Wyre Forest Reptile Report 2016

correlated with meteorological data

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Female Adder Phil Rudlin

Summary of Seasonal Weather 2016

The winter of 2015/16 (December, January, February and March) was dominated by a succession of named storms, ie, Desmond, Eva and Frank, which produced 191% of average rainfall. The erratic, meandering course of the jet stream affected both world and UK weather on a daily basis.

JANUARY 2016 continued stormy, with Gertrude arriving on the 9th. Low pressure dominated, which resulted in a record breaking rainfall total of 117.8mm, and the fourth wettest January ever recorded in the UK. In Wyre, 25 days with rain were recorded, although it was milder than average.

FEBRUARY saw gale force winds at the beginning of the month, with Storm Imogen striking a few days later, but, as the month progressed drier weather prevailed with some sunny spells, but still windy and with night frosts.

MARCH was again dominated by low pressure, with strong winds accompanying the arrival of Storm Jake early on. However, by mid-month high pressure brought a welcome period of dry settled weather, with some sunshine. However, by the last week of the month Storm Katie brought further heavy rain and strong winds.

APRIL continued in a similar vein, with low pressure and rain for 15 days, followed by a dry spell with cold northerly winds, giving a brief flurry of snow early on the 15th. Although the month remained cool, there were several sunny days. However, the last week saw hail, sleet and further storms return.

MAY began unsettled, but eventually, more settled weather moved in, to produce warmer conditions at times, and despite a cool spell mid-month, it was still warmer and drier than average.

JUNE began with warm settled weather, but it didn't last, for after just six days, low pressure moved in to give 20 rainy days, making June yet another wet month.

JULY was dominated by low pressure with several rainy days, however, this was followed by a mini-heatwave 16th-23rd, which gave 8 days with largely cloudless skies and hot sun, resulting in the hottest day of the year on the 19th, with an air temperature of 34.5°C. However, a thundery breakdown followed with a return to unsettled weather by the end of the month.

AUGUST began unsettled with low pressure dominant until the 18th, when high pressure briefly established itself, producing another mini-heatwave, prior to an unseasonably deep low pressure system from the 19th onwards, which gave unsettled weather once again, right up until the end of the month.

SEPTEMBER was warmer than average, with average rainfall. Indeed, it was settled and warm during the first half of the month, although, with light rain on most days. Following a thunderstorm on the 13th, temperatures plummeted, with a particularly cool night on the 23rd/24th, quickly followed by the wettest day of the month with 16.5mm of rain recorded.

OCTOBER was drier than average with only 21.6mm of rain, less than one inch. The first ground frosts of the autumn occurred on the 11th, 22nd and 23rd, with several foggy mornings resulting.

NOVEMBER was the wettest month of the year with 136.1mm of rain (5.5 inches). Not much rain fell during the first 7 days, but torrential rain on the 8th deposited some 27.6mm, followed by another 14 days with variable rainfall, the 20th/21st producing 63.7mm alone. However, the last week was dry with cold frosty nights and low sun on several days.

DECEMBER was a drier month with only 35.5mm of rain and 14 dry days, with variable cloud and sun, there were 23 nights with ground frost and 9 days with fog.

2016 Weather Data

Total Rainfall/Precipitation = 848.7mm (33.46 inches)

Rain Days with +0.2mm = 197 days

Rain Days with +1.0mm = 150 days

Wettest Day, with 33mm on 21st November

Wettest Month, with 136.1mm (5.5 inches) was Nov.

Warmest Day, with 34.5°C on 19th July

Coldest Night, with an air temperature of -7°C was on 30th November with a ground temperature of -10°C

2 days of brief snow on 2nd March and 16th April

This data was recorded at Knowles Mill, in the Dowles Valley, Wyre Forest, at approximately 9am GMT. Below average temperatures are frequently recorded as the

This article is an extract from the Wyre Forest Study Group annual Review 2016

site lies only 31 meters above sea level, with the steep sided valley forming a frost pocket, and limiting sunshine to just a few hours, even during the summer months.

Discussion

As Tables 4 and 5 reveal, 2016 proved to be a very poor year for reptiles in Wyre Forest, and especially for Adders. Whilst the weather was generally inclement during both March and April, male Adders were still observed on a regular basis, in close proximity to, and even basking with females in breeding condition, awaiting a spell of warm sunshine, a vital ingredient required to incite both courtship and mating.

