

CATERPILLAR PESTS OF BRASSICA CROPS – 29th October 2019

Diamond-back moth

There was a small influx of diamond-back moths on the night of 23rd October <https://warwick.ac.uk/fac/sci/lifesci/wcc/research/pests/plutella/sightings2019/>. None have been captured recently in pheromone traps <https://warwick.ac.uk/fac/sci/lifesci/wcc/research/pests/plutella/trapping2019/>. **More information about diamond-back moths is available on the AHDB web site** <https://horticulture.ahdb.org.uk/diamondback-moth>.

Silver Y moth

There was a similar small influx of silver Y moths on the night of 23rd October <https://warwick.ac.uk/fac/sci/lifesci/wcc/research/pests/plutella/sightings2019/>. In the autumn, silver Y moths that have bred in the UK attempt to return to their winter breeding grounds in the Mediterranean Basin so that they can continue their life-cycle under more favourable conditions <https://warwick.ac.uk/fac/sci/lifesci/wcc/research/pests/silvery>. Silver Y moth captures in pheromone traps in brassica crops are recorded here <https://warwick.ac.uk/fac/sci/lifesci/wcc/research/pests/silvery/pheromonetraps/>.

Butterflies

The results of the UK's 'Big Butterfly Count' in July-August are out <https://www.bigbutterflycount.org/2019mainresults>. The 'winner' was the painted lady butterfly – another migrant species (the last 'big year' was 2009). Interestingly whilst many of our colourful native species (red admiral, peacock etc.) were more numerous than in 2018, numbers of small white and large white butterflies declined by 42%.



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On-farm monitoring of diamond-back moth by members of the Brassica Growers Association and others using pheromone traps

Date	Location	Number of moths	Number of traps	Mean number of moths per trap
29th October	Wellesbourne	0	2	0
25th October	Lincolnshire	0	4	0
25th October	Wellesbourne	0	2	0
22nd October	Wellesbourne	0	2	0
18th October	Lincolnshire	0	4	0
18th October	Wellesbourne	0	2	0

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On-farm monitoring of diamond-back moth by members of the Brassica Growers Association and others using pheromone traps

Date	Location	Number of moths	Number of traps	Mean number of moths per trap
15 th October	Wellesbourne	0	2	0
11 th October	Lincolnshire	0	4	0
11 th October	Wellesbourne	0	2	0
7 th October	Wellesbourne	0	2	0
4 th October	Lincolnshire	0	4	0
4 th October	Wellesbourne	0	2	0
1 st October	Wellesbourne	0	2	0
27 September	Lincolnshire	0	4	0
27 September	Wellesbourne	0	2	0
24 September	Wellesbourne	0	2	0
20 September	Wellesbourne	0	2	0
20 September	Lincolnshire	0	4	0
17 September	Wellesbourne	0	2	0

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On-farm monitoring of diamond-back moth by members of the Brassica Growers Association and others using pheromone traps

Date	Location	Number of moths	Number of traps	Mean number of moths per trap
16 September	Scotland (Fife and Angus)	1	2	0.5
13 September	Wellesbourne	0	2	0
13 September	Lincolnshire	0	4	0
10 September	Wellesbourne	0	2	0
9 September	Scotland (Fife and Angus)	0	12	0
6 September	Lincolnshire	0	4	0
6 September	Wellesbourne	0	2	0
3 rd September	Wellesbourne	0	2	0
2 September	Scotland (Fife and Angus)	10	12	0.8
31 st August	Lincolnshire	10	4	2.5
30 th August	Wellesbourne	0	2	0

On-farm monitoring of diamond-back moth by members of the Brassica Growers Association and others using pheromone traps

