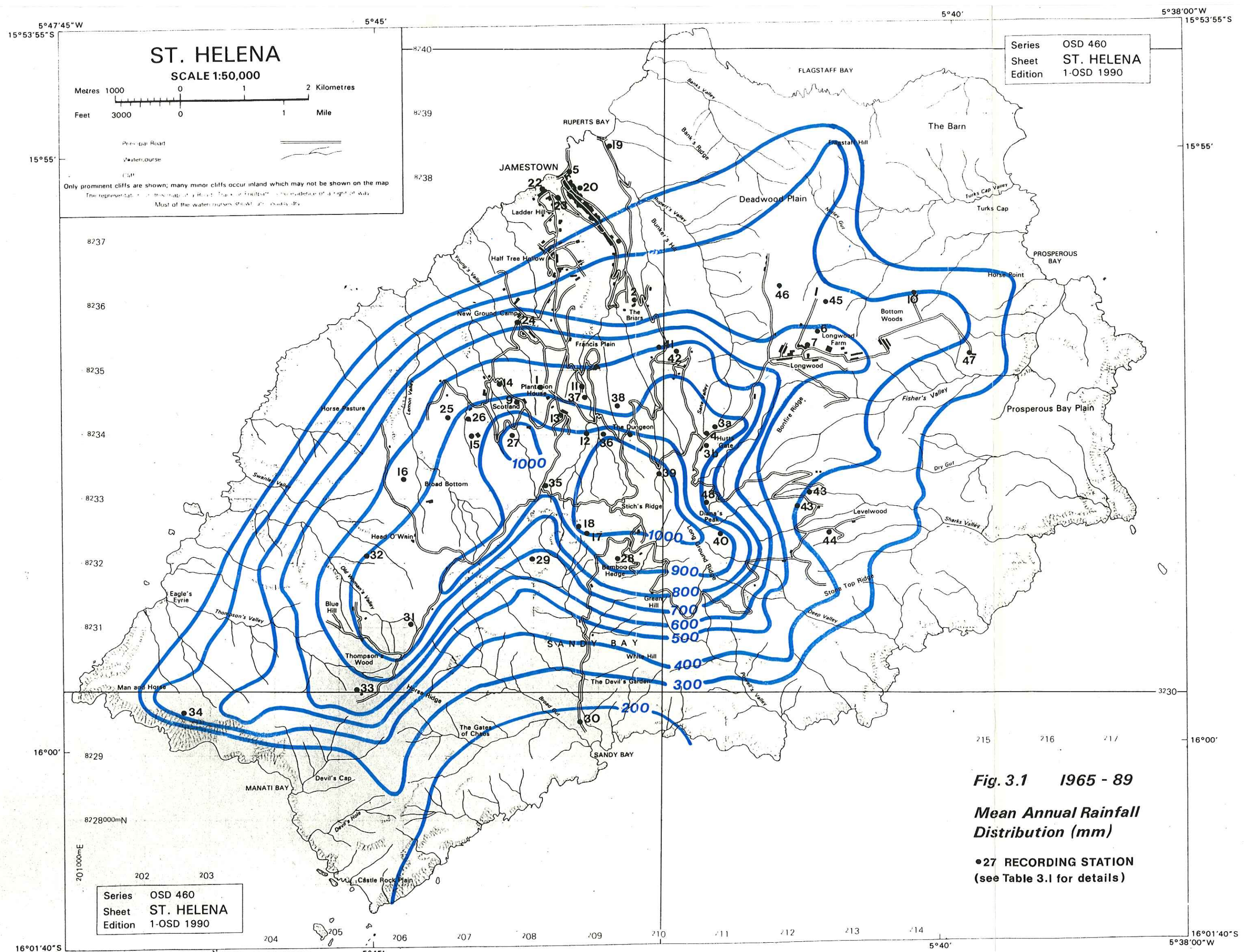
3.2 Annual Rainfall Distribution

3.2.1 Introduction

The results of the rainfall distribution analysis are shown as isohyets in Fig 3.1. The only previous attempt to produce an isohyet map was made by Brown in 1982 based upon data up to 1977. Considerably more data have become available since that first attempt and in addition the method of calculating the annual mean has been converted to the 25 year standard. The main difference between Fig 3.1 and Brown's map is not so much in the shape of the isohyets as in their absolute values.

Table 3.1 Summary of Rainfall Stations 1965-89

Ref No.	Station	Elev (m)	Data Period	Years Rec. 1965-89	Period Ann.AV	No of Full 1965-89 Ann. Av	Ref Stat	Equiv Stations Maintained by:
PRINCIPAL STATIONS - Stations with the longest records								
1	Plantation	530	1910-89	25	859.6	801	1	A & F
2	Briars	280	1910-89	25	505.7	421	2	C & W
3	Hutts Gate	620	1925-89	25	826.5	828	3	PW & SD
4	St Mathews Vic	630	1893-1924		987.9	855	1	
5	Jamestown	11	1920-89	25	227.0	247	5	Soc Serv
	Jamestown	Intermittent earlier records commencing 1853						
6	Longwood Field	500	1952-89	25	583.2	548	6	A & F
	L-wood Observatory	530	1841-48		1113.1			
	L-wood Observatory	530	1882-91		632.9			
7	Longwood Lawn	530	1961-89	29	539.1	537	7	A & F
8	Hallams	590	1970-89	20	983.7	995	3	J.Beadon
9	Scotland	560	1961-89	29	903.8	886	9	A & F
SECONDARY STATIONS - Stations with intermediary records								
10	Bottom Woods	435	1977-89	13	458.2	465	6	Met Office
11	Harpers	450	1971-89	19	740.3	751	9	
12	Oakbank	520	1901-14	0	1117.5	995	8	
13	St Pauls Vic	600	1906-09	0	851.7	725	12	
14	Sunnyside	475	1971-79	9	734.1	743	9	
15	Farm Buildings	520	1971-78	8	863.9	900	9	
16	Woodlands Field	530	1973-76	4	735.1	760	9	A & F
	Woodlands Fld House	624	1887-99	0	736.1			
17	Mount Pleasant	580	1897-1902	0	1007.2			
	Mount Pleasant	580	1972-73	2	715.4	968	9	J.Cairns-Wicks
18	Rose Cottage	600	1954-61	8	1168.3	1054	9	
TERTIARY STATIONS - Stations with some data								
19	Ruperts	20	1988-89	0	268.7	269	5	Fisheries
20	St James Vicarage	25	1985-88	4	204.8	195	5	
21	Blundens	85	1988-89	0		400	5	
22	Secondary Selec School	190	1976-79	2	396.7	240	5	
23	Cliff-top	210	1988-89	1	222.0	220	5	R.Wootton
24	Sapper Way	450	1988-89	1	597.0	600	1	J.Lawrence
25	Bluemens Field	580	1988-89	2	902.1	805	1	A & F
26	Farm Lodge	500	1910-13	0	914.6	816	12	
27	Oaklands	560	1988-89	1	1203.9	1049	9	C.Allwood
28	Bamboo Grove	415	1971-77	3	1077.8	945	9	
29	Fairyland	450	1978-79	0		629	9	
30	Sandy Bay Station	30	1972-83	5	175.8	175	30	
31	West Lodge	680	1975-85	2	868.8	851	9	
32	Barren Ground	500	1988-89	1	908.9	833	9	V.March
33	Thompsons Wood	540	1971-89	4	648.8	674	9	S.Francis
34	South-west Point	560	1972-74	1	206.2	438	33	
35	Bates Branch	690	1989	0		891	17	A & F
36	Rose Bower	525	1988-89	1	1194.5	1041	17	J.Bailey
37	Harpers Education	450	1989	1	597.0			Education
38	Woodlands House	525	1988-89	1	890.8	776	9	N.Thorpe
39	Grapevine Gut	575	1989	0		1055	17	PW & SD
40	Cuckolds Point	770	1977-79	1		952	3	
41	Seaview	480	1988-89	1	734.1	710	2	L.Carter
42	Willowdene	515	1912-23 & 1963	3	947.8	771	2	
43	Pink Grove/Redhill	570	1988-89			364	6	W.Henry
44	Levelwood	480	1971-89	8	351.4	375	6	PW & SD
45	Middle Point	480	1988-89	1	527.6	466	6	A & F
46	Little Deadwood	485	1975-79	1	301.6			
47	Bradleys	370	1971-76	2	540.0	367	6	
48	Leggs Gut	650	1989-90	0		7878878	6	PW & SD



3.2.2 Factors Governing Distribution

There is clearly a strong correlation between rainfall and elevation on St Helena. Annual rainfall at sea level is about 175 mm as shown by the data for Sandy Bay Station where orographic disturbance is least. Totals increase with elevation but generally the lee of the island receives more rain than the windward side and local topography can exert considerable influence. Longwood Lawn and Plantation are at the same elevations (530 m) but Plantation receives nearly 50 % more rainfall, the annual respective totals being 537 and 801 mm. Flagstaff and the Barn have similar elevations to Hutts Gate and although no records exist, it is apparent from their vegetation that rainfall is much lower on these outlying hills. There are also local variations so that during 15 months of recording Oaklands received 15% more rainfall than Scotland which is only 300 m away and at the same elevation. The difference has been most pronounced in the wetter months when storms appear to move down Bevins Gut and directly over Oaklands.

As Table 3.1 shows annual average rainfall varies between about 175 mm and 1050 mm over the whole island.

3.2.3 Seasonal Variations

Table 3.2 shows the monthly distribution of rainfall for the principal stations. This is illustrated graphically in Fig 3.2. Full data for each recording station are contained in Appendix 1.

Table 3.2 Annual and Monthly Rainfall (mm) for Stations on St Helena (1965-89)

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Jamestown	10.2	26.5	34.7	23.3	27.4	38.2	36.4	22.6	10.3	7.0	4.1	6.2	246.9
Briars	23.7	51.0	57.9	46.4	44.4	58.4	57.9	36.3	22.8	16.1	10.6	12.4	438.1
Longwood	37.1	57.1	68.7	48.1	50.4	61.1	66.3	49.7	42.5	25.2	19.0	22.7	548.0
HuttsGate	56.3	89.5	104.7	78.1	71.0	84.8	93.7	73.0	58.3	44.3	35.1	38.8	827.6
Scotland	54.9	97.4	107.8	85.9	82.9	101.8	116.4	82.1	55.7	42.1	29.0	29.4	885.5
Hallams	59.0	108.2	117.7	87.1	83.5	112.8	119.5	91.7	70.0	49.4	39.0	45.9	983.7

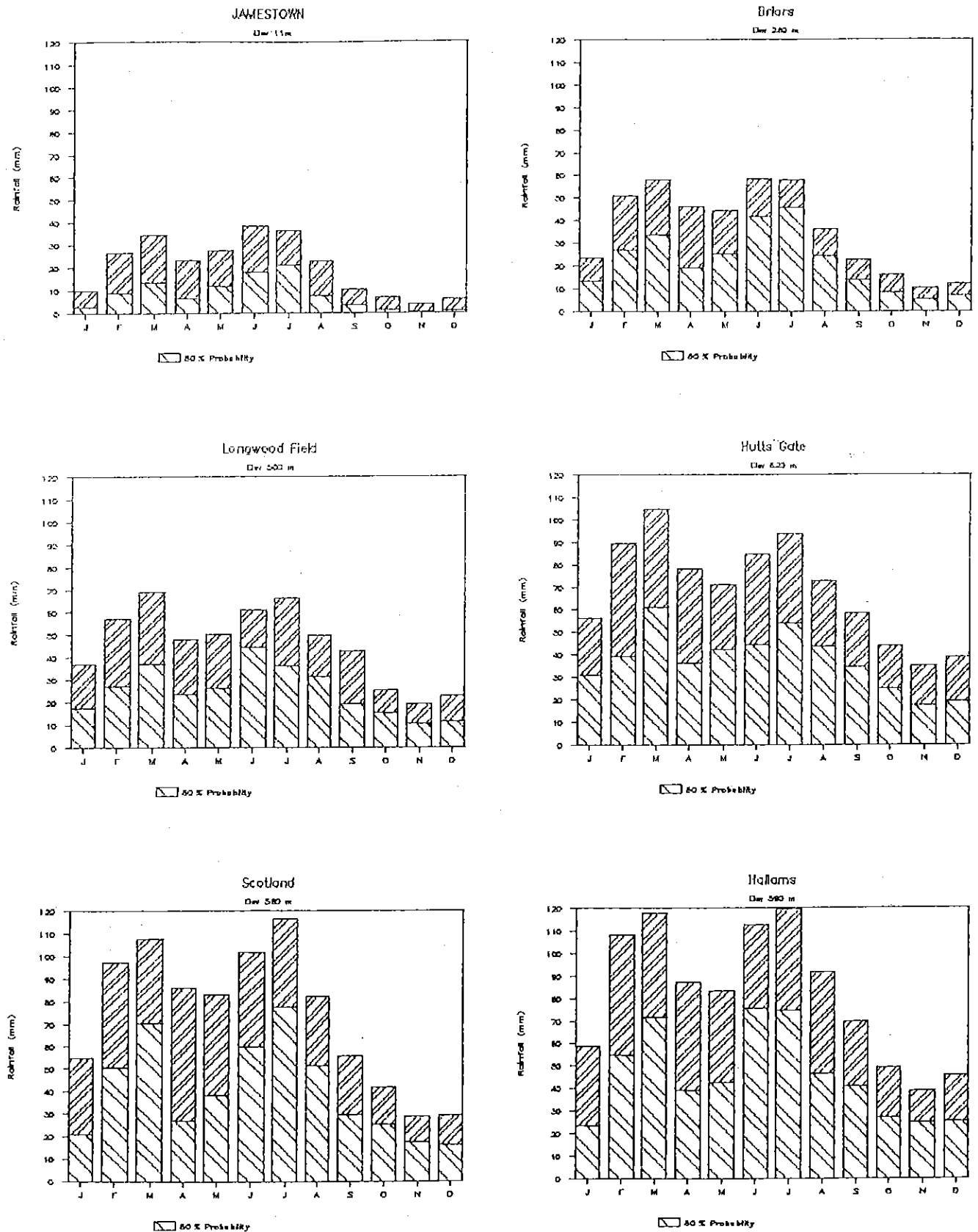
Source: Appendix 1

All stations exhibit a bi-modal rainfall distribution with March and July being the wettest months. Fig 3.2 also illustrates that on average there is not a substantial difference between the quantity of rain falling in the "Summer Rains" - February and March and the "Winter Rains" June and July (However transpiration varies considerably between the summer and winter period - see Section 7.3).

In Appendix 1 an analysis has been carried out to show the rainfall to be expected in any three and four month period of the year at Plantation, The Briars, Hutts Gate, Longwood and Scotland. This analysis shows that expected three monthly rainfall is largely the same for a period starting February 1st through to July 1st. It is variations in evapotranspiration that controls the difference in water demand between summer and winter.

The dry season spans the months October to January - more precisely this can be defined as mid-October to mid-January.

Fig 3.2 Monthly Rainfall Distribution



3.3 Rainfall Probability

3.3.1 Statistical Analysis

The principal statistical analyses used for St Helena rainfall data have been the mean, the standard deviation (SD) and the coefficient of variation (CV). While the mean is self-explanatory the SD has been calculated mainly to determine the CV (SD/Mean).

The CV is a useful measure of variation between stations. Values of less than 0.2 indicate moderate variability and values above 0.25 indicate that the rainfall is highly variable.

The annual CVs for Plantation, The Briars, Hutts Gate and Jamestown are respectively 0.18, 0.22, 0.18 and 0.32. As might be expected stations with low rainfall have a statistically more variable rainfall while the higher rainfall sites have relatively low variability.

On a monthly basis the CVs for all stations indicate a much greater degree of variability. At Plantation monthly CVs range from 0.42-0.59, at the Briars from 0.40-0.71, at Hutts Gate from 0.38-0.53 and at Jamestown from 0.69-1.02.

3.3.2 Rainfall Return Periods

Rainfall return periods have been calculated for all the stations shown in Table 3.2 and full data are given in Appendix 1 under the appropriate station. The 80 % probability level which corresponds to a dry year in five has been plotted in Fig 3.2. For most stations a dry in five month is around half the mean and a dry in five year about 80% of the mean. The corresponding values for wet periods in five are 150% of mean on a monthly basis and 120% of mean on an annual basis.

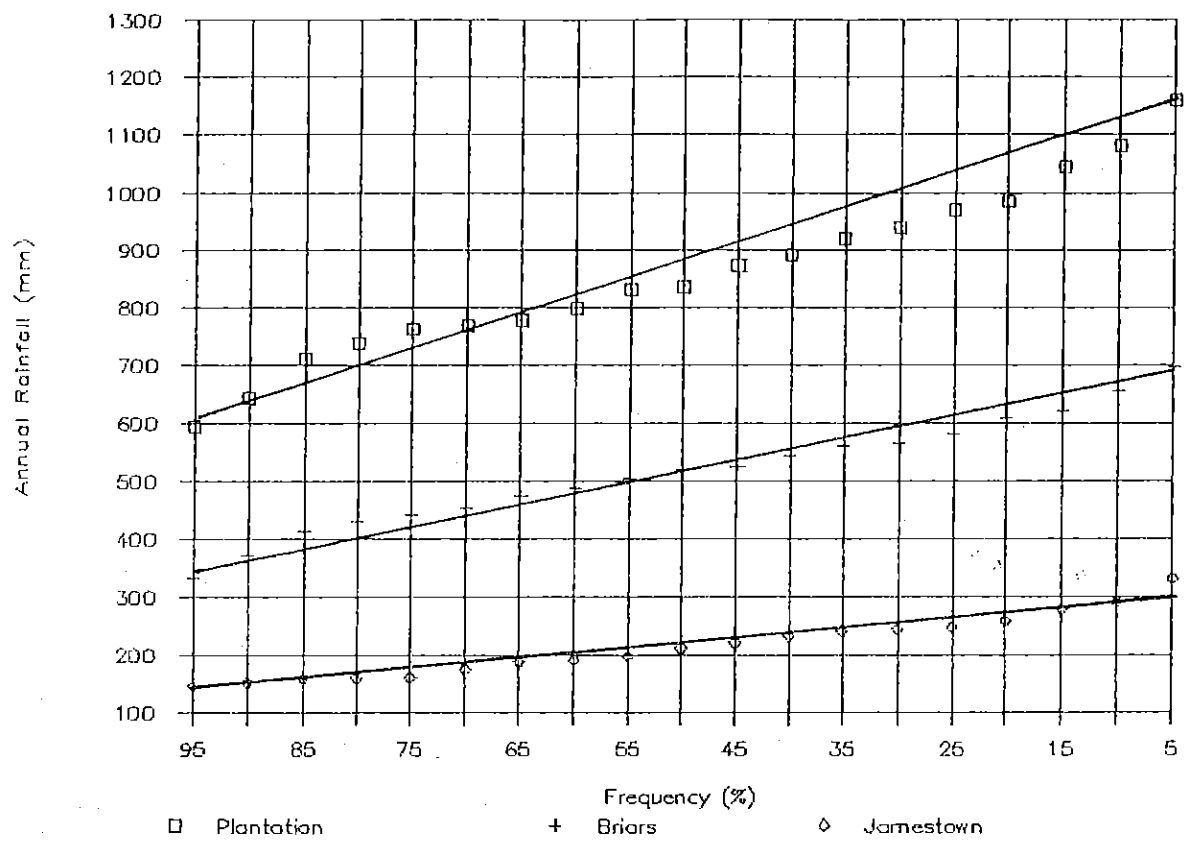
Table 3.3 gives the annual probabilities for the main stations and the data for Plantation, The Briars and Jamestown are plotted in Fig 3.3. The 90 % probability level corresponds to a dry year in ten, the 80% to a dry year in five and so on with the mean at 50%.

Table 3.3 Annual Rainfall Probability For Principal Stations (mm)

Station	Number of Years Data	Driest	Probability Percentage					
			95%	90%	80%	Mean	20%	Wettest
Jamestown	60	101	147	153	161	227	270	379
Briars	80	254	315	373	416	506	600	764
Longwood	38	306			459	583	697	860
Hutts Gate	64	477		610	702	827	968	1130
Plantation	80	428	585	625	739	860	985	1218

Source: Appendix 1

Fig 3.3 Annual Rainfall Probability



3.4 Rainfall Intensity

3.4.1 Rain Days per Annum

Rainfall intensities on St Helena are generally low by tropical standards; this is reflected by the very high number of raindays as shown in Table 3.4.

Table 3.4 Average Number of Raindays for Principal Stations

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Jamestown	4.9	8.6	9.5	6.7	7.4	9.4	12.1	8.4	5.8	3.9	2.4	2.9	82.1
Briars	12.1	15.4	18.7	15.0	14.7	16.8	17.1	14.8	12.7	10.5	8.0	9.3	150.1
HuttsGate	17.4	19.1	22.6	19.4	17.4	18.5	19.9	18.8	18.4	17.4	14.0	15.9	218.2
Scotland	13.0	15.5	17.8	15.1	13.7	15.8	15.8	16.1	13.7	12.7	10.7	11.2	171.5

Source: Appendix 2

The fact that Hutts Gate has a lower rainfall than Scotland but more raindays reflects the frequency of light rain and mists in the Peaks area. The highest number of raindays recorded for this area was 291 at St Mathews Vicarage in 1903. However in 1989, only a moderately wet year, 278 days were recorded at Rose Bower for a rainfall total of 1194 mm.

3.4.2 Hourly Intensities

Although A & F attempted to operate some automatic raingauges during the 1970's the data gathered from these sources were never reliable enough to give any consistent guide to rainfall intensity. Brown reports a storm at Woodlands Field producing 10.7 mm in one hour; this was a major event producing 76 mm in 12 hours so that the maximum intensity is low but the records appear to have been lost. The only maintained continuous record is that provided by a tilting syphon rainauge at Bottom Woods that has operated since 1977. This gauge is reasonably accurate but high intensities are difficult to interpret. The full data are given in Appendix 2. Only storms producing more than 10mm in 24 hours were analyzed of which there were 61 between 1978-1989 -about 5 per year. On average 35% of rain fell at less than 10 mm/hr, 25% at between 10 and 20 mm/hr and 40% at intensities of greater than 20 mm/hr. Undoubtedly greater intensities occur at higher elevations. Although intensities are generally low, occasional high intensity storms of long duration occur and cause considerable damage.

3.4.3 Major Rainfall Events

Further light is shed on intensities by examining the frequency of occurrence of daily totals of certain magnitudes. The average number of days in each class for three stations is as follows:

	Days per annum		
	10-20mm	20-30mm	30mm+
Bottom Woods	3.5	0.9	0.2
Plantation	16.4	2.0	1.4
Hallams	18.3	3.6	1.9

The largest 24 hour totals recorded are as follows:

Station	Date	Rainfall (mm)
Plantation	31.7.64	112.5
Scotland	31.7.64	104.9
Scotland	12.6.82	104.7
Woodlands Field	15.4.89	96.6
Hutts Gate	31.7.64	89.2
Scotland	18.2.74	80.5
St Mathews Vic	8.2.03	80.5
Briars	31.7.64	69.3

It may well be possible that other storms have occurred that have not been correctly recorded (for example the storm at Woodlands Field mentioned by Brown above). However a reasonably complete record of daily events exists for Hutts Gate back to 1925 and before that for St Mathews Vicarage to 1893. For this record of 104 years only 25 days with over 40 mm are recorded while at Plantation a record from 1910-65 records a daily maximum of 52.1.

Unfortunately more detailed information for most of the above storms has been mislaid; however the 15.4.89 storm was remarkably localised as follows:

Woodlands Field: 96.6 mm
 Oaklands: 58.0 mm
 Barren Ground: 46.3 mm
 Hallams: 11.2 mm
 Thompsons Wood: 4.3 mm
 Jamestown: 7.3 mm

The storm was concentrated over Lemon Valley head and produced flows not seen for "twenty years" - possibly since Brown's storm in 1974 or before that since 1964. Unlike Ascension where heavy storms can effect the whole island with equal severity, at St Helena topography still exerts considerable influence so that the maximum recorded daily fall at Jamestown is only 34.3 mm (in 1913).

While considering major daily events it is also interesting to consider the major monthly and annual events recorded. These are as follows:

Table 3.5 Wettest Months and Years (mm)

Wettest Months			Wettest Years		
Rose Cottage	346.2	March 1957	Rose Cottage	1450	1961
Mt. Pleasant	344.7	April 1904	Oakbank	1401	1914
Oakbank	340.6	April 1907	Hallams	1393	1976
Woodlands Field	323.9	March 1887	Rose Cottage	1395	1957
Rose Cottage	309.4	March 1961	Rose Cottage	1338	1955
Woodlands Field	295.3	April 1989	Mt Pleasant	1280	1899
Oakbank	289.3	April 1904	Plantation	1269	1814
West Lodge	278.4	March 1978	St Mats Vic	1256	1917

Note: Data for Longwood 1840-48 have been omitted from the above table (see discussion in 3.6.2 below). Source: Appendix 1

It is worth noting from the above that all the wettest months have occurred in March or April although the largest storms have occurred in several different

months. The Bottom Woods intensity data show a total of 14 storms where more than half the rainfall has fallen at intensities greater than 20 mm/hr; of these 14, nine have occurred between February and March and no other month received more than one event. The old concept of the "summer" rains being short and sharp and the "winter" rains more protracted is supported by these data.

3.5 Mist Interception

3.5.1 Introduction

The importance of mist interception by vegetation has long been recognised on St Helena. In 1805 Duncan noted that

"The well-wooded tops of mountains preserves a coolness which stops and condenses the passing vapours; while the clouds are often observed to glide over the naked and heated surfaces of rocky summits without producing rain".

Henry (1974) noted the importance of mist for increasing precipitation. Cronk (1989) undertook a mist interception experiment on High Peak in 1985. Over four days he used cans to collect precipitation under the canopy of a Dogwood and compared them with the catch in neighbouring pasture land. He found that the catch under the Dogwood measured 45 mm and in the grassland 25.2 mm.

Certain kinds of vegetation are more efficient mist interceptors than others. Flax and grass are poor interceptors but many trees and particularly coniferous trees are good interceptors. Some of the endemic flora are probably extremely efficient interceptors having adapted to this special environment. Cronk cites the Dogwood and Tree Ferns particularly. Clearing of trees in the seventeenth and eighteenth centuries may well have magnified the effect of the droughts so frequently reported - because reduction in mist interception would have caused a decline in stream flow.

It is important to note that the significance of trees increasing precipitation on St Helena is almost entirely due to mist interception. The popular notion that planting trees will physically increase rainfall does not apply on St Helena (if it applies anywhere) because the main mechanisms by which trees might increase rainfall - by lifting and disturbing local air masses is already more than adequately carried out by the topography.

3.5.2 Mist Interception Studies of Relevance to St Helena

The bibliography contains a number of references dealing with mist interception in other parts of the world. These can be summarised as follows:

Nagel (1956) measured a 70% increase in precipitation on Table Mountain using cylindrical fog catchers but noted the difficulty of determining the extent of fog precipitation during periods of rain or drizzle.

Twomey (1957) provides an account of collecting mist using a wire mesh in Tasmania. From a mesh extending 1 m above a rain gauge he was able to collect 10.4 times the precipitation collected by an adjacent rain gauge.

Ekern (1964) reports a similar relationship in Hawaii where he was also able to show that Norfolk Island Pines more than doubled precipitation over a three year period.

Kerfoot (1968) provides a useful summary of previous work and an extensive bibliography.

Nanni (1970) shows that in South Africa afforestation where mist interception does not occur causes a decline in streamflow.

Cavelier and Goldstein (1989) measured mist interception in the Elfin cloud forests of Colombia and Venezuela and found that mist interception increased effective precipitation by up to 90% depending upon altitude.

3.5.3 Measuring Mist Interception on St Helena

A number of different methods of measuring mist interception are cited in the literature. On St Helena quantifying the absolute quantity is probably not important since the main significance of mist interception is as a means of increasing stream flow. As is discussed in section 3.2 of the water plan a 10% increase in precipitation could increase stream flow by 10-50%. On the other hand as Nanni (quoted above) shows planting trees that are poor interceptors or in areas where mist occurrence is infrequent can reduce streamflow. This appears to have occurred in Pleasant Valley where the stream at the road crossing has ceased flowing since the catchment vegetation changed from flax to eucalyptus (the most efficient angle of interception, quoted in the literature, is 45° to the horizontal; eucalyptus leaves hang downwards).

There is one instance in the records at Hutts Gate (for October 1943) when hourly observations of fog were made for 24 hours per day for a period of one month. The number of recordings were as follows:

Light fog	63
Moderate fog	11
Thick fog	15
Dense fog	194

Fog occurred 78% of the time and dense fog 26% of the time out of the total of 744 hours. The method of determining thick fog is not described but it would be reasonable to suppose that significant mist interception occurred at least at such times. Rainfall in this month was slightly above average and October at Hutts Gate (from the data in Appendix 5) is the foggiest month. This suggests that mist precipitation at most is likely to be occurring 25-30% of the time.

In 1989 a mist intercepting device was established at Hutts Gate Treatment Works. The device consists of a rectangle of metal gauze (39 holes per cm²) measuring 83.5 x 91.7 cm placed in a frame of angle iron. The square has been placed in a diamond shape on legs over a normal 125 mm diameter raingauge and orientated to face the prevailing wind. Table 3.6 provides the results of the collection when compared to the readings of the conventional raingauge nearby.

Table 3.6 Mist Interception at Hutts Gate (mm) 1989-90

Month	Gross Catch	Reduced Catch	Raingauge	Ratio
Aug	1943	281.7	91.8	3.1
Sept	3026	438.8	90.0	4.9
Oct	1759	255.1	65.2	3.9
Nov	1380	200.1	55.9	3.6
Dec	1093	158.5	41.2	3.8
Jan	2605	377.7	72.2	5.2
Feb	2276	330.0	102.9	3.2
Mar	1220	176.9	82.0	2.2

Source: A & F Met. Records

In the table the catch under the interceptor has been reduced to an area of gauze that corresponds to the width of the raingauge and extends 114 cm above it. Under these circumstances the mist interceptor on average catches 3.75 more precipitation than the raingauge. However it can be argued that the height of the gauze is quite arbitrary - a tree would be much higher but possibly less efficient than the mist interceptor. Also the outer trees of a forest would be more effective than the inner trees. It is significant to note that no registrations of mist precipitation were made on days when there was zero rainfall.

An attempt was made to reproduce a much smaller intercepting device with a cylinder of gauze sitting on top of a raingauge and extending about 50 mm above the rim. However trials at Scotland were not very effective and the normal gauge collected more precipitation than the interceptor (however the incidence of mist at Scotland is not very frequent).

At Grapevine Gut continuous recording of flows in a small largely flax covered catchment started in 1989 (see Irrigation Adviser's End of Tour Report). A long term (10 years plus) experiment monitoring flow following planting within the catchment should provide the basis for a decision to re-afforest more extensively in the upper catchment areas. In addition installation of more mist intercepting devices, the same as that at Hutts Gate, at other sites on the island would give a better understanding of the variability of mist occurrence. Possible sites would be Longwood, Scotland, Bates Branch and the Churchyard.

Some further indication of the likely occurrence of mists is provided by the observations of fog made at Hutts Gate and Bottom Woods Met Stations (see section 6.2.2). However the occurrence of fog at a specific time of day is not a particularly reliable indication of the incidence of mist precipitation.

3.6 Long Term Changes In Rainfall

3.6.1 Introduction

The popular view amongst islanders most affected by the weather is not so much that rainfall quantities are substantially changing but that there is a shift in the time of year when rainfall occurs. This has been particularly emphasised by March 1989 and 1990 when in both years a 1 in 10 dry event occurred in otherwise wet years.

Long term rainfall trends are best examined by calculating the annual running means for the stations with the longest set of data. In this instance the five year running mean has been used whereby the average for a particular year is taken by averaging the annual rainfall for the year in question with the two years that occur either side of it.

Table 3.1 has shown the availability of long term data for St Helena .

3.6.2 Annual Rainfall Trends

Fig 3.4 shows the five year running means for four stations. Unfortunately the records are intermittent but it is worth examining the means for each station in some detail:

-Longwood: The Longwood record is particularly fragmentary. The early data is somewhat confusing because although well supervised and documented on a daily basis some of the records are unbelievable. In 1841 Longwood is recorded as receiving 1750 mm and in 1842 2298 mm. The wettest year ever recorded at any other station (many of which are in wetter parts of the island) is 1450 mm at Rose Cottage in 1961 (see Table 3.5). That the Longwood data are incorrect is supported by the published daily figures not adding up to the given monthly

totals and the minimum daily rainfall recorded being 0.25 ". In addition published figures in the same document showing rainfall for four other sites specified by elevation only as 574.8 mm at 805 m, 688.5 mm at 607 m and 1102.9 mm at 543 m. There is an air of improbability about these latter figures as well. Perhaps most surprising though is the fact the these values have been published without question in at least three different places.

Ignoring the older data there is no evidence for a decline in annual rainfall at Longwood, the current five year mean is close to what it was in 1890. However the data for this situation do not conform so strongly to the cyclical nature of rainfall demonstrated by other stations.

- Hutts Gate: there is a large difference between the annual totals for St Mathews Vicarage and Hutts Gate although the stations are very close to each other - possibly the more sheltered site of St Mathews Vicarage permitted more rainfall to be collected although the transfer of the sites in 1926 occurred at a time of a sudden decline in the 5 year mean. Since 1926 there is little evidence of a decline in rainfall at Hutts Gate, although a sharply cyclical pattern is observable with troughs occurring at an interval of about 15 years with a range of 150-200 mm (plus or minus 15% of the mean).

- Plantation: the record for Plantation mirrors that of Hutts Gate and appears to confirm the sharp decline in rainfall in the second half of the 1920's. The range and frequency of troughs is similar to that of Hutts Gate.

- Briars: the Briars record shows droughts occurring with a frequency of between 9-17 years averaging around 15 years. However the record for this station shows a downward trend that is not observable in any other data. Whereas rainfall totals at Plantation and Hutts Gate show a complete recovery after the drought at the end of the 1950's the Briars totals did not fully recover. Since the data for this station appear to be at odds with those for other sites it is probably too early to attach any significance to them. It will be interesting to observe the level at which the current wet cycle peaks.

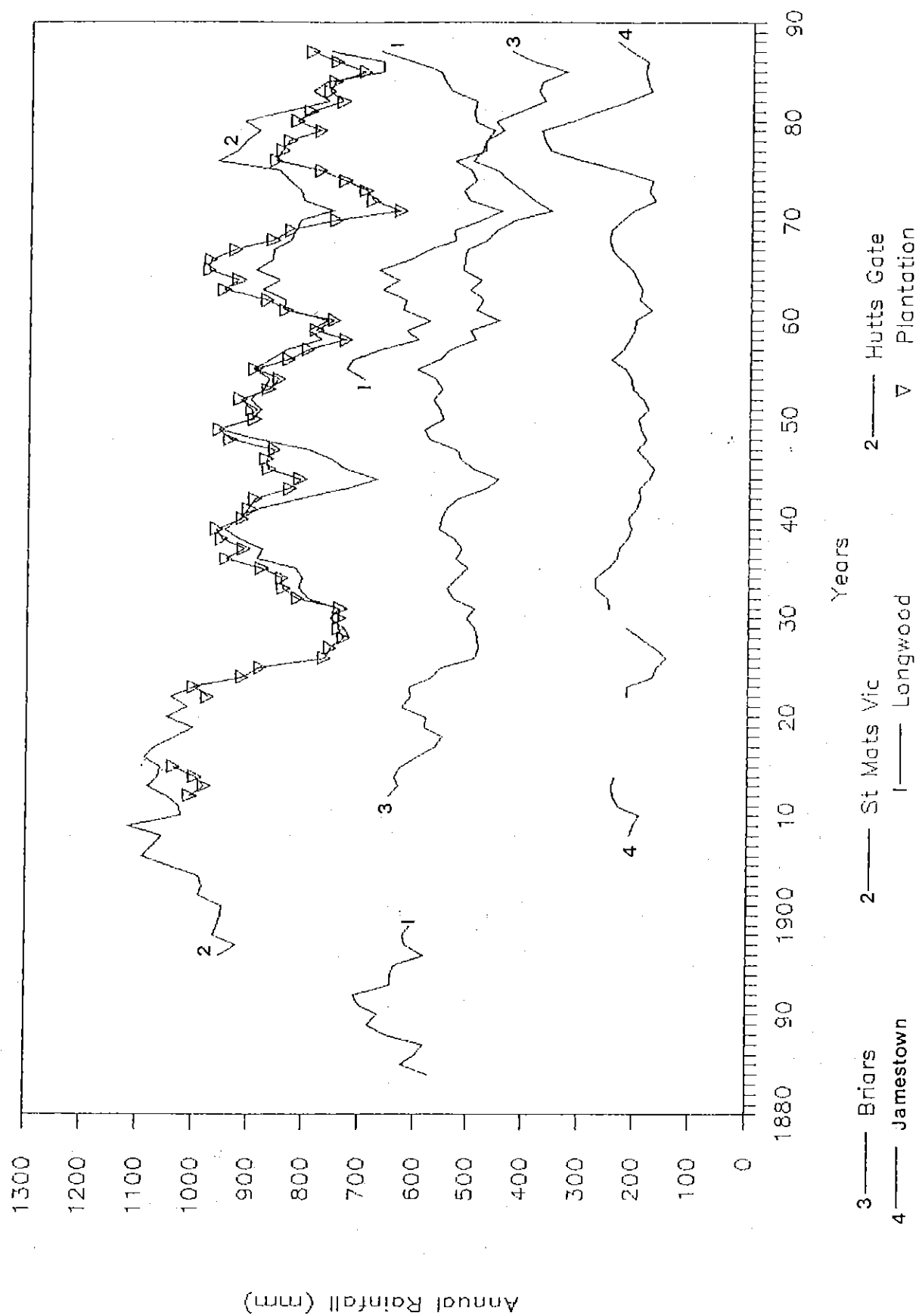
- Jamestown: stations with low annual averages can have long term trends greatly distorted by occasional major rainfall events. The data for Jamestown while generally reflecting the pattern of other stations, do not show such marked peaks or troughs. The record is also distorted by the years 1976-78 when annual rainfall in each year were amongst the highest that have been recorded. While these were wet years at other stations, the magnitude of the difference at Jamestown is very surprising. Some of the daily records are available for this period and suggest that daily totals were simply higher. Nevertheless a question mark must remain over the validity of the data for these three years.

It can be concluded from the data available that there has been no significant decline in annual rainfall quantities in the last sixty years and that droughts are experienced about every 15 years but sometimes the interval is closer to 10 years. There is also evidence of a longer term pattern that suggests longer periods of higher less oscillating annual rainfall that allows the island to be drought free for periods of up to 50 years. Such a period was recorded as ending in 1921 and extended back at least to 1895 and possibly considerably further.

3.6.3 Drought Frequency Noted in the Historical Records

An examination of droughts during the twentieth century shows that they tend to occur as a succession of years with below average rainfall one of which is at least a dry year in 10. Thus each year of the 1983-87 drought at Plantation had

Fig 3.4 5 Year Running Means



the following return periods:

1983 - Dry in six
 1984 - Dry in thirteen
 1985 - Dry in three
 1986 - Dry in ten
 1987 - Dry in two

1982 and 1988 at either end of the drought were both wet years with well above average rainfall. In the above data set the low of the five year mean cycle occurred in 1985.

This pattern is observable from data recorded over the last 100 years and from the island's records before rainfall recording started as shown in Table 3.7.

Table 3.7 Occurrence of Drought 1670-1989

Year	Comment	Years Since Last Drought
1712-13	"No rain for 10 months" -The Great Drought	
1720-24	"Want of rainy seasons for four or five years"	10
1736-38	"Water more scarce than at time of the Great Drought"	15
1747-49	"Several springs now dry that were never known to be so within memory of the oldest inhabitant"	11
1770-71	"Country in a terrible state"	22
1788-91	"Drought of 4 years just ended" report by Eliz. Fay	19
1808-11	Inferred from Beatson's records	21
1857-61	Inferred from partial data for Jamestown	49
1880-82	Possible tail end of drought at start of Longwood records in 1882	22
1926-30	From recorded data	44
1942-46	From recorded data	16
1958-60	From recorded data	15
1969-73	From recorded data	12
1983-87	From recorded data	14

Sources: Janisch, Gosse, Beatson, Mellis and Appendix 1.

Note: Years since last drought has been calculated on the basis of mid-years of the periods stated.

Table 3.7 suggests two trends already touched upon above - periods with a drought frequency of around 15 years interspersed with much longer periods of higher rainfall which apart from the occasional dry season are drought free.

The island was permanently settled in 1659 but it was nearly 50 years before the first drought was recorded; during this early period there are many references to rainfall but none to lack of it; it appears that the first severe drought to occur was called the "Great Drought" because nothing like it had been experienced before. However within 36 years two droughts of greater severity had been experienced. The eighteenth century, like the twentieth century had droughts every 15-20 years. The nineteenth century was different. Mellis writing in 1875 makes no comment of any serious droughts during the previous 70 years but catalogues the eighteenth century droughts. Nor is there reference anywhere else to serious droughts in the nineteenth century (although the mid-century records for Jamestown are low and suggest a moderate drought). Interpretation of Beatson's records from 1806-15 (raindays only 1806-11, rainfall 1811-15) suggest

a dry period around 1811. He considered that the eighteenth century droughts were probably made to seem worse by poor management - overstocking etc. but this is probably unfair as his experience of drought in 1811 was undoubtedly less severe.

For the remainder of the nineteenth century no mention of serious drought is made and it must be concluded that a drought of the magnitude of that of 1969-73, for example, did not occur during this period. As an aside it must also be noted that Napoleon's residence at Longwood coincided with a wet period.

In conclusion it can be observed that the eighteenth century drought cycle lasted 80 years and included six major droughts. The twentieth century cycle has lasted 60 years and included five major droughts. There are some grounds at least for expecting a major drought to occur around the turn of the century but not before.

3.6.4 Seasonal Rainfall Trends

Beatson, writing in 1816 described the summer rains setting in in January or February and the winter rains in June or July. This notion still exists on the island and while generally true also reflects nineteenth administrators tendency to compare natural phenomena on St Helena with the only other place in the tropics they were likely to know namely India. While rainfall in India is markedly seasonal in St Helena the seasons are much less predictable.

Seasonal rainfall has already been discussed in section 3.2.3 and illustrated in Fig 3.2. There is very little evidence from the data in Appendix 1 to show that there has been any significant shift in distribution when the 1965-89 averages are compared with the longer term averages.



Photo 4 Meteorological Station, Bottom Woods

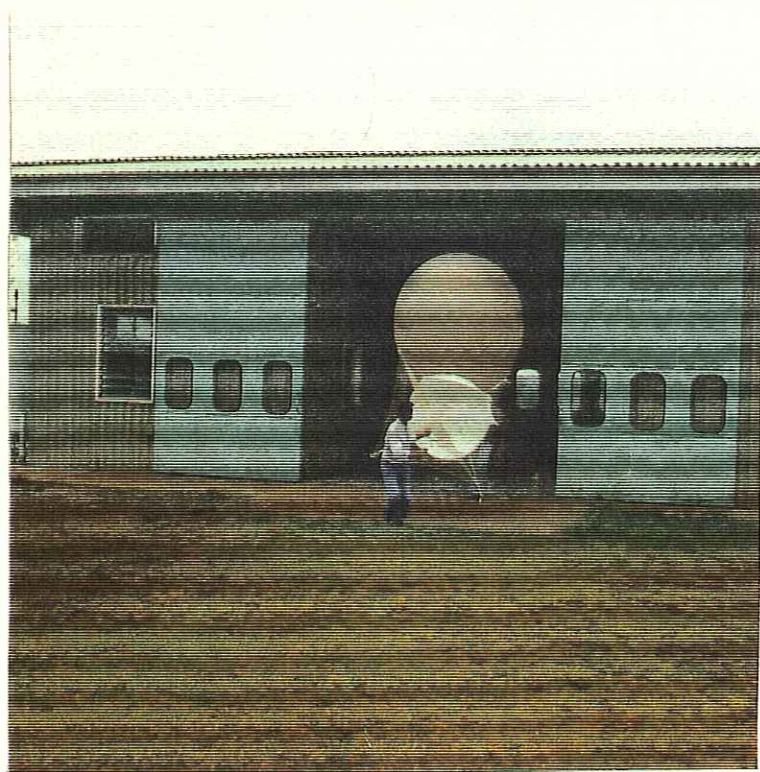


Photo 5 Preparing Balloon and
Radio Sonde

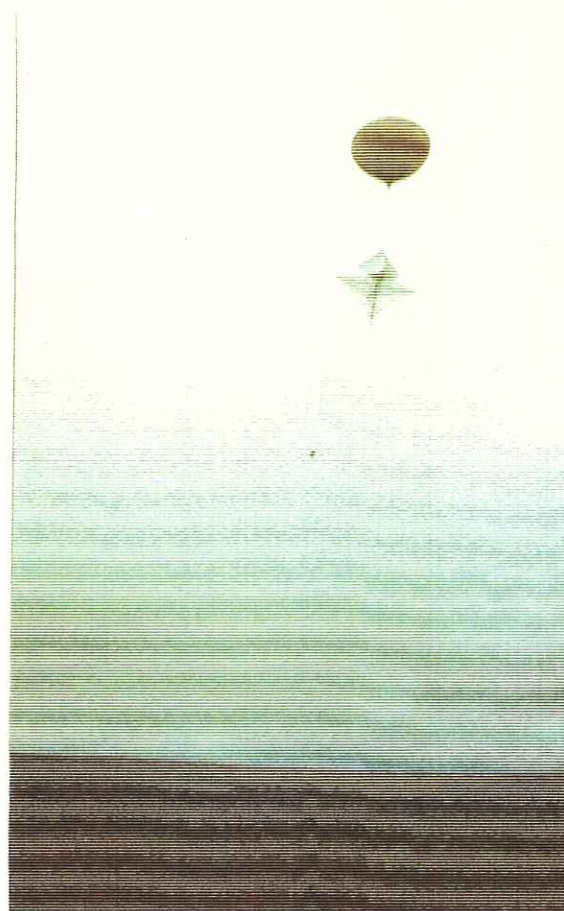


Photo 6 Just After Release
Note Sonde Hanging Beneath

4. TEMPERATURE AND RELATIVE HUMIDITY

4.1 Introduction

Temperature data are available as shown on Table 4.1.

Table 4.1 Availability of Temperature and Humidity Data

Station	Temp	R.H.	Years	Comment
1. Bottom Woods	X	X	1977-present	Accurate data
2. Hallams	X		1971-present	1984 missing. Inaccurate post '87
		X	1973-77	Unreliable
3. Hutts Gate	X		1926-75	Accurate data
		X	1926-75	0630 reading only
4. Jamestown	X		1853-62	Appears accurate
	X		1885-1920	Inaccuracies
	X		1985-89	Accurate data
		X	1857-62	Appears accurate
5. Longwood	X	X	1841-45	Appears accurate
	X		1890-97	Appears accurate ex 1891-92
6. St Mats Vic	X		1892-1924	Accurate data
7. Scotland	X		1880-81	Appears too low
	X		1981-89	Accurate data
		X	1981-85	Inaccurate data
		X	1988-89	Accurate data
8. Varneys	X		1960-65	Accurate data
9. Woodlands Fld	X		1891-98	Appears inaccurate
	X		1988-89	Accurate data
		X	1988-89	0630 reading only
10. Clifftop	X	X	1988-89	Accurate data
11. Ruperts	X	X	1988-89	Temps too high
12. Harpers	X	X	1989	Fairly accurate
13. Rose Bower	X		1988-89	Temps too high

Source: Appendix 3

The temperature data vary in accuracy mainly through poor screening. Under these circumstances direct sunlight causes the maximum to over read or poor ventilation causes the minimum to over read. In addition poor instrumentation may have caused inaccuracies in the early years eg at Woodlands.

4.2 Temperature Variations

4.2.1 Introduction

Temperature shows the least variation of St Helena's weather phenomena. The small diurnal variation and absence of seasonal extremes has excited comment from numerous travellers over the last four hundred years - particularly those used to the extremes of the Indian Monsoon. Even Napoleon, victim of a wet section of the rainfall cycle, admitted that the temperature was very pleasant.

4.2.2 Diurnal and Seasonal Variations

For all stations the diurnal temperature range at any time of year is almost constant around 5-6°C. The absolute temperatures increase the diurnal range by plus or minus 3-4°C (Fig 4.1 and Table 4.2) so that the extreme range ever recorded at any station at any particular time of the year is about 14°C. Data analysis carried out by Powers in 1933 for Hutts Gate showed the daily minimum occurring at 0600 hrs and the daily maximum at 1300 hrs throughout the year. Most of the time there was very slight difference in temperature between 0100 and 0600 hrs but outside these hours the increase or decrease in temperature was more rapid.

Table 4.2 Monthly Average Maximum and Minimum Temperatures °C

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
<u>Maximum</u>													
Jamestown	28.0	28.9	29.2	28.8	27.9	26.0	24.8	24.7	23.8	24.3	25.2	26.3	26.5
B. Woods	22.8	23.6	23.4	22.5	21.4	19.9	18.7	18.3	18.4	18.7	19.5	20.7	20.7
Scotland	21.9	22.5	22.2	21.9	20.9	18.9	18.0	17.7	17.4	17.6	18.8	19.9	19.9
Hutts Gate	20.3	21.1	21.0	20.5	19.4	18.0	16.7	16.2	16.0	16.5	17.5	19.0	18.5
<u>Minimum</u>													
Jamestown	23.1	24.3	24.5	24.1	22.8	21.1	20.1	19.9	19.6	19.9	20.6	21.8	21.8
B. Woods	17.5	18.5	18.6	18.1	16.9	15.5	14.5	14.1	14.1	14.2	14.9	16.0	16.1
Scotland	16.6	17.8	17.9	17.3	16.1	14.3	13.7	13.3	13.4	13.3	14.0	15.1	15.2
Hutts Gate	15.7	16.4	16.6	16.3	15.3	14.4	13.5	12.9	12.8	12.6	13.4	14.1	14.5

Source: Appendix 3

Seasonal variations are also small with the annual range between 5-6°C for all stations. In other words at any particular spot on the island the winter day temperature is only very slightly less than the summer night temperature. The warmest months are February and March and the coolest August and September. The extreme temperatures recorded are 7.2 and 33.9°C at Hallams and Jamestown respectively. It is an unusual year when anywhere on the island experiences temperatures of less than 10 and more than 30°C for more than a day or two.

4.2.3 Temperature Variation with Altitude

The mean temperatures for eight stations have been calculated and their values plotted against their elevation in Fig 4.2.

Fig 4.1 Average and Absolute Temperatures

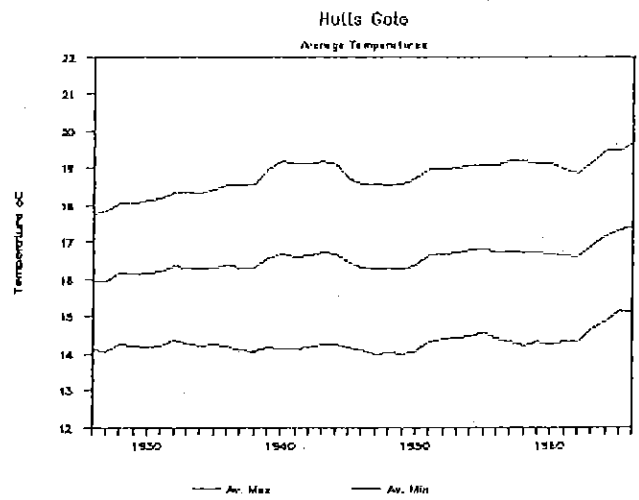
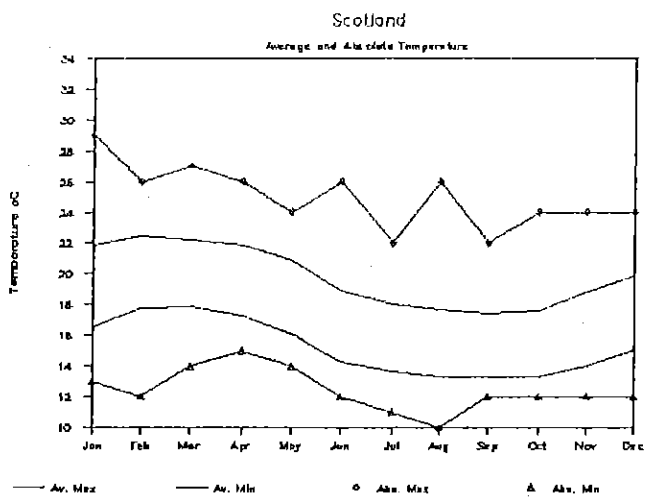
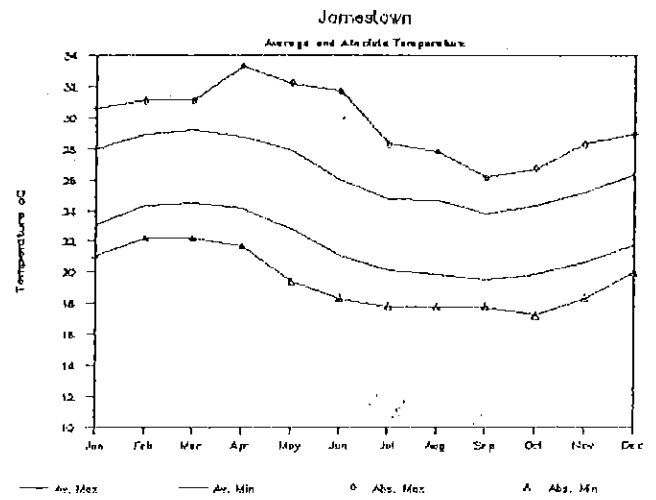
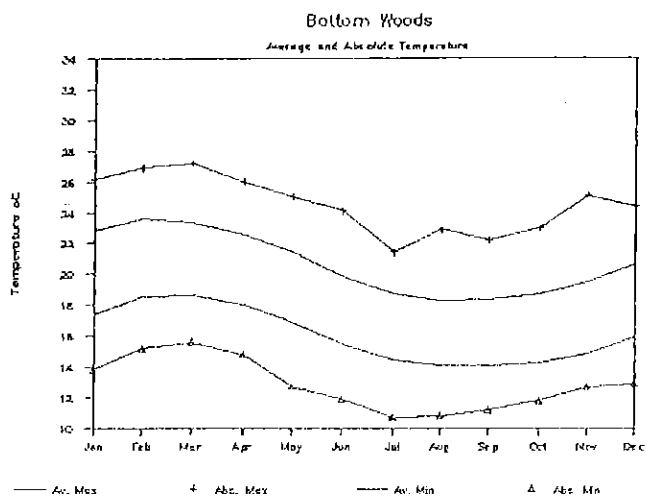
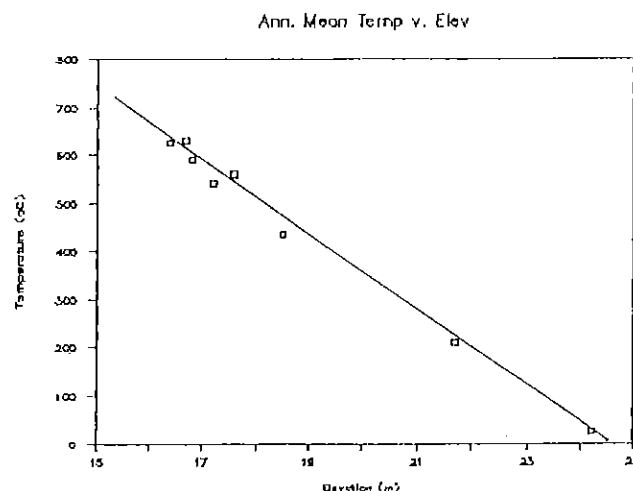


Fig 4.2 Temperature Variation With Altitude

Station	Altitude (m)	Mean Temp (°C)	Recording Period
Bottom Woods	435	18.5	1977-89
Hallams	590	16.8	1971-86
Hutts Gate	627	16.4	1926-75
Jamestown	25	24.2	1985-88
Longwood	542	17.2	1890-97
St Mats Vic	630	16.7	1893-1924
Scotland	560	17.6	1982-89
Cliff-top	210	21.7	1988-89



Source: Appendix 3

Fig 4.2 shows that there is a fairly constant relationship between elevation and temperature. The graph shows this to be approximately 1.3°C per 100 m increase in elevation. This is about double a normal inland relationship. Small distortions are caused to this trend by exposure to the Trade Winds - for example compare Longwood temperatures with those of Scotland at the same elevation.

On average, temperatures at Hutts Gate are 7-8 °C cooler than those in Jamestown.

4.2.4 Long Term Variations in Temperature

The small variation in temperature, the fragmentary record and small recording inaccuracies makes a long term examination of temperature change difficult. There is some evidence that, as might be expected, long term means rise during the periods of drought by about 0.3-0.5 °C but that this rise is fairly short lived - just for the period when the drought is at its worst. Temperatures do not appear to be correspondingly lower during wet periods.

In 1806 the records contain seven months of absolute maximum and minimum temperature data (see Appendix 3). Although not specified these data were presumably recorded by Beatson at Plantation. The average for the months recorded was 17.2 °C compared to the current average for the same months at Scotland of 18.1 °C. Data recorded for Jamestown in 1848 gave an annual mean of 24.8 °C compared to the 1985-88 average of 24.2 °C. In 1805 the anonymous author of "A Description of the Island of St Helena" refers to the temperature of the interior being 12-15 degrees below that of the valleys; this corresponds to 6.6 - 8.3 °C and the average island wide range of temperatures being between an equivalent of 11 and 29 °C. All these data are very close to current levels of recording and suggest no long term changes in temperature.