Year	Total Rainfall		Days with Minimum	Maximum Daily	Date of Maximum
	mm	Inches	Of 0.2mm Rainfall	Rainfall (mm)	Rainfall
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

Table 1. Rainfall at Knowles Mill

Tiny baby Adder next to *Cepaea* shell Jane Scott

However, there is now so much disturbance in and around the main Adder sites, principally from dog walkers and overzealous photographers, that Adders are not able to settle for long enough to allow for successful courtship and mating, which, even in ideal conditions, can still be a prolonged affair. Thus, it is of great concern, that this continual disturbance, be it largely based on ignorance, and the, by now, near iconic status of the Adder, could prove to be the final straw which, ultimately leads to the "functional extinction" of this species in Wyre Forest.

It illustrates once again, the dire need for Adder sites and surrounding habitat to be fully protected by the letter of the law, especially in spring, to give the species a chance to procreate and prosper. This point

RECORD	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
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
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
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
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
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
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
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
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
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
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
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
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
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

Table 2. Phenology Data in the Wyre Forest

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

Table 3. Cumulative Data of Adders

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

*Usual Sites without three new sites added

* Total when three new sites were added

FDM – Foot & Mouth Disease

Table 4. Adder Numbers

was further emphasized by the fact that no pregnant females or neonates were seen at the main Adder site during the summer months, although 3 babies were found on one occasion at London Orchard, within 50 metres of each other.

It is still to be hoped that some Adders have found sanctuary in more secluded spots (now very difficult to find) away from public disturbance, to ensure that at least a remnant population will survive in future years.

It should also be noted that on Wimperhill Wood, which once supported some of the key hibernacula in Wyre Forest, no male Adders were seen despite several visits to this site in favourable weather conditions. This statistic is particularly worrying, especially as 3 female Adders, all apparently in breeding condition and awaiting the arrival of a male, were seen one sunny afternoon in this location. The chance of any successful matings would thus appear to be very slim.

Possibly the only encouraging news during the annual census was the presence of 7 males and 2 females on Pound Green Common, where much management work to restore the site back to lowland heath, has taken place in recent years. However, no mating activity was observed, and the quality and viability of the site, both for reptiles in general, and for Adders in particular, could be compromised by further management work, such as tree felling and clearance of scrub and the more established gorse thickets; also possibly from overgrazing by sheep in spring and summer, which, apart from the unwelcome disturbance, further denudes valuable ground cover and soft herbage, essential to Adder survival. On the adjacent site at Pound Green Coppice, numbers are still generally in decline, although one particular spot, a favourite place in the recent past, still proved lucrative, both for Adders and Grass Snakes. However, it was noted that the network of main rides, dissecting young conifer plantations, comprised mainly of Corsican Pine, were no longer utilised by Adders, and indeed, have now been taken over by dog walkers, with the verges, once a favoured basking spot for Adders, liberally sprinkled with dog faeces in various stages of decay. Yet more disturbance by man and his canines. Incidentally, on the edge of one ride, Chris Bradley also encountered both a cock and hen Pheasant, in the process of attacking a mature male basking alone in the sun. Only a swift intervention prevented yet another Adder fatality. This once again highlights the negative impact of intensive pheasant rearing in the Forest, on reptiles, invertebrates, etc.

We further conclude, that, given the premature demise of the Captive Breeding Programme, largely engineered by the Institute of Zoology, the only effective means available to ensure the long term survival of the Adder in Wyre Forest, is by the large scale translocation of Adders from other locations within the UK, where populations are still flourishing. Suitable sites and habitat within the Wyre Forest have already been identified, but finding appropriate donor

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

Table 5. Other Reptiles recorded during Adder Census

populations and gaining permission from the relevant authorities could still prove a major stumbling block. However, we suggest that there is now no longer any viable alternative, and that currently, the future of the Adder in Wyre Forest hangs in the balance supported by only the narrowest of thread.

Acknowledgements

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The oldest Adder in the Forest
'Broken Birch' 22 years old
Sylvia Sheldon

Footnote from Phil Rudlin

When recording Adders it can be very difficult to tell individuals apart. A first glance they look very similar and without Sylvia's technique of identifying them by their head markings, it would be all but impossible. This became apparent this year when one of the volunteers recorded several sightings of a male Adder in his survey area. Found in a similar area it would usually be assumed it was just one animal as they were never seen together. However, Jonathan managed to get good photos of each one and, on closer inspection, confirmed that there were in fact two different males. Can you spot the difference on the photos below?

Jonathon Cartwright

Jonathon Cartwright