Date	Location	Number of moths	Number of traps	Mean number of moths per trap
27 th August	Wellesbourne	0 There was 1 moth on a total of 5 carrot fly traps	2	0
26 August	Scotland (Fife and Angus)	6	12	0.5
23 rd August	Wellesbourne	1	2	0.5
20 th August	Wellesbourne	2 There were also 2 moths on a total of 5 carrot fly traps	2	1
19 August	Scotland (Fife and Angus)	9	12	0.75
16 th August	Lincolnshire	2	4	0.5
16 th August	Wellesbourne	2	2	1
13 August	Wellesbourne	2 There were also 3 moths on a total of 5 carrot fly traps	2	1
12 August	Scotland (Fife and Angus)	1	12	<0.1

On-farm monitoring of diamond-back moth by members of the Brassica Growers Association and others using pheromone traps

Date	Location	Number of moths	Number of traps	Mean number of moths per trap
9 August	Lincolnshire	8	4	2
9 August	Wellesbourne	2 There were also 4 moths on a total of 5 carrot fly traps	2	1
6 August	Wellesbourne	3 There were also 2 moths on a total of 5 carrot fly traps	2	1.5
5 August	Scotland (Fife and Angus)	15	12	1.3
2 August	Lincolnshire	2	4	0.5
2 August	Wellesbourne	4 There were also 2 moths on a total of 5 carrot fly traps	2	2
30 July	Wellesbourne	0 There were also 3 moths on a total of 5 carrot fly traps	2	0
29 July	Scotland (Fife and Angus)	70	12	5.8

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On-farm monitoring of diamond-back moth by members of the Brassica Growers Association and others using pheromone traps

Date	Location	Number of moths	Number of traps	Mean number of moths per trap
26 July	Lincolnshire	2	4	0.5
26 July	Wellesbourne	2 There were also 4 moths on a total of 5 carrot fly traps	2	1
23 July	Wellesbourne	2 There were also 5 moths on a total of 5 carrot fly traps	2	1
22 July	Scotland (Fife and Angus)	24	12	2
19 July	Lincolnshire	Spalding 2 Old Leake 3	4 (2 per site)	1.25
19 July	Wellesbourne	0 There were also 8 moths on a total of 5 carrot fly traps	2	0

More on next page...

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On-farm monitoring of diamond-back moth by members of the Brassica Growers Association and others using pheromone traps

Date	Location	Number of moths	Number of traps	Mean number of moths per trap
15 July	Scotland (Fife and Angus)	11	12	0.9
15 July	Wellesbourne	3 There were also 7 moths on a total of 5 carrot fly traps	2	1.5
12 July	Lincolnshire	Spalding 5 Old Leake 49	4 (2 per site)	13.5
12 July	Wellesbourne	1 There were also 11 moths on a total of 5 carrot fly traps	2	0.5

More on next page...

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On-farm monitoring of diamond-back moth by members of the Brassica Growers Association and others using pheromone traps

Date	Location	Number of moths	Number of traps	Mean number of moths per trap
10 July	Lancashire	71 Caterpillars in crops	5	14.2
9 July	Wellesbourne	1 There were also 14 moths on a total of 5 carrot fly traps	2	0.5
8 July	Scotland (Fife and Angus)	25	12	2.1
5 July	Lincolnshire	Spalding 6 Kirton 10 Old Leake 47	6 (2 per site)	10.5
5 July	Wellesbourne	2 There were also 7 moths on a total of 5 carrot fly traps	2	1
4 July	Somerset and Devon	29 on one trap over 8 days. Moths seen in most brassica fields		

More on next page....



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On-farm monitoring of diamond-back moth by members of the Brassica Growers Association and others using pheromone traps

Date	Location	Number of moths	Number of traps	Mean number of moths per trap
2 July	Wellesbourne	11 There were also 11 moths on a total of 5 carrot fly traps	2	5.5
1 July	Scotland (Fife and Angus)	46	12	3.8
28 June	Wellesbourne	3 There were also 4 moths on a total of 5 carrot fly traps	2	1.5

More on next page....



