



In partnership with



## **BRASSICA FLEA BEETLES 10 September 2020**

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## Introduction

Eight species of the genus *Phyllotreta* (flea beetles) feed on cruciferous/brassicaceous crops and weeds in the UK and they tend to be considered together. However they may have slightly different life-cycles and biology. Most of the information on their basic biology and ecology in the UK was collected many years ago and there do not appear to have been many recent studies, apart from those on methods of control, mainly with insecticides. The basic life-cycle of these species is described as follows:

- Adult beetles hibernate from October to March in hedgerows, under trees and in other sheltered locations.
- When temperatures rise in the spring the beetles come out of hibernation.
- They first stay close to hedgerows and feed on weeds, but they gradually disperse more widely and then when temperatures get to about 20°C more widespread dispersal occurs and they can fly with the prevailing wind.
- The older literature says that the period of greatest activity is from 10<sup>th</sup> April – 20<sup>th</sup> May – but more recently damage appears to have occurred over a much more extended period than this.
- The beetles mate and lay eggs towards the end of May.
- The larvae hatch and feed on plant roots and form pupae after about 4 weeks.
- The pupal stage lasts for about 4 weeks and then adults emerge in late July – early August when they again feed on crops.
- In autumn the beetles move into shelter, away from crops, and hibernate. The older literature suggests that the flea beetle population in any field is a drifting one and that different species dominate in different parts of the country.

### **Monitoring data 2020**

No forecasts for flea beetles have been developed. However, they are recorded (all species together) from water trap captures in Warwickshire and these will be summarized during the year in the table below. Numbers of cabbage stem weevil, cabbage seed weevil and cabbage stem flea beetle are also shown. We first set up the traps in some overwintered swedes at Wellesbourne but the traps were then moved to allotments and a garden in Tysoe in Warwickshire before returning to Wellesbourne on 19<sup>th</sup> May.

Date	Total in 3 traps near overwintered swedes at Wellesbourne. Traps out all winter.				
	No. flea beetles	No. cabbage stem weevils	No. cabbage seed weevils	No. cabbage stem flea beetles	Number of traps
3rd March	0	0	0	0	3
10th March	0	1	0	0	3
17th March	0	1	0	0	3
<b>Total in traps at Tysoe, Warwickshire – from 26<sup>th</sup> March</b>					
27 <sup>th</sup> March	0	0	0	0	3
28 <sup>th</sup> March	0	0	0	0	3
29 <sup>th</sup> March	0	0	0	0	3
30 <sup>th</sup> March	0	0	0	0	8
31 <sup>st</sup> March	0	0	0	0	9
1 <sup>st</sup> April	0	0	0	0	9
2 <sup>nd</sup> April	0	0	0	0	9
3 <sup>rd</sup> April	0	0	0	0	9
4 <sup>th</sup> April	0	0	0	0	9
5 <sup>th</sup> April	0	0	0	0	9
6 <sup>th</sup> April	0	2	0	0	9
7 <sup>th</sup> April	0	12	0	3	9
8 <sup>th</sup> April	0	21	0	21	9
9 <sup>th</sup> April	0	10	0	7	9
10 <sup>th</sup> April	0	10	0	2	9
11 <sup>th</sup> April	0	4	0	9	9
12 <sup>th</sup> April	0	6	0	8	9





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Date	Total in traps at Tysoe, Warwickshire – from 26 <sup>th</sup> March				
	No. flea beetles	No. cabbage stem weevils	No. cabbage seed weevils	No. cabbage stem flea beetles	Number of traps
13 April	0	0	0	2	9
14 April	0	1	0	1	9
15 April	0	4	0	3	9
16 April	0	6	0	2	9
17 April	0	0	0	2	9
18 April	0	0	0	0	9
19 April	0	3	0	2	9
20 April	0	0	0	1	9
21 April	0	0	0	1	9
22 April	0	0	0	2	9
23 April	0	2	0	3	9
24 April	2	9	0	1	9
25 April	0	7	0	2	9
26 April	0	2	0	1	9
27 April	0	0	0	1	9
28 April	0	0	0	2	9
29 April	0	0	0	0	9
30 April	0	0	0	0	9
1 May	0	0	0	1	9
2 May	0	0	0	3	9
3 May	0	0	0	0	9
4 May	0	0	0	1	9
5 May	0	0	0	2	9
6 May	0	0	0	1	9

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Date	Total in traps at Tysoe, Warwickshire – from 26 <sup>th</sup> March				
	No. flea beetles	No. cabbage stem weevils	No. cabbage seed weevils	No. cabbage stem flea beetles	Number of traps
7 May	0	0	0	0	9
8-9 May	0	0	0	1	9
10-11 May	0	0	0	0	9
12 May	0	0	0	1	9
13 May	0	0	0	0	9
14 May	0	0	0	3	9
15 May	0	0	0	0	9
16 May	0	0	0	1	9
17 May	0	0	0	0	9
18 May	0	0	0	0	9
19 May	0	0	0	0	9
20 May	0	0	0	0	9
21 May	0	0	0	0	9
Traps set up at Wellesbourne in swede plot on 19 <sup>th</sup> May					
22 May	7	51	13	4	3
26 May	14	31	1	0	3
29 May	13	71	7	0	3
2 June	10	47	1	2	3
5 June	1	21	8	1	3
9 June	0	18	0	0	3
12 June	1	82	3	1	3
16 June	6	335	3	1	3
19 June	2	100	3	1	3
23 June	1	105	0	1	3
26 June	5	256	5	2	3
30 June	7	41	3	1	3
3 <sup>rd</sup> July	5	20	0	2	3
7 <sup>th</sup> July	9	18	0	1	3



