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Carrot aphids – 28 October 2021

This is the last update for 2021

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Introduction

Willow carrot aphid (*Cavariella aegopodii*) overwinters mainly as eggs on willow trees and these generally hatch in February – March. The aphids pass through one or two generations on the willow. Winged forms are produced later and migrate to carrot and other hosts over a five to six week period.

Willow-carrot aphid may also be present as adult or immature stages on carrot crops throughout the winter. These mobile stages are capable of producing spring colonies rapidly, with winged forms potentially arising earlier than those developing on willow trees.

Willow-carrot aphid is known to transmit virus to carrot crops. It is possible that two species of parsnip aphid and *Myzus persicae* also transmit viruses to carrot and thereby reduce yield (see [Factsheet 07/16 Virus diseases of carrots](#) and the [report for FV382b](#)). The parsnip aphids are *Cavariella pastinacae* and *Cavariella theobaldi*. There is some information on parsnip aphids at the end of this document. The management of virus transmission in carrot crops is being investigated in AHDB Project FV460 'Investigating the timing of transmission of carrot viruses to improve management strategies' – [first year report](#).



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Rothamsted Insect Survey and SASA suction trap captures 2021

Cavariella aegopodi	Inverness	Dundee	Edinburgh	Ayr	Newcastle	FERA, York	Preston	Kirton	Broom's Barn	Wellesbourne	Hereford	Rothamsted	Writtle	Ascot	East Malling	Starcross	Total
Week ending																	
11-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
09-May	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	2
16-May	0	0	0	0	0	1	9	2	1	1	6	2	5	8	4	4	43
23-May	0	1	36	0	0	9	2	0	15	82	5	2	3	12	12	5	184
30-May	0	5	87	0	1	62	108	15	86	235	84	141	68	106	30	31	1059
06-Jun	0	44	245	0	11	98	210	359	347	998	375	272	182	229	125	97	3592
13-Jun	1	86	103	0	4	89	58	328	253	519	152	294	100	244	80	167	2478
20-Jun	0	6	17	0	3	6	41	85	60	188	64	78	34	69	21	37	709
27-Jun	0	1	2	4	1	22	13	8	12	57	0	14	18	35	9	21	217
04-Jul	40	0	3	0	0	9	28	3	6	30	18	6	7	0	1	14	165
11-Jul	17	3	7	0	3	3	16	3	7	6	8	0	1	1	0	2	77
18-Jul	2	4	1	0	1	10	14	2	7	3	2	4	0	0	0	1	51
25-Jul	3	2	1	0	0	4	4	1	0	3	2	1	0	0	0	1	22
01-Aug	0	0	5	0	0	4	0	0	0	0	0	0	1	0	0	2	12
08-Aug	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	2
15-Aug	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
22-Aug	3	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	7
29-Aug	0	5	0	0	0	4	1	0	0	0	1	0	0	0	0	1	12
05-Sep	0	8	0	0	0	9	0	0	1	1	0	0	0	0	0	0	19
12-Sep	0	4	1	0	0	28	1	3	2	0	1	0	0	0	0	0	40
19-Sep	0	0	1	0	3	134	0	4	24	8	0	1	1	0	0	0	176
26-Sep	0	7	0	0	0	1403	0	51	82	6	0	0	0	1	1	0	1551
03-Oct	0	0	0	0	0	126	9	2	3	0	0	0	0	0	0	0	140
10-Oct	0	0	0	0	0	9797	151	386	388	17	1	1	15	1	2	1	10760
17-Oct	0	0	0	0	0	1544	12	19	107	15	0	1	6	1	2	1	1708



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Myzus persicae	Inverness	Dundee	Edinburgh	Ayr	Newcastle	FERA, York	Preston	Kirton	Broom's Barn	Wellesbourne	Hereford	Rothamsted	Writtle	Ascot	East Malling	Starcross	Total
Week ending																	
11-Apr	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
18-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
25-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02-May	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
09-May	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	3
16-May	0	0	0	0	0	0	0	0	2	1	0	0	1	0	1	0	5
23-May	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	3
30-May	0	1	0	0	0	0	1	0	0	1	0	2	1	0	2	1	9
06-Jun	0	0	0	0	0	1	0	1	8	40	3	29	47	1	16	5	151
13-Jun	0	0	0	0	0	0	1	9	121	33	4	86	116	6	24	8	408
20-Jun	0	0	0	0	0	4	0	11	58	44	26	27	57	4	19	1	251
27-Jun	0	0	2	0	0	2	0	1	23	12	0	5	13	1	13	0	72
04-Jul	0	1	0	0	0	0	0	3	4	5	8	10	5	0	4	5	45
11-Jul	0	5	0	0	0	3	1	0	8	3	4	6	0	0	0	0	30
18-Jul	0	0	0	0	0	4	6	7	6	4	4	1	0	4	0	0	36
25-Jul	0	0	1	0	1	14	8	2	0	7	4	0	0	2	1	0	40
01-Aug	0	9	1	0	2	14	0	2	0	0	2	0	0	0	1	2	33
08-Aug	0	3	3	0	7	0	0	1	0	0	1	0	0	0	0	0	15
15-Aug	0	3	0	0	1	0	0	0	0	1	0	0	0	0	0	0	5
22-Aug	4	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	6
29-Aug	0	3	2	0	1	0	0	0	0	0	0	0	0	0	0	0	6
05-Sep	0	2	2	0	0	0	0	1	0	0	0	0	0	0	0	0	5
12-Sep	0	3	5	0	1	1	0	6	0	3	1	0	0	0	0	1	21
19-Sep	0	0	1	0	0	1	0	3	1	1	2	0	0	0	4	2	15
26-Sep	0	0	0	0	0	0	0	7	3	5	11	0	0	2	8	4	40
03-Oct	0	0	0	0	1	0	0	3	0	0	1	0	3	0	6	2	16
10-Oct	0	0	0	0	0	4	4	35	12	8	0	3	1	1	4	5	77
17-Oct	0	0	0	0	1	8	8	7	10	10	7	3	6	0	1	3	64