Brooks (1926) analyzed data from St Mathews Vicarage and was able to observe a rise in temperature between 1892-1923 of nearly 2°C. This was entirely attributable to a rise in the maximum temperature while the minimum remained constant. He was able to link this change with corresponding changes in wind speed and pressure suggesting that the South Atlantic High Pressure was moving northward but this did not appear to have any significant effect on rainfall.

Subsequent data has not been fully analysed but temperature for Hutts Gate showed a very slight increase between 1925 and 1960.

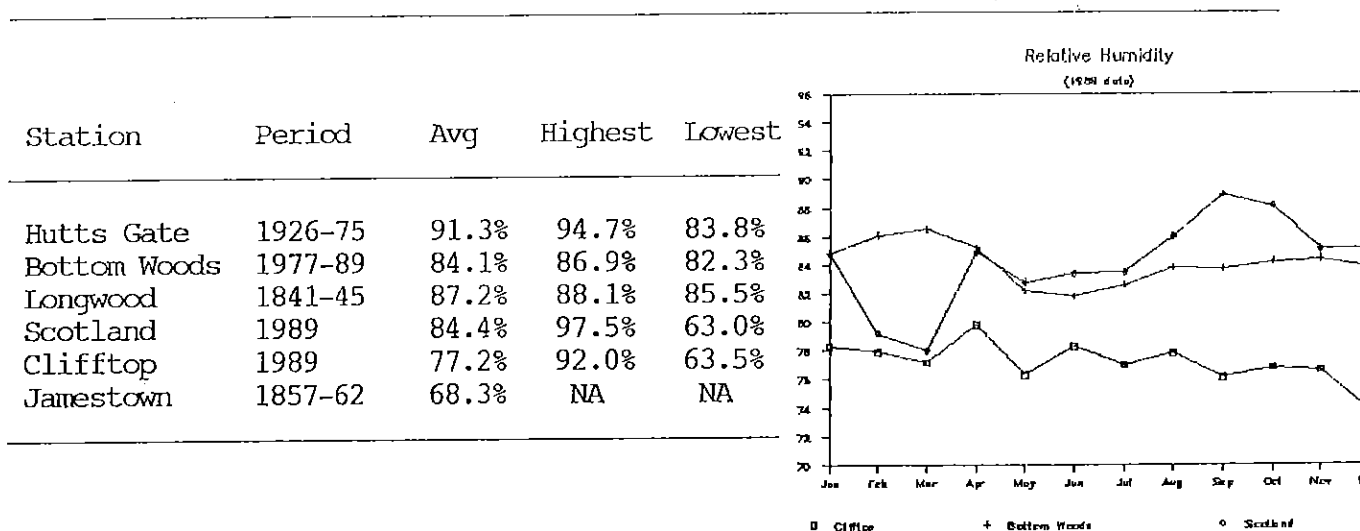
Temperature changes over the last ten to twenty years are of relevance with the current interest in global warming although the equatorial regions are least likely to exhibit significant changes. At Bottom Woods the 5 year mean between 1977 and 1989 increased from 18.0 to 18.7 °C but this may reflect the drought cycle. In the last year the mean has turned downwards again after a near average year in 1989. At Hallams the record is interrupted and the last few years data appear to be too high and no other records are of sufficient duration to draw any conclusions.

In view of Brooks's works any attribution of an increase in temperature to global warming will need very considerable data analysis and research to show that other factors are not responsible.

4.2.5 Relative Humidity

Data on Relative Humidity are very sparse but this absence is compensated by almost complete uniformity throughout the year and very small differences between different parts of the island. The records that exist are given in Appendix 3 and are summarised in Fig 4.3.

Fig 4.3 Relative Humidity (Per Cent)



Source: Appendix 3

A problem with humidity data is the time of recording. Humidities can fall considerably during the day. Of the above only Bottom Woods has a continuous record and the humidity is calculated as an average of the maximum and minimum. Readings at Scotland are taken at 0800 hrs and 1530 hrs which should provide a good indication of range. It can be stated with reasonable confidence that humidities above 300-400m are in the range 80-85% almost all the time.

At lower levels humidities drop slightly. The record at Cliff top may be slightly high as readings were taken at 0800 and 1800 hrs but the readings for Jamestown appear too low. A continuous recorder was used at Ruperts for eleven months in 1989 and gave an average of 80% but showed a monthly average as low as 73%. The accuracy of these latter recordings is not assured. It would seem that in coastal areas, on the leeward side of the island at least, humidities are more commonly in the range 75-80%.

During the 1970's A & F introduced a potato blight warning service based

upon Beaumont Periods. This system predicts that late blight hazard is greatly increased when relative humidity is above 75% continuously for more than 48 hours and that preventative sprays are only warranted at such times. At this time A & F were operating a thermohygrograph that was malfunctioning and gave mean annual relative humidities of 59%. Although the warning system was later abandoned as impractical it is evident that humidities over most of the growing areas rarely if ever fall below 75% so that sprays need to be applied throughout the life of the crop.

5. WIND SPEED AND DIRECTION

5.1 Introduction

Of all the meteorological elements wind has been the most studied phenomena on St Helena. The significance of wind to agricultural production is through its effect upon transpiration and its ability to cause physiological damage.

The remarkable constancy of the South-East Trade Winds at St Helena has long been commented upon. Known historically as "the Doctor" the steady breeze was considered to be the main contributor to St Helena's healthy climate.

The study of the Trade Winds on St Helena dates back to the first meteorological observatory at Longwood. Data here was recorded as wind pressure using an Osler pressure gauge and has not been analysed in this report. Similarly data for St Mathews Vicarage were recorded as a force and have only been partially analyzed in Appendix 4 (a detailed analysis of these early data is provided by Dines 1910).

Subsequently all studies have concentrated on examining the wind at exposed points on the south-east side of the island - both for climatological purposes and more recently for the feasibility of wind generated electricity. Although these data are of value to agriculture in the exposed parts of the island virtually no recording has been undertaken on the leeward side of the island until 1988. In general the leeward side of the island is, as expected, less windy than the windward but there appear to be exceptions - the destruction of the new windpump at Frenches Gut, in the lee of High Peak, by severe gusting in the mid 1970's is such an example.

In analyzing the wind data for St Helena most data have been expressed as a wind run in km/day - the usual format for the Penman evapotranspiration calculation. In addition data have been reduced to a common standard of windspeed at 2m above ground level; the correction factors for this have been derived from FAO Irrigation and Drainage Paper 24 and are as follows:

Measurement Height:	1.5m	2.0m	5.0m	10m+
Correction Factor:	1.06	1.0	0.85	0.8

5.2 Monthly and Annual Wind Speed

5.2.1 Monthly Variations

Table 5.1 and Fig 5.1 show the monthly variations of wind runs for four stations. Full data are contained in Appendix 4 and as can be seen there is a small variation between the yearly totals for any particular station. Although the records for Scotland and Clifftop are for only just over one year it seems improbable that the long term average will show large departures from the data presented.

Fig 5.1 Monthly Windruns For Selected Stations

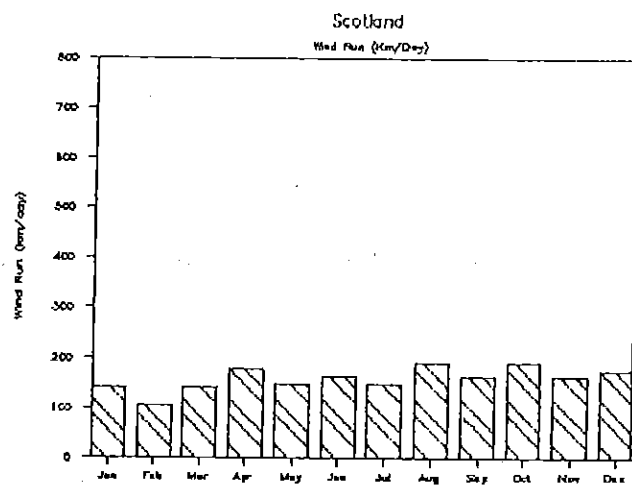
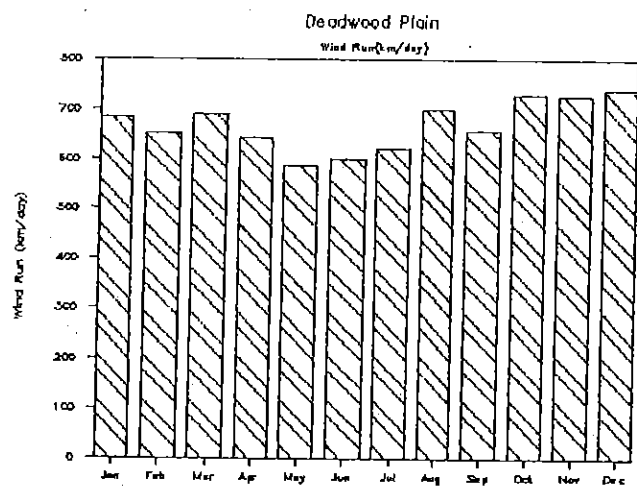
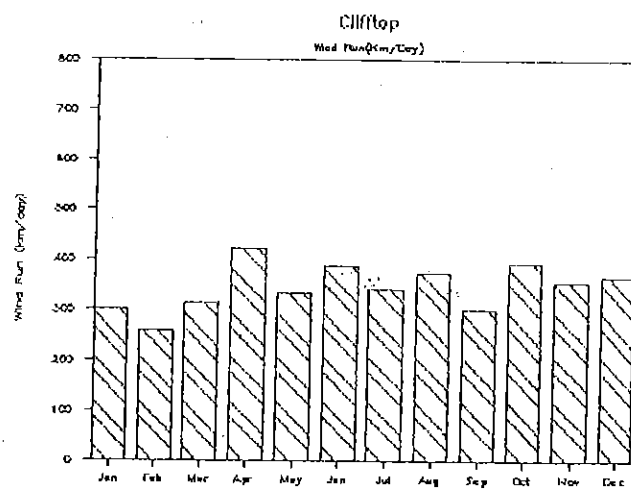
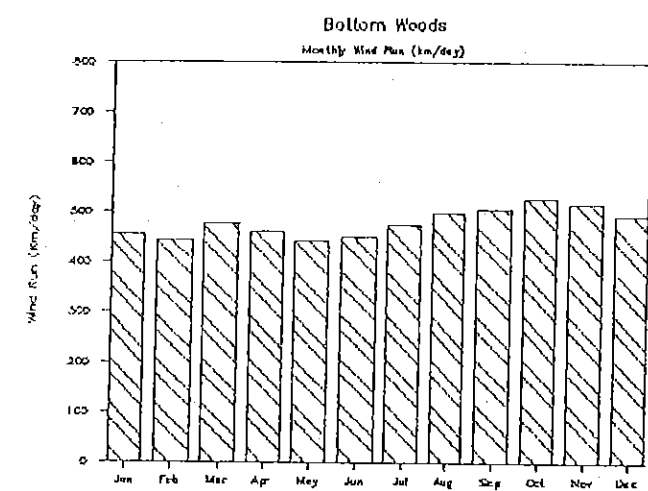


Table 5.1 Monthly Variations of Wind Run (Km/day)

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
B.Woods	456	445	476	461	442	450	473	499	507	527	517	493	479
Deadwood	683	652	689	643	586	600	621	701	656	731	728	742	670
Cliff-top	302	254	314	422	333	388	341	375	302	392	355	365	349
Scotland	141	105	140	178	148	164	147	190	165	190	165	159	165

Source: Appendix 4

The historical records generally comment on the constancy of the wind except at the time of the equinoxes in March and September. Thus Duncan (1805) comments

"This settled and uniform state of things is disturbed by the approach of the sun to the zenith, which occasions temporary calms, during which, the clouds collect and give rise to storms, attended with violent and opposite gusts of wind. But the departure of the sun from the zenith restores the regular current of the Trade Wind."

The figures in Table 5.1 and other data in Appendix 4 do not support the notion of calms around the equinoxes which occur on September 14th and March 29th. The long term data from Bottom Woods show that the windiest months occur in the second half of the year but that the difference between the average of the calmest month (February) and the windiest month (October) is only about 16%. Data for Hutts Gate from 1925-60 (Appendix 4) show a greater variation of 55% and as these are the only data from this period the possibility that the wind pattern over the last ten years has become more uniform cannot be dismissed.

5.2.2 Locational Variations

As Table 5.1 shows there is a large variation in wind speeds at different locations on the island. The wind speeds for a sheltered leeward station such as Scotland are only one third those of the exposed Bottom Woods. Cliff-top which has an exposed leeward position has a speed of half that of Deadwood about 3 km away although there is an uninterrupted air flow between the two sites. For the sake of comparison annual wind run totals for all sites included in Appendix 4 have been reduced to a 1989 equivalent as far as possible and are as follows:

Station	Wind Run (km/day)
Deadwood	726
Woody Ridge	510
Bottom Woods	507
Hutts Gate	507
Cliff-top	349
Woodlands Fld	228
Ruperts	180
Scotland	165
Harpers	160
Iron Pot	83

From an agricultural point of view sustained windspeeds of around 4-5 m/sec can cause damage to crops and dramatically reduce the application efficiency of sprinklers. 4-5m/sec corresponds to a wind run of approximately 350-430 km/day. In other words crops grown and particularly those irrigated by sprinklers anywhere in exposed positions on the windward side of the island will require protection by the provision of windbreaks.

5.2.3 Day/Night Windspeeds

The ratio of day to night wind speeds can be important when managing sprinkler irrigation systems and also for calculating potential evapotranspiration.

Continuous wind speed data for Bottom Woods are held on the Met. Office computer at Bracknell. An analysis of the data from 1979-88 is given in Appendix 4 and shows that on average the ratio of day to night speeds is small - about 1.1, as might be expected for a coastal site. However readings from Clifftop, also in the Appendix, show not only a larger average ratio of 1.3 but also much greater variation between months within the range 1.0-2.0. The data are scanty and not detailed, in that the anemometer used is not self-recording, but they do suggest that there may be a significant difference in day and night windspeeds on the leeward side of the island.

5.2.4 Extreme Events

The wind regime in St Helena is remarkably lacking in extreme events. Gales are rare with only one gale at Bottom Woods during 12 years of recording (in August 1988). On Deadwood gales may be more frequent.

Gale force gusts are relatively common. In 1964 the Meteorological Office ran a probability analysis on gusts at Hutts Gate and arrived at the following:

Maximum gust in one year : 77.8 km/hr
ten years: 101.9 km/hr
twenty years: 126.0 km/hr

At Bottom Woods an analysis by the Wind Energy Group (1983) calculated the maximum gust in 50 years to be 108 km/hr and the maximum hourly mean for the same return period 61.2 km/hr. All years from 1977-83 experienced gusts of over 85 km/hr at this station.

Gale force is 62 km/hr and a gale defined as a windspeed above that threshold for at least half an hour. The analysis of Bottom Woods data therefore showed that a gale was a 1 in 50 year event at this station (in 12 years recording one gale has been recorded).

Although no data exist, it is likely the extreme topography of St Helena can amplify these events through eddying and that extremely localised bursts of high wind of short duration are fairly common. Such events probably accounted for the destruction of the windpump at Frenches Gut, already referred to and for the localised destruction of forest on the north side of Halleys Mount during 1989 when elsewhere on the island no noticeably high winds were observed.

5.3 Wind Direction

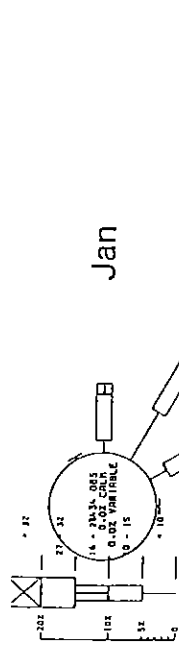
The broader view of South Atlantic wind directions has already been discussed in section 2. Fig 2.1. Fig 5.2 and 5.3 show the wind roses for Hutts Gate and Bottom Woods. The uniformity of the direction is apparent. At Hutts Gate 71% of wind directions were south-east and at Bottom Woods 72%.

The wind direction shows greater variability during the autumn and winter

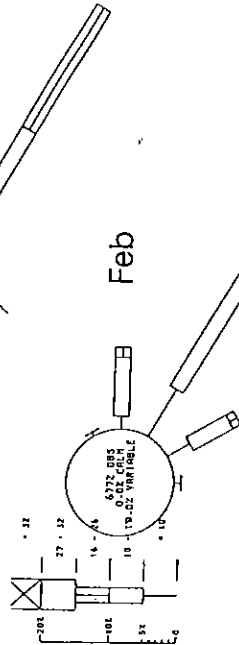
months at both stations but even then the variability is almost entirely confined to the 90-150° range.

In his detailed analysis of wind direction at Longwood between 1841-45 Sabine concluded that the wind direction was 5-6° more easterly from April to August than for the remainder of the year. He also concluded that day time wind directions were slightly more easterly than those at night.

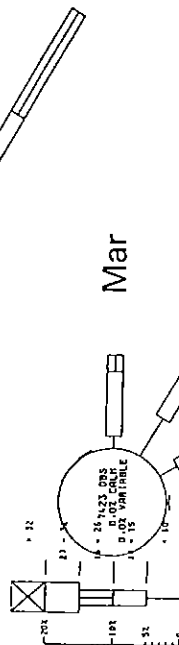
Winds blowing from the 180-360° range are very rare and traditionally held to be unhealthy. They appear to occur most often between May and July and tend to last for two or three days. Kitching quotes the St Helena records for 17.6.1716 as recording that "the wind has blown from the west for three weeks continuously and that three vessels which had sailed for England on 30th May were still in sight".



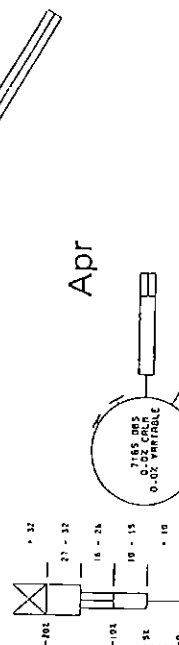
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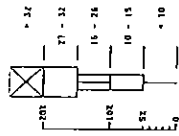
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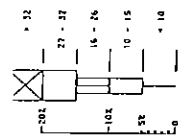
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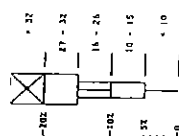
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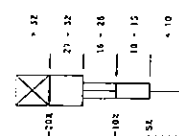
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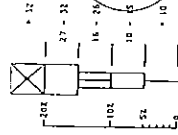
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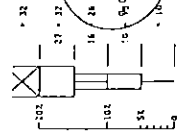
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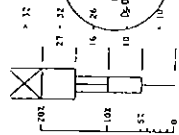
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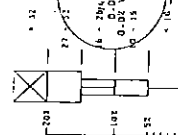
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Oct



Nov



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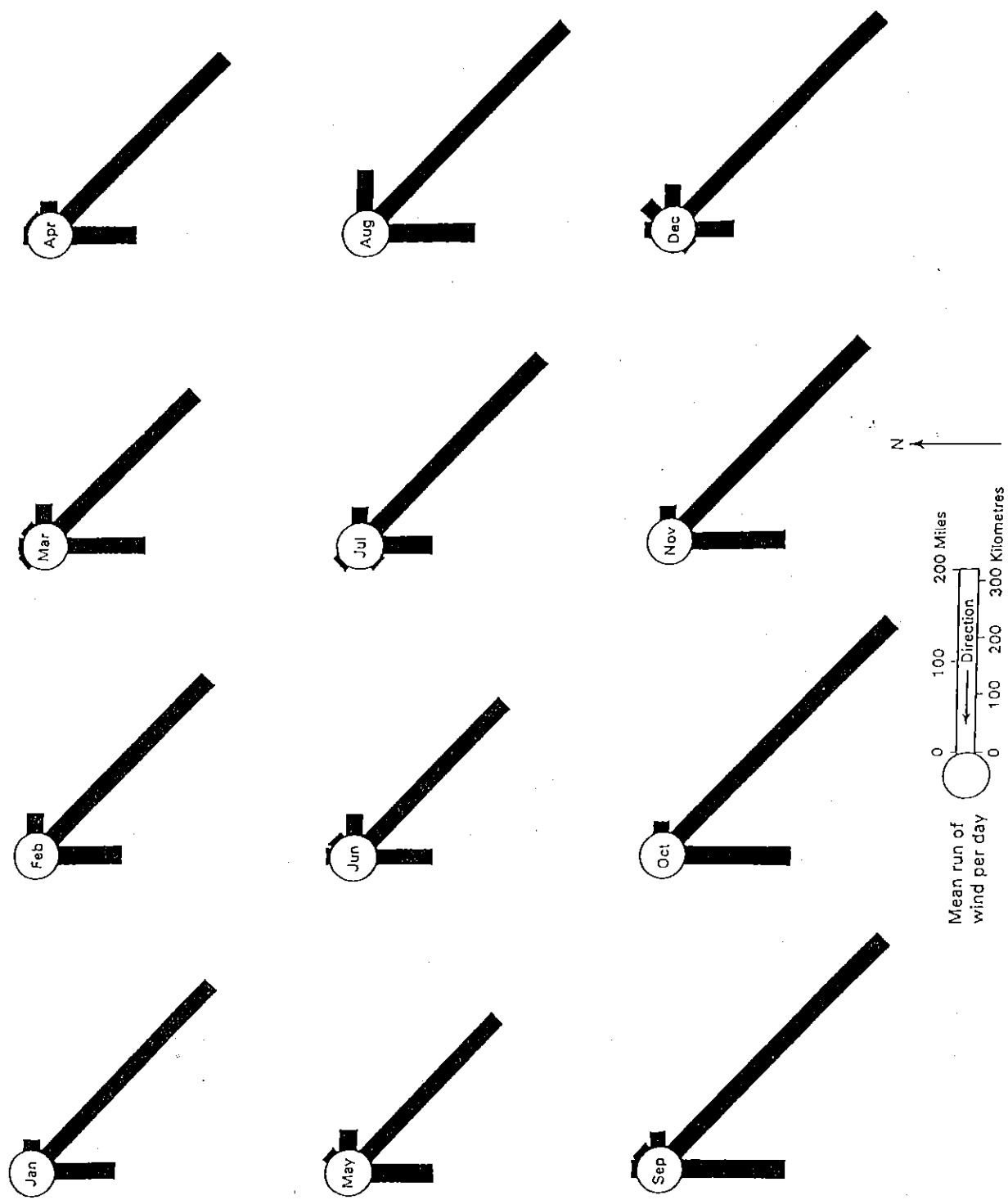


Fig. 5.3 Wind direction and velocity, Hutts Gate (from Brown, 1981)

6. SUNSHINE AND CLOUD COVER

6.1 Introduction

St Helena is a remarkably cloudy island, a fact that appears to have largely escaped comment in the historical records - possibly because for most writers the experience of island climate was largely based upon Jamestown where slightly less cloudy conditions prevail. Lamb (1957) comments

" Hutts Gate has an average of only two clear days a year, and 290 cloudy (overcast) days. Even Jamestown gets 128 cloudy (overcast) days in the average year. The figures for Hutts Gate are comparable with the duller skies of the sub-Antarctic ocean and those for Jamestown compare with the Atlantic coast of Nova Scotia"

It is unfortunate that there is a shortage of data on cloud cover and sunshine. The longest record of sunshine hours is provided by Bottom Woods from 1977 to the present. The introduction of two more Campbell-Stokes recorders and two solarimeters during 1988-89 has started to yield some interesting data.

Cloud cover records have been kept at Hutts Gate and St Mathews Vicarage but these are of only limited value being taken only once in the morning. A morning and afternoon record was maintained at Clifftop during 1989. In addition records have been kept at Hutts Gate and continue at Bottom Woods for the incidence of fog. A day with fog is defined as any day when a visibility of less than 1000 metres occurs in any direction; a 24 hour watch is maintained although the accuracy of night-time observations may be open to question.

6.2 Cloud Cover and Fog

6.2.1 Cloud Cover

Three records of cloud cover are provided by St Mathews Vicarage, Hutts Gate and Clifftop (Appendix 5). At Hutts Gate cloud cover at 0900 hrs averages 80% with a maximum occurring between August and November and a minimum in May. The variation between months is small. The earlier record maintained at St Mathews Vicarage confirms the Hutts Gate data although February and March exhibited the least cloud.

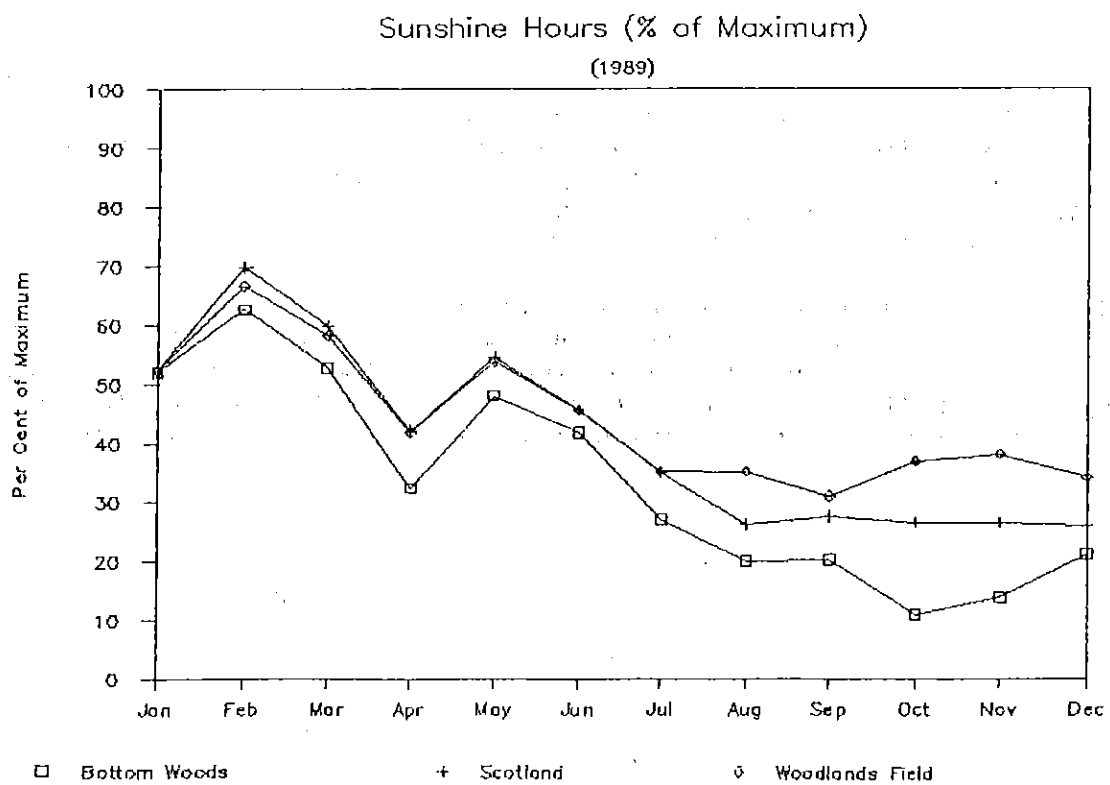
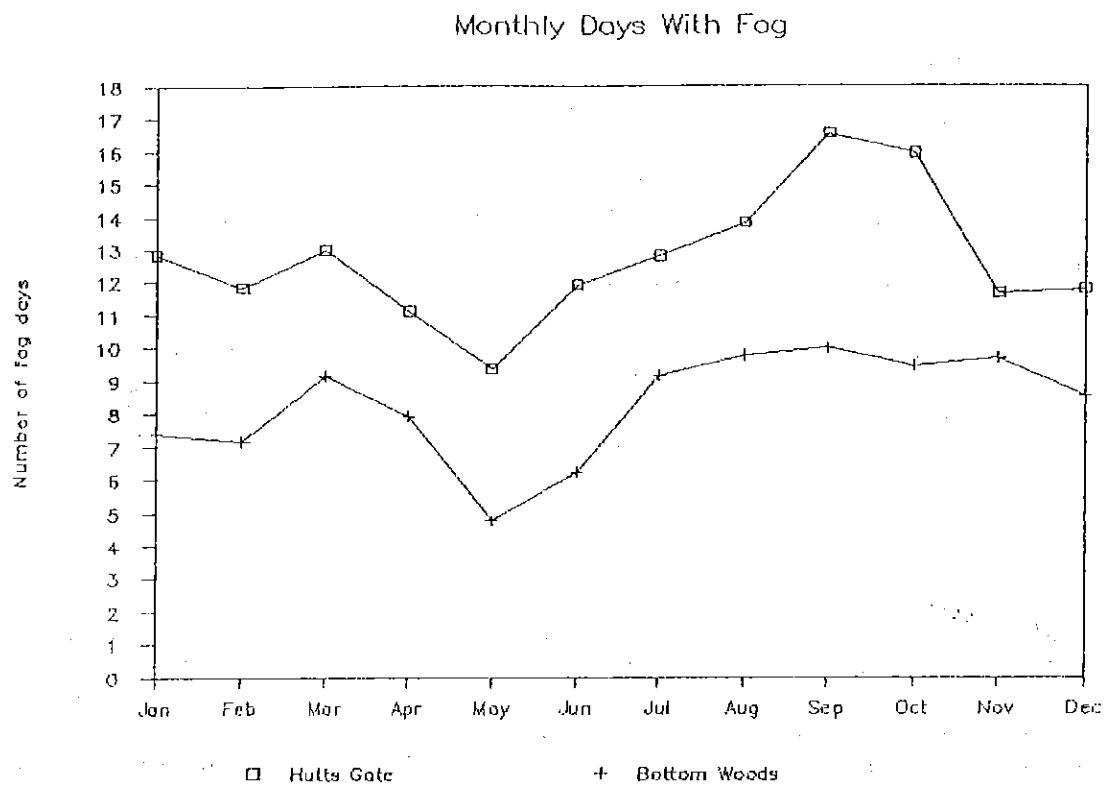
A record maintained during the nineteenth century at Jamestown gives an annual cloud cover of 64% and compares closely with one year's data at Clifftop for 1989 which averaged 66% with a mean of 71% at 0730 hrs and 61 % at 1800 hrs. The seasonal pattern described above was reflected by these data although the range was larger, as might be expected for a single year of recording.

6.2.2 Fog

The monthly frequency of fog at Bottom Woods and Hutts Gate is plotted in Fig 6.1. Full data are in Appendix 5. Fog is defined as occurring on any day when visibility in any direction is less than 1000 m.

It is apparent from the figure that the incidence of fog at both stations is common throughout the year but that May and June are the least foggy months and September and October the most foggy (although these months are among the driest of the year - see section 3.2.3).

Fig 6.1 Sunshine Hours and Incidence of Fog



7. EVAPORATION AND POTENTIAL EVAPOTRANSPIRATION

7.1 Introduction

Brown provides the first instance of an evaporation pan being used on St Helena. Unfortunately the pan, installed at Longwood, leaked and lacked a proper measuring device so that the data were not accurate. During 1988-89 Class A evaporation pans were installed at Scotland, Longwood Nursery and Bottom Woods Met. Station.

Potential Evapotranspiration (Eto) is calculated from weather data using the Penman formula. Eto is a measure of potential short grass transpiration that has no restrictions placed upon its ability to draw water from the soil.

It has only been possible to calculate Eto when the necessary data components are available - maximum and minimum temperature, relative humidity, sunshine hours and wind run. These data have only been available from Bottom Woods since 1977 and from other sites since 1988-89.

7.2 Evaporation

Data collected from the three evaporation pans are presented in Appendix 6. Evaporation during 1989 at Bottom Woods was 1515 mm and at Longwood 1136 mm. The average evaporation ratio of Longwood to Bottom Woods of 0.75 has been maintained fairly consistently on a monthly basis.

During 1989 a pan was installed at Scotland but readings from this site have been consistently much lower than at Longwood - by an average factor of 0.7. Possible explanations for this are suggested below.

7.3 Potential Evapotranspiration (Eto)

Only two sites - Bottom Woods and Scotland - have full data for calculating Eto. However a number of sites have almost complete data and it is possible to estimate with reasonable confidence any data that are missing.

Appendix 6 contains the average Eto calculations for eight sites that are reasonably representative of most conditions on the island. The annual totals for each site are as follows:

Clifftop	1731 mm
Jamestown	1519 mm
Bottom Woods	1312 mm
Woodlands Fld	1237 mm
Harpers	1203 mm
Scotland	1190 mm
Longwood	1140 mm
Hutts Gate	1047 mm

Although there is an approximate relationship between altitude and Eto the situation is complicated by several variables. Jamestown loses about two hours of sunshine per day due to its position and wind speeds are much lower than those at the top of the cliff. So despite slightly higher temperatures, Eto is less at the bottom of Ladder Hill than at the top. Similarly while Bottom Woods and Harpers are at the same elevation much higher wind speeds at the former more

than offset slightly lower sunshine hours.

Hutts Gate is the highest point with records. Eto above this level is of considerable importance in terms of hydrology. At the 750 m level Eto is likely to be about 950 mm p.a.

Seasonal variations in Eto are shown in Fig 7.1. June and July are the months with the lowest Eto and January and February the highest. Day length controls potential sunshine hours and therefore has a significant effect upon Eto. For most sites the minimum monthly Eto is about 65% of the maximum.

Unlike rainfall Eto shows only small variations between years so that the measurement of Eto at a site for one year is likely to give a good approximation of the long term mean. For the 12 years data available for Bottom Woods the annual mean is 1328 mm (calculated on an annual basis rather than by average data as above) and the range only plus or minus 8%.

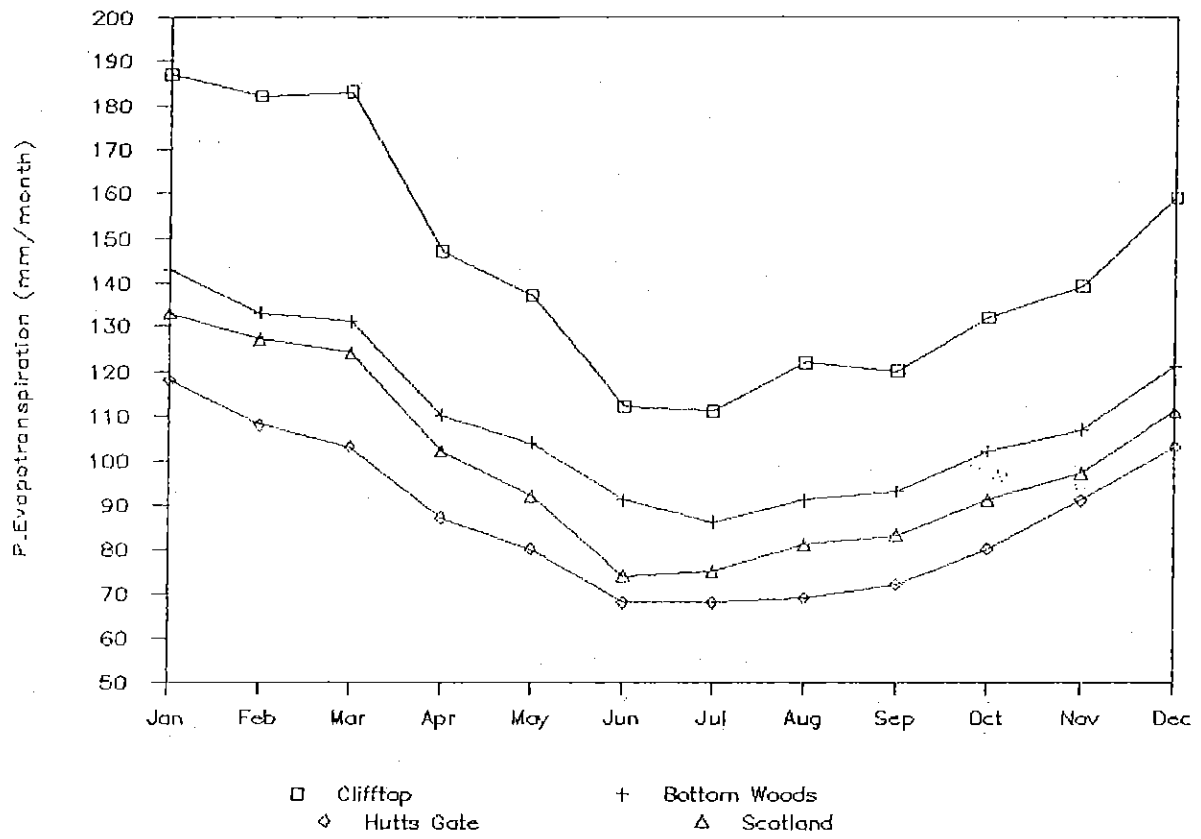
7.4 Eto/Evaporation Relationship

The relationship of Eto to evaporation is an important tool for scheduling irrigation. If a constant relationship can be established between the two then a pan offers a much cheaper and simpler method of monitoring crop water demand than a full agro-meteorological station.

Appendix 6 provides the monthly Eto/Epan relationship for Bottom Woods and Scotland. For Scotland the ratio is 1.6, for Bottom Woods the ratio 0.95 and for Longwood the ratio compared to the estimated average Eto above is 1.0. It is normal for this relationship to be about 0.8. The values at Longwood and Bottom Woods are not too far from this and suggest that Epan readings in this area are a direct measure of Eto. At Scotland the relationship is not satisfactory but the reasons for this are not entirely clear.

The siting of the pans at both Bottom Woods and Longwood is similar, being on nearly bare ground and in positions where buildings up wind cause some break up of air flow. At Scotland the pan is situated on a lawn and trees and buildings are not far away. However these influences are also experienced by the meteorological instruments. The ratio also tends to show more variation than at Bottom Woods. Measurement errors provide an explanation but a longer record is also needed to see if any changes occur in the relationship.

Fig 7.1 Monthly Potential Evapotranspiration



8. CROP WATER DEMANDS

8.1 Potential Soil Moisture Deficit

The Potential Soil Moisture Deficit (PSMD) is a useful measure of drought. It may be computed on an annual basis by subtracting station Eto (water demand) from average rainfall (water supply). The results of this analysis for all stations where rain has been recorded are shown in Table 8.1 and Fig 8.1.

In the Table only three stations - Rose Cottage, Grapevine Gut and Cuckolds Point have a zero PSMD ie. where rainfall is equal to water demands in an average year. All other stations show a minus value with the driest point being Sandy Bay station with a PSMD of 1625 mm. In other words in an average year a grass sward grown at this point will need 1.6 m of water to keep it growing to its full potential.

The area of zero PSMD is of importance to stream discharge. It is interesting to note that the principal streams on the island all have their headwaters in this area.

Of course rainfall is not evenly distributed throughout the year and it is quite possible to grow non-irrigated crops successfully at certain times of year in areas with quite a large annual PSMD. Similarly the area of zero PSMD will increase considerably in wetter years. Under average conditions the area of zero PSMD is about 100 ha. A 10% increase in precipitation would increase the area of zero PSMD by two or three times with very profound effects on stream flow. The full hydrological implications of this analysis are discussed in section 3.2 of the Water Plan.

8.2 Crop Water Requirements

Table 8.2 provides the agricultural water balances for the main growing areas and summarises the irrigation requirements for crops grown in the main planting seasons of February, June and October for a dry year in five. This provides the basis for planning an irrigation system.

It is also useful to know the probability of being able to grow a crop successfully at any time of the year without irrigation. For a dry year in five it is apparent from Table 8.2 that irrigation is required in all the main growing areas of the island. Table 8.3 shows the likelihood of being able to grow a crop in any part of the island at any time of year without irrigation.

It is apparent from the table that at Scotland in an average year it would normally (given reasonably well distributed rainfall) be possible to grow a crop planted between March and July without irrigation but not at any other time of year. Even in a dry year May and June plantings without irrigation should be possible.

The situation at Hutts Gate is similar to that at Scotland - planting between March and July without irrigation is an acceptable risk but not at any other time of the year.

At Longwood planting without irrigation should not be attempted; only about once in two to three years would a crop planted in May-June receive sufficient rainfall not to require irrigation.

At the Briars the situation is worse than at Longwood. Only in a very wet year would non-irrigated planting in April and May be successful and never at any other time.

Table 8.1 Annual Potential Soil Moisture Deficits (PSMD) for All Stations

Ref No.	Station	Elev (m)	Rain Av. 1965-89	Annual Eto	Annual PSMD
1	Plantation	530	801	1170	-369
2	Briars	280	421	1450	-1029
3	Hutts Gate	620	828	1047	-219
4	St Mathews Vic	630	855	1047	-192
5	Jamestown	11	247	1519	-1272
6	Longwood Field	500	548	1180	-632
7	Longwood Lawn	530	537	1140	-603
8	Hallams	590	995	1047	-53
9	Scotland	560	886	1190	-305
10	Bottom Woods	435	465	1312	-847
11	Harpers	450	751	1203	-452
12	Oakbank	520	995	1190	-195
13	St Pauls Vic	600	725	1130	-405
14	Sunnyside	475	743	1275	-532
15	Farm Buildings	520	900	1190	-290
16	Woodlands Field	530	760	1200	-440
17	Mount Pleasant	580	968	1047	-79
18	Rose Cottage	600	1054	1047	7
19	Ruperts	20	269	1519	-1250
20	St James Vicarage	25	195	1519	-1324
21	Blundens	85	400	1500	-1100
22	Secondary Selec School	190	240	1731	-1491
23	Clifftop	210	220	1731	-1511
24	Sapper Way	450	600	1250	-650
25	Bluemens Field	580	805	1190	-385
26	Farm Lodge	500	816	1190	-374
27	Oaklands	560	1049	1190	-141
28	Bamboo Grove	415	945	1300	-355
29	Fairyland	450	629	1300	-671
30	Sandy Bay Station	30	175	1800	-1625
31	West Lodge	680	851	1000	-149
32	Barren Ground	500	833	1190	-357
33	Thompsons Wood	540	674	1190	-516
34	South-west Point	560	438	1120	-682
35	Bates Branch	690	891	1000	-109
36	Rose Bower	525	1041	1195	-154
37	Harpers Education	450			
38	Woodlands House	525	776	1195	-419
39	Grapevine Gut	575	1055	1047	8
40	Cuckolds Point	770	952	930	22
41	Seaview	480	710	1180	-470
42	Willowdene	515	771	1170	-399
43	Pink Grove/Redhill	570	364	1100	-736
44	Levelwood	480	375	1250	-875
45	Middle Point	480	466	1300	-834
46	Little Deadwood	485			
47	Bradleys	370	367	1400	-1033
48	Leggs Gut	650	787	1050	-263

Source: Table 3.1 / App 7. Eto for stations with no calculations is extrapolated

Table 8.2 Agricultural Water Balances For Different Areas of St Helena (mm)

NOTE: Irrig Reqt. is taken as deficit times 0.75 to allow for low water demand in early growth stages

1. JAMESTOWN-BRIARS	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
Eto	167	165	158	128	117	93	93	103	108	120	127	140	1519	irrig reqt.
Rainfall	19	41	49	32	38	49	45	32	19	12	9	10	355	planting in:
														Feb Jun Oct
Deficit	148	124	109	96	79	44	48	71	89	108	118	130	1164	
Irrig Reqt	111	93	82	72	59	33	36	53	67	81	89	98	873	276 156 323
Table uses Jamestown Eto from Appendix 6 and Briars dry year in 5 rainfall														
2. HALF TREE HOLLOW	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
Eto	187	182	183	147	137	112	111	122	120	132	139	159	1731	irrig reqt.
Rainfall	19	41	49	32	38	49	45	32	19	12	9	10	355	planting in:
														Feb Jun Oct
Deficit	168	141	134	115	99	63	66	90	101	120	130	149	1376	
Irrig Reqt	126	106	101	86	74	47	50	68	76	90	98	112	1032	330 202 362
Table uses Clifftop Eto from Appendix 6 and Briars dry year in five rainfall														
3. BOTTOM WOODS	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
Eto	143	133	131	110	104	91	86	91	93	102	107	121	1312	irrig reqt.
Rainfall	21	52	56	40	34	49	45	39	28	22	20	22	428	planting in:
														Feb Jun Oct
Deficit	122	81	75	70	70	42	41	52	65	80	87	99	884	
Irrig Reqt	92	61	56	53	53	32	31	39	49	60	65	74	663	196 126 245
Table uses Bottom Wood Eto from Appendix 6 and dry year in five rainfall														
4. HARPERS	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
Eto	134	128	126	103	94	75	76	82	84	91	98	112	1203	irrig reqt.
Rainfall	30	68	80	58	58	66	74	54	38	26	23	26	601	planting in:
														Feb Jun Oct
Deficit	104	60	46	45	36	9	2	28	46	65	75	86	602	
Irrig Reqt	78	45	35	34	27	7	2	21	35	49	56	65	452	127 47 209
Table uses Harpers Eto from Appendix 6 and dry year in five rainfall														
5. SCOTLAND	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
Eto	133	127	124	102	92	74	75	81	83	91	97	111	1190	irrig reqt.
Rainfall	45	81	93	63	70	85	93	73	47	34	25	23	732	planting in:
														Feb Jun Oct
Deficit	88	46	31	39	22	-11	-18	8	36	57	72	88	458	
Irrig Reqt	66	35	23	29	17	0	0	6	27	43	54	66	344	95 20 196
Table uses Scotland Eto from Appendix 6 and dry year in five rainfall														
6. LONGWOOD	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
Eto	131	122	113	96	88	73	74	74	77	86	97	109	1140	irrig reqt.
Rainfall	29	47	58	39	42	55	53	46	34	22	17	17	459	planting in:
														Feb Jun Oct
Deficit	102	75	55	57	46	18	21	28	43	64	80	92	681	
Irrig Reqt	77	56	41	43	35	14	16	21	32	48	60	69	511	158 66 215
Table uses Longwood Eto from Appendix 6 and Longwood Field dry year in five rainfall														

Table 8.3 Four Monthly Water Balances For Selected Stations (mm)

To use the table:

All figures refer to a four month projection starting with the month of entry. So a demand entry for Scotland of 486 mm refers to the total Eto from Jan 1st to April 30th. The corresponding rainfall expected for the same 4 month period has been taken from Appendix 1 for both the average event and the dry in five event except for the Briars.

The requirement is the difference between the two; where it is negative irrigation will be required

A four month period has been used as corresponding to the life of an average crop. The analysis can be easily re-worked using three month periods

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
SCOTLAND												
Demand	486	445	392	343	322	313	330	352	382	432	468	495
Rain dry in 5	223	254	282	292	316	309	242	167	105	122	145	178
Requirement	-263	-191	-110	-51	-6	-4	-88	-185	-277	-310	-323	-317
Rain Av.Year	346	372	382	379	389	366	302	223	161	160	210	293
Requirement	-140	-73	-10	36	67	53	-28	-129	-221	-272	-258	-202
HUTTS GATE												
Demand	416	378	338	303	285	277	289	312	346	392	420	432
Rain dry in 5	230	253	268	252	269	255	205	170	137	130	151	207
Requirement	-186	-125	-70	-51	-16	-22	-84	-142	-209	-262	-269	-225
Rain Av.Year	329	343	339	328	322	310	269	211	177	170	127	286
Requirement	-87	-35	1	25	37	33	-20	-101	-169	-222	-293	-146
LONGWOOD												
Demand	462	419	370	331	309	298	311	334	369	423	459	475
Rain dry in 5	137	154	159	156	178	171	141	117	78	79	93	128
Requirement	-325	-265	-211	-175	-131	-127	-170	-217	-291	-344	-366	-347
Rain Av.Year	217	234	244	238	247	236	195	150	113	108	140	193
Requirement	-245	-185	-126	-93	-62	-62	-116	-184	-256	-315	-319	-282
Rain wet in 5	280	322	317	311	321	290	250	175	143	121	154	241
Requirement	-182	-97	-53	-20	12	-8	-61	-159	-226	-302	-305	-234
BRIARS												
Demand	587	540	471	409	386	377	403	435	470	526	569	599
Wettest	343	439	437	433	388	346	251	201	159	157	217	266
Requirement	-244	-101	-34	24	2	-31	-152	-234	-311	-369	-352	-333

9. ASCENSION ISLAND

9.1 Introduction

Weather recording on Ascension started in 1853 but the record is discontinuous during the nineteenth century. Full records started in March 1923 although the recording station was closed at Georgetown between 1975 and 1985 and is now run by Cable and Wireless. Sophisticated recording at the air base now includes forecasting although the future presence of the Met. Office on the island is not guaranteed. From an agricultural point of view much of the data are of limited value since they have been principally collected from the parts of the island least suitable for agriculture. Only limited, mainly rainfall, data exist for Green Mountain, Two Boats and Traveller's Hill and the Airhead.

This section presents a much less detailed analysis of data than for St Helena and in the time available it has not been possible to collect all the data available - much of which can only be obtained on the island itself. However the salient features of the climate are described, a good impression of the climate of the area with some agricultural potential can be obtained and comparisons drawn with St Helena climate.

The controlling influences of Ascension weather have already been described in Chapter 2.

9.2 Precipitation

9.2.1 Introduction

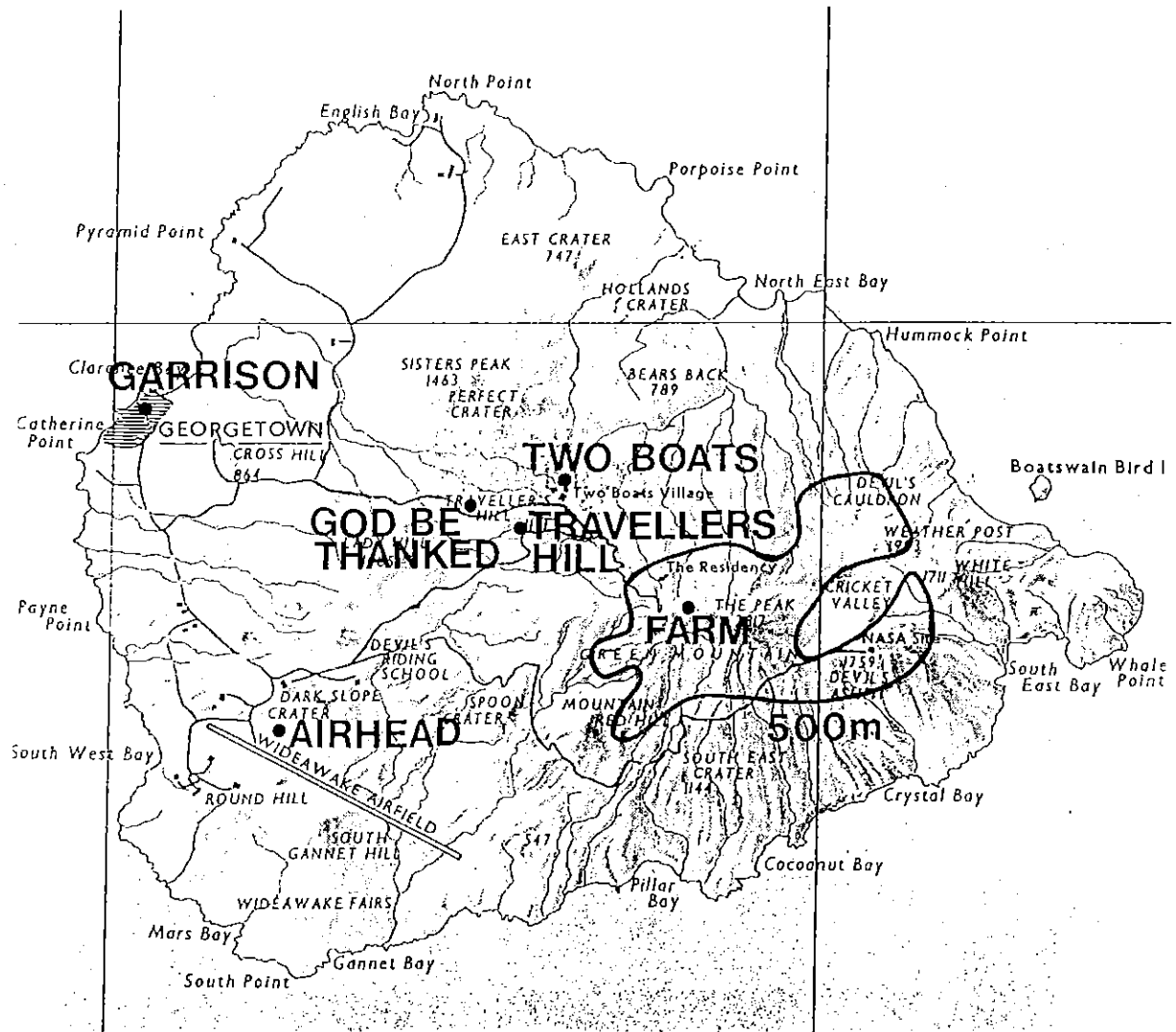
The rainfall records collected comprise the following:

Georgetown (Garrison):	1854-65
	1895-1975 (with gaps)
	1985-89
H.M.S. Tortoise:	1853-66 (with gaps)
God Be Thanked:	1860-62
Green Mountain:	1859-65
	1884-1922
Two Boats:	1968-77
Airhead:	1962-89
Traveller's Hill:	1987-89

Currently rainfall is believed to be recorded only at the Airhead, Travellers Hill and Green Mountain. Up to date records for Green Mountain were not obtained.

In 1985 Alison Hodges completed a BSc dissertation on Ascension rainfall which provides useful analysis for Georgetown.

Fig.9.1 Ascension Island



9.2.2 Rainfall Distribution

Mean annual rainfall for the main stations has been calculated as follows:

Station	Elevation (m)	Rainfall (mm)
Georgetown	16	130
Airhead	79	185
God Be Thanked	150	177
Traveller's Hill	200	290
Two Boats	290	327
Green Mountain Farm	686	657

All the recording stations are on the leeward side of the island and nothing is known about distribution on the windward side. Comparison with stations of similar elevation on St Helena - Sandy Bay, Clifftop, Briars and Hutts Gate shows Ascension rainfall to be around one third less than at similar elevations on St Helena.

Table 9.1 shows the seasonal distribution of rainfall for three stations and Fig 9.2 plots the data as histograms.

Table 9.1 Annual and Monthly Rainfall for Stations on Ascension (mm)

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Georgetown	4.2	8.7	22.8	27.2	10.7	12.4	12.6	9.7	7.8	6.7	3.8	3.3	130.0
Two Boats	16.1	12.1	54.1	56.8	30.2	34.3	39.2	22.6	21.1	17.4	17.7	11.0	327.1
Farm	58.2	46.8	48.6	63.6	62.2	53.5	46.4	42.8	51.2	61.3	69.3	56.7	656.8

Source: Appendix 7

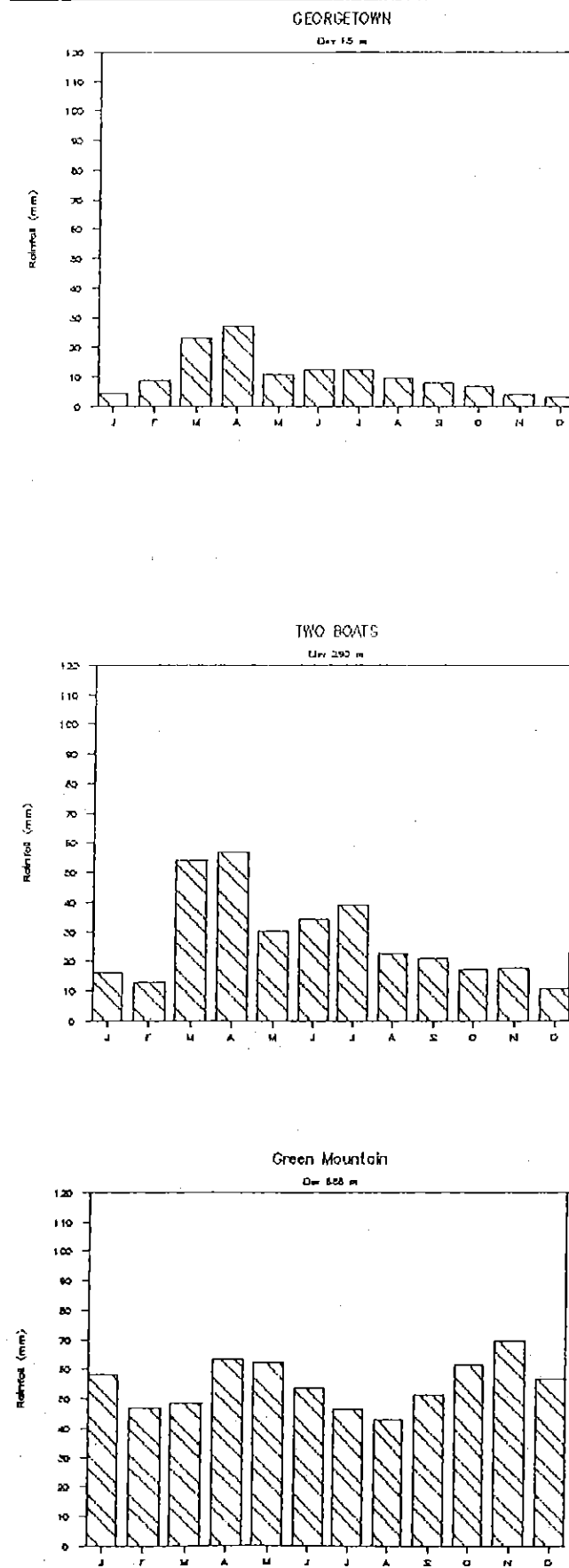
The annual rainfall distribution pattern shows considerable differences between the three stations. The reason for this is that Ascension experiences occasional extremely heavy rainfall which is mainly confined to March and April. For low rainfall stations a single storm can have a profound influence on the long term average. At Green Mountain rainfall distribution is bi-modal with peaks in April and November but distribution is relatively even throughout the year (compared to St Helena). At lower levels a less even distribution is evident but is partly explained by the occurrence of heavy storms.

9.2.3 Rainfall Intensity

Automatic recording gauges are in use on Ascension but no regular data were obtained. It is clear from daily data that occasional very high intensity storms occur. A storm at the Airhead on 24.4.1988 produced 119.5 mm in 8 hours. Some principal storms in the last one hundred years are listed in Appendix 7. The heaviest storm on record is 317 mm recorded on 4.3.1984. The effects of this storm were quite devastating and are described by Hodges (1985) and fortuitously recorded by an Anglia TV Survival film crew who happened to be on the island at the time.

