The 2010 Buckinghamshire Striped Lychnis Survey

Peter Hall
Striped Lychnis Species Champion

Striped Lychnis adult, Looseley Row

It has been 5 years since the last comprehensive Striped Lychnis (*Shargacucullia lychnitis:* Rambur 1833) survey was held. At the time of the previous survey in 2005, it was felt that subsequent surveys should be about every 5 years in frequency. In between, a number of sites have been surveyed more often.

Weather conditions this Spring and early Summer were exceptionally dry with less than one inch of rainfall in the 4 weeks prior to the survey start and very little rain during the survey. As a result conditions were very dry. In many of the grassland areas this made the plants more prominent as the deep tap root could seemingly access water better than shallow rooted grasses.

The survey began on the 18th July and was almost completely finished by July 31st – with only a very few sites remaining which were covered in the subsequent week. Besides myself, a total of 16 people helped in the survey work. Training was offered to new recruits on the first day of surveying; although it sounds fairly obvious what to do, to actually see first instar larvae and also to locate them on the plant, helps a lot. Young larvae are very small and much greyer than larger versions and they can often be hidden in the flower area.

A young larva , note its grey colour and typical circular hole into the flower

Identification of the foodplant Dark Mullein (*Verbascum nigrum*), is fairly simple when the plant is in flower, but to show volunteers what it looks like after the seeds have begun forming was also useful to them. During the survey period, I performed a small degree of overlapping at random to see if the volunteers were seeing all plants and larvae in their areas and where differences were spotted, this was informed to them. In some cases I asked for areas to be re-surveyed.

Dark Mullein plants on the West Wycombe Estate

The results in a concise format: Larvae down 34% in numbers, whilst foodplant was up 49% in numbers. Road verges continue to decline in importance despite being a preferred location for egg laying.

Results

Table 1 Plant Population Trends (numbers of plants)

	SURVEY YEAR					
SITE GROUP	**1996**	**1998**	**1999**	**2000**	**2005**	**2010**
Piddington/West Wycombe (A40)	375	660	575	1544	3564	15158
West Wycombe to Saunderton (A4010)	180	357	1139	776	1235	1729
High Wycombe			6	819	9779	18414
Holtspur	4	167		226	88	269
Burnham Area				69	312	576
Cryers Hill	500	150	86	136	141	174
Slough Lane/Buttler's Hangings	577	256	235	631	319	720
Bradenham and Small Dean Lane	105	65	30	124	158	529
Speen to North Dean					149	427
Frieth	2			5	83	203
Hughenden Valley	369	313	279	342	416	499
West Wycombe to Bledlow Ridge	14	12		27	44	2747
Radnage	2045	4083	1104	759	10620	7037
Stokenchurch to Ibstone					1116	1011
Swains Wood SSSI	50	50	30	50	93	66
Lodge Hill SSSI	80	1500	1501	372	1065	430
Homefield Wood SSSI & Area	402	293	80	66	131	327
Hambleden Valley	1126	160	167	815	1019	827
Wormsley Estate					696	3598
Culden Faw Estate		819		7370	3786	11595
Henley to Stonor					390	558
Medmenham to Fawley Court	12	384	177	375	191	96
Marlow Area					522	2018
Winchbottom Lane to Well End					727	1456
Hedsor Area				397	22	515
Wendover	15	26	151	24	22	205
Bacombe Hill	40	500	300	1200	383	1641
Great Missenden	65	91	134	225	84	352
Cadsden & Rignall Road	1	7		7	73	69
Shardeloes/Amersham	254	110	357	210	228	432
Total	**6086**	**9752**	**6315**	**14895**	**37456**	**73678**

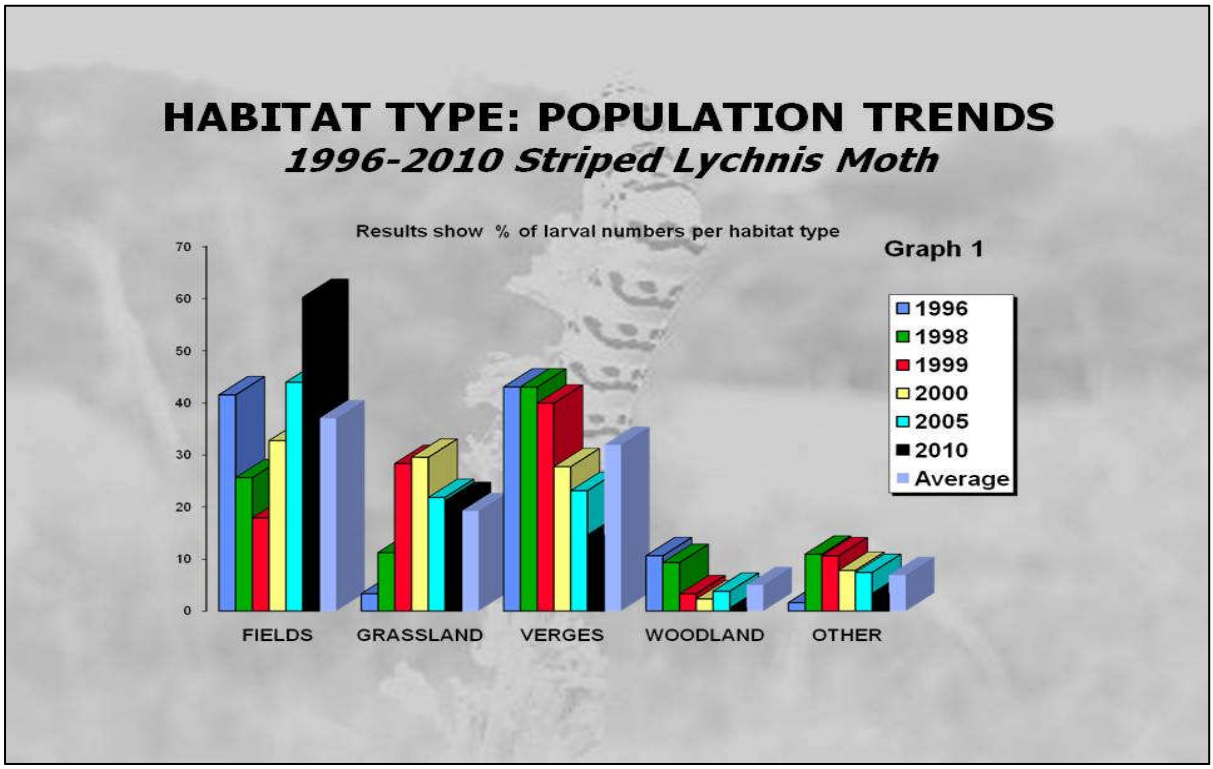
Of the 30 Site Groups listed in Table 1 (above), 7 show plant number declines and 23 show plant number increases, compared to 2005. Overall plant numbers increased significantly.

