

Weather data from Las Cuevas Research Station, Chiquibul Forest: May 1995 - July 1996

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A weather station was installed in the clearing at Las Cuevas during May 1995; this included a rain gauge, a maximum and a minimum thermometer, and a wet and a dry thermometer. When staff were present all day, readings were taken at 0900, 1200 and 1500. If this was not possible, effort was made to take at least one reading a day, but there were some occasions when no readings were taken. The tables below summarise the daily and monthly values for rain and maximum and minimum temperatures. Full records are kept at the Las Cuevas Research Station.

Prior to the installation of the weather station, the dry season at the beginning of 1995 had been very hot and dry, with very little rain and high temperatures during April and May. The wet season of 1994 had also been relatively dry. Heavy rain started in the middle of June 1995, the second half of June being very wet. August had a very high total rainfall, but the actual number of rainy days was very low. September and October were both wet. The dry season 1995/6 was relatively wet, with a lot of cold fronts during January to March. May 1996 had a lot of rain compared to 1995, but June was unusually dry. July had persistent wet weather, but few heavy storms.

With 14 consecutive months of rainfall data, annual rainfall can be summed as 1,912 mm (Jun 95 to May 96), 1,755 mm (Jul 95 to Jun 96) or 1,780 mm (Aug 95 to Jul 96). If the values for Jun and Jul in 1995 and 1996 are averaged, the annual rainfall for the period studied was 1,846 mm (table 1).

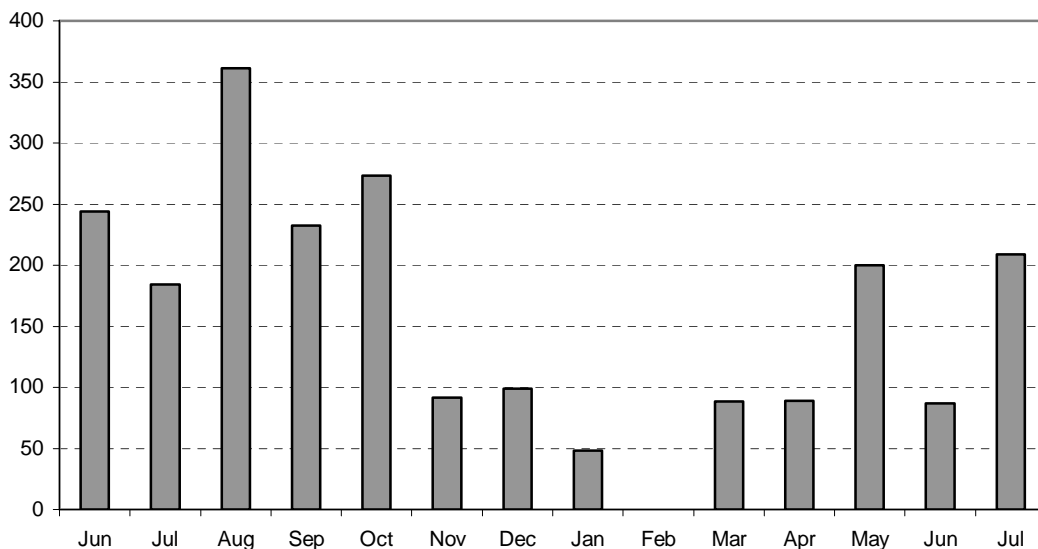


Figure 1: Monthly rainfall (mm) at Las Cuevas, Jun 1995 to Jul 1996.

Table 1: Monthly rainfall (mm) at Las Cuevas, Jun 1995 to Jul 1996.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1995						244	185	361	233	273	91.5	99.2	
1996	48.4	0.25	88.5	89.3	200	87	209						
Mean	48.4	0.25	88.5	89.3	200	165	197	361	233	273	91.5	99.2	1846

Table 2: Days with >0.1 mm rainfall at Las Cuevas, Jun 1995 to Jul 1996.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1995						14	10	6	12	11	7	9
1996	11	1	6	6	15	7	20					

Table 3: Monthly maximum temperatures at Las Cuevas, 15 May 1995 to Jul 1996.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1995					39.5	36	32.5	33	31.5	33	30	31.5
1996	32.5	-	35	34.5	33	32.5	32					

Table 4: Monthly minimum temperatures at Las Cuevas, 15 May 1995 to Jul 1996.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1995					16.5	16.5	16.5	-	-	-	12	10
1996	7.5	-	5.5	15	16	15.5	15					

Table 5: Monthly average daily temperatures at Las Cuevas, 15 May 1995 to Jul 1996 (average of monthly means for daily maximum and minimum temperatures).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1995					26.8	25.1	24.0	-	-	-	22.5	21.7
1996	19.4	-	21.0	23.8	24.6	24.3	24.0					

Appendix 1: Daily rainfall (mm) at Las Cuevas, 15 May 1995 to 31 July 1996.