The reason for these storms has already been discussed in Chapter 2. It is interesting to note that while St Helena's maximum daily fall is 112 mm Ascension has several records of storms of over 200 mm in addition to the 1984

Fig 9.2 Ascension Monthly Rainfall Distribution



storm. There has been an increase in the frequency of heavy storms in the 1980's. Between 1923-83 Georgetown had only three days with over 50 mm. From 1984-89 it has received a further three.

As discussed in Section 3.4.3 the heavy storms are not so closely orographically related as on St Helena eg. the heaviest storm recorded on the island was at a low elevation station.

9.2.4 Long Term Changes in Rainfall

Hodges (1985), in her analysis of Georgetown rainfall, concluded that there exists a ten year rainfall cycle. As she observes, when dealing with a low rainfall site, with occasional heavy storms, long term trends tend to be obscured and the Green Mountain record is not sufficiently long or continuous to provide a clear indication of trends.

Hodges also considered that Ascension was becoming wetter as evidenced by an increase in vegetation on the lower slopes. The data that she used do not provide much support for this since from 1976-84 she used Airhead rainfall to continue her analysis of long-term Garrison data. When recording re-started at the Garrison in 1985 it was evident that Airhead rainfall is at least one third higher than at the Garrison. However since 1985 rainfall has been higher with more frequent heavy storms. The current 5 year mean for the Garrison is 13% above the highest previous level (see Appendix 7). With regard to the vegetation it appears likely that it advances and retreats with wet and dry periods.

For the most part rainfall on Ascension and St Helena are controlled by different influences. As Section 3.6.3 has shown the drought cycle on St Helena appears to be about every 15 years. However it is surprising how frequently wet years on St Helena coincide with wet years on Ascension.

9.2.5 Mist Interception

Mist interception has long been recognised as important on Ascension - probably more so than on St Helena. A dew pond was constructed on top of Green Mountain in the nineteenth century and has proved effective, although the current bamboo wood surrounding it is probably not the most efficient mist interceptor.

Unfortunately there are no data on mist interception apart from a short period of fog recording at 0900 hrs during the 1930's. This record shows an average of 126 days per year with fog at 0900 hrs. This compares with 153 days at Hutts Gate.

Undoubtedly mist interception could be increased on Ascension but the effective area is fairly small - probably about 400 ha that lies above the 500 metre contour (see Fig 9.1).

9.3 Temperature and Relative Humidity

9.3.1 Temperature

Data on temperature and humidity are even fewer than for rainfall and are almost entirely for Georgetown. Fortunately for one year, 1919, a comparison was made between temperatures at Georgetown and at the Farm on Green Mountain. These data are shown in Table 9.2 and illustrated with the long term data for Georgetown in Fig 9.3.

Fig 9.3 Monthly Temperature Variations on Ascension

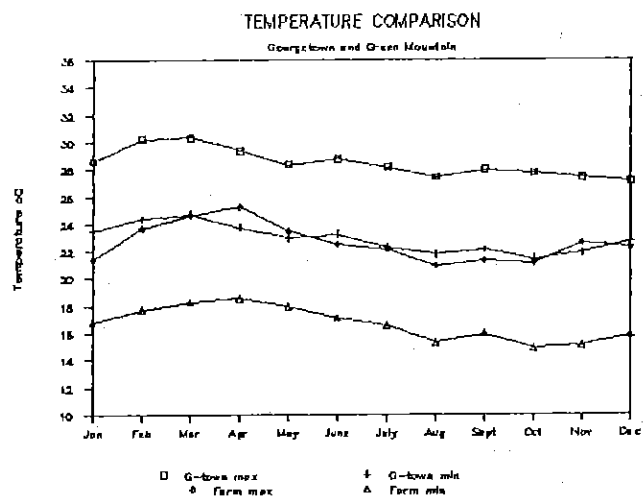
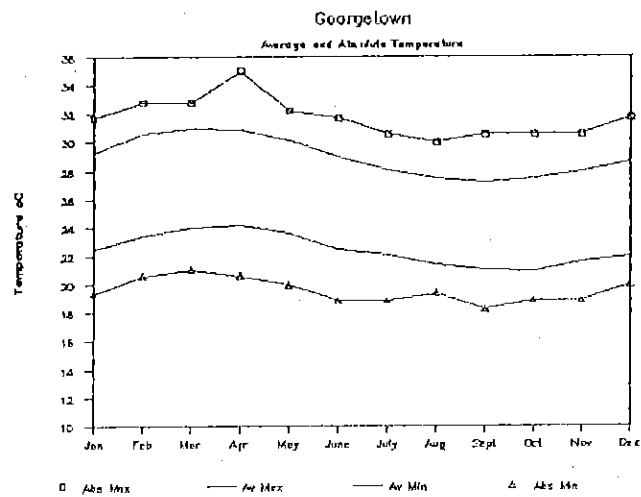


Table 9.2 Annual Maximum and Minimum Temperatures (°C)

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
<u>Maximum</u>													
Georgetown	28.6	30.2	30.3	29.4	28.3	28.8	28.2	27.4	27.9	27.7	27.4	27.1	28.5
Farm	21.4	23.7	24.6	25.2	23.4	22.5	22.1	20.9	21.3	21.2	22.6	22.3	22.6
<u>Minimum</u>													
Georgetown	23.5	24.4	24.7	23.7	22.9	23.2	22.3	21.8	22.1	21.4	21.9	22.7	22.9
Farm	16.8	17.7	18.3	18.6	17.9	17.1	16.6	15.3	15.9	14.9	15.1	15.8	16.7

Source: Appendix 7

Seasonal temperature fluctuations are small at Ascension with less than 3°C variation throughout the year. The warmest months are March and April and the coolest September and October. Diurnal variation is between 6-7 °C, typical for a tropical island. In a normal year therefore the maximum temperature range is about 10°C. Absolute maximum and minimum at Georgetown between 1962-76 was 35°C and 18.3°C.

The seasonal temperature fluctuation on Ascension is about half that of St Helena although diurnal variation is slightly larger. Summer temperatures on St Helena are only a degree or two less than those at a similar altitude on Ascension but winter temperatures show a difference of about 4°C. Overall the mean temperature at Jamestown is 24.2°C and at Georgetown 26.0°C.

Temperature variation with altitude is based upon the 1919 data only and shows a 6.1°C difference between the Farm and Georgetown; this suggests that temperature declines by about 1°C per 100 metre rise - rather less than the 1.3°C per 100 metres experienced on St Helena (Section 4.2.3).

9.3.2 Relative Humidity

Relative humidity averages about 69% at Georgetown and is almost constant throughout the year. This is about 5-8% lower than Jamestown. No data exist on humidities on Green Mountain but they are likely to be considerably higher.

9.4 Wind, Sunshine and Cloud Cover

9.4.1 Wind Speed and Direction

Data on wind speed are available for the Airhead but have not been analyzed. However wind on Ascension is very constant both in speed and direction - probably more so than on St Helena. More details are provided in Appendix 7 but the mean daily wind run is about 400 km/day.

9.4.2 Sunshine and Cloud Cover

Sunshine has been recorded in Georgetown since 1928. Although not all years have been analyzed sunshine amounts are fairly constant between years, with an average of 2501 hours and a range of plus or minus 15%.

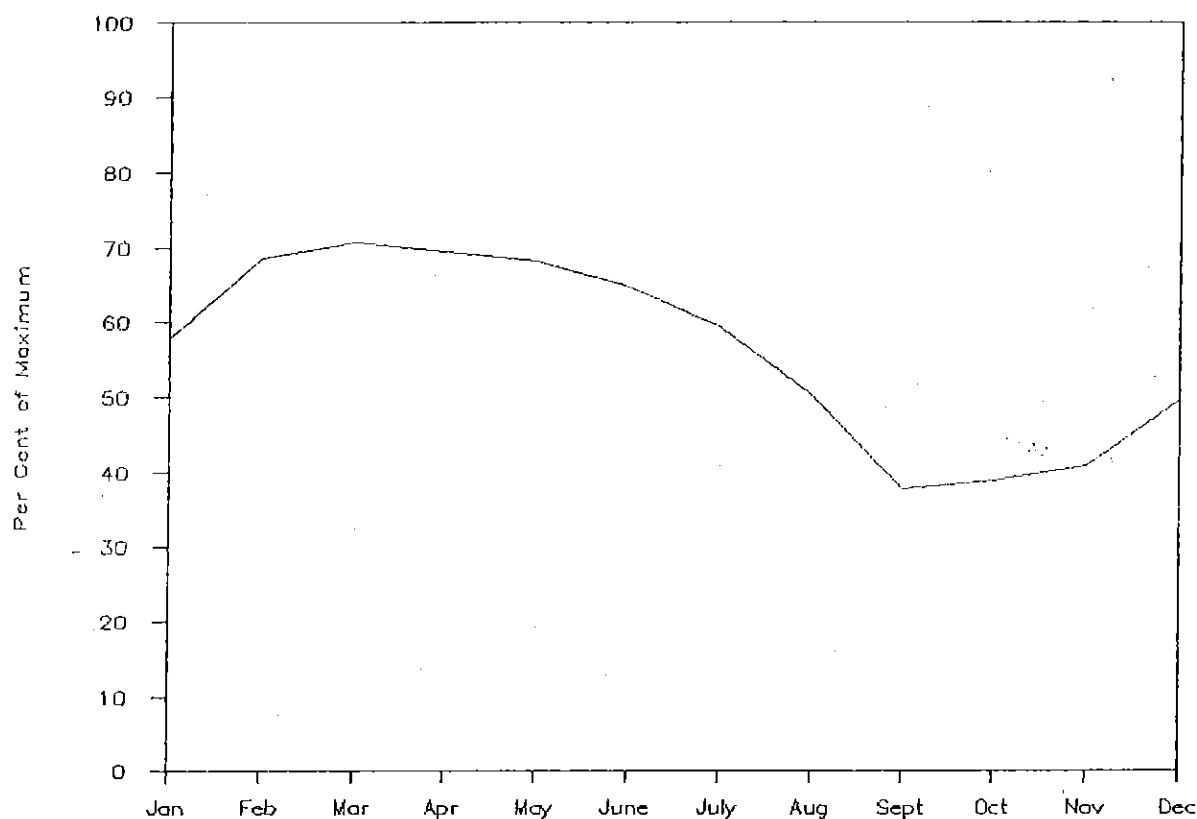
Day length only varies by about half an hour throughout the year although as Fig 9.4 shows the percentage of sunshine received varies from 70% in summer to 40% in winter.

Data for Green Mountain do not exist but it is likely that sunshine hours at

the Farm could be little more than half those at Georgetown.

The maximum sunshine hours received on St Helena is about 2000. Cloud cover at Jamestown averages 6.4 tenths compared to 4.8 tenths at Georgetown. At the higher levels however it seems likely that the difference in sunshine hours between the two islands is less.

Fig 9.4 Monthly Sunshine Hours at Georgetown



9.5 Evapotranspiration and Potential Soil Moisture Deficits.

9.5.1 Potential Evapotranspiration (Eto)

Eto has been calculated for Georgetown and Green Mountain Farm and is given in Table 9.3. The Figures for the Farm are only an approximation as estimated data have been used.

Table 9.3 Potential Evapotranspiration (mm) for Stations on Ascension

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Georgetown	217	220	246	220	210	186	185	184	171	184	182	203	2408
Farm	125	128	144	132	121	108	110	110	108	116	116	124	1442

Note: Data from Appendix 9 used where available. For Farm 0.5 Georgetown sun, Georgetown wind and 80% R.H. used.

The totals of 1442 and 2408 mm cover the range of expected Eto's on Ascension. They compare with the range on St Helena of 1000-1730 mm. The small monthly variations reflect the small monthly variations of all weather phenomena besides rainfall on Ascension.

9.5.2 Potential Soil Moisture Deficits (PSMDs)

The annual PSMD at Georgetown is 2278 mm ie about 2.25 metres of irrigation p.a. is required to keep a lawn green at all times. At the Farm the PSMD drops to about 750 mm. Even at the Farm rainfall on average is exceeded by Eto in all months and it is a relatively rare event when rainfall is in surplus on a monthly basis - perhaps once every two or three years for a single month.

The level of the PSMD demonstrates the reason for the absence of springs of any magnitude on Ascension. Even if mist intercepting trees were able to provide a net increase in rainfall of 50% there would still be a substantial annual PSMD on Green Mountain.

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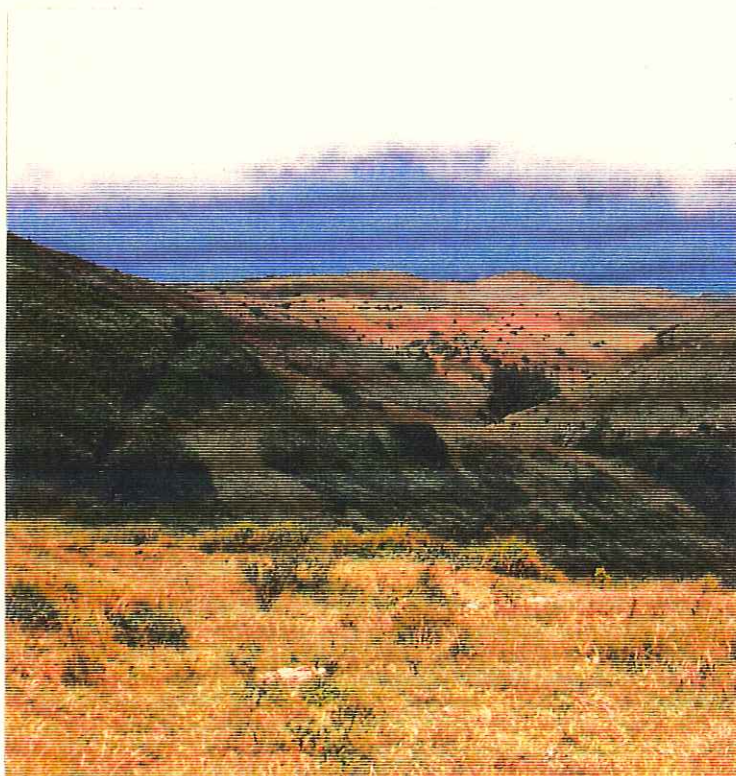


Photo 7 Cloud Hanging over Green Mountain, Ascension



Photo 8 The Dew Pond on Green Mountain, Ascension



Photo 9 Ascension the wet and the dry

APPENDIX 1

Rainfall Data

Ref No.	Station	Elev (m)	Data Period
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PRINCIPAL STATIONS - Stations with the longest records

1	Plantation	530	1910-89
2	Briars	280	1910-89
3	Hutts Gate	620	1925-89
4	St Mathews Vic	630	1893-1924
5	Jamestown	11	1920-89
	Jamestown		Intermittent earlier records commencing 1853
6	Longwood Field	500	1952-89
	L-wood Observatory	530	1841-48
	L-wood Observatory	530	1882-91
7	Longwood Lawn	530	1961-89
8	Hallams	590	1970-89
9	Scotland	560	1961-89

SECONDARY STATIONS - Stations with intermediary records

10	Bottom Woods	435	1977-89
11	Harpers	450	1971-89
12	Oakbank	520	1901-14
13	St Pauls Vic	600	1906-09
14	Sunnyside	475	1971-79
15	Farm Buildings	520	1971-78
16	Woodlands Field	530	1973-76
	Woodlands Fld House	624	1887-99
17	Mount Pleasant	580	1897-1902
	Mount Pleasant	580	1972-73
18	Rose Cottage	600	1954-61

TERTIARY STATIONS - Stations with some data

19	Ruperts	20	1988-89
20	St James Vicarage	25	1985-88
21	Blundens	85	1988-89
22	Secondary Selec School	190	1976-79
23	Clifftop	210	1988-89
24	Sapper Way	450	1988-89
25	Bluemens Field	580	1988-89
26	Farm Lodge	500	1910-13
27	Oaklands	560	1988-89
28	Bamboo Grove	415	1971-77
29	Fairyland	450	1978-79
30	Sandy Bay Station	30	1972-83
31	West Lodge	680	1975-85
32	Barren Ground	500	1988-89
33	Thompsons Wood	540	1971-89
34	South-west Point	560	1972-74
35	Bates Branch	690	1989
36	Rose Bower	525	1988-89

37	Harpers Education	450	1989
38	Woodlands House	525	1988-89
39	Grapevine Gut	575	1989
40	Cuckolds Point	770	1977-79
41	Seaview	480	1988-89
42	Willowdene	515	1912-23 & 1963
43	Pink Grove/Redhill	570	1988-89
44	Levelwood	480	1971-89
45	Middle Point	480	1988-89
46	Little Deadwood	485	1975-79
47	Bradleys	370	1971-76
48	Leggs Gut	650	1989-90

PLANTATION ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 1

Station Elevation: 530m.

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total	live year mean
1811										From 22.2.1811			569.0	
1812	20.3	73.7	185.7	56.6	14.5	103.1	87.6	44.7	51.3	27.4	15.7	56.9	737.6	
1813	76.2	64.5	39.1	51.1	249.9	92.7	56.6	41.1	70.9	16.8	46.0	11.2	816.1	
1814	64.5	150.4	170.2	186.7	190.2	111.0	81.0	111.8	70.1	52.0	19.8	51.3	1269.0	
Average	53.7	96.2	131.7	98.1	151.6	102.3	75.1	65.9	64.1	35.4	27.2	39.8	847.9	
1847													1165.7	
1910	53.3	86.1	147.6	110.0	81.8	179.6	113.0	135.4	68.8	89.7	18.3	29.5	1113.0	
1911	23.9	59.4	69.1	48.3	121.7	119.4	90.7	128.0	15.0	46.7	19.6	21.1	762.8	
1912	68.8	140.5	62.5	68.3	98.3	178.3	102.1	20.1	77.7	19.6	18.3	36.6	891.0	1007.8
1913	39.9	122.4	85.6	120.7	146.1	119.6	150.6	54.4	118.4	34.5	38.1	23.9	1054.1	981.8
1914	78.5	110.7	137.2	163.6	142.2	94.2	91.4	124.5	87.4	25.1	82.6	81.3	1218.7	998.8
1915	60.7	114.3	32.0	70.9	112.0	122.9	195.6	90.2	55.9	20.3	61.7	45.7	982.2	1036.8
1916	36.8	62.5	158.8	93.2	133.9	92.2	115.8	57.9	18.8	40.6	14.7	21.3	846.6	
1917	108.5	124.7	205.0	90.4	72.9	146.6	115.6	78.0	69.9	19.3	31.8	18.8	1081.3	
1918	87.1		147.8	59.9	82.3									
1919								93.2	94.7	24.4	16.8	28.7		
1920	35.6	63.5	86.4	21.3	148.1	81.3	123.4	46.7	46.7	72.6	22.6	15.7	764.0	
1921	78.7	109.7	133.4	147.3	78.7	182.4	226.6	118.4	45.2	30.7	46.7	3.8	1201.7	
1922	59.7	137.2	93.5	106.7	73.4	83.6	83.6	143.8	52.3	47.8	36.1	49.5	967.0	976.3
1923	52.3	130.6	149.1	218.7	170.9	116.6	79.5	130.8	55.9	10.9	15.2	30.7	1161.3	1002.0
1924	38.1	55.4	143.0	73.7	48.5	79.5	81.8	57.4	66.8	85.1	24.1	34.3	787.7	914.7
1925	72.9	72.9	144.5	59.7	182.6	91.9	60.2	57.7	43.9	46.7	27.4	31.8	892.3	881.8
1926	43.4	61.0	81.3	68.6	91.4	70.6	70.6	74.4	68.1	20.8	60.5	54.6	765.3	766.5
1927	47.2	55.9	105.7	91.7	113.8	35.6	129.3	76.5	49.3	56.1	19.6	22.1	802.6	756.8
1928	50.8	48.3	150.4	52.8	52.1	32.0	68.6	18.8	43.7	25.7	9.9	31.5	584.5	732.2
1929	33.0	66.0	80.3	22.6	82.3	81.8	160.3	74.4	56.6	33.0	15.7	33.0	739.1	741.4
1930	33.5	22.6	93.2	100.8	88.9	93.5	121.7	78.7	41.9	54.1	24.1	16.5	769.6	740.9
1931	55.9	33.5	96.5	108.0	28.4	68.3	145.0	104.9	72.1	39.1	44.5	14.7	811.0	738.2
1932	38.9	51.3	135.6	21.6	151.1	71.4	132.1	28.5	103.6	14.7	14.0	37.3	800.2	816.5
1933	40.6	61.2	41.7	34.0	24.6	97.8	123.4	49.5	22.1	15.2	43.9	16.8	571.0	841.6
1934	87.4	129.5	171.7	193.3	69.9	53.3	118.9	96.5	69.6	62.0	25.9	52.6	1130.6	844.4
1935	31.0	140.0	61.0	148.6	71.4	185.9	94.7	49.8	56.9	10.4	24.4	21.3	895.4	881.1
1936	96.5	42.9	93.2	59.2	112.3	100.1	111.8	40.1	20.1	98.0	18.8	31.8	824.7	945.4
1937	19.1	94.7	166.4	145.3	133.9	60.2	155.2	55.4	55.6	36.3	18.3	43.4	983.8	913.3
1938	108.0	49.3	62.7	68.3	34.3	78.7	76.7	111.8	119.9	76.5	24.9	81.5	892.6	954.0
1939	42.4	131.6	148.1	112.0	30.0	51.8	208.8	62.5	23.4	28.2	43.9	87.6	970.3	962.0
1940	41.1	51.3	174.2	116.3	93.5	121.2	145.0	96.8	125.0	45.5	44.7	43.9	1098.6	917.0
1941	90.7	120.9	49.3	95.5	27.4	89.4	72.4	118.4	34.8	60.2	75.9	29.7	864.6	904.9
1942	72.6	53.6	142.0	52.3	55.6	68.3	31.8	97.3	72.6	37.3	8.4	67.1	759.0	892.7
1943	61.2	55.1	65.8	93.7	101.3	50.8	109.5	92.2	65.0	57.4	28.4	51.6	832.1	831.5
1944	27.7	60.5	135.9	22.4	78.5	174.2	93.2	185.4	82.6	17.0	18.5	13.5	909.3	812.5
1945	63.8	111.3	121.7	34.5	50.3	58.4	183.1	75.2	7.1	27.4	14.0	46.0	792.7	869.8
1946	47.2	75.4	156.5	19.8	125.5	19.8	134.6	70.4	49.0	26.2	18.0	27.2	769.6	874.2
1947	80.0	62.2	156.5	97.5	148.3	132.6	115.6	53.1	103.9	51.3	20.8	23.6	1045.5	859.9
1948	48.8	87.4	104.4	107.2	47.0	65.5	202.7	26.4	27.9	98.8	22.4	15.2	853.7	939.4
1949	9.4	19.1	91.4	116.8	105.9	155.2	63.8	87.9	97.8	42.9	36.3	11.7	838.2	960.3
1950	60.5	128.3	260.6	78.7	68.8	90.9	227.8	86.4	77.5	34.5	23.9	52.1	1190.0	896.2
1951	55.9	151.1	100.1	57.7	69.9	147.1	66.0	72.6	37.3	50.8	31.5	34.3	874.3	901.7
1952	18.8	70.4	41.1	36.6	86.4	92.2	140.7	78.0	46.7	31.8	33.0	49.0	724.7	921.9
1953	23.4	103.4	48.8	81.3	65.5	230.1	119.9	122.9	21.6	23.4	17.8	23.1	881.1	871.5
1954	36.3	118.4	60.2	70.6	97.3	180.3	158.0	34.5	93.5	35.1	20.3	34.8	939.3	852.7

Plantation (page2)

1955	15.2	145.3	116.1	114.8	81.3	103.6	129.3	104.4	37.6	55.4	11.2	24.1	938.3	895.6
1956	35.3	77.7	156.7	155.2	33.5	85.1	45.5	68.8	51.6	46.2	17.3	7.4	780.3	835.6
1957	36.6	65.0	225.0	54.9	93.5	140.0	65.5	85.3	103.9	44.5	3.0	21.6	938.8	801.1
1958	34.5	91.4	80.8	37.1	52.8	64.3	25.7	37.6	52.1	46.7	24.4	34.0	581.4	732.2
1959	39.9	58.7	65.3	47.5	141.7	115.3	97.3	41.4	41.9	41.1	36.8	39.9	766.8	786.8
1960	15.2	56.1	64.5	75.2	14.5	61.5	40.1	150.6	37.6	38.4	21.1	19.1	593.9	754.3
1961	88.1	43.7	222.5	138.4	92.7	101.6	125.0	52.3	46.2	59.7	29.7	53.3	1053.3	841.1
1962	34.8	34.8	92.5	72.6	34.8	54.6	115.6	86.1	61.5	74.4	89.4	25.1	776.2	875.1
1963	97.8	86.1	117.1	108.5	89.7	158.5	117.9	93.0	30.2	42.9	34.8	38.9	1015.2	953.3
1964	47.8	45.5	81.5	17.5	87.9	135.1	142.7	197.6	117.1	23.6	33.8	6.6	936.8	926.9
1965	84.6	104.6	198.1	93.7	5.1	130.3	81.5	67.8	97.3	48.0	19.6	54.4	985.0	979.7
1966	89.7	150.4	53.6	11.7	109.2	46.7	168.4	143.0	86.1	14.2	21.1	27.2	921.3	977.4
1967	59.2	47.5	140.0	192.0	181.1	119.4	48.3	117.9	33.0	71.4	1.0	29.5	1040.1	933.0
1968	121.2	112.5	154.9	93.5	90.9	81.5	181.9	28.4	38.4	34.3	13.2	53.3	1004.1	865.0
1969	51.1	77.2	94.0	35.1	81.5	131.8	82.8	45.2	35.8	36.8	16.5	26.7	714.5	834.0
1970	84.1	29.0	35.3	22.9	38.9	60.5	126.7	116.8	101.1	13.0	14.7	2.3	645.2	750.9
1971	52.8	98.6	71.9	39.4	75.4	94.5	185.4	65.8	45.7	12.4	11.2	13.0	766.1	635.7
1972	33.3	43.9	74.2	62.5	31.2	124.0	93.7	33.8	43.7	45.7	19.3	19.6	624.8	685.2
1973	12.4	28.2	54.1	33.8	33.8	88.1	44.5	45.0	31.0	6.6	24.9	25.4	427.7	698.8
1974	70.1	131.6	86.1	95.3	198.9	86.4	78.2	55.6	62.7	31.2	34.5	31.8	962.4	736.0
1975	34.8	32.5	114.8	47.8	52.8	85.9	95.3	99.1	58.9	33.0	16.8	41.1	712.7	780.5
1976	79.5	208.3	119.6	67.6	102.6	91.9	76.5	83.1	49.5	31.8	27.9	14.0	952.2	861.8
1977	57.4	112.3	172.0	30.7	45.5	159.3	77.5	32.8	93.5	28.7	9.4	28.4	847.3	850.2
1978	11.4	80.0	224.3	73.9	63.8	23.6	93.2	159.8	49.0	15.0	20.8	19.6	834.4	836.9
1979	26.4	217.9	96.0	22.9	103.9	81.8	135.6	81.8	45.2	48.8	31.2	13.0	904.5	780.7
1980	12.2	46.0	58.4	56.6	88.4	141.7	56.6	48.3	26.2	37.6	40.6	33.5	646.2	823.6
1981	38.6	78.0	72.9	58.9	40.1	65.3	95.3	85.1	34.3	18.5	36.1	48.3	671.3	799.1
1982	46.7	123.4	158.2	169.9	23.6	238.0	120.1	119.4	5.6	24.6	19.3	12.4	1061.5	740.6
1983	9.4	112.8	55.6	15.7	91.4	82.0	103.1	61.0	19.1	26.4	65.0	70.6	712.2	765.3
1984	9.4	68.8	69.9	98.0	37.8	10.7	87.6	24.6	50.0	54.6	31.8	68.6	611.9	756.3
1985	9.9	150.4	94.2	103.1	78.7	17.5	80.8	47.8	61.0	29.7	29.7	66.5	769.4	702.5
1986	14.0	26.9	99.8	77.5	19.8	71.6	77.2	40.4	66.0	55.1	56.4	21.8	626.6	752.1
1987	28.2	78.7	90.7	12.2	122.7	90.9	70.6	150.4	63.0	13.2	16.0	55.9	792.5	796.8
1988	50.5	72.4	47.5	152.4	16.3	137.0	227.1	86.4	54.4	48.8	23.9	43.7	960.4	
1989	73.3	46.0	43.6	144.9	67.9	145.5	102.2	74.5	48.2	50.2	20.6	18.0	834.9	
Av 1910-89	50.2	85.0	110.0	80.9	82.6	100.9	111.6	80.8	57.5	39.6	27.8	33.5	859.6	
Av 1965-89	46.4	91.1	99.2	72.5	72.1	96.2	103.6	76.5	51.9	33.2	24.9	33.5	801.2	
Av 1980-89	29.2	80.3	79.1	88.9	58.7	100.0	102.1	73.8	42.8	35.9	33.9	43.9	768.7	
SD, 1910-89	26.4	42.3	50.0	47.8	43.2	46.8	47.0	38.8	26.7	20.1	15.6	18.5	157.7	
CV, 1910-89	0.53	0.50	0.45	0.59	0.52	0.46	0.42	0.48	0.47	0.51	0.56	0.55	0.18	

PLANTATION RAINFALL PROBABILITY ANALYSIS 1910-89

Period	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Driest	9.4	19.1	32.0	11.7	5.1	10.7	25.7	18.8	5.6	6.6	1.0	2.3	427.7
Dry in 20	9.9	28.2	41.7	19.8	23.6	23.6	45.5	26.4	18.8	12.4	9.4	7.4	584.5
Dry in 15	11.7	30.2	44.9	21.4	19.8	33.3	51.2	28.4	22.4	13.1	10.3	12.0	599.2
Dry in 5	26.4	51.3	62.7	36.6	47.0	65.5	76.7	47.8	35.8	20.8	16.0	18.0	739.1
Wet in 5	79.5	124.7	154.9	155.2	148.1	137.0	145.0	117.9	82.6	54.1	36.1	49.0	985.0
Wettest	121.2	217.9	260.6	218.7	198.9	238.0	227.8	197.6	125.0	98.8	89.4	87.6	1218.7

N.B. If annual values are calculated by adding the last six months data of one year to the first six months data of the following year the wettest year is 1251.2 mm (1922-23) and the driest 5062 mm (1972-73)

Per Cent of Average Value 1910-89

Driest	18.7	22.4	29.1	14.4	6.2	10.6	23.0	23.3	9.7	16.7	3.6	6.8	49.8
Dry in 20	19.7	33.2	37.9	24.5	28.6	23.4	40.8	32.7	32.7	31.3	33.8	22.1	68.0
Dry in 15	23.3	35.5	40.8	26.4	24.0	33.0	45.9	35.1	39.0	33.1	37.0	35.8	69.7
Dry in 5	52.6	60.4	57.0	45.2	56.9	64.9	68.7	59.1	62.3	52.6	57.5	53.7	86.0
Wet in 5	158.4	146.7	140.8	191.8	179.4	135.8	129.9	145.8	143.7	136.7	129.7	146.1	114.6
Wettest	241.4	256.5	236.8	270.2	240.9	235.9	204.1	244.5	217.4	249.7	321.1	261.4	141.8

Three Monthly Rainfall Starting With Month of Entry

AV 1920-89	240.9	271.8	267.8	256.0	286.9	287.9	246.7	176.4	123.4	100.7	109.8	165.8
AV 1965-89	236.7	262.8	243.7	240.8	271.9	276.4	232.1	161.7	110.0	91.6	104.0	169.6
AV 1980-89	188.7	248.4	226.7	247.7	260.8	275.9	218.6	152.4	112.6	113.8	113.4	162.1

Driest	94.7	87.1	97.0	122.2	116.1	119.4	115.3	82.6	48.5	30.0	41.1	43.7
Wettest	449.4	498.3	538.7	506.2	487.7	527.3	457.5	338.3	225.3	189.0	212.3	328.9
Dry in 5	162.9	195.3	186.7	168.9	205.0	232.0	195.1	129.3	93.2	67.1	74.4	124.2

Four Monthly Rainfall Starting With Month of Entry

AV1920-89	320.5	350.8	365.2	366.4	366.9	344.1	286.8	203.5	156.9	149.7	193.0	275.4
Av 1965-89	309.2	334.8	340.0	344.4	348.4	328.3	265.3	186.5	143.5	136.5	194.6	264.6
AV1980-89	277.6	307.0	326.7	349.7	334.6	318.6	254.5	186.4	156.5	147.7	197.5	243.5

Driest	128.5	126.0	157.5	179.8	160.8	163.1	127.0	98.0	62.0	65.8	66.0	114.3
Wettest	581.9	669.3	655.3	635.0	606.0	592.6	481.1	372.1	302.8	286.8	345.7	461.1
Dry in Five	218.2	251.2	268.7	284.7	291.1	279.9	221.7	160.8	123.2	107.4	148.1	213.6

Daily Intensities (1971-89 inclusive) - Total Number of Days in Each Class Average p.a.

Days 10-20mm	9	45	41	31	22	47	55	29	13	4	6	9	4.0
Days 20-30mm	1	3	5	5	4	8	4	3	3	1		1	2.0
Days 30mm+		6	3	2	4	3	6	2			1		1.4
Highest	29.5	61.0	59.2	38.1	65.0	83.1	39.6	44.2	26.7	27.9	34.0	26.7	

Source: Pre 1929 original records at Plantation House. Post 1929 Brown

BRIARS ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 2

Station Elevation: 280 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total	5 year mean
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1910	38.1	74.9	64.8	61.2	45.5	117.1	88.9	61.0	36.3	40.6	13.2	16.8	658.4	
1911	18.0	46.0	48.3	24.1	86.6	88.1	52.1	86.6	11.2	26.7	10.2	13.0	510.8	
1912	65.8	108.5	55.4	43.7	79.8	114.6	86.4	8.9	39.9	8.1	7.9	18.5	637.3	649.6
1913	17.0	94.5	55.9	85.9	102.9	73.2	96.5	26.7	69.9	25.1	20.6	9.4	677.4	633.1
1914	51.3	70.9	89.4	103.9	87.9	88.6	46.5	86.6	40.1	25.1	49.5	44.5	764.3	639.2
1915	37.6	58.4	16.3	46.2	76.7	92.7	114.8	49.5	32.0	8.4	25.7	17.5	575.8	627.7
1916	21.6	37.6	99.6	55.4	114.3	66.3	74.9	24.4	3.6	21.8	6.4	15.2	541.0	597.6
1917	38.1	74.9	64.8	52.3	82.6	87.9	70.4	43.7	30.5	7.4	22.4	5.1	579.9	564.7
1918	56.6	108.7	89.9	35.1	67.6	82.8	41.4	5.1	11.2	6.1	3.0	19.6	527.1	550.7
1919	38.1	74.9	64.8	52.3	82.6	87.9	70.4	43.7	30.5	12.7	19.1	22.9	599.7	583.7
1920	38.1	74.9	64.8	15.7	85.1	43.4	74.4	31.2	25.1	35.6	8.6	8.6	505.7	581.1
1921	41.4	73.7	100.3	86.1	48.8	102.6	130.6	63.0	22.6	11.7	23.9	1.8	706.4	624.7
1922	30.2	79.2	66.0	68.1	46.5	60.5	48.3	77.5	19.8	23.6	16.8	30.2	566.7	609.0
1923	26.9	89.2	79.8	130.6	140.0	86.6	76.2	66.3	28.2	5.8	9.1	6.6	745.2	612.3
1924	34.0	79.2	77.7	37.3	33.0	88.4	45.7	31.0	21.3	29.0	39.9	4.3	521.0	572.6
1925	33.3	25.7	101.6	55.6	98.8	61.0	39.9	25.4	32.5	21.6	12.7	14.5	522.5	553.7
1926	32.3	37.3	53.8	50.3	53.3	57.2	66.8	47.8	39.1	14.5	26.2	29.2	507.7	493.0
1927	21.3	29.0	55.9	69.3	76.2	14.7	84.3	43.2	23.6	23.6	10.7	20.1	471.9	484.5
1928	34.8	30.7	108.7	38.6	32.0	30.5	44.5	47.5	29.7	13.5	6.9	24.6	441.9	488.2
1929	17.3	40.4	64.0	19.1	59.4	55.9	99.6	45.0	31.0	17.0	4.1	25.9	478.5	491.5
1930	22.9	17.3	100.3	69.3	50.8	75.9	89.7	43.9	19.1	24.9	17.5	9.4	541.0	508.3
1931	30.7	19.8	56.1	70.9	19.1	67.6	103.6	63.5	37.1	19.8	27.7	8.4	524.3	491.2
1932	28.4	29.7	110.2	13.7	107.5	55.1	101.3	24.9	49.8	8.6	17.0	9.4	555.8	531.5
1933	23.1	32.0	36.8	16.5	17.0	60.7	86.1	31.8	13.7	10.7	19.8	8.4	356.6	545.2
1934	52.8	76.5	99.8	114.0	46.0	33.3	82.6	69.1	34.0	31.2	13.5	26.9	679.7	525.8
1935	30.5	92.7	46.0	97.3	71.6	132.6	78.0	21.6	25.7	3.8	4.8	5.3	609.8	505.3
1936	46.5	37.8	55.9	20.3	54.9	52.6	58.4	18.0	9.1	46.2	8.4	18.8	426.9	526.8
1937	31.8	39.9	30.7	70.1	72.6	42.4	73.7	30.7	35.3	0.0	4.1	22.4	453.7	515.3
1938	46.2	39.9	37.1	38.6	11.4	35.8	62.2	59.7	60.5	30.7	11.2	30.7	464.0	532.6
1939	26.9	107.4	100.3	71.4	12.4	28.2	132.8	42.7	13.5	12.7	29.0	44.7	622.0	560.3
1940	26.2	26.9	150.6	83.3	49.3	70.4	101.6	46.0	77.7	22.4	22.1	20.1	696.5	556.0
1941	76.5	98.3	27.9	71.9	12.7	58.9	60.2	54.9	15.7	37.1	38.4	13.0	565.4	546.1
1942	44.2	26.7	84.1	38.1	35.8	41.7	21.3	46.7	37.6	19.8	1.5	34.8	432.3	525.1
1943	30.2	31.5	33.5	43.2	62.2	33.0	51.8	55.1	25.4	22.4	9.1	17.0	414.5	472.7
1944	8.4	48.0	90.7	10.9	48.8	103.9	40.4	111.8	38.9	5.1	7.6	2.3	516.6	450.6
1945	33.0	67.8	69.9	18.5	32.5	39.4	92.5	39.9	3.6	11.9	3.6	22.1	434.6	495.2
1946	31.0	42.2	83.8	12.2	97.5	13.0	80.8	34.3	24.6	10.4	12.7	12.4	454.9	521.2
1947	46.7	48.3	126.5	84.3	77.2	83.1	67.1	17.8	58.4	21.8	10.4	13.7	655.3	526.6
1948	43.4	50.5	108.0	69.9	29.2	33.5	106.2	23.6	14.5	48.8	7.1	9.9	544.6	579.3
1949	5.8	21.8	62.0	79.5	94.5	96.8	50.0	48.3	48.3	16.5	11.9	8.4	543.8	589.0
1950	31.2	84.1	142.0	53.1	45.5	51.1	145.3	54.1	39.4	12.7	11.9	27.7	698.0	553.2
1951	28.4	78.2	63.0	32.8	40.9	97.5	48.3	38.4	23.9	27.9	9.7	14.2	503.2	560.4
1952	9.1	33.8	23.9	24.9	71.9	65.5	114.6	48.3	25.9	15.5	20.8	22.1	476.3	573.4
1953	11.2	69.1	19.6	58.2	52.3	167.4	84.6	83.8	10.2	13.0	4.8	6.9	580.9	556.3
1954	19.3	71.6	54.4	39.9	73.7	143.0	96.8	20.8	43.9	18.0	10.2	17.3	608.8	569.0
1955	4.8	106.9	64.5	77.2	40.1	82.3	94.0	74.9	19.3	30.7	6.1	11.2	612.1	604.6
1956	25.1	47.0	97.0	124.5	43.7	59.2	57.9	45.2	28.2	22.4	10.7	5.8	566.7	562.6
1957	26.2	54.6	164.1	35.8	65.0	94.2	64.0	50.5	58.7	28.7	2.3	10.2	654.3	541.5
1958	26.7	53.1	43.9	25.7	30.2	57.7	14.5	25.7	38.6	20.6	15.2	19.1	370.8	493.8
1959	29.2	36.6	55.4	31.0	91.2	79.0	68.6	43.4	21.6	15.5	17.5	14.7	503.7	504.7
1960	15.2	39.9	30.2	46.5	16.0	43.4	29.2	79.2	25.4	20.1	13.0	15.2	373.4	450.1
1961	40.1	23.1	126.2	87.9	62.7	68.6	86.1	53.1	18.0	24.1	7.6	23.6	621.3	494.6
1962	6.6	16.8	60.7	43.9	22.9	37.1	55.9	58.4	24.4	19.1	31.2	4.3	381.3	480.9
1963	46.2	49.8	100.6	66.8	62.5	104.4	68.3	43.2	8.6	11.4	19.3	12.4	593.6	505.1
1964	7.4	25.1	30.0	4.1	53.1	73.7	83.8	88.6	46.5	12.7	5.3	4.6	434.8	485.2
1965	48.0	61.7	108.0	40.4	1.5	79.8	44.7	31.8	33.3	18.3	5.6	21.6	494.5	518.3
1966	25.7	80.3	45.2	6.6	93.2	23.9	97.3	80.0	43.4	7.9	5.8	12.7	522.0	516.1
1967	31.5	25.4	72.4	105.7	98.8	72.1	18.0	64.5	11.4	25.9	8.1	12.7	546.6	512.3
1968	52.6	75.7	68.6	74.4	62.2	71.9	106.2	9.9	12.7	9.7	15.2	23.6	582.7	476.3
1969	37.8	68.8	70.6	17.8	41.7	67.8	42.7	23.1	16.5	14.7	3.3	10.7	415.5	456.0

Briars (Page 2)

1970	27.9	11.4	11.7	11.9	23.1	36.1	72.1	66.3	46.5	4.3	3.0	0.0	314.5
1971	37.1	54.6	29.5	23.4	53.1	67.6	88.1	26.9	24.9	5.6	2.5	7.4	420.6
1972	21.1	38.4	58.7	42.7	18.5	79.5	57.9	17.3	15.7	17.8	9.7	8.6	385.8
1973	4.8	9.7	33.5	27.4	26.9	48.8	33.0	24.4	12.4	3.8	11.7	17.3	253.7
1974	32.3	90.9	55.6	48.8	127.3	52.6	56.9	30.7	31.2	12.2	20.8	14.2	573.5
1975	22.6	22.9	85.1	19.3	25.1	47.5	65.0	58.2	24.9	20.3	4.8	28.4	424.2
1976	46.5	114.0	71.1	32.3	59.9	56.6	49.3	61.5	21.8	22.4	9.9	5.1	550.4
1977	32.8	72.9	109.5	17.0	21.8	107.7	38.4	19.1	42.2	8.6	4.1	11.2	485.1
1978	8.1	42.4	146.8	57.7	35.1	9.7	46.7	83.1	23.1	11.2	7.4	8.6	479.8
1979	15.7	115.1	46.2	15.5	49.8	43.2	82.3	46.2	20.8	36.1	11.4	7.1	489.5
1980	7.6	31.2	32.5	36.3	79.0	98.0	20.8	29.7	14.0	11.9	14.0	13.2	388.4
1981	19.8	39.4	37.3	32.5	36.6	67.6	57.4	49.0	14.5	6.6	13.0	13.5	387.1
1982	33.5	65.3	85.1	90.9	9.4	109.2	64.3	46.2	4.1	15.5	33.0	5.8	562.4
1983	1.3	0.3	20.8	8.6	44.5	44.7	63.5	9.9	8.6	5.3	29.5	20.3	257.3
1984	1.8	32.0	23.1	64.8	14.0	4.3	9.9	0.0	14.5	43.2	12.4	38.9	258.8
1985	9.9	98.6	98.6	85.3	45.0	16.5	41.1	12.2	18.0	11.9	11.4	0.0	448.6
1986	13.5	18.5	56.6	40.1	13.5	61.2	62.2	11.9	29.0	41.4	10.7	2.3	360.9
1987	0.0	22.1	37.8	5.6	70.9	50.5	38.1	52.3	28.4	4.1	9.1	13.7	332.7
1988	29.0	47.8	17.8	177.0	19.3	66.0	123.2	15.5	30.0	26.2	4.6	7.1	563.5
1989	32.9	36.1	26.4	78.3	40.4	78.0	67.1	37.8	28.5	18.4	4.1	6.7	454.6

Av 1910-89	28.7	54.1	68.2	51.7	54.8	66.5	69.4	43.9	27.8	18.5	13.3	15.1	512.0
Av 1965-89	23.7	51.0	57.9	46.4	44.4	58.4	57.9	36.3	22.8	16.1	10.6	12.4	438.1
Av 1980-89	14.9	39.1	43.6	62.0	37.2	59.6	54.8	26.5	19.0	18.5	14.2	12.1	401.4
SD. 1910-89	15.1	28.3	34.0	32.7	29.8	30.3	28.1	22.6	14.8	10.7	9.4	9.5	110.4
CV. 1910-89	0.53	0.52	0.50	0.63	0.54	0.46	0.40	0.51	0.53	0.58	0.71	0.63	0.22

Driest	0.0	0.3	11.7	4.1	1.5	4.3	9.9	0.0	3.6	0.0	1.5	0.0	253.7
Dry in 20	4.8	12.4	19.6	8.6	12.4	14.7	20.8	9.9	8.6	4.1	3.0	2.3	314.5
Dry in 15	5.1	17.0	21.5	11.3	12.9	18.7	23.7	10.5	8.8	4.6	3.1	3.1	338.4
Dry in 5	13.5	26.9	33.5	19.3	25.1	41.7	45.7	24.4	14.0	8.4	5.3	6.9	415.5
Wet in 5	40.1	79.2	100.3	79.5	82.5	88.4	94.0	63.0	39.1	25.1	20.6	22.1	599.7
Wettest	76.5	115.1	164.1	177.0	140.0	167.4	145.3	111.8	77.7	48.8	49.5	44.7	764.3

N.B. If annual values are calculated by adding the last six months data of one year to the first six months data of the following year the wettest year is 769.1 mm (1922-23) and the driest 233.2 mm (1969-70)

Per Cent of Average Values 1910-89

Driest	0.0	0.6	16.8	7.9	2.7	6.5	14.3	0.0	13.1	0.0	11.3	0.0	49.4
Dry in 20	16.9	23.0	28.2	16.6	22.7	22.1	30.0	22.4	31.3	22.2	22.5	15.0	61.3
Dry in 15	17.9	31.5	30.9	21.8	23.6	28.2	34.1	23.8	32.0	24.9	23.3	20.2	65.9
Dry in 5	47.5	49.8	46.7	37.2	45.9	62.8	65.8	55.3	50.9	45.5	43.6	46.4	81.0
Wet in 5	141.1	146.6	144.1	153.3	150.8	133.2	135.4	142.7	142.2	135.8	154.8	144.3	116.9
Wettest	269.2	213.0	210.9	341.3	255.8	252.2	209.3	253.2	282.6	264.0	372.0	291.9	148.9

Three Monthly Rainfall Starting With Month Of Entry

Av 1910-89	151.0	174.0	174.7	173.1	190.7	179.8	141.1	90.2	59.6	46.9	56.6	96.5
Av 1965-89	132.7	155.4	148.8	149.3	160.7	152.6	117.0	75.3	49.6	39.2	44.9	82.8
Av 1980-89	101.1	154.7	146.7	154.8	144.6	135.7	102.1	64.1	55.3	47.0	37.2	54.8

Driest	22.4	29.7	46.7	71.1	28.2	14.2	24.4	22.4	19.1	7.4	10.8	6.7
Wettest	257.3	299.5	350.3	357.1	313.4	335.8	238.8	155.7	122.2	119.1	131.6	194.8
Dry in 5	96.5	118.4	119.9	115.6	147.1	140.2	103.1	57.7	41.7	32.8	39.1	64.3

Four Monthly Rainfall Starting With Month Of Entry

Av 1910-89	202.7	228.8	241.2	242.4	234.6	207.6	159.6	103.5	74.7	75.1	109.8	163.9
Av 1965-89	169.3	189.3	197.9	199.1	189.0	170.7	129.2	84.0	61.0	57.6	87.2	127.9
Av 1980-89	159.6	181.9	202.4	213.6	178.1	159.8	118.6	78.1	63.7	58.9	76.5	102.7

Driest	31.0	58.2	82.8	93.0	28.2	28.7	63.8	25.4	34.8	29.2	10.8	6.7
Wettest	343.2	439.4	436.9	433.3	388.1	345.9	251.5	201.4	159.3	156.7	216.9	265.7
Wet in 5	218.2	251.2	268.7	284.7	291.1	279.9	221.7	160.8	123.2	107.4	148.1	213.6

HUTTS GATE ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 3

Station Elevation: 620m. (gauge moved from met station to treatment works on 22.8.79)

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total	5 year Mean
1925							52.6	40.6	48.5	54.4	46.0	40.1		
1926	57.2	86.4	95.8	51.8	65.3	61.0	69.3	57.7	69.6	23.4	50.3	46.7	734.3	
1927	41.9	40.6	113.8	86.6	85.6	30.7	96.3	78.2	40.6	40.1	15.5	38.9	708.9	
1928	46.5	50.5	140.7	67.1	41.7	26.4	52.6	62.5	54.9	42.7	9.1	47.8	642.4	721.2
1929	47.0	89.2	95.3	28.7	80.3	81.8	124.7	69.3	51.8	42.9	18.0	38.4	767.3	730.5
1930	47.8	25.2	85.3	117.9	57.2	91.9	126.5	75.9	38.6	36.6	31.0	19.1	753.0	757.4
1931	63.0	37.6	89.7	112.8	30.5	64.5	126.0	98.6	53.8	37.6	52.3	14.7	781.0	739.3
1932	32.5	46.0	153.2	17.5	164.1	98.0	139.7	27.9	92.5	21.6	17.0	33.3	843.3	796.9
1933	51.1	49.8	49.3	36.1	21.1	68.6	122.4	35.6	28.7	18.8	50.6	19.8	551.7	814.0
1934	84.8	121.7	131.1	194.3	58.4	61.7	107.2	100.3	59.4	50.3	28.4	57.7	1055.4	806.0
1935	45.2	148.1	64.8	118.4	87.9	132.6	89.7	37.1	60.2	15.7	17.5	21.3	838.5	820.5
1936	75.7	39.4	85.9	57.4	99.6	74.2	88.9	26.4	21.8	109.7	19.8	42.4	741.2	887.3
1937	14.7	51.6	156.2	182.9	112.3	45.5	127.8	51.8	51.3	48.3	19.6	53.8	915.7	878.9
1938	114.0	74.7	83.6	57.2	42.4	53.3	66.5	106.9	106.7	79.0	16.5	84.8	885.7	923.0
1939	56.4	129.8	151.9	117.3	43.2	26.4	173.2	75.4	28.2	33.3	61.5	116.8	1013.5	946.9
1940	38.6	43.7	145.3	152.4	74.4	140.2	142.5	86.4	92.5	42.2	42.2	58.4	1058.7	921.0
1941	105.9	120.1	53.8	80.8	24.6	91.9	80.3	85.3	38.9	66.3	85.1	27.9	861.1	886.4
1942	75.9	85.3	145.5	59.4	49.5	75.7	24.9	70.6	76.5	29.2	10.7	82.8	786.1	811.4
1943	57.7	59.9	37.3	82.6	61.5	37.1	119.6	74.4	60.7	59.2	25.7	36.8	712.5	728.1
1944	35.1	61.5	109.0	28.7	59.2	121.9	55.1	83.3	37.8	18.5	17.8	10.7	638.6	672.8
1945	48.0	100.1	143.3	22.9	38.9	39.6	137.4	31.2	5.1	25.7	7.4	42.7	642.1	730.2
1946	49.3	44.7	116.8	34.3	98.0	13.0	69.9	45.0	37.1	25.9	21.1	30.0	585.0	756.6
1947	85.1	102.9	155.4	105.4	113.5	113.0	108.2	52.8	125.2	70.4	18.8	22.4	1073.2	796.7
1948	68.6	98.8	122.4	92.2	52.8	56.4	168.9	34.8	26.2	86.9	11.4	24.6	844.0	887.9
1949	7.4	21.1	104.9	108.7	135.6	121.7	58.2	85.6	85.6	56.9	34.8	18.8	839.2	960.5
1950	70.1	140.2	191.5	88.4	78.5	77.2	175.0	87.1	85.6	31.0	27.2	46.2	1098.0	902.3
1951	48.8	160.0	102.4	58.4	74.9	121.7	97.3	85.6	50.5	50.0	42.7	55.9	948.2	884.9
1952	18.0	63.2	51.8	47.5	95.0	104.9	154.2	71.1	49.3	33.0	42.2	51.8	782.1	904.1
1953	29.7	73.4	28.2	56.6	66.3	175.5	117.1	127.3	22.6	17.3	24.9	18.3	757.2	879.9
1954	42.9	107.4	83.1	59.2	90.7	162.3	142.2	36.6	94.7	47.0	25.4	43.4	935.0	870.5
1955	16.8	165.6	124.2	101.6	78.5	92.7	103.6	102.9	57.2	58.4	29.2	46.5	977.1	900.3
1956	57.7	78.2	168.7	167.4	71.4	79.2	51.1	78.5	59.9	53.6	26.7	8.6	900.9	869.1
1957	41.7	81.8	209.6	49.5	85.9	122.2	69.1	89.9	91.9	50.8	9.9	29.0	931.2	840.9
1958	35.1	77.0	67.1	36.6	55.1	71.9	26.2	39.6	68.1	51.8	38.6	34.5	601.5	777.0
1959	40.1	58.2	77.2	48.0	132.8	98.3	92.5	70.4	51.6	50.3	36.8	37.6	793.7	801.7
1960	40.6	59.9	61.2	59.7	23.9	55.9	45.7	126.5	41.9	63.2	38.1	40.9	657.6	765.0
1961	84.6	38.1	180.6	113.3	88.9	88.9	93.0	77.2	54.1	71.1	71.1	63.5	1024.4	845.6
1962	29.2	31.8	111.8	83.8	35.8	40.9	91.4	106.9	81.3	38.1	73.7	23.1	747.8	841.2
1963	96.5	106.7	134.9	124.7	83.8	124.7	106.7	89.2	33.3	46.0	50.8	7.4	1004.6	883.2
1964	25.4	48.5	79.0	27.9	71.4	104.4	117.1	121.9	104.1	33.3	23.1	15.5	771.7	853.4
1965	112.0	94.2	134.9	71.4	5.3	106.7	101.9	53.6	73.9	35.6	23.1	54.9	867.4	894.4
1966	81.5	114.6	103.6	20.6	137.2	20.6	109.5	114.6	99.1	18.0	20.6	35.8	875.5	866.1
1967	62.5	38.4	134.9	160.3	157.5	112.0	43.2	106.9	25.4	63.8	22.9	25.4	953.0	863.5
1968	91.7	106.9	89.2	104.4	75.4	73.9	119.6	40.9	33.3	50.8	20.6	56.1	862.8	832.6
1969	53.1	103.9	122.2	33.3	73.9	99.1	77.0	48.3	43.2	53.6	20.6	30.7	758.7	824.5
1970	101.6	30.7	48.3	43.2	56.1	57.4	114.3	93.0	106.9	22.9	20.6	17.8	712.7	815.5
1971	58.2	96.0	71.4	74.4	98.0	84.1	168.9	84.3	47.2	17.8	15.7	19.1	835.2	756.1
1972	42.9	57.9	85.9	51.8	50.5	150.4	168.4	107.4	55.9	52.8	37.8	46.2	908.1	812.5
1973	26.9	21.1	68.6	40.9	56.6	87.6	60.5	64.5	39.9	19.8	34.0	45.2	565.7	817.0
1974	60.7	159.5	119.1	61.0	171.5	111.3	97.8	61.2	55.9	47.5	47.8	48.0	1041.1	838.7
1975	49.3	26.7	124.7	39.1	42.4	88.6	81.0	85.6	72.1	45.2	23.1	57.2	735.1	657.0
1976	108.0	164.8	131.3	65.8	90.4	77.5	71.1	78.2	57.7	51.3	29.7	17.5	943.4	966.9
1977	57.7	79.0	177.8	54.4	30.5	104.9	123.2	49.0	137.7	97.8	43.7	33.8	989.3	931.1
1978	53.1	142.5	246.9	198.1	65.5	42.7	84.3	119.1	75.9	33.8	46.2	17.3	1125.5	913.8
1979	39.1	217.2	128.0	27.9	75.2	49.0	117.1	65.5	31.2	51.6	41.4	19.1	862.3	890.5

Hutts Gate (Page 2)

1980	16.0	39.9	49.8	45.2	71.9	123.7	46.7	50.5	38.9	51.6	46.2	68.3	648.7	918.6
1981	54.6	82.8	82.8	79.8	57.4	94.7	92.5	104.4	52.8	24.6	47.5	52.6	826.5	845.3
1982	83.6	152.4	158.2	199.4	35.8	157.2	126.0	106.9	14.0	37.3	41.1	18.0	1130.0	768.2
1983	18.8	64.0	96.5	82.8	62.5	79.5	92.5	73.2	17.5	30.0	64.3	77.5	759.0	795.1
1984	29.7	79.5	25.9	49.0	40.1	12.7	21.1	18.5	35.1	56.4	38.1	70.6	476.8	772.8
1985	25.9	140.0	146.8	105.4	78.5	26.4	44.7	45.2	68.6	53.6	16.8	31.2	783.1	668.5
1986	33.5	56.1	86.6	74.9	39.4	100.1	62.2	33.0	81.3	59.7	52.3	35.8	715.0	668.2
1987	31.8	67.8	85.6	19.3	99.8	32.0	52.3	93.2	35.3	18.0	46.5	26.9	608.6	762.9
1988	62.2	63.0	53.3	107.2	25.4	76.7	171.2	34.8	68.8	48.3	21.8	24.6	757.4	
1989	53.9	39.4	46.2	144.1	77.0	151.0	94.6	91.8	90.0	65.2	55.9	41.2	950.3	