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On-farm monitoring of diamond-back moth by members of the Brassica Growers Association and others using pheromone traps

Date	Location	Number of moths	Number of traps	Mean number of moths per trap
25 June	Lancashire	70	6	11.7
25 June	Lincolnshire	15 Larvae in crop at Spalding (5 seen)	1	15
25 June	Wellesbourne	4 There were also 4 moths in total on 5 carrot fly traps	2	2
24 June	Scotland (Fife and Angus)	64	12	5.3
24 June	Lincolnshire	Old Leake - 30 (17-24 June)	2	15
21 June	Wellesbourne	6 There were also 12 moths in total on 5 carrot fly traps	2	3
18 June	Lancashire	58	5	11.6

More on next page....



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On-farm monitoring of diamond-back moth by members of the Brassica Growers Association and others using pheromone traps

Date	Location	Number of moths	Number of traps	Mean number of moths per trap
18 June	Wellesbourne	8 There were also 2 moths in total on 3 carrot fly traps	2	4
17 June	Scotland (Fife and Angus)	29	12	2.4
14 June	Wellesbourne	15 There were also 29 moths in total on 3 carrot fly traps	2	7.5
12 June	Lincolnshire	2 (Kirton), 2 (Spalding) Larvae in crop at Spalding (14 seen), moths in crop at Old Leake.	4	1

More on next page....

On-farm monitoring of diamond-back moth by members of the Brassica Growers Association and others using pheromone traps

Date	Location	Number of moths	Number of traps	Mean number of moths per trap
11 June	Lancashire	27	6	4.5
11 June	Wellesbourne	2	2	1
10 June	Scotland (Fife and Angus)	55	12	4.6
7 June	Somerset and Devon	9 (on 1 trap over 2 weeks)	4	2.25
7 June	Wellesbourne	1	2	0.5
4 June	Lancashire	27 (16 at one site) and moths in crops	6	4.5
4 June	Wellesbourne	0	2	0
3 June	Scotland (Fife and Angus)	88	12	7.3
31 May	Wellesbourne	0	2	0
27 May	Scotland (Fife and Angus)	134	12	11.2

More on next page....

On-farm monitoring of diamond-back moth by members of the Brassica Growers Association and others using pheromone traps

Date	Location	Number of moths	Number of traps	Mean number of moths per trap
27-May	Wellesbourne	0	2	0
24-May	Wellesbourne	2	2	1
23-May	Lincolnshire	Moths seen in crops since 17th May		
21-May	Lancashire	11	6	1.8
21-May	Wellesbourne	0	2	0
20-May	Scotland (Fife and Angus)	19	12	1.6
20-May	Scotland	Moths seen in crops		
17-May	Wellesbourne	1	2	0.5
14-May	Wellesbourne	0	2	0
14-May	Lancashire	14	6	2.3
14-May	Cornwall	1	2	0.5
13-May	Scotland (Fife)	0	4	0
10-May	Wellesbourne	0	2	0
07-May	Lancashire	15	6	2.5
07-May	Wellesbourne	0	2	0
03-May	Wellesbourne	0	2	0
30-Apr	Lancashire	1	2	0.5
30-Apr	Wellesbourne	0	2	0



