

## Wyre Forest Reptile Report 2018

correlated with meteorological data

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Male Adder, Button Oak, March 2018

Phil Rudlin

### Summary of Seasonal Weather 2018

The weather of 2018 was one of extremes, which began in December 2017 with heavy falls of snow from the 7th to the 11th, causing widespread power failures and damaged telephone lines. As we entered 2018 we were greeted with roaring winds from Storm Eleanor on the 3rd January accompanied by rain. Another band of snow fell on 21st and 22nd, as a result of Storm Georgina crossing Scotland with gale force winds.

**FEBRUARY** produced a few snow flurries on the 6th, with blizzard conditions on the 9th in very strong winds. More blizzards followed later in the month courtesy of Storm Emma on the 28th, with bitter east winds and more snow, described by meteorologists as a "weather bomb".

**MARCH** began with the coldest March day since records began, with a cold north east wind, and Dowles Brook frozen over as the ground temperature dipped to  $-7.5^{\circ}\text{C}$ . Bitter cold winds roared once again on the 1st, 2nd and 3rd, with more snow, now described as "the beast from the east". Thereafter, conditions became milder and wetter, although much colder on the 17th and 18th with blizzards and more heavy snowfalls. It was to remain unsettled until the end of the month, which was the wettest of the year with 116.3mm of rain and snow precipitation.

**APRIL** remained unsettled, but a few sunny spells glim-

mered through at times with the occasional sunny warm day from the 14th, with exceptionally warm conditions from the 18th to the 26th when the 19th became the hottest April day for nearly 70 years when I recorded a temperature of  $27^{\circ}\text{C}$  ( $29.1^{\circ}\text{C}$  in London's St. James Park). The month ended with cooler unsettled weather.

**MAY** began unsettled but soon turned warmer with prolonged spells of dry sunny weather through to the end of the month, albeit, with heavy rain on the 25th, followed by thunderstorms overnight on the 27th. However, it proved to be the warmest May on record.

**JUNE** - the weather became increasingly settled with well above average temperatures, and it was also exceptionally dry, with only 9.5mm of rain recorded at Knowles Mill.

**JULY** was also dominated by High Pressure making it possibly the warmest July since 1910. The hottest day of the year fell on the 8th July with a temperature of  $31.3^{\circ}\text{C}$ .

**AUGUST** continued warm and settled for the first week or two, although the weather deteriorated during the second half of the month, resulting in a rainfall total only slightly below average (95%) and bringing the drought conditions of May, June and July to a predictable end.

**SEPTEMBER** saw the first of the autumn storms, with Storm Ali on the 18th and Bronagh on the 20th, bringing more welcome rain for the farmers. The first frost



was also recorded at Knowles Mill on the 25th with a temperature of -0.2°C

OCTOBER 11th/12th saw the arrival of Storm Callum, which brought high winds and rain to the Midlands, with stronger winds, even severe gales, affecting western coastal regions.

NOVEMBER 21st produced a brief flurry of snow which didn't last long. The month ended with Storm Diane on the 28th, giving wet and windy conditions.

DECEMBER gave us Storm Deidre with more heavy rain during the month. Christmas Day was mild, misty, grey and damp.

## 2018 Weather Data

Total Rainfall/Precipitation = 734.2mm (28.9 inches).

Rain Days with +0.2mm = 184 days

Rain Days with +1.0mm = 134 days

Wettest Day, with 26.1mm on 30th September

Wettest Month, with 116.3mm (45.75 inches) was March

Warmest Day, with 31.3°C on 8th July.

Coldest Night, with an air temperature of -9°C was on 28th February with a ground temperature of -14°C.