Day	1995							1996							
	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
1		0	1.5	0	0	0	0	27	0	0	0	0	22.2	0	0
2		0	1.7	0	42	0	0	6	0	0	19.25	4.4	1.2	0	10.3
3		0	1.8	0	3.5	0		4.55	0	0	0.1	0	0	0	0.7
4			0		20.6	63			0.2	0	0.9	0	2.9	0	0.8
5			0		9	2		0	14.8	0	1.4	0	0	19.3	34.8
6		0	0	0	0			0	0.05	0	0	0.05	3.7	15.0	0
7		0	5	0	0	42.7	0	0	3.8	0	0	0.3	0	0	0
8		0	24	86	46	44	0	0	5.5	0	41.5	1.3	0	0	0
9		0	0	0	5			0	0	0	13.0	0	0	0	0
10			34	0	9	0		10	0	0.1	0	0	0	5.8	0
11		0	3	0	5	15		0	0	0	0	0	4.35	0	
12		9	45.5	0	7.5	19		0	0	0	0	0	15	0	0
13		0	0	0	0	0		0	0	0.15	0		6.8	0	0
14			7		30			22	42	0	0	10.4		0	2.7
15	0	33.5		3				0	8.1	0	0		29.9		23.1
16	0	42.5		0				0	0	0	0	49.4	0.2		5.9
17	0	33.6		0	0			0	0	0	0	0	4.3		7.8
18	0	0	0	0				0	0	0	0	0	3.4	0	6.1
19	0	2.5	0		0			6.3	0	1.2	0	0	0	0	1.4
20	0.35	44.4	0					10	0.1	4.1	0	0	0	7.6	5.4
21	0.4	18.45	0			37.3	1.2	0	0.05	0	0	0	88.6	30.8	16.4
22		0.1	0			14.1	0	0	1.8	0	0	0	9.2	0	0
23		1.9	0			8.2	28		11.4	0	0	23.4	0	0	0
24	17	32	42	0		0	18	0	0	0	0	0	0.4	0	0.42
25	0	13.5	0	0		10	0	1.4	3.8	0	0	0	0	2.1	0.15
26	0	2.5		90	0	18	0	0.05	0	0	0	0	0	1.3	19
27	0	1.5	26	0	0	0	0	0	0	0		0	0	0	6
28	0	0		45	48	0	6	0	1.5	0	12.3	0	0	12.7	33.4
29	0	1.4		107	15		0	0	0.15	0	0	0	0	0	14.7
30	0	0		0	22	0		0	0	-	0	0	0	0	0.3
31	0	-	0		-		-	0	0	-	0	-	0	-	19.5
total		244	185	361	233	273	91.5	99.2	48.4	0.25	88.5	89.3	200	87	209

Appendix 2: Maximum temperatures (°C) at Las Cuevas, 15 May 1995 to Jul 1996.

Day	1995							1996								
	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	
1		35.5	31.0	33.0	31.5	31.0	29.5	26.0	31.5		28.5	34.5	27.5	31.0	30.0	
2			33.0	31.0	30.5	29.5	33.0	29.5	28.0	32.0	21.5	29.0	30.0	31.5	26.5	
3			33.0	31.0	30.0	29.5	32.5		28.5	22.5	27.5	25.0	29.5	31.0	31.0	
4				29.5		30.5	32.5		28.0	22.5	28.0	32.5	26.5	30.0	29.5	
5			33.0	30.0	32.5	30.5	32.0		28.5	26.5	28.5	32.0	29.5	29.5	30.0	
6			35.5	31.0	30.5	31.5	32.0	28.5	28.0	27.5	30.0	33.0	26.0	29.5	32.0	
7			35.5	27.5	30.5	30.5	28.0	29.0	27.0	25.0	35.0	24.0	28.5	30.0	32.0	
8			36.0	27.0	29.0	29.5	23.5	27.0	28.0	20.5	19.0	30.0	30.5	30.0	31.5	
9				27.0	30.5	27.5	26.5		31.5	19.5	19.0	27.0	28.5	29.0	32.0	
10			29.5	27.5	30.0	29.5	26.5		25.5	19.5	22.0	30.0	29.0	31.0	32.0	
11			31.0	26.0	30.5	29.5	24.0		22.5	22.0	21.0	28.5	30.0	31.0		
12			33.0	28.5	30.5	29.5	24.0		21.0	25.0	22.0	29.5	29.5	32.0	31.0	
13			33.5	29.0	33.0	28.5	31.5		25.0	19.5	28.5	27.5		29.0	30.5	
14			30.5		28.0			29.5	23.5	25.0	26.5	33.0		30.5	29.5	
15		36.0	29.0		30.5			29.0	26.0	24.5	27.5	34.5	30.0		26.0	
16		35.5			29.5	30.0		27.5	27.5	27.5	31.0	25.5	30.0		27.0	
17		32.5		30.0	30.5	29.0		26.5	27.5	27.5	34.5	28.5	24.5	32.5	25.5	
18		37.0		29.5	28.0	30.0			29.5	32.5	33.5	30.0	25.5	32.0	27.0	
19		39.5		30.0		29.0		28.5	29.5	24.5	23.5	30.0	30.0	31.5	28.5	
20		37.0		28.0				29.5	23.0	24.5	21.0	29.5	31.0	32.5	29.5	
21			30.5	29.0		30.0	27.5	26.0	26.5	26.5	22.5	29.5	32.5	30.0	31.5	
22			31.0	30.5		26.0	26.5	31.0	25.0		29.5	31.5	32.0	30.5	31.0	
23		31.0	32.0	28.0	27.5		27.5	26.0	25.0		27.0	31.0	33.0	31.0	30.0	
24		34.0	30.0	30.0	30.5		27.5	24.0	24.5	29.0	29.0	31.0	31.5	32.5	30.0	
25		35.0	31.5	31.0	32.5	28.0	27.0	25.5	22.5	26.5	31.0	30.5	32.0	30.0	29.0	
26		32.5	29.5	30.5	30.5	27.0	28.0	25.5	26.5	26.5	30.0	30.0	31.5	28.0	26.0	
27		34.5	31.0	30.5	30.5	27.0	27.5	30.0	24.5	27.5	31.0	29.5	31.5	29.5	30.0	
28		36.0	31.0		28.0	23.5	27.5	28.5	25.0	23.0	31.0	29.5	31.5	26.0	29.5	
29		34.0	31.0		30.0	26.0	28.0	29.5	24.5	24.5	29.0	32.5	32.0	29.0	24.0	
30		35.0	31.0	31.0	28.0	30.5	27.5	28.5	27.0	26.0	-	30.0	28.5	31.5	30.0	29.5
31		36.0	-	32.5	-	29.5	-	31.5	28.0	-	33.5	-	32.0	-	27.0	
Max	39.5	36.0	32.5	33.0	31.5	33.0	30.0	31.5	32.5	-	35.0	34.5	33.0	32.5	32.0	
Mean	35.0	32.0	29.5	30.2	29.0	28.5	27.9	26.6	25.4	-	27.5	29.9	29.9	29.3	29.3	