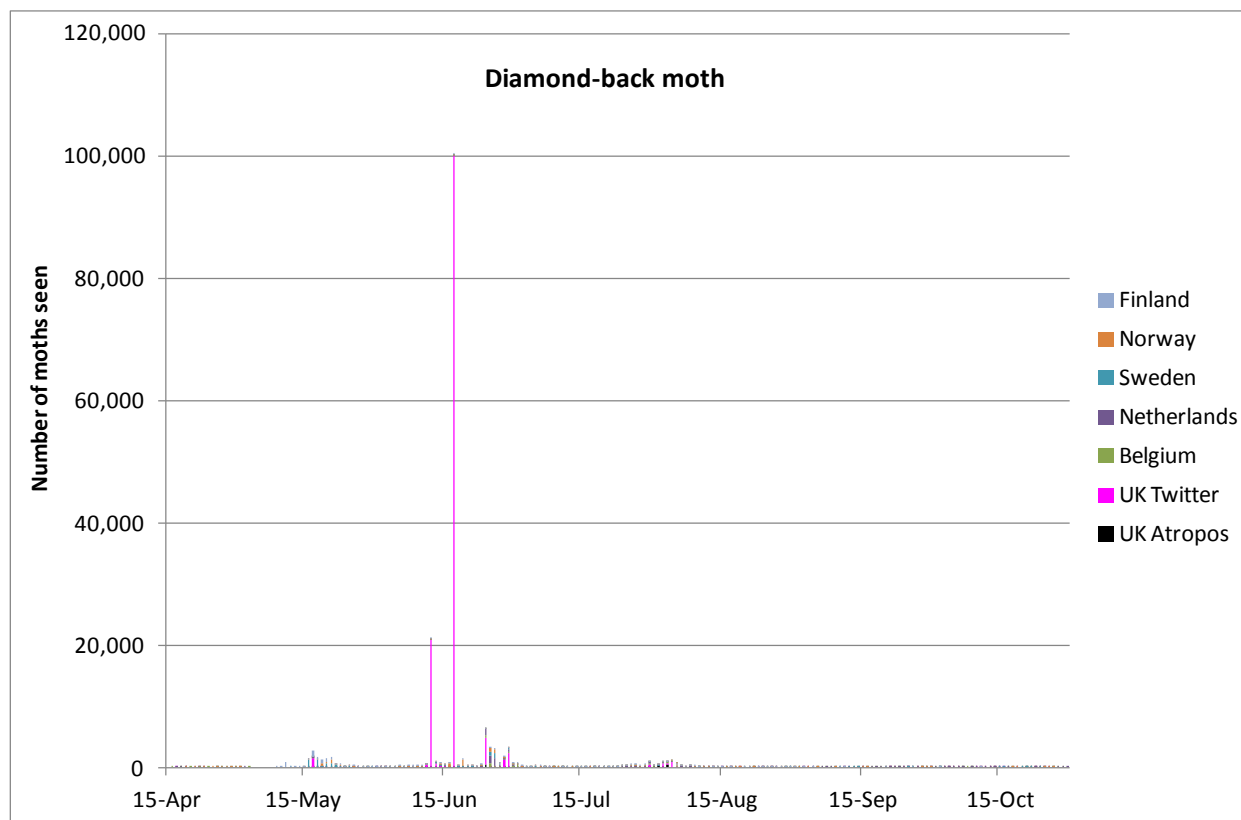
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Citizen Science – sightings of diamond-back moth and silver Y moth