Table 2 Larval Population Trends (numbers of larvae)

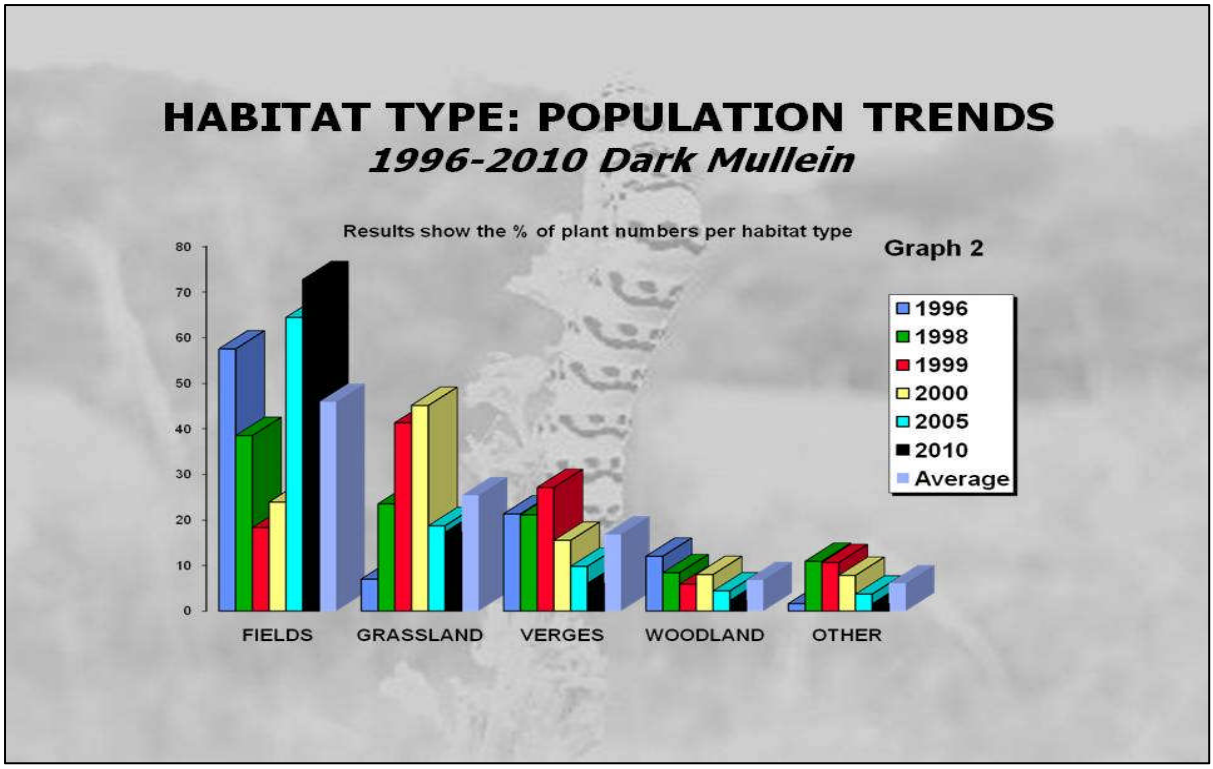
	SURVEY YEAR					
SITE GROUP	**1996**	**1998**	**1999**	**2000**	**2005**	**2010**
Piddington/West Wycombe (A40)	182	82	240	174	594	480
West Wycombe to Saunderton(A4010)	122	160	236	264	192	98
High Wycombe			2	265	742	305
Holtspur	1	53		118	14	33
Burnham Area				3	25	1
Cryers Hill	200	438	134	136	303	84
Slough Lane/Buttler's Hangings	12	71	254	222	223	87
Bradenham and Small Dean Lane	7	5	9	2	177	158
Frieth	0			5	63	34
Speen to North Dean					64	11
Hughenden Valley	92	19	89	28	130	19

West Wycombe to Bledlow Ridge	0	77		1	26	399
Radnage Area	46	8	60	36	213	372
Stokenchurch to Ibstone					127	82
Swains Wood SSSI	7	20	0	0	8	1
Lodge Hill SSSI	15	13	136	75	317	48
Homefield Wood SSSI & Area	88	51	10	17	14	3
Culden Faw Estate		338		424	517	130
Wormsley Estate					293	253
Hambleden Valley	242	113	17	163	111	105
Henley to Stonor					177	110
Medmenham to Fawley Court	11	99	16	8	29	10
Marlow Area					287	177
Winchbottom Lane to Well end					387	320
Hedsor Area				30	2	17
Wendover	1	0	0	0	0	4
Bacombe Hill	0	0	3	9	44	29
Great Missenden	3	6	17	0	0	0
Cadsden & Rignall Road	0	0		0	0	6
Shardeloes/Amersham	0	0	13	0	0	0
Total	**1021**	**1418**	**1225**	**1556**	**5079**	**3376**

