

NUTFIELD WEATHER 2019

Happy, if belated, New Year from me, and I hope that 2019 will be a warm and sunny year without all the rain that fell in the last three months. I have been busy collating the data from my Davis Weather Station, and making some corrections during the time it was undergoing some maintenance, using manually collected rain, temperature and pressure, but I have updated the data basic with this information for long term reference. I have also found some information on my computer going back to 2009 on minimum and maximum temperature which with a bit of work has given some average data to try and see if there are any measureable signs of global warming using this historical data. .

Just a small note about the information I provide. All the data I take is only strictly relevant to where the recording actually takes place, in Nutfield, that does not mean that it not relevant to other parts of our parish, but it will not be identical from the aspects of rain and to some extent temperature, so if you take data where you live the results will be similar but not identical. Well we had quite a year for rain and floods in the UK, with Doncaster, Sheffield, Leeds West Yorkshire and the Midlands getting bucket loads in early November with extensive flooding. I read that Sheffield had 465 mm fall from 1st September to 27th of November, so half a year's rain in 2 months. Here in the South East it was just before Christmas (19th to 21st Dec.) that we had flooding and even a Tornado in Chertsey on the 21st. The poor condition of road drains and ditches made it even worse, however nothing like the floods in the North East.

Looking at the year past, in early January we had high pressure right on top of us for two weeks with almost totally dry albeit cloudy weather. From the third week onwards the pressure started dropping and we had nearly 30 mm of rain. We even had a few snow flurries on the 28th with our coldest day on the 31st at -4.3 degrees. I recorded 11 frosts. Average temperature over the month was only 3.8 degrees, much colder than last year, however it was much dryer with rain recorded on 13 days and 30% of last year's rain.

February started with very cold weather and snow overnight on the 1st. low pressure and rain persisted for the first two weeks, gradually reducing over the remainder of the month as high pressure was established, but falling away at the end of the month. We had 60 mm rain, less than last year but not significantly so. The mean average temperature was 5.8 degrees, so no Beast from the East this year, but we still had 11 frosts (17 in 2017). We had rain on 15 days.

March started mild and wet, the longer days certainly help with temperature, but we had recordable rain for 15 of the first 19 days, then with rising pressure no more rain until April. Total rain was 68.5 mm but only on 9 days with more than 0.2 mm. The mean average temperature was 8.4 degrees, and only 3 frosts all very mild. There were 24 days with temperatures above 10 degrees with the hottest day at 19.9 degrees! The middle of the month was characterised by very strong gusty winds with tree damage, so quite typical for the change of seasons.

April was a dry month with only 12 mm overall and only 7 days with some rain, and what we did have was very light, quite different to last year when we had 95.4 mm. As the month progressed we had a warm period between 17th and 24th not quite such a high as last year, but well into the mid twenties. A very pleasant way to move towards summer, even the 5 frosts in the first half of the month were mild. Mean average temperature was 9.6.

May continued the dry trend with only 38 mm falling on 10 days mainly during the second week, in fact 27 mm of the month's rain fell on the 8th and 9th. I made a notation on my records that this was real rain at last! Perhaps to be forgotten later in the year. This was not a very warm month but comfortable, with the day and night temperatures on the rise during the last two weeks, and the months mean average was now in double figures at 12.1 degrees. There were no frosts.

June started with temperatures in the mid twenties, but this gradually fell and we had heavy rain on the 8th and torrential rain on the 10th (44.6 mm) and it felt like March. It took another week for the temperatures to rise, and then we had more heavy rain on the 12th. We had a spell of rain on and off for the next week and it was not until the last 7 days that it was generally dry and warm with 33 degrees on the 29th. Mean average temperature was 15.3 degrees, but we had 117.6 mm of rain during the month compared with 3 mm in 2017 and rain fell on 15 days.

July started warm and remained so, we only has 3 days where the maximum temperature did not reach 20 degrees, and the high at 35.9 degrees on 25th when we had 28 mm of rain. The relatively dry period of the first two weeks was replaced with rain during the last 3 weeks, however it was not cold with mean monthly average at 18.5 degrees still a bit down on the balmy 2018. Total rain was 89 mm compared with 25 mm in 2018 with rain recorded on 11 days.