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<i>Cavariella pastinaceae</i>	Inverness	Dundee	Edinburgh	Ayr	Newcastle	FERA, York	Preston	Kirton	Broom's Barn	Wellesbourne	Hereford	Rothamsted	Writtle	Ascot	East Malling	Starcross	Total
Week ending																	0
11-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-May	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	3
30-May	0	0	0	0	1	1	7	0	0	0	0	0	0	0	0	0	9
06-Jun	0	1	5	0	1	15	26	1	2	8	4	10	2	1	8	0	84
13-Jun	0	6	20	0	4	24	35	3	2	17	12	8	0	2	7	4	144
20-Jun	1	1	18	0	0	25	36	2	2	33	41	2	0	7	7	6	181
27-Jun	0	0	7	1	1	8	14	1	2	29	0	0	0	8	0	8	79
04-Jul	0	0	1	0	0	10	8	7	4	30	76	0	3	0	1	14	154
11-Jul	0	1	3	0	2	58	4	95	5	62	85	5	2	0	2	0	324
18-Jul	1	14	10	0	6	56	0	43	10	39	100	12	5	2	3	19	320
25-Jul	12	26	24	0	1	84	3	15	4	8	4	4	0	0	1	0	186
01-Aug	21	13	13	0	5	21	0	2	1	0	0	0	1	0	0	4	81
08-Aug	17	10	25	0	0	2	0	0	1	1	0	1	0	0	1	0	58
15-Aug	5	5	15	0	0	0	2	0	0	0	0	0	1	0	0	0	28
22-Aug	4	2	13	0	2	0	0	1	0	0	0	0	0	0	0	0	22
29-Aug	0	5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	6
05-Sep	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2
12-Sep	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2
19-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1



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<i>Cavariella theobaldi</i>	Inverness	Dundee	Edinburgh	Ayr	Newcastle	FERA, York	Preston	Kirton	Broom's Barn	Wellesbourne	Hereford	Rothamsted	Writtle	Ascot	East Malling	Starcross	Total
Week ending																	0
11-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09-May	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
16-May	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2
23-May	0	0	3	0	0	0	0	0	0	0	0	0	1	2	3	0	9
30-May	0	0	1	0	0	1	3	0	1	1	1	4	2	9	7	1	31
06-Jun	0	0	6	0	0	8	7	2	5	24	12	18	15	14	16	6	133
13-Jun	0	1	6	0	2	2	4	28	45	30	8	72	16	26	52	2	294
20-Jun	0	0	0	0	1	7	10	26	32	17	12	27	21	31	35	5	224
27-Jun	0	0	1	0	1	2	0	3	2	17	0	2	4	31	17	8	88
04-Jul	0	1	0	0	1	4	2	9	0	16	23	0	3	2	0	11	72
11-Jul	0	0	1	0	2	11	2	119	13	26	11	2	2	0	1	1	191
18-Jul	1	0	0	0	0	0	4	39	11	6	8	3	7	2	4	4	89
25-Jul	0	1	0	0	0	0	0	20	2	1	2	1	0	0	0	1	28
01-Aug	4	1	2	0	2	3	0	1	2	0	0	0	2	0	3	2	22
08-Aug	1	0	0	0	0	0	0	5	1	0	0	0	0	0	0	0	7
15-Aug	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6
22-Aug	5	0	2	0	1	0	0	0	0	0	0	0	0	0	1	0	9
29-Aug	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	3
05-Sep	0	0	4	0	0	0	0	0	0	0	0	0	1	0	0	1	6
12-Sep	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	3
19-Sep	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
26-Sep	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
03-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3
10-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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AHDB yellow water trap data

AHDB supports the provision of aphid count data from a network of yellow water traps. The aphids are identified by staff at Fera.

All the individual counts are available at: <https://secure.fera.defra.gov.uk/aphmon/>. You can click on a region on the map to see the counts in more detail.

Although the focus of the commentary on the site is on aphids that transmit potato viruses, there are graphs to show the weekly counts of individual aphid species.

Information on the pest aphids of outdoor vegetable and salad crops has been summarized here for the year <https://warwick.ac.uk/fac/sci/lifesci/wcc/research/pests/aphids/2021/>.

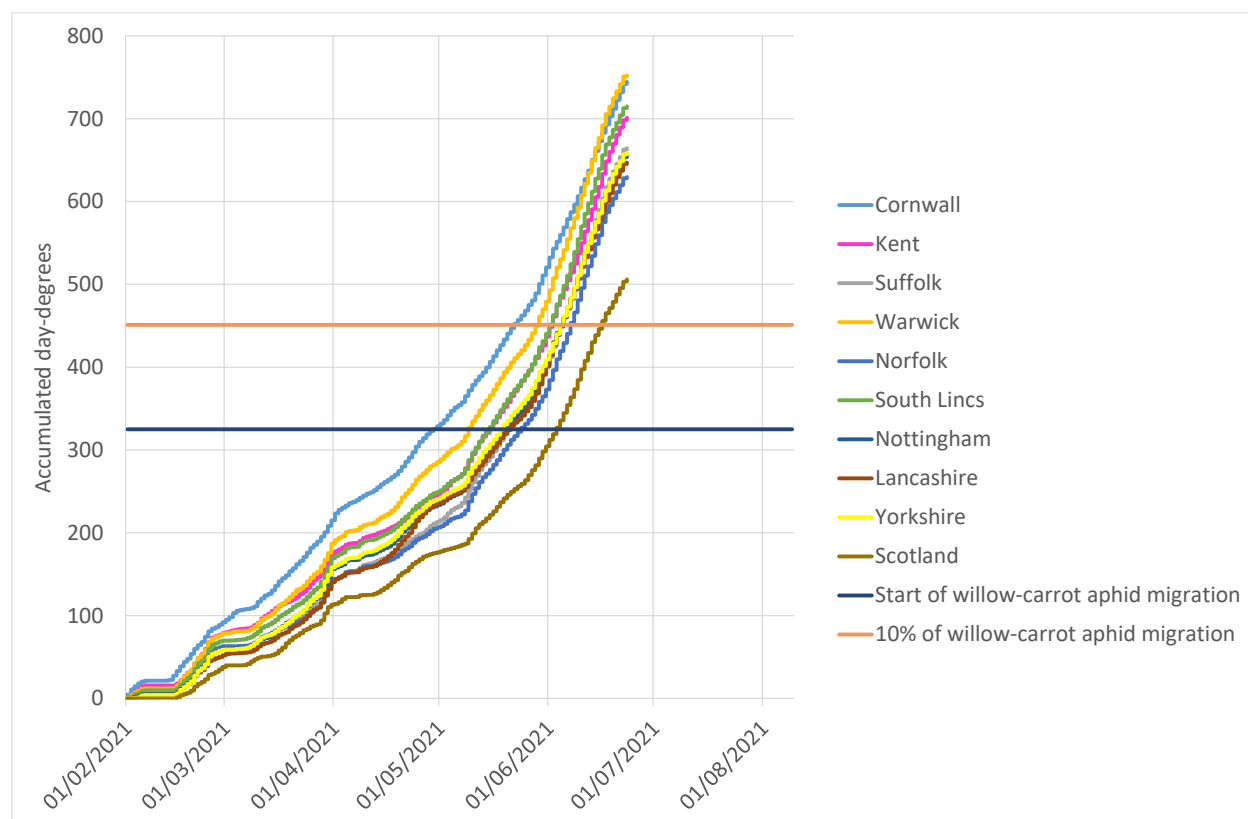
These are the last counts for the year:

Region	No. of samples taken between 01/09/2021 to 09/09/2021	Average Cavariella aegopodii per sample	Average Cavariella pastinacea per sample	Average Cavariella theobaldi per sample	Average Myzus persicae per sample
North Scotland	2	0	0	0	2
Grampian	4	1	0	0	0.8
Angus & Perthshire	0	0	0	0	0
Borders	0	0	0	0	0
Northern England	0	0	0	0	0
East Anglia	0	0	0	0	0
Midlands	0	0	0	0	0
South-West	0	0	0	0	0
Total	6	0.7	0	0	0.5



Day-degree forecast 2021

The graph below shows the 'day-degree forecast' for willow-carrot aphid (*Cavariella aegopodii*) graphically. The forecast is based on accumulated day-degrees (D°) from 1 February (base 4.4°C). Information from the Rothamsted Suction trap captures have been used to estimate the mean number of D° from 1 February until the first aphid of the year is caught in a suction trap (the start of the migration to carrot) and when 10% of aphids are caught. This is after approximately 325 and 451 D° respectively.





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Monitoring in plots at Wellesbourne 2021

Below are counts of willow-carrot aphids which have overwintered on our carrot plots at Wellesbourne (plots maintained for the carrot fly population) and subsequently on the carrots sown this year.

Numbers of willow-carrot aphid on overwintered carrots at Wellesbourne in 2021 (numbers per plant) – sampling also on new carrots from 25th May			
Date	Winged per plant	Wingless per plant	Parasitised per plant
01-Dec	0.0	0.8	0.0
15-Dec	0.0	0.5	0.0
05-Jan	0.0	0.2	0.0
19-Jan	0.0	0.6	0.0
03-Feb	0.0	0.3	0.0
16-Feb	0.0	0.3	0.0
03-Mar	0.0	0.3	0.0
17-Mar	0.0	2.7	0.0
31-Mar	0.0	25.4	0.0
14-Apr	0.0	15.2	0.0
27-Apr	0.6	94.5	0.0
10-May	1.0	112.7	0.0
24-May	1.6	121.0	0.1
25-May (new carrots)	0.2	0.3	0.0
01-Jun (new carrots)	0.3	3.4	0.0
08-Jun (old carrots)	0.12	21.50	0.00
08-Jun (new carrots)	0.83	14.30	0.00
15-June (new carrots)	0.17	48.93	0.10
22-June (old carrots)	0.00	1.06	0.00
22-June (new carrots)	0.00	6.13	0.04
29-June (new carrots)	0.00	2.18	0.08
7 July (old carrots)	0.00	1.06	0.00
7 July (new carrots)	0.00	1.20	0.09



Monitoring in plots at Wellesbourne 2021

Below are counts of willow-carrot aphids which have overwintered on our carrot plots at Wellesbourne (plots maintained for the carrot fly population) and subsequently on the carrots sown this year.

Numbers of willow-carrot aphid on overwintered carrots at Wellesbourne in 2021 (numbers per plant) – sampling also on new carrots from 25th May			
Date	Winged per plant	Wingless per plant	Parasitised per plant
14 July (new carrots)	0.0	0.18	0.04
20 July (new carrots)	0.0	0.07	0.06
27 July (new carrots)	0.0	0.0	0.02
16 August (new carrots)	0.0	0.03	0.01
1 September (new carrots)	0.0	0.0	0.0
28 September (new carrots)	0.0	0.14	0.0
12 October (new carrots)	0.0	0.24	0.0
26 October (new carrots)	0.04	0.16	0.0



Historical data 2020

Suction trap captures in 2020 – Rothamsted Insect Survey and SASA

The table below summarises suction trap captures for 2020. Cells shaded in grey indicate that information is not available yet from these traps due to COVID-19. Some of the trap counts are based on less than 7 days' data.

Cavariella aegopodi	Inverness	Dundee	Edinburgh	Ayr	Newcastle	FERA, York	Preston	Kirton	Broom's Barn	Wellesbourne	Hereford	Rothamsted	Writtle	Ascot	East Malling	Starcross	Total
Week ending																	
05-Apr					0	0		0	0	0	0	0	0	0	0	0	0
12-Apr					0	0		2	1	1	1	0	0	0	1	1	7
19-Apr					0	0		0	1	0	1	0	0	1	0	0	3
26-Apr					0	1		8	9			0	0	1	6	4	29
03-May					0	0	1	4	25			0	6	0	0	2	38
10-May								85	28			5		4	14	2	138
17-May						62	5	187	30	42	0	5		6		18	355
24-May	4		26					512	141			7			8	10	708
31-May	2	33	71			80		343	331	60		21		20	34	10	1005
07-Jun	10	29	103			45	14	64	54	36		84	104		30	11	584
14-Jun						166	114	299	131	79		75			23	19	906
21-Jun			5			14	85	73	415	112		19		14	7	1	745
28-Jun		6	15			95	20	73	33	8	1	4		3	2	0	260
05-Jul	3	2	5		2	9	2	0	2	1	0	3	0	0	0	0	29
12-Jul	0	2	1		2	4	0	7	0	0	0	2	4	3	0	4	29
19-Jul	0	1	0		2	0	0	4	2	0	0	2	0	1	1	3	16
26-Jul	0	0	0		1	0		1	1	0		0	0	0	1	0	4
02-Aug	0	0	0		0	2	2	0	1	1	1	1	0	1	0	1	10
09-Aug	0	2	1		0	0	4	0	0	0		0	0	0	0	0	7
16-Aug	0	0	1		0	2	0	0	0	0	0	0	0	0	0	0	3
23-Aug		3	0		1	0		0	0	1	0	0	0	0	0	0	5
30-Aug	0	5	1		0	0	0	0	0	0	0	0		0	0	0	6
06-Sep		58	0		2	0	2	0	0	0	0	0	0	0	0	0	62
13-Sep		1	0		1	0	0	0	0	0	0	0	0	0	0	0	2
20-Sep			3		3	3	0	0	0	1	0	0	0	0	0	0	10
27-Sep			1		0	6	2	0	0	0	0	0	1	0	0	0	10
04-Oct					0	11	2	6	2	2	0	0	3	0	0	1	27
11-Oct		10	7	0	1	1	2	7	0	2		0	0	0	0	0	30
18-Oct		48	38		0	0	3	3	33	9	2	0	0	0	0	4	140
25-Oct					0	51	17	7	0	0	1	0	0	0	0	2	78