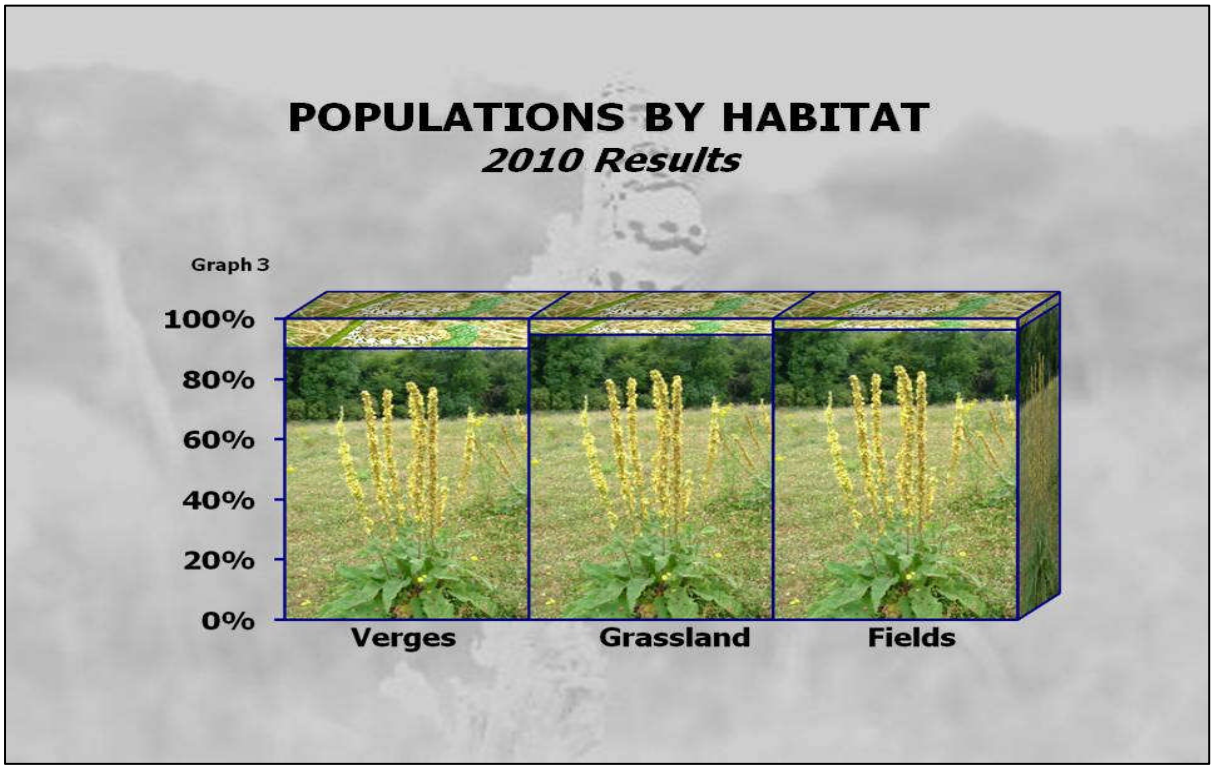
Table 2 shows the larval numbers found in all major surveys to date. In 30 different Site Groups, 6 showed larval number increases whilst 24 showed declines, compared to 2005. The overall numbers showed a marked decline on 2005.



Graph number 1 (above) shows the percentage of larvae found for each habitat type recorded. Of significance is the general increase in importance of fields and field margins for the moth and the steady decline in importance of roadside verges since large scale surveying began in 1996.