This data was recorded at Knowles Mill, Dowles Brook,

**Table 1: Rainfall at Knowles Mill**

Year	Total Rainfall		Days with Minimum Of 0.2mm Rainfall	Maximum Daily Rainfall (mm)	Date of Maximum Rainfall
	mm	Inches			
1990	964.3	38	167	42.5	28-Jan
1991	633.5	24.9	158	33	30-Apr
1992	880.4	34.7	196	42.9	28-May
1993	785.9	30.9	177	38	10-Jun
1994	814	32	198	54.8	14-Aug
1995	625.9	24.6	164	41.3	10-Jul
1996	624.8	24.6	169	17.4	12-Apr
1997	753.7	29.7	161	32	25-Jun
1998	805.4	31.7	195	27.2	01-Jun
1999	968.6	38.1	212	45.6	19-Sep
2000	1011.6	39.9	223	36.8	29-Oct
2001	738.1	29.1	187	40.2	17-Jul
2002	843.7	33.3	191	22.8	20-Dec
2003	560.2	22.1	155	27.3	30-Oct
2004	849.6	33.4	209	46.3	03-Aug
2005	748.8	29.5	183	35.3	24-Jul
2006	652.5	25.7	191	20.1	24-Nov
2007	1046	41.25	184	74.7	20-Jul
2008	930	36.67	197	37.2	05-Sep
2009	724.5	28.6	184	25	06-Jun
2010	659.2	25.99	168	27	25-Aug
2011	498.6	19.66	166	18.7	07-May
2012	1077.1	42.47	202	82.3	23-May
2013	807.7	31.35	169	28	14-May
2014	976	38.48	212	26.7	25-Aug
2015	775.5	30.06	207	40	13-Aug
2016	848.7	33.46	197	33	21-Nov
2017	722.2	28.48	207	24.8	26-Dec
2018	734.2	28.9	184	26.1	20-Sep

Wyre Forest, at approximately 9am GMT. The site is located only some 31 metres above sea level, with the steep sided valley forming a frost pocket, and limiting direct sunshine to just a few hours daily, even during the summer months.

## Discussion

Adder numbers are down again, this time by 3 from 2017, with 21 Males and 18 Females seen. There is still a worrying trend of the males disappearing, although the female numbers appear to be stable. No courtship or copulation was seen on the main site, which indicates that few if any of the 5 females present were in breeding condition. On another Site just 2 dead males were recorded, possible run over by quad bikes! Most sites have very low numbers, often just a single animal, which is not sustainable. The main site is now possibly the only remaining viable site in the long term, with males, females and juveniles all recorded during 2018. Credit must be given to Natural England for padlocking the gates on this site. This action should discourage future access by over zealous photographers and unwelcome canines running loose. Hopefully, this will give the remaining adders a chance to court and mate without continual disturbance. In addition, for the sensitive habitat management planned for this site during January 2019 and in future years. It will of course take several years for the site to fully benefit from these positive measures.

Recorders all agreed that both slow-worms and lizards were in very low numbers compared to previous years as the census shows.

## Acknowledgements

I would like to thank Chris Bradley and all the volunteers for the many hours of fieldwork involved in the census. Further thanks to landowners on whose property the study has been undertaken, especially to the Forestry Commission and Natural England. Special thanks go to Wildlife Ranger Phil Rudlin for laying out this report and organising Work Parties to improve adder/reptile habitat and all who participated in this.

## Footnote from Phil Rudlin

It has been well documented how difficult it can be to identify individual adders but how head and scale markings can help, if you can get a close look or a decent photo. However, it dawned on me recently how tricky it was to tell the difference between sexes sometimes! Females are usually brownish in hue with dark-brown markings. The males are darker with black



# Wyre Forest Study Group



Photo 1. Male Adder 26th March 2018

Sylvia Sheldon



Photo 2. Male Adder, 14 April 2018

Sylvia Sheldon

markings. The basal colour of males will also often be slightly lighter than that of the females, making the black zigzag pattern stand out. However, Sylvia showed me the photos taken above (Photos 1 and 2) of the same male just a few weeks apart. As you can see on the 26th March he has quite a brown tinge to the body, but by 14th April, just 19 days later, he has changed considerably. In recent years I have taken photos of what I was sure to be a male but when I looked at it on the com-

puter screen it looked decidedly female! As a general rule if an animal is seen from February to mid-March it is probably a male. However, as table 2 shows, females can come out earlier. It is far easier to tell them apart when they are sunbathing together as in photo 3 but this is becoming increasingly rare to see in the forest! Once the males have shed, in April they are also easier to tell apart (Photo 4)