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<i>Cavariella pastinaceae</i>	Inverness	Dundee	Edinburgh	Ayr	Newcastle	FERA, York	Preston	Kirton	Broom's Barn	Wellesbourne	Hereford	Rothamsted	Writtle	Ascot	East Malling	Starcross	Total
Week ending																	0
05-Apr					0	0		0	0	0	0	0	0	0	0	0	0
12-Apr					0	0		0	0	0	0	0	0	0	0	0	0
19-Apr					0	0		0	0	0	0	0	0	0	0	0	0
26-Apr					0	0		0	0			0	0	0	0	0	0
03-May					0	0		0	0			0	0	0	0	0	0
10-May								0	0			0		0	0	0	0
17-May						1	0	0	0	0	0	0		0		0	1
24-May	0		0					0	0			0			0	0	0
31-May	0	1	4			4		1	4	2		0		0	2	1	19
07-Jun	0	2	2			5	2	0	2	2		0	0		1	0	16
14-Jun						4	9	0	1	0		0			1	0	15
21-Jun			1			2	5	0	0	4		0		7	1	0	20
28-Jun		0	1			24	14	10	0	0	4	0		0	1	0	54
05-Jul	1	0	0		0	41	1	12	0	8	0	0	2	0	0	0	65
12-Jul	1	1	0		0	22	3	32	2	2	0	4	6	2	2	5	82
19-Jul	0	1	0		1	15	1	10	2	1	0	5	7	2	2	4	51
26-Jul	2	2	8		2	11		6	4	0		2	2	1	2	0	42
02-Aug	2	5	23		0	6	5	7	1	4	0	1	1	1	1	1	58
09-Aug	5	8	24		3	2	5	0	1	1		0	0	0	0	0	49
16-Aug	7	3	10		0	1	18	0	0	0	0	0	0	0	0	1	40
23-Aug		4	1		2	0		1	0	0	0	0	0	0	0	0	8
30-Aug	4	2	1		0	0	0	0	0	0	0	0		0	0	0	7
06-Sep		3	2		1	1	2	0	0	0	0	0	0	0	0	0	9
13-Sep		1	0		0	0	2	0	0	0	0	0	1	0	0	1	5
20-Sep			0		3	0	3	0	0	0	0	0	0	0	0	0	6
27-Sep			0		0	0	0	0	0	0	0	0	0	0	0	0	0
04-Oct					0	0	4	0	0	0	0	0	0	0	0	2	6
11-Oct		0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
18-Oct		0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
25-Oct					0	1	0	0	0	0	0	0	0	0	0	0	1



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<i>Cavariella theobaldi</i>	Inverness	Dundee	Edinburgh	Ayr	Newcastle	FERA, York	Preston	Kirton	Broom's Barn	Wellesbourne	Hereford	Rothamsted	Writtle	Ascot	East Malling	Starcross	Total
Week ending																	0
05-Apr					0	0		0	0	0	0	0	0	0	0	0	0
12-Apr					0	0		0	0	0	0	0	0	0	0	0	0
19-Apr					0	0		0	0	0	0	0	0	0	0	0	0
26-Apr					0	0		0	0			0	0	0	0	0	0
03-May					0	0		0	0			0	0	0	0	0	0
10-May								2	0			0		1	1	0	4
17-May						0	0	0	0	0	0	0		0		0	0
24-May	0		0					0	3			0			1	0	4
31-May	0	0	1			0		4	0	0		1		0	1	2	9
07-Jun	0	0	1			0	0	0	2	1		0	0		1	0	5
14-Jun						1	0	0	0	0		0			0	1	2
21-Jun			0			2	0	0	0	0		0		0	0	0	2
28-Jun		0	0			2	3	3	0	0	0	0		1	0	0	9
05-Jul	0	0	0		0	3	0	10	1	1	0	0	5	0	0	0	20
12-Jul	0	0	1		0	0	0	13	3	1	0	2	2	0	3	1	26
19-Jul	0	0	0		0	1	1	4	4	0	0	0	0	1	5	1	17
26-Jul	0	0	0		0	0		3	8	0		0	2	0	3	0	16
02-Aug	0	0	3		0	1	0	1	0	1	0	0	2	0	2	1	11
09-Aug	0	2	6		3	0	0	0	0	2		0	0	0	0	0	13
16-Aug	0	0	7		0	0	1	1	0	0	0	0	0	0	1	0	10
23-Aug		2	1		1	0		0	0	0	0	0	0	0	0	0	4
30-Aug	0	0	1		0	1	0	0	0	1	0	0		0	0	0	3
06-Sep		0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
13-Sep		0	0		0	0	2	0	0	0	0	0	0	0	0	1	3
20-Sep			0		1	0	0	1	0	0	0	1	0	0	0	0	3
27-Sep			0		0	0	0	0	0	0	0	0	0	0	0	0	0
04-Oct					0	0	0	0	0	0	0	0	0	0	0	0	0
11-Oct		0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
18-Oct		0	0		0	0	0	0	1	0	0	0	0	0	0	0	1
25-Oct					0	0	0	0	0	0	0	0	0	0	0	1	1