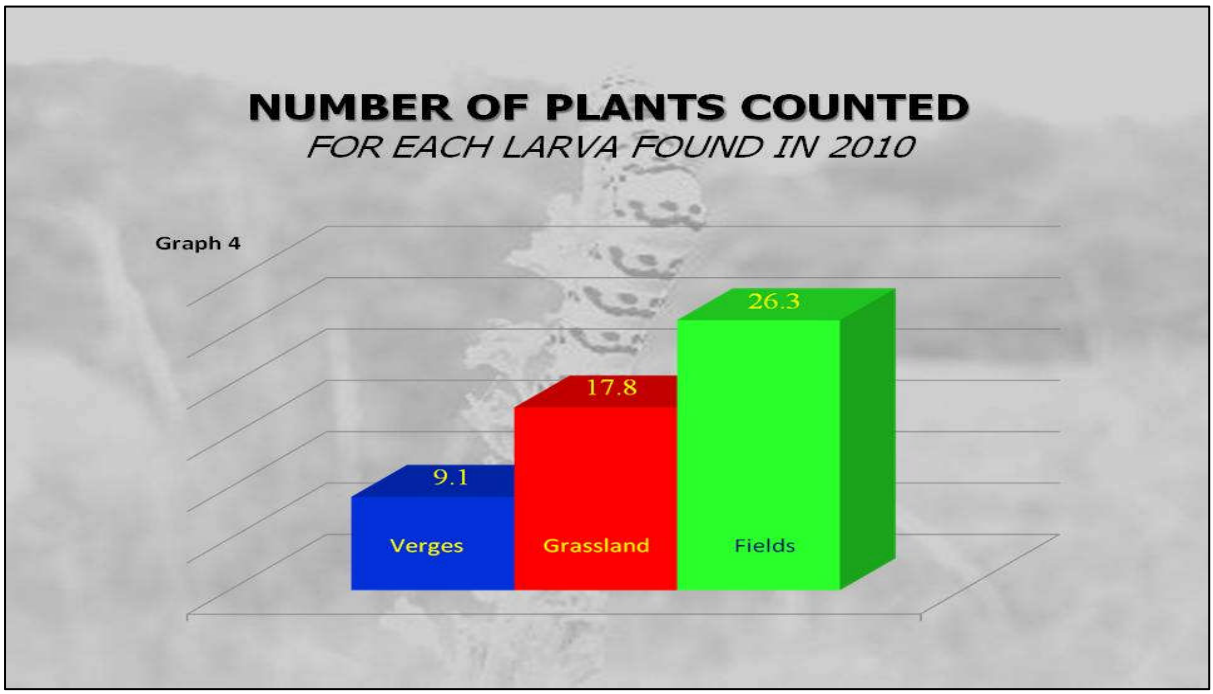


Graph number 2 (above) shows the increasing importance of fields and field margins (including HLS strips) in overall numbers of plants. Roadside verges continue to decline. Please note that cut plants were not included in the recording.

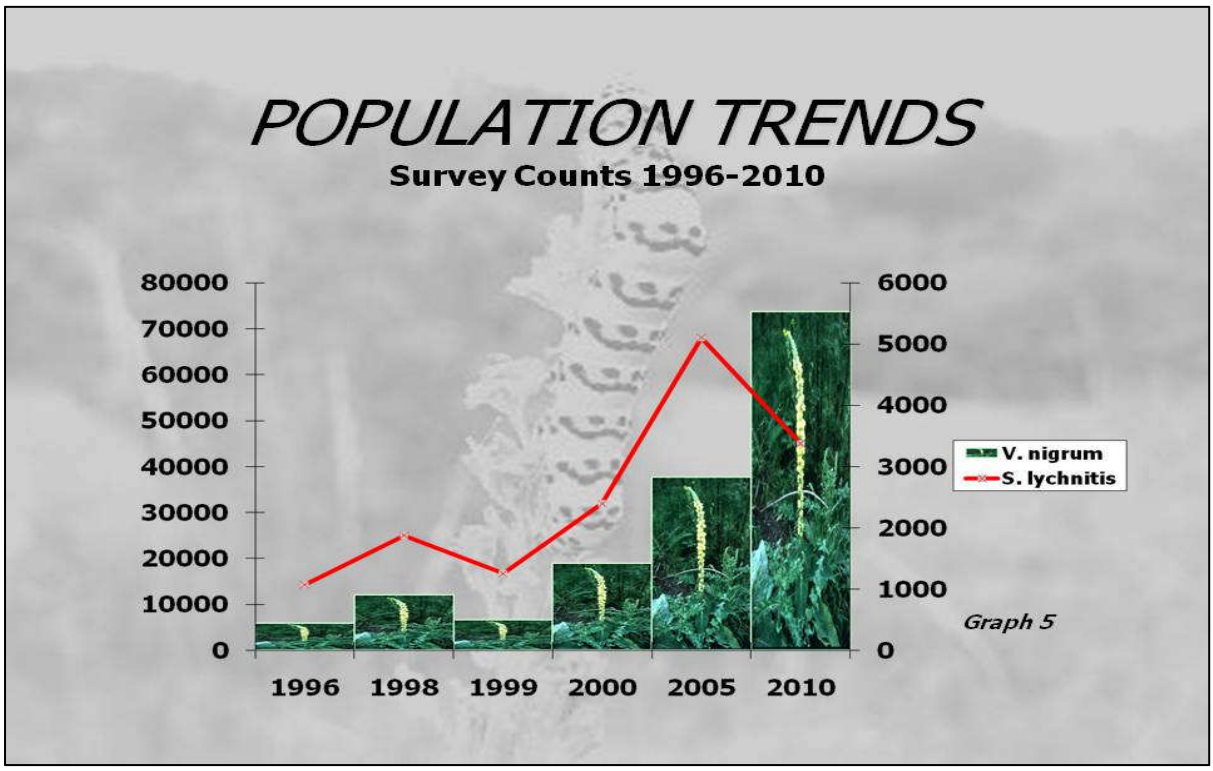


Graph number 3 (above) shows that despite the general decline in plant and larval numbers along roadside verges, it is still the preferred site for the moth, followed by chalk grassland then fields and their margins. The image of Dark Mullein represents plant numbers and above, the image of the