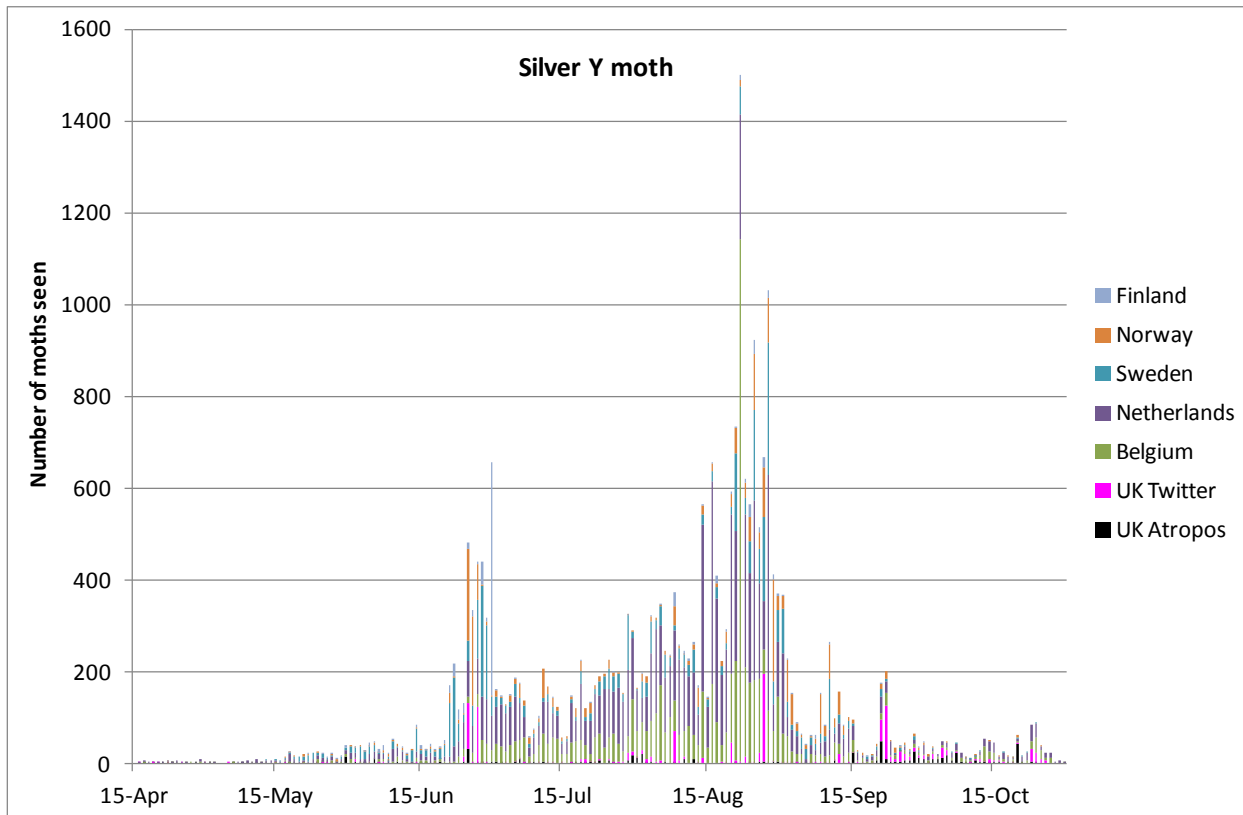
<https://warwick.ac.uk/fac/sci/lifesci/wcc/research/pests/plutella/sightings2019/>

Sightings of diamond-back moth and silver Y moth reported on websites since mid-April 2019 are summarised below.





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Numbers of butterflies and moths captured at Wellesbourne in 2019.

Date	Diamond-back moth (2 pheromone traps)	Cabbage moth (2 pheromone traps)	Silver Y moth (2 pheromone traps)	Turnip moth (2 pheromone traps)	Small white butterfly (no. water traps)	Large white butterfly (no. water traps)
14 May	0	0	0	4	1 (6)	0 (6)
17 May	1	0	0	1	0 (6)	0 (6)
20 May	0	0	0	0	0 (6)	0 (6)
24 May	2	0	0	0	0 (3)	0 (3)
28 May	0	0	0	9	0 (3)	0 (3)
31 May	0	0	0	5	0 (3)	0 (3)
4 June	0	0	0	2	0 (3)	0 (3)
7 June	1	0	0	0	0 (3)	0 (3)
10 June	2	0	0	2	0 (3)	0 (3)
14 June	15	0	0	0	0 (3)	0 (3)
18 June	8	0	0	1	0 (3)	0 (3)
21 June	6	0	0	1	0 (3)	0 (3)
25 June	4	0	0	1	0 (3)	0 (3)
28 June	3	0	0	3	0 (3)	0 (3)
2 July	11	0	0	1	0 (3)	0 (3)
5 July	2	0	0	2	0 (3)	0 (3)
9 July	1	0	0	8	0 (3)	0 (3)
12 July	1	0	0	1	0 (3)	0 (3)
15 July	3	0	0	1	1 (3)	0 (3)
19 July	0	0	0	0	1 (3)	0 (3)
23 July	2	0	1	1	1 (3)	0 (3)
26 July	2	0	0	0	0 (3)	0 (3)
30 July	0	0	1	1	0 (3)	0 (3)

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Numbers of butterflies and moths captured at Wellesbourne in 2019.