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Myzus persicae	Inverness	Dundee	Edinburgh	Ayr	Newcastle	FERA, York	Preston	Kirton	Broom's Barn	Wellesbourne	Hereford	Rothamsted	Writtle	Ascot	East Malling	Starcross	Total
Week ending																	
05-Apr					0	0		0	0	0	0	0	0	0	0	0	0
12-Apr					0	0		0	2	2	0	2	1	0	0	1	8
19-Apr					0	0		2	2	0	0	1	2	0	0	29	36
26-Apr					0	0		0	1			8	1	3	3	6	22
03-May					0	0	1	2	40			6	33	0	0	2	84
10-May								63	9			9		2	5	0	88
17-May						0	0	4	12	53		33		14		4	120
24-May	0		0					103	781			120			66	4	1074
31-May	0	0	7			0		338	1764	75		281		176	144	20	2805
07-Jun	0	0	1			39	43	92	173	251		301	284		296	50	1530
14-Jun						267	93	25	48	149		63			121	15	781
21-Jun			2			46	232	50	209	210		40		7	29	2	827
28-Jun		3	6			376	102	26	39	44	119	10		1	10	0	736
05-Jul	1	1	2		1	30	1	7	5	14	44	8	1	0	2	0	117
12-Jul	0	5	1		0	6	0	31	3	2	21	2	2	0	1	1	75
19-Jul	0	3	0		0	2	2	6	2	0	1	1	2	0	1	2	22
26-Jul	0	22	1		0	0		1	1	0		0	0	0	0	0	25
02-Aug	0	12	1		0	0	0	0	0	0	0	0	0	0	0	0	13
09-Aug	0	3	0		0	0	4	1	0	0		0	0	0	0	0	8
16-Aug	1	0	0		0	0	0	1	0	0	1	0	0	1	1	0	5
23-Aug		2	1		0	0		4	0	0	0	0	0	0	0	0	7
30-Aug	0	0	0		0	0	0	2	0	0	0	0		0	0	0	2
06-Sep		1	0		0	0	0	1	0	1	1	0	0	1	0	0	5
13-Sep		0	0		0	0	0	14	0	0	0	0	2	0	0	1	17
20-Sep			0		0	0	0	8	4	3	1	1	5	6	4	4	36
27-Sep			0		0	0	0	41	1	10	8	5	10	1	1	4	81
04-Oct					1	0	0	22	12	19	6	10	5	0	6	4	85
11-Oct		0	1	0	0	0	0	3	0	3		8	1	0	0	1	17
18-Oct		1	0		0	0	0	1	2	1	0	2	1	2	1	7	18
25-Oct					1	0	1	1	4	0	0	0	4	1	1	9	22



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AHDB yellow water trap data

AHDB supports the provision of aphid count data from a network of yellow water traps. The aphids are identified by staff at Fera.

All the individual counts are available at: <https://secure.fera.defra.gov.uk/aphmon/>. You can click on a region on the map to see the counts in more detail.

Although the focus of the commentary on the site is on aphids that transmit potato viruses, there are graphs to show the weekly counts of individual aphid species.

Information on the pest aphids of outdoor vegetable and salad crops has been summarized here for the year <https://warwick.ac.uk/fac/sci/lifesci/wcc/research/pests/aphids/2020/>. Sampling finished on 24 September 2020.



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Monitoring in plots at Wellesbourne 2020

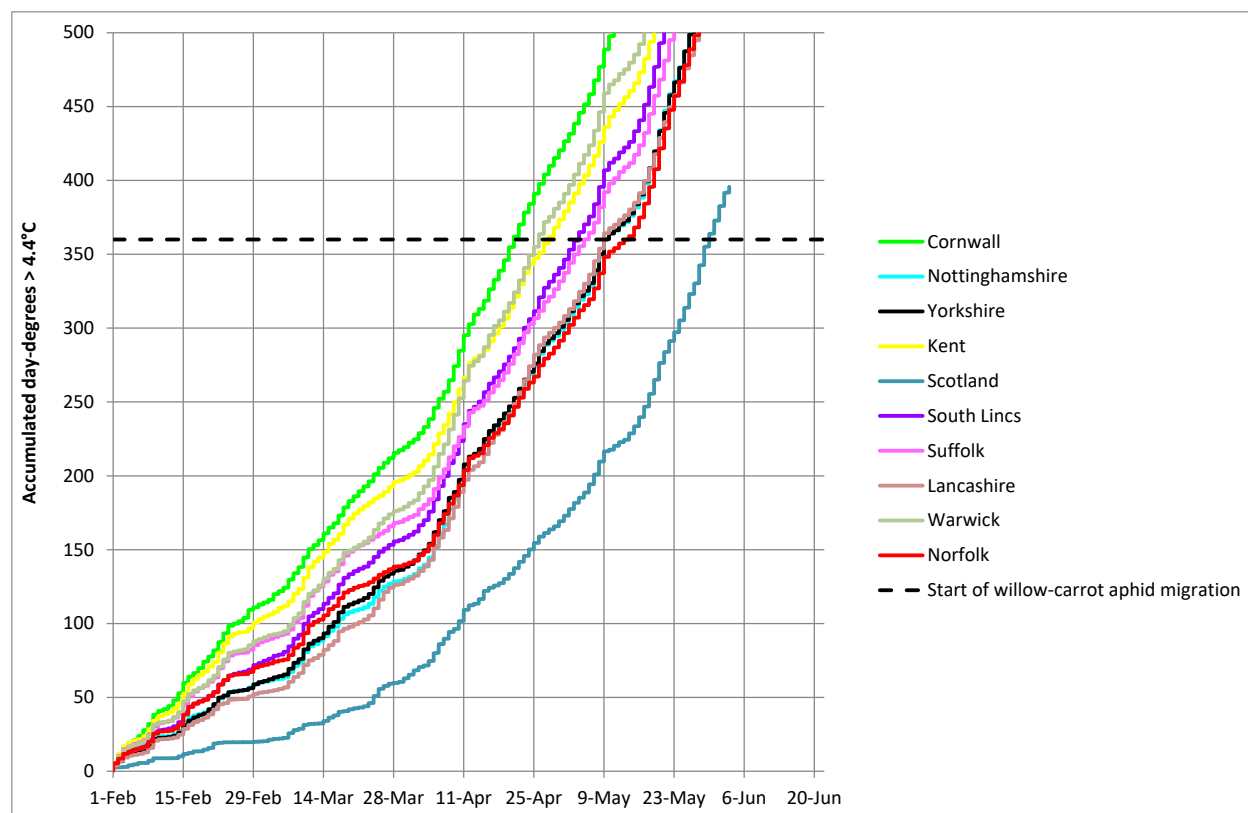
Willow-carrot aphids which overwintered on our carrot plots at Wellesbourne (maintained for the carrot fly population).