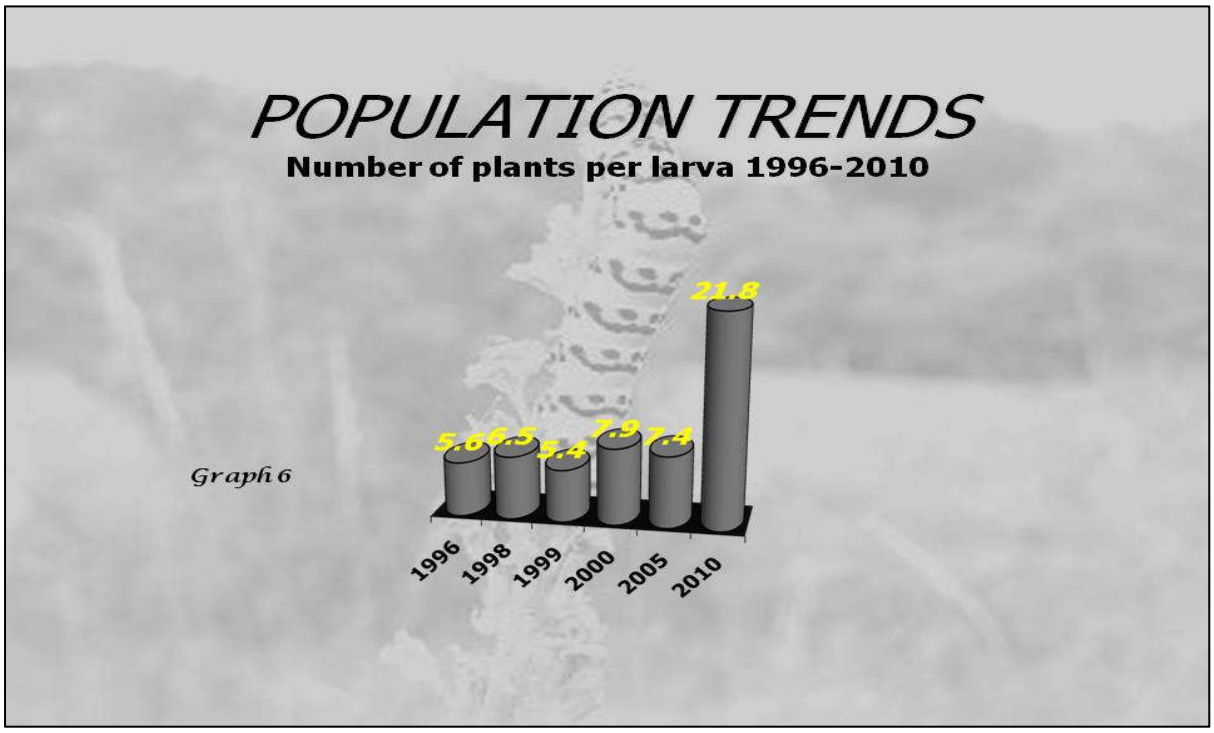
larva, the larval numbers, expressed as a total of 100%. For example, for Verges, there were 493 larvae found amongst 4513 plants. This can be expressed slightly differently, see Graph 4 (below).



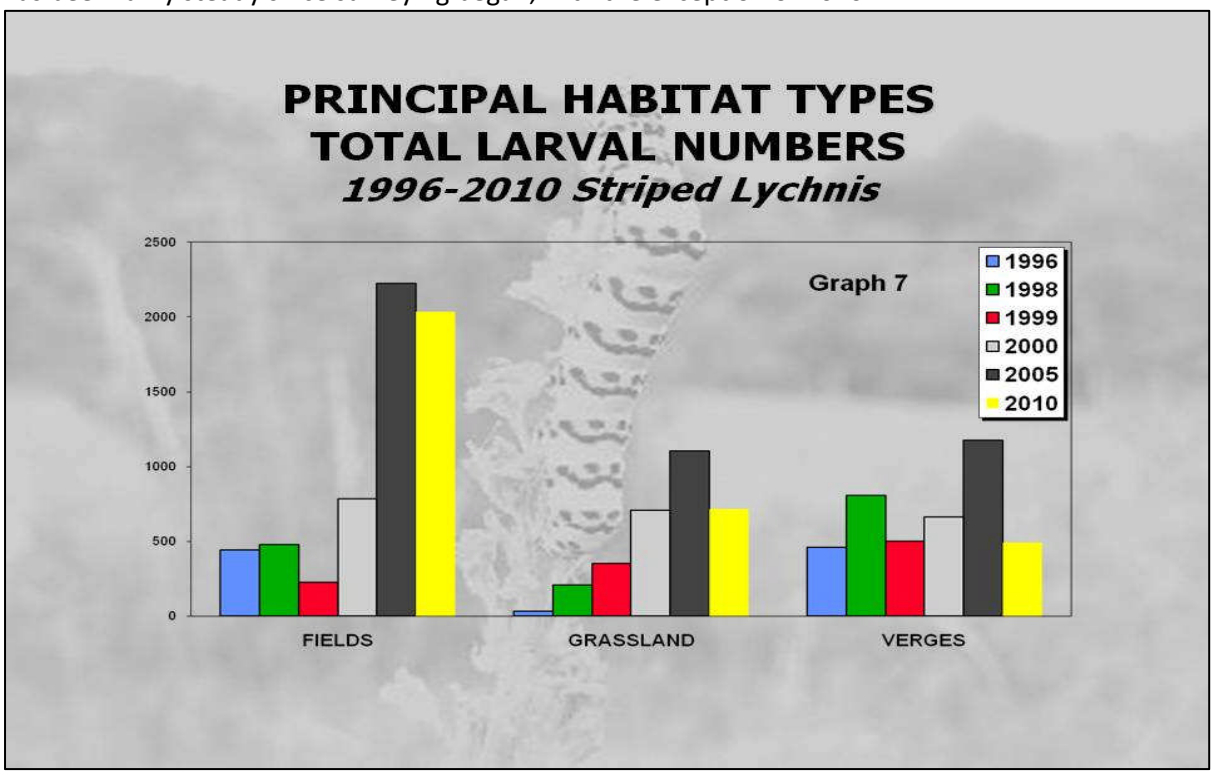
Graph number 4 (above) shows that on average, for roadside verges, every 9.1 plants inspected an average of 1 larva was located. This compares to just under 18 plants for Chalk Grassland and just over 26 plants for fields and their margins. Clearly, despite overall population declines in both foodplant and larvae on roadside verges, it is still the preferred habitat for the moth.