Av 1926-89	53.7	82.1	108.1	79.5	71.9	83.9	98.4	73.2	58.6	45.0	33.1	38.8	826.5	
Av 1965-89	56.3	89.5	104.7	78.1	71.0	84.8	93.7	73.0	58.3	44.3	35.1	38.8	827.6	
Av 1980-89	41.0	78.5	83.2	90.7	58.8	85.4	80.4	65.2	50.2	44.5	43.1	44.7	765.5	
SD. 1926-89	25.4	43.1	45.1	46.3	34.5	38.4	38.8	27.6	27.6	19.5	16.9	20.6	150.3	
CV. 1926-89	0.47	0.52	0.42	0.58	0.48	0.46	0.39	0.38	0.47	0.43	0.51	0.53	0.18	

Driest	7.4	21.1	25.9	15.7	5.3	12.7	21.1	18.5	5.1	15.7	7.4	7.4	476.8	
Dry in 15	17.2	27.5	40.9	21.1	25.6	26.0	43.5	31.6	22.0	18.0	10.8	14.9	587.2	
Dry in 10	20.3	32.9	50.4	27.9	32.4	27.5	46.3	35.0	25.6	18.6	15.9	17.4	610.2	
Dry in 5	31.0	39.4	61.2	36.3	42.4	44.4	54.1	43.5	34.4	24.7	17.6	19.1	702.4	
Wet in 5	79.0	120.7	145.4	117.9	98.0	122.2	126.2	101.3	90.0	59.7	50.3	55.3	967.5	
Wettest	114.0	217.2	246.9	199.4	171.4	175.5	175.0	127.3	137.7	109.7	85.1	116.8	1130.0	

N.B. If annual values are calculated by adding the last six months data of one year to the first to the first six months data of the following year the wettest year is 1233.9 mm (1977-78) and the d 591.8 mm (1983-84)

Per Cent of Average Values 1926-89

Driest	13.8	25.5	23.9	20.0	7.4	15.3	21.7	25.3	8.7	35.3	22.9	19.1	57.9	
Dry in 15	32.0	33.2	37.7	26.9	35.6	31.4	44.8	43.2	37.5	40.5	33.5	38.5	71.4	
Dry in 10	37.7	39.8	46.5	35.6	45.0	33.2	47.6	47.8	43.6	41.9	49.3	44.9	74.2	
Dry in 5	57.8	48.0	56.6	45.6	58.9	52.9	55.0	59.4	58.8	54.8	53.1	49.2	85.0	
Wet in 5	147.2	146.9	134.5	148.3	136.2	145.7	128.2	138.3	153.7	132.5	151.8	142.5	117.1	
Wettest	206.6	241.6	232.8	271.3	242.3	211.6	185.1	171.7	233.9	255.1	251.6	309.0	137.7	

Three Monthly Rainfall Starting With Month of Entry

Av 1926-89	243.9	269.7	259.5	235.3	254.2	255.5	230.2	176.8	136.7	116.9	125.1	174.4		
Av 1965-89	250.5	272.4	253.8	233.8	249.4	251.4	224.9	175.5	137.7	118.2	127.0	182.0		
Av 1980-89	202.6	252.3	232.6	234.8	224.5	230.9	195.7	159.8	137.7	132.2	130.4	171.6		
Driest	105.7	122.2	106.5	101.3	73.9	52.3	74.7	62.0	38.1	47.0	43.4	53.1		
Wettest	442.5	587.5	510.5	429.8	401.8	426.2	347.7	292.6	279.1	211.6	216.9	329.9		
Dry in 5	176.0	181.4	186.2	167.7	199.1	208.6	174.8	141.6	102.7	93.0	92.3	126.8		

Four Monthly Rainfall Starting With Month of Entry

Av 1926-89	323.4	341.7	343.4	333.7	327.4	314.0	275.2	209.9	175.5	169.8	125.1	282.7		
Av 1965-89	328.7	343.3	338.6	327.5	322.3	309.7	269.1	210.6	176.5	170.4	127.0	285.5		
Av 1980-89	293.3	311.1	318.0	315.2	289.7	281.1	240.2	202.9	182.4	172.6	130.4	258.5		
Driest	150.8	156.2	127.7	122.9	92.45	87.37	131.0	69.34	80.77	94.99	43.43	124.7		
Wettest	640.5	653.0	584.6	518.4	486.1	482.0	407.6	328.1	312.9	255.2	216.9	476.2		
Dry in 5	230.1	252.6	268.2	251.6	268.5	254.8	205.2	170.4	136.6	130.3	150.7	206.8		

Source: pre 1941 Blue Book. 1942-79 Brown. Post 1979 current records

ST MATHEWS VICARAGE ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 4

Elev: 630 m 5.40 W 15.57 S

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	5 yr mean
1892		65.8	87.6	159.5	120.1	91.4	71.9	37.8	147.1	39.1	17.8	17.0		
1893	143.8	159.5	204.0	79.8	39.6	30.2	79.2	116.8	73.7	38.9	50.5	8.9	1024.9	
1894	52.1	55.9	280.7	132.8	99.6	77.7	43.4	94.0	74.9	28.7	15.5	37.3	992.6	
1895	24.6	44.7	129.3	34.3	99.8	201.7	83.1	51.1	61.2	26.2	34.0	30.7	820.7	952.4
1896	62.0	104.4	170.4	39.4	83.8	70.4	59.4	195.6	38.9	42.4	68.6	94.2	1029.5	920.0
1897	121.2	98.0	116.6	39.9	156.2	38.6	86.6	104.9	65.5	41.4	11.9	13.5	894.3	961.9
1898	59.9	75.2	102.6	108.7	134.6	51.6	118.6	50.3	45.0	58.2	24.6	33.5	862.8	956.7
1899	51.3	113.8	152.7	182.6	160.5	57.7	115.3	91.7	112.3	98.6	9.4	56.6	1202.4	948.5
1900	36.8	52.6	88.6	84.3	46.0	85.6	140.0	86.9	34.3	52.1	9.9	77.5	794.5	947.6
1901	42.2	62.5	149.4	201.7	56.9	34.3	34.3	99.8	137.4	44.2	53.1	72.6	988.3	991.8
1902	34.8	35.3	61.5	50.3	69.6	69.6	101.9	157.5	171.7	70.1	19.6	48.3	890.0	983.7
1903	84.6	154.4	76.2	56.1	108.7	151.6	100.8	58.2	40.9	75.7	70.1	106.2	1083.6	989.9
1904	107.4	53.1	125.5	256.8	110.5	74.2	67.1	98.8	78.2	78.7	47.8	64.0	1162.1	1045.2
1905	65.0	97.0	104.1	14.0	85.9	44.5	14.2	143.3	57.2	32.3	61.2	107.2	825.8	1090.9
1906	93.0	135.9	140.7	105.4	81.0	179.8	161.0	124.7	79.5	47.5	34.5	81.3	1264.4	1074.0
1907	80.5	45.2	142.0	208.3	103.1	108.7	89.2	47.0	57.9	91.2	98.3	47.5	1118.9	1056.7
1908	99.1	85.6	35.8	75.4	75.4	119.9	79.0	157.2	69.9	49.8	99.6	52.1	998.7	1117.0
1909	127.3	117.3	106.2	89.7	129.0	79.5	120.4	112.3	100.1	25.4	11.7	57.2	1075.9	1024.9
1910	91.2	98.3	131.8	121.9	67.6	142.5	130.0	109.5	62.7	110.2	27.4	34.0	1127.3	1026.0
1911	32.8	73.7	58.9	52.8	115.3	126.5	96.5	135.4	26.9	37.3	19.8	27.9	803.9	1047.9
1912	144.5	157.5	91.4	85.9	169.2	154.7	94.5	24.4	92.7	30.7	30.7	47.8	1124.0	1082.8
1913	61.0	109.2	101.1	122.7	163.3	114.0	141.2	55.4	121.2	42.2	44.5	32.8	1108.5	1065.2
1914	89.9	110.0	154.2	138.4	131.1	94.2	86.1	141.5	93.5	37.6	93.2	80.5	1250.2	1061.9
1915	67.1	115.8	47.5	50.5	109.7	118.6	211.8	98.6	70.1	25.9	75.9	48.0	1039.6	1088.2
1916	39.6	69.6	129.5	96.0	112.5	92.5	91.4	44.5	20.8	40.6	22.6	27.4	787.1	1070.4
1917	117.6	162.1	232.7	126.7	72.9	138.2	133.6	79.5	90.7	31.5	50.8	19.3	1255.5	1031.4
1918	98.3	228.6	147.1	25.1	96.8	156.2	98.8	15.0	48.8	25.4	25.7	53.6	1019.3	1002.5
1919	52.1	91.4	87.9	81.5	87.9	99.8	159.5	101.3	145.0	60.7	60.7	27.7	1055.6	1050.8
1920	29.0	23.9	188.2	34.3	89.2	73.2	120.4	82.8	113.0	98.0	22.6	20.6	895.1	1014.0
1921	41.7	95.3	138.7	100.6	55.9	160.0	165.4	119.6	45.2	25.9	67.1	13.5	1028.7	1042.5
1922	70.9	130.6	125.0	106.7	84.8	86.9	79.5	140.0	60.7	56.4	29.5	100.6	1071.4	999.8
1923	40.9	84.8	165.1	144.3	167.9	159.3	73.4	164.6	48.3	44.5	29.0	39.9	1161.8	
1924	41.9	125.0	171.5	47.8	36.3	72.6	76.7	43.9	52.6	71.9	56.1	46.0	842.3	
Mean	72.0	97.9	128.6	98.6	100.6	101.7	100.7	96.5	76.9	50.9	42.2	49.2	987.9	

(1) Records commenced 1.2.1892

Source: Blue Book

JAMESTOWN ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 5

Station Elevation: 10.7 m (Location assumed to be Time Office)

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total	five year mean
1853									17.3	0.3	1.0	1.0		
1854	4.1	6.4	39.4	0.0	32.5	27.7	72.6	0.0	17.5	5.1	0.0	5.1	210.3	
1855	15.7	24.9	36.3	3.8	12.4	29.0	23.1	30.0	3.0	5.1	0.0	0.0	183.4	
1856	13.5	15.5	14.7	9.9	0.0	10.2	70.1	6.4	0.0	0.0	0.0			
1857				21.1	0.0	10.9	14.0	5.6	0.0	0.1	0.0	0.0		
1858	1.0	2.5	21.8	5.8	22.4	3.8	22.9	17.0	0.0	0.0	0.0	3.0	100.3	
1859	3.6	13.2	14.5	9.7	15.2	38.6	16.8	3.6	0.0	0.0	1.3	0.0	116.3	
1860	4.3	5.8	4.1	15.2	26.4	1.8	14.2	4.1	4.6	0.5	0.0	3.0	84.1	
1861	1.3	0.8	20.6	4.1	24.9	28.7	26.2	16.3	1.0	0.0	0.0	2.5		
1862	27.7	8.6	11.4	14.0										
Average	8.9	9.7	20.4	9.3	16.7	18.8	32.5	10.4	4.8	1.2	0.3	1.8	134.8	

Recorded at Hussey Charity School elevation 45.7 m

1896		26.2	20.8	6.4	34.0	14.7	13.7	33.5	1.3	1.0	5.3	5.1		
1897	14.5	20.1	29.2	1.3	48.8	12.4	11.7	16.3	1.8	2.0	0.0	0.0	158.0	
1898	14.0	9.9	20.8	17.3	24.1	11.7	22.1	5.6	2.8	2.0	1.0	1.5	132.8	
1899	3.8	26.2	20.3	34.5	21.6	13.5	21.6	21.6	12.2	6.1	0.8	2.3	184.4	
1900	7.1	2.3	19.3	13.7	15.5	29.2	44.2	2.5	2.3	1.0	0.8	3.0	141.0	
1901	5.6	10.2	35.8	34.3	23.9	7.1	16.3	14.5	6.6	3.6	3.3	0.8	161.8	
1902	9.4	5.3		12.2										
Average	9.1	12.3	25.1	18.9	26.8	14.8	23.2	12.1	5.1	2.9	1.2	1.5	152.9	

Recorded at 10.7 m (Time Office ?)

1906	2.0	27.2	36.6	26.7	16.5	37.3	48.3	20.6	4.8	3.8	1.3	17.5	242.6	
1907	3.3	15.7	35.3	98.3	43.4	34.0	27.9	5.1	17.0	3.3	7.6	1.0	292.1	
1908	11.2	11.2	6.1	19.1	17.0	33.0	22.9	29.2	5.1	1.3	2.3	2.0	160.3	210.8
1909													188.7	203.4
1910	12.2	4.3	28.7	5.8	10.7	51.1	28.7	22.9	0.0	3.0	1.3	1.5	170.2	191.8
1911	4.6	12.2	28.2	0.0	46.0	34.3	29.0	41.7	2.5	5.8	1.5	0.0	205.7	229.6
1912													233.9	240.5
1913													349.3	241.7
1914													243.3	239.2
1915	7.9	15.0	0.0	16.3	21.6	38.1	49.8	14.0	10.9	0.0	1.3	1.3	176.0	
1916	4.3	9.1	37.6	20.1	41.4	32.0	33.8	11.9	0.0	3.0	0.0	0.5	193.7	
1917	19.1	36.8	45.0	38.6	9.7	64.8	41.7	16.0	11.7	0.0				
Average	6.9	14.3	22.5	27.7	25.9	38.0	34.4	22.2	6.7	2.9	2.5	3.9	226.2	

Site presumably the same as 1906-15

1920													147.3	
1921													382.3	
1922													191.8	215.4
1923													257.6	216.5
1924													98.3	170.6
1925													152.4	162.8
1926													152.9	146.9
1927													152.7	166.5
1928													178.1	191.9
1929	15.0	14.5	13.7	5.6	48.5	24.4	27.2	20.6	7.9	11.2	0.0	7.9	196.3	215.3

Janestown (Page 2)

1930	9.1	0.0	26.9	44.5	42.9	47.8	44.7	22.9	14.2	11.7	7.9	6.9	279.4	248.1
1931	6.1	0.0	31.8	32.5	23.1	44.5	51.1	38.6	18.0	12.4	12.2	0.0	270.3	251.3
1932	23.1	39.6	51.6	8.9	62.2	26.7	65.0	13.5	20.8	0.0	0.0	5.1	316.5	272.0
1933	19.3	7.4	28.4	4.8	9.1	57.2	43.2	9.9	3.8	1.8	5.6	3.6	194.1	272.7
1934	29.7	33.6	47.0	45.5	25.7	11.2	48.0	32.3	8.4	9.9	2.3	6.4	299.8	250.6
1935	17.3	48.3	21.6	43.2	30.7	67.8	32.0	10.2	10.2	0.8	0.0	0.8	282.7	235.8
1936	21.3	4.3	15.5	6.4	31.5	20.6	34.5	5.8	0.5	15.5	0.0	4.1	160.0	230.9
1937	0.8	18.5	50.3	31.0	57.2	19.8	37.1	11.9	4.8	7.6	1.0	2.5	242.5	217.3
1938	17.0	19.6	5.8	12.4	8.6	22.4	31.5	19.6	19.8	5.1	0.0	7.4	169.2	210.7
1939	6.9	40.4	52.8	15.7	5.1	15.2	64.8	5.6	1.0	12.7	7.1	4.6	231.9	216.3
1940	6.6	6.9	73.7	23.1	12.4	38.4	41.4	11.2	30.7	3.0	0.0	2.5	249.9	199.7
1941	26.9	34.5	5.1	32.8	2.0	19.3	22.1	17.3	3.6	6.9	15.5	1.8	187.7	194.2
1942	6.9	4.1	42.4	13.7	18.0	21.3	9.1	23.6	10.4	3.6	0.0	6.6	159.8	196.9
1943	12.4	7.4	13.5	12.2	22.1	9.9	24.9	26.7	3.8	4.3	2.0	2.3	141.5	179.6
1944	2.7	28.2	40.6	6.6	20.6	49.5	22.4	61.5	9.1	1.3	2.3	0.6	245.4	170.8
1945	7.4	21.3	21.3	8.6	20.6	24.1	35.8	20.6	0.0	0.5	0.0	3.3	163.6	185.9
1946	9.7	13.5	30.5	1.3	34.8	1.8	37.8	7.1	4.1	0.0	1.5	2.0	144.0	200.0
1947	11.4	17.5	45.0	33.0	42.4	44.5	16.8	5.1	16.0	1.5	0.0	2.0	235.2	183.3
1948	8.1	21.1	50.0	41.7	9.1	15.0	45.2	4.3	3.6	12.2	0.0	1.3	211.6	195.3
1949	0.0	0.0	27.2	23.1	26.4	30.7	20.8	17.8	9.9	3.3	3.0	0.0	162.3	198.9
1950	8.9	23.1	39.4	0.0	16.3	23.4	77.5	6.4	14.5	6.1	4.6	3.3	223.3	182.6
1951	6.6	22.6	13.0	15.2	17.5	36.8	21.1	14.7	3.3	9.1	1.3	1.0	162.3	189.1
1952	2.5	13.5	2.0	5.8	28.4	22.9	44.2	15.2	3.0	3.0	7.4	5.6	153.7	208.9
1953	2.0	31.2	6.6	21.3	23.4	84.6	35.1	34.5	2.0	1.5	1.5	0.0	243.8	213.2
1954	0.8	23.9	32.0	6.4	31.8	53.3	75.4	15.2	13.2	3.0	3.0	3.3	261.4	223.8
1955	1.3	51.8	20.1	41.9	23.4	44.2	35.3	15.0	1.8	6.4	0.0	3.8	244.9	250.2
1956	5.1	17.8	54.4	46.2	12.7	38.4	16.5	14.2	6.9	0.5	2.3	0.3	215.1	226.8
1957	7.4	20.3	72.9	17.3	39.6	52.3	37.3	12.4	21.8	3.0	0.0	1.3	285.8	217.3
1958	5.1	23.1	19.8	5.1	14.0	11.7	6.9	6.9	10.2	3.8	1.5	19.1	127.0	207.9
1959	14.2	9.4	34.5	12.2	47.5	41.7	26.2	15.7	2.8	3.8	1.3	4.3	213.6	205.6
1960	4.6	56.1	12.2	26.7	3.6	2.0	8.9	79.2	2.0	2.3	0.5	0.0	198.1	177.6
1961	1.5	5.6	49.3	9.1	27.7	33.0	43.4	19.6	5.8	5.6	1.0	2.0	203.7	198.3
1962	2.5	5.8	15.2	13.2	11.7	17.8	18.3	30.7	6.1	11.7	11.7	0.8	145.5	193.6
1963	11.2	34.5	29.2	21.1	32.3	36.8	30.2	4.8	18.8	2.8	7.9	1.0	230.6	202.3
1964	1.0	8.6	11.4	0.3	17.8	35.3	26.9	62.7	19.6	6.1	0.5	0.0	190.2	212.5
1965	10.2	16.0	59.4	9.9	0.8	52.3	28.4	27.7	14.2	10.7	2.0	9.7	241.3	233.1
1966	8.9	30.0	11.2	2.0	54.4	20.6	62.0	40.1	16.8	0.0	4.1	5.1	255.0	248.3
1967	15.7	8.6	28.2	61.5	44.2	30.2	11.4	26.7	3.6	6.6	4.3	7.1	248.2	254.4
1968	32.5	20.1	61.0	35.8	38.6	31.0	62.0	7.4	6.4	1.8	3.3	6.9	306.6	251.4
1969	5.6	20.1	33.0	5.8	25.7	46.2	25.1	13.2	15.5	5.1	2.5	22.9	220.7	232.6
1970	22.9	8.9	6.9	6.6	18.0	60.5	48.8	33.8	14.5	2.5	1.8	1.3	226.3	213.0
1971	12.7	17.8	5.8	2.5	21.6	33.5	47.8	8.1	8.6	0.0	2.3	0.5	161.3	171.9
1972	2.5	4.8	15.5	15.2	10.2	49.5	27.4	8.9	4.6	3.6	3.6	4.1	149.9	183.4
1973	1.0	4.8	15.7	9.1	14.5	23.9	11.9	10.7	3.6	1.0	4.3	0.8	101.3	175.9
1974	16.3	43.9	22.1	25.9	72.6	18.5	28.7	26.4	9.7	1.5	4.6	8.1	278.4	236.6
1975	5.6	13.5	30.5	6.1	10.4	25.1	39.6	32.3	9.9	9.7	2.3	3.8	188.7	298.5
1976	8.9	81.0	58.4	20.8	43.7	73.7	64.5	52.8	20.3	25.4	9.1	6.1	464.8	361.7
1977	26.7	53.1	88.4	17.5	45.0	96.8	48.5	18.0	42.9	11.7	2.3	8.1	459.0	372.6
1978	6.1	47.0	117.3	60.5	40.4	8.4	46.7	67.6	12.2	3.3	2.5	5.8	417.8	378.8
1979	9.9	72.6	34.3	6.9	41.4	33.5	56.9	35.8	8.1	19.8	6.4	6.9	332.5	323.1
1980	2.5	10.4	28.7	16.0	39.4	77.2	11.4	11.2	7.1	4.1	9.1	2.5	219.7	277.8
1981	5.8	15.0	22.1	19.3	20.3	33.3	28.4	28.7	3.6	2.5	4.3	3.0	186.4	222.9
1982	15.0	28.2	13.0	27.2	3.6	75.2	36.1	18.3	1.3	3.3	7.1	4.6	232.7	182.1
1983	1.8	15.7	13.5	1.0	27.4	17.8	26.4	20.1	2.3	2.8	3.6	10.7	143.0	187.8
1984	0.8	13.0	17.8	24.1	12.7	0.0	6.9	4.6	7.9	17.3	4.6	19.3	128.8	191.8
1985	2.8	53.6	59.2	50.5	21.8	9.7	29.0	5.6	5.3	5.3	1.0	4.1	247.9	188.1
1986	5.3	9.1	57.9	19.1	6.4	27.9	27.7	7.6	15.2	16.5	11.2	2.5	206.5	217.7
1987	4.8	19.3	33.3	7.6	43.7	30.5	28.2	28.7	10.9	1.3	1.5	4.3	214.1	241.9
1988	17.5	29.0	24.6	74.2	13.0	25.1	70.9	10.9	7.4	11.2	4.6	3.0	291.4	
1989	13.5	26.2	9.0	58.4	15.2	55.1	35.1	19.8	5.3	8.0	0.5	3.7	249.8	

Av 1930-89	9.5	22.9	32.7	21.1	25.6	34.6	35.7	21.3	9.7	6.0	3.5	4.4	227.0	
Av 1965-89	10.2	26.5	34.7	23.3	27.4	38.2	36.4	22.6	10.3	7.0	4.1	6.2	246.9	
Av 1980-89	7.0	21.9	27.9	29.7	20.3	35.2	30.0	15.5	6.6	7.2	4.8	5.8	212.0	
SD. 1930-89	7.9	17.6	22.4	17.4	15.8	20.9	17.3	16.3	7.8	5.4	3.5	4.5	72.4	
CV. 1930-89	0.82	0.77	0.69	0.83	0.62	0.60	0.48	0.77	0.81	0.91	1.01	1.02	0.32	

Dry in 5 2.5 8.9 13.5 6.4 11.7 17.8 21.1 7.6 3.3 1.5 0.5 1.0

LONGWOOD FIELD ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 6

Station Elevation: 500m														Est	5 year
Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total	months	mean
1952	17.3	21.6	31.5	35.3	75.4	80.3	131.3	53.6	38.4	26.4	35.8	27.2	574.0		
1953	21.3	59.4	19.3	42.4	49.5	132.1	87.1	96.3	17.8	13.0	9.1	16.8	564.1		
1954	29.2	96.3	90.9	47.8	93.2	155.2	121.4	30.0	97.5	44.7	24.4	29.5	860.0		699.1
1955	18.3	143.0	123.7	83.3	49.3	99.3	97.5	90.7	38.6	40.9	9.4	11.9	805.9		730.1
1956	65.5	57.4	105.9	133.6	39.9	75.4	53.8	74.2	38.9	29.2	16.8	0.8	691.4		719.8
1957	55.1	77.5	163.6	42.4	67.8	91.4	49.8	59.9	86.9	24.9	0.0	9.9	729.2		669.0
1958	64.0	66.5	51.3	27.7	47.0	67.6	16.0	41.7	37.1	36.8	33.8	23.1	512.6		602.0
1959	32.3	61.5	71.6	38.4	71.9	81.8	77.7	59.4	27.7	27.9	41.7	14.2	606.0		623.3
1960	29.7	50.0	50.3	35.8	21.8	46.5	37.8	73.7	34.0	42.4	24.6	24.1	470.9		579.8
1961	74.9	26.7	109.2	120.7	65.8	82.8	81.0	75.7	50.3	53.1	22.6	35.1	797.8		630.6
1962	6.4	27.2	89.4	40.6	29.5	16.3	68.8	73.2	53.3	43.4	43.4	20.3	511.8		623.8
1963	68.6	68.3	76.5	86.9	57.4	110.7	94.5	58.2	30.7	45.2	43.2	26.4	766.6		666.9
1964	16.5	33.5	51.3	23.1	63.5	74.2	36.6	144.3	87.1	15.5	19.6	6.9	572.0		639.0
1965	66.3	103.6	136.9	47.5	2.3	81.0	68.1	35.8	64.3	23.6	9.7	47.0	686.1		674.7
1966	54.1	88.4	63.5	11.4	104.1	44.5	91.9	94.5	70.1	1.8	17.5	16.8	658.6		619.2
1967	16.0	41.1	80.5	120.1	146.1	100.6	30.5	74.4	8.4	37.1	17.5	17.8	690.1		583.3
1968	51.3	44.2	79.0	62.2	28.4	47.0	85.9	16.5	19.6	17.8	16.0	21.1	489.0		534.2
1969	25.9	59.9	48.5	9.9	41.9	49.5	53.3	18.8	32.8	28.7	9.1	14.5	392.9		535.7
1970	51.1	19.6	31.5	10.2	17.3	37.8	90.9	62.0	84.6	15.2	10.2	10.0	440.3	Dec	485.6
1971	62.5	71.1	49.8	36.1	77.5	85.3	137.2	70.1	33.0	12.4	21.3	9.9	666.2		448.9
1972	28.2	43.4	36.6	24.4	33.0	104.1	33.8	42.9	25.9	21.1	16.0	30.0	439.4		507.7
1973	11.9	14.2	36.6	26.9	28.7	47.2	39.9	26.4	7.9	13.8	22.9	29.2	305.6	Oct	518.0
1974	36.1	110.2	83.1	50.8	115.1	67.8	77.5	42.2	24.6	28.4	21.1	30.0	686.8		495.7
1975	27.9	13.2	64.3	31.2	26.2	64.5	61.2	54.9	47.5	39.1	12.7	49.0	491.7		505.8
1976	64.3	103.6	74.4	31.2	42.9	50.0	57.9	53.1	33.0	24.6	4.6	15.0	554.7		535.8
1977	63.8	43.9	78.5	6.9	10.9	57.2	85.6	12.7	82.8	13.2	15.0	19.6	490.0		478.6
1978	10.2	31.8	122.7	56.4	52.6	3.8	43.4	86.6	19.1	8.9	10.9	9.7	456.0	Dec	479.4
1979	23.8	31.5	94.0	19.0	8.1	6.4	74.4	53.5	24.6	24.4	24.4	16.3	400.3	Ja,Ap,Ag	465.0
1980	18.6	34.8	46.2	52.6	85.1	86.6	31.5	36.3	27.9	28.7	16.5	31.2	496.1	Ja,Feb	498.8
1981	22.6	54.4	42.2	39.6	29.5	79.2	59.9	68.8	13.7	26.7	15.7	30.0	482.3		501.4
1982	49.0	85.3	101.1	119.4	31.5	89.4	45.7	63.0	9.1	30.0	24.4	11.2	659.1		495.6
1983	10.4	54.1	36.6	30.0	65.5	64.5	72.4	50.0	12.1	22.6	38.1	12.7	469.0	Ja,Sp	541.4
1984	32.5	12.7	32.3	62.0	39.4	14.7	29.5	15.2	35.5	39.4	35.6	22.9	371.5	Sp	556.0
1985	17.3	170.7	114.3	91.2	68.8	35.6	38.1	37.5	66.0	48.3	14.5	22.9	725.1	Ja,Ag	563.9
1986	31.5	23.9	71.6	50.8	25.7	101.6	35.8	25.7	99.1	48.5	20.6	20.6	555.2		617.2
1987	34.5	77.5	80.5	4.6	94.7	59.7	103.6	100.3	59.7	19.6	39.9	24.1	698.7		675.0
1988	71.9	56.6	71.1	115.1	28.7	51.6	140.7	36.6	87.4	20.4	19.1	36.1	735.3		
1989	47.1	38.8	42.0	94.0	55.8	98.0	68.8	64.8	74.2	34.6	22.7	19.7	660.5		
Av 1952-89	37.6	58.4	72.4	51.6	52.4	69.5	68.7	57.2	44.8	28.2	21.1	21.4	583.2		
Av 1965-89	37.1	57.1	68.7	48.1	50.4	61.1	66.3	49.7	42.5	25.2	19.0	22.7	548.0		
Driest	6.3	12.7	19.3	4.6	2.3	3.8	16.0	12.7	7.9	1.8	0.0	0.8	305.6		
Dry in 5	17.3	26.9	37.3	23.4	26.0	44.6	36.2	31.2	19.3	15.3	10.4	11.3	458.6		
Wet in 5	63.9	87.8	104.9	89.0	77.1	94.9	91.7	75.4	78.6	42.1	35.2	29.9	697.0		
Wettest	74.9	170.7	163.6	133.6	146.0	155.2	137.2	144.3	99.1	53.1	43.4	49.0	860.0		
% Average															
Driest	16.8	21.8	26.6	8.9	4.4	5.5	23.3	22.2	17.6	6.4	0.0	3.7	52.4		
Dry in 5	46.0	46.1	51.5	45.3	49.6	64.2	52.7	54.6	43.1	54.2	49.4	52.8	78.6		
Wet in 5	170.1	150.5	144.8	172.4	147.1	136.5	133.5	131.8	175.6	149.2	167.1	139.7	119.5		
Wettest	199.3	292.5	225.9	258.8	278.5	223.3	199.7	252.3	221.4	188.2	206.1	229.0	147.5		
Rainfall Totals For Three Month Periods Starting With Month Of Entry															
Dry in 5	101.5	110.6	113.3	105.8	133.6	137.3	114.8	93.5	63.2	43.9	59.3	75.9			
Average	168.6	180.9	175.0	170.9	188.9	193.5	167.0	128.6	92.1	70.4	80.0	118.8			
Rainfall Totals For Four Month Periods Starting With Month Of Entry															
Dry in 5	137.2	153.7	158.7	156.2	178.2	170.6	141.3	117.0	77.9	79.4	93.0	127.5			
Average	217.3	233.9	244.2	237.6	246.5	236.2	195.3	149.6	113.1	108.2	139.9	193.2			
Wet in 5	280.2	322.3	316.7	311.2	320.8	289.8	249.7	174.8	143.3	121.4	153.8	240.8			

LONGWOOD OBSERVATORY ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 6

Station Elevation: 530 m.

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1840									146.8	65.8	24.1	104.4	
1841	88.9	215.9	336.6	171.5	241.3	146.1	108.0	152.4	88.9	108.0	38.1	55.1	1750.6
1842	244.9	342.9	234.2	125.2	156.7	194.3	255.3	190.2	182.6	172.2	99.6	99.6	2297.7
1843	45.5	109.7	212.6	37.1	185.9	91.2	44.7	39.4	23.4	39.6	44.2	71.1	944.4
1844	25.1	34.5	49.5	22.9	65.3	37.6	47.5	84.6	71.6	34.3	18.0	17.5	508.5
1845	10.7	19.8	21.8	34.5	88.9	79.2	64.3	66.8	67.3	25.4	11.7	2.5	493.0
1846	33.0	80.0	77.0	70.1	99.1	49.3	84.8	78.2	30.5	20.1	26.4	23.1	671.6
1847	63.3	32.0	93.2	48.8	35.3	216.2	76.5						1077.2 (full year)
1848													1159.0
Av 1840-49	83.0	144.6	170.9	78.2	147.6	109.7	103.9	106.7	96.8	74.2	39.3	58.4	1112.7

Source: Mellis, Brown and Sabine.

1882													482.6
1883													668.8
1884	34.3	54.4	89.4	61.5	33.5	38.1	89.2	71.9	32.3	38.4	63.5	43.2	649.5
1885	29.2	81.3	67.6	57.9	52.3	17.0	7.6	63.8	46.7	39.1	26.9	51.8	541.3
1886	35.6	50.3	121.9	30.2	60.7	26.4	18.0	64.8	50.5	18.3	24.6	22.1	523.5
1887	81.0	58.2	145.5	36.1	110.2	55.1	97.0	71.6	15.5	27.4	15.7	16.5	730.0
1888	25.9	36.6	29.5	60.7	51.6	74.4	100.8	64.5	43.2	8.1	17.3	31.8	544.3
1889	27.2	14.7	86.6	105.2	86.9	36.8	54.1	26.4	66.5	18.5	23.9	24.1	571.0
1890	40.4	25.7	123.4	133.4	107.2	71.6	101.1	127.5	66.8	51.8	11.7	20.6	881.1
1891	60.7	33.0	47.8	28.4	123.2	78.0	48.0	94.5	55.9	38.9	63.8	30.0	702.1
1892	12.2	63.5	53.1	106.7	87.1	56.6	51.1	34.3	101.6	29.0	15.7	8.6	619.5
1893	101.6	103.4	119.9	60.7	33.8	23.4	62.5	88.1	55.6	22.4	34.3	7.4	713.0
1894	30.0	32.5	170.7	80.3	69.1	57.7	32.3	60.2	44.7	16.3	7.6	23.1	624.3
1895	13.5	29.5	79.2	30.7	98.6	131.1	52.6	28.4	41.9	14.7	20.8	16.8	557.8
1896	33.0	70.6	108.0	30.7	79.8	59.9	41.7	130.0	24.9	26.2	42.2	50.8	697.7
1897	74.4	58.9	88.4	24.6	118.4	23.1	61.5	67.6	34.5	20.3	5.8	9.4	587.0
1898	30.0	45.0	58.2	55.9	70.6	29.7	61.5	24.1	15.7	24.9	12.2	16.0	443.7
1899	18.0	53.1	66.5	100.3	119.6	49.8	106.7	76.5	81.8	75.9	6.1	42.4	796.8
1900	24.4	35.6	63.8	57.9	43.7	67.6	96.0	73.9	33.0	37.6	10.2	38.4	581.9
1901	24.4	33.0	98.8	114.0	41.7	26.2	43.4	68.1	77.5	25.1	25.4	50.5	628.1
Av 1882-01	38.7	48.8	89.9	65.3	77.1	51.3	62.5	68.7	49.4	29.6	23.8	28.0	632.9

Source: 1882-83 Brown. 1884 onwards Blue Book

LONGWOOD LAWN ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 7

Station Elevation: 530m.

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total	Est. Months	Five ye. mean
1960									28.4	19.8	33.5	22.4			
1961	54.6	28.4	114.6	94.7	69.1	71.4	77.0	63.0	41.7	39.1	19.1	35.1	707.6		
1962	5.9	25.4	91.7	46.7	36.6	18.3	74.7	73.7	58.2	43.7	45.5	20.1	540.3	Jan	
1963	62.5	63.5	77.0	76.2	48.5	96.0	87.4	52.1	26.2	40.1	36.6	22.4	688.3		619.9
1964	11.7	26.2	44.2	17.8	67.1	72.1	34.3	140.5	78.0	13.2	16.0	6.1	527.1		602.6
1965	63.2	97.0	124.0	45.0	2.3	81.0	68.1	30.5	53.3	21.8	8.1	41.9	636.3		624.1
1966	46.7	86.4	66.5	10.9	98.8	39.4	93.0	82.6	54.9	3.6	17.0	21.3	621.0		576.9
1967	17.5	40.6	85.3	99.6	125.7	91.2	26.2	75.2	5.8	48.8	12.7	19.1	647.7		555.0
1968	61.2	43.7	70.1	62.5	25.7	45.5	58.9	18.0	17.0	15.2	15.0	19.6	452.4		513.5
1969	31.8	63.2	63.0	10.4	41.4	48.0	54.9	20.8	30.7	32.8	8.4	12.4	417.8		512.5
1970	54.9	18.3	31.2	8.6	18.0	38.1	94.7	58.9	75.7	13.0	7.1	10.2	428.8	Dec	474.4
1971	58.7	54.3	50.5	45.0	77.0	78.0	132.8	49.0	31.2	10.2	9.1	10.2	616.0		445.6
1972	32.5	45.7	49.5	23.4	33.0	98.0	39.9	40.9	23.4	19.6	22.6	28.7	457.2		498.3
1973	14.2	10.4	35.3	27.2	28.7	50.8	38.1	29.2	9.1	12.5	38.4	14.2	308.2	Oct	505.1
1974	36.8	124.5	60.5	52.3	128.8	65.5	82.0	40.6	24.6	22.1	19.3	24.1	681.2		490.0
1975	23.6	13.2	79.2	27.7	23.6	65.8	70.9	44.5	37.8	33.0	7.4	36.1	462.8		507.2
1976	58.7	96.8	74.4	35.1	40.9	54.1	60.2	42.4	25.1	28.2	3.3	21.3	540.5		554.5
1977	36.1	81.0	77.2	20.1	24.1	79.0	91.7	10.2	67.1	13.7	18.3	25.1	543.6		506.9
1978	14.2	36.1	128.3	57.2	56.1	12.7	51.1	94.0	40.4	17.3	27.7	9.5	544.4	Dec	505.4
1979	22.3	99.6	81.0	18.3	33.3	6.9	40.1	48.2	27.7	25.7	26.2	14.0	443.1	Ja, Ap, Ag	494.9
1980	17.4	34.3	29.5	38.6	87.1	99.6	31.0	26.4	27.7	27.7	13.7	22.4	455.3	Ja, Feb	514.5
1981	22.4	41.7	42.2	43.9	32.3	82.8	66.0	63.0	14.5	35.6	11.4	32.5	488.2		485.3
1982	42.7	96.3	99.1	113.5	31.5	89.4	47.0	63.0	5.1	24.9	23.6	5.3	641.4		459.8
1983	9.7	45.2	30.0	20.3	48.3	60.2	70.9	51.1	10.2	22.1	25.7	5.1	398.6	Ja, Sep	517.2
1984	17.5	33.8	27.7	44.2	27.9	11.4	23.1	15.2	29.9	35.3	31.0	18.5	315.7	Sep	512.3
1985	16.1	158.2	109.5	108.0	80.3	36.1	35.8	33.4	63.2	70.1	11.9	19.8	742.4	Ja, Ag	506.4
1986	20.8	24.9	65.8	53.3	24.4	111.8	33.0	20.3	43.4	30.7	14.2	20.6	463.3		553.6
1987	19.3	68.1	72.4	5.6	82.3	38.6	85.9	104.6	52.1	17.3	33.3	31.8	612.1		613.8
1988	53.6	51.5	68.0	109.4	23.3	43.2	121.1	31.9	53.4	35.6	13.9	29.6	634.5		
1989	42.5	38.8	38.7	89.7	51.1	97.7	69.3	56.3	68.9	30.5	14.8	18.6	616.9		
Av 1961-89	33.4	57.1	68.5	48.5	50.6	61.5	64.1	51.0	37.5	26.8	19.5	20.6	539.1		
Av 1965-89	33.4	60.5	66.4	46.8	49.8	61.0	63.5	46.0	35.7	25.9	17.4	20.5	526.8		
Av 1980-89	26.2	59.3	58.3	62.7	48.8	67.1	58.4	46.5	36.8	33.0	19.4	20.4	536.8		

HALLAMS: ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 8

Station Elevation: 590m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total	Five year mean
1970	135.4	40.4	55.4	25.9	40.6	75.7	172.5	153.4	166.4	27.2	24.9	5.8	923.5	
1971	70.9	135.1	105.9	81.3	111.5	122.7	256.0	111.8	68.3	29.2	20.8	20.8	1134.4	
1972	43.9	53.3	96.8	63.8	47.8	158.5	125.5	46.5	64.3	59.4	42.7	47.0	849.4	951.8
1973	23.9	34.0	56.6	47.5	54.1	106.2	74.7	66.5	41.1	22.1	37.1	46.0	609.9	954.1
1974	88.9	182.6	115.1	89.2	231.4	125.2	104.6	69.6	81.5	52.8	47.5	53.3	1241.8	1005.9
1975	62.5	31.8	135.6	54.9	58.2	106.9	119.4	116.6	91.4	55.1	29.7	73.2	935.2	1059.4
1976	126.0	250.7	148.6	89.2	123.2	141.5	119.4	132.6	86.1	77.5	54.4	44.5	1393.4	1141.4
1977	98.0	151.9	221.2	43.9	52.3	188.0	94.2	46.7	128.5	33.3	20.6	37.8	1116.6	1109.2
1978	13.7	96.0	260.1	114.8	72.4	26.4	96.5	178.1	84.3	45.7	26.7	25.1	1019.8	1079.9
1979	46.5	249.9	117.3	39.4	109.5	79.2	156.2	90.2	50.8	63.8	47.8	30.5	1081.0	982.5
1980	23.4	60.7	77.7	63.0	99.3	160.8	58.4	63.2	40.6	44.2	44.5	52.6	788.4	997.2
1981	56.6	88.1	87.9	75.4	81.5	128.5	101.1	105.4	51.6	24.9	47.8	57.9	906.8	957.1
1982	81.0	143.8	172.0	215.4	31.5	193.8	147.1	98.6	9.7	40.6	38.9	17.5	1189.7	877.9
1983	13.0	75.9	71.4	24.9	98.3	92.5	117.1	99.1	25.7	36.1	75.2	90.7	819.7	919.6
1984	13.7	84.6	83.1	100.1	37.6	19.1	47.5	28.7	57.2	77.5	40.6	95.5	685.0	924.1
1985	29.5	196.6	167.6	142.2	102.9	24.4	70.1	68.3	65.8	70.1	16.3	43.2	997.0	869.4
1986	53.3	57.2	128.8	107.4	42.9	142.2	80.5	43.4	91.9	74.2	64.8	42.2	928.9	928.6
1987	34.8	94.2	116.6	25.4	140.2	91.7	102.4	142.2	63.8	26.4	45.7	33.3	916.7	995.8
1988	76.2	82.6	80.0	185.4	45.5	109.5	231.1	74.9	74.9	67.8	27.4	60.2	1115.4	
1989	88.8	55.1	55.5	152.1	88.6	162.3	116.3	97.3	76.2	60.2	27.0	41.7	1021.1	
1990													1068.6	
Av 1970-89	59.0	108.2	117.7	87.1	83.5	112.8	119.5	91.7	70.0	49.4	39.0	45.9	983.7	
Av 1980-89	47.0	93.9	104.1	109.1	76.8	112.5	107.2	82.1	55.7	52.2	42.8	53.5	936.9	
Dry in 5	23.4	55.1	71.4	39.4	42.9	75.7	74.7	46.7	41.1	27.2	24.9	25.1	819.7	

Daily Intensities - Total days per month from 1977-89

Days 10-20 mm	7	33	30	28	20	26	33	22	21	4	6	8	238
Days 20-30 mm	0	6	12	2	4	7	8	6	1	1	0	0	47
Days 30mm+	1	5	3	3	2	5	3	2	0	0	1	0	25

Highest 43.2 54.6 55.1 41.4 62.5 43.4 40.3 44.5 25.7 24.6 33.5 19.8

Daily Intensities - Average days per month 1977-89

Days 10-20 mm	0.5	2.5	2.3	2.2	1.5	2.0	2.5	1.7	1.6	0.3	0.5	0.6	18.3
Days 20-30 mm	0.0	0.5	0.9	0.2	0.3	0.5	0.6	0.5	0.1	0.1	0.0	0.0	3.6
Days 30mm+	0.1	0.4	0.2	0.2	0.2	0.4	0.2	0.2	0.0	0.0	0.1	0.0	1.9

SCOTLAND ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 9

Station Elevation: 560 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total	5 year mean
1960	Installed 18.4.1960				20.3	82.8	42.7	169.9	41.4	52.8	29.7	32.0		
1961	116.3	52.6	259.6	140.2	111.5	139.2	134.4	61.5	57.2	68.8	19.3	62.7	1223.3	
1962	27.9	33.0	88.6	81.0	34.3	70.6	119.4	131.1	81.0	56.1	87.6	23.4	834.1	
1963	103.6	116.1	126.7	100.1	88.9	169.7	143.0	85.6	27.4	47.8	43.9	32.8	1085.6	1016.7
1964	22.9	47.8	75.2	16.8	76.5	138.7	138.7	209.6	122.7	43.7	20.3	14.5	927.1	971.3
1965	90.7	110.2	185.7	81.3	8.4	148.3	93.5	65.3	97.5	51.6	24.1	56.9	1013.5	1026.4
1966	74.2	137.7	94.0	11.2	134.1	48.3	174.5	152.1	98.0	15.7	26.7	29.7	996.2	996.5
1967	88.9	33.0	136.7	208.8	197.1	125.5	48.5	117.1	30.2	76.2	17.8	29.7	1109.5	978.8
1968	104.9	131.8	143.3	91.7	79.2	57.4	212.9	23.6	30.5	31.0	7.9	22.1	936.2	910.7
1969	80.0	99.6	128.5	37.8	83.1	152.7	85.1	68.6	23.1	39.9	7.9	32.5	838.7	881.2
1970	83.3	27.9	34.3	28.7	41.4	62.5	132.3	121.4	119.1	0.8	18.0	3.3	673.1	800.0
1971	59.7	101.9	79.8	51.8	76.7	103.4	209.0	90.4	48.5	10.9	12.4	3.8	848.4	711.9
1972	27.2	53.6	71.9	65.8	51.3	139.2	92.7	59.4	39.9	58.7	25.4	18.8	703.8	767.2
1973	19.3	25.4	55.1	36.1	43.9	84.6	72.4	53.3	22.9	13.5	29.0	40.1	495.6	791.9
1974	91.2	146.8	77.5	125.2	231.1	84.1	95.0	58.4	74.9	54.1	37.8	39.1	1115.3	825.7
1975	40.9	66.5	80.5	72.1	50.8	107.7	95.0	109.2	68.6	42.2	17.8	45.2	796.5	863.9
1976	86.9	223.5	105.4	72.6	116.3	93.5	92.5	88.9	51.6	37.3	31.5	17.3	1017.3	950.2
1977	57.2	120.4	169.4	41.7	55.6	138.7	114.6	36.1	91.4	29.0	16.5	24.4	894.8	942.3
1978	13.5	91.4	218.4	120.4	57.2	23.4	93.0	165.4	62.5	31.5	24.9	25.4	926.8	935.0
1979	40.1	189.0	189.0	34.8	104.4	98.3	154.2	90.7	54.4	60.7	40.6	19.8	1075.9	881.6
1980	19.8	39.4	78.5	87.9	98.3	143.8	66.5	63.8	30.7	46.7	41.9	42.9	760.2	938.2
1981	53.1	90.2	78.0	69.9	63.8	110.0	105.9	79.2	34.0	26.9	36.8	2.3	750.1	895.9
1982	77.0	129.8	176.8	201.4	22.6	232.2	156.2	95.3	12.4	31.8	23.6	18.8	1177.8	787.3
1983	8.1	81.0	66.5	18.3	96.3	70.6	104.6	91.9	17.3	36.8	59.2	64.8	715.5	803.7
1984	8.9	71.9	70.1	83.1	43.4	22.4	40.6	23.4	53.8	54.6	49.8	11.2	533.1	835.8
1985	22.4	163.3	121.9	121.9	100.6	20.3	78.7	45.2	61.2	51.3	10.9	43.9	841.8	786.9
1986	43.4	63.5	128.0	96.8	28.2	127.0	90.7	44.5	79.0	102.9	71.6	35.1	910.6	855.4
1987	39.4	84.1	109.0	20.3	169.9	61.5	126.2	149.4	72.4	22.9	46.0	32.8	933.7	952.1
1988	67.8	88.4	50.0	182.9	42.7	115.1	255.0	73.2	58.9	64.8	18.3	40.9	1058.0	
1989	74.9	65.8	47.6	184.7	77.1	175.5	121.4	87.6	60.3	59.7	27.6	34.1	1016.3	
Av 1961-89	56.7	92.6	111.9	85.7	82.2	105.6	118.8	87.6	58.0	43.7	30.9	29.9	903.8	
Av 1965-89	54.9	97.4	107.8	85.9	82.9	101.8	116.4	82.1	55.7	42.1	29.0	29.4	885.5	
Av 1980-89	41.5	87.7	92.6	106.7	74.3	107.8	114.6	75.3	48.0	49.8	38.6	32.7	869.7	
Driest	8.1	25.4	34.3	11.2	8.4	20.3	40.6	23.4	12.4	0.8	7.9	2.3	495.6	
Dry in 5	21.0	50.7	70.1	26.9	38.6	59.9	77.4	51.7	29.6	25.3	17.3	16.2	730.0	
Wet in 5	89.0	135.3	173.8	140.2	114.5	143.8	154.6	134.8	83.1	59.7	45.2	43.3	1080.0	
Wettest	116.3	223.5	259.6	208.8	231.1	232.2	253.0	209.5	122.7	102.9	87.6	64.8	1223.3	
% of average														
Dry in 5	37.1	54.7	62.6	31.4	46.9	56.7	65.1	59.0	51.0	57.9	56.0	54.1	80.8	
Wet in 5	157.1	146.1	155.3	163.6	139.2	136.1	130.1	153.8	143.3	136.6	146.4	144.6	119.5	
Rainfall Totals For Three Month Periods Starting With Month Of Entry														
Dry in 5	150.3	198.1	193.6	185.6	214.9	266.2	189.3	137.4	87.2	71.2	80.7	117.7		
Average	263.8	289.9	278.8	262.9	298.9	309.0	263.9	191.1	131.4	103.6	116.9	179.1		
% av	57.0	68.3	69.4	70.6	71.9	86.1	71.7	71.9	66.4	68.7	69.0	65.7		
Rainfall Totals For Four Month Periods Starting With Month Of Entry														
Dry in 5	222.7	254.3	282.2	292.3	315.6	309.4	242.3	166.5	104.5	122.1	144.7	178.4		
Average	346.0	372.4	382.0	379.0	389.3	366.4	302.2	222.5	160.9	159.6	210.4	293.3		
% av	64.4	68.3	73.9	77.1	81.1	84.4	80.2	74.8	65.0	76.5	68.8	60.8		

Source: A & F Records and Brown

BOTTOM WOODS: ACTUAL AND AVERAGE RAINFALL

Reference Number: 10

Station Location: 15.56S 05.40W

Station Elevation: 435m.

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total	5 year mean
1976										15.0	13.5	18.4		
1977	53.3	53.4	120.1	15.5	18.5	77.8	53.0	27.5	59.5	16.8	16.8	28.6	540.8	
1978	6.1	28.8	88.5	58.9	49.2	9.8	36.2	80.0	34.5	22.1	21.3	9.8	445.2	
1979	15.9	141.6	63.2	15.9	41.6	40.7	75.1	41.9	19.7	16.8	29.5	20.7	522.6	469.0
1980	12.4	32.7	31.9	24.3	55.8	107.9	23.1	19.6	31.0	24.7	15.4	30.5	409.3	470.7
1981	26.6	46.3	41.8	35.7	21.9	44.9	51.8	67.9	18.6	17.2	31.0	23.3	427.0	467.4
1982	45.0	80.8	80.6	95.1	20.1	77.9	44.3	62.2	3.9	20.9	12.5	6.3	549.6	423.5
1983	6.9	35.4	29.5	24.1	49.3	59.8	62.5	55.4	8.5	16.8	26.5	54.0	428.7	439.3
1984	8.6	38.2	33.6	45.8	16.3	10.8	17.5	15.9	24.9	34.2	19.6	37.3	302.7	440.6
1985	11.5	90.1	81.3	74.8	59.0	30.5	29.4	27.8	34.7	30.7	6.7	12.1	488.6	424.4
1986	20.4	25.3	56.8	32.7	13.9	82.7	31.6	19.4	57.1	45.9	24.8	22.8	433.4	436.4
1987	22.9	62.2	50.0	9.2	74.2	50.6	52.9	62.4	26.6	13.4	23.9	20.4	468.7	466.2
1988	41.6	32.4	44.1	87.9	17.9	38.3	99.8	22.8	34.6	29.6	8.0	28.2	488.4	
1989	40.4	27.8	19.2	63.5	40.4	64.4	49.3	48.9	46.6	24.4	13.4	13.6	451.9	
Av 1977-89	24.0	53.5	57.0	44.9	36.8	53.5	48.2	42.4	30.8	24.1	19.2	23.7	458.2	
Av 1980-89	23.6	47.1	46.9	49.3	36.9	56.8	46.2	40.2	28.7	25.8	18.2	24.9	444.5	

HARPERS: ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 11

Station Elevation: 450m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total	5 year mean
1971	34.3	80.0	45.7	26.1	62.5	82.8	158.2	63.5	42.2	13.7	10.4	12.2	631.6	
1972	31.8	41.7	65.3	51.1	36.3	114.3	73.9	48.0	50.6	41.9	25.7	19.1	599.7	
1973	16.5	27.2	51.3	36.1	36.1	101.4	62.5	45.0	23.6	19.1	28.2	29.2	476.2	688.1
1974	77.7	136.4	91.7	74.7	200.4	94.7	74.7	56.6	58.7	40.6	35.6	33.0	974.8	766.3
1975	41.2	31.8	114.8	47.5	54.1	84.8	89.9	97.5	72.9	43.4	17.3	63.0	758.2	808.5
1976	101.6	217.9	121.9	89.4	111.3	85.1	85.0	78.2	44.5	40.6	20.8	26.4	1022.7	884.3
1977	44.5	125.7	167.6	43.9	49.8	103.9	95.0	26.9	95.0	22.4	12.7	23.1	810.5	840.3
1978	11.2	73.7	198.9	106.7	61.7	16.0	97.8	151.6	66.0	32.5	19.8	19.3	855.2	806.7
1979	33.3	148.9	134.4	21.8	65.8	77.5	96.3	61.5	31.0	36.3	29.2	18.8	754.8	740.0
1980	17.8	42.4	74.7	50.0	87.6	67.3	52.1	52.1	28.5	30.5	51.6	35.6	590.2	773.0
1981	37.9	63.0	63.8	53.3	67.1	120.7	80.3	83.1	30.2	22.1	29.0	38.6	689.1	727.0
1982	59.7	102.4	130.8	165.6	16.3	185.4	129.8	105.2	8.9	23.9	34.3	13.2	975.5	684.6
1983	4.8	62.0	49.8	16.3	82.8	78.7	82.6	79.5	18.8	24.7	54.6	70.9	625.5	704.9
1984	7.6	66.6	42.2	99.3	66.6	8.9	34.5	21.1	46.7	52.3	27.4	69.6	542.8	712.9
1985	4.1	119.4	102.6	142.5	86.1	17.3	65.5	41.4	49.5	45.0	7.6	10.7	691.7	662.9
1986	59.4	50.8	87.4	85.6	36.1	91.2	97.0	31.2	66.0	45.7	54.6	23.9	728.9	698.2
1987	35.8	56.6	111.5	13.2	113.5	44.2	110.0	99.6	56.9	15.8	25.9	42.4	725.4	751.8
1988	50.0	67.8	62.0	153.7	35.8	81.3	165.6	55.6	51.3	37.3	17.3	24.4	802.1	
1989	72.1	44.8	33.9	121.9	57.1	163.2	107.7	67.9	48.7	46.7	13.3	33.7	811.0	
Av 1971-89	39.0	82.1	92.1	73.6	69.8	85.2	92.5	66.6	46.8	33.4	27.1	32.0	740.3	
Av 1980-89	34.9	67.6	75.9	90.1	64.9	85.8	92.5	63.7	40.6	34.4	31.6	36.3	718.2	

OAKBANK ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 12

Station Elevation: 520 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1901	33.0	49.5	170.4	210.6	88.1	34.3	78.5	105.4	134.4	39.6	39.1	62.2	1045.2
1902	32.0	38.6	87.4	52.8	68.8	105.7	178.8	160.0	79.5	16.5	41.9	35.3	897.4
1903	66.0	110.5	62.7	56.4	95.3	176.8	114.0	60.2	29.0	69.9	56.9	96.0	993.6
1904	120.4	57.4	111.8	289.3	119.1	98.3	71.1	106.2	76.5	60.7	40.1	68.8	1219.7
1905	65.3	87.6	101.6	15.2	110.0	156.7	19.8	133.9	65.8	24.1	69.9	124.5	974.3
1906	86.6	136.9	147.6	109.5	74.4	182.1	148.3	121.9	73.9	38.6	24.9	87.4	1232.2
1907	79.5	56.6	166.1	340.6	119.9	124.5	93.5	29.0	60.2	77.5	77.5	46.7	1271.5
1908	111.5	85.3	39.4	93.2	94.2	111.5	86.1	159.0	72.1	43.7	77.5	43.7	1017.3
1909													1156.2
1910													1233.9
1911													864.9
1912													1149.9
1913													1188.5
1914													1400.8

Averag 74.3 77.8 110.9 146.0 96.2 123.7 98.8 109.4 73.9 46.3 53.5 70.6 1117.5

Source: Brown.