Date	Numbers of willow-carrot aphid on overwintered carrots at Wellesbourne in 2020 (numbers per plant)		
2020	Winged	Wingless	Parasitised aphids
10 Jan	0	0.6	0
31 Jan	0	0.7	0
26 Feb	0	14.3	0
3 Mar	0	2.7	0
19 Mar	0	53.3	0
17 Apr	13	397	0



Day-degree forecast 2020

The graph below shows the 'day-degree forecast' for willow-carrot aphid (*Cavariella aegopodii*) graphically. The forecast is based on accumulated day-degrees (D°) from 1 February (base 4.4°C). Information from the Rothamsted Suction trap captures at Wellesbourne and Kirton has been used to estimate the mean number of D° from 1 February until the first aphid of the year is caught in a suction trap (the start of the migration to carrot). This is after approximately $360D^\circ$.





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Background information on all aphid species that are pests of carrot

Mark Taylor from the Rothamsted Insect Survey very kindly extracted their data on *Cavariella pastinacae* and *Cavariella theobaldi* for 2015 for the suction traps in England. Both of these species overwinter on willow, as does *Cavariella aegopodii* (willow-carrot aphid). Because they have similar life-cycles to *C. aegopodii* there is the possibility of developing a simple day-degree forecast.

2015 data

Figure 1 shows the total numbers of each species captured at the English suction trap sites in 2015. It includes *C. aegopodii* and *M. persicae*.

Figure 2 shows the dates by which 10% of each species were captured in each suction trap (start of migration) and Figure 3 shows the date of 50% capture (mid-point of migration). These show that *Cavariella pastinacae* and *Cavariella theobaldi* migrate later than *Cavariella aegopodii* overall.

Figures 4 and 5 show captures in the suction traps at Broom's Barn and Kirton over time.



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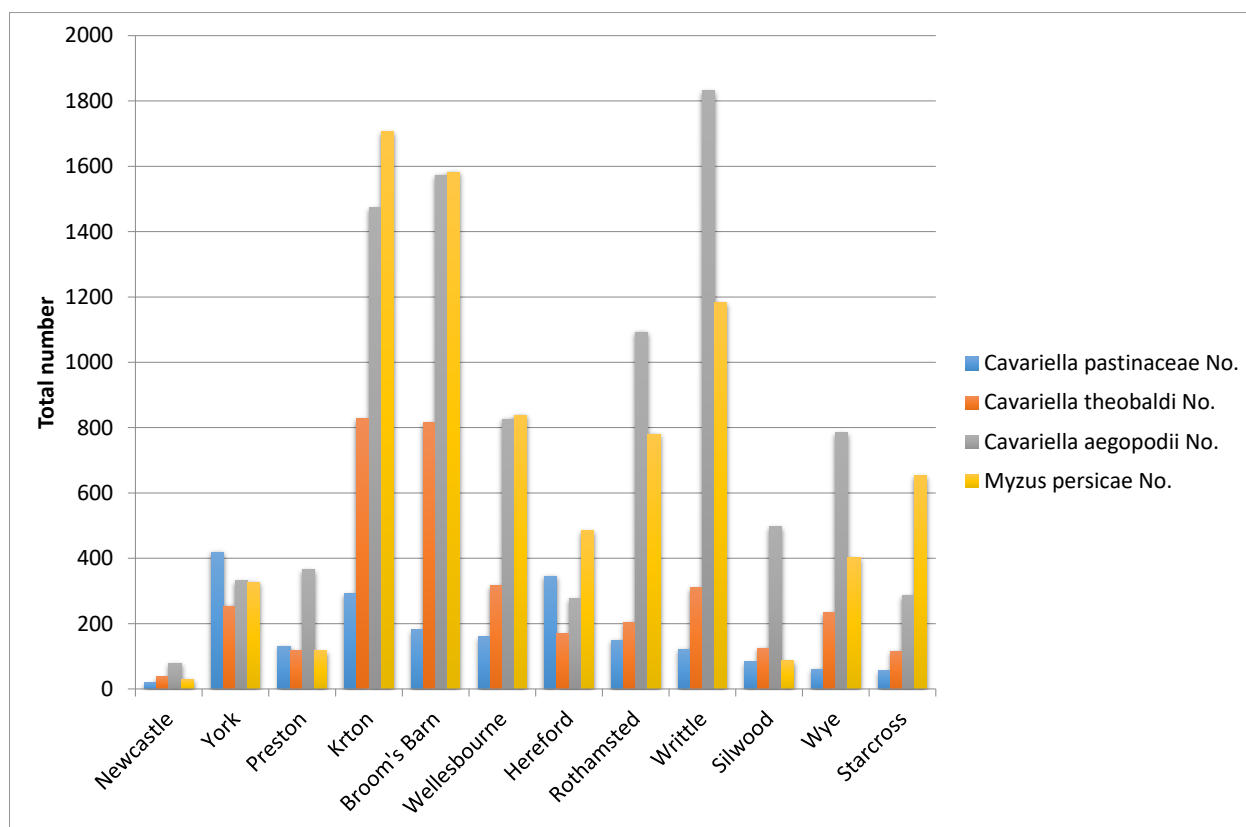


Figure 1 Total numbers of each species captured at the English suction trap sites in 2015 including *C. aegopodii* and *M. persicae*.