Date	Diamond-back moth (2 pheromone traps)	Cabbage moth (2 pheromone traps)	Silver Y moth (2 pheromone traps)	Turnip moth (2 pheromone traps)	Small white butterfly (no. water traps)	Large white butterfly (no. water traps)
2 August	4	0	0	3	0 (3)	0 (3)
6 August	3	0	2	2	0 (3)	0 (3)
9 August	2	0	3	2	0 (3)	0 (3)
13 August	2	0	7	2	0 (3)	0 (3)
16 August	2	0	1	0	0 (3)	0 (3)
20 August	2	0	0	0	1 (3)	0 (3)
23 August	1	0	0	0	1 (3)	0 (3)
27 August	0	0	0	0	2 (3)	0 (3)
30 August	0	0	0	2	0 (3)	0 (3)
3 September	0	0	0	2	2 (3)	0 (3)
6 September	0	0	0	2	1 (3)	0 (3)
10 September	0	0	1	3	2 (3)	0 (3)
13 September	0	0	2	0	1 (3)	0 (3)
17 September	0	0	0	2	2 (3)	0 (3)
20 September	0	0	0	0	2 (3)	0 (3)
24 September	0	0	0	1	2 (3)	0 (3)
27 September	0	0	0	0	2 (3)	0 (3)
1 October	0	0	1	1	1 (3)	0 (3)
4 October	0	0	1	0	0 (3)	0 (3)
7 October	0	0	0	1	0 (3)	0 (3)
11 October	0	0	0	0	0 (3)	0 (3)
15 October	0	0	1	4	0 (3)	0 (3)
18 October	0	0	1	0	0 (3)	0 (3)
22 October	0	0	3	1	0 (3)	0 (3)
25 October	0	0	0	0	0 (3)	0 (3)
29 October	0	0	1	1	0 (3)	0 (3)