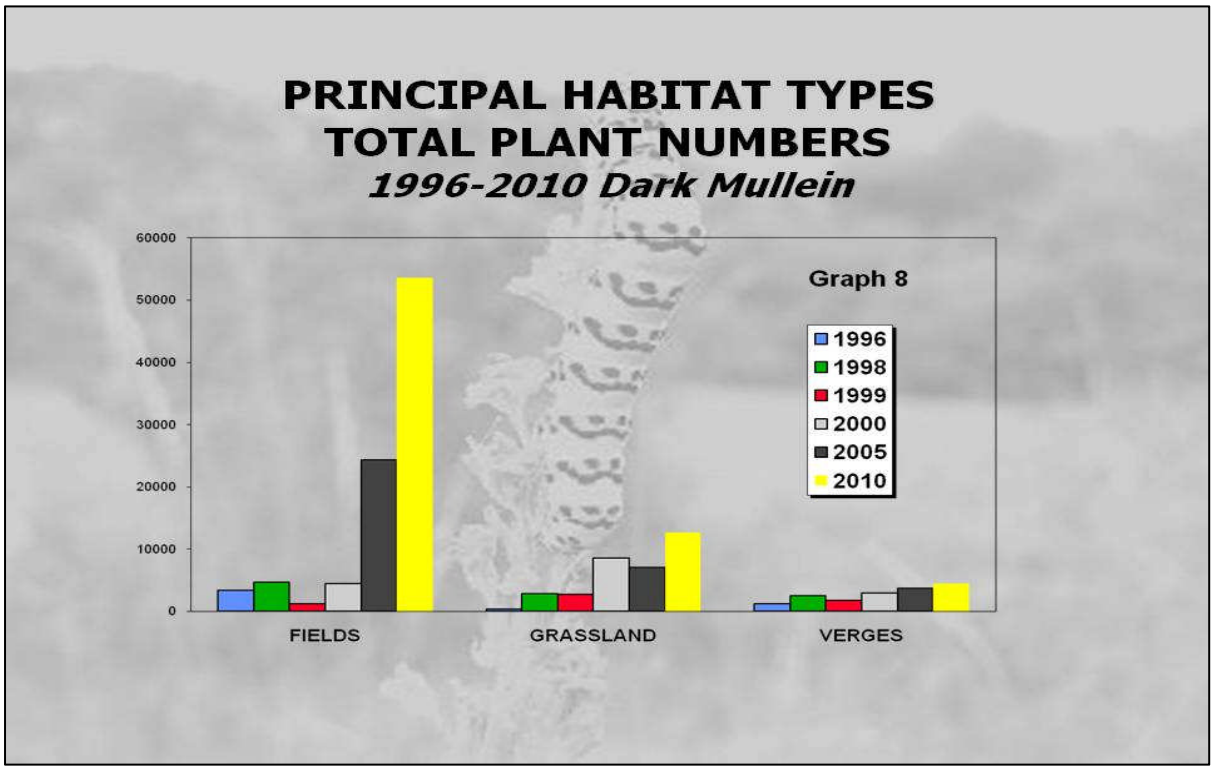
Graph number 5 (above), shows the overall total numbers of both foodplant and larvae for each major survey conducted since 1996. Dark Mullein (*Verbascum nigrum*), shows a steady increase, whilst larval number have dropped in 2010 following a steady increase since 1999.



Graph number 6 (above) reflects the drop in larval numbers and increase in foodplant numbers. Overall plants per larva found increased from 7.4 in 2005 to 21.8 in 2010. The plants per larva ratio has been fairly steady since surveying began, with the exception of 2010.



Graph number 7 (above), shows the total numbers of larvae of Striped Lychnis (*Shargacucullia lychnitis)* found per habitat type. Graph number 8 (below), reflects total numbers of Dark Mullein (*Verbascum nigrum*).



Individual Site Reports

Piddington to West Wycombe. Predominantly a roadside verge area, and the main section was declared a Road Verge Nature Reserve (RVNR) by Bucks County Council back in 2005. The A40 roadside verge was very poor in larval numbers, with most larvae found on plants the other side of the fence on a set aside strip, presumably under hls stewardship. Ham Farm Bridleway had some larvae as did Chipps Hill verge. The allotment area supported only a few larvae this time. Verge cutting had cut quite a percentage of plants. Old Dashwood Hill fields area was still the main source of larval records. The lower section was tree planted back in the late 1990's and these trees are now big enough to discourage egg laying, so although many plants were found, a few larvae were found only on plants along the main access ride. The higher slopes had also seen some activity since 2005, with the upper section having had large quantities of chalk dumped and spread out over the hill. As a result the field was effectively in 3 sections. Lower young woodland, a middle section of rank chalk grassland and an upper section with a large growth of opportunistic plants such as thistles and ragwort. In between, Dark Mullein was still present and larval counts were well up on 2005, compensating for lower numbers along the road verge. Additional sites were located on the West Wycombe Estate, especially along Hellbottom Wood and Great wood. These are pockets of chalk grassland surrounded by planted mature forest.

West Wycombe to Saunderton. The RVNR area, which was partly destroyed a few years ago when the ditch was cleared out, has recovered to a large extent, with Dark Mullein plants re-appearing in some numbers. Larvae were present again, albeit not in the large numbers of some years ago. A new high metal fence has been erected preventing access to the railway track approach by the bridge. Normally a good location for larvae, this was no longer possible to survey. Kit's Wood chalk grassland continues to scrub up slowly. Good numbers of plants along the A4010, but larval numbers were

very poor, probably due to untimely verge cutting. Cookshall Lane site supported good numbers of larvae once more.

High Wycombe. The High Wycombe site group includes Green Farm, which in recent surveys has proven to be by far the biggest and most important site in the county - indeed the country. Careful management by the National Trust has ensured that foodplants are present and plentiful. The field that harbours the vast majority of Dark Mullein is now being managed better to allow the flower spikes to be present all through the larval growing period. Discussions have been held with a view to remove some of the young Ash growth at one end of this field, which has bountiful numbers of foodplant in and around the young trees. Green Farm was last surveyed as recently as 2008. During that particular survey 13,658 plants and 1,770 larvae were recorded. In 2010 there were 18,017 plants and 258 larvae. So whilst Dark Mullein increased by about 24%, the Striped Lychnis larvae reduced in numbers by around 70%. The main field, numbered as Field 4, contained 16,340 plants (91% of all plants on the farm) and 197 (76%) of the 258 larvae. This site will be monitored again in 2011.