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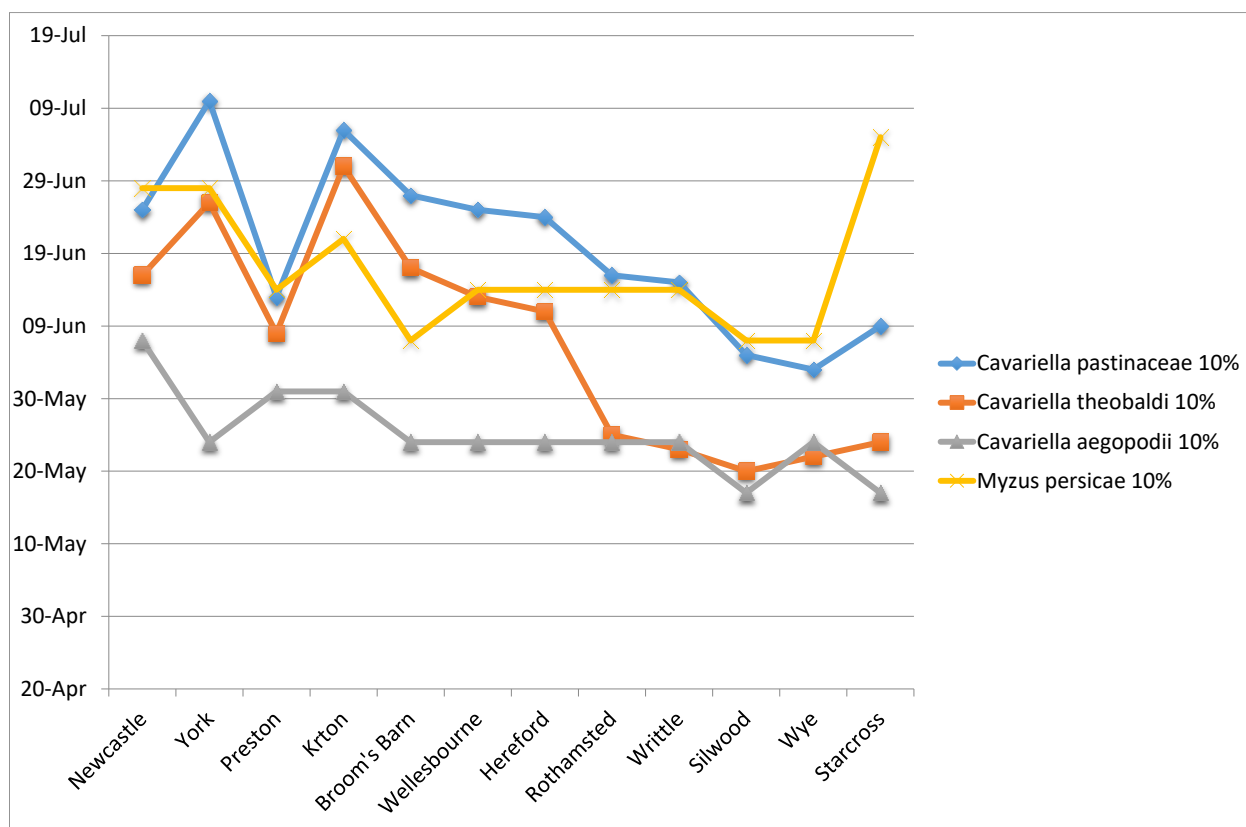


Figure 2 Dates by which 10% of each species were captured in each suction trap (start of migration) in 2015.

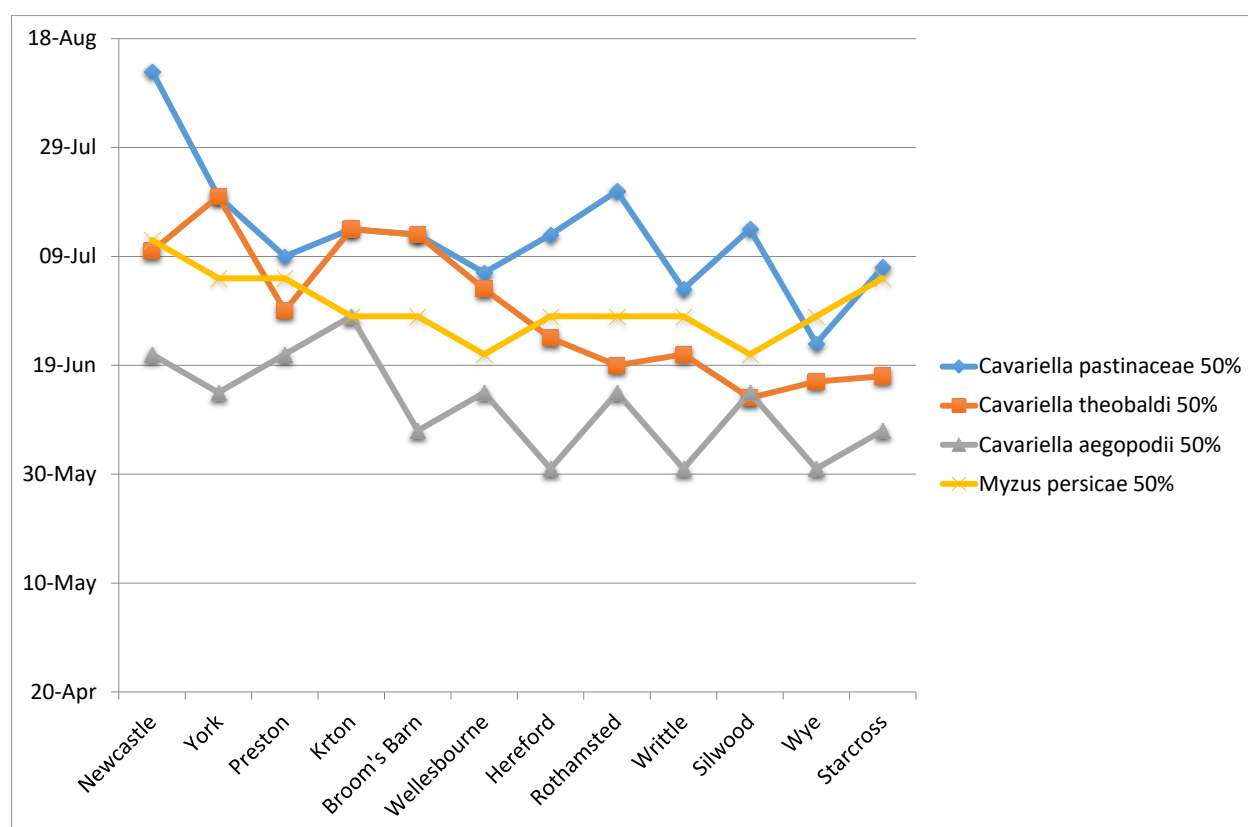


Figure 3 Dates by which 50% of each species were captured in each suction trap (mid-point of migration) in 2015.