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1989			52.4	160.8	86.7								

1989 readings taken for three months only to check Rose Bower

ST PAULS VICARAGE ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number 13

Station Elevation: 600 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1905									43.2	11.9	43.7	77.2	
1906	51.3	84.3	111.8	82.0	62.2	118.9	109.2	88.1	53.6	24.6	12.7	62.0	860.8
1907	56.6	53.3	136.1	267.0	102.4	100.8	80.3	23.6	46.7	52.8	58.2	30.7	1008.6
1908	77.7	53.3	31.8	73.9	63.8	81.8	84.4	117.6	50.8	33.3	66.5	22.4	757.2
1909													780.3

Averag 61.9 63.7 93.2 141.0 76.1 100.5 91.3 76.5 48.6 30.7 45.3 48.1 851.7

Source: Brown and Blue Book.

Sum of monthly averages: 876.7

Reference Number: 14

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1971	35.3	77.0	56.4	40.6	63.5	78.5	173.2	70.1	42.9	7.4	11.9	12.7	669.5
1972	25.7	45.5	77.5	56.4	36.3	119.9	81.0	47.5	32.8	42.2	19.6	17.0	601.2
1973	14.5	23.4	48.5	32.8	36.6	78.7	59.9	43.4	28.2	10.7	23.9	26.4	427.0
1974	74.2	118.9	74.7	106.7	198.6	75.4	78.2	59.9	51.1	43.7	32.3	32.8	946.4
1975	32.3	29.2	101.1	40.9	17.3	57.2	92.2	100.6	53.6	30.0	15.7	38.9	608.8
1976	52.3	186.4	87.6	68.3	111.8	86.9	73.9	80.0	41.4	29.7	23.6	20.1	862.1
1977	44.5	111.3	160.0	43.9	49.8	97.5	96.0	26.9	95.0	43.4	12.7	23.1	804.2
1978	10.7	70.9	205.7	106.9	52.3	26.4	63.0	158.8	56.6	23.6	23.4	16.3	814.6
1979	29.5	187.5	129.0	26.7	65.8	95.5	132.1	81.5	43.7	45.0	30.2	6.4	872.7
1980	39.4	61.7	48.5	98.6	134.1	74.4	43.7	20.3	37.6	30.5			
Average	35.8	91.2	98.9	62.2	76.6	79.0	89.3	68.9	48.3	30.6	21.5	21.5	734.1

Reference Number: 15

[illegible]

WOODLANDS FIELD ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 16

Station Elevation: 624 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1887	100.6	64.5	323.9	57.9	161.5	56.4	118.9	70.1	13.0	33.8	9.9	18.3	1028.7
1888	31.0	42.2	43.7	86.1	44.5	61.5	114.0	73.7	36.3	32.5	15.0	9.4	589.8
1889	20.6	15.2	96.5	140.7	110.7	56.1	70.6	27.2	64.3	21.6	9.1	24.6	657.4
1890	60.2	22.6	133.1	134.9	130.0	95.5	109.2	119.4	29.2	34.5	10.7	15.0	894.3
1891	78.5	56.4	94.5	41.1	137.9	87.4	50.0	113.0	36.6	23.6	48.8	31.2	799.1
1892	14.2	47.2	64.5	163.6	129.5	110.2	68.6	29.0	82.8	28.2	6.1	13.5	757.4
1893	122.2	131.6	137.4	133.1	37.3	20.6	80.3	84.6	27.2	15.0	15.5	2.3	807.0
1894	30.0	34.8	262.9	99.8	116.1	85.3	49.8	77.7	42.2	15.0	6.1	20.1	839.7
1895	14.7	34.8	130.6	19.6	55.9	192.3	64.5	36.3	25.7	7.9	15.2	7.1	604.5
1896	44.7	84.6	116.1	30.0	73.2	46.5	37.6	103.4	15.5	16.5	34.5	43.4	645.9
1897	83.8	85.6	77.2	19.8	115.1	25.1	54.9	67.3	22.6	22.6	2.3	4.1	580.4
1898	68.3	68.8	54.6	96.3	89.9	44.2	95.5	28.4	18.3	18.3	5.6	10.4	598.7
1899	21.6	86.1	94.5	148.3	97.8	36.1	91.2	55.9	48.8	48.8	15.2	21.6	765.8
1900													
1901													
1902													
1903													
1904													773.9
1905													419.4

Av 1887-89 53.1 59.6 125.3 90.1 100.0 70.6 77.3 68.2 35.6 24.5 14.9 17.0 736.1

51.6 mm fell on 18.3.1887 and 126.5mm between 17-19.3.1887

Source: 1887-1899 Blue Book. 1904-05 Brown

Station Elevation: 530 m (centre of Woodlands Field)

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1971				15.7	63.2	100.8	149.4	57.2	29.5	9.9	5.8	13.5	
1972	21.8	58.4	47.2	66.0			71.6	33.5	32.5	36.8	26.7	16.0	
1973	13.5	16.5	27.4	25.1	35.6	69.6	48.5	42.9	24.4	7.1	19.3	33.5	363.5
1974	91.2	132.6	83.6	74.4	234.7	111.3	72.9	54.9	48.0	26.2	30.7	20.8	981.2
1975	35.1	25.7	108.0	37.8	55.9	104.6	87.9	84.6	26.4	32.0	13.5	37.1	648.5
1976	85.1	197.1	109.7	65.0	86.1	59.7	85.6	60.2	32.3	45.7	15.5	5.3	847.3
1977	17.8	106.7	161.3	29.0		33.8	102.9	30.2	76.7	22.1			
1978	19.8	102.1	234.2	153.4	64.8		79.5	137.2	55.4	8.9	17.8	4.6	
1979	46.2	149.4	155.2	29.0	97.8	88.4	94.2						
Av 1971-79	41.3	98.6	115.8	55.1	91.1	81.2	88.1	62.6	40.6	23.6	18.5	18.7	735.1
1988									48.5	55.0	17.2	39.7	
1989	74.8	47.1	44.1	295.3	69.9	174.9	137.6	74.3	77.5	36.2	20.0	28.6	1080.3

MOUNT PLEASANT ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 17

Station Elevation: 580 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1896		113.0	198.9	55.1	103.4	83.3	70.6	203.5	35.6	36.6	61.7	79.2	
1897	155.7	108.2	161.8	54.9	185.2	46.5	116.8	74.9	59.4	39.9	11.7	9.7	1024.6
1898	79.8	108.2	104.9	128.3	128.8	48.0	127.5	57.7	42.7	52.3	14.2	23.6	915.9
1899	40.9	119.9	166.4	226.6	168.7	72.6	136.4	70.1	102.4	88.9	8.1	79.0	1279.9
1900	36.1	43.2	88.1	74.9				100.8	45.5	52.1	8.4	85.9	
1901	44.2	41.7	204.0	241.6	73.2	63.8	71.4	99.6	136.7	25.9	43.9		
1902	18.8	30.7	86.9	64.5	77.7	108.0	151.4	118.9	86.6	13.2	42.9	36.6	836.2
1903	95.3	121.4	61.2	59.7	122.4	130.6		29.5	20.3	50.8	48.5	93.7	
1904	94.5	83.8	89.9	344.7									
Average	70.6	85.6	129.0	138.9	122.8	79.0	112.4	94.4	86.1	45.0	30.6	53.7	1007.2

Source: 1896-99 Blue Book. 1900 onwards Brown.

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1971									60.5	26.7	17.5	18.5	
1972	50.3	54.9	82.8	67.1	58.7	176.3	135.9	36.6	26.7	46.2	47.0	33.3	815.6
1973	18.3	20.8	54.9	57.2	45.2	67.8	62.0	61.5	29.2	14.7	31.0	32.5	495.0
1974	62.2	201.4	74.7	81.5	112.8	113.0	42.7						
1975			69.3	99.8	77.5	91.9	38.9						
Average	43.6	92.4	70.4	76.4	73.5	112.3	69.9	49.0	38.8	29.2	31.8	28.1	715.4

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1988										51.0	20.0	41.8	
1989	86.0	56.4	69.3	215.5	100.2	149.1	153.0	106.1	125.8	83.2	36.1	46.6	1227.3

ROSE COTTAGE ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 18

Station Elevation: 600 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1953						227.1	170.4	163.3	26.9	24.4	19.1	23.4	
1954	67.6	194.6	125.7	101.9	108.2	204.0	191.5	39.1	114.8	62.2	34.8	41.4	1285.7
1955	23.6	255.3	163.6	153.9	95.3	146.3	161.0	130.8	58.4	93.5	19.6	37.3	1338.6
1956	70.1	100.6	223.5	265.9	100.1	103.6	87.1	113.0	62.7	48.0	42.9	15.2	1232.9
1957	69.6	101.9	346.2	83.6	113.3	178.6	109.0	99.3	150.1	55.9	8.9	29.0	1345.2
1958	76.7	106.7	106.2	58.4	85.1	92.5	33.8	59.7	75.7	56.1	45.0	37.3	833.1
1959	54.1	100.6	129.3	59.7	146.1	120.9	119.6	90.9	58.9	64.8	54.6	54.9	1054.4
1960	59.7	73.9	107.2	78.2	34.0	71.9	56.9	133.1	45.0	50.3	43.2	53.1	806.5
1961	115.3	46.0	309.4	256.3	133.6	119.1	115.3	118.6	65.5	71.4	33.8	65.8	1450.1
Average	57.7	163.1	214.8	151.3	104.2	171.9	143.8	109.1	82.6	56.8	25.0	29.3	1168.3

Source: Brown.

Sum of monthly averages: 1309.6

Reference Number: 19

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1988									1.0	15.0	1.0	2.5	
1989	16.0	28.3	9.5	42.5	18.5	60.3	42.8	27.8	9.8	10.3	3.8		

ST JAMES VICARAGE ACTUAL AND AVERAGE RAINFALL (mm) Reference Number: 20

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1985	1.3	45.7	69.3	34.3	20.8	6.6	24.9	3.6	4.6	2.3	0.3	4.6	218.2
1986	3.6	9.1	57.4	18.0	1.8	25.9	20.1	5.1	18.3	18.0	8.1	2.8	188.2
1987	6.1	22.6	30.5	5.6	10.9	14.2	31.0	21.8	15.7	0.3	0.8	8.1	167.6
1988	10.4	26.7	19.6	33.8	5.6	23.4	80.3	23.1	9.9	9.8	2.0	0.8	245.3
1989	19.7	25.0	15.9	71.8	22.4	69.1	43.9						

BLUNDENS ACTUAL AND AVERAGE RAINFALL (mm) Reference Number: 21

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1988									13.5	17.1	3.0	15.5	
1989	27.6	34.1	26.2	88.3	35.5	82.2	54.5	27.8	9.8	10.3	3.8		

CLIFFTOP ACTUAL AND AVERAGE RAINFALL (mm) Reference Number: 22

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1988									1.3	9.9	2.3	5.5	
1989	14.2	21.7	10.3	45.4	15.3	44.5	35.6	17.1	6.9	6.3	1.0	3.7	222.0

SECONDARY SELECTIVE SCHOOL ACTUAL AND AVERAGE RAINFALL (mm) Reference Number: 23

[illegible]

1976	12.4	63.5	67.6	46.7	48.5	65.3	64.8	40.9	13.2	8.6	3.0	3.3	437.9
1977	49.3	28.7	114.8	16.5	42.2	16.5	49.5	49.5	33.0	29.5	24.6	0.0	454.1
1978	19.6		121.7	57.9	59.9	30.5	57.7	58.2	24.1	15.5	12.2	3.3	
1979	6.6	40.6	18.0	3.6	15.0	20.1	31.8	24.1	6.9	9.9	7.1		
Average	22.0	44.3	80.5	31.2	41.4	33.1	50.9	43.2	19.3	15.9	11.7	3.2	396.7
Source: PWSD Records													

Reference Number: 24

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1988										36.0	9.5	11.5	
1989	30.0	34.5	30.5	99.0	47.5	125.5	85.5	72.0	23.5	19.0	14.5	15.5	597.0
Average	30.0	34.5	30.5	99.0	47.5	125.5	85.5	72.0	23.5	27.5	12.0	13.5	597.0
Source:	Original Records								Sum of monthly averages:				601.0

Reference Number: 25

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1988	39.9	70.1	40.2	168.3	41.5	95.6	251.9	46.3	35.5	48.4	11.7	23.8	873.2
1989	60.5	66.8	39.7	217.8	64.9	157.2	124.2	66.9	56.1	41.7	12.3	22.9	931.0
Average	50.2	68.5	40.0	193.1	53.2	126.4	188.1	56.6	45.8	45.1	12.0	23.4	902.1
Source:	Original Records								Sum of monthly averages:				902.1

Reference Number: 26

[illegible]

Reference Number: 27

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1988									46.1	65.0	19.1	41.8	
1989	75.0	63.5	46.0	245.6	96.6	194.5	151.7	108.4	65.5	77.3	35.5	44.3	1203.9
Average	75.0	63.5	46.0	245.6	96.6	194.5	151.7	108.4	55.8	71.2	27.3	43.1	
Source:	Original Records								Sum of monthly averages:				
									1178.6				

BAMBOO GROVE ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 28

Station Elevation: 415 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1971		82.0	81.8	84.6	102.1	106.7	196.6	101.1	49.5	21.6	8.9	12.7	
1972	49.8	54.1	61.2	38.1	48.0	52.6							
1973							61.5	69.1	26.7	13.7	28.4	31.0	
1974	61.7	196.9	138.7	58.9	157.7	140.0	75.7	63.8	49.8	46.5	38.1	45.0	1072.6
1975													
1976	94.5	194.8	139.7	71.9	83.1	84.8	88.6	115.3	49.0	45.5	29.5	32.3	1029.0
1977	85.3	137.9	275.6	58.4	47.0	190.8	85.3	56.6	101.9	29.7	27.2	36.1	1131.8
Average	72.8	133.1	139.4	62.4	87.6	115.0	101.5	81.2	55.4	31.4	26.4	31.4	1077.8

Source: Brown.

Sum of monthly averages: 937.6

FAIRYLAND ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 29

Station Elevation: 450m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1978		77.0	192.5	76.5	66.0	18.0	42.2	91.7	25.9	13.5	22.9	19.1	
1979	17.0	68.1	29.5	23.6									

Values for 7/78, 1/79, 4/79 are for part months only

SANDY BAY: ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 30

Station Elevation: 30 m.

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1972				5.1	4.6	17.3	17.5	12.7	2.5	2.5	1.3	2.3	
1973	2.0	3.8	13.0	12.4	15.7	14.7	13.2	8.4		1.8	3.3	5.8	
1974	7.9	48.5	29.7	0.0	56.4	62.2	56.4	2.5	6.4	0.0	4.1	6.4	280.4
1975	7.6	4.3	21.6	3.3	9.9	11.7	25.4	12.7	7.1	5.1	0.0	7.4	116.1
1976	17.0	31.0	28.4	14.7	9.1	27.4	37.1	15.0	4.1	7.4	12.4	5.3	209.0
1977	19.6	82.0	105.9	6.9	6.4	61.0	17.8	5.1	19.6	1.3	1.3	3.8	330.5
1978	3.8	10.2	88.9	26.7	0.0	5.1	20.3	44.5	2.5	3.8	1.3	0.0	207.0
1979	5.1	27.7	22.6		35.3	19.1	22.9	17.0	2.5	2.5	3.8	2.5	
1980	15.2		10.2	3.8	8.9	67.3	11.4	1.3	2.5	7.6	2.5		
1981	8.9	5.1	13.5	3.3		5.1	18.0	27.9	5.1		10.7	2.3	
1982	10.4	26.2	17.8	37.6	3.0	9.7	8.1	26.9			5.1		
1983		6.6											
1989	18.5	3.2	0.0	54.7	17.0	44.0	5.5	1.0	0.2	0.0	0.0	0.0	144.1
Average	10.5	22.6	32.0	15.3	15.1	28.7	21.1	14.6	5.3	3.2	3.8	3.6	175.8

WEST LODGE: ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 31

Station Elevation: 680 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1975				57.2	69.9	134.6	83.8	90.2	82.6	29.5	29.2	74.9	
1976	126.2	159.3	134.4		33.5	95.0	105.4	87.9	59.7	49.8	25.4	2.0	
1977	66.0	104.1	218.4	54.6	36.8	160.0	78.2	49.5	114.3	38.1	20.3	23.1	963.7
1978		134.1	278.4	57.9	48.3	11.4	94.0	77.7	57.2	13.2	10.7	8.1	
1979	23.9	177.8			53.3	96.5	95.5	48.3		25.4	30.7	9.4	
1980	9.7	35.6	76.2	45.7	71.1	172.7	40.6	21.1	35.6	32.5	45.7	71.1	657.6
1981	49.5	94.0	68.6	96.5	61.0			94.0		15.2	20.3	55.9	
1982	99.1	152.4	157.5	170.2	20.3	256.5	86.4	86.4	12.7	20.3			
1983	0.0	47.0	48.3	10.2	63.5	83.8	88.9			22.9	99.1		
1984													
1985								73.7	64.8	12.7			
Average	53.5	113.0	140.2	70.3	50.9	126.3	84.1	69.4	62.2	31.2	32.7	34.9	868.8

BARREN GROUND ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 32

Station Elevation: 500 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1988										39.3	10.5	28.4	
1989	70.8	41.5	36.8	225.3	65.3	131.8	109.0	78.3	72.5	39.8	17.8	19.3	908.2
Average	70.8	41.5	36.8	225.3	65.3	131.8	109.0	78.3	72.5	39.6	14.2	23.9	

Source: Original Records

Sum of monthly averages: 908.9

THOMPSONS WOOD: ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 33

Station Elevation: 540 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1971	41.4	84.3	64.5	61.2	85.6	88.6	154.2	83.6	29.7	17.0	7.4	20.6	738.1
1972	42.4	49.0	49.5	33.8	46.7	71.9	58.7	39.6	29.2	37.6		27.2	
1973	12.4	24.9	31.2	42.7	20.3	40.1	44.2	30.0	17.8	6.6	23.9	21.3	315.5
1974	29.0	137.4	96.5	27.4	130.3	107.2	50.5				22.6		
1975							44.2	43.4	38.1	35.6			
1976	70.9	149.9	74.9	71.4	70.1	58.2	80.0	58.9	30.5	27.2	12.4	33.3	737.6
1977	61.5	69.6	144.0	33.0	23.9			25.7		19.6	19.1		
1978		62.0		81.3				115.1	55.4	33.3			
1979		142.7	104.1				103.6	57.9					
1988											11.2	24.9	
1989	67.6	43.2	31.1	81.8	43.0	109.8	93.9	90.0	76.3	52.3	26.2	21.5	736.7
Average	46.5	84.8	74.5	54.1	60.0	79.3	78.7	60.5	39.6	28.6	17.5	24.8	648.8

SOUTH WEST POINT ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 34

Station Elevation: 560 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1972	27.9	32.0	25.4	39.1	25.9	83.3	35.6	28.7	18.5	25.9		12.7	
1973	5.8	12.4	20.3	18.8	22.4	26.9	23.4	22.9	14.2	3.0	19.8	16.3	206.2
1974	19.8	75.2	78.7										
Average	17.9	39.9	41.5	29.0	24.1	55.1	29.5	25.8	16.4	14.5	19.8	14.5	206.2

Source: Brown.

Sum of monthly averages: 327.8

BATES BRANCH ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 35

Station Elevation: 690 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1989									113.2	49.0	42.3	42.5	

Source: Original Records

ROSE BOWER ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 36

Station Elevation: 525 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1988									90.9	80.4	40.9	81.9	
1989	97.2	65.4	56.9	161.9	99.3	189.0	126.8	117.6	105.9	76.4	46.3	51.8	1194.5
Average	97.2	65.4	56.9	161.9	99.3	189.0	126.8	117.6	98.4	78.4	43.6	66.9	

Source: Original Records

Sum of monthly averages: 1201.4

HARPERS EDUCATION ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 37

Station Elevation: 450 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1989	67.0	36.0	42.0	141.5	51.0	164.0	137.0	99.0	69.0	63.0	53.0	52.0	597.0

Source: Original Records

Sum of monthly averages:

WOODLANDS HOUSE ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 38

Station Elevation: 525 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1988								41.3	55.5	54.8	18.3	49.6	
1989	80.0	44.8	44.2	132.7	76.8	143.8	104.0	85.5	63.5	52.5	26.5	36.5	890.8
Average	80.0	44.8	44.2	132.7	76.8	143.8	104.0	63.4	59.5	53.7	22.4	43.1	

Source: Original Records

Sum of monthly averages: 868.3

GRAPEVINE GUT ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 39

Station Elevation: 575 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1989								99.2	119.4	77.0	59.2	54.4	

Source: Original Records

CUCKOLDS POINT ACTUAL RAINFALL (mm)

Reference Number: 40

Station Elevation: 770 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1977			225.8	36.1	42.7	172.7	134.6	52.8	120.9	42.7	48.0	39.6	
1978	11.4	69.3	206.3	92.0	77.2	18.7	42.7	28.7	57.4	52.6	31.0	12.5	699.8
1979	23.9	116.6											

N.B. Original records describe site as Mt Actaeon. This is incorrect; site was about 300 m east of the most southerly Peak. A tilting syphon automatic gauge was used but the clock proved unreliable.

Part months: 4/77, 9/77, 6/78, 7/78, 8/78, 12/78, 1/79

SEAVIEW ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 41

Station Elevation: 480 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1988								40.8	43.2	43.9	19.5	39.3	
1989	54.8	51.8	42.0	95.6	62.1	120.5	80.7	65.8	71.5	41.0	24.0	24.3	734.1
Average	54.8	51.8	42.0	95.6	62.1	120.5	80.7	53.3	57.4	42.5	21.8	31.8	

Source: Original Records

Sum of monthly averages: 714.2

Reference Number: 42

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1912													895.1
1913													902.2
1963	85.3	88.9	136.1	147.3	76.2	112.3	121.2	90.4	31.8	57.2	51.3	48.3	1046.2
Average	85.3	88.9	136.1	147.3	76.2	112.3	121.2	90.4	31.8	57.2	51.3	48.3	947.8

PINK GROVE / REDHILL ACTUAL AND AVERAGE RAINFALL (mm) Reference Number: 43

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1988											5.5	22.4	
1989	37.5	26.0	18.0			55.3	24.0	16.1	19.8	11.9	9.2	2.7	
Average	37.5	26.0	18.0			55.3	24.0	16.1	19.8	8.9	10.0		

Station moved to Redhill after May 1989

Reference Number: 44

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1971	35.1	49.0	41.7	42.7	87.9		132.8	42.2	20.8	8.1			
1972	1.8		0.8	1.0		1.0	3.3	2.0	1.0				
1973			1.5	3.6	0.8	39.4	23.6	27.7				5.1	
1974		105.4	25.9										
1975												20.3	
1976	61.7	90.9	72.6	44.2		136.7		9.4	30.7	28.7	17.5	18.8	
1977	74.9	75.4	128.5	38.4	29.2	102.9	68.3	32.3	94.7	8.6	7.6	9.1	670.1
1978	11.9	19.1	115.1	32.0	42.4	11.2	32.3	53.3	18.0	13.2	10.7	8.1	367.3
1979	15.0	81.0	35.3	15.7	39.6	20.8	56.6	33.3	11.7	17.8	17.8		
1980	8.4	22.9	26.7	20.6	34.5	96.0	13.5	12.7	92.5	15.7	7.4	23.4	374.1
1981	14.7	37.3	26.2	22.4	24.9	33.5	48.0	47.5	16.5	7.9	16.8	11.4	307.1
1982													
1983	3.8	19.6	21.8	15.2	26.4	33.5	47.2	54.4	4.6	7.6	45.2	12.7	292.1
1984	4.1	29.0	68.6	41.7	3.0	8.6	19.6	0.5	7.4	30.7	4.6	18.3	236.0
1985	10.7	81.3	54.4	62.2	39.9	10.7	9.7	16.0	19.6	17.3	4.3	10.7	336.6
1986	6.1	29.0	8.6	17.8	10.2	67.3	17.3	8.6	24.9	21.1	8.6	8.6	228.1
1987	7.6	41.1	29.5		26.9	32.5	37.6	54.4	7.6	3.0	16.5	14.7	
1988	37.6	36.6			23.4	51.5	14.2	23.4					
1989	19.1	15.7	8.9	67.8	19.5	50.3	45.2	24.9	23.8	5.0	0.0	11.7	

Average	20.8	48.9	41.6	30.4	29.2	46.4	37.9	27.7	26.7	14.2	13.1	13.3	351.4
								Average based upon monthly avgs					350.2

MIDDLE POINT ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 45

Station Elevation: 480 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1988											16.3	29.6	
1989	36.6	31.3	34.4	70.2	51.7	73.4	58.8	51.1	52.8	29.8	18.9	18.6	527.6
Average	36.6	31.3	34.4	70.2	51.7	73.4	58.8	51.1	52.8	29.8	17.6	24.1	527.6

Source: Original Records

Sum of monthly averages: 531.8

LITTLE DEADWOOD ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 46

Station Elevation: 485 m.

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1975						39.9		44.7	45.5	31.0	14.5	31.5	
1976	31.8	43.9	45.0	23.6	19.6	24.1	53.1	36.1	30.5	21.3	2.5	5.6	337.1
1977	38.9	50.6	50.3	2.8	7.1	37.3	49.2	4.3	31.8	6.4	8.9	14.0	301.6
1978	3.6	35.8	28.5										
1979		17.8											
Average	24.8	37.0	41.3	13.2	13.4	33.8	51.2	28.4	35.9	19.6	8.6	17.0	324.1

Source: A & F Records. (Brown comments that figures are unreliable)

N.B. Mar-May 1976 are for part months only

DWS BRADLEYS: ACTUAL AND AVERAGE RAINFALL (mm)

Reference Number: 47

Station Elevation: 370m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1971									20.8	11.4	3.6	8.4	
1972	25.1	30.7	25.1	53.3	16.5	38.9	5.8						
1973											37.1	32.5	
1974	36.6	111.3	50.0	34.8	123.2	89.9	130.3	165.9	59.4	19.6	34.0	33.0	888.0
1975	47.8	19.6	116.3	76.2	21.3	47.0	22.9	25.7	19.1	10.4	3.8	21.1	431.0
1976	18.0	17.0	38.1										
Average	31.9	44.6	57.4	54.8	53.7	58.6	53.0	95.8	33.1	13.8	19.6	23.7	540.0

APPENDIX 2

Raindays and Rainfall Intensity

Raindays

Bottom Woods	1977-89 including details of days over 10 mm and heaviest falls
Briars	1929-89 includes some detail of heaviest falls
Hutts Gate	1925-89 includes some detail of heaviest falls
Jamestown	1853-62 includes some detail of heaviest falls
	1885-90
	1906-15
	1928-65 includes some details of heaviest falls
Longwood Field	1957-65 includes some details of heaviest falls
	1890-1901
Plantation	1910-65 includes some details of heaviest falls
St Mathews Vic	1893-1925 includes data on all falls over 25 mm 24 hrs
Scotland	1960-89 includes data on all falls over 25 mm in 24 hrs
Woodlands	1890-99

Rainfall Intensity

Bottom Woods	1978-89 details of all storms over 10 mm in 24 hours
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BOTTOM WOODS NUMBER OF RAINDAYS

Elev: 435 m

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	All falls > 25 mm *
1977	13	18	24	7	11	19	13	14	24	18	8	10	179	
1978	7	15	20	21	16	5	16	24	21	13	11	11	180	
1979	14	19	15	13	15	15	23	16	7	16	15	13	181	25.3 26/2
1980	10	11	12	10	16	20	10	10	13	14	14	12	152	28.3 26/6
1981	13	19	21	12	10	15	20	22	10	10	9	16	177	
1982	18	16	19	26	10	19	17	17	5	13	16	7	183	
1983	10	18	19	9	20	19	15	14	8	11	11	18	172	25.9 14/7
1984	12	13	17	15	13	7	8	5	11	18	11	10	140	
1985	11	21	22	19	19	11	10	17	20	21	8	14	193	28.0 20/2, 36.5 25/4
1986	18	10	20	15	13	19	16	15	18	13	14	15	186	
1987	14	11	20	7	10	13	20	13	13	14	19	6	160	44.1 13/5
1988	18	14	17	19	18	14	22	14	13	16	8	12	185	
1989	17	16	14	21	16	20	18	21	15	18	13	16	205	
Mean	13.5	15.5	18.5	14.9	14.4	15.1	16.0	15.5	13.7	15.0	12.1	12.3	176.4	

Source: Original records at Bottom Woods Weather Station.

* For details of all storms over 10mm in 24 hrs see intensity data for Bottom Woods

Falls over 10 mm in 24 hours

Days 10mm+	2	8	11	5	3	9	8	4	1	2	2	1	56
Days 20mm+	1	3	4	1	1	2							13
Highest	23.0	28.0	21.3	36.5	44.1	28.4	25.9	14.1	12.6	14.1	17.1	11.7	44.1

HEAVIEST FALLS (mm) in: 24 hrs 72 hrs

13.5.87	44.1	67.6 12-14/5.87
25.4.85	36.5	58.0 26-28/2.79
26.6.80	28.3	46.2 24-26/6.79
20.2.85	28.0	42.8 20-22/2.85

Rainfall Intensities at Bottom Woods (for all storms recorded over 10 mm in 24 hrs) 1978-89

Date	Quantities falling at intensity (mm/hr) of:			24 hr Total mm	Percentage	
	<10mm	10-20mm	>20mm		10-20mm	>20mm
5.3.78	5.6	3.5	7.5	16.6	21.1	45.2
17.7.78	6.7	0.8	6.0	13.5	5.9	44.4
3.8.78	4.6	1.0	5.8	11.4	8.8	50.9
4.8.78	4.8	1.5	5.0	11.3	13.3	44.2
20.2.79	5.0	2.5	5.5	13.0	19.2	42.3
26.2.79	failed			25.3		
27.2.79	failed			18.5		
28.2.79	1.8	5.0	8.5	15.3	32.7	55.6
12.3.79	3.4	5.5	2.0	10.9	50.5	18.3
14.3.79	2.5	1.5	10.0	14.0	10.7	71.4
15.3.79	6.5	2.5	3.5	12.5	20.0	28.0
26.6.79	failed			10.4		
5.7.79	7.9	2.0	6.5	16.4	12.2	39.6
24.5.80	4.2	4.5	5.0	13.7	32.8	36.5
25.6.80	7.9	3.5	2.5	13.9	25.2	18.0
26.6.80	15.8	8.5	4.0	28.3	30.0	14.1
28.12.80	9.8	2.0	0.0	11.8	16.9	0.0
2.3.81	4.6	3.0	3.5	11.1	27.0	31.5
15.11.81	failed			17.1		
3.1.82	failed			12.2		
26.3.82	5.1	3.3	4.0	12.4	26.6	32.3
26.4.82	failed			10.5		
11.6.82	8.5	3.5	4.5	16.5	21.2	27.3
18.6.82	9.0	3.0	4.0	16.0	18.8	25.0
3.2.83	4.8	3.0	5.0	12.8	23.4	39.1
13.6.83	6.7	3.0	7.0	16.7	18.0	41.9
14.7.83	17.4	6.5	2.0	25.9	25.1	7.7
21.11.83	13.3	1.5	0.0	14.8	10.1	0.0
24.3.84	2.4	2.5	5.5	10.4	24.0	52.9
7.8.84	8.1	5.0	1.0	14.1	35.5	7.1
9.2.85	5.1	2.5	3.5	11.1	22.5	31.5
20.2.85	10.0	8.0	10.0	28.0	28.6	35.7
31.3.85	7.6	2.0	2.5	12.1	16.5	20.7
7.4.85	failed			10.2		
25.4.85	8.5	5.0	23.0	36.5	13.7	63.0
10.5.85	0.7	1.0	9.0	10.7	9.3	84.1
24.6.85	5.8	8.5	1.5	15.8	53.8	9.5
3.7.85	7.1	2.0	6.0	15.1	13.2	39.7
26.2.86	1.8	1.0	8.0	10.8	9.3	74.1
15.3.86	5.3	2.5	9.5	17.3	14.5	54.9
7.6.86	3.1	8.5	9.0	20.6	41.3	43.7
8.6.86	2.7	4.0	8.0	14.7	27.2	54.4
6.9.86	8.1	3.5	1.0	12.6	27.8	7.9
13.10.86	6.1	5.0	3.0	14.1	35.5	21.3
15.10.86	3.0	1.0	7.5	11.5	8.7	65.2
10.2.87	Records Mislaid			20.6		
18.2.87	Records Mislaid			13.6		
30.3.87	Records Mislaid			10.8		
12.5.87	Records Mislaid			13.8		
13.5.87	Records Mislaid			44.1		
30.6.87	Records Mislaid			19.4		
10.8.87	Records Mislaid			21.3		
20.2.88	4.3	2.5	7.5	14.3	17.5	52.4
8.3.88	3.8	3.0	11.5	18.3	16.4	62.8
8.4.88	5.9	1.0	12.0	18.9	5.3	63.5
4.7.88	3.6	5.0	9.0	17.6	28.4	51.1
5.7.88	6.2	2.0	5.5	13.7	14.6	40.1
19.7.88	failed			14.9		
19.5.89	4.1	7.0	1.5	12.6	55.6	11.9
1.6.89	3.5	5.8	4.5	13.8	42.0	32.6
16.8.89	3.0	3.9	4.5	11.4	34.2	39.5

BRIARS NUMBER OF RAINDAYS

(Max falls over 25 mm listed)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Heaviest falls > 25 mm
1929	15	23	20	9	13	12	21	20	16	15	6	16	186	} no data
1930	10	8	16	18	9	18	23	17	11	9	8	4	151	} no data
1931	16	12	17	23	6	16	15	21	16	19	19	9	189	} no data
1932	14	14	22	9	20	20	25	6	20	8	11	7	176	
1933	10	15	14	9	11	18	21	14	10	5	11	11	149	
1934	19	22	22	15	16	13	21	18	10	17	10	15	198	26.4 19/4
1935	12	18	19	25	24	20	23	10	15	5	11	7	189	27.9 22/6
1936	13	16	22	14	21	15	15	8	6	18	5	7	160	
1937	13	14	25	22	15	9	20	6	3		3	17		
1938	16	12	16	18	5	17	15	16	16	12	4	11	158	
1939	7	17												
1940	12	13	28	24	20	16	18	14	23	11	18	12	209	30.0 6/3
1941	18	19	18	14	7	16	17	19	6	10	23	13	180	40.9 11/4
1942	20	15	20	15	11	14	12	14	14	11	4	20	170	
1943	12	15	19	18	16	12	14	15	13	8	11	10	163	
1944	9	17	22	8									150	
1945	15	14	20	9	12	14	22	15	7	10	5	15	158	nd
1946	18	25	20	16	22	11	17	15	13	9	12	9	187	
1947	18	16	26	18	16	22	21	14	18	15	8	12	204	
1948	15	16	21	19	15	11	27	9	9	15	5	11	173	
1949	8	14	19	22	18	10	11	18	13	16	12	10	171	39.4 4/5
1950	16	22	24	18	17	19	29	19	17	12	13	15	221	35.6 21/3
1951	13	22	20	16	22	25	13	22	12	17	8	11	201	
1952	5	16	17	12	18	19	25	18	15	7	9	19	180	25.4 22/7
1953	9	22	12	20	16	24	21	18	8	8	8	6	172	29.0 19/6
1954	12	21	18	20	23	24	24	10	21	12	7	12	204	
1955	10	21	20	23	14	23	25	18	11	17	3	10	195	
1956	13	21	22	23	16	14	18	15	14	9	7	5	177	
1957	13	20	28	15	17	20	17	22	21	16	2	7	198	
1958	13	18	19	11	17	18	12	13	25	20	8	6	180	
1959	13	12	20	18	26	19	25	11	11	15	16	15	201	
1960	12	17	18	14	16	19	14	21	15	11	11	11	179	
1961	17	12	22	20	19	23	14	12	12	19	8	19	197	28.5 29/3
1962	8	12	16	14	8	18	17	22	18	12	13	6	164	
1963	19	19	21	19	14	21	16	15	8	9	10	12	183	30.2 11/3, 26.0 17/6
1964	6	12	16	6	12	17	6	19	21	9	4	2	130	69.3 31/7
1965	10	17	18	17	2	17	16							
1966	14	19	12	4	11	13	21	17	14	1	4	6	136	26.2 21/5
1967	11	5	23	22	15	17	7	17	5	13	3	1	139	
1968	11	11	13	13	13	16	17	7	8	7	1	10	127	38.1 26/4, 33.0 31/5, 26.4 12/6
1969	9	13	21	6	11	17	15	13						35.6 1/7
1970	9	8	9	3	8	19	18	17	20	5	3	0	119	
1971	10	18	14	10	14	19	23	14	12	3	2	4	143	
1972	9	10	15	12	9	19	13	12	12	9	9	7	137	
1973	5	5	11	9	12	14	8	10	10	5	8	9	106	
1974	16	18	17	17	21	13	16		12	13	12	7	162	34.5 16/2, 50.8 2/5
1975	11	4	18	13	11	10	15	16	15	11	5	10	139	
1976	14	19	20	17	16	18	13	13	14	10	10	7	171	
1977	12	15	23	5	11	19	11	13	21	8	6	8	152	30.5 30/6
1978	4	14	26	18	15	4	12	22	16	10	5	8	154	
1979	11	22	16	9	11	15	21	14	5	11	10	4	149	33.8 28/2, 28.5 5/7
1980	7	10	11	9	19	16	9	13	9	10	9	7	129	
1981	11	16	18	15	13	13	20	20	9	6	8	8	157	
1982	16	18	19	28	6	27	20	17	4	7	6	4	172	30.0 26/3, 25.4 10/6, 27.9 11/6
1983	3	1	17	5	15	17	13	11	2	4	6			25.4
1984-85	missing													
1989	15	13	7	23	12	15	15	11	11	6	3	5	136	
Avg	12.1	15.4	18.7	15.0	14.7	16.8	17.1	14.8	12.7	10.5	8.0	9.3	167.7	69.3 on 31.7.64

Source: typwritten manuscript in Archives (pre 1965). Plantation Library records 1929-31

HUTTS GATE NUMBER OF RAINDAYS (Max falls over 25 mm listed)

Elev: 609 m

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Heaviest falls > 25 mm
1925							17	12	17	15	14	20		
1926	21	19	21	20	19	17	18	22	23	8	22	17	227	
1927	17	13	20	20	18	13	18	22	19	17	10	15	202	28.5 1/5
1928	19	18	28	20	13	9	15	19	19	14	7	19	200	30.5 19/3
1929	22	26	26	11	15	14	23	23	19	22	11	18	230	
1930	16	12	15	24	12	20	28	23	19	13	12	9	203	
1931	20	9	18	26	7	15	25	21	18	21	17	10	207	26.9 7/5
1932	20	18	23	10	19	17	24	7	24	12	11	12	197	37.6 9/3, 56.4 8/5
1933	16	17	20	17	13	20	26	15	16	7	23	14	204	
1934	22	24	25	19	15	13	21	19	10	21	14	21	224	29.2 3/4, 28.2 29/6, 32.8 10/9
1935	13	21	20	25	27	21	22	15	19	9	15	18	225	26.7 11/2
1936	17	14	25	21	28	20	20	19	10	27	10	10	221	34.0 6/1
1937	9	13	27	26	18	13	23	14	18	13	12	25	211	34.6 15/4, 30.5 5/5
1938	23	18	17	17	11	21	22	22	23	25	11	26	236	
1939	18	27	21	26	14	11	25	23	18	17	15	22	237	36.6 8/3, 29.7 12/7
1940	19	5	25	29	24	17	20	16	25	15	20	15	230	27.1 25/2, 25.7 22/4, 29.5 30/7
1941	18	19	19	14	9	19	18	24	17	21	25	29	232	49.3 11/4
1942	24	19	27	18	16	16	14	22	16	15	3	21	211	
1943	18	19	20	20	21	15	22	17	27	26	13	16	234	
1944	18	22	26	30	15	26	13	18	21	11	14	7	221	32.3 22/3
1945	19	15	26	12	14	12	24	7	10	17	4	18	178	N/A
1946	18	21	21	17	21	7	17	23	22	11	14	13	205	
1947	24	19	29	24	18	19	24	17	24	20	13	12	243	31.8 20/2, 26.4 5/3, 28.7 30/5
1948	17	18	20	17	13	13	28	12	8	20	5	8	179	25.7 10/3
1949	9	8	20	21	17	21	12	16	16	17	15	8	180	46.7 4/5
1950	17	24	23	19	17	20	28	17	23	15	17	20	240	27.4 12/2, 40.1 21/3
1951	18	22	26	21	28	26	18	20	17	21	15	20	252	
1952	9	16	21	11	20	22	29	19	16	15	15	24	217	27.7 22/7
1953	12	24	17	22	18	23	24	21	15	11	20	15	222	29.0 14/4, 30.5 19/6, 26.9 3/8
1954	17	25	21	21	23	24	25	12	23	18	11	18	238	38.9 3/6, 34.0 26/7
1955	11	22	25	27	16	18	26	25	20	21	14	20	245	27.4 22/2
1956	13	23	25	25	21	16	18	19	21	25	17	6	229	29.0 19/3 & 18/4
1957	17	22	31	14	22	23	15	21	26	23	7	16	237	
1958	16	24	20	12	21	17	9	18	25	25	10	10	207	
1959	12	15	22	16	26	18	23	12	18	17	22	22	223	
1960	15	17	17	14	11	19	20	22	22	20	18	22	217	
1961	22	18	27	21	24	25	18	18	29	24	24	26	276	
1962	20	17	23	17	14	14	21	26	23	18	19	16	228	
1963	24	23	24	21	20	23	24	18	12	17	15	6	227	25.7 17/6, 26.7 18/7
1964	14	23	22	19	12	19	11	23	24	16	12	9	204	89.2 31/7
1965	20	23	24	21	8	22	22	18	24	16	12	18	228	38.1 Jan, 38.4 18/3, 26.7 Jun
1966	26	22	16	10	15	11	22	21	20	12	13	17	205	40.6 21/5
1967	18	22	30	28	23	23	14	24	15	21	8	11	237	35.6 19/5, 25.6 30/8
1968	21	25	22	22	18	25	18	19	13	18	11	22	234	27.9 18/2, 35.8 26/4
1969	22	20	27	19	21	22	24	19	15	17	16	15	237	25.4 9/2
1970	22	15	17	12	10	23	23	22	23	11	11	8	197	
1971	18	20	23	18	17	22	25	21	14	11	10	11	210	31.2 21 & 25/5
1972	15	13	21	16	16	23	14	15	17	13	12	15	190	29.0 19/1, 36.6 20/3, 33.0 15/6, 28.2 8/
1973	15	11	15	14	18	20	14	20	17	10	11	21	186	
1974	23	23	22	19	21	19	20	17	12	15	17	9	217	40.9 17/2, 27.4 18/2, 26.2 19/5, 61.2 1/
1975	19	6	22	17	15	15	17	22	20	18	9	18	198	27.7 23/3, 26.4 20/6 28.2 10/
1976	20	25	28	22	20	17	19	19	16	14	11	7	218	33.0 19/9, 38.1 20/9
1977	3	15	24	8	13	21	14	12	25	21	12	10	178	25.4 5/3, 25.4 4/6, 36.8 1/7
1978	9	19	27	26	15	11	16	25	21	14	10	12	205	30.5 3/3
1979	11	22	19	15	16	22	23	18	10	19	18	11	204	50.3 27/2, 61.0 28/2

Hutts Gate Raindays Page 2

1980	14	15	13	14	23	19	11	24	16	24	19	22	214	27.9	26/6
1981	20	20	22	17	13	14	20	22	14	13	8	20	203		
1982	22	23	26	29	16	27	20	22	11	16	21	10	243	38.1	26/3, 25.4 14/4, 25.4 10/6
1983	9	20	22	18	21	21	16	18	12	12	13	21	203	25.4	14/7, 27.9 13/11 27.9 11/6
1984	14	23	20	20	20	9	8	5	14	24	17	17	191		
1985	13	24	27	25	24	14	12	21	22	24	14	19	239	40.6	20/2, 25.4 28/2
1986	22	18	27	18	13	20	19	17	21	16	21	17	229		
1987	23	14	28	13	12	15	23	15	18	17	21	16	215	28.2	19/3, 33.0 13/5, 43.2 14/5
1988	25	16	19	26	18	21	23	16	18	20	12	19	233	25.4	8/4
1989	19	18	16	29	21	23	21	29	17	22	23	18	256	29.9	1/6

Mean 17.4 18.9 22.6 19.4 17.4 18.5 19.9 18.8 18.4 17.4 14.0 15.9 218.4

Source: Pre 1941 Blue Book. Post 1941-65 typwritten manuscript in Archives. Post 1965 PWD records and B.Woods qq

HEAVIEST FALLS	mm	Period Data
31.7.64	89.2	130.8 31/7-3/8
2.5.74	61.2	78.0 2-4.5
28.2.79	61.0	131.8 25.2-1.3
8.5.32	55.6	96.2 7-10/5
27.2.79	50.3	131.8 25.2-1.3

JAMESTOWN NUMBER OF RAINDAYS

Elev: 10.7 m (Location assumed to be Time Office)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Heaviest falls >12.5 mm
1853									13	3	2	2		
1854	6	6	12	0	4	9	14	0	4	1	0	1	57	22.1 7/3, 19.1 15/5, 12.5 4/7
1855	6	9	5	1	3	8	7	7	1	2	0	0	49	12.5 30/3
1856	2	3	1	3	0	1	7	1	0	0	0			12.5 16 & 18/3, 14.5 29/3
1857				8	0	6	4	2	0	1	0	0	21	
1858	1	2	5	2	5	1	7	4	0	0	0	2	29	
1859	4	4	5	2	9	9	7	2	0	0	2	0	44	19.3 23/6
1860	2	3	2	4	6	2	6	4	2	1	0	2	34	14.7 22/5
1861	2	1	10	3	7	10	8	6	1	0	0	3	51	12.5 13/5
1862	8	3	6	6										
	3.9	3.9	5.8	3.2	4.3	5.8	7.5	3.3	2.3	0.9	0.4	1.3	40.7	

Elev: 10.4 m (same location as 1853-62 ?)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1885	5	13	8	11	12	5	1	11	5	6	7	10	94
1886	5	13	14		5	1	1	8	11	1	6	4	69
1887	11	8	11	7		12	14	15	5	2	2	3	90
1888	3	10	6	12	9	6	9		5		1		61
1889	9	3	11	12	4	5	6			1	4		55
1890	6	2	13	13	16	4	13	14	8	5	5	10	109
Mean	6.5	8.2	10.5	11.0	9.2	5.5	7.3	12.0	6.8	3.0	4.2	6.8	79.7

(1) There was no raingauge recording in Jamestown during these years. Precisely how the rain day was measured is unclear. The data are therefore suspect and also gappy.

Elev: 10.7 m

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1906	1	15	18	9	11	14	19	10	6	2	1	5	111
1907	2	8	11	24	18	12	10	2	7	3	8	2	107
1908	7	9	3	11	8	15	12	14	2	1	3	1	86
1909													
1910	3	1	7	2	5	15	6	8	0	3	2	2	54
1911	5	3	8	0	20	19	14	20	4	6	1	0	100
1912													0
1913													0
1914													0
1915	6	8		9	10	14	27	20	9		2	2	107
Mean	4.0	7.3	9.4	9.2	12.0	14.8	14.7	12.3	4.7	3.0	2.8	2.0	62.8

(1) Precise location of this station is unclear but it appears to be different from site of 1885-90 recordings. It is possible that it was at the time office.

JANESTOWN RAINDAYS (Page 2)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Heaviest falls >12.5 mm
1928			11			6								
1929		16	13	5	10	9	17	16	9	11	0	8	114	25.4 16/5
1930	8	0	14	16	5	14	17	19	14	7	7	6	127	24.9 9/3, 21.1 11/4, 20.3 27/5
1931	7	0	10	9	8	14	26	19	14	14	13	0	134	12.7 12/4 & 8/5
1932	12	15	21	9	17	16	23	4	20	0	0	3	140	13.5 9/3, 17.8 8/5, 16.0 16 & 17/7
1933	13	8	9	4	6	14	18	10	6	4	7	4	103	21.1 20/3
1934	10	11	13	13	11	3	15	12	4	5	3	5	105	14.0 19/1, 14.0 19/4, 14.2 8/8
1935	8	12	8	14	11	14	12	7	7	1	0	1	95	
1936	9	5	10	5	8	8	13	4	1	7	0	3	73	12.5 6/1, 12.5 6/2
1937	1	10	11	14	10	6	10	6	3	3	1	3	78	14.5 29/3, 15.2 17/5
1938	6	5	2	4	4	8	10	6	5	2	0	5	57	
1939	1	10	9	4	1	2	11	2	1	4	2	4	51	15.0 8/3
1940	2	2	9	5	4	6	6	3	6	3	0	1	47	17.8 23/3, 12.7 8/9
1941	4	8	2	3	2	9	7	7	2	3	7	2	56	12.5 28/1, 25.4 10/4
1942	7	3	16	4	6	7	4	10	5	2	0	7	71	
1943	7	4	8	11	8	5	8	11	3	4	1	2	72	
1944	0	8	6	0	5	13	7	17	4	0	2	0	62	13.5 20/5, 13.7 22/5, 17.8 5/8
1945	4	6	7	2	6	4	14	5	0	1	0	2	51	13.0 28/6
1946	4	6	7	2	10	1	17	3	3	0	1	2	56	
1947	5	7	13	8	8	11	6	3	9	2	0	2	74	
1948	3	8	8	8	3	6	16	1	2	6	0	1	62	
1949	0	0	8	6	8	20	8	10	7	4	3	0	74	19.3 22/6
1950	4	8	13	0	4	8	30	10	18	5	6	6	112	29.7 16/7, 14.7 12/9
1951	5	18	5	8	13	13	9	6	3	3	2	3	88	
1952	1	9	3	2	10	12	18	9	4	2	5	5	80	
1953	4	15	5	10	8	15	9	9	1	1	2	0	79	13.0 21/6
1954	1	9	8	4	7	16	20	9	10	6	4	5	99	13.0 1/7
1955	3	17	10	11	9	15	14	14	3	7	0	2	105	
1956	6	17	15	17	3	10	11	5	7	1	3	1	96	
1957	5	13	10	4	8	11	14	16	12	5	0	2	100	17.8 11 & 25/3, 16.3 15/5,
1958	5	10	12	4	7	3	4	5	6	5	2	13	76	17.0 24/6
1959	6	6	10	5	16	13	10	7	3	3	2	2	83	
1960	3	16	3	5	4	1	5	8	1	2	1	0	49	13.2 8/2
1961	2	2	16	6	13	14	12	7	6	6	2	2	88	
1962	4	10	10	8	5	5	5	13	2	4	4	1	71	
1963	10	11	10	10	6	5	7	1	3	2	4	1	70	
1964	1	5	8	1	8	10	4	8	6	4	1	0	56	17.8 31/7, 12.7 1 & 3/8
1965	6	7	7	7	2	12	12							25.4 25/3
1989	14	13	8	18	12	18	13	11	8	7	3	7	132	
Mean	5.2	8.7	9.4	7.0	7.5	9.7	12.2	8.5	5.9	3.9	2.4	3.0	83.4	

Source: Blue Book pre 1941. Post 1941 typwritten manuscript in Archives

LONGWOOD FIELD NUMBER OF RAINDAYS (Max falls over 25 mm listed)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Heaviest falls	2
1957	14	14	26	12	16	18	10	14	19	8		5			
1958	12	18	15	6	10	8	6	12	13	14	9	7	130		
1959	11	11	14	15	23	22	22	12	6	5	6	6	153		
1960	8	11	15	12	14	15	14	20	13	6	7	6	141	48.8	29/9
1961	8	9	9	12	15	16	12	10	9	14	7	11	132	25.4	18/9
1962	8	11	14	10	9	10	16	16	18	13	12	8	145	30.5	18/3
1963	14	13	16	13	10	15	16	12	7	14	10	7	147	29.2	19/7
1964	6	13	16	12	11	13	6	14	19	4	6	2	122	57.9	31/7
1965	10	18	15	15	2	17	19							35.6	19/3
Mean	10.1	13.1	15.6	11.9	12.2	14.9	13.4	13.8	13.0	9.8	8.1	6.5	142.4		

Source: typewritten manuscript in Archives

LONGWOOD NUMBER OF RAINDAYS

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1890	15	17	18	27	23	20	25	30	15	23	9	16	238
1891	23	15	19	12	24	23	17	25	21	15	18	19	231
1892	14	17	17	27	22	15	15	15	25	16	20	14	217
1893	21	18	22	16	11	8	12	20	13	7	15	3	166
1894	12	10	31	19	19	13	14	21	20	13	7	23	202
1895	9	15	18	17	17	24	16	12	18	8	11	10	175
1896	20	26	25	16	20	16	13	27	15	19	21	29	247
1897	28	21	21	21	27	15	23	21	17	20	11	10	235
1898	23	20	20	21	20	12	19	9	10	15	6	12	187
1899	14	18	25	25	17	9	18	15	19	21	5	21	207
1900													
1901	12	15	25	23	16	11	15	19	21	11	8	15	191
Mean	17.4	17.5	21.9	20.4	19.6	15.1	17.0	19.5	17.6	15.3	11.9	15.6	208.7

PLANTATION NUMBER OF RAINDAYS (Max falls over 25 mm listed)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Heaviest fall
1910		17	19	16	16	24	20	27	12	21	10	6		29.5 9/6
1911	9	11	13	10	24	20	17	19	5	11	7	11	157	24.6 20/6
1912	20	24	14	19	21	24	17	10	20	9	11	13	202	51.8 5/6
1913	17	15	20	23	21	21	26	20	26	10	14	9	222	30.5 27/2
1914	18	20	25	28	23	24	18	21	17	9	17	19	239	52.1 6/4
1915	14	20	9	17	22	19	26	22	16	9	16	18	208	26.7 7/5
1916	14	17	28	24	20	18	20	14	12	12	5	6	190	23.4 15/5
1917	21	24	25	16	16	22	22	21	18	14	10	14	223	24.1 Mar
1918	22		22	12	20									ND
1919								27	27	14	4	15		ND
1920	6	21	20	9	25	19	26	16	19	16	8	11	196	29.0 27/5
1921	24	23	20	21	17	16	19	20	11	13	14	7	205	33.3 13/4
1922	17	24	27	21	14	18	12	30	16	21	20	16	236	30.5 5/7
1923	21	24	26	26	24	23	20	22	15	7	7	13	228	36.1 21/4
1924	24	14	23	30	19	16	12	19	23	23	19	16	238	26.4 23/3
1925	24	22	21	14	24	17	17	15	16	14	13	22	219	25.9 6/4
1926	20	18	19	20	20	18	17	20	22	14	20	19	227	34.8 5/5
1927	13	10	21	18	17	11	18	19	18	19	9	7	180	31.0 6/4, 40.4 1/5, 30.0 11
1928	14	16	25	16	12	9	15	14	17	11	8	15	172	22.9 19/3
1929	19	23	20	8	12	12	22	21	15	19	19	13	203	19.8 16/5
1930	13	7	14	24	9	17	25	26	19	11	8	6	179	34.6 27/5
1931	17	17	16	24	4	11	24	19	15	20	15	8	190	25.4 7/5
1932	17	15	21	9	16	16	22	2	20	5	10	10	163	26.0 29/3, 36.1 31/5
1933	15	14	11	14	10	17	21	11	11	3	13	8	148	
1934	20	21	24	17	11	13	18	13	9	16	9	12	183	37.6 20/4, 26.7 30/6, 31.2
1935	9	19	18	21	23	21	24	15	13	9	15	12	199	26.4 11/2, 33.3 23/6
1936	17	16	27	27	27	19	19	12	9	25	8	10	216	40.4 7/1
1937	9	18	26	24	16	11	27	15	18	13	11	25	213	26.0 10/2 & 28/3, 32.0 11/5
1938	19	14	16	16	7	20	19	22	21	19	12	26	211	
1939	19	23	27	24	14	17	25	18	11	18	13	27	236	33.5 8/3, 37.1 12/7
1940	16	13	28	27	20	16	16	15	26	13	17	15	222	26.4 19/3 & 24/4, 35.3 30/7
1941	17	22	12	15	9	18	17	23	16	19	25	17	210	51.1 11/4
1942	22	22	23	16	15	16	16	19	17	15	6	20	207	
1943	18	17	20	22	20	16	20	19	20	12	12	17	213	
1944	18	20	24	10	15	27	14	22	22	8	9	7	196	25.7 22/6, 39.9 5/8
1945	20	14	25	9	13	10	25	7	3	12	6	18	162	26.2 4/8
1946	17	21	21	13	21	22	18	19	15	11	10	8	196	35.8 21/3, 27.2 2/5
1947	18	12	20	17	11	21	25	20	21	17	8	12	202	49.0 28/5
1948	19	18	18	17	11	13	27	6	5	18	5	4	161	40.1 10/3
1949	4	6	14	17	19	17	11	16	13	13	13	5	148	30.7 22/3, 40.6 4/5, 27.4 2
1950	16	21	23	15	17	19	27	19	6	12	10	16	201	48.8 22/3, 33.0 30/6
1951	14	24	20	17	20	24	15	18	16	18	14	15	215	29.0 16/6, 30.7 16/8
1952	7	16	15	11	22	21	26	18	14	8	11	21	190	26.2 22/7
1953	11	24	10	21	17	23	21	20	10	7	13	14	191	49.5 19/6
1954	15	25	16	24	24	22	25	11	20	11	7	11	211	25.4 25/2, 28.0 28/6
1955	6	22	23	22	13	20	22	18	10	16	4	8	184	
1956	13	18	21	20	18	13	15	11	13	12	8	2	164	33.0 18/4
1957	8	16	28	13	19	18	15	21	25	18	2	6	189	30.0 23/6
1958	9	19	15	10	17	19	11	11	18	21	8	9	167	
1959	9	8	15	16	27	21	21	10	11	19	19	15	191	
1960	6	16	15	14	13	14	13	21	13	10	9	13	157	30.0 1/4
1961	15	13	27	19	18	18	15	12	11	15	14	20	197	32.5 19/3, 31.2 7/7, 42.7 1
1962	11	11	16	13	8	8	16	21	17	13	16	8	158	31.8 7/2, 27.2 13/3
1963	17	15	21	18	18	24	17	16	11	10	13	13	193	32.0 11/3, 30.7 17/6, 26.4
1964	7	13	16	6	11	16	7	24	22	5	8	11	146	112.5 31/7
1965	15	16	19	14	3	13	20	15	10	10	9	12	156	31.8 9/1, 51.1 29/3, 25.7 1
Mean	15.2	17.6	20.0	17.5	16.8	17.8	19.3	17.8	15.7	13.7	11.3	12.9	195.9	