August was another warm month with only 3 days below 20 degrees and a high of 31.9 on the 27th, during a warm period between 21st and 31st. It was a relatively dry month, the rain falling in the middle of the month with a total of 64.4 mm, rain fell on 15 days. The mean average temperature was 17.4 degrees still pleasant and only 0.1 degrees less than in 2018.

September heralding the start of Autumn was noticeably cooler than August with the maximum temperature of 25.2 degrees and a mean average of 14.6 degrees. We did have a warm spell from the 12th to the 22nd with good sunny days, but the last week was rainy and cool. We had some rain on 14 days but no frosts. Total rain for the month was 89 mm compared with 38 mm in 2018, Up until the end of September the year had been relatively dry.

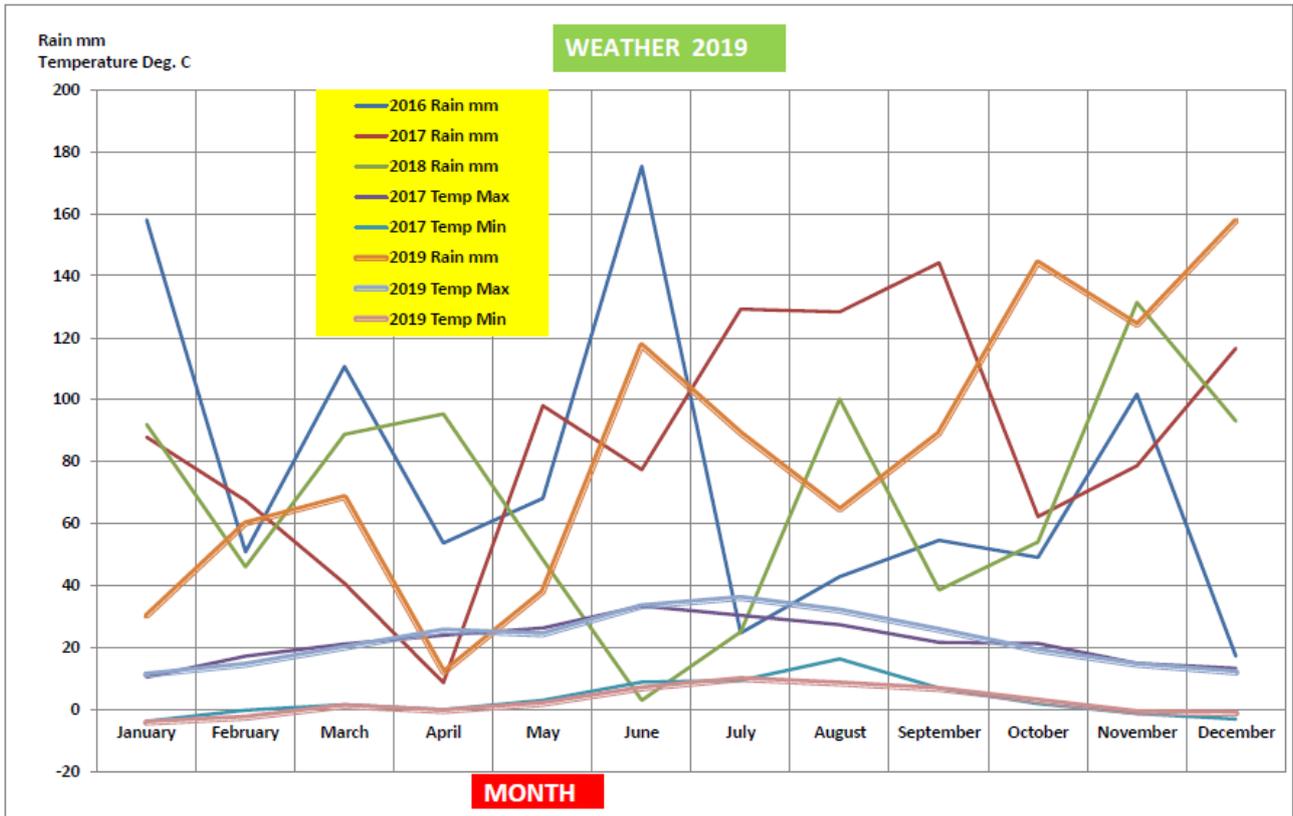
October heralded the start of the wet season, with 144 mm falling and we had some rain on 25 days (twice the number days than we had in September) there were no huge daily totals (maximum daily rain was 21 mm falling on the 24th) but just regular amounts until the last 5 days where we had the one frost and the temperatures fell. Mean average temperature for the month was 10.8 degrees and it was clear that winter was approaching .