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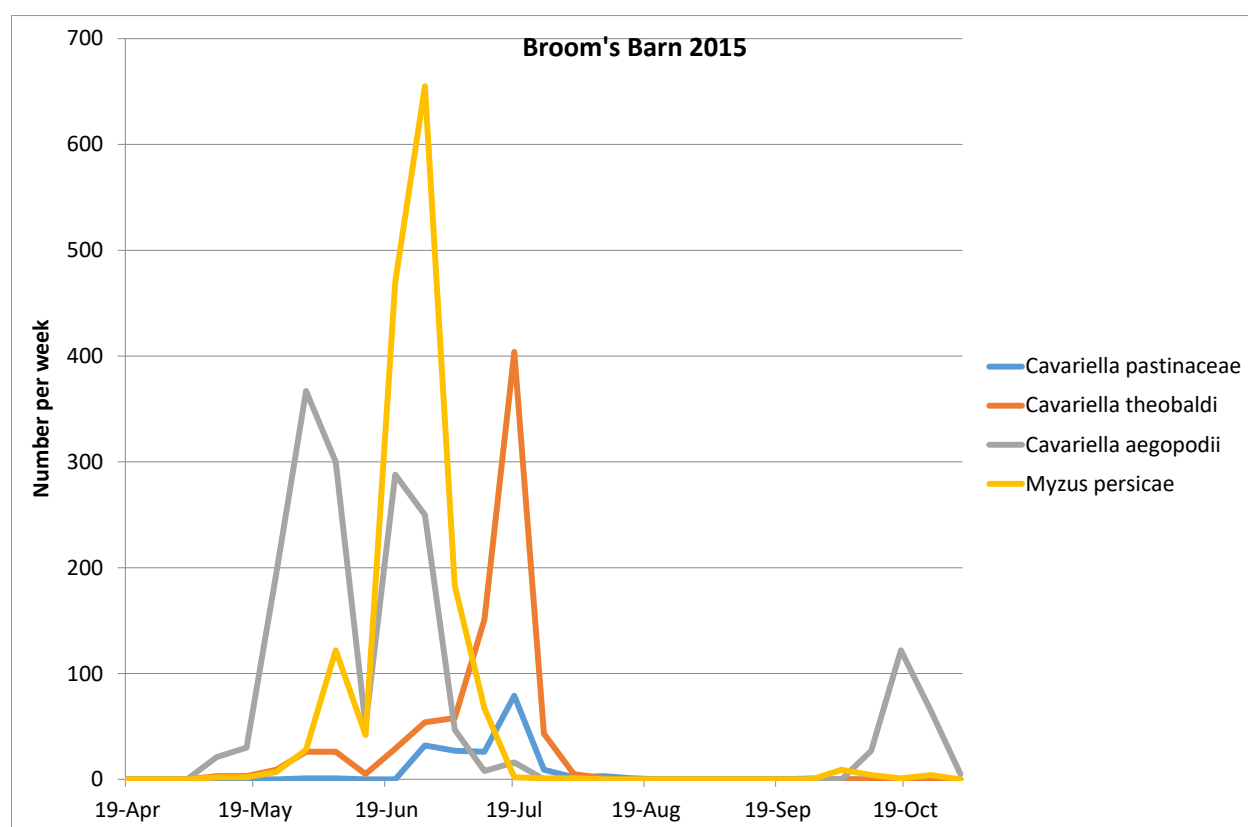


Figure 4 Captures of aphids by the suction trap at Brooms's Barn in 2015.



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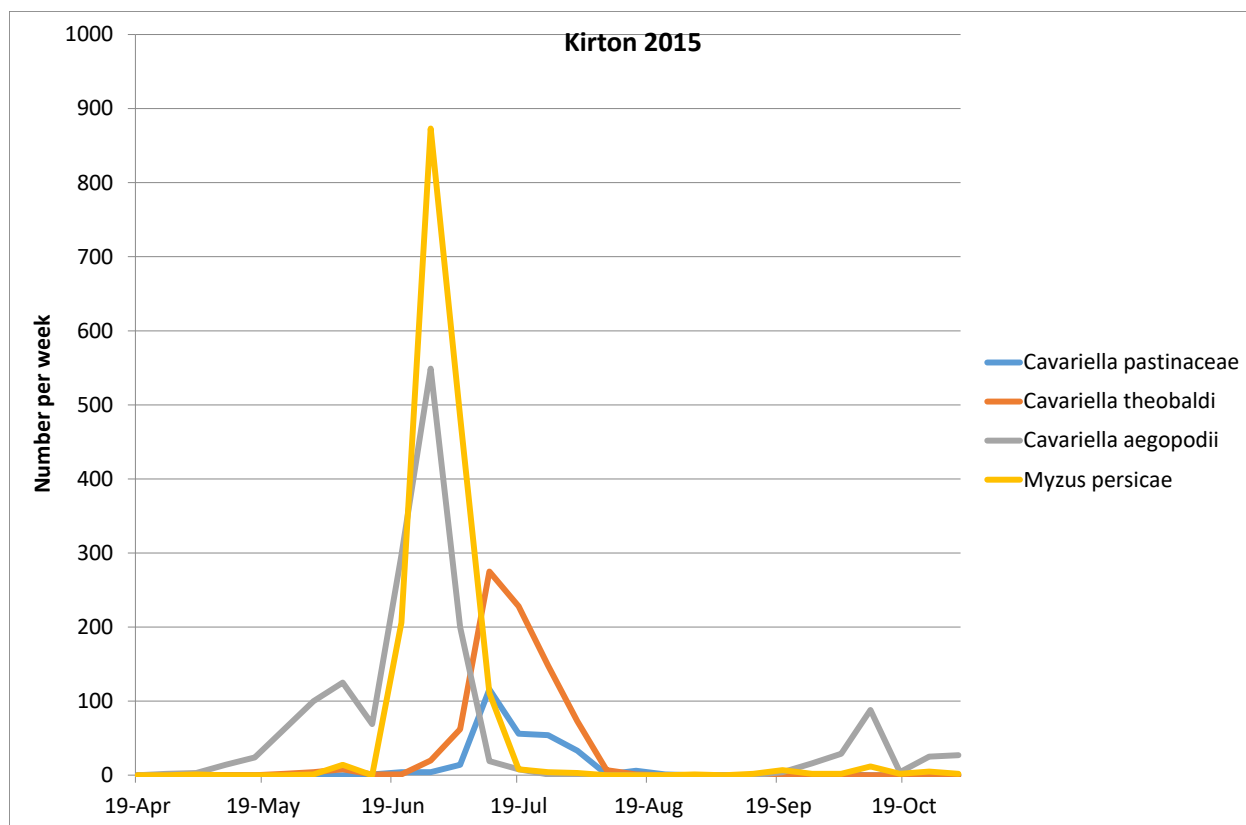


Figure 5 Captures of aphids by the suction trap at Kirton in 2015.