Source: 1910-25 Plantation Library records. 1925-1941 Blue Book. Post 1941 typwritten manuscript in Archives

St Kathews Vicarage Number of Raindays

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Falls > 25mm in 24 hrs
1893	25	19	24	18	16	15	17	26	19	17	21	10	227	25.7 11/1, 33.3 7/3
1894	13	16	31	21	22	19	15	23	26	15	9	21	231	40.4 18/3, 25.7 24/4, 27.7 31/5, 25.7 10/6
1895	17	19	24	22	19	25	19	18	19	13	13	16	224	32.0 4/6
1896	21	25	26	16	22	18	12	26	17	18	26	30	257	35.8 26/3
1897	24	14	23	20	27	21	22	22	23	22	13	8	239	
1898	24	21	25	20	22	20	24	21	12	22	15	17	243	
1899	26	22	26	28	22	17	26	22	25	23	15	22	274	26.4 2/4, 48.3 21/5, 26.2 17/8
1900	18	18	26	26	20	24	22	26	19	24	9	26	258	28.2 25/7
1901	18	21	31	26	19	17	14	15	22	14	16	23	236	31.8 15/5, 27.4, 35.8 3/8
1902	21	10	26	22	16	23	27	28	19	21	18	23	254	55.1 6/8, 28.5 2/9
1903	21	27	19	20	26	26	24	26	24	27	27	24	291	30.5 24/1, 80.5 8/2
1904	27	23	21	22	22	16	21	23	22	20	24	16	257	32.5 24/1, 55.9 3/4, 33.0 7/4, 25.7 8/1
1905	24	22	22	13	20	23	12	30	24	18	22	26	256	26.2 23/3, 47.5 8/12
1906	23	26	28	19	24	21	28	23	25	19	21	20	277	31.8 1/4, 48.5 15/6
1907	24	19	21	30	29	27	24	17	18	18	26	24	277	27.7 2/3, 28.0 4/8
1908	26	25	17	22	14	26	22	27	20	22	30	23	274	30.5 27/1
1909	25	25	22	22	28	24	24	24	25	20	12	16	267	25.7 21/1, 27.2 3/5
1910	22	21	26	27	21	27	21	28	17	29	15	17	271	35.1 8/3, 26.9 21/4, 31.2 8/6, 33.8 1/1
1911	22	20	21	15	29	24	21	24	13	17	10	13	229	
1912	25	28	22	26	26	28	22	20	25	16	19	18	275	32.5 10/5, 28.5 5/6
1913	25	18	22	25	29	25	27	22	28	15	18	19	273	27.2 26/2, 28.5 28/5, 26.2 2/6
1914	26	24	26	29	24	26	24	24	21	19	19	25	287	28.5 21/1
1915	19	23	12	24	30	23	29	24	25	14	19	27	269	35.1 2/5, 32.0 11/7
1916	22	21	30	28	27	22	25	17	17	20	15	14	258	27.9 17/5
1917	23	25	30	24	21	28	28	25	23	15	20	16	278	26.7 3/2, 29.5 28/3, 25.9 27/7
1918	26	23	28	16	27	23	21	11	18	13	19	22	247	41.2 27/2, 29.2 28/3, 43.7 9/6
1919	22	23	21	26	20	20	24	25	30	18	17	17	263	27.7 12/3, 29.5 25/5, 26.2 27/6, 51.6 11/1
1920	14	15	23	10	21	22	23	15	23	20	6	7	199	43.9 28/3, 41.4 25/5
1921	18	20	14	15	10	13	19	19	7	8	14	5	162	43.7 13/3, 31.2 11/4
1922	15	18	20	16	12	13	9	29	16	22	19	15	204	26.9 19/5
1923	12	16	20	22	17	24	18	20	16	11	6	11	193	41.9 21/4, 50.8 17/3, 28.2 11/5
1924	14	12	19	21	11	16	10	13	16	19	11	12	174	26.2 24/3
Mean	21	21	23	22	22	22	21	22	20	18	17	18	248	

Source: Blue Book. Daily data 1893-1907, thereafter highest falls in each month only

Highest Falls mm	Period Data
8.2.03	80.5
3.4.04	55.9
6.8.02	55.1
11.7.19	51.6
17.3.23	50.8
3.1894	

SCOTLAND NUMBER OF RAINDAYS (Max falls over 25 mm listed)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Falls > 25 mm
1960				8	14	17	12	22	10	14	7	13		
1961	16	13	24	18	22	22	16	12	13	17	11	24	208	37.1 18 & 19/3, 25.4 7/6, 37.6 7/7
1962	12	13	18	16	10	15	21	23	22	16	20	13	199	
1963	21	22	20	21	15	23	21	17	8	14	16	12	210	25.4 11/3, 33.0 28/6, 38.1 18/7
1964	4	16	20	11	10	17	9	26	21	11	7	6	158	30.5 10/6, 104.9 31/7, 35.6 1/8
1965	14	19	19	16	4	18	16							
1966														
1967														
1968														
1969														
1970	9	4	7	8	9	18	21	18	21	7	10	5	137	35.6 22/6
1971	15	16	20	10	13	17	22	15	10	9	4	3	154	31.0 22/2, 36.3 15/6, 53.6 5/7
1972	11	12	12	11	11	19	8	11	12	10	8	6	131	28.2 20/3, 37.1 17/7
1973	6	11	8	9	12	11	11	10	6	5	5	7	101	32.0 19/3
1974	17	14	16	13	19	10	13	5	8	13	9	3	140	80.5 18/2, 35.1 16/4, 36.8 22/4, 65.3 3/5
1975	6	6	8	7	8	10	14	13	15	10	4	11	112	27.9 8/2, 34.0 2/6 27.9 4/5
1976	10	21	18	21	21	18	17	16	19	16	14	7	198	53.3 9/2
1977	13	21	24	14	15	21	13	12	25	11	10	10	189	25.4 22/1, 27.7 2/3, 35.1 5/3, 34.8 4/6
1978	5	19	26	27	17	5	20	26	21	13	11	16	206	34.8 6/3 29.5 1/7, 26.7 5/7
1979	16	23	22	12	15	18	21	15	6	15	13	6	182	55.2 28/2, 68.6 1/3, 27.7 26/6, 40.9 6/7
1980	9	13	18	12	18	17	10	14	10	14	11	15	161	27.0 25/5
1981	18	16	19	15	14	16	20	19	9	8	10	17	181	26.2 4/6
1982	20	19	21	28	12	17	15	18	7	10	7	7	181	28.7 26/3, 29.0 13/4, 35.6 11/6, 104.7 12/6
1983	6	15	19	6	20	16	12	15	7	9	8	16	149	27.7 4/2, 31.8 19/3, 31.0 22/11
1984	11	16	14	20	15	7	7	5	9	20	14	16	154	25.9 3/9
1985	9	22	21	22	23	11	12	17	17	18	7	14	193	34.5 21/2, 25.7 1/4, 27.7 19/4
1986	17	13	22	15	6	19	17	16	17	12	17	12	183	38.1 3/7
1987	15	11	21	6	9	11	21	14	16	11	18	6	159	38.1 14/5, 34.3 1/7, 41.2 11/8, 43.4 12/8
1988	18	12	12	20	8	17	20	14	17	16	11	19	184	38.1 21/2, 41.9 9/4, 29.5 4 & 6/7
1989	26	20	15	27	17	22	21	29	16	19	16	17	245	28.2 13/4, 34.0 15/35.5 5/7
Mean	13.0	15.5	17.8	15.1	13.7	15.8	15.8	16.1	13.7	12.7	10.7	11.2	171.5	

Source: typewritten manuscript in Archives to 1965. Records at Scotland thereafter

HEAVIEST FALLS	mm	Period Data
31.7.64	104.	No data for adjacent days
12.6.82	104.	140.2 11-12.6, 200.4 11-19.6
18.2.74	80.5	96.0 18-19.2
1.3.79	68.6	155.2 26.2-1.3
3.5.74	65.3	103.1 2-4/5
28.2.79	55.2	155.2 26.2-1.3
5.7.71	53.6	105.7 5-8.7
9.2.76	53.3	89.4 9-11.2
		108.9 11-14.8.87
		94.6 13-15.4.89Oaklands (58.0 15.4) 133.5 12-15/4
		Woodlands Field (96.6 15.4)172.0 12-15.4

Woodlands Number of Raindays

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1890	5	13	19	26	22	19	26	31	12	23	6	7	209
1891	18	8	15	10	23	21	15	20	18	17	15	17	197
1892	12	19	18	25	22	24	14	14	23	12	6	8	197
1893	21	16	19	17	16	17	14	21	17	13	19	7	197
1894	9	10	31	21	21	17	10	21	17	9	6	14	186
1895	12	14	21	14	17	23	16	14	10	8	8	7	164
1896	15	23	23	11	19	15	12	26	9	13	13	23	202
1897	27	20	20	19	26	12	20	17	15	12	4	4	196
1898	16	17	16	21	20	20	23	14	7	15	6	10	185
1899	16	17	26	25	19	16	22	13	18	18	3	17	210
Mean	15.1	15.7	20.8	18.9	20.5	18.4	17.2	19.1	14.6	14.0	8.6	11.4	194.3

Source: Blue Book

APPENDIX 3

Temperature and Humidity

Temperature

1. Bottom Woods 1976-89 includes details of monthly and annual absolutes
2. Hallams 1971-89 1984 missing. Post 1986 data suspect. Absolutes included
3. Hutts Gate 1926-75 includes details of annual absolutes
4. Jamestown 1848 average temps only
1857-62 average temps only, partial data with absolutes
1885-1920 1895-96 missing includes annual absolutes
1985-89 Jamestown Vicarage with full absolutes
5. Longwood 1840-47 at the Observatory average data.
1890-97
6. St Mathews Vic 1892-1924 annual absolutes included
7. Scotland 1880-81
1981-1989 with all absolute data
Plantation 1816 earliest temperature records
8. Varneys 1960-65 period monthly averages only
9. Woodlands Fld 1891-98 1896 missing
1989 full data
10. Clifftop 1988-89 full data from 11.88
11. Ruperts 1988-89
12. Harpers Ed 1989
13. Rose Bower 1988-89 data appears inaccurate

Humidity

1. Bottom Woods 1976-89
2. Hallams 1973-77 data appear inaccurate
3. Hutts Gate 1926-75
4. Jamestown 1857-62 period monthly averages only. appear too low
5. Longwood 1841-45
6. St Mathews Vic 1892-1924 data available but not processed. Same as Hutts Gate
7. Scotland 1981-85 inaccurate
1989
9. Woodland Fld 1989
10. Clifftop 1989
11. Ruperts 1989
12. Harpers Ed 1989

1. BOTTOM WOODS MEAN MAXIMUM TEMPERATURE (°C)

Elevation: 435 m.

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Abs	Date	Ann Avg
1976										18.4	19.1	21.3		23.4		
1977	22.7	23.8	23.2	23.0	21.4	18.8	18.0	17.5	17.4	18.3	18.5	18.5	20.1	25.5	21/2	18.0
1978	22.8	23.7	22.1	21.4	19.3	19.9	18.7	17.1	17.3	18.5	18.9	19.4	19.9	25.2	16/2	17.7
1979	22.2	22.7	22.5	22.7	21.5	20.1	18.5	18.6	18.9	18.6	19.0	20.2	20.5	25.4	10/4	18.2
1980	22.0	23.1	23.3	23.1	21.5	19.7	18.8	18.2	18.2	18.0	18.9	19.6	20.4	25.6	3/4	18.1
1981	21.8	22.7	22.7	22.4	21.3	19.4	18.3	18.2	18.6	18.8	20.1	20.5	20.4	26.0	15/4	18.0
1982	21.6	22.6	22.7	21.1	20.8	18.8	18.0	17.2	18.6	19.1	19.6	21.1	20.1	24.8	16/3	17.9
1983	23.4	23.6	23.0	22.4	21.0	19.7	18.7	17.8	19.4	19.1	19.9	21.2	20.8	24.8	20/2	18.5
1984	23.5	24.0	23.8	22.9	21.4	21.0	19.4	19.8	19.6	19.2	20.1	20.8	21.3	25.4	9/2	18.9
1985	22.8	23.7	23.1	22.4	21.1	20.0	19.0	18.2	18.0	18.4	19.8	21.7	20.7	26.9	4/2	18.4
1986	23.4	23.9	23.9	23.0	22.5	20.3	19.2	19.4	18.6	19.5	19.8	20.8	21.2	26.0	9/2	18.8
1987	23.2	23.9	23.9	23.6	22.3	20.6	19.3	19.0	18.3	19.1	20.1	22.1	21.3	26.0	8/2	19.0
1988	23.2	24.6	24.8	22.7	22.1	20.2	18.4	18.5	18.0	18.6	20.3	21.5	21.1	26.1	16/2	18.7
1989	23.6	24.7	24.7	22.3	22.1	19.9	18.8	18.1	18.4	18.1	19.1	20.7	20.9	27.2	22/3	18.5
Average	22.8	23.6	23.4	22.5	21.4	19.9	18.7	18.3	18.4	18.7	19.5	20.7	20.7			18.4
Absolute	26.1	26.9	27.2	26.0	25.0	24.1	21.4	22.9	22.2	23.0	25.1	24.4				

BOTTOMWOODS MEAN MINIMUM TEMPERATURE (°C)

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Abs	Date
1976									13.8	14.0	14.7	15.9		12.1	
1977	17.7	18.9	18.9	18.0	16.4	15.2	14.3	14.2	13.2	14.0	14.7	15.4	15.9	11.9	16/9
1978	17.0	18.0	18.1	16.9	16.2	15.8	14.3	13.4	13.3	13.8	14.6	15.0	15.5	11.7	27/8
1979	16.9	18.2	18.3	17.9	16.7	15.3	13.8	13.7	14.5	14.4	14.7	15.8	15.9	10.7	30/8
1980	16.6	17.9	18.6	18.4	17.0	15.5	14.9	14.1	14.0	14.1	14.4	15.3	15.9	11.4	10/7
1981	16.8	17.7	17.5	17.4	16.0	15.0	13.8	13.6	14.4	14.4	14.8	16.2	15.6	11.5	25/8
1982	16.9	18.1	18.4	17.3	16.6	14.6	14.1	13.7	14.0	14.4	14.8	16.5	15.8	11.6	18/9
1983	18.3	18.6	18.3	17.9	16.6	15.4	14.5	13.9	14.3	14.6	15.2	16.2	16.2	10.7	30/7
1984	18.5	19.2	19.2	18.6	17.1	15.6	15.1	14.4	14.8	14.3	15.5	16.1	16.5	11.6	25/8
1985	17.3	18.7	18.6	18.2	16.7	15.6	14.9	14.3	13.9	14.2	14.9	16.2	16.1	11.8	23/7
1986	17.6	18.9	19.1	18.4	17.5	15.7	14.6	14.6	14.6	14.8	15.1	16.3	16.4	11.5	3/9
1987	17.6	19.0	18.8	18.9	17.9	16.4	15.0	15.0	14.5	14.4	15.6	16.6	16.6	11.8	7/10
1988	18.2	18.8	19.4	18.3	17.2	15.8	14.2	14.1	14.2	14.1	14.7	16.2	16.3	10.9	2/8
1989	17.5	18.7	18.8	18.6	17.5	15.2	14.5	14.2	14.2	13.9	14.4	15.6	16.1	12.6	20/8
Average	17.5	18.5	18.6	18.1	16.9	15.5	14.5	14.1	14.1	14.2	14.9	16.0	16.1		
Absolute	13.8	15.2	15.6	14.8	12.7	11.9	10.7	10.8	11.2	11.8	12.7	12.9			

1. BOTTOMWOODS RELATIVE HUMIDITY (Av of Daily Max and Min %)

Elevation: 435 m.

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
1976	86.4	93.4	91.8	90.0	87.1	89.0	88.1	85.6	84.6	82.1	81.6	83.6	86.9
1977	86.6	85.0	94.7	83.0	79.0	82.0	84.4	83.4	88.1	87.0	91.3	86.4	85.9
1978	85.0	87.7	87.8	83.3	84.6	78.1	83.9	85.8	82.5	81.8	86.1	82.0	84.1
1979	86.2	89.5	87.1	85.0	83.5	82.1	84.1	83.6	83.2	86.3	87.1	84.1	85.2
1980	83.0	86.5	88.0	83.6	83.3	84.7	79.9	82.3	84.8	84.2	82.2	86.3	84.1
1981	86.2	86.8	82.7	85.0	81.3	83.4	84.4	84.2	82.9	85.4	85.6	87.3	84.6
1982	85.0	88.0	86.0	87.0	80.0	83.0	82.0	86.0	84.0	83.0	83.0	85.0	84.3
1983	86.0	86.7	83.4	84.0	80.2	83.3	82.0	82.1	79.9	82.0	83.8	83.7	83.1
1984	84.2	85.4	85.4	85.4	82.0	78.5	76.8	80.0	79.3	84.6	83.5	82.1	82.3
1985	82.5	82.0	88.9	87.0	83.0	78.0	82.5	82.0	84.8	88.4	82.0	83.2	83.7
1986	83.0	84.0	84.5	86.8	83.0	81.5	80.0	81.5	86.0	82.5	83.1	82.5	83.2
1987	83.5	86.0	85.5	81.5	81.5	79.1	81.5	82.1	82.0	83.0	86.5	81.0	82.8
1988	86.5	82.0	83.5	85.0	82.2	80.5	82.5	89.0	84.5	83.6	81.9	83.5	83.7
1989	82.8	82.5	81.6	86.7	79.6	82.3	83.7	85.7	85.2	85.4	84.2	82.3	83.5
Average	84.8	86.1	86.5	85.2	82.2	81.8	82.6	83.8	83.7	84.2	84.4	83.8	84.1

2. HALLAMS MEAN MAXIMUM TEMPERATURE (°C)

Elevation: 590 m

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Abs	Ann Avg
1971	23.1	24.2	23.3	23.5	23.2	20.8	19.1	17.5	18.0	18.4	18.3	19.9	20.8	27.8	17.0
1972	23.9	25.7	25.6	25.7	25.7	22.3	21.0	21.6	19.2	19.9	20.9	21.2	22.7	29.4	18.2
1973	23.4	25.7	26.7	26.7	25.3	22.7	20.8	19.9	20.1	20.3	21.2	21.8	22.9	30.6	18.3
1974	22.6	23.3	23.9	25.1	22.5	21.7	20.5	19.7	18.4	18.3	19.9	20.4	21.4	28.9	17.2
1975	21.0	24.7	24.2	23.7	22.9	21.5	19.7	17.0	16.4	18.1	18.7	19.0	20.6	28.3	16.7
1976	21.2	21.6	22.4	22.3	21.4	19.5	19.9	17.5	17.3	18.1	18.6	21.6	20.1	27.2	16.3
1977	22.7	24.8	24.4	24.2	21.8	18.5	17.8	18.5	16.2	17.6	18.2	19.3	20.3	29.4	16.4
1978	23.1	23.0	22.8	21.4	21.1	20.9	18.3	16.2	16.2	16.9	19.0	20.2	19.9	27.2	16.0
1979	21.6	22.6	22.7	24.0	23.3	20.7	19.2	18.8	18.9	17.5	18.6	19.2	20.6	27.8	16.5
1980	21.0	22.8	23.9	24.6	22.5	20.7	19.9	18.2	17.7	17.4	18.3	18.8	20.5	27.2	16.4
1981	21.5	22.4	22.5	23.5	22.6	19.7	18.6	18.4	18.5	19.4	19.8	18.9	20.5	28.3	16.2
1982	21.3	22.4	23.4	20.7	21.2	19.0	18.1	16.8	19.5	18.7	19.3	20.9	20.1	27.8	16.0
1983	23.9	23.7	22.8	24.2	22.1	20.4	18.9	18.4	19.9	19.0				32.8	
1984															
1985	23.0	23.8	23.9	22.9	21.7	20.3	20.4	17.9	17.9	18.5	20.0	21.1	20.9	27.2	16.6
1986	23.4	24.1	24.3	23.7	23.4	21.0	18.9	19.6	17.6	19.3	18.2	19.7	21.1	28.3	16.8
1987	22.3	24.3	24.6	26.8	27.2	24.4	22.2	22.8	21.0	23.1	23.3	25.7	24.0	31.7	19.5
1988	26.0	27.1	28.3	25.0	25.2	22.0	19.9	20.0	19.6	20.1	22.1	23.8	23.3	28.3	19.3
1989	25.3	27.0	28.6	24.1	25.5	22.7	20.8	20.0	21.4	20.8	22.4	23.2	23.5	33.9	19.4
Average	22.8	24.1	24.3	24.0	23.3	21.0	19.7	18.8	18.5	19.0	19.8	20.9	21.4		17.2
Absolute	28.3	28.3	33.9	32.8	27.8	26.7	26.1	26.1	23.9	26.1	26.7	25.6			
Av 1971-86	22.4	23.7	23.8	23.8	22.7	20.6	19.4	18.4	18.1	18.5	19.2	20.2			16.8

2. HALLAMS MEAN MINIMUM TEMPERATURE (°C)

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Abs
1971	14.9	16.4	16.4	15.2	14.1	12.7	11.6	11.4	10.8	11.3	11.4	12.9	13.3	8.9
1972	15.2	15.7	16.1	15.4	13.2	13.2	12.1	12.0	12.1	12.0	13.3	14.9	13.8	9.4
1973	15.2	15.4	16.5	15.3	15.1	13.3	12.5	12.1	11.9	12.3	12.6	13.4	13.8	10.0
1974	14.9	15.4	15.4	14.9	13.9	11.8	12.0	10.8	11.1	11.6	12.1	13.2	13.1	8.3
1975	14.1	14.9	14.9	15.0	13.6	12.5	11.5	11.3	11.0	11.2	11.6	12.3	12.8	8.3
1976	13.8	14.7	14.7	14.3	12.2	11.9	10.8	10.6	10.6	10.8	11.4	13.3	12.4	8.3
1977	14.7	15.6	15.2	14.3	12.6	11.6	10.8	10.8	10.1	10.7	11.3	12.1	12.5	8.3
1978	13.0	14.6	14.9	13.4	12.4	11.6	10.6	10.2	9.9	10.3	11.3	12.2	12.0	8.3
1979	13.4	14.9	14.9	14.5	13.3	11.9	10.5	10.4	10.9	10.9	11.3	12.3	12.4	8.3
1980	12.9	14.7	15.0	14.4	13.2	11.8	10.8	10.5	10.4	10.6	10.8	11.9	12.2	7.8
1981	13.4	14.2	14.0	13.6	11.9	11.1	10.0	9.7	10.8	10.7	11.6	12.5	12.0	7.8
1982	13.3	14.3	14.5	13.5	12.5	10.6	9.9	10.0	10.3	10.6	11.1	12.8	11.9	8.3
1983	14.6	14.8	14.5	13.8	12.5	11.2	10.5	10.2	10.6	11.0				7.8
1984														
1985	13.4	14.9	14.7	14.0	12.8	11.2	10.9	10.4	10.3	10.5	11.2	12.3	12.2	8.3
1986	14.1	14.6	14.7	13.9	12.8	11.1	10.5	10.5	10.9	10.5	12.0	13.4	12.4	7.2
1987	14.7	16.1	16.0	17.0	16.1	14.6	13.7	13.6	13.4	13.6	15.1	15.6	15.0	10.0
1988	17.6	17.8	18.3	17.6	15.6	14.5	13.2	12.8	13.4	13.4	14.0	15.3	15.3	10.0
1989	16.8	17.4	18.2	17.2	16.2	13.8	13.6	13.6	13.5	13.3	13.8	15.3	15.2	11.1
Average	14.4	15.4	15.5	14.8	13.6	12.3	11.4	11.2	11.2	11.4	12.1	13.3	13.1	
Absolute	10.6	11.7	11.7	10.0	8.9	7.8	7.2	7.2	7.8	7.2	7.8	10.0		
Av 1971-86	14.1	15.0	15.1	14.4	13.1	11.8	11.0	10.7	10.8	11.0	11.6	12.8		

2. HALLAMS RELATIVE HUMIDITY (%)

Elevation: 590 m

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1973				74.0	72.5	73.2	72.7	72.4	73.4	70.0	69.7	68.4	
1974	71.1	73.5	72.5	72.3	72.5	72.9	74.2	72.3	72.1	72.1	67.3	65.7	71.5
1975	69.4	63.3	67.6	67.7	67.4	69.1	70.9	71.5	73.4	68.8	66.8	67.5	68.6
1976	69.1	72.5	72.4	68.8	70.3	69.4	69.6	71.7	70.7	68.0	68.1	65.4	69.7
1977	66.3	67.8	69.5										
Average	69.0	69.3	70.5	70.7	70.7	71.2	71.9	72.0	72.4	69.7	68.0	66.8	69.9

N.B. An indoor humidity measurer was read each morning to produce above figures.

3. HUTTS GATE MINIMUM TEMPERATURE (oC)

Elevation 627 m.

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean	Abs	
1926	15.5	16.3	16.7	16.3	14.7	13.5	12.3	12.1	11.7	12.1	12.4	13.4	13.9	10.0	Sept
1927	15.0	15.6	16.1	15.6	15.0	13.9	12.8	12.2	12.2	12.2	13.3	13.9	14.0	11.1	Aug
1928	15.1	16.3	15.9	15.6	14.6	13.6	12.5	12.1	12.0	12.2	12.7	15.0	14.0	12.8	Aug
1929	14.4	15.6	15.4	15.7	14.5	13.7	12.2	12.0	11.6	12.0	12.8	13.4	13.6	11.1	Aug
1930	14.7	15.3	15.8	17.4	14.9	12.4	12.7	11.9	11.8	12.5	13.5	14.2	13.9	10.6	Sept
1931	15.3	16.1	16.7	15.9	15.3	13.9	12.6	12.4	12.0	11.9	12.4	14.1	14.1	10.6	Oct
1932	14.9	15.7	16.2	15.6	15.2	12.6	12.0	12.0	11.3	11.4	11.5	13.9	13.5	10.6	Sept
1933	15.4	16.7	17.1	16.3	15.3	13.6	12.8	12.5	12.0	12.4	12.3	13.7	14.2	11.1	Aug
1934	15.9	16.1	16.8	16.8	15.6	14.9	13.4	12.9	13.0	11.8	13.4	14.5	14.6	11.7	Oct
1935	16.1	17.0	17.3	16.5	14.9	13.6	12.2	12.3	11.9	12.8	12.7	13.7	14.3	11.1	Aug
1936	15.4	15.5	15.7	15.9	14.3	12.9	12.4	11.8	12.2	12.1	12.5	14.2	13.7	10.6	Aug
1937	15.7	16.8	17.6	17.2	15.9	14.2	12.9	12.6	12.2	12.4	13.4	13.8	14.6	11.1	Sept
1938	15.1	16.1	16.7	15.9	15.2	14.0	13.3	13.0	11.9	11.9	11.4	13.3	14.0	10.6	Sept
1939	15.3	15.8	16.4	16.3	15.1	14.1	13.1	12.5	12.9	12.9	13.3	14.7	14.4	11.1	Aug
1940	16.2	16.0	15.7	16.8	14.9	13.8	12.8	13.0	12.3	12.9	13.6	14.4	14.4	11.1	Sept
1941	16.2	17.1	16.8	15.9	15.2	14.3	12.9	12.3	12.5	13.1	13.0	14.0	14.5	10.6	Aug
1942	15.4	16.1	16.4	16.5	15.1	13.9	12.9	12.1	12.4	12.5	13.1	13.9	14.2	10.6	Jul
1943	14.9	15.7	15.9	15.6	14.1	13.1	12.3	12.0	12.1	12.0	12.5	13.6	13.7	11.1	Sep
1944	15.8	17.7	17.3	17.5	15.6	13.8	13.0	12.0	11.8	12.6	13.1	14.2	14.5	10.2	Aug
1945	15.4	16.5	16.8	17.3	15.4	13.6	12.5	12.2	12.4	12.4	13.1	14.3	14.3	11.1	Aug
1946	15.0	15.5	16.1	15.4	14.1	13.3	12.5	11.8	11.8	12.3	13.3	14.2	13.8	11.2	Sept
1947	15.2	16.6	16.8	16.2	15.2	13.3	12.2	12.2	11.5	12.1	13.1	13.9	14.0	10.6	Sept
1948	15.6	16.7	17.0	16.5	14.7	14.2	12.6	12.7	12.5	12.0	12.8	14.2	14.3	11.1	Sept
1949	15.7	17.2	17.4	17.3	15.5	13.3	12.8	12.2	12.6	12.3	12.4	13.9	14.4	10.6	Sept
1950	15.3	16.8	16.9	16.2	15.2	13.9	12.8	12.4	12.2	12.3	12.4	13.6	14.2	11.1	Aug
1951	14.5	16.3	16.5	15.7	14.9	13.7	12.9	12.6	12.4	12.2	13.1	14.1	14.1	11.1	Oct
1952	15.4	16.2	17.3	16.9	15.0	13.8	12.7	12.3	12.3	12.6	13.1	14.3	14.3	11.1	Aug
1953	15.4	16.2	16.9	16.3	15.2	13.8	12.9	12.5	12.8	12.9	13.2	13.9	14.3	11.1	Aug
1954	15.3	16.2	16.4	16.4	14.9	13.7	12.4	12.4	12.2	12.5	12.5	13.7	14.0	11.1	Sept
1955	15.1	15.8	16.6	15.7	15.1	13.5	12.0	11.5	11.4	11.6	12.8	13.0	13.7	10.0	Aug
1956	15.0	15.5	15.9	15.6	14.6	13.2	11.9	12.2	11.8	12.1	12.2	13.5	13.6	10.6	Jul
1957	15.6	17.2	17.4	16.7	15.6	13.9	13.1	12.3	12.1	12.1	12.8	14.3	14.4	11.1	Sept
1958	15.6	16.7	16.5	16.3	14.6	13.4	12.7	12.3	12.2	12.4	13.1	14.9	14.2	10.6	Aug
1959	15.9	16.9	17.3	16.9	15.2	13.8	12.8	12.4	12.3	11.9	12.7	13.9	14.3	10.6	Oct
1960	16.1	17.2	16.3	16.8	15.8	16.2	15.7	12.5	12.6	13.2	13.9	14.3	15.1	11.7	Sept
1961	17.2	17.4	16.7	15.6	13.9	13.1	12.3	12.1	12.1	12.8	13.0	12.3	14.0	10.6	Aug
1962	15.4	16.2	17.4	15.4	15.7	15.3	13.6	12.3	12.3	12.6	13.2	14.4	14.5	10.0	Aug
1963	16.0	17.1	17.4	17.1	15.3	13.9	12.5	12.7	12.4	12.0	12.6	15.2	14.5	11.1	Aug
1964	16.1	16.6	16.3	16.8	15.8	16.2	15.7	12.5	12.6	11.5	13.9	14.3	14.9	10.6	Sept
1965	15.6	16.7	16.5	16.3	14.6	13.4	12.7	12.3	12.4	12.2	13.1	12.9	14.1	11.7	Sept
1966	15.1	15.8	16.6	15.7	15.1	13.5	12.0	11.5	11.4	11.6	12.8	13.0	13.7	11.1	Aug
1967	15.3	16.2	16.4	16.4	14.9	13.7	12.4	12.4	12.2	12.5	12.5	13.7	14.0	10.0	Sept
1968	16.1	17.2	16.3	16.8	15.8	16.2	15.7	12.5	12.6	13.2	13.9	14.3	15.1	10.0	Sept
1969	15.4	16.2	17.4	15.4	15.7	15.3	13.6	12.3	12.3	12.6	13.2	14.4	14.5	11.1	Jul
1970	15.6	17.2	17.4	16.7	15.6	13.9	13.1	12.3	12.1	12.1	12.8	14.3	14.4	10.0	Jun
1971	14.6	16.4	16.6	16.2	15.0	13.8	12.9	12.4	12.1	12.7	12.7	13.5	13.6	10.6	Aug
1972	16.2	16.8	17.2	16.8	15.2	14.4	13.1	12.2	12.1	12.9	14.0	15.1	15.7	11.7	Aug
1973	16.2	16.9	17.4	17.0	16.4	14.5	13.9	13.0	13.0	13.3	13.6	14.3	16.2	11.1	Sept
1974	15.5	16.5	16.9	16.4	15.3	13.7	13.2	12.2	12.4	12.4	13.4	14.3	16.0	11.1	Aug
1975	14.9	16.0	16.4	16.4	15.3	14.2	13.3	12.7	12.2	12.2	12.9	13.5	14.2	10.0	Sept
1976	15.4	16.2	16.2	15.9	14.1	13.6	12.2	12.1							
Average	15.5	16.4	16.7	16.3	15.1	13.9	12.9	12.3	12.2	12.3	12.9	14.0	14.3	10.9	

Source: 1926-41 Blue Book. 1942-70 Met Office Archives. 1971-76 records at Met. Office archives

3. HUTTS GATE MINIMUM TEMPERATURE (°C)

Elevation 627 m.

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean	Abs	
1926	15.5	16.3	16.7	16.3	14.7	13.5	12.3	12.1	11.7	12.1	12.4	13.4	13.9	10.0	Sept
1927	15.0	15.6	16.1	15.6	15.0	13.9	12.8	12.2	12.2	12.2	13.3	13.9	14.0	11.1	Aug
1928	15.1	16.3	15.9	15.6	14.6	13.6	12.5	12.1	12.0	12.2	12.7	15.0	14.0	12.8	Aug
1929	14.4	15.6	15.4	15.7	14.5	13.7	12.2	12.0	11.6	12.0	12.8	13.4	13.6	11.1	Aug
1930	14.7	15.3	15.8	17.4	14.9	12.4	12.7	11.9	11.8	12.5	13.5	14.2	13.9	10.6	Sept
1931	15.3	16.1	16.7	15.9	15.3	13.9	12.6	12.4	12.0	11.9	12.4	14.1	14.1	10.6	Oct
1932	14.9	15.7	16.2	15.6	15.2	12.6	12.0	12.0	11.3	11.4	11.5	13.9	13.5	10.6	Sept
1933	15.4	16.7	17.1	16.3	15.3	13.6	12.8	12.5	12.0	12.4	12.3	13.7	14.2	11.1	Aug
1934	15.9	16.1	16.8	16.8	15.6	14.9	13.4	12.9	13.0	11.8	13.4	14.5	14.6	11.7	Oct
1935	16.1	17.0	17.3	16.5	14.9	13.6	12.2	12.3	11.9	12.8	12.7	13.7	14.3	11.1	Aug
1936	15.4	15.5	15.7	15.9	14.3	12.9	12.4	11.8	12.2	12.1	12.5	14.2	13.7	10.6	Aug
1937	15.7	16.8	17.6	17.2	15.9	14.2	12.9	12.6	12.2	12.4	13.4	13.8	14.6	11.1	Sept
1938	15.1	16.1	16.7	15.9	15.2	14.0	13.3	13.0	11.9	11.9	11.4	13.3	14.0	10.6	Sept
1939	15.3	15.8	16.4	16.3	15.1	14.1	13.1	12.5	12.9	12.9	13.3	14.7	14.4	11.1	Aug
1940	16.2	16.0	15.7	16.8	14.9	13.8	12.8	13.0	12.3	12.9	13.6	14.4	14.4	11.1	Sept
1941	16.2	17.1	16.8	15.9	15.2	14.3	12.9	12.3	12.5	13.1	13.0	14.0	14.5	10.6	Aug
1942	15.4	16.1	16.4	16.5	15.1	13.9	12.9	12.1	12.4	12.5	13.1	13.9	14.2	10.6	Jul
1943	14.9	15.7	15.9	15.6	14.1	13.1	12.3	12.0	12.1	12.0	12.5	13.6	13.7	11.1	Sep
1944	15.8	17.7	17.3	17.5	15.6	13.8	13.0	12.0	11.8	12.6	13.1	14.2	14.5	10.2	Aug
1945	15.4	16.5	16.8	17.3	15.4	13.6	12.5	12.2	12.4	12.4	13.1	14.3	14.3	11.1	Aug
1946	15.0	15.5	16.1	15.4	14.1	13.3	12.5	11.8	11.8	12.3	13.3	14.2	13.8	11.2	Sept
1947	15.2	16.6	16.8	16.2	15.2	13.3	12.2	12.2	11.5	12.1	13.1	13.9	14.0	10.6	Sept
1948	15.6	16.7	17.0	16.5	14.7	14.2	12.6	12.7	12.5	12.0	12.8	14.2	14.3	11.1	Sept
1949	15.7	17.2	17.4	17.3	15.5	13.3	12.8	12.2	12.6	12.3	12.4	13.9	14.4	10.6	Sept
1950	15.3	16.8	16.9	16.2	15.2	13.9	12.8	12.4	12.2	12.3	12.4	13.6	14.2	11.1	Aug
1951	14.5	16.3	16.5	15.7	14.9	13.7	12.9	12.6	12.4	12.2	13.1	14.1	14.1	11.1	Oct
1952	15.4	16.2	17.3	16.9	15.0	13.8	12.7	12.3	12.3	12.6	13.1	14.3	14.3	11.1	Aug
1953	15.4	16.2	16.9	16.3	15.2	13.8	12.9	12.5	12.8	12.9	13.2	13.9	14.3	11.1	Aug
1954	15.3	16.2	16.4	16.4	14.9	13.7	12.4	12.4	12.2	12.5	12.5	13.7	14.0	11.1	Sept
1955	15.1	15.8	16.6	15.7	15.1	13.5	12.0	11.5	11.4	11.6	12.8	13.0	13.7	10.0	Aug
1956	15.0	15.5	15.9	15.6	14.6	13.2	11.9	12.2	11.8	12.1	12.2	13.5	13.6	10.6	Jul
1957	15.6	17.2	17.4	16.7	15.6	13.9	13.1	12.3	12.1	12.1	12.8	14.3	14.4	11.1	Sept
1958	15.6	16.7	16.5	16.3	14.6	13.4	12.7	12.3	12.2	12.4	13.1	14.9	14.2	10.6	Aug
1959	15.9	16.9	17.3	16.9	15.2	13.8	12.8	12.4	12.3	11.9	12.7	13.9	14.3	10.6	Oct
1960	16.1	17.2	16.3	16.8	15.8	16.2	15.7	12.5	12.6	13.2	13.9	14.3	15.1	11.7	Sept
1961	17.2	17.4	16.7	15.6	13.9	13.1	12.3	12.1	12.1	12.8	13.0	12.3	14.0	10.6	Aug
1962	15.4	16.2	17.4	15.4	15.7	15.3	13.6	12.3	12.3	12.6	13.2	14.4	14.5	10.0	Aug
1963	16.0	17.1	17.4	17.1	15.3	13.9	12.5	12.7	12.4	12.0	12.6	15.2	14.5	11.1	Aug
1964	16.1	16.6	16.3	16.8	15.8	16.2	15.7	12.5	12.6	11.5	13.9	14.3	14.9	10.6	Sept
1965	15.6	16.7	16.5	16.3	14.6	13.4	12.7	12.3	12.4	12.2	13.1	12.9	14.1	11.7	Sept
1966	15.1	15.8	16.6	15.7	15.1	13.5	12.0	11.5	11.4	11.6	12.8	13.0	13.7	11.1	Aug
1967	15.3	16.2	16.4	16.4	14.9	13.7	12.4	12.4	12.2	12.5	12.5	13.7	14.0	10.0	Sept
1968	16.1	17.2	16.3	16.8	15.8	16.2	15.7	12.5	12.6	13.2	13.9	14.3	15.1	10.0	Sept
1969	15.4	16.2	17.4	15.4	15.7	15.3	13.6	12.3	12.3	12.6	13.2	14.4	14.5	11.1	Jul
1970	15.6	17.2	17.4	16.7	15.6	13.9	13.1	12.3	12.1	12.1	12.8	14.3	14.4	10.0	Jun
1971	14.6	16.4	16.6	16.2	15.0	13.8	12.9	12.4	12.1	12.7	12.7	13.5	13.6	10.6	Aug
1972	16.2	16.8	17.2	16.8	15.2	14.4	13.1	12.2	12.1	12.9	14.0	15.1	15.7	11.7	Aug
1973	16.2	16.9	17.4	17.0	16.4	14.5	13.9	13.0	13.0	13.3	13.6	14.3	16.2	11.1	Sept
1974	15.5	16.5	16.9	16.4	15.3	13.7	13.2	12.2	12.4	12.4	13.4	14.3	16.0	11.1	Aug
1975	14.9	16.0	16.4	16.4	15.3	14.2	13.3	12.7	12.2	12.2	12.9	13.5	14.2	10.0	Sept
1976	15.4	16.2	16.2	15.9	14.1	13.6	12.2	12.1							
Average	15.5	16.4	16.7	16.3	15.1	13.9	12.9	12.3	12.2	12.3	12.9	14.0	14.3	10.9	

Source: 1926-41 Blue Book, 1942-70 Met Office Archives, 1971-76 records at Met. Office archives

3. HUTTS GATE MEAN RELATIVE HUMIDITY (%)

(mean of obs. at 00.00, 0600, 1200, 1800 or 0700 & 1200)

Elevation 627 m.

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1926	87.9	87.7	88.5	88.4	88.1	92.6	89.4	92.9	94.8	91.5	92.9	93.2	90.7
1927	93.3	92.8	93.8	89.9	88.6	88.8	95.8	90.9	98.4	90.9	94.3	93.8	92.6
1928	93.7	94.8	93.5	92.8	92.5	97.0	97.6	96.8	93.4	93.1	95.5	95.2	94.7
1929	97.1	94.5	92.6	92.3	97.2	98.4	89.7	90.3	92.4	96.7	94.1	92.1	94.0
1930	94.0	94.5	91.7	94.0	90.4	93.2	95.2	94.2	95.6	94.2	96.0	92.3	93.8
1931	92.6	91.8	93.2	92.4	91.9	92.2	94.2	96.6	94.0	90.0	94.4	94.2	93.1
1932	91.3	91.5	94.3	91.1	96.9	91.3	93.8	92.9	95.9	96.6	97.8	93.6	93.9
1933	92.8	93.7	88.3	93.7	90.7	90.4	95.2	94.6	92.1	95.8	94.7	94.7	93.1
1934	95.6	94.7	97.0	95.2	90.7	94.2	92.0	94.9	94.1	93.2	88.7	93.0	93.6
1935	92.2	90.9	95.1	91.1	92.7	93.4	91.8	91.5	92.4	93.2	94.0	92.8	92.6
1936	92.4	91.1	94.3	95.3	97.6	90.4	94.0	94.5	91.7	96.6	92.2	91.4	93.5
1937	93.0	92.3	94.8	95.9	92.9	89.0	97.0	94.4	91.3	95.6	95.5	94.0	93.8
1938	95.3	91.4	91.1	91.4	86.6	91.4	95.3	95.3	91.5	97.1	86.4	94.0	92.2
1939	95.0	93.7	91.2	91.9	90.5	81.2	91.7	87.7	89.2	91.2	94.5	95.9	91.1
1940	91.9	92.0	89.9	91.6	91.3	90.0	87.8	91.4	95.2	92.0	92.8	93.7	91.6
1941	92.0	92.0	92.0	89.7	89.4	93.5	89.2	92.5	93.3	94.5	93.8	92.9	92.1
1942	94.0	95.0	95.1	93.5	88.5	89.6	88.9	87.6	96.2	89.6	93.7	97.5	92.4
1943	87.0	86.1	92.1	93.2	94.0	87.7	88.8	89.6	90.9	94.1	86.3	87.2	89.8
1944	95.0	95.0	92.0	93.0	94.0	92.0	91.0	92.0	94.0	97.0	93.0	92.0	93.3
1945	89.0	89.0	91.5	87.0	86.9	83.5	91.8	88.0	87.5	92.0	94.8	85.0	88.8
1946	96.0	89.8	93.0	94.5	91.3	87.0	96.0	89.5	93.0	88.5	93.0	87.0	91.6
1947	93.4	93.3	93.3	93.3	93.4	92.9	93.9	93.8	94.5	94.3	92.9	90.7	93.3
1948	89.8	91.0	90.0	89.8	88.5	87.8	92.6	91.3	91.5	94.5	89.3	91.5	90.6
1949	90.7	88.5	90.3	93.6	90.3	90.9	92.1	91.6	94.3	94.4	90.9	89.4	91.4
1950	90.3	92.7	94.7	92.0	91.4	90.5	94.7	91.9	93.4	92.9	89.7	90.6	91.4
1951	89.2	93.5	93.0	90.0	90.3	90.4	91.0	89.7	92.0	91.9	90.4	93.7	91.3
1952	89.3	88.4	92.4	91.1	87.4	89.3	90.6	88.3	91.9	92.1	90.7	92.0	90.3
1953	88.8	90.0	88.0	88.0	90.0	91.0	89.0	89.0	89.0	89.0	89.0	89.0	89.2
1954	87.0	93.0	88.0	89.0	90.0	91.0	94.0	91.0	97.0	96.0	91.0	93.0	91.7
1955	87.0	91.0	91.0	93.0	89.0	91.0	91.0	91.0	95.0	95.0	93.0	89.0	91.3
1956	92.0	91.0	92.0	95.0	93.0	91.0	91.0	93.0	93.0	96.0	92.0	91.0	92.5
1957	93.0	93.0	94.0	92.0	91.0	92.0	90.0	93.0	95.0	95.0	94.0	92.0	92.8
1958	89.0	94.0	87.0	89.0	90.0	91.0	89.0	91.0	92.0	94.0	91.0	90.0	90.6
1959	87.0	88.0	91.0	92.0	89.0	90.0	93.0	91.0	95.0	93.0	89.0	95.0	91.1
1960	89.0	93.0	90.0	90.0	88.0	91.0	85.0	92.0	91.0	89.0	87.0	91.0	89.7
1961	89.0	80.0	93.0	89.0	90.0	90.0	88.0	90.0	90.0	95.0	91.0	92.0	89.8
1962	85.0	87.0	91.0	93.0	87.0	84.0	87.0	93.0	93.0	95.0	93.0	91.0	89.9
1963	91.0	98.0	90.0	94.0	89.0	87.0	91.0	93.0	81.0	93.0	81.0	88.0	89.7
1964	88.0	89.0	94.0	80.0	87.0	88.0	87.0	89.0	94.0	91.0	90.0	86.0	88.6
1965	89.0	91.0	91.0	88.0	87.0	88.0	92.0	89.0	91.0	88.0	88.0	91.0	89.4
1966	92.0	92.0	90.0	90.0	87.0	89.0	91.0	91.0	93.0	90.0	91.0	88.0	90.3
1967	85.0	89.0	91.0	91.0	92.0	91.0	88.0	91.0	91.0	92.0	86.0	84.0	89.3
1968	90.0	91.0	90.0	90.0	88.0	89.0	90.0	92.0	91.0	92.0	91.0	90.0	90.3
1969	94.0	92.0	92.0	88.0	90.0	90.0	90.0	89.0	92.0	91.0	91.0	90.0	90.8
1970	92.0	89.0	90.0	89.0	80.0	94.0	95.0	95.0	97.0	95.0	95.0	93.0	92.0
1971	90.0	89.0	90.0	93.0	91.0	92.0	92.0	92.0	91.0	91.0	88.0	86.0	90.4
1972	88.0	85.0	88.0	86.0	89.0	81.0	87.0	87.0	89.0	89.0	91.0	90.0	87.5
1973	88.0	89.0	87.0	84.0	88.0	89.0	88.0	89.0	90.0	87.0	87.0	82.0	87.3
1974	89.0	90.0	90.0	89.0	89.0	87.0	88.0	88.0	85.0	89.0	88.0	89.0	88.4
1975	89.0	83.0	95.0	87.0	86.0	87.0	89.0	89.0	93.0	92.0	91.0	90.0	89.3
Average	90.9	91.0	91.6	90.9	90.1	90.1	91.3	91.5	92.5	92.8	91.4	91.1	91.2
Highest	95.6	94.7	97.0	95.9	97.6	98.4	97.6	96.8	98.4	97.1	97.8	95.2	94.7
Lowest	85.0	80.0	87.0	80.0	80.8	84.0	85.0	87.0	81.0	87.8	86.0	82.0	83.8

4. JAKESTOWN AVERAGE MONTHLY TEMPERATURE oC

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1848	26.1	26.9	28.1	26.9	24.4	22.3	22.2	21.6	22.7	25.1	25.2	26.1	24.8

Source: St Helena Almanack

Royal Engineers Station - Elevation 9.0 m

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1857								20.8	21.9	22.3	22.9	23.4	
1858		24.8	24.8	25.8	23.5	22.7	20.3	20.5	21.2	22.4	23.6	24.8	
1859		25.5	25.8	25.1	23.1	21.8	21.5	21.6	21.3	21.5	22.4	23.7	
1860	26.1	26.9	28.1	28.4	23.1	22.3	21.4	21.4	21.7	21.9	22.0	22.3	23.8
1861	23.6	24.6	24.4	23.5	23.1	21.8	21.1	20.9	20.1	21.2	21.9	23.3	22.5
1862	23.6	24.7	26.0	25.5									
Average	24.4	25.3	25.8	25.7	23.2	22.2	21.1	21.1	21.2	21.9	22.6	23.5	23.2
Abs Max	31.7	32.2	33.3	33.9	28.3	27.2	26.1	25.6	25.6	25.6	26.7	27.8	
Abs Min	17.2	18.9	18.9	17.2	16.1	16.1	14.4	14.7	14.4	15.6	16.7	15.6	

JAKESTOWN AVERAGE MONTHLY MAXIMUM TEMPERATURE oC

Elev: 10 m Believed to have been kept in the Castle

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Abs Month	Ann Avg
1885	26.7	27.5	28.8	28.5	26.8	24.3	24.1	23.2	23.2	22.9	23.6	22.7	25.4	29.4 Mar	24.7
1886	26.0	27.2	27.5	27.7	27.2	25.6	24.4	23.3	23.3	24.2	23.9	25.0	25.5	28.3 May	24.9
1887	25.0	26.4	26.9	27.2	27.2	25.0	22.2	22.2	22.6	23.3	24.0	24.4	24.7	27.5 Mar	24.1
1888	25.8	27.3	27.9	27.8	27.6	24.4	24.6	22.6	23.3	25.0	24.9	26.6	25.6	29.4 Mar	24.9
1889	27.8	29.1	30.0	25.0	25.0	24.2	22.6	21.7	21.4	22.0	22.8	24.7	24.7	31.1 Mar	24.0
1890	25.9	27.2	27.4	26.4	24.5	23.3	22.1	21.1	21.2	21.5	22.9	24.5	24.0	28.3 Mar	22.6
1891	25.8	27.1	28.1	25.7	25.2	22.7	22.0	21.4	21.1	21.6	22.2	23.3	23.9	32.8 Mar	23.0
1892	24.8	26.4	26.1	25.4	23.6	22.1	21.1	21.1	20.5	21.4	22.2	23.3	23.2	26.7 Apr	22.5
1893	24.2	24.9	25.2	25.6	24.9	23.3	22.1	21.2	20.9	22.0	22.1	23.6	23.3	26.1 Apr	22.7
1894	25.0	26.0	25.9	25.3	24.4	23.2	22.1	21.0	21.4	22.4	23.3	24.5	23.6	27.2 Mar	23.0
1895															
1896															
1897	24.4	26.1	26.7	26.7	25.0	23.9	22.8	21.7	21.1	21.7	22.8	23.3	23.9	27.2 Mar	23.2
1898	25.1	25.3	25.7	25.1	23.9	22.6	20.9	21.3	21.4	22.9	24.3	26.7	23.5	26.7 Mar	22.7
1899	26.1	26.7	26.7	26.1	25.6	23.9	23.3	23.3	22.2	24.4	23.9	23.9	24.7	27.8 Feb	23.4
1900	24.6	25.6	25.3	25.6	26.8	24.7	24.6	24.4	22.9	21.8	24.1	25.6	24.6	27.8 Dec	23.0
1901	25.5	26.7	26.1	25.8	25.1	24.4	22.9	22.9	21.7	22.2	23.3	23.9	24.2	28.9 Apr	23.3
1902	24.4	26.7	26.1	24.4	25.0	24.4	22.2	21.1	21.1	22.8	23.9	24.4	23.8	27.2 Feb	23.0
1903	26.1	27.2	26.1	25.6	24.4	23.9	23.3	21.7	21.7	22.2	23.9	25.6	24.2	27.2 Feb	23.1
1904	23.5	25.1	25.9	24.5	23.9	23.1	21.2	20.7	22.7	22.1	23.0	22.9	23.2	27.2 Feb	22.4
1905	24.7	25.6	25.8	25.9	25.2	22.8	22.8	21.8	21.9	22.9	23.3	23.8	23.9	28.3 May	23.0
1906	25.1	25.6	25.9	25.2	23.9	22.7	21.3	21.1	21.2	21.9	22.1	23.5	23.3	26.7 Feb	22.4
1907	24.4	25.9	26.4	25.6	24.7	22.6	22.2	22.3	21.4	22.2	20.6	22.8	23.5	27.2 Mar	22.7
1908	23.7	24.7	25.2	25.7	24.8	22.6	22.0	21.7	22.2	22.5	21.9	23.1	23.4	26.7 Apr	22.3
1909	24.8	23.7	25.5	25.4	23.9	23.2	20.6	21.4	21.3	22.2	22.9	24.4	23.2	26.7 Apr	22.2
1910	25.2	25.2	25.7	26.1	25.3	23.9	22.1	21.2	21.7	21.5	22.1	23.9	23.6	26.7 May	22.4
1911	24.2	25.6	25.6	25.2	23.8	22.8	21.9	21.1	22.6	21.4	22.5	24.5	23.3	26.7 Feb	22.3
1912	25.0	25.6	25.1	25.1	24.4	22.8	21.2	20.9	21.4	22.2	22.2	23.9	23.3	26.7 Feb	22.3
1913	21.9	25.3	25.2	25.7	25.2	22.8	22.0	22.1	21.7	21.6	22.1	24.1	23.2	26.7 Apr	22.3
1914	25.5	25.7	25.3	25.3	24.4	22.9	22.1	21.1	21.7	21.5	22.2	23.1	23.4	27.2 Feb	22.5
1915	24.4	25.8	26.7	25.9	24.3	23.4	21.0	20.9	21.2	21.8	22.3	23.1	23.4	27.8 Mar	22.5
1916	24.8	25.7	25.8	25.2	23.9	22.4	23.1	20.9	20.9	21.5	22.5	23.6	23.3	27.2 Feb	22.6
1917	24.4	26.0	25.7	26.2	24.9	23.1	22.1	21.3	21.1	21.7	21.9	23.4	23.5	27.8 Mar	22.9
1918	24.1	25.1	25.7	25.4	24.1	22.1	21.3	21.3	21.7	22.3	22.9	23.6	23.3	26.1 Mar	22.7
1919	24.4	25.0	25.6	25.6	23.9	22.8	21.7	21.1	21.7	21.7	22.2	24.4	23.2	27.2 Apr	22.5
1920	24.4	25.0	25.6	25.6	25.0	23.3	21.7	22.2	23.3	21.7	22.2	25.0	23.6	26.7 Apr	22.6
Mean	24.9	26.0	26.3	25.8	24.9	23.4	22.3	21.7	21.8	22.3	22.9	24.1	23.8	27.6	23.0

4. JAMESTOWN AVERAGE MONTHLY MINIMUM TEMPERATURE oC

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Abs	Month
1885	25.6	26.7	27.5	26.8	23.9	23.1	22.9	21.8	21.8	21.7	22.5	23.2	24.0	20.6	Sept
1886	25.0	26.4	26.6	27.1	24.3	24.3	23.9	21.8	22.7	22.4	22.8	22.8	24.3	21.7	Sept
1887	24.1	25.2	26.0	26.7	24.2	22.8	20.7	20.9	21.6	22.6	23.3	23.0	23.4	20.6	Aug
1888	24.8	26.4	26.9	26.4	25.6	23.1	23.2	21.7	22.2	23.3	23.9	25.2	24.3	23.3	Aug
1889	26.7	27.8	28.7	23.7	23.3	22.8	20.8	20.8	20.0	20.7	21.7	23.2	23.4	19.7	Jul
1890	23.7	24.6	24.7	23.3	21.9	21.0	19.4	18.7	18.9	18.0	20.4	22.5	21.3	17.2	Sept
1891	23.9	24.0	24.3	24.3	23.3	21.4	20.8	20.0	20.0	20.6	20.6	21.7	22.1	18.9	Aug
1892	23.4	24.4	25.0	23.9	22.1	20.8	19.9	19.7	19.3	20.0	21.1	21.7	21.8	18.9	Sept
1893	22.9	23.7	24.2	24.2	23.3	22.1	20.6	19.8	19.7	20.6	20.9	22.3	22.0	18.3	Aug
1894	23.8	24.6	24.7	24.0	23.1	21.9	20.7	19.9	20.2	21.1	22.1	23.1	22.4	19.4	Aug
1895															
1896															
1897	23.3	25.0	25.0	25.0	23.9	22.2	21.1	20.6	20.0	20.6	21.1	22.8	22.5	17.2	Aug
1898	23.8	23.9	24.4	24.0	22.1	21.0	19.8	19.6	20.0	20.2	21.6	22.9	21.9		
1899	23.9	24.4	23.9	23.9	23.3	22.2	20.6	20.6	21.1	17.2	21.1	21.1	22.0	15.0	Oct
1900	22.8	22.9	22.2	23.9	21.2	22.4	21.7	18.3	20.3	19.4	21.1	21.7	21.5	16.1	Aug
1901	24.5	24.9	24.4	23.3	22.9	22.6	21.1	20.3	20.6	20.6	21.7	22.2	22.4	18.9	Sept
1902	23.3	24.4	23.9	23.3	23.3	22.2	20.0	18.9	20.0	21.1	22.2	22.8	22.1	16.7	Sept
1903	24.4	24.4	24.2	22.8	22.2	21.8	21.2	19.4	20.0	20.0	21.7	22.8	22.0	18.3	Aug
1904	21.7	22.8	23.9	23.3	21.8	21.1	19.9	19.1	21.1	20.6	21.2	21.2	21.5	18.3	Aug
1905	22.7	23.9	23.9	23.9	23.3	21.3	21.1	20.2	19.3	21.2	22.2	22.4	22.1	18.9	Sept
1906	23.3	23.9	24.3	23.3	22.1	21.0	19.6	19.3	19.3	20.0	20.9	21.6	21.6	18.3	Sept
1907	26.0	23.9	23.9	23.4	21.8	20.8	20.0	20.3	19.3	20.2	22.3	21.1	22.0	18.3	Sept
1908	21.4	22.3	23.3	24.2	22.1	20.1	19.6	19.1	20.1	20.2	20.3	20.3	21.2	18.3	Aug
1909	22.2	23.1	23.7	23.9	21.8	21.2	18.7	19.4	18.3	20.3	20.8	20.8	21.2	18.3	Sept
1910	22.7	23.0	23.4	23.0	23.0	21.5	17.1	19.6	19.7	19.8	20.6	20.6	21.2	18.3	Oct
1911	21.7	23.2	23.6	23.2	21.4	21.2	20.2	19.2	19.8	20.3	21.1	21.1	21.3	18.3	Aug
1912	23.3	23.9	23.3	23.4	22.2	20.8	19.4	19.4	19.2	20.1	20.6	20.6	21.4	18.9	Sept
1913	21.8	23.0	22.4	23.8	22.7	20.9	20.1	20.0	19.9	19.6	20.2	20.2	21.3	18.3	Oct
1914	23.6	23.7	23.3	23.2	22.3	21.1	20.1	19.2	19.9	19.7	20.8	20.8	21.5	18.3	Aug
1915	21.8	22.8	25.1	24.0	22.9	21.6	19.6	19.4	19.6	20.3	20.4	20.4	21.6	18.3	Jul
1916	23.1	24.5	24.7	24.2	22.4	20.9	20.1	19.8	20.1	20.3	21.2	21.2	21.9	18.3	Aug
1917	23.3	24.5	25.0	25.0	23.6	21.8	20.9	20.2	19.9	20.3	20.8	20.8	22.3	19.4	Aug
1918	22.8	24.0	23.5	24.2	23.6	21.0	20.2	20.2	20.6	21.1	21.7	21.7	22.1	19.4	Aug
1919	23.3	24.4	24.4	23.9	22.2	21.1	20.0	19.4	20.0	20.0	20.6	20.6	21.8	18.9	Sept
1920	22.8	22.8	22.8	23.9	23.3	21.7	20.0	20.0	20.0	20.0	20.6	20.6	21.6	19.4	Jul
Mean	23.5	24.2	24.4	24.1	22.8	21.7	20.4	19.9	20.1	20.4	21.4	21.8	22.1	18.2	

- (1) New "more reliable" thermometers installed in April 1889. Min may continue to overread as situated in poorly ventilated passage.
- (2) Source suggests Abs Max in Mar 1891 an error, but readings for previous week all high so may be accurate
- (3) The data source is The Blue Book. Daily data are available from this source from 1891.
- (4) From 1897 records refer to Time Office as recording point. Prior to this The Castle entrance appears to have been used.