November carried on the wet season with 27 days where some rain fell reasonably spread throughout the month with total rain of 128 mm (rainfall in 2018 was 132 mm). It turned cooler in the middle of the month and we had 5 frosts none very heavy. The mean average temperature was only 6.6 degrees with the highest temperature of 14.4 degrees. It felt wet and miserable.

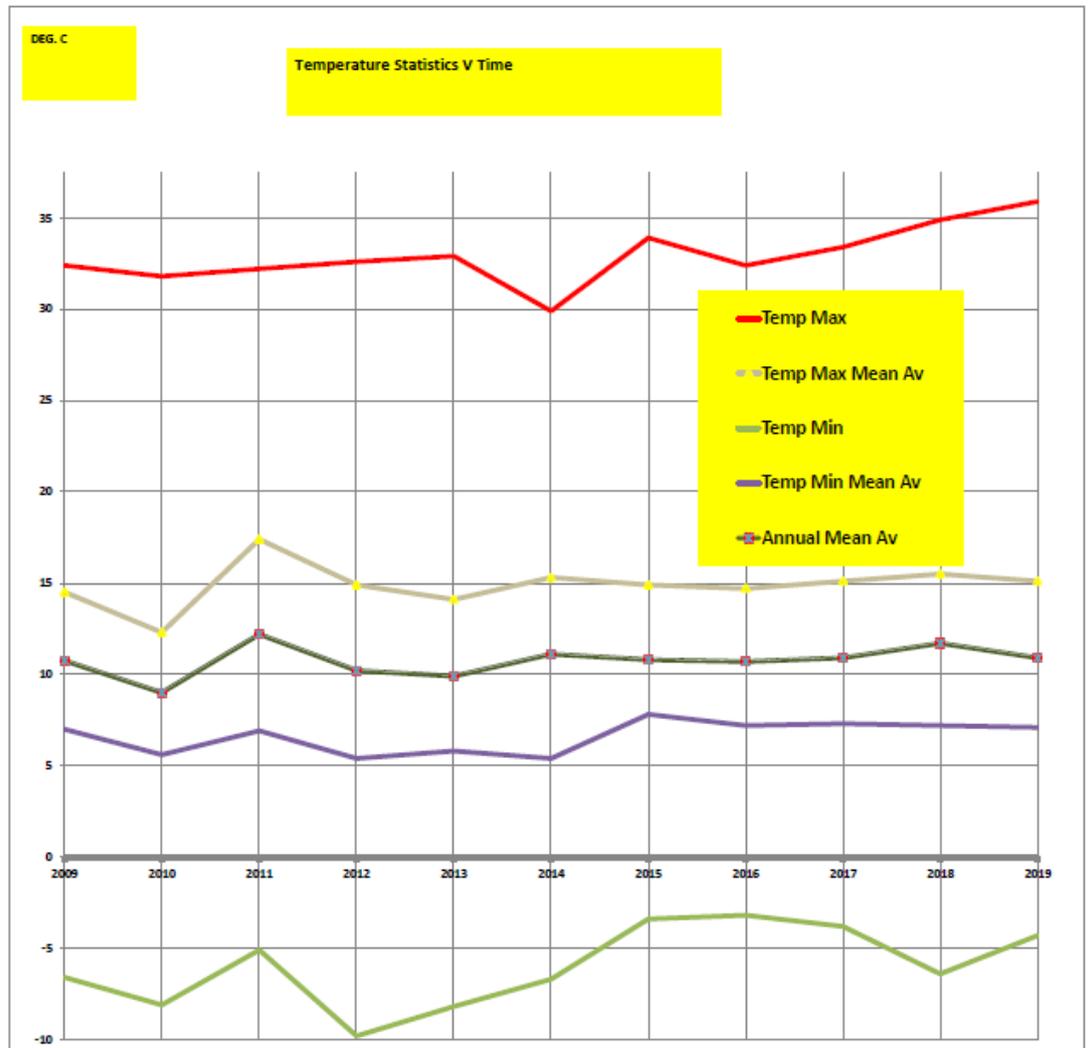
December gave us no respite from the rain with a huge total of 157.8 mm ; between 19th and the 21st 65 mm fell on just these 3 days. The month started cold with 5 frosty mornings in a row, and a total of 7 frosts in the month. The cool period coincided with high pressure, which dropped in the middle of the month to return only during the last few days. We had 26 days on which rain fell, but miraculously Christmas day was dry and sunny.