Outside of Green Farm, High Wycombe has plants scattered all over in low numbers, many in gardens and these are highly transient. Records of larvae were actually few outside of Green Farm, with most larvae found around the fringes of Wycombe Wanderers FC overflow carpark.

Neil Fletcher and Martin Albertini survey plants in Hughenden Manor orchard

Holtspur. The plants in and around Holtspur, from the village up to Holtspur Bank and Bottom nature reserves held very few larvae, with the exception of the caravan site adjacent to Holtspur Bottom NR. Plant numbers on the Butterfly conservation site were very low. Planting is currently

underway on the newly cleared slopes to try to increase larval numbers and hopefully to establish a viable colony on the site.

Burnham Area. Disappointing numbers of larvae despite plenty of foodplant present. Cliveden in particular normally has numbers of larvae, this time only a single larva was found.

Cryers Hill. The field is a popular spot for the moth. It usually has the highest density of larvae in the surveyed areas and this survey was no exception. 111 plants found and 84 larvae. Just outside, on Cryers Hill road and Valley road, plants were found that had avoided the cut, but no larvae located. I have liaised with the landowner of the Cryer's Hill site and am assured hay cutting will be delayed until the end of August, giving the moth larvae plenty of time to pupate.

Slough Lane and Buttler's Hangings. Buttler's Hangings reserve has recently been handed back to the Dashwood Estate after the local Wildlife Trust decided it could no longer manage it. All along this lane there are plants, many on set-aside areas and areas managed for pheasants. Results followed the overall trends, a sharp decline in larvae and an increase in plant numbers.

Bradenham and Small Dean Lane. The National Trust has cleared a large area of former chalk grassland that was planted many years ago with conifers. The idea is to revert it back to chalk grassland again. Adjacent fields are reverting really nicely and the entire site looks better each year. Most surprising is the growth of Sallow on some of the slopes following work to restore the area and weed wiping is working well here. Along the lane, there are relatively few plants, but there are 2 fields beyond that support some good plants and many larvae. Larval numbers on the National Trust site were down, but overall the Site Group showed stable numbers of larvae and an increase in foodplant. The National Trust part will be inspected again in 2011.

Speen to North Dean. Plant numbers have increased here largely due to the success of Little Stocking Wood chalk grassland field. Historically this field has harboured very few larvae and is encroached by beech woodland on almost all sides, making it a little isolated. Other sites have not fared so well, mainly roadside verges and larval numbers were well down. One field which had good numbers of larvae in 2005 had been tidied up.

Frieth. Mainly Moor Wood and adjacent chalk bank, there is a small population of larvae here once again. Plant numbers have increased, whilst larval numbers have declined in keeping with the overall trend this year.

Hughenden Valley. This is one area that benefitted from the verge cutting crews avoiding the plants back in 2005. Larval numbers responded accordingly. Additionally Longrove Plantations always supported larvae. However, in this survey the plantation had finally grown to a size that precluded any larvae, it was too shaded. The roadside verges were well cut, removing a lot of suitable foodplant and leaving plants that were deep in hedgerows or in areas unsuitable for the moth to lay her eggs. Overall plant numbers stable and larval numbers showing a steep decline.

West Wycombe to Bledlow Ridge. This Site Group is one of the few success stories of this survey. Both larval and plant numbers showed good increases. This was due to the inclusion of new sites within the group. Indeed, Chawley Farm fields supported some of the best numbers of larvae found. This site was included this year after liaison with the owner back in 2009. They are fully aware of the findings and the hope is it will be well looked after. Also new to the survey, were the fields both sides of the tarmac road that runs towards Keeper's House, off Wigan's Lane.

Lodge Hill SSSI. The large set-aside field on the southern lower slopes of the hill supported some larvae, although many of the plants were too shaded. On the upper slope itself, there are 2 main areas for Dark Mullein. The northern slope supports most plants, but this is rapidly becoming overgrown with scrub and numbers of larvae here were hugely down on previous surveys. Fingers crossed it gets some attention soon. The south facing slope fared better, with the usual numbers of plants present and good numbers of larvae. Overall both plant and larval numbers down.

Stokenchurch to Ibstone. In this survey all located larvae were found in the pheasant cover field in the centre of Penley Wood. Both plant and larval numbers were down on the 2005 survey for this particular site, but only slightly. Hartmoor wood and the old church at Ibstone, did not result in any larvae this time.

Swains Wood SSSI. Most plants are still to be found in the lower section and this is still suffering from scrub encroachment. Only a single larva located during this survey. A shame, because a minor amount of work would open up a lot of plants.

Homefield Wood SSSI & Area. There is a lot of scope to discover more plants and larvae in this area. There are plenty of small pockets of plants and a number of new sites were located during the brief time allocated to survey. Some walking of footpaths may be beneficial over the forthcoming years. Homefield Wood SSSI was rather disappointing. The main ride along the bottom normally supports a small population of larvae and the recent clearance of adjacent pines should have opened up the area for more plants and larvae, but a disappointing single larva was found. Other small pockets of foodplant on the site revealed no additional larvae. Nearby fields and road and field verges in the Site Group only added one more larva to the tally.

Radnage. The area around the village of Radnage is good for foodplant and larvae. Plants along the roadside tend to be very transient. The main site within this group is Sprig's Alley – a series of chalk grassland fields which in former times had been used as a scrambling circuit and it is thought this disturbance encouraged Dark Mullein to proliferate. The dry early summer certainly reduced the grass growth here and plants were more prominent than usual. Numbers of plants still continue to do very well, with 5866 counted in the main field. The lower of the 3 main fields had been ploughed and young secondary growth had sprung up, but mainly too late for larvae. Larvae were located around the edges. Numbers were typically at a low density compared to plants but this is usual for this site. Just over 200 larvae were counted. Yoesden Bank had a small colony at the far end and field margins along a footpath running South-west beyond Chorley Farm sported good numbers of larvae.