4. JAMESTOWN VICARAGE AVERAGE MONTHLY MAXIMUM TEMPERATURE oC

Elevation: 25 m

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Abs	Ann Mean
1985	27.3	28.0	28.2	28.2	26.8	25.2	25.3	23.7	23.5	24.2	25.4	26.7	26.0	30.6	23.6
1986	28.3	29.2	29.4	29.2		25.5	24.4	24.9	23.6	24.6	24.8	25.8	26.3	31.7	24.1
1987	27.7	28.8	28.7	30.7	29.1	27.9	26.1	24.6	24.0	24.2	25.4	26.8	27.0	33.3	24.8
1988	28.1	28.8	29.6	28.3	28.1	25.6	24.0	26.7	24.0	24.1	25.3	25.9	26.5	31.1	24.1
1989	28.4	29.7	30.0	27.5	27.7	25.7	24.1	23.6						31.1	
Av 1985-	28.0	28.9	29.2	28.8	27.9	26.0	24.8	24.7	23.8	24.3	25.2	26.3	26.5		24.2
Absolute	30.6	31.1	31.1	33.3	32.2	31.7	28.3	27.8	26.1	26.7	28.3	28.9	29.7		

4. JAMESTOWN VICARAGE AVERAGE MONTHLY MINIMUM TEMPERATURE oC

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Abs
1985	22.6	23.7	23.5	22.9	21.5	20.2	19.6	19.1	18.8	19.3	20.0	21.6	21.1	17.8
1986	23.5	24.8	24.9	24.7		20.4	19.8	20.0	20.0	20.3	20.7	22.1	21.9	18.3
1987	23.1	24.6	24.2	25.9	24.6	23.2	21.9	20.6	19.6	20.0	21.2	22.4	22.6	18.3
1988	24.0	24.2	24.9	23.8	22.6	21.1	19.4	19.5	19.8	19.9	20.6	20.9	21.7	17.8
1989	22.2	24.3	24.9	23.4	22.6	20.6	20.0	20.1						
Average	23.1	24.3	24.5	24.1	22.8	21.1	20.1	19.9	19.6	19.9	20.6	21.8	21.8	18.1
Absolute	21.1	22.2	22.2	21.7	19.4	18.3	17.8	17.8	17.8	17.2	18.3	20.0	19.5	

JAMESTOWN RELATIVE HUMIDITY (%)

Elevation: 15 m

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1857								80.5	71.5	74.5	79.5	68.5	
1858	68.0	72.5	69.5	69.0	73.0	77.0	88.0	89.5	80.0	74.0	66.0	63.0	74.1
1859	67.0	69.0	68.0	71.5	73.0	76.5	76.5	75.5	76.5	67.5	67.0	60.0	70.7
1860	54.0	54.0	49.5	49.5	72.0	64.5	60.5	62.0	61.5	64.5	69.0	65.5	60.5
1861	64.0	60.0	63.0	67.0	66.0	64.5	66.0	67.5	72.5	74.0	72.5	66.5	67.0
1862	69.0	67.0	61.0	59.5									
Average	64.4	64.5	62.2	63.3	71.0	70.6	72.8	75.0	72.4	70.9	70.8	64.7	68.1

Readings at 0930 and 1530 hrs

Source: Met. Office Archives

5. Longwood Observatory Average Monthly Temperature oC

Elev: 542 m. 5.42.28 W 15.56.28 S

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1840									13.9	15.3	16.3	17.1	
1841	17.7	18.8	19.3	18.8	17.4	16.2	15.1	14.7	14.2	14.6	16.3	17.3	16.7
1842	17.7	18.5	19.3	18.6	17.9	15.4	14.3	14.0	14.4	15.0	15.9	16.4	16.5
1843	18.1	18.9	18.6	18.3	16.4	14.9	14.1	13.7	13.7	14.1	15.3	16.9	16.1
1844	18.6	19.6	20.1	19.5	17.8	16.2	14.7	13.9	14.1	14.6	15.0	16.2	16.7
1845	17.0	17.9	18.3	18.4	17.2	15.5	14.4	13.7	13.4	15.2	15.2	16.1	16.0
1846	18.1	19.4	20.0	19.2	17.5	16.2	14.8	14.5	14.7	15.0	15.6	16.4	16.8
1847	17.3	18.8	19.1	18.6	17.8	15.4	14.7						

Average	17.8	18.8	19.2	18.8	17.4	15.7	14.6	14.1	14.1	14.8	15.7	16.6	16.5
Abs Max.	22.8	23.5	25.3	23.8	21.7	20.7	18.3	17.7	19.4	19.9	21.9	22.5	
Abs Min.	14.9	15.6	15.8	16.1	13.7	12.4	11.2	11.3	11.1	11.9	12.6	13.1	

Source: J.S.Dines

1848	20.6	23.3	23.3	21.7	19.5	12.3	17.2	16.7	17.3	18.7	19.4	19.0	19.1
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Source: St Helena Almanack

Longwood Average Monthly Maximum Temperature oC

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Ann Avg
1890	23.3	25.0	24.4	24.4	23.9	20.6	15.0	16.1	16.1	18.3	20.6	22.2	20.7	17.0
1891														
1892														
1893	21.1	23.3	22.8	22.2	21.7	21.1	18.3	17.8	15.6	17.2	18.9	21.7	20.0	16.5
1894	23.9	22.8	23.3	22.8	21.7	19.4	19.4	17.2	18.9	22.2	23.3	23.9	21.4	17.3
1895	23.9	26.1	21.7	22.2	23.3	20.6	21.7	20.0	20.6	19.4	21.1	22.8	21.9	17.7
1896	24.4	26.1	25.6	23.9	22.2	20.6	20.6	18.3	18.9	20.0	20.6	21.7	21.9	17.4
1897	22.8	26.7	23.9	23.9	22.8	16.7	16.7	18.9	18.3	18.9	22.8	22.8	21.1	17.1
Mean	23.2	25.0	23.6	23.2	22.6	19.8	18.6	18.1	18.1	19.4	21.2	22.5	21.2	17.2

Longwood Average Monthly Minimum Temperature oC

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1890	15.0	16.1	16.1	15.0	15.0	13.9	11.1	10.6	11.1	11.1	12.2	12.2	13.4
1891													
1892													
1893	13.9	15.0	15.0	15.0	13.9	12.8	11.7	11.1	11.1	11.7	12.2	13.9	13.0
1894	15.0	15.6	15.6	15.0	14.4	11.1	11.7	11.1	11.1	11.7	13.3	13.3	13.2
1895	14.4	15.0	16.7	15.6	13.9	11.7	11.7	12.2	12.2	12.8	13.3	13.3	13.6
1896	14.4	15.6	15.6	15.6	13.9	12.2	11.7	11.1	10.6	10.6	11.7	13.3	13.0
1897	14.4	12.8	14.4	14.4	13.9	12.2	12.2	11.1	12.2	11.7	14.4	14.4	13.1
Mean	14.5	15.0	15.6	15.1	14.2	12.3	11.7	11.2	11.4	11.6	12.9	13.4	13.2
Av 1890-97	18.9	20.0	19.6	19.2	18.4	16.1	15.1	14.6	14.7	15.5	17.0	18.0	17.2

Source: Blue Book

Longwood Average Monthly Relative Humidity %

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1841	84	86	91	94	88	88	87	88	87	90	88	86	88.1
1842	88	90	90	88	87	87	86	86	86	87	85	85	87.1
1843	84	84	90	83	85	84	86	85	86	88	85	86	85.5
1844	85	87	86	88	86	86	85	92	94	92	88	86	87.9
1845	84	85	86	87	87	87	88	93	91	89	87	86	87.5
Mean	85.0	86.4	88.6	88.0	86.6	86.4	86.4	88.8	88.8	89.0	86.3	85.7	87.2

Note: Readings taken at every second hour throughout the day and night.

Source: Sabine

6. ST MATHEWS VICARAGE AVERAGE MONTHLY MAXIMUM TEMPERATURE oC

Elev: 630 m 5.40 W 15.57 S

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Abs Month	Ann Avg	5 yr mean
1892		22.8	22.3	20.4	18.9	17.2	16.3	16.1	15.3	16.4	16.6	18.8		25.6 Feb		
1893	19.8	20.5	20.3	20.6	20.6	18.6	17.3	16.1	15.4	17.1	16.7	19.1	18.5	24.2 May	16.2	
1894	21.2	22.0	21.0	20.1	19.6	17.3	17.4	15.5	16.4	17.6	18.6	20.9	19.0	25.5 Apr	16.3	
1895	21.6	22.8	21.8	21.8	20.6	17.8	17.8	17.4	17.1	17.3	18.3	19.5	19.5	25.3 Feb	16.9	16.4
1896	21.1	21.2	21.9	21.3	19.6	18.8	17.2	15.4	16.7	16.9	17.0	17.8	18.7	25.3 Mar	16.3	16.4
1897	19.4	21.2	21.8	21.3	20.3	18.8	17.4	16.6	15.7	16.2	17.4	18.8	18.7	24.5 May	16.3	16.4
1898	20.8	20.9	20.6	20.1	18.1	17.3	16.1	16.4	16.2	17.1	18.7	19.5	18.5	22.9 Feb	15.9	16.4
1899	21.0	21.8	21.6	21.0	19.9	18.8	17.7	17.2	16.4	16.7	18.3	18.3	19.1	24.8 Mar	16.5	16.5
1900	20.9	21.3	21.9	21.2	20.9	19.5	17.9	17.3	17.9	18.5	19.2	19.0	19.6	24.2 Mar	16.8	16.6
1901	21.1	23.5	21.6	20.6	20.6	21.6	19.1	17.6	16.5	18.1	18.8	19.4	19.9	26.1 Nov	16.9	16.5
1902	21.3	23.3	23.1	21.8	21.3	19.0	18.0	17.3	16.2	18.3	18.2	18.8	19.7	25.6 Feb	16.8	16.3
1903	21.4	22.6	21.9	20.6	19.5	17.3	16.5	16.3	15.6	15.5	15.1	17.7	18.3	25.0 Mar	15.8	16.3
1904	18.7	20.8	20.6	19.3	19.3	18.1	18.5	15.9	15.9	17.0	17.9	17.4	18.3	25.3 Mar	15.5	16.1
1905	19.8	20.9	21.4	20.2	21.7	18.4	16.5	16.7	17.6	19.6	19.1	18.2	19.2	26.7 Apr	16.4	16.0
1906	20.6	21.3	21.7	21.3	20.1	18.5	17.1	16.1	16.3	16.8	16.9	20.4	18.9	23.9 Apr	16.1	16.0
1907	19.6	22.4	23.7	21.1	19.4	18.0	17.7	17.8	16.3	17.0	16.8	17.8	19.0	24.4 Mar	16.2	16.1
1908	18.7	21.1	21.2	20.3	19.5	17.8	16.7	15.8	16.9	16.9	16.0	17.8	18.2	23.9 May	15.7	16.0
1909	20.2	20.4	21.1	20.5	19.4	18.6	17.3	15.4	15.9	16.9	18.4	21.0	18.8	24.2 Dec	16.0	16.1
1910	21.1	21.3	22.1	21.4	21.4	18.1	17.4	15.9	16.4	15.8	17.2	18.7	18.9	25.6 Mar	16.2	16.2
1911	20.9	21.7	22.6	21.7	19.5	18.8	16.4	16.0	17.2	17.8	20.7	20.5	19.5	25.0 Mar	16.4	16.6
1912	21.4	22.4	22.8	21.8	20.4	18.6	18.1	17.7	17.1	17.8	17.8	19.8	19.7	25.8 Feb	16.8	16.8
1913	21.4	24.6	24.2	22.8	21.6	19.9	18.9	18.5	17.4	19.8	20.5	21.9	21.0	27.6 Feb	17.5	16.9
1914	23.7	23.9	23.2	21.6	20.7	19.6	19.1	17.7	18.0	18.8	19.1	21.1	20.5	27.8 Feb	17.0	17.1
1915	23.3	24.0	24.4	18.5	21.7	19.9	17.0	17.6	17.6	19.6	20.4	20.7	20.4	28.3 Mar	16.9	17.2
1916	22.9	24.6	23.4	22.8	21.6	19.6	18.3	20.2	18.4	18.9	21.4	23.7	21.3	28.9 Feb	17.3	17.0
1917	23.3	25.3	23.5	23.1	22.3	20.3	19.2	17.9	17.4	18.3	17.3	21.3	20.8	28.9 Mar	17.1	17.1
1918	22.2	21.9	23.2	23.1	21.1	19.4	18.5	16.1	19.4	17.9	20.6	21.1	20.4	27.2 Mar	16.7	17.2
1919	23.2	24.1	24.8	24.1	22.1	20.8	18.6	17.6	17.7	18.3	19.0	21.7	21.0	28.1 Mar	17.2	17.3
1920	24.1	25.3	24.4	24.7	22.6	20.5	18.8	18.0	20.0	19.6	22.6	23.7	22.0	28.1 Mar	17.9	17.4
1921	22.8	24.8	25.6	24.2	23.0	22.4	18.8	17.5	18.2	19.8	19.6	23.6	21.7	28.7 Feb	17.8	17.4
1922	23.9	24.4	24.4	23.3	24.0	19.9	19.7	17.4	17.8	18.6	20.0	22.9	21.4	27.6 Feb	17.2	17.4
1923	22.7	24.4	25.2	21.4	19.7	19.5	18.2	17.4	17.7	19.3	20.3	22.4	20.7	26.7 Feb	16.8	
1924	24.8	25.5	25.1	23.9	21.7	20.1	18.7	19.1	19.2	19.4	20.1	21.1	21.6	27.5 Mar	17.5	
Mean	21.5	22.7	22.7	21.6	20.7	19.1	17.8	17.0	17.1	17.9	18.6	20.1	19.8	26.0	16.7	

(1) Records commenced 1.2.1892

Source: Blue Book

6. ST MATHEWS VICARAGE AVERAGE MONTHLY MINIMUM TEMPERATURE °C

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Abs	Month
1892		16.5	16.3	16.0	14.0	13.3	12.2	11.7	11.4	12.0	12.8	13.6		11.4	Aug
1893	14.7	15.5	16.4	15.9	14.9	14.3	12.9	11.9	12.0	12.3	12.7	13.8	13.9	10.7	Aug
1894	15.5	16.0	11.1	15.7	14.4	13.4	12.6	11.8	12.0	12.4	13.6	14.6	13.6	10.6	Sept
1895	15.8	16.4	16.9	15.9	15.0	13.5	13.0	12.7	12.5	12.8	13.2	14.1	14.3	11.4	July
1896	15.4	15.8	16.9	16.5	12.5	14.0	12.5	11.5	12.2	12.7	12.8	13.4	13.8	10.1	Sept
1897	14.7	16.0	16.3	16.6	14.7	14.1	13.1	12.2	11.9	11.8	12.5	13.3	13.9	10.6	Oct
1898	14.7	15.2	16.0	14.7	13.6	12.4	12.6	11.1	11.5	12.7	12.5	14.0	13.4	7.8	July
1899	15.2	16.7	16.8	16.2	14.5	13.7	12.1	11.8	11.8	11.8	12.4	13.1	13.8	9.4	July
1900	14.0	15.3	15.7	15.7	15.1	13.4	12.6	11.9	13.6	13.6	13.2	13.0	13.9	10.6	Aug
1901	15.4	16.4	15.7	15.0	15.1	15.3	12.8	11.7	11.7	11.7	12.4	13.2	13.9	9.8	Oct
1902	14.3	15.9	16.2	15.6	15.2	12.9	12.9	12.2	11.5	11.5	13.0	14.6	13.8	9.4	Sept
1903	16.1	15.6	15.9	15.6	15.3	11.8	11.0	10.9	10.6	10.9	12.2	12.7	13.2	9.8	Sept
1904	13.7	14.6	12.2	14.5	14.2	12.8	11.7	11.3	11.3	11.8	12.7	12.1	12.7	9.8	Aug
1905	14.2	15.5	15.6	15.7	15.0	13.4	11.8	12.2	11.7	10.7	13.2	13.8	13.6	10.6	Jul
1906	14.8	16.1	15.8	15.2	13.8	12.6	11.3	11.6	11.0	11.5	11.9	12.7	13.2	9.2	Sept
1907	14.0	15.3	16.7	15.6	13.9	12.8	12.2	12.2	11.6	12.0	12.3	12.1	13.4	9.9	Aug
1908	13.8	14.8	15.4	14.8	13.8	12.9	12.0	11.6	11.6	11.9	11.6	13.8	13.2	10.3	Aug
1909	14.4	15.3	15.7	15.7	14.1	12.0	11.9	11.3	11.4	11.7	12.3	12.8	13.2	9.9	Sept
1910	15.3	15.6	15.8	16.2	15.1	13.1	12.2	11.3	11.8	11.3	12.2	12.8	13.6	10.6	Sept
1911	13.9	15.2	15.4	15.6	13.8	13.0	11.9	11.2	11.4	11.9	13.5	12.8	13.3	10.5	Sept
1912	15.5	15.9	16.5	16.1	14.6	13.4	12.6	12.3	11.8	11.3	12.8	13.7	13.9	10.1	Sept
1913	14.5	15.8	16.7	15.8	14.8	13.9	12.4	11.9	12.0	14.9	12.7	13.1	14.0	10.6	Aug
1914	15.2	15.3	15.6	15.1	13.9	12.7	11.8	11.6	11.7	12.4	12.5	14.6	13.5	10.6	July
1915	14.6	15.6	16.6	15.6	14.4	13.1	11.8	11.2	11.1	11.7	12.6	14.0	13.5	9.5	Aug
1916	14.6	16.0	16.2	15.3	13.8	12.7	11.7	11.3	11.3	11.7	12.2	13.6	13.4	9.4	May
1917	14.8	15.9	16.4	16.5	14.6	13.1	12.4	11.7	11.1	11.7	10.9	13.2	13.5	10.5	Sept
1918	11.7	15.6	15.1	15.2	14.1	12.9	11.8	11.6	11.7	12.2	11.8	13.2	13.1	10.0	Aug
1919	14.6	15.7	15.8	15.6	12.8	13.4	12.3	11.4	11.6	11.7	11.9	13.1	13.3	10.3	Sept
1920	14.4	16.1	16.4	15.3	14.7	13.1	11.9	11.8	11.8	12.3	13.1	13.5	13.7	10.6	July
1921	15.2	14.8	16.9	17.1	14.2	12.5	12.3	11.9	12.2	13.0	13.4	13.2	13.9	10.9	Sept
1922	13.8	14.3	15.4	15.1	12.9	12.3	11.9	11.9	11.9	12.3	12.3	13.1	13.1	10.3	July
1923	15.1	14.7	13.9	12.4	13.1	12.1	11.8	11.5	11.9	11.7	12.3	13.2	12.8	10.0	July
1924	13.8	15.4	14.9	15.0	13.8	13.1	11.9	12.2	12.4	12.7	13.0	12.8	13.4	10.6	Aug
Mean	14.6	15.6	15.7	15.5	14.2	13.1	12.2	11.7	11.7	12.1	12.6	13.3	13.5	10.2	

(1) Records commenced 1.2.1892

Source: Blue Book

7. SCOTLAND MEAN TEMPERATURE (oC)

Elevation: 560 m

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Abs Max	Abs Min
1880				17.6	16.8	14.9	14.8	13.4	13.3	14.0	15.8	16.8	16.1	21.8	11.1
1881	18.3	19.0	18.6												

Source: Some Considerations Concerning St Helena As A Health Resort

7. SCOTLAND MEAN MAXIMUM TEMPERATURE (oC)

Elevation: 560 m

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Abs	Ann Avg
1881									16.4	16.7	18.2	18.1			
1882	19.9	20.1	20.2	19.9	19.7	18.0	16.3	15.6	16.8	16.6	18.1	19.4	18.4	25.0	16.6
1883	22.8	22.6	21.9	22.2	20.2	16.3	17.8	17.4	18.6	18.1	19.1	19.8	19.7	29.0	17.4
1884	22.7	23.2	22.7	22.6	20.6	20.7	18.4	19.3	18.4	17.9	19.3	19.9	20.5	28.0	17.9
1885	22.1	23.0	22.3	21.8	20.3	18.7	18.7	17.1	17.1	17.6	19.4	19.9	19.8	26.0	17.4
1886	22.0	22.5	22.6	22.1	21.4	19.4	18.1	18.5	17.2	18.6	18.1	19.7	20.0	26.0	17.6
1887	20.9	23.0	22.6	22.6	21.5	19.9	18.3	18.2	17.6	17.9	18.5	21.1	20.2	26.0	17.8
1888	21.7	21.6	21.0	22.2	22.0	19.2	18.5	18.2	16.9	17.0	19.7	21.1	19.9	26.0	17.8
1889	23.1	24.2	24.5	21.6	21.5	19.3	18.2	17.4	17.8	17.6	18.7	20.1	20.3	27.0	17.9
Average	21.9	22.5	22.2	21.9	20.9	18.9	18.0	17.7	17.4	17.6	18.8	19.9	19.9		17.5
Absolute	29.0	26.0	27.0	26.0	24.0	26.0	22.0	26.0	22.0	24.0	24.0	24.0			

7. SCOTLAND MEAN MINIMUM TEMPERATURE (oC)

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Abs
1881									13.6	13.5	14.1	15.2		
1882	16.0	17.1	17.3	16.6	15.6	13.3	13.1	13.0	13.2	13.5	13.7	15.1	14.8	12.0
1883	17.2	17.1	17.6	16.9	15.8	13.1	13.9	13.2	13.4	13.1	13.6	14.9	15.0	12.0
1884	16.2	17.8	18.1	17.3	16.2	14.2	13.7	13.2	13.7	13.7	14.5	14.9	15.3	10.0
1885	16.0	17.6	17.4	16.9	15.6	14.1	13.7	13.3	12.9	13.1	14.1	15.2	15.0	11.0
1886	16.6	17.9	17.7	17.2	16.3	14.7	13.5	13.5	13.7	13.6	13.7	14.5	15.2	11.0
1887	16.5	18.2	17.3	17.8	16.4	14.9	13.7	13.8	13.2	13.3	14.6	15.4	15.4	12.0
1888	17.2	18.7	18.8	18.1	16.3	15.1	13.7	13.3	13.1	13.1	14.1	15.4	15.6	12.0
1889	16.8	17.9	18.8	17.3	16.6	14.6	13.9	13.4	13.4	13.1	13.6	15.0	15.4	12.0
Average	16.6	17.8	17.9	17.3	16.1	14.3	13.7	13.3	13.4	13.3	14.0	15.1	15.2	
Absolute	13.0	12.0	14.0	15.0	14.0	12.0	11.0	10.0	12.0	12.0	12.0	12.0		

7. Plantation Absolute Max and Min

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Avg
1816	Abs.Max	23.3	23.9	24.5	21.1	17.8	18.3	18.3	21.0
	Abs.Min	16.1	15.6	13.3	12.2	13.3	12.2	11.1	13.4

Source: St Helena Records - Presumed to be taken by Beatson at Plantation

7. SCOTLAND RELATIVE HUMIDITY (%)

Elevation: 560 m

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1981									71.8	65.1	61.1	71.9	
1982	65.5	67.3	65.8	69.5	63.4	67.3	72.4	72.6	65.4	58.6	58.1	56.8	65.2
1983	56.4	55.5	62.3	58.0	61.0	57.0	63.0	60.0	54.0	56.0	49.0	56.0	57.4
1984	49.0	57.0	62.0	58.0	58.0	46.0	57.0	47.0	57.0	61.0	55.0	56.0	55.3
1985	51.0	60.0	60.0	59.0	59.0	59.0	54.0	62.0	61.0	58.0	54.0	59.0	58.0
Average	55.5	60.0	62.5	61.1	60.4	57.3	61.6	60.4	61.8	59.7	55.4	59.9	59.0

N.B. Above recordings taken at 0800 hrs only. They appear inaccurate.

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1988												81.8	
1989	84.8	79.2	78.0	84.9	82.8	83.4	83.5	86.0	88.9	88.1	85.1	88.3	84.4
Average	84.8	79.2	78.0	84.9	82.8	83.4	83.5	86.0	88.9	88.1	85.1	85.1	84.4

N.B. Wet and dry bulb recordings taken at 0800 and 1500 hrs

8. VARNEYS MEAN MAXIMUM AND MINIMUM TEMPERATURE oC

Elev: 525 m

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Ann Avg
1960-65 Max	24.2	25.5	26.3	24.8	24.1	22.8	22.1	20.6	20.5	19.4	21.4	22.3	22.8	19.3
1960-65 Min	17.0	17.8	18.2	17.7	16.2	14.9	14.2	13.9	13.9	13.9	15.2	15.5	15.7	

Source: A.Loveridge - Notes on Vertebrates of St Helena Island 1957-74

9. WOODLANDS FIELD AVERAGE MONTHLY MAXIMUM TEMPERATURE oC

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Ann Avg
1891	25.6	28.3	28.9	29.4	27.8	25.6	25.6	26.1	24.4	22.8	21.7			
1892	23.9	27.8	27.2	26.7	25.0	22.2	22.8	22.8	20.0	21.1	21.1	25.6	23.8	17.7
1893	22.8	23.9	25.0	25.6	27.2	24.4	25.0	21.1	19.4	21.7	20.6	22.8	23.3	17.3
1894	23.9	27.8	27.2	26.7	25.0	22.2	22.8	22.8	20.0	21.1	21.1	25.6	23.8	17.7
1895	23.3	26.1	26.7	24.4	26.7	22.2	24.4	23.3	21.7	20.6	21.1	21.7	23.5	17.4
1896														
1897	20.8	24.4	26.7	26.7	28.3	23.9	22.8	21.9	19.7	19.4	20.0	21.7	23.0	16.8
1898	23.3	22.8	23.9	23.3	22.2	22.2	22.2	22.2	16.7	17.2	22.2	22.2	21.7	15.7
Mean	23.4	25.9	26.5	26.1	26.0	23.3	23.7	22.9	20.3	20.6	21.1	23.2	23.2	17.1

Source: Blue Book

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Ann Avg
1888												21.2		
1889	22.7	24.0	24.5	21.6	21.4	19.9	19.5	18.1	18.7	18.5	18.9	20.6	20.7	18.1

9. WOODLANDS FIELD AVERAGE MONTHLY MINIMUM TEMPERATURE oC

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1891	15.0	15.6	15.6	15.6	12.8	11.1	10.6	10.3	10.3	10.6	11.4		
1892	13.3	15.0	14.4	13.3	12.2	10.6	9.4	8.9	9.4	9.4	10.6	11.1	11.5
1893	12.2	11.7	13.9	13.3	12.8	11.1	10.0	9.4	9.4	10.0	10.6	11.7	11.3
1894	13.3	15.0	14.4	13.3	12.2	10.6	9.7	8.9	9.4	9.4	10.6	11.1	11.5
1895	11.7	13.9	13.9	12.2	11.7	10.0	10.6	9.4	10.0	10.0	10.0	11.7	11.3
1896													
1897	11.7	12.2	13.3	13.3	11.1	10.6	9.4	8.3	8.9	8.9	9.4	10.0	10.6
1898	11.7	12.2	11.7	11.7	10.0	8.3	7.8	7.8	7.8	8.3	8.9	10.6	9.7
Mean	12.7	13.7	13.9	13.3	11.8	10.3	9.6	9.0	9.3	9.5	10.2	11.0	11.0

(1) Records at least towards the end appear to have been recorded on the 15 th and last day of the month only. Values could well be absolutes as a result.

Source: Blue Book

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1888												15.5	
1889	17.1	18.5	18.4	17.2	16.2	14.1	14.2	13.6	13.4	13.3	13.7	15.1	15.4

9. WOODLANDS FIELD RELATIVE HUMIDITY (%)

Elevation: 530 m

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1889	96.5	93.1	87.4	88.6	88.5	88.9	89.4	91.8	91.4	91.8	91.3	90.6	90.8

Readings taken at 0630 hrs

10. CLIFFTOP MEAN MAXIMUM AND MINIMUM TEMPERATURES (°C) AND RELATIVE HUMIDITY %

Elevation: 210 m

Temperature Years		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Abs	Ann Avg
1988	Max											24.2	25.0			
	Min											17.4	18.7			
1989	Max	27.0	28.4	29.2	26.5	27.2	24.9	23.4	22.0	22.9	22.2	22.6	24.1	25.0	31.4	21.7
	Min	20.0	21.0	21.6	20.4	19.7	17.2	16.9	16.4	16.5	16.4	16.9	18.1	18.4	14.8	

Relative Humidity

1988												78.7	82.7			
1989		78.3	77.9	77.2	79.8	76.3	78.3	77.0	77.8	76.1	76.8	76.6	73.8	77.2		

Readings at 0730 and 1800 hrs

11. RUPERTS MEAN MAXIMUM AND MINIMUM TEMPERATURES (°C)

Elevation: 20 m

Temperature Years		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Abs	Ann Avg
1988	Max										23.9	25.5	26.6			
	Min										20.3	21.4	23.0			
1989	Max	28.5	31.7	31.1	29.7	29.8	27.7	26.8	26.6	27.2	28.1	28.6				
	Min	24.7	27.3	28.0	27.5	27.2	25.7	25.5	25.6	26.0	27.2	27.3				

Relative Humidity

1988									74.4	73.2	73.2					
1989		74.4	73.0	75.1	78.4	76.1	76.4	79.4	81.0	81.7	80.6	81.3				

Readings average of max and min from hygrograph

12. HARPERS EDUCATION MEAN MAXIMUM AND MINIMUM TEMPERATURES (°C)

Elevation: 450 m

Temperature Years		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Abs	Ann Avg
1989	Max		23.4	24.5	22.5	21.7	20.1	18.8	18.5	18.1	18.3	19.2	19.2			
	Min		15.1	21.4	18.5	17.1	15.8	15.3	14.8	14.3	13.8	14.1	14.7			

Relative Humidity

1988																
1989		82.0	80.2	80.5	87.0	87.7	92.2	94.9	95.8	95.1	96.0	92.4	86.4	89.2		

Readings taken at 0800 hrs

13. ROSE BOWER MEAN MAXIMUM AND MINIMUM TEMPERATURES (°C)

Elevation: 525 m

Years		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Abs	Ann Avg
1988	Max								18.1	18.9	19.4	22.0				
	Min								13.6	13.6	14.4	15.8				
1989	Max	24.3	25.6	26.6	24.7	27.9	25.6	22.1	21.0	21.8	20.6	21.8	22.9	23.7		19.8
	Min	17.4	17.8	18.8	18.2	13.1	15.2	14.9	14.5	14.4	14.3	14.8	16.3	15.8		

APPENDIX 4

Wind Speed and Direction

- | | |
|-------------------|--|
| 1. Hutts Gate | 1925-60 mean monthly speeds only
1952-75 direction data |
| 2. Bottom Woods | 1977-89 Monthly speeds. Day/night ratio. Direction data |
| 3. Woody Ridge | 1980-87 |
| 4. Deadwood | 1980-87 |
| 5. St Mathews Vic | 1893-1903 wind force data
1893-1924 direction data |
| 6. Clifftop | 1989 |
| 7. Scotland | 1989 |
| 8. Woodlands Fld | 1989 |
| 9. Harpers Ed | 1989 |
| 10. Ruperts | 1989 |
| 11. Iron Pot | partial 1989 data |

1. HUTTS GATE WIND SPEED (km/day)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
Halcrow	453.7	453.7	434.8	453.7	415.9	415.9	472.6	586.0	623.8	623.8	548.2	529.3	500.9
Met Office 1925-60	434.8	378.1	397.0	397.0	397.0	378.1	453.7	491.5	586.0	586.0	510.4	472.6	456.8
Mean	444.3	415.9	415.9	425.4	406.5	397.0	463.2	538.8	604.9	604.9	529.3	501.0	478.9

Note: Only two sources of AVERAGE data are available and they vary from each other.
Both data reported as recorded in knots but at 0600 hrs by Met Office and 0700 hrs by Halcrow.
No recording height is stated so 5 m has been assumed and a 0.85 reduction factor used.

In 1964 Met Office made a probability estimate of maximum gust at Hutt's Gate as follows:

Max gust in one year 77.8 km/hr
Max gust in ten years 101.9 km/hr
Max gust in 100 years 126.0 km/hr

1. Hutt's Gate Wind Direction (Numbers of Observations)

Year	N	NE	E	SE	S	SW	W	NW	CALM	Total
1952	2	18	137	1023	272			2		1454
1953	6	13	113	1031	276	1			20	1460
1954		24	183	1078	152	2			21	1460
1955	1	24	183	998	241	2			11	1460
1956	4	34	107	1007	266	2		1	43	1464
1957	1	9	60	913	460	3		3	11	1460
1958		9	38	879	539				13	1478
1959	4	13	58	883	483	5			14	1460
1960		3	21	498	245				58	825
1961			19	519	86				408	1032
1962	1	5	15	528	192	2			183	926
1963		13	15	368	330			2	106	834
1964		4	12	390	280				67	753
1965		2	11	410	298	12			116	849
1966			8	283	281				202	774
1967		1	14	314	349	1			277	956
1968			5	161	315				704	1185
1969				85	219				929	1233
1970				79	228				858	1165
1971			7	263	165				663	1098
1972			2	1141	39				61	1243
1973										
1974			43	377	842	42	1		9	1314
1975		1	25	372	1107	91			36	1632
Mean per annum	0.1	0.5	2.2	25.7	14.5	0.6	0.0	0.1	9.5	
Per Cent	0.2	0.9	4.2	48.2	27.2	1.2	0.1	0.2	17.8	

N.B. The reason for different annual totals and some very calm years is not clear

2. BOTTON WOODS WIND RUN (km/day)

Station Elevation: 435 m. Recording height: 10 m														km/hr	
Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Hourly	
														Max Speed	Max Gust
1977	502	427	445	423	498	505	512	448	559	566	576	537	500	53.6	103.0
1978	391	448	473	523	420	427	519	623	587	555	562	534	505	53.6	103.0
1979	537	477	527	416	438	434	473	420	505	527	491	477	477	51.8	99.7
1980	431	434	448	374	445	402	427	505	438	527	544	491	455	46.4	88.9
1981	484	463	487	441	366	527	423	395	477	516	530	580	474	48.2	92.2
1982	505	484	487	477	384	431	491	544	431	495	477	569	481	50.0	95.8
1983	487	530	516	480	473	441	420	448	434	527	399	431	466	46.4	88.9
1984	413	438	491	455	491	388	495	452	484	563	502	448	468		
1985	448	384	455	445	420	413	455	541	480	498	480	466	457		
1986	445	399	480	434	445	391	434	466	541	416	516	480	454		
1987	416	477	470	484	448	452	466	516	616	491	562	441	487		
1988	480	441	413	544	455	495	548	541	516	580	500	407	493		94.5
1989	384	378	491	493	468	542	491	590	529	589	582	547	507		
Average	456	445	476	461	442	450	473	499	507	527	517	493	479		

N.B. Penman requires a recording height of 2m; the above values incorporate a reduction factor of 0.8 to allow for the recording elevation difference.

Only gale recorded at 0800 hrs on 8.8.1988; maintained for 1/2 hour.

Source: Original Records at Botton Woods

BOTTON WOODS MEAN DAY/NIGHT WIND SPEEDS - (km/day)

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1979-88 Day (0600-1800 hrs)													
	238	233	246	233	222	224	237	246	254	263	256	246	242
Night (1800-0600 hrs)													
	224	219	231	221	213	213	226	238	242	251	242	233	230
Ratio Day/Night													
	1.1	1.1	1.1	1.1	1.0	1.1	1.0	1.0	1.1	1.0	1.1	1.1	1.1
Maximum Day													
	445	445	463	445	463	480	480	605	480	463	445	427	
Maximum Night													
	427	445	427	445	427	463	463	534	463	480	445	391	
Maximum 24 hour													
	890	890	925	890	925	961	961	1210	961	961	890	854	

Note on Calculations: The above data were originally recorded in knots at 10 m above ground level. They have been converted to a wind run equivalent in km/day by multiplying the original data by 1.8532 (knots to km/hr), by 0.8 (10 m above ground level to 2 m) and by the appropriate number of hours represented - 12 in the case of day/night speeds and 24 for 24 hour speeds. For the sake of comparison a gale blowing for 24 hours would have a run of 1512 km on the same basis as the above data.

Source: Met Office Special Computer Run.

3. WOODY RIDGE WIND RUN (km/day)

Station Elevation: 510 m Recording height: 9 m

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1980			442	473	490	448	464	590	552	626	599		
1981		499	503	451	379	585	506	405	539	552	495	611	
1982	551	530	475	498	409	433	534	588	494	506	510	555	507
1983	475	462	416	423	472	441	423	410	414	577	406	470	449
1984	389	419	487	412	504	391	493	462	487	510		454	
1985	456	410	418	407	386	443	404	581	476	490	414	640	460
1986	500	459	461	487	490	411	433	490	675	412	602	541	497
1987	475	462	416	423	472	441	423	410	414	577	406	470	449
Average	474	463	452	447	450	449	460	492	506	531	490	534	472

N.B. A correction factor of 0 has been applied to reduce the data to a 2 metre standard

4. DEADWOOD WIND RUN (km/day)

Station Elevation: 490 m Recording height: 30 m

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1980	719	632	651	701	686	631	609	788	757	856	827		
1981		657	688	595	452	718	642	519	729	729	764	820	
1982	814	707	646	683	549	628	677	812	601	665	721	827	694
1983	781	712	736	675	665	592	633	611	604	760	608	683	672
1984	502	756	686	668	754	552	698	629	644	800	690	635	668
1985	594	525	760	537	575	544	532	844	668	775	680	722	646
1986	640	593	672	642	423	536	559		590	530	805	764	
1987	730	634	671										
Average	683	652	689	643	586	600	621	701	656	731	728	742	670

N.B. a correction factor of 0.78 has been used to convert the above data to a 2m standard.

5. ST MATHEWS VICARAGE WIND FORCE

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1893	2.6	2.2	3.2	3.0	2.1	3.3	3.1	4.1	3.9	3.5	3.6	3.1	3.1
1894	2.9	2.6	2.4	3.3	2.5	2.6	1.9	3.5	3.1	2.9	3.6	2.6	2.8
1895	2.9	2.3	3.0	2.1	2.0	2.6	2.2	2.7	3.4	3.8	3.5	3.0	2.8
1896	2.5	2.4	2.2	2.8	1.7	2.6	2.3	3.5	3.0	3.2	4.0	3.4	2.8
1897	2.6	2.5	1.8	2.9	2.0	2.5	2.6	3.2	4.3	3.7	3.6	3.6	2.9
1898	3.1	3.2	3.1	2.8	2.8	2.4	2.9	1.9	3.5	3.9	2.7	2.7	2.9
1899	2.6	2.3	2.1	2.1	1.8	2.2	1.9	3.0	4.0	3.1	2.9	3.3	2.6
1900	2.5	2.7	2.1	2.0	1.8	2.0	2.5	2.9	3.5	2.9	2.9	2.7	2.5
1901	2.4	2.4	2.3	2.6	2.8	1.3	2.4	2.4	3.8	3.7	3.0	3.0	2.7
1902	2.6	2.2	2.2	1.8	1.8	2.8	3.0	4.1	3.1	3.0	3.0	2.6	2.7
1903	2.7	2.4	2.0	2.3	2.0	2.5	3.0	3.9	3.2	4.1	3.5	2.5	2.8
Mean	2.7	2.5	2.4	2.5	2.1	2.4	2.5	3.2	3.5	3.4	3.3	3.0	2.8

(1) Wind Force measured on a scale of 1-12 (Beaufort presumably)

(2) Recordings at 0900 hrs are presumed to be point readings

(3) Anemograph dismantled 1903-04. Upon resumption monthly averages were not calculated. From 1908 daily data from St Mathews Vicarage were not entered in the Blue Book and wind speeds were not given in the summary tables.
Source: Blue Book

5. ST MATHEWS VICARAGE WIND DIRECTION

Year	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
1893	1			1	2	42	215	97	2								5
1894	1				13	40	203	99									9
1895			5	1	22	40	184	105	1								7
1896	1	1	3	5	19	17	171	131	4								14
1897	1	1	1	2	28	13	206	98	1								14
1898		1		3	14	26	205	101	6								9
1899		2	1		20	68	135	123	7								9
1900			4	4	35	95	166	45	13								3
1901		1	1		11	102	176	63	7								4
1902					9	118	151	79	1								7
1903					7	122	179	55									2
1904)	Anemograph repair data incomplete.																
1905)																	
1906						21	71	253	3								17
1907				1		24	110	219									11
1908			1			14	141	197	8								5
1909					1	6	129	208	15								6
1910						8	235	117									5
1911					1	30	181	142	2							2	7
1912						19	195	139	3								10
1913					1	25	192	132	2								13
1914						4	183	156	19								3
1915						4	237	96	15								13
1916					1	7	234	103	17								14
1917					5	14	256	62	14								14
1918					3	14	238	103	3								4
1919	Anemometer sent for repairs																
1920						7	87	100	144								28
1921					2	6	166	125	36								30
1922					6	32	245	68									11
1923					1	64	235	42									23
1924						14	248	14									60
Mean	0	0	1	1	7	34	185	113	11	0	0	0	0	0	0	0	12
Per Cent	0	0	0	0	2	9	51	31	3	0	0	0	0	0	0	0	3

6. CLIFFTOP WIND RUN (km/day)

Station Elevation: 210 m Recording height: 2 m

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1989	280	313	322	422	333	388	341	375	302	392	355	365	349
1990	324	206	307										
	302	260	315	422	333	388	341	375	302	392	355	365	
Day/Night Ratio (0730-1800 & 1800-0730)													
1989						1.1	1.35	1.26	1.96	1.28	1.40	1.38	
1990	1.21	1.15	0.97										

7. SCOTLAND WIND RUN (km/day)

Station Elevation: 560 m Recording height: 2 m

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1988												144	
1989	136	148	177	178	148	164	147	190	165	190	165	175	165
1990	146	62	104										

8. WOODLANDS FIELD WIND RUN (km/day)

Station Elevation: 530 m Recording height: 2 m

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1988												95	
1989	136	172	231	235	211	215	193	264	248	294	275	260	228
1990	221	154	178										

9. HARBERS WIND RUN (km/day)

Station Elevation: 450 m Recording height: 2 m

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1989	119	137	192	180	134	106	86	203	165	216	198	188	160
1990	169	97	130										

10. RUPERTS WIND RUN (km/day)

Station Elevation: 20 m Recording height: 2 m

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1988										221	207	187	
1989	166	184	190	188	171	167	154	179	171	207	208		180
1990	149	165	147										

N.B. Ruperts data have been multiplied by 0.85 to reduce to 2 m high equivalent

11. IRON POT WIND RUN (km/day)

Station Elevation: 560 m Recording height: 2 m

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1989											208	75	
1990	44	31	80										

N.B. Anemometer situated on top of wind mill tower. Readings have been reduced by 0.8

APPENDIX 5

Sunshine and Cloud Cover

1. Hutts Gate	1952-75	Fog days per month
2. Bottom Woods	1977-89	Fog days per month
1. Hutts Gate	1928-75	Cloud cover 1942-51 missing
2. St Mathews Vic	1893-1924	Cloud cover
3. Clifftop	1989	Cloud cover
4. Jamestown	1854-62	Cloud Cover
1. Bottom Woods	1977-90	Sunshine hours
2. Scotland	1989	Sunshine hours
	1989	Irradiation
3. Woodlands Fld	1989	Sunshine hours
4. Clifftop	1989	Irradiation

1. NUMBER OF DAYS WITH OCCURENCE OF FOG AT HUTTS GATE

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1952	8	13	9	14	16	16	21	12	16	15	16	14	170
1953	9	16	8	9	10	19	8	18	11	6	11	6	131
1954	8	18	7	13	7	15	17	3	20	10	6	7	131
1955	6	7	9	9	8	9	14	13	18	19	9	9	130
1956	11	12	10	15	10	8	10	14	10	12	11	2	125
1957	12	10	21	10	8	17	12	22	23	20	5	24	184
1958	15	17	14	11	10	16	9	15	23	22	14	11	177
1959	7	11	15	10	13	11	19	11	19	22	21	16	175
1960	16	16	14	13	8	15	17	18	22	19	14	21	193
1961	21	11	23	22	15	16	14	10	21	18	12	17	200
1962	15	14	18	12	6	7	12	18	19	22	18	13	174
1963	13	13	6	18	5	11	17	21	11	16	11	13	155
1964	16	8	18	12	13	13	7	16	21	15	11	9	159
1965	17	13	13	9	2	13	14	11	16	9	8	15	140
1966	18	15	10	7	12	4	15	12	17	13	17	14	154
1967	5	11	18	19	18	21	6	17	17	20	6	5	163
1968	16	16	10	15	9	13	16	16	14	20	12	16	173
1969	21	15	18	4	11	14	13	9	15	14	15	12	161
1970	22	10	15	5	2	10	17	19	23	18	10	6	157
1971	13	15	19	13	14	13	20	15	13	19	6	9	169
1972	13	4	7	8	7	14	11	10	12	16	16	16	134
1973	6	6	9	6	5	2	5	12	9	5	6	9	80
1974	9	11	15	8	7	5	4	10	5	17	9	7	107
1975	11	2	6	5	9	4	9	10	22	16	16	12	122
Average	12.8	11.8	13.0	11.1	9.4	11.9	12.8	13.8	16.5	16.0	11.7	11.8	152.7

2. NUMBER OF DAYS WITH OCCURENCE OF FOG AT BOTTOM WOODS

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1977	9	5	11	3	1	11	13	11	23	12	11	7	117
1978	2	6	14	11	6	0	11	22	16	9	12	7	116
1979	11	15	16	8	8	7	20	13	7	11	13	13	142
1980	8	7	9	5	8	11	6	5	8	13	11	10	101
1981	11	9	10	5	2	5	7	10	7	9	2	11	88
1982	15	15	12	13	2	9	9	14	4	7	9	5	114
1983	8	1	10	8	10	11	10	8	3	5	9	12	95
1984	3	9	5	8	3	0	3	1	7	10	11	8	68
1985	6	11	11	11	7	1	3	9	14	15	5	5	98
1986	2	4	6	10	1	6	6	5	11	6	9	10	76
1987	6	8	10	2	4	5	12	9	7	6	13	4	86
1988	7	2	1	5	2	5	7	4	10	6	6	9	64
1989	8	1	4	14	8	10	12	16	13	14	15	10	125
Average	7.4	7.2	9.2	7.9	4.8	6.2	9.2	9.8	10.0	9.5	9.7	8.5	99.2

N.B. Fog defined as period when visibility less than 1000 metres in any direction. Continuous 24 hour visual observation for both stations.

1. HUTTS GATE CLOUD COVER (Tenths)

Station Elevation: 609 m

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1928	8.8	8.7	8.3	8.7	7.9	8.7	8.9	9.5	9.7	9.5	9.9	9.5	9.0
1929	9.6	9.6	9.3	7.8	8.5	8.2	9.3	8.8	9.8	9.8	9.0	10.0	9.1
1930	8.9	8.1	7.3	9.5	7.6	9.0	9.4	9.4	9.9	9.0	9.9	8.7	8.9
1931	9.0	8.7	9.1	8.9	8.1	8.7	9.0	9.8	9.7	9.7	9.2	9.8	9.1
1932	9.4	9.1	9.0	8.5	8.8	9.1	9.1	8.7	9.9	9.8	9.7	9.9	9.3
1933	8.4	9.1	8.7	8.6	7.9	9.1	8.9	9.5	9.8	9.7	9.6	9.4	9.1
1934	8.9	8.8	9.2	9.2	8.8	7.5	7.7	9.5	9.5	9.7	9.2	9.5	9.0
1935	9.4	8.2	9.0	9.2	9.4	9.1	9.1	8.7	9.9	9.7	9.4	9.4	9.2
1936	9.8	9.4	9.3	9.0	9.7	8.4	8.6	9.2	9.7	10.0	9.6	8.9	9.3
1937	9.7	9.1	9.4	9.0	8.1	8.8	9.6	10.0	10.0	10.0	9.9	10.0	9.5
1938	9.9	8.6	9.4	8.0	7.3	8.5	8.8	9.9	9.5	9.9	8.9	9.8	9.0
1939	9.7	9.4	9.1	8.9	8.5	6.4	9.6	8.6	9.2	9.9	9.7	9.9	9.1
1940	9.5	9.6	8.2	9.2	9.0	8.1	8.2	9.3	9.9	9.3	9.4	9.6	9.1
1941	8.4	9.0	9.4	9.7	8.5	8.7	8.5	9.1	9.9	9.8	9.7	9.5	9.2
1942													
1943													
1944													
1945													
1946													
1947													
1948													
1949													
1950													
1951													
1952	8.6	8.4	7.0	8.1	7.5	8.5	9.0	9.1	9.3	9.1	9.0	8.6	8.5
1953	8.6	8.4	7.0	8.1	7.5	8.5	9.0	9.1	9.3	9.1	9.0	8.6	8.5
1954	8.3	9.4	8.1	8.3	8.6	8.9	9.1	9.1	9.9	9.6	8.9	8.8	8.9
1955	7.9	8.6	8.3	8.9	7.8	8.4	8.6	9.1	9.6	9.6	9.1	8.9	8.7
1956	8.5	8.5	8.6	9.1	8.3	8.4	8.3	8.6	9.0	9.6	9.1	8.1	8.7
1957	8.6	8.6	8.8	8.1	8.3	8.6	8.4	9.3	9.5	9.4	9.8	9.0	8.9
1958	7.9	8.4	8.3	8.6	8.5	8.6	8.4	9.1	9.3	9.5	8.8	8.1	8.6
1959	7.8	8.1	7.9	8.4	9.0	7.6	7.8	9.4	9.6	9.4	9.5	8.5	8.6
1960	8.8	7.9	8.0	8.1	7.8	7.9	8.8	8.9	9.0	9.4	9.3	9.1	8.6
1961	8.9	8.1	8.9	9.0	8.8	8.5	8.6	8.9	9.3	9.3	9.1	8.9	8.8
1962	8.3	7.8	8.1	7.9	7.4	8.4	8.3	9.0	9.6	9.5	9.1	8.0	8.4
1963	8.3	8.5	7.8	8.1	8.1	8.3	8.3	9.3	8.9	9.4	8.1	8.3	8.4
1964	8.5	8.0	8.9	8.6	7.8	8.5	8.1	8.8	9.3	9.3	9.0	8.1	8.6
1965	8.5	8.4	8.5	8.1	8.3	8.6	8.5	8.9	8.8	9.0	8.8	8.9	8.6
1966	9.0	8.4	8.4	8.0	7.5	8.0	8.9	8.8	9.6	9.0	9.1	8.3	8.6
1967	8.0	8.5	9.0	8.8	9.1	9.1	8.8	9.3	9.1	9.4	8.3	8.3	8.8
1968	8.9	9.0	8.1	8.8	8.6	8.5	8.9	9.4	9.3	9.4	9.4	8.9	8.9
1969	9.1	8.8	8.9	8.6	9.0	9.0	8.9	9.0	9.4	9.0	8.9	8.9	9.0
1970	9.3	8.9	8.9	8.3	8.3	8.5	8.8	9.4	9.8	9.1	8.9	8.5	8.9
1971	8.5	8.8	9.0	8.9	8.6	8.9	9.1	9.4	9.3	9.1	8.6	8.6	8.9
1972	8.5	7.8	8.3	8.3	7.8	8.9	8.6	8.5	9.1	8.6	9.0	9.3	8.5
1973	8.8	9.0	9.4	8.1	8.4	8.8	8.6	9.0	8.9	8.9	8.6	8.6	8.8
1974	8.5	8.6	8.6	8.4	8.6	8.3	8.6	8.8	8.8	9.4	8.8	8.4	8.6
1975	9.8	8.0	7.8	9.3	7.6	7.6	8.1	8.9	9.4	8.9	8.8	8.9	8.6
Average	8.8	8.6	8.6	8.6	8.3	8.5	8.7	9.1	9.4	9.4	9.2	9.0	8.8

N.B. Readings from 1928-41 were taken as tenths at 0630 hrs

Readings from 1952-75 were taken in Oktas at 0900 hrs and have been converted to tenths.