The total rain for the for the year was 994.7 mm which was quite high especially when 2018 had only 815.5 mm. Temperatures during the year were similar to 2018, although the annual mean average was lower at 10.9 degrees (11.1 degrees in 2018). As for the year ahead most forecasts expect the unsettled weather to continue in January and February, with only a slight chance of snow. Long range forecasts expect a mostly dry and warm June and July, but as always they are forecasts without promises. The weather is always with us.

David Cullen



Year	Temp Max	Temp Max Mean Av	Temp Min	Temp Min Mean Av	Annual Mean Av
2009	32.4	14.5	-8.6	7	10.75
2010	31.8	12.3	-8.1	5.8	9.00
2011	32.2	17.4	-5.1	8.9	12.2
2012	32.6	14.9	-9.8	5.4	10.2
2013	32.0	14.1	-8.2	5.8	9.9
2014	29.9	15.3	-6.7	5.4	11.1
2015	33.9	14.9	-3.4	7.8	10.8
2016	32.4	14.7	-3.2	7.2	10.7
2017	33.4	15.1	-3.8	7.3	10.9
2018	34.9	15.5	-6.4	7.2	11.7
2019	35.0	15.1	-4.3	7.1	10.9
2020					



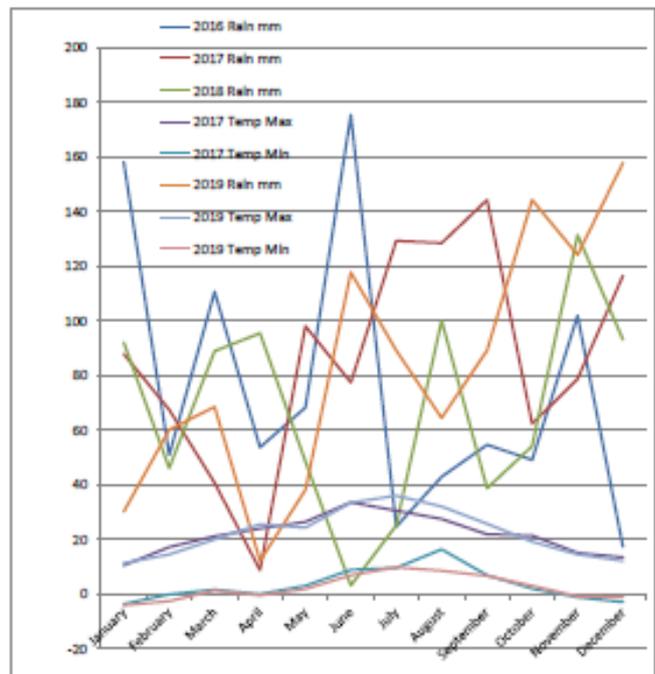
MONTH	Week 1	Week 2	Week 3	Week 4	Week 5	Total mm	Max Temp Deg C	Min Temp Deg C	Min Press mbar	Frosty Days	YEAR 2019 RAIN In mm
January	0.0	0.4	5.6	17.0	11.0	30.0	11.2	-4.3	987.0	10	30.0
February	7.6	46.6	1.6	2.2	0.6	60.0	14.4	-2.7	983.0	11	60.0
March	25.2	16.9	26.0	0.4	0.0	68.5	19.9	1.1	993.0	3	68.5
April	5.2	4.0	0.0	2.8	0.0	12.0	25.4	-0.6	993.0	5	12.0
May	4.2	27.0	0.2	2.0	4.2	38.0	24.2	1.7	989.0	0	38.0
June	0.0	20.4	71.8	16.4	9.0	117.6	33.3	6.8	1001.0	0	117.6
July	0.8	0.4	42.2	33.0	12.6	89.0	35.9	9.7	1001.0	0	89.0
August	0.0	16.6	45.2	1.4	2.0	64.4	31.9	8.7	997.0	0	64.4
September	6.0	11.0	2.6	68.1	1.3	89.0	25.6	6.5	993.0	0	89.0
October	25.0	42.0	36.4	40.6	0.2	144.2	19.1	2.9	995.0	1	144.2
November	17.0	25.4	25.0	18.4	42.2	124.1	14.4	-1.0	979.0	6	124.1
December	17.0	44.1	86.3	9.8	0.6	157.8	12.0	-1.3	973.0	7	157.8
Total										43	994.6