Appendix 3: Minimum temperatures (°C) at Las Cuevas, 15 May 1995 to July 1996.

Day	1995							1996							
	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
1		17.0	16.5					17.5	19.5		16.3	18.5	22.0	18.0	16.0
2		18.5	16.5					17.0	19.0		17.0	18.0	17.0	17.5	19.0
3			16.5					14.0	19.0		17.0	13.0	17.0	16.5	19.5
4			20.5								16.5	15.5	21.0		21.0
5			20.5					14.0	17.5			17.5	19.5	19.0	19.5
6		21.0	20.0					13.0	16.0		17.0	17.0	18.0	17.0	16.0
7		21.5						10.0	16.0		15.5	18.5	18.0	17.5	19.0
8		21.5	18.5					19.0	11.0		17.0	18.5	19.0	20.0	18.0
9		23.5	19.5						09.5		13.0	15.5	19.0	19.0	19.0
10			19.5					18.0	13.0		10.0	19.0	21.0	21.0	18.0
11		19.0	19.5					18.0	12.5		11.0	15.5	19.5	21.0	
12		19.5	18.0					17.5	10.5		05.5	18.0	18.0	21.0	15.0
13		16.5	19.0					21.0					19.0	20.0	
14		19.5						17.0	08.0		06.5	15.0		18.5	19.0
15	21.5	21.0					20.5	19.0	12.0				16.0		18.5
16	21.0						20.0	17.0	08.0		11.0	18.0	18.0		19.0
17	18.5						22.5	16.5	08.0		11.5	24.5	19.0		18.5
18	18.5		15.5					17.0	07.5		12.5	18.5	19.0		20.0
19	18.0		18.5				14.5	17.0	11.5		15.5	16.5	18.5	20.0	20.0
20			18.0				17.5	18.0	14.0		14.0	17.0	19.0	20.0	17.5
21	17.5		20.0				18.5	16.0	12.5		12.5	20.5	18.0	19.0	19.0
22		20.0	18.5				18.5	18.0	14.5		10.0	21.0	20.5	21.0	17.0
23		20.0	19.0				16.0		18.5		11.0	18.0	17.5	21.5	17.0
24		20.0	16.5				18.0	16.5	15.0		15.5	18.0	18.5	22.5	18.0
25	16.5	20.5	18.0				18.0	18.0	14.0		19.0	17.0	19.0	21.0	21.5
26		18.5					18.0	15.5	12.0		19.5	15.0	21.0	18.5	19.0
27	19.0	19.0	18.0				12.0	15.0	14.5			17.5	19.5	20.5	17.0
28	20.5	16.5					12.0	17.5	13.0		22.0	18.0	20.0	19.0	19.0
29	17.0	16.5					14.0	17.5	12.5		15.5	18.0	19.0	18.5	20.5
30	17.5	16.5						18.0	12.5	-	23.0	19.0	24.0	15.5	18.0
31	17.0	-			-		-	18.0	18.5	-		-	21.0	-	19.5
Min	16.5	16.5	16.5	-	-	-	12.0	10.0	07.5	-	05.5	15.0	16.0	15.5	15.0
Mean	18.5	18.2	18.4	-	-	-	17.1	16.8	13.4	-	14.4	17.7	19.2	19.3	18.6