Source: 1928-41 Blue Book. 1952-75 records at Bottom Woods

2. ST MATHEWS VICARAGE CLOUD COVER - Recorded in tenths at 0900 hrs only

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1893	9.4	8.6	8.9	8.4	6.9	8.9	8.3	9.5	10.0	8.9	9.7	9.2	8.9
1894	8.3	8.4	8.4	8.7	8.4	8.8	7.4	9.0	9.1	8.9	9.4	8.4	8.6
1895	9.0	8.7	8.9	8.5	7.6	8.7	7.9	8.3	8.8	9.4	9.1	9.0	8.7
1896	8.5	8.5	8.3	8.6	7.6	8.0	8.5	9.4	8.6	9.2	8.9	9.0	8.6
1897	9.0	8.4	7.7	8.3	8.3	7.7	8.6	9.0	9.5	9.2	8.8	8.6	8.6
1898	8.5	7.9	8.0	7.5	8.9	7.5	7.7	8.5	9.5	9.6	8.0	8.8	8.4
1899	8.4	8.7	8.4	8.5	8.2	9.3	8.6	9.2	9.9	9.4	8.8	9.6	8.9
1900	8.8	9.1	8.6	8.6	8.0	7.8	8.2	9.4	8.6	9.0	8.4	9.3	8.7
1901	9.0	7.6	8.4	8.6	8.3	7.0	7.5	8.7	9.5	8.6	7.5	8.3	8.2
1902	7.3	3.7	7.2	7.3	8.2	8.6	8.8	9.8	9.4	8.5	8.6	7.9	7.9
1903	7.2	8.7	7.7	8.5	8.0	9.0	8.3	9.2	9.2	9.6	9.1	9.1	8.6
1904	9.1	7.7	7.2	8.0	8.6	7.9	8.2	9.2	8.4	8.6	8.3	8.1	8.3
1905	8.4	8.0	7.0	7.0	7.8	7.7	8.2	8.0	8.0	7.0	6.9	8.3	7.7
1906	7.6	8.7	8.5	7.7	7.8	8.8	9.2	9.1	8.3	8.4	8.6	8.0	8.4
1907	7.2	7.9	8.0	9.5	7.7	7.4	7.9	6.3	8.9	8.6	8.6	7.6	8.0
1908	9.5	7.8	6.0	8.8	8.5	7.6	9.0	9.9	8.2	8.4	8.5	9.5	8.5
1909	9.5	8.9	8.2	8.1	7.6	6.6	9.1	9.1	9.6	8.2	5.9	7.9	8.2
1910	8.2	9.0	8.9	8.6	7.3	9.8	8.7	8.5	9.2	10.0	8.7	2.5	8.3
1911	8.2	8.8	7.0	8.0	9.2	8.2	9.6	9.3	8.6	8.3	6.2	8.0	8.3
1912	7.7	7.9	7.8	8.1	7.4	8.8	7.8	8.7	8.5	8.8	9.3	8.7	8.3
1913	8.1	6.8	7.1	8.2	7.7	7.7	8.6	8.8	9.1	7.4	7.8	8.4	8.0
1914	8.4	8.1	8.3	9.1	8.8	7.5	8.6	8.3	7.4	8.4	9.0	8.6	8.4
1915	8.9	8.2	8.7	8.5	8.0	8.7	9.5	9.6	8.4	8.5	7.8	9.4	8.7
1916	8.3	7.0	8.6	8.6	9.1	8.6	9.1	9.0	8.8	7.8	8.6	8.4	8.5
1917	8.4	8.3	9.6	8.6	8.9	9.0	9.1	9.7	10.0	10.0	9.5	9.1	9.2
1918	8.9	8.7	8.4	8.0	8.9	9.4	9.3	8.6	8.0	9.6	9.3	9.3	8.9
1919	9.5	9.7	8.0	9.2	9.8	8.6	9.8	9.4	9.7	8.4	9.2	9.7	9.3
1920	8.6	8.2	8.0	7.7	9.2	8.1	8.9	9.5	9.0	9.1	9.1	9.6	8.8
1921	7.5	7.1	7.6	8.2	9.1	7.6	8.7	10.0	10.0	9.4	9.8	8.9	8.7
1922	8.5	9.2	8.7	8.6	8.7	8.7	9.7	9.9	9.2	9.1	8.2	8.3	8.9
1923	7.1	7.7	8.6	8.5	9.3	8.8	9.5	10.0	9.7	8.2	6.7	7.6	8.5
1924	8.7	7.1	8.4	8.6	9.0	9.5	9.8	10.0	9.5	8.4	9.3	8.1	8.9
Mean	8.4	8.1	8.1	8.3	8.3	8.3	8.7	9.1	9.0	8.8	8.5	8.5	8.5

(1) Measured in tenths

(2) Recording at 0900 hrs only

Source: Blue Book

1. BOTTOMWOODS SUNSHINE HOURS

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	% max
1977					122	73	77	80	42	65	20	74		
1978	189	130	104	75	75	95	129	61	77	22	59	101	1116	25
1979	101	134	109	139	192	127	122	103	98	54	48	63	1289	29
1980	141	146	169	150	166	152	109	89	76	48	70	49	1365	31
1981	136	143	136	169	165	162	99	114	57	71	126	41	1417	32
1982	115	116	162	86	98	89	108	53	103	104	81	108	1224	28
1983	139	145	132	148	116	103	82	93	98	71	92	97	1313	30
1984	104	129	137	143	149	163	131	166	85	60	46	72	1385	31
1985	179	140	104	136	123	105	130	64	42	51	62	129	1267	29
1986	151	157	164	139	168	116	100	156	40	109	52	67	1420	32
1987	168	147	164	174	144	133	129	120	55	73	80	162	1547	35
1988	107	194	197	131	188	119	105	95	41	47	98	129	1451	33
1989	208	221	199	114	170	141	95	72	73	42	55	85	1475	33
1990	119	168	166											
Average	143	152	149	134	144	121	109	97	68	63	68	90	1356	31
Maximum	400	353	378	353	354	338	352	360	361	386	398	403	4434	
% Max	36	43	40	38	41	36	31	27	19	16	17	22	31	
	52	63	53	32	48	42	27	20	20	11	14	21		

2. SCOTLAND SUNSHINE HOURS

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1988											156	148	
1989	209	246	226	148	193	154	123	94	99	102	105	104	1803
1990	146	146	170										
	178	196	198	148	193	154	123	94	99	102	131	126	1741
Maximum	400	353	378	353	354	338	352	360	361	386	398	403	4434
% Max	52	70	60	42	55	46	35	26	28	26	27	26	39
	52	70	60	42	55	46	35	26	27	26	26	26	

2. SCOTLAND SOLAR IRRADIATION (MJ/m2)

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1989					18.1	16.5	12.3	12.2	16.7	16.9	19.0	17.6	
1990	19.5	19.3	19.4										

N.B. Recorded with a silicon cell solarimeter

3. WOODLANDS FIELD SUNSHINE HOURS

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1989	209	235	220	148	190	153	123	126	111	143	146	137	1941
1990	185	149	174										
	197	192	197	148	190	153	123	126	111	143	146	137	1863
Maximum	400	353	378	353	354	338	352	360	361	386	398	403	4434
% Max	52	67	58	42	54	46	35	35	31	37	38	34	44

4. CLIFFTOP SOLAR IRRADIATION (MJ/m2)

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1989					21.0	17.8	15.5	14.7	18.6	18.8	20.9	19.1	
1990	21.8	21.7	21.8										

N.B. Recorded with a silicon cell solarimeter

Ratio Clifftop/Scotland Irradiation

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.12	1.12	1.12		1.16	1.08	1.26	1.20	1.11	1.11	1.10	1.09

3. CLIFFTOP CLOUD COVER (tenths)

Elevation: 210 m

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
1989 a.m.	6.4	5.5	5.4	5.8	6.4	6.0	7.8	8.4	8.6	8.6	8.6	8.3	7.1
1989 p.m.	4.9	3.8	4.4	5.4	5.3	5.6	7.4	7.9	7.5	7.8	7.0	6.4	6.1
Average	5.6	4.6	4.9	5.6	5.8	5.8	7.6	8.1	8.1	8.2	7.8	7.3	6.6
Ratio a.m./p.m.	1.3	1.5	1.2	1.1	1.2	1.1	1.1	1.1	1.2	1.1	1.2	1.3	1.2

N.B. Readings taken at 0730 and 1800 hrs in oktas and converted to tenths.

4. JAMESTOWN CLOUD COVER (tenths)

(readings taken at 0930 and 15.30)

Elevation: 15 m

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
1854	2.1	3.8											
1855	4.7	5.5	5.5	4.2	5.6	7.2	9.2	8.3	7.9	4.9	1.5	4.6	5.8
1856	5.0	4.3	2.3	3.6	4.7	6.7	7.6	5.7	4.8	4.0	4.7		
1857				8.2	6.9	8.0	6.2	6.8	2.5	3.5	2.2	4.9	
1858	4.6	4.3	6.3	3.3	4.1	5.3	9.4	9.1	5.5	5.8	5.4	4.6	5.6
1859	5.0	6.6	5.7	6.4	6.8	7.4	7.5	8.0	8.5	7.5	6.8	7.3	7.0
1860	8.3	6.9	5.9	5.1	7.1	7.5	8.5	7.3	8.0	7.5	8.5	7.8	7.4
1861	6.8	7.1	6.9	6.9	7.1	7.5	6.3	5.6	6.0	6.1	5.3	4.0	6.3
1862	4.6	4.0	3.7	3.6									
	5.1	5.3	5.2	5.2	6.0	7.1	7.8	7.3	6.2	5.6	4.9	5.5	6.4

Source: Met. Office Archives

APPENDIX 6

Evaporation and Evapotranspiration

- | | | |
|-----------------|---------|---------------|
| 1. Bottom Woods | 1978-89 | monthly Eto |
| | 1989 | evaporation |
| 2. Scotland | 1989 | monthly Eto |
| | 1989 | evaporation |
| 3. Longwood | 1988 | evaporation |
| 4. Clifftop | 1988 | Eto part year |

Station by station calculations of Eto

1. BOTTOM WOODS POTENTIAL EVAPOTRANSPIRATION (mm)

Elevation: 435 m.

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1978	155	120	110	98	80	90	89	79	97	97	99	127	1241
1979	125	117	115	111	111	88	85	91	103	95	93	111	1245
1980	143	128	132	116	107	86	91	93	91	96	111	101	1295
1981	122	126	134	119	106	93	79	91	92	102	123	99	1286
1982	131	114	135	90	95	77	87	76	100	117	113	128	1263
1983	141	132	133	117	102	81	82	91	109	111	113	124	1336
1984	130	128	131	113	107	101	104	116	109	103	103	119	1364
1985	161	135	109	106	96	91	91	89	83	88	110	138	1297
1986	151	139	143	108	111	89	90	110	83	118	106	117	1365
1987	154	134	142	131	108	97	91	101	95	108	108	155	1424
1988	126	162	157	112	116	92	87	78	84	92	128	144	1378
1989	180	178	185	105	115	93	83	84	92	94	103	124	1436
Average	143	134	136	111	105	90	88	92	95	102	109	124	1328

BOTTOMWOODS CLASS A EVAPORATION (mm)

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1988											124	124	
1989	152	156	159	102	116	101	96	107	99	118	140	169	1515

BOTTOMWOODS ETo/Pan Ratios

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
1988											1.0	1.2	
1989	1.2	1.1	1.2	1.0	1.0	0.9	0.9	0.8	0.9	0.8	0.7	0.7	0.95

2. SCOTLAND POTENTIAL EVAPOTRANSPIRATION (mm)

Elevation: 560 m.

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1988												128	
1989	149	160	156	100	97	76	73	74	82	94	102	105	1268
1990	128	113	127										
Average	139	137	142	100	97	76	73	74	82	94	102	116	

SCOTLAND CLASS A EVAPORATION (mm)

[illegible]

SCOTLAND Eto/Bpan Ratios

[illegible]

Elevation: 525 m.

4. CLIFFTOP POTENTIAL EVAPOTRANSPIRATION (mm)

Elevation: 210 m.

[illegible]

STATION BY STATION WEATHER DATA FOR CALCULATIONS OF E_{to} (short grass transpiration)

Jamestown (15 m)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Data Source
Max Temp (oC)	28.0	28.9	29.2	28.8	27.9	26.1	24.8	24.7	23.8	24.3	25.2	26.3	26.5	J'town Vic 1985-
Min Temp (oC)	23.1	24.3	24.5	24.1	22.8	21.1	20.1	19.9	19.6	19.9	20.6	21.8	21.8	J'town Vic 1985-
R.H. (%)	74.0	73.0	75.0	78.0	76.0	76.0	77.0	74.0	74.0	74.0	73.0	73.0	74.8	(1)
Sun (hrs/day)	5.3	6.2	5.5	5.1	5.4	4.6	4.0	3.5	2.6	2.3	2.6	3.3	1549.8	(3)
Windrun (km/day)	199.0	221.0	185.0	174.0	162.0	137.0	146.0	143.0	192.0	196.0	210.0	228.0	182.8	(2)
E _{to} (mm/month)	167	165	158	128	117	93	93	103	108	120	127	140	1519	

Notes on data sources: (1) Composite of limited 1988-89 data from Ruperts and Clifftop plus 19th century data

(2) Ratio ruperts 1988-89 data to Bottom Woods averages.

(3) 2 hrs per day assumed lost. Ratio of this to max sun possible applied to Clifftop data

Clifftop (210 m)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Data Source
Max Temp (oC)	26.6	27.6	28.4	27.8	27.4	25.3	24.1	23.1	22.0	22.4	23.1	25.1	25.2	(1)
Min Temp (oC)	20.0	21.2	21.4	21.0	19.7	18.0	17.0	16.8	16.5	16.8	17.5	18.7	18.7	(1)
R.H. (%)	74.0	73.0	75.0	78.0	76.0	76.0	77.0	74.0	74.0	74.0	73.0	73.0	74.8	(2)
Sun (hrs/day)	6.2	7.3	6.5	6.1	6.4	5.4	4.7	4.2	3.1	2.7	3.1	3.9	1834.0	Scotland x 1.168
Windrun (km/day)	319.2	311.5	333.2	322.7	309.4	315.0	331.1	349.3	354.9	368.9	361.9	345.1	335.2	(3)
E _{to} (mm/month)	187	182	183	147	137	112	111	122	120	132	139	159	1731	

(1) Jamestown average minus relative difference 1988-89

(2) As for Jamestown; comparison between Ruperts and Clifftop shows former 1-2% higher but Ruperts are max/min Clifftop 0730 hrs and 1800 hrs ie max is usually missed at Clifftop

(3) Taken as 70 % of Bottom Woods based upon 1988-89 comparisons

B. Woods (435 m)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Data Source
Max Temp (oC)	22.8	23.6	23.4	22.5	21.4	19.9	18.7	18.3	18.4	18.7	19.5	20.7	20.7	1976-89
Min Temp (oC)	17.5	18.5	18.6	18.1	16.9	15.5	14.5	14.1	14.1	14.2	14.9	16.0	16.1	1976-89
R.H. (%)	84.8	86.1	86.5	85.2	82.2	81.8	82.6	83.8	83.7	84.2	84.4	83.8	84.1	1976-89
Sun (hrs/day)	4.6	5.4	4.8	4.5	4.7	4.0	3.5	3.1	2.3	2.0	2.3	2.9	1356.0	1976-89
Windrun (km/day)	456.0	445.0	476.0	461.0	442.0	450.0	473.0	499.0	507.0	527.0	517.0	493.0	478.8	1976-89
E _{to} (mm/month)	143	133	131	110	104	91	86	91	93	102	107	121	1312	1976-88

Harpers (455 m)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Data Source
Max Temp (oC)	22.3	22.9	22.6	22.3	21.3	19.3	18.4	18.1	17.8	18.0	19.2	20.3	20.2	(1)
Min Temp (oC)	17.7	18.9	19.0	18.4	17.2	15.4	14.8	14.4	14.5	14.4	15.1	16.2	16.3	(2)
R.H. (%)	84.8	86.1	86.5	85.2	82.2	81.8	82.6	83.8	83.7	84.2	84.4	83.8	84.1	(3)
Sun (hrs/day)	5.3	6.3	5.6	5.2	5.4	4.6	4.1	3.6	2.7	2.3	2.7	3.4	1570.2	Btm Wds + 15.8%
Windrun (km/day)	155.0	151.3	161.8	156.7	150.3	153.0	160.8	169.7	172.4	179.2	175.8	167.6	162.8	(4)
E _{to} (mm/month)	134	128	126	103	94	75	76	82	84	91	98	112	1203	

(1) Scotland plus 0.4 oC based upon 1989 comparison

(2) Scotland plus 1.1 oC based upon 1989 comparison

(3) Estimated to be the same as Scotland

(4) As Scotland based on 1989 comparisons

STATION BY STATION WEATHER DATA FOR CALCULATIONS OF ETo (short grass transpiration) (cont)

Scotland (560 m)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Data Source
Max Temp (oC)	21.9	22.5	22.2	21.9	20.9	18.9	18.0	17.7	17.4	17.6	18.8	19.9	19.8	1981-89
Min Temp (oC)	16.6	17.8	17.9	17.3	16.1	14.3	13.7	13.3	13.4	13.3	14.0	15.1	15.2	1981-89
R.H. (%)	84.8	86.1	86.5	85.2	82.2	81.8	82.6	83.8	83.7	84.2	84.4	83.8	84.1	Btm Wds
Sun (hrs/day)	5.3	6.3	5.6	5.2	5.4	4.6	4.1	3.6	2.7	2.3	2.7	3.4	1570.2	Btm Wds + 15.8
Windrun (km/day)	155.0	151.3	161.8	156.7	150.3	153.0	160.8	169.7	172.4	179.2	175.8	167.6	162.8	0.34 of Btm Wd

Eto (mm/month) 133 127 124 102 92 74 75 81 83 91 97 111 1190

Note: Reduction factors based upon Bottom Woods apply 1988-89 differences between Scotland and Bottom Woods to long term Bottom Woods averages

Longwood (525 m)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Data Source
Max Temp (oC)	21.5	22.3	21.1	21.4	20.2	18.7	17.5	17.1	17.2	17.6	18.3	19.3	19.4	B.Woods -1.2oC
Min Temp (oC)	16.2	17.3	17.4	16.8	15.6	14.3	13.3	12.9	12.9	13.1	13.7	14.8	14.9	B.Woods -1.2oC
R.H. (%)	85.0	86.4	88.6	88.0	86.6	86.4	86.4	88.8	88.8	89.0	86.3	85.7	87.2	1841-45
Sun (hrs/day)	4.0	4.7	4.2	3.9	4.1	3.5	3.1	2.7	2.0	1.8	2.0	2.5	1186.5	Est. 0.875 of B.Wo
Windrun (km/day)	456.0	445.0	476.0	461.0	442.0	450.0	473.0	499.0	507.0	527.0	517.0	493.0	478.8	Btm. Woods

Eto (mm/month) 131 122 113 96 88 73 74 74 77 86 97 109 1140

H. Gate (627 m)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Data Source
Max Temp (oC)	20.3	21.1	21.0	20.5	19.4	18.0	16.7	16.2	16.0	16.5	17.5	19.0	18.5	1926-75
Min Temp (oC)	15.7	16.4	16.6	16.3	15.3	14.4	13.5	12.9	12.8	12.6	13.4	14.1	14.5	1926-75
R.H. (%)	85.0	86.4	88.6	88.0	86.6	86.4	86.4	88.8	88.8	89.0	86.3	85.7	87.2	Longwood
Sun (hrs/day)	3.1	3.6	3.2	3.0	3.1	2.7	2.3	2.1	1.5	1.3	1.5	1.9	908.5	Est. 0.67 of B.Wo
Windrun (km/day)	456.0	445.0	476.0	461.0	442.0	450.0	473.0	499.0	507.0	527.0	517.0	493.0	478.8	Btm. Woods

Eto (mm/month) 118 108 103 87 80 68 68 69 72 80 91 103 1047

WdlandsFld(530m)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Data Source
Max Temp (oC)	21.9	22.5	22.2	21.9	20.9	18.9	18.0	17.7	17.4	17.6	18.8	19.9	19.8	Scotland (1989
Min Temp (oC)	16.6	17.8	17.9	17.3	16.1	14.3	13.7	13.3	13.4	13.3	14.0	15.1	15.2	comparison
R.H. (%)	84.8	86.1	86.5	85.2	82.2	81.8	82.6	83.8	83.7	84.2	84.4	83.8	84.1	Scotland
Sun (hrs/day)	5.5	6.5	5.7	5.4	5.6	4.8	4.2	3.7	2.8	2.4	2.8	3.5	1622.1	Scotland +3.3%
Windrun (km/day)	214.0	208.8	223.3	216.3	207.4	211.1	221.9	234.1	237.9	247.3	242.6	231.3	224.7	Scotland + 38%

Eto (mm/month) 138 132 127 106 97 78 78 84 86 95 101 115 1237

APPENDIX 7

Ascension Island

Rainfall	Georgetown (Garrison):	1854-65
		1859-1975 (with gaps)
	H.M.S. Tortoise:	1853-66 (with gaps)
	God Be Thanked:	1860-62
	Green Mountain:	1859-65
		1884-1922
	Two Boats:	1968-77
	Airhead:	1962-89
	Traveller's Hill	1987-89
Temperature	Georgetown (Garrison)	1923-75 (partially analyzed)
	Green Mountain	1919
	Airhead	1942-47
		1957-67
Relative Humidity	Georgetown (Garrison)	1923-75 (partially analyzed)
Sunshine	Georgetown (Garrison)	1923-70 (partially analyzed)
Cloud Cover	Georgetown (Garrison)	1955-59
Fog Incidence	Green Mountain	1931-35
Wind	Georgetown (Garrison)	1923-70 (partially analyzed)

ASCENSION GARRISON ACTUAL AND AVERAGE RAINFALL (mm)

Station Elevation: 16 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total	5 year Mean
1895													143.0	
1896													116.8	
1897													215.1	172.2
1898													54.6	155.7
1899	3.8	37.6	38.6	31.8	119.1	56.9	23.1	2.3	6.1	5.1	4.6	2.5	331.5	152.1
1900	1.0	2.0	1.5	4.8	17.5	8.1	6.4	9.1	2.5	0.8	4.1	2.8	60.7	124.5
1901	8.1	2.8	5.6	32.5	6.4	17.8	3.6	7.6	6.1	2.5	2.0	3.8	98.8	125.2
1902	1.8	0.5	1.8	5.1	6.6	12.2	16.5	13.5	7.6	4.1	1.0	6.1	76.7	73.9
1903	5.1	6.9	6.4	9.1	1.3	0.5	4.6	5.6	4.1	9.4	1.5	3.8	58.2	
1904	5.8	1.8	0.8	25.1	14.5	10.4	6.6	3.3	3.8	1.8	1.0	0.0	74.9	
1905	0.0	0.0	9.4	5.3	1.0	6.9	2.3	2.5	0.0					
1906	2.0	0.8	2.3				26.4		3.0	3.3	0.0	1.3		
1907	0.3	0.0	12.7	3.6	21.6	12.2	8.1	93.2	9.7	11.7	9.4	9.1	191.5	
1908	1.3	2.5	2.0	15.0	1.3	52.6	3.6	2.3	8.1	11.4	30.5	4.8	135.4	116.0
1909	3.0	3.6	5.6	109.7	4.3	21.1	32.8	26.9	24.6	14.7	4.8	1.8	253.0	116.0
1910	0.8	11.7	5.8	17.0	44.5	3.6	18.0	22.1	17.0					77.7
1911		19.6	4.6	17.8	3.8	6.9	1.5	7.4	1.5	10.2	3.8	4.3		80.5
1912	1.3	22.1	96.0	20.3	15.5	30.0	12.4		3.0	1.8	5.6	8.1		29.9
1913	4.1	38.9	3.8	70.4	2.8	2.5	10.7	4.3	3.6	3.0	2.5	3.0	149.6	29.9
1914														
1915														
1916														
1917				42.7	79.5	39.4	3.6	9.9	6.1					
1918						5.1	1.8	3.3						
1919	2.0	0.0	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.1	
1920														
1921														
1922														92.4
1923			2.0	10.2	0.3	8.1	5.6	12.7	9.4	8.9	2.8	7.9		105.6
1924	20.8	102.6	90.2	142.7	58.4	17.0	1.0	7.4	9.9	5.8	5.6	0.3	461.8	145.8
1925	0.3	1.0	8.1	5.6	4.6	14.7	11.4	5.6	3.8	9.1	0.0	1.8	66.0	174.7
1926	1.0	13.0	80.8	1.3	36.3	7.1	22.1	11.7	14.0	6.1	5.1	2.8	201.2	190.4
1927	9.9	6.9	17.0	44.2	4.8	2.3	14.5	13.7	11.2	7.4	9.1	3.3	144.3	114.7
1928	3.8	6.1	5.8	25.4	5.6	6.9	1.8	2.3	6.6	6.6	2.5	5.6	79.0	123.9
1929	4.3	28.2	6.9	0.0	7.1	9.4	17.0	4.1	1.5	4.6	0.0	0.0	83.1	96.3
1930	7.1	9.9	0.0	11.4	1.5	1.5	18.3	14.0	5.1	4.8	2.8	3.3	79.8	
1931	7.6	9.7	2.3	9.4	5.6	23.6	29.5	8.4	3.0	6.9	4.6	1.3	111.8	86.3
1932	4.8	16.5	11.4	4.6	3.8	1.0	9.1	2.5	6.4	1.0	2.3	0.0	63.5	134.8
1933	3.3	2.8	9.1	32.5	3.8	10.4	12.4	3.6	4.1	4.8	3.6	3.8	94.2	141.9
1934	1.0	2.3	27.7	257.0	14.2	2.3	3.6	6.4	1.3	1.8	1.3	2.8	321.6	134.6
1935	7.6	5.3	5.1	53.1	6.9	7.4	10.4	5.6	8.9	2.3	4.1	2.0	118.6	141.0
1936	3.0	0.5	7.1	6.6	9.9	23.1	6.1	7.9	0.5	5.3	3.0	2.0	75.2	131.4
1937	0.8	1.0	32.5	3.3	13.7	17.8	7.1	2.8	9.4	4.1	2.3	0.5	95.3	96.3
1938	1.3	1.8	3.6	0.8	5.3	2.5	1.5	6.1	13.7	9.7	0.0	0.0	46.2	80.4
1939	0.0	4.8	44.7	66.0	0.0	4.8	7.6	17.0	0.0	0.0	1.0	0.0	146.0	76.4
1940	0.3	0.0	2.0	22.6	0.8	0.0	2.3	5.3	3.0	2.8	0.0	0.0	39.1	77.5
1941	1.5	0.0	5.6	7.1	0.8	0.0	2.5	10.4	9.4	5.3	7.9	5.1	55.6	84.6
1942	9.9	11.9	2.8	1.0	4.6	23.6	25.4	2.0	5.1	6.9	1.5	5.8	100.6	80.7
1943	7.0	3.2	15.0	5.6	13.7	2.8	2.4	9.3	14.3	7.5	0.6	0.0	81.4	86.4
1944	1.7	55.2	21.2	3.3	10.6	7.8	4.2	5.1	13.4	3.7	0.5	0.0	126.7	99.7
1945	0.5	0.0	8.5	3.9	6.9	10.6	6.1	5.5	3.6	16.3	2.6	3.0	67.5	105.4
1946	6.2	6.8	23.8	15.4	4.1	3.2	24.0	15.8	8.3	4.4	2.1	8.0	122.1	114.6
1947	7.3	5.9	0.6	49.9	2.5	14.0	9.7	8.3	10.2	8.5	6.6	6.0	129.5	115.2
1948	11.4	11.8	4.0	29.6	9.1	12.7	20.3	3.3	7.0	5.0	7.1	5.7	127.0	138.9
1949	6.9	0.3	35.3	4.4	8.7	13.4	11.2	15.6	5.5	14.6	8.9	5.2	130.0	130.3

ASCENSION GARRISON (Page 2)

1950	0.0	4.2	77.4	15.2	17.2	4.5	16.2	22.8	12.9	6.7	7.5	1.5	186.1	133.1
1951	2.0	9.9	6.3	7.7	6.9	7.4	2.3	7.0	7.8	13.6	2.6	5.2	78.7	145.6
1952	3.1	1.3	14.6	7.9	10.3	13.2	20.0	24.2	14.2	19.1	3.5	12.4	143.8	141.3
1953	2.7	2.8	34.1	10.9	17.6	58.1	24.9	15.4	5.4	6.1	7.1	4.3	189.4	143.5
1954	1.0	1.1	1.9	43.9	6.9	18.8	9.0	3.5	9.0	5.9	3.1	4.4	108.5	149.1
1955	1.8	1.4	40.7	14.1	36.4	13.4	27.4	25.8	11.4	8.0	10.5	6.4	197.3	139.1
1956	2.2	2.2	7.8	11.1	13.0	24.9	13.9	12.3	11.5	6.0	0.0	1.4	106.3	113.6
1957	0.0	2.6	1.4	29.5	9.3	6.3	9.5	13.6	3.5	10.2	3.7	4.6	94.2	112.7
1958	8.5	0.1	4.3	6.3	12.5	5.6	7.6	0.5	4.4	4.6	4.1	3.0	61.5	101.6
1959	3.2	7.9	5.2	3.3	13.9	25.8	20.8	6.2	6.8	5.4	4.1	1.5	104.1	128.0
1960	2.5	3.7	5.2	62.3	9.9	15.9	2.4	7.6	8.0	8.3	6.3	10.0	142.1	128.5
1961	0.4	14.3	13.4	65.9	29.3	25.4	11.6	15.0	17.6	33.1	2.3	9.9	238.2	182.4
1962	0.7	2.1	22.5	7.1	3.2	4.9	18.1	9.6	12.8	7.3	4.0	4.5	96.8	210.0
1963	9.0	7.0	191.4	34.7	7.2	13.6	8.5	25.0	11.6	13.9	0.7	8.3	330.9	205.0
1964	18.1	2.3	40.7	97.2	0.0	30.1	2.2	28.5	11.9	1.9	6.0	3.3	242.2	173.9
1965	2.0	43.1	9.2	5.7	0.3	11.3	25.8	5.2	6.7	1.1	3.9	2.7	117.0	184.9
1966	1.0	1.8	2.8	20.3	11.8	12.1	8.3	8.9	2.4	0.0	6.9	6.2	82.5	138.5
1967	0.0	2.7	68.0	15.6	8.8	16.5	0.0	15.2	12.3	12.7	0.0	0.0	151.8	105.3
1968	7.4	3.5	7.9	12.2	16.5	14.6	17.6	6.5	8.5	4.4	0.0	0.0	99.1	86.4
1969	3.0	3.5	35.7	8.3	4.0	0.0	5.0	5.0	0.0	4.4	4.0	3.3	76.2	105.3
1970	0.0	2.0	6.4	0.0	2.5	2.0	3.5	0.0	5.8	0.0	0.0	0.0	22.2	92.4
1971	0.2	0.3	15.9	58.7	16.2	33.8	34.4	7.4	3.6	2.3	1.8	2.5	177.2	83.8
1972	0.0	0.0	0.4	27.6	11.0	24.3	4.3	4.2	7.2	5.2	1.9	1.1	87.2	111.4
1973	1.9	2.0	4.2	2.9	7.3	2.2	16.3	2.2	10.0	0.0	3.5	3.5	56.0	144.7
1974	12.1	3.3	93.7	33.2	24.2	8.9	1.1	17.8	6.4	9.1	3.7	0.9	214.4	
1975	8.7	20.3	2.4	7.4	17.4	13.4	61.0	13.0	16.2	3.4	22.5	2.8	188.5	
1985	0.3	75.4	5.1	321.1	8.1	4.5	9.3	12	12.3	9.7	5.6	5.1	468.5	
1986	21.4	1.1	51.5	59.1	1.1	5.8	3.2	10.1	20	1.9	8.5	7.2	190.9	
1987	5.5	5.8	7.9	6.7	0.0	0.0	1.8	3.1	7.6	1.8	5.0	0.0	45.2	236.7
1988	2.0	6.9	14.0	86.3	3.4	17.7	16.1	10.1	23.3	3.3	6.1	2.8	192.0	
1989	1.9	0.0	102.9	55.3	68.7	8.9	2.3	17.8	8.6	9.6	8.4	2.7	287.1	

Av 1899-1975 4.1 9.5 21.2 32.0 13.2 13.0 11.5 10.6 7.9 6.4 4.3 3.5 137.6

Av 1924-75 4.2 8.7 22.8 27.2 10.7 12.4 12.6 9.7 7.8 6.7 3.8 3.3 130.0

Av 1985-89 6.2 17.8 36.3 105.7 16.3 7.4 6.5 10.6 14.4 5.3 6.7 3.6 236.7

N.B. No data recorded 1975-85

Heaviest Falls (list complete for all storms > 50mm in 24 hours at Garrison 1923-75)

27.6.1859	208.3 mm	Mountain
28.6.1859	231.1 mm	Mountain
30.4.1934	209.3 mm	Garrison
29.6.1963	96.5 mm	Garrison
30.6.1963	73.5 mm	Garrison
4.3.1984	317.0 mm	Airhead
7.4.1985	145.0 mm	Traveller's Hill
24.4.1988	119.5 mm	Airhead
24.4.1988	103.7 mm	Traveller's Hill

GREEN MOUNTAIN ACTUAL AND AVERAGE RAINFALL (mm)

Station Elevation: 686 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total	five year mean
1859				68.6	73.7	523.2				396.2	170.2	236.2		
1860				2.8	87.1	2.0	31.2	17.5	68.1	149.4	61.0	81.3		
1861				79.5	40.9	48.8	102.1	77.5	70.1					
1862			58.7			31.2				66.3	37.3	45.2		
1863	31.5	11.4	15.7	147.3		13.2	32.5	32.5	48.8					
1864	1.5	1.8	19.6											
1865														

Average 16.5 6.6 31.3 74.5 67.2 123.7 55.3 42.5 62.3 204.0 89.5 120.9 894.4

N.B. 208.3 mm fell on 27.6.1859 and 231.1 mm fell on the following day

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total	five year mean
1884													590.3	
1885													667.0	
1886													1092.2	860.9
1887													1426.5	877.5
1888													528.3	865.6
1889													673.6	758.1
1890													607.6	586.9
1891													554.7	609.5
1892													570.5	571.4
1893													641.4	600.7
1894	22.6	76.2	44.7	27.4	31.2	17.5	34.5	47.0	38.4	48.8	86.9	7.6	482.9	623.4
1895	106.7	60.7	39.4	30.5	125.5	124.7	27.7	33.0	35.6	40.4	120.7	9.1	753.9	632.4
1896	65.5	41.7	126.0	47.8	12.7	37.1	13.0	42.4	16.5	31.8	120.1	114.0	668.5	595.4
1897	43.4	22.6	14.7	49.8	111.0	84.3	22.9	15.7	48.0	46.2	99.1	57.7	615.4	723.8
1898	36.8	24.9	41.9	36.6	48.8	13.0	16.8	22.1	29.2	95.5	44.7	46.2	456.4	692.7
1899	55.1	76.7	45.5	92.2	321.1	86.6	76.5	25.4	74.4	71.1	106.7	93.5	1124.7	663.2
1900	29.2	84.8	12.7	18.0	17.3	39.4	45.2	85.6	55.9	39.4	75.7	95.3	598.4	700.7
1901	86.6	22.9	34.0	91.2	27.4	37.6	6.1	49.3	44.7	47.6	36.8	36.6	520.8	723.3
1902	264.7	18.5	15.0	28.4	31.0	43.2	80.8	75.9	76.7	36.6	70.4	62.0	803.1	611.2
1903	110.5	43.9	29.2	51.1	7.4	9.7	31.5	39.9	55.1	90.4	51.6	49.0	569.2	
1904	55.1	23.6	4.3	75.2	14.5	43.7	32.5	73.9	21.3	56.4	98.0	66.0	564.6	
1905	83.8	58.4	54.6	40.4	24.9	30.5	14.5	52.1	92.2	48.5	36.3			
1906	66.5	36.1	43.7	100.3	48.0	71.6	33.5	27.2	24.1	33.3	77.0	60.2	621.5	
1907	49.0	16.0	52.1	17.3	51.8	40.6	60.2	34.5	84.1	96.3	70.4	67.1	639.3	
1908	108.7	69.9	52.8	43.4	15.2	87.4	22.4	9.4	38.1	52.6	125.2	53.8	678.9	696.2
1909	12.2	12.7	46.5	263.7	13.7	82.8	126.2	68.8	61.5	82.6	22.1	10.4	803.1	656.3
1910	9.7	48.0	98.3	83.8	82.6	86.1	56.6	78.2	38.9	52.6	56.1	47.2	738.1	690.3
1911	23.9	51.1	32.0	52.8	31.8	29.2	15.7	27.2	11.2	70.6	34.0	42.4	421.9	710.3
1912	13.5	54.4	167.1	77.5	34.3	152.4	46.5	6.9	25.9	41.9	86.1	103.1	809.5	699.8
1913	43.4	101.6	43.7	176.0	55.4	28.4	65.3	27.9	55.4	30.0	79.8	72.1	779.0	670.5
1914	36.1	97.3	65.8	52.6	55.6	36.3	43.7	65.0	90.9	62.7	67.8	76.7	750.6	
1915	24.6	18.0	22.1	48.3	57.4	54.4	60.5	42.4	74.9	71.6	56.9	60.5	591.6	
1916	32.3	55.1	49.3		178.6	39.4	111.8	58.9	62.0	108.5	50.0	57.2		
1917	90.9	65.5	117.6	79.0	211.3	116.3	49.3	64.5	45.5	72.4	64.5	18.0	994.9	
1918	35.6	84.1	39.6	30.0	20.3	21.3	34.0	18.3	85.6	121.4	77.2	67.8	635.3	
1919	63.8	16.8	22.6	18.8	31.5	16.3	74.7	50.5	58.2	52.3	51.3	51.8	508.5	617.2
1920	26.4	17.5	29.7	7.9	33.3	20.3	32.3	24.1	70.1	41.7	30.5	71.1	404.9	418.2
1921	57.7	58.7	15.2	42.9	48.5	49.3	65.5	31.5	18.8	74.7	45.7	33.8	542.3	
1922	32.8	1.0	49.3	98.8										

Av 1894-1922 58.2 46.8 48.6 63.6 62.2 53.5 46.4 42.8 51.2 61.3 69.3 56.7 656.8

Av 1884-1922 678.6

TWO BOATS ACTUAL AND AVERAGE RAINFALL (mm)

Station Elevation: 290 m (approx)

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1968				22.1	43.7	111.6	44.5	21.5	22.3	26.7	15.9	11.9	320.2
1969	27.7	22.3	84.1	28.9	13.7	11.7	37.1	15.3	7.7	19.6	22.3	17.9	308.3
1970	7.3	19.4	44.1	11.2	5.2	25.6	19.3	5.1	46.9	17.1	14.6	8.7	224.5
1971	2.1	7.1	35.5	76.9	62.9	34.8	75.2	21.1	17.1	16.3	17.5	5.6	372.1
1972	1.8	1.5	1.8	83.5	22.2	42.9	14.8	11.0	17.6	23.5	16.7	10.8	248.1
1973	16.8	5.7	14.3	17.3	50.9	22.8	33.5	8.9	15.5	3.3	10.1	9.3	208.4
1974	27.1	9.6	124.1	239.5	51.4	50.3	16.3	86.5	17.9	27.2	13.6	8.1	671.6
1975	37.5	30.3	11.3	10.7	22.5	29.8	88.9	26.5	29.7	11.9	30.1	13.1	342.3
1976	9.5	10.5	85.1	15.8	25.1	13.7	23.5	7.1	15.2	10.9	18.2	13.8	248.4
1977	15.3	8.2	87.0	62.1	4.3	End of record							
Av 1968-77	16.1	12.7	54.1	56.8	30.2	34.3	39.2	22.6	21.1	17.4	17.7	11.0	327.1

TRAVELLERS HILL ACTUAL AND AVERAGE RAINFALL (mm)

Station Elevation: 200 m (approx)

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1987										25.1	46.4	4.7	
1988	24.2	17.7	13.9	146.8	21.5	47.1	48.3	27.5	57.0	20.4	38.8	17.0	480.2
1989	20.2	2.8	135.8	105.4	78.5	16.6	5.7	62.8	61.3	29.6	59.6	32.9	611.2
Av 1987-89	22.2	10.3	74.9	126.1	50.0	31.9	27.0	45.2	59.2	25.0	48.3	18.2	545.7

ASCENSION GARRISON ACTUAL AND AVERAGE RAINFALL (mm)

Station Elevation: 16 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1854	9.9		6.4	92.2	101.9	9.1	48.0	16.0	13.0	13.5	16.0	14.0	
1855	3.0	1.5	10.7	23.4	16.8	17.5	16.0	67.6	22.4	14.5		3.0	
1860							7.1	1.5	9.9	6.4	1.0	2.3	
1861	26.7	0.3	7.1	5.3	9.1	7.6	9.9	17.8	3.8	1.0	1.0	3.0	92.7
1862	7.1	0.8	3.8	35.3	13.0	14.2	15.7	27.7	18.0	5.1			
1863	12.7	0.0	0.0			83.8			8.9	6.6	1.8	2.5	
1864	2.3	0.5	1.5	50.3	5.8	3.0	21.3	4.6	4.6	5.8	3.6	2.5	105.9
1865	0.0	1.8	4.3	7.9	3.8	8.6	6.4	9.4	5.6	4.6			
Average	8.8	0.8	4.8	35.7	25.1	20.6	17.8	20.6	10.8	7.2	4.7	4.6	99.3

H.M.S. TORTOISE ACTUAL AND AVERAGE RAINFALL (mm)

Station Elevation: 6.7 m Location unknown

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1853											4.8	2.5	
1854	11.2	1.3	5.6	67.6	46.2	12.2	21.3	9.9	13.0	13.5	16.0	14.0	231.6
1855	3.0	1.5	10.7	23.4	16.8	17.8	16.0	67.6	22.4	14.5		3.0	
1863	0.0	4.3	74.4				28.2						
1864	6.9	1.5	5.3			29.0	2.8	0.0	0.0	0.0	0.0	0.0	
1865	15.5	6.4	0.0	11.4	3.0	2.8	2.0	2.8	2.5	2.5	0.0	2.5	
1866	8.9	35.8	5.1	1.0									
Average	7.6	8.5	16.8	25.8	22.0	15.4	14.1	20.1	9.5	7.6	5.2	4.4	

Note: H.M.S. Tortoise is believed to refer to the Garrison at Georgetown. For some months there is agreement between values and for others large differences.

GOD BE THANKED ACTUAL AND AVERAGE RAINFALL (mm)

Station Elevation: 150 m (approx)

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1860										9.9	6.6	3.0	
1861	19.1	3.8	0.3	8.1	11.2	4.3	11.7	36.8	3.6	3.8	3.6		
1862	8.4	5.1	5.1	54.6									
Average	13.7	4.4	2.7	31.4	11.2	4.3	11.7	36.8	3.6	6.9	5.1	3.0	134.7

ASCENSION AIRHEAD ACTUAL AND AVERAGE RAINFALL (mm)

Station Elevation: 73 m

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total	5 Year mean
1962	5.6	1.0	35.1	13.5	8.6	5.1	8.1	4.1	20.1	8.4	8.1	5.6	123.3	
1963	35.8	4.8	294.6	57.4	10.2	7.6	51.1	30.5	4.3	15.2	1.8	11.9	525.2	
1964	19.1	2.0	32.0	100.1	8.4	24.9	21.3	30.7	12.5	4.8	12.9	13.2	281.9	
1965	2.8	34.5	9.4	23.4	0.3	13.2	14.7	3.6	6.3	2.5	6.9	4.1	121.7	
1966	0.5			20.3			11.9	8.6	7.6	7.1	19.1	8.1		
1967	2.5	14.7	91.4	18.3	15.0	20.1	6.3	22.3	3.8	16.0	5.6	0.1	216.1	
1968	8.9	7.4	10.4	7.1	19.6	29.5	12.5	7.9	13.5	10.4	11.4	3.8	142.4	
1969	15.0	13.1	25.4	14.2	11.9	12.2	13.2	8.4	3.1	7.6	9.4	7.1	140.6	
1970	3.1	2.3	31.2	7.9	6.6	7.9	7.9	2.3	2.5	5.1	5.8	3.8	86.4	
1971	6.1	5.1	17.3	48.3	17.3	15.2		5.1	6.6	2.5	2.8	2.5		
1972	0.1	0.1	0.3	24.1	8.1	7.1	5.3	7.1	4.6	5.1	6.1	2.8	70.8	
1973	6.6	2.5	7.4	7.4	22.6	1.8	18.3	2.3	4.6	0.3	3.1	8.6	85.5	
1974	10.7	0.0	103.6	109.5	19.6	33.0	1.5	18.5	2.8	7.1	3.1	2.0	311.4	145.7
1975	9.7	26.9	0.1	20.1	12.9	12.7	36.8	7.4	7.4	1.0	15.5	5.1	155.6	166.8
1976	5.1	0.5	62.0	4.6	5.8	2.8	3.5	3.0	3.3	1.5	6.6	6.6	105.3	173.3
1977	8.9	0.0	64.0	44.7	1.8	3.0	15.2	1.5	13.7	5.3	10.2	8.1	176.4	139.2
1978	6.9	12.2	20.3	1.8	16.5	4.6	18.6	10.7	8.1	6.9	3.8	7.4	117.8	119.3
1979	11.9	3.6	7.4	84.1	0.8	0.8	2.5	1.0	6.4	6.1	11.9	4.3	140.8	110.7
1980	3.6	4.8	4.6	3.0	0.8	19.3	2.5	4.6	3.0	5.1	3.6	1.5	56.4	92.7
1981	2.5	4.6	0.2	0.8	17.5	6.3	6.6	2.6	5.3	3.8	5.1	6.6	61.9	95.1
1982	6.6	8.4	11.0	3.8	4.1	14.2	6.9	8.4	3.3	6.6	9.7	3.8	86.8	130.3
1983	8.9	7.4	37.1	7.1	8.1	4.8	11.7	7.4	17.5	10.4	5.6	3.5	129.5	223.9
1984	9.9	6.6	152.1	3.8	1.8	16.0	1.3	0.3	16.8	25.1	65.3	18.1	317.1	254.6
1985	8.9	95.8	11.4	338.6	7.1	3.3	10.2	15.5	9.9	7.6	8.1	7.6	524.0	255.0
1986	16.3	11.2	53.1	66.3	0.0	5.3	3.3	11.4	30.0	1.8	9.7	7.4	215.8	276.4
1987	15.0	5.3	6.1	6.1	0.5	2.3	11.4	9.4	8.1	7.6	15.2	1.4	88.4	260.2
1988	2.4	10.6	9.4	135.0	7.5	22.5	5.9	7.9	16.2	4.7	8.2	6.5	236.8	
1989	1.5	0.0	82.2	8.3	70.8	2.1	2.6	21.1	16.7	5.4	15.9	9.3	235.9	
Av 1962-1989	8.4	10.6	43.7	42.1	11.3	11.0	11.5	9.4	9.2	6.8	10.4	6.1	182.8	

ASCENSION MAXIMUM TEMPERATURE (°C)

Station Elevation: 11.6 m (Georgetown)

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Avg	Ann Avg
1929	29.2	30.1	30.9	30.4	30.2	29.3	28.1	27.6	26.4	26.9	27.7	27.8	28.7	25.8
1930														
1931	29.6	30.8	31.4	30.8	30.3	29.1	27.9	27.3	27.3	27.0	27.4	28.3	28.9	25.8
1932	29.1	29.8	30.7	30.7	30.0	29.2	28.1	27.7	27.1	26.8	27.7	27.8	28.7	25.6
1933	29.0	30.3	30.9	30.8	30.4	29.3	28.5	28.0	27.5	27.9	27.6	28.6	29.1	26.0
1934	29.8	30.7	31.1	31.4	29.6	29.3	29.3	28.9	29.1	29.1	29.2	29.6	29.8	26.4
1935	29.7	31.2	31.9	31.6	31.4	30.7	28.2	28.4	27.9	28.1	28.2	28.7	29.7	26.3
Av 1929-35	29.4	30.5	31.1	31.0	30.3	29.5	28.3	28.0	27.6	27.6	28.0	28.5	29.1	26.0
Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Avg	Ann Avg
1955	28.8	30.4	30.7	30.9	29.9	29.1	28.1	27.3	26.8	27.3	28.2	28.2	28.8	26.0
1956	28.9	30.0	30.6	30.7	30.4	29.2	28.4	27.9	27.6	27.4	28.3	28.7	29.0	25.9
1957	29.2	30.9	32.1	31.0	30.8	29.8	28.6	27.8	27.9	27.4	28.3	28.9	29.4	26.3
1958	29.4	30.9	31.6	31.0	30.5	30.7	28.8	27.8	27.1	26.9	27.7	28.2	29.2	26.0
1959	29.3	29.8	30.3	29.6	29.2	28.8	28.2	27.7	27.0	27.4	27.3	27.9	28.6	25.7
Av 1955-59	29.1	30.4	31.1	30.6	30.2	29.5	28.4	27.7	27.3	27.3	28.0	28.4	29.0	26.0
Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Avg	Ann Avg
1968	30.0	30.9	30.9	30.7	29.9	28.6	28.2	27.7	27.4	28.2	28.5	29.0	29.2	26.1
1969	28.7	31.5	31.5	31.7	30.5	29.5	28.2	27.1	26.5	27.2	27.6	27.3	28.9	25.0
1970	28.5	29.4	30.1	30.4	30.5	28.7	27.8	27.1	26.7	27.1		27.8	28.6	24.7
Av 1968-70	29.1	30.6	30.8	30.9	30.3	28.9	28.1	27.3	26.9	27.5	28.1	28.0	28.9	25.2
Av 1962-76	29.3	30.6	31.0	30.9	30.1	29.0	28.1	27.5	27.2	27.5	28.0	28.6	29.0	
Abs 1962-76	31.7	32.8	32.8	35.0	32.2	31.7	30.6	30.0	30.6	30.6	30.6	31.7		

ASCENSION MINIMUM TEMPERATURE (°C)

Station Elevation: 11.6 m (Georgetown)

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Avg
1929	23.2	24.1	24.9	25.8	24.4	23.4	22.2	21.9	21.4	21.6	21.1	20.6	22.9
1930													
1931	22.3	24.1	24.3	24.5	24.3	23.2	22.3	21.3	21.2	21.2	21.2	21.8	22.6
1932	23.0	23.3	23.0	24.6	23.9	22.9	21.6	21.4	20.7	20.7	21.6	21.8	22.4
1933	23.0	23.4	24.6	25.1	24.0	23.4	22.6	22.3	21.7	21.7	21.5	21.7	22.9
1934	22.1	23.3	23.7	23.9	24.1	23.2	22.8	22.7	22.8	22.6	22.4	22.7	23.0
1935	23.5	24.3	24.2	24.2	23.8	23.3	22.3	22.3	21.6	21.9	22.1	22.4	23.0
Av 1929-35	22.9	23.7	24.1	24.7	24.1	23.2	22.3	22.0	21.6	21.6	21.7	21.8	22.8
Av 1962-76	22.5	23.4	24.0	24.2	23.6	22.5	22.1	21.4	21.1	21.0	21.6	22.0	22.5
Abs 1962-76	19.4	20.6	21.1	20.6	20.0	18.9	18.9	19.4	18.3	18.9	18.9	20.0	
Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Avg
1955	22.9	23.7	24.7	24.7	24.8	23.7	22.8	21.9	21.9	21.6	22.4	22.4	23.1
1956	22.6	23.6	23.9	24.1	23.9	23.1	22.3	22.1	22.0	21.8	22.2	22.3	22.8
1957	23.1	24.1	24.5	25.1	24.3	23.5	23.0	22.5	21.8	21.7	22.0	22.5	23.2
1958	22.7	24.3	25.1	24.6	24.5	23.6	21.8	21.2	20.4	21.1	21.7	21.7	22.7
1959	23.1	22.8	23.9	25.1	24.5	23.1	22.7	21.8	21.7	21.6	21.9	23.1	22.8
Av 1955-59	22.9	23.7	24.4	24.7	24.4	23.4	22.5	21.9	21.6	21.6	22.0	22.4	22.9
Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Avg
1968	23.3	24.0	24.2	24.4	24.3	23.5	23.1	22.6	22.2	21.7	21.8	21.3	23.0
1969	21.4	22.8	22.9	23.1	22.4	20.8	20.2	19.6	19.2	19.1	20.1	20.8	21.0
1970	20.5	21.6	21.9	21.7	21.7	21.3	22.5	20.5	20.0	19.5		17.8	20.8
Av 1968-70	21.6	22.3	22.4	22.4	22.1	21.1	21.4	20.1	19.6	19.3	20.1	19.3	21.6

Station Elevation: 79 m

Source: AWS Climate Brief, ETAC 1972 (taken from data 1942-47 and 1957-67)

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Avg
Max Garrison	28.6	30.2	30.3	29.4	28.3	28.8	28.2	27.4	27.9	27.7	27.4	27.1	28.5
Max Mountain	21.4	23.7	24.6	25.2	23.4	22.5	22.1	20.9	21.3	21.2	22.6	22.3	22.6
Min Garrison	23.5	24.4	24.7	23.7	22.9	23.2	22.3	21.8	22.1	21.4	21.9	22.7	22.9
Min Mountain	16.8	17.7	18.3	18.6	17.9	17.1	16.6	15.3	15.9	14.9	15.1	15.8	16.7
Av Temp Garrison:	25.7												
Av Temp Mountain:						19.6							

ASCENSION RELATIVE HUMIDITY (%)

Station Elevation: 11.6 m (Georgetown). Recorded at 0900 hrs

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Average
1928	77	74	73	73	71	75	65	76	78	81	77	78	74.8
1929	79	79	73	75	79	73	81	77	79	71	69	73	75.7
1930	65	71	63	63	63	63	65	65	65	61	64	80	65.7
1931	85	80	71	73	75	71	75	73	72	73	75	78	75.1
1932	79	71	73	71	73	75	68	75	80	83	79	77	75.3
1933	74	74	76	77	68	66	73	81	78	74	81	75	74.8
1934	71	72	71	70	69	66	71	67	67	65	69	71	69.1
1935	74	69	71	71	69	69	66	66	69	72	78	69	70.3
Av 1929-35	75.3	73.7	71.1	71.4	70.9	69.0	71.3	72.0	72.9	71.3	73.6	74.7	72.3

Recorded at 0600, 1200, 1800 hrs

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Average
1955	74	70	73	72	73	67	67	68	68	67	71	66	69.7
1956													
1957	64	66	68	68	66	63	63	63	65	70	67	67	65.8
1958	66	68	66	67	70	68	74	66	77	78	80	79	71.6
1959	73	73	69	68	70	70	69	66	68	69	68	72	69.6
Av 1955-59	69.3	69.3	69.0	68.8	69.8	67.0	68.3	65.8	69.5	71.0	71.5	71.0	69.2

Recorded at 0600, 1200, 1800 hrs

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Average
1968	69	71	70	70	69	69	67	68	71	71	69	66	69.2
1969	65	66	66	67	65	60	61	62	62	60	65	66	63.8
1970	66	65	67	63	65	62	67	65	65	66		65	65.1
Av 1968-70	66.7	67.3	67.7	66.7	66.3	63.7	65.0	65.0	66.0	65.7	67.0	65.7	66.0
Av set 2 & 3	68.0	68.3	68.3	67.7	68.0	65.3	66.6	65.4	67.8	68.3	69.3	68.3	67.6

ASCENSION SUNSHINE HOURS

Station Elevation: 11.6 m (Georgetown)

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1928	233	229	256	278	301	247	212	214	198	147	150	187	2652
1929	229	231	263	260	264	256	232	227	147	155	160	187	2611
1930	205	186	285	283	277	237	216	230	144	186	176	171	2596
1931	233	208	277	223	261	234	196	170	145	117	141	179	2384
1932	167	234	278	249	266	243	226	179	146	136	135	165	2424
1933	205	252	246	244	268	256	230	199	158	139	170	215	2582
1934	290	237	262	247	270	266	239	233	185	178	216	252	2875
1935	250	261	274	251	241	258	244	226	133	133	161	213	2645

Av 1928-35 227 230 268 254 269 250 224 210 157 149 164 196 2596

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1955	197	255	254	219	224	225	229	184	113	167	150	181	2400
1956	209	246	296	235	249	245	234	201	152	127	178	217	2588
1957	241	246	308	244	256	250	218	161	130	150	128	193	2526
1958	205	244	251	209	242	230	207	173	135	133	116	157	2302
1959	232	211	287	273	221	225	226	193	117	160	147	151	2443

Av 1955-59 217 240 279 236 239 235 223 183 129 148 144 180 2452

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1968	270	282	257	265	252	196	223	162	133	150	154	230	2574
1969	185	247	259	267	256	199	208	175	101	139	136	163	2335
1970	200	189	228	245	232	215	180	154	131				

Av 1968-70 218 239 248 259 247 203 204 164 122 145 145 197 2455

Av 1962-76 230 241 264 247 254 210 213 178 140 145 169 208 2499

Av above years 221 236 265 250 251 229 217 185 136 147 151 191 2501

Maximum 381 345 375 360 369 354 366 369 360 378 369 384

% Max 57.9 68.5 70.6 69.4 68.1 64.8 59.3 50.2 37.8 38.9 40.9 49.7

Source: Met. Office Archives

ASCENSION CLOUD COVER (tenths, original recordings in oktas)

Station Elevation: 11.6 m (Georgetown) Readings at 0600, 1200, 1800 hrs

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Average
1955	5.6	3.5	3.6	4.4	4.6	4.6	5.0	5.9	6.8	5.5	6.8	5.8	5.2
1956	4.5	4.1	3.9	4.4	3.4	3.6	3.4	4.8	6.5	6.4	6.1	4.8	4.6
1957	5.0	4.0	2.6	4.5	4.0	3.9	5.0	6.1	6.3	6.5	6.8	5.5	5.0
1958	5.1	3.1	3.8	4.9	4.8	4.1	4.4	5.0	5.8	6.1	6.4	5.4	4.9
1959	4.5	3.8	3.1	3.3	3.8	4.4	3.9	4.4	5.9	5.3	5.8	5.4	4.4
Av 1955-59	5.0	3.7	3.4	4.3	4.1	4.1	4.3	5.2	6.2	6.0	6.4	5.4	4.8

GREEN MOUNTAIN OCCURENCE OF FOG AT 0900 hrs

Station Elevation:

Years	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1931			6	4	9	5	0	4	4	5	3	4	4
1932	16	6	6	9	3	1	1	0	8	16	17	18	101
1933	16	13	10	20	9	10	11	11	8	29	19	11	167
1934	11		7	8	12	7	10	4	13	6	12	12	
1935	16	3	11	7	18	2	8	8	10	6	13	7	109
Av 1931-35	14.8	7.0	7.6	10.6	9.4	4.0	6.8	5.4	8.8	12.0	13.0	10.4	125.7

ASCENSION WIND RUN

Data on wind run is poorly presented in the records. The old records show a continuous wind speed of 9 knots at the Garrison. This is equivalent to a wind run of 400 km/day uncorrected for height of observation. Some data analysis in the Met Office archives for 1955-57 shows the following:

	Time 0600 hours		Time 1200 hours	
	Force 1-3	Force 4-5	Force 1-3	Force 4-5
	No. of Observations			
1955	301	62	266	99
1956	338	28	302	63
1957	356	8	312	53

All observations fall in the quadrant east to south with a large majority from the south-east.

No calm days were recorded and accordingly the mean wind speed is taken as 400 km/day since force 3 appears to be the mean and covers the wind run range 356-534 km/day. No correction for recording height has been applied.