Photo 3. Female (left) and male (right) Adders, 7 April 2018

Phil Rudlin

**Table 2: Phenology data in the Wyre Forest**

RECORD	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Frogs Croaking	23-Jan	31-Jan	18-Jan	12-Jan	16-Jan	13-Feb	24-Feb	18-Feb	03-Mar	07-Mar	18-Feb	N/S	N/S	21-Feb	10-Mar
First Frogspawn	16-Feb	09-Feb	26-Feb	15-Feb	09-Feb	18-Feb	26-Feb	22-Feb	03-Mar	08-Mar	21-Feb	07-Mar	22-Feb	22-Feb	11-Mar
First Male adder	04-Mar	15-Feb	15-Feb	14-Feb	12-Feb	16-Feb	20-Feb	12-Feb	21-Feb	17-Mar	19-Feb	18-Feb	01-Mar	24-Feb	20-Feb
First common lizard	25-Mar	15-Feb	22-Feb	07-Mar	12-Feb	02-Mar	07-Mar	12-Feb	25-Feb	13-Mar	24-Feb	18-Mar	01-Mar	14-Mar	13-Mar
First Slow-Worm	16-Mar	18-Mar	25-Mar	07-Mar	01-Mar	25-Feb	18-Feb	17-Mar	25-Feb	16-Apr	24-Feb	10-Mar	01-Mar	02-Apr	26-Mar
First female adder	16-Mar	18-Mar	26-Mar	14-Feb	21-Mar	02-Mar	14-Mar	12-Mar	17-Mar	18-Mar	18-Mar	07-Mar	14-Mar	14-Mar	03-Apr
First grass snake	02-Apr	21-Mar	12-Apr	07-Mar	27-Mar	06-Mar	21-Mar	12-Mar	25-Feb	23-Apr	17-Mar	20-Mar	12-Mar	02-Apr	21-Mar
First grass snake copulation	N/S	04-Apr	N/S	N/S	01-Apr	21-Mar	04-Apr	N/S	N/S	N/S	N/S	N/S	14-Apr	N/S	N/S
First male adder slough	19-Apr	16-Apr	19-Apr	06-Apr	02-Apr	26-Mar	13-Apr	08-Apr	17-Apr	24-Apr	08-Apr	13-Apr	20-Apr	10-Apr	26-Apr
First adder courtship and combat	24-Apr	27-Apr	25-Apr	12-Apr	22-Apr	03-Apr	14-Apr	08-Apr	17-Apr	N/S	16-Apr	18-Apr	N/S	18-Apr	N/S
First adder mating	25-Apr	27-Apr	26-Apr	12-Apr	23-Apr	11-Apr	14-Apr	08-Apr	17-Apr	N/S	18-Apr	18-Apr	N/S	18-Apr	N/S
Last adder courtship	07-May	06-May	07-May	27-Apr	03-May	29-Apr	05-May	30-Apr	26-Apr	N/S	28-Apr	18-Apr	N/S	25-Apr	N/S
Last adder	05-Oct	16-Oct	20-Oct	02-Nov	21-Oct	26-Sep	23-Sep	16-Oct	05-Nov	18-Sep	22-Sep	23-Sep	28-Sep	19-Sep	24-Sep