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Date	Total in 3 traps at Wellesbourne in swede plot			
	No. flea beetles	No. cabbage stem weevils	No. cabbage seed weevils	No. cabbage stem flea beetles
10 July	4	4	0	1
14 July	35	38	1	1
17 July	51	12	1	3
20 July	84	6	0	2
24 July	46	11	0	0
28 July	32	11	2	2
31 July	85	11	1	1
4 August	105	4	1	1
7 August	55	2	2	1
11 August	133	6	0	0
14 August	169	3	0	1
18 August	205	3	1	0
21 August	52	2	0	0
25 August	50	0	0	0
28 August	14	0	0	0
1 September	10	0	0	0
4 September	5	0	0	0
8 September	0	0	0	0



**Historical information from 2019**

<b>Total in 3 traps near overwintered swedes at Wellesbourne. Set up 26th February 2019</b>				
<b>Date</b>	<b>No. flea beetles</b>	<b>No. cabbage stem weevils</b>	<b>No. cabbage seed weevils</b>	<b>Cabbage stem flea beetles</b>
5 <sup>th</sup> March	6	14	0	2
12 <sup>th</sup> March	1	0	0	0
19 <sup>th</sup> March	1	0	0	1
26 <sup>th</sup> March	8	10	0	1
2 <sup>nd</sup> April	32	110	0	2
9 <sup>th</sup> April	9	2	0	2
16 <sup>th</sup> April	12	5	0	2
23 <sup>rd</sup> April	16	37	56	12
26 <sup>th</sup> April	0	3	1	3
30 <sup>th</sup> April	8	18	4	2
3 <sup>rd</sup> May	15/29	16/9 (old swedes/new swedes)	3/2	3/4
7 <sup>th</sup> May	2/24	5/1 (old swedes/new swedes)	0/0	0/5
10 <sup>th</sup> May	11/31	7/0 (old swedes/new swedes)	0/0	4/9
14 <sup>th</sup> May	23/311	23/59	7/0	5/15
17 <sup>th</sup> May	12/357	9/14	9/3	8/14
21 <sup>st</sup> May	19/512	8/34	4/2	15/17
24 <sup>th</sup> May	258	23 (new swedes only from now onwards)	7	15
28 <sup>th</sup> May	148	24	2	24
31 <sup>st</sup> May	51	8	1	4
4 <sup>th</sup> June	86	12	4	9

Date	Total in 3 traps near overwintered swedes. Set up 26th February 2019			
	No. flea beetles	No. cabbage stem weevils	No. cabbage seed weevils	Cabbage stem flea beetles
7 <sup>th</sup> June	68	15	0	0
11 <sup>th</sup> June	40	6	1	0
14 <sup>th</sup> June	1	2	0	0
18 <sup>th</sup> June	18	39	2	2
21 <sup>st</sup> June	0	25	0	0
25 <sup>th</sup> June	14	19	0	4
8 <sup>th</sup> June	0	1	0	2
2 <sup>nd</sup> July	0	0	0	3
5 <sup>th</sup> July	0	13	1	8
9 <sup>th</sup> July	0	26	1	2
12 <sup>th</sup> July	9	51	1	2
16 <sup>th</sup> July	11	59	0	0
19 <sup>th</sup> July	20	65	1	25
23 <sup>rd</sup> July	12	57	1	18
26 <sup>th</sup> July	28	92	0	270
30 <sup>th</sup> July	29	29	0	216
2 <sup>nd</sup> August	25	10	0	165
6 <sup>th</sup> August	20	6	0	97
9 <sup>th</sup> August	11	5	0	31
13 <sup>th</sup> August	7	0	0	39
16 <sup>th</sup> August	9	5	0	17
20 <sup>th</sup> August	27	0	0	6
23 <sup>rd</sup> August	37	0	0	8
27 <sup>th</sup> August	50	0	0	12
30 <sup>th</sup> August	22	1	0	5
3 <sup>rd</sup> September	9	0	0	2
6 <sup>th</sup> September	8	0	0	1
10 <sup>th</sup> September	7	4	0	10
13 <sup>th</sup> September	18	0	0	0
17 <sup>th</sup> September	20	2	0	28





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<b>Total in 3 traps near overwintered swedes. Set up 26th February 2019</b>				
<b>Date</b>	<b>No. flea beetles</b>	<b>No. cabbage stem weevils</b>	<b>No. cabbage seed weevils</b>	<b>Cabbage stem flea beetles</b>
20 <sup>th</sup> September	28	2	0	25
24 <sup>th</sup> September	12	0	0	5
27 <sup>th</sup> September	5	2	0	3
1 <sup>st</sup> October	4	12	0	1
4 <sup>th</sup> October	3	51	0	8
7 <sup>th</sup> October	0	16	1	3
11 <sup>th</sup> October	0	3	0	2
15 <sup>th</sup> October	2	13	0	4
18 <sup>th</sup> October	1	25	0	1
22 <sup>nd</sup> October	0	8	0	0
25 <sup>th</sup> October	0	21	2	4
29 <sup>th</sup> October	0	3	0	1