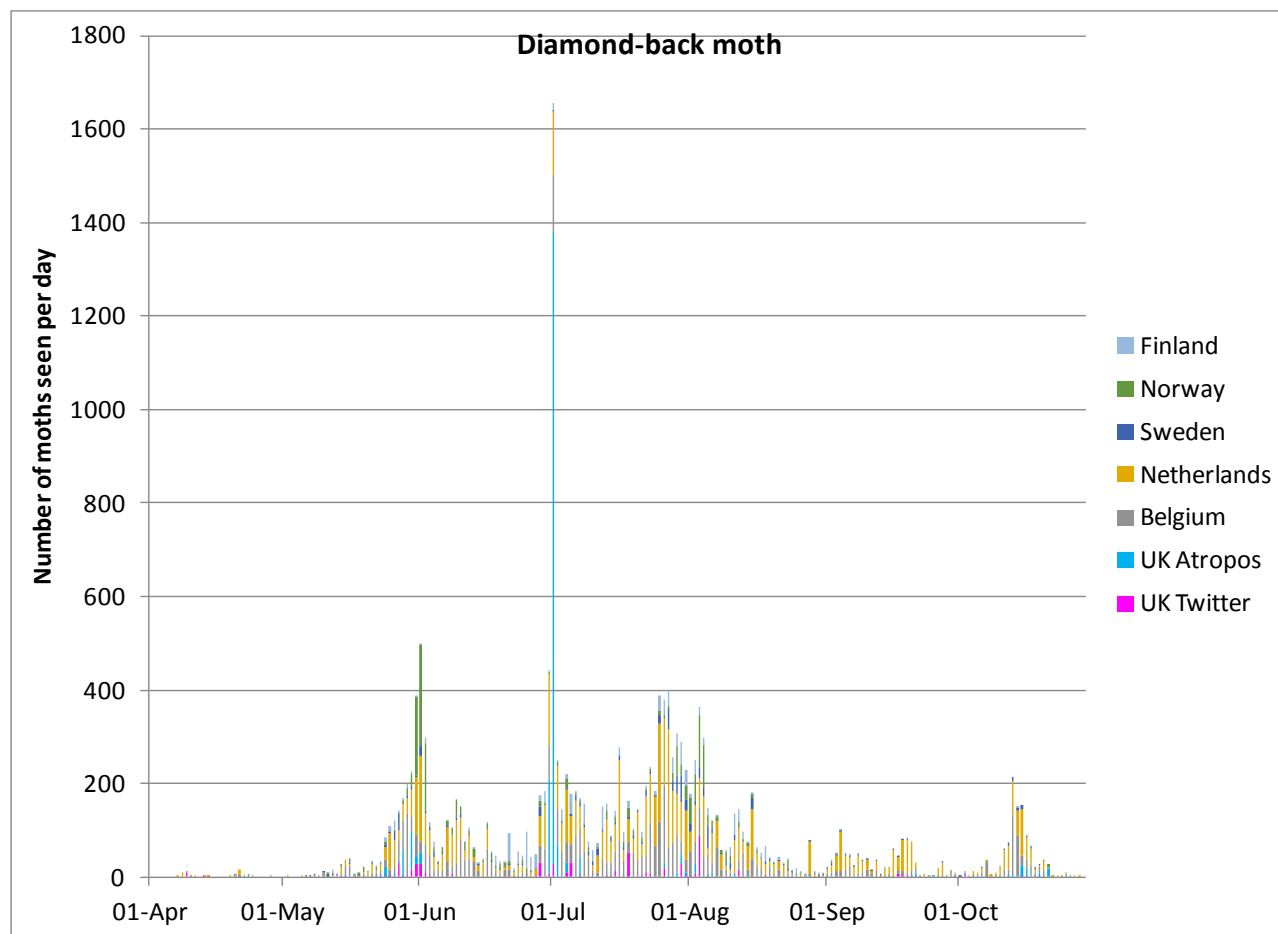


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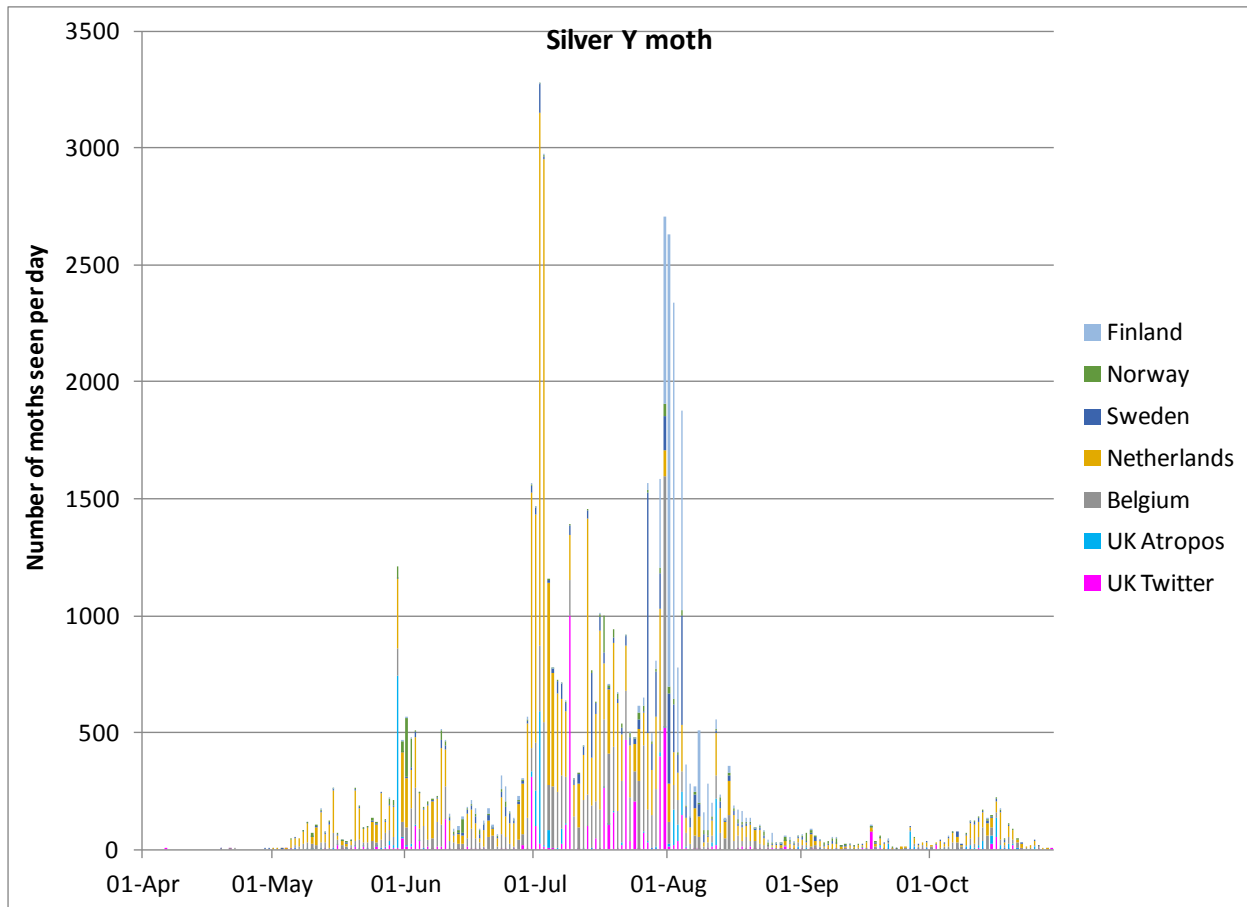
2018