A mature larva sits atop a well eaten flower spike in a field parallel to the footpath

Hambleden Valley. This is quite along valley, with spurs off of either side and in the past has proven to be a good location for both plants and larvae. Numbers of larvae followed the survey trends and were down slightly on 2005. However, the number of sites with larvae was considerably down, with main aggregations at Fingest Churchyard and along Fingest RVNR – although this latter location had a singleton plant supporting over 40 larvae which overhung the roadside cut strip and was included in a fresh cut soon after surveying, meaning larvae here were lost.

This roadside strip was re-cut shortly after this image was taken, removing overhanging plants

Wormsley Estate. This estate is home for a lot of foodplant and surveying is quite a task in itself. The mian foodplant area from 2005 is slowly becoming enclosed by non native trees lining the roadside – Upper and Lower Vicar's Farms. Plant still flourish, but numbers of larvae were well down in the area

closest to Lower Vicar's Farm. Further up the tarmac track, the chalk banks also sported many plants, but almost all flower spikes had been nipped off, presumably by the abundant population of deer on the estate. This resulted in very few larvae being located. However, other sites were more productive. A field that was cut actually supported quite a number of plants and larvae, I think due to the poor sharpness of the blades leaving many of the more robust plants still standing. Overall plant numbers showed a very large increase and larval numbers a small decline. The Estate Manager has been made aware of the moth and hopefully will be sympathetic towards its survival here.

A Wormsley Estate larva, happy even after the field had been cut earlier

Culden Faw Estate (Hambleden Esate). Another site that has traditionally had many plants and larvae. However, the main area around Reservoir Hill has been largely tree planted and herbicides used in between the rows of staked trees. Dark Mullein grew very well in this area, presumably further helped by soil disturbance from the planting, but the combination of herbicides and encroachment and strimming meant that larval numbers were very low. Other areas, such as the main chalk bank supported larvae and Dairy Lane itself still had many larvae, even though many of the plants had been cut down. Overall, still a very important site and the coming years will be interesting with the new ownership and changes being made. Despite the tree planting overall plant numbers showed a large increase, but loss of suitable habitat for the moth meant that larval numbers dropped significantly.

The fence line along Dairy Lane was a good site for plants and larvae

Henley to Stonor. The road is also the boundary for much of its length between Bucks and Oxon. There is plenty of spots with foodplant along this section and also plenty of larvae too. Overall numbers followed trends – plant numbers up, larval numbers down.

Medmenham to Fawley Court. Mainly long the main road, and most of the larvae found were at the entrance to Dairy Lane. Plant numbers are still declining here as are larval numbers.

Marlow Area. Plants numbers up and larval numbers down. Larvae were located in many spots along the roadsides and also in adjacent fields. Most numbers were found at the old Beechwod Nurseries' fields and here the landowner was notified of the larvae and foodplants. The area is going to be sold off as horse grazing paddocks, so time will tell if the moth survives here. 2018 plants and 177 larvae overall, of which 1208 plants and 104 larvae were from the Beechwood Nursery area.

Winchbottom Lane to Well End. Trends followed the averages with plant numbers doubling and larval numbers showed a small decline. Most larvae were located around Sheepridge although the reserve did not harbour any.

Hedsor Area. Increases in both plants and larvae in this Site Grouping but this was due to a new location which had a lot of plants and a few larvae. Overall 515 plants and 17 larvae.

Wendover. This area will never support many larvae, but despite this, 4 larvae were located. Most plants are along a bank that has been landscaped and planted with trees and shrubs which is slowly covering a chalk grass bank. Elsewhere there are a few plants along the verge.

Bacombe Hill. This population has been isolated from other populations and still survives albeit at low numbers. Larvae found in Wendover will be from this site and probably also responsible for colonising Grangelands some distance away. Bacombe Warren was disappointing and no larvae were found here at all. Liaison with the owner has resulted in more plants being grown and this trend is set to continue, and there should be no reason why the moth cannot re-colonise from the other side of the slope. Plant numbers increased and 29 larvae were recorded, all from the County Council side.

Great Missenden. It still comes as a surprise to find no larvae along this stretch as the roadside verge in particular sports many plants. 352 plants were found – a record number – but no larvae and no larvae have been recorded here since 1999.

Cadsden & Rignall Road. It came as a huge surprise to locate larvae on Granglends in 2009 for the first time, and the survey in 2010 also revealed small numbers of larvae. This site will be monitored annually to see if it survives. In total 6 larvae were found and I know of 1 person who has removed larvae from the site. He has promised to return the moths there once they hatch next year. The 2 larvae he removed amounted to 33% of the population! 68 plants in total, those on the Rignall Road were large but no larvae found.

Shardeloes & Amersham. This is really an extension from Great Missenden and in a similar state. Plenty of suitable plants found but no larvae and the last larvae found was back in 1999 and then on a single plant. 432 plants found.

Acknowledgements
I would like to thank the following people and organisations. Firstly to the dedicated team of willing volunteers, without whom, the survey would have been almost impossible to conduct. They are Martin Albertini, Paul Bowyer, Eric Britnell, Michael Campbell, Wendy Campbell, Julia Carey, Neil Fletcher, David Fergusen, Andrew George, Alan Gudge, Trevor Hussey, Nicolas Keighley, Nigel

Partridge, John Sheppard and David Wilton. And then to Butterfly Conservation, the Buckinghamshire and Milton Keynes Environmental Records Centre and Buckinghamshire County Council for their assistance.

Peter Hall

Butterfly Conservation Species Champion: Striped Lychnis Moth &
Buckinghamshire Moth Officer