MONTH	Rain 2018	Rain 2019	Max T 2019	Min T 2019	Mean Temp 2019
January	92.0	30.0	11.2	-4.3	3.8
February	46.0	60.0	14.4	-2.7	5.8
March	88.8	68.5	19.9	1.1	8.4
April	95.4	12.0	25.4	-0.6	9.6
May	48.4	38.0	24.2	1.7	12.1
June	3.0	117.6	33.3	6.8	15.3
July	25.0	89.0	35.9	9.7	18.5
August	100.1	64.4	31.9	8.4	17.4
September	38.6	89.0	25.6	6.5	14.6
October	54.0	144.2	19.1	2.9	10.8
November	131.3	124.1	14.4	-1.0	6.6
December	93.0	157.8	12.0	-1.3	6
Total	815.6	994.6			10.9

MONTH	2016 Rain mm	2017 Rain mm	2018 Rain mm	2017 Temp Max	2017 Temp Min	2019 Rain mm	2019 Temp Max	2019 Temp Min
January	158	87.8	92.0	10.4	-3.8	30.0	11.2	-4.3
February	50.8	67.4	46.0	17.1	-0.3	60.0	14.4	-2.7
March	110.6	40.6	88.8	21.0	1.5	68.5	19.9	1.1
April	53.6	8.6	95.4	23.9	-0.2	12.0	25.4	-0.6
May	68.2	98.0	48.4	26.3	2.9	38.0	24.2	1.7
June	175.3	77.4	3.0	33.4	8.8	117.6	33.3	6.8
July	24.6	129.2	25.0	30.4	9.4	89.0	35.9	9.7
August	42.8	128.4	100.1	27.4	16.2	64.4	31.9	8.4
September	54.5	144.2	38.6	21.7	6.8	89.0	25.6	6.5
October	49	62.2	54.0	21.3	1.8	144.2	19.1	2.9
November	101.8	78.6	131.3	14.9	-1.3	124.1	14.4	-1.0
December	17.2	116.5	93.0	13.3	-3.1	157.8	12.0	-1.3
Total	906.4	1038.9	815.6			994.6		

All Temperatures In Degree C

Year	Temp Max	Temp Max Mean Av	Temp Min	Temp Min Mean Av	Annual Mean Av
2009	32.4	14.5	-6.6	7	10.75
2010	31.8	12.3	-8.1	5.6	9.00
2011	32.2	17.4	-5.1	6.9	12.2
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2017	33.4	15.1	-3.8	7.3	10.9
2018	34.9	15.5	-6.4	7.2	11.7
2019	35.9	15.1	-4.3	7.1	10.9
2020					
2022					
2023					
2024					
2025					



RAINFALL - WINTER MONTHS

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2023
January	89.92	159.6	34.5	23	75	72.4	87.9	53.2	73.80	37.6	53.8	242.8	84.4	158.00	87.80	92	30		
February	29.21	36.7	26.5	54.7	105.7	24.9	70	83.7	49.00	16.2	41.2	146.8	65.2	50.80	67.40	46	60		
March	21.59	37.8	57.5	56	66	85.2	36.1	58.2	13.60	22.8	75.2	31.5	22.6	110.60	40.60	88.8	68.5		
September	10.16	28.4	37.5	104.7	29.9	64.4	29.8	69.4	39.80	69.8	62.8	13.2	54.4	54.50	144.20	38.6	89		
October	45.72	118.1	98.6	102	54.7	98.3	36.4	78.6	29.00	108.8	150	137.2	60.8	49.00	62.20	54	144		
November	111.76	74.9	51.5	63	104.5	95.5	194.6	54.3	50.20	96.6	91.7	143	79.8	101.80	78.60	131.3	128		
December	45.97	66.1	50	49.7	102.1	54.7	111.4	45.6	88.00	120	190.9	51.3	104.8	17.20	116.50	93	157.8		
TOTAL mm	354.33	521.8	356.1	453.1	537.9	495.4	566.2	443	343.40	471.8	665.6	765.9	472	541.90	597.30	543.7	677.3		

Total Rain	535.94	850.4	559	722.8	811.2	841.9	795.8	614.7	588.8	975.4	874.5	1059.4	734.4	906.4	1038.9	815.6	994.7		
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WINTER RAINFALL