Sightings of diamond-back moth and silver Y moth reported on websites in 2018 are summarised below.





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Moth and butterfly captures at Wellesbourne 2018

Date	Diamond-back moth (2 traps)	Silver Y moth (2 traps)	Cabbage moth (2 traps)	Small white butterfly (3 traps)	Large white butterfly (3 traps)
3 July	9	0	0	0	0
6 July	6	1	0	3	0
10 July	11	2	0	0	1
13 July	6	5	0	0	0
17 July	7	15	0	0	0
19 July	3	4	0	0	0
24 July	0	5	0	0	0
27 July	0	4	0	0	1
31 July	3	2	0	0	0
3 August	1	0	0	0	0
7 August	2	0	0	0	0
10 August	0	0	0	1	0
14 August	1	0	0	0	0
17 August	1	2	0	0	0
21 August	0	0	0	1	0
24 August	0	0	0	2	0
28 August	0	1	0	1	0
31 August	0	0	0	1	0
4 September	0	2	0	0	0
7 September	0	0	0	0	0
11 September	0	4	0	0	0
14 September	0	1	0	0	0
18 September	0	0	0	0	0
21 September	0	0	0	0	0
25 September	0	0	0	0	0
28 September	0	0	0	0	0
2 October	0	0	0	0	0
9 October	0	0	0	0	0
16 October	0	1	0	0	0
23 October	0	2	0	0	0
30 October	0	0	0	0	0

Background

The caterpillars of a number of species of moth and butterfly can be pests of brassica crops:

Species	Activity periods	Importance
Small white butterfly (<i>Pieris rapae</i>)	May/June and late summer – more abundant in late summer	Can be damaging and hard to see on plants
Large white butterfly (<i>Pieris brassicae</i>)	May/June and late summer – more abundant in late summer	Can be damaging but usually attacks a small number of plants and damage is generally obvious
Cabbage moth (<i>Mamestra brassicae</i>)	May/June and late summer – more abundant in late summer	Localised pest – can be hard to see on plants when young
Garden pebble moth (<i>Evergestis forficalis</i>)	May/June and late summer – more abundant in late summer	Localised pest – hard to see on plants
Diamond-back moth (<i>Plutella xylostella</i>)	Migrant and can arrive at any time – usually from June onwards	Can be very damaging and hard to see on plants when small
Silver Y moth (<i>Autographa gamma</i>)	Migrant and can arrive at any time from early spring	Rarely causes significant damage on brassicas
Turnip moth (cutworm) (<i>Agrotis segetum</i>)	Late May-early July, sometimes a second generation in later summer – forecast available	Rarely causes significant damage on brassicas