**Table 3: Cumulative data of Adders**

Year	First Sighting	Air Temp. (°C)	Grass Temp. (°C)	First Slough
1990	05-Feb	13	14	08-Apr
1991	23-Feb	14	17	19-Apr
1992	23-Feb	13	15	22-Apr
1993	17-Feb	10.7	12.5	16-Apr
1994	10-Feb	10	15	18-Apr
1995	12-Feb	11.4	11	10-Apr
1996	16-Feb	12.2	15	24-Apr
1997	15-Feb	8.6	11	08-Apr
1998	11-Feb	13.6	12.5	17-Apr
1999	16-Feb	8	9	16-Apr
2000	19-Feb	6.3	12.5	07-Apr
2001	07-Feb	10	11.5	17-Apr
2002	11-Feb	13.5	16	09-Apr
2003	23-Feb	11	23.8	31-Mar
2004	04-Mar	11	17.5	19-Apr
2005	15-Feb	10	14	16-Apr
2006	15-Feb	10	17.3	19-Apr
2007	14-Feb	11.3	19	06-Apr
2008	12-Feb	7	27	02-Apr
2009	16-Feb	11.7	13.7	26-Mar
2010	20-Feb	4	20	13-Apr
2011	12-Feb	11.5	15.6	08-Apr
2012	21-Feb	15	28	17-Apr
2013	17-Feb	5.5	13	24-Apr
2014	19-Feb	10	16	08-Apr
2015	18-Feb	10	16	13-Apr
2016	01-Mar	13	18	20-Apr
2017	24-Feb	14.5	12.5	10-Apr
2018	20-Feb	9.2	12	26-Apr

**Table 4: Adder numbers**

Year	Sites Surveyed	Sites with Adders	Mature Males	Mature Females	Total	Average per Site
1990	56	50	185	55	240	4.8
1991	76	61	211	56	267	4.4
1992	78	55	159	33	192	3.5
1993	80	59	186	70	256	4.3
1994	76	50	153	29	182	3.6
1995	76	44	103	14	117	2.6
1996	80	41	112	32	144	3.5
1997	84	44	102	31	133	3
1998	85	42	103	34	137	3.3
1999	67	35	100	20	120	3.4
2000	87	24	69	13	82	3.4
2001	Data incomplete due to FMD					
2002	20	13	36	17	53	4
2003	20	9	26	10	36	4
2004	47	20	40	19	59	3.6
2005	54	25	40* 65*	16* 38*	56*103*	4.1* 2.4*
2006	38	21	74	26	100	2.1
2007	28	19	67	24	101	5.3
2008	51	24	120	35	155	6.5
2009	55	22	96	30	126	5.7
2010	55	24	83	23	106	4.4
2011	44	20	59	27	86	4.3
2012	27	14	56	19	75	5.4
2013	26	12	35	22	57	4.8
2014	26	15	43	16	59	3.9
2015	26	12	44	18	62	5.2
2016	26	10	26	16	42	4.2
2017	26	9	24	18	42	4.7
2018	26	11	21	18	39	3.5

\*Usual Sites without three new sites added  
 \* Total when three new sites were added  
 FMD – Foot & Mouth Disease

**Table 5: Other reptiles recorded during Adder census**

Year	Grass Snakes	Slow-Worms	Lizards
1990	36	26	24
1991	20	35	20
1992	30	35	13
1993	49	62	38
1994	20	46	23
1995	23	36	11
1996	22	48	15
1997	28	53	42
1998	21	42	37
1999	34	41	19
2000	12	24	23
2001	Data incomplete due to FMD		
2002	9	17	14
2003	5	10	26
2004	7	18	19
2005	12/16*	53/71*	58/144*
2006	11	49	70
2007	12	45	52
2008	34	129	169
2009	18	156	98
2010	28	124	90
2011	26	59	117
2012	16	43	34
2013	13	42	21
2014	19	43	23
2015	16	70	38
2016	49	97	31
2017	41	96	32
2018	40	87	18

\*\* the total with the three new sites added  
 FMD – Foot & Mouth Disease



Photo 4. Male Adder recently shed, 28 April 2006

Phil Rudlin