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### **SOME FINDINGS FROM THE PRESTWOOD POND SURVEY**

*Tony F Marshall and Eric  
Hollowday*

Surveys of the major ponds in the Ecclesiastical Parish of Prestwood (not including small garden ponds) have been carried out regularly by the authors from 1995 to 1999. A full report on the findings (including complete species lists) is to be published, but some of the conclusions may be of general interest.

At least 67 ponds existed in this area at the end of the last century, when they were important for providing water for livestock and other purposes

(e.g. sheep-dip) before the arrival of piped supplies. They were especially numerous around the edges of the former commons, whilst others were on private farmland. Due to their loss of economic function, many of these ponds have now disappeared. Only 39 survived by the time of the survey, and many of these were in a desperately poor condition. No more than about 15 are now of much wildlife value, although some have become small patches of marshland with plant species not growing elsewhere in the district.

Apart from losing their economic function, there are three other major threats to the survival of the remaining ponds.

The first is a general lowering of the water-table consequent on the large expansion in the built-up area in the parish, especially since 1960. Ponds surrounded by housing are in a particularly perilous state, drying out earlier and earlier each year.

The second is natural progression to marshland, and ultimately dry scrub, from the encroachment of vegetation. Unless there is regular upkeep a pond can disappear in this way in just a few years. Associated with this problem is the deliberate introduction of alien plants of garden origin, such as the notorious "parrot's feather" *Myriophyllum aquaticum* or ornamental grasses, which can spread throughout an entire large pond in a single year. Even the tiny introduced duckweed *Lemna minuta* is capable of blanketing the whole surface of a pond, much more efficiently than the native common duckweed *L. minor*, cutting out all light to underwater creatures. The survey showed clearly the importance of local people taking care of the ponds on their land or close to their property. Very few of the longstanding ponds in the area have survived in a reasonable state without regular intervention (in one case by Chiltern Society volunteers).

The third threat is pollution, including the dumping of builders' and garden rubbish and old farm machinery. Several ponds have been filled in in this way. Generally, existing ponds do not for the most part exhibit obvious signs of pollution, but effects may be quite subtle. A possible effect may be indicated by the sampling of rotifers carried out by E.H.. Rotifers display a large range of adaptations, so that there are species living in virtually any kind of aquatic habitat. There were,

however, six ponds sampled where none at all were found. This may have been due to seasonal variation – it is particularly difficult when sampling to assert that a species is *not* present – but another explanation is suggested from their geographical associations. The six ponds exhibit considerable variation in general condition (degree of vegetation etc), but five immediately abut roads or tracks, which raises the possibility that some sort of pollution may be responsible in many cases. The sixth pond – well away from any roads or tracks - had just been re-dredged and this may have been the reason for the lack of rotifers there. Only two other ponds sampled were *immediately* adjacent to roads. In both just one species of rotifer was found, well below the numbers normally expected, given that both had plenty of water and aquatic vegetation.

Ecological diversity was measured by separately counting the numbers of plant species, macrofauna (amphibians to water beetles) and microfauna (rotifers etc). The diversity of microfauna was not correlated with either of the other two measures, although the diversity of the flora (native and introduced species) did have some association with the range of macrofauna. Only six ponds were above average on all three measures, even though there were several more that had valuable assemblages of species in one or two of the main categories. Different ponds need to be managed for different features, and certainly not all need to aspire to high diversity across all three main types of species. To do so would actually *reduce* overall diversity, by making all ponds too similar. Some ponds with little vegetation were found to be important for certain species of fauna,



for instance. It is important that those that have survived as particular types of pond are managed to ensure they survive in that way. A prime example of this is a shallow field pond, only a few inches deep and totally invaded by willow, which had a record total of nine different rotifers, some of them relatively rare species, despite having apparently little other wildlife to recommend it.

Another feature emerging from this survey is the existence of certain "indicators" for quickly identifying ponds likely to be in good order as wildlife habitats. One of these would be the number of aquatic plants present (over three). Particularly significant aquatics are water-plantain and rushes other than the prevalent soft rush. Other indicators of the better ponds would be the presence of moorhens, mayflies and caddis-flies, dragonflies (especially the larger species), aquatic bugs other than the common pondskater *Gerris lacustris*, larger crustacea (water slater and freshwater shrimp), and any molluscs other than *Lymnaea stagnalis*. Microfauna especially associated with the best ponds included the green hydra, and the rotifers *Anureaopsis fissa*, *Lepadella patella*, *Squatinella tridentata*, *Synchaeta pectinata*, and perhaps *Lecane bulla*.

It is, perhaps surprising that amphibians do not feature in this list of indicator species. This is for two reasons. One is that the occurrence of fish in some of the best ponds has limited their presence there. The other is that both the common frog and the smooth newt proved to be surprisingly tolerant in the water conditions they would accept, so that their presence does not necessarily indicate a thriving pond. (Both

species, it should be noted, spend much of the year away from ponds, often visiting them only to breed. As a result, frogs were found visiting certain ponds that had declined below the level of viability year after year in large numbers.) It is also perhaps surprising that water-beetles do not appear in the list. This again may be due to the wide range of tolerances exhibited by this group as a whole, helped by the fact that they generally have the ability to fly from one pond to another if conditions in the first become seasonally unsuitable. On the other hand, more substantial sampling might have revealed differences for specific species not apparent with the current data.

## THE BOMBADIER BEETLE

*Alison Woods and Julia Carey*

Following archival research by Alison Woods, the following entomological society abstract describing a specialist chalk grassland species – The Exploding Bombadier Beetle (*Brachynus scolopetus*) has come to light. The abstract may interest managers of chalk grassland, the beetle's primary habitat.

The Society (see ref.) has recently formed, after extensive field studies in 1921 revealed a series of previously unrecorded behavioural characteristics of the little known and rare Bombadier Beetle.

Most fascinating was territorial behaviour linked to the attraction of a potential mate. Each male beetle adopts a flower spike of a specific Musk Orchid (*Herminium monorchis*) which it would defend vigorously against rival males and marauding



herbivores. It appears that the scent of the orchid plays a vital role in the attraction of the female. Males without a blemish free orchid in their territory had little or no chance of successfully attracting a mate.

With the loss of chalk grassland and the inevitable decline of the Musk Orchid, suitable mating territories became rarer, fierce fights would commonly occur between rival males. In the peak breeding season, early November, local villagers who could not afford the extortionate fireworks prices, would congregate at dusk around the beetle's breeding grounds. They report spectacular displays produced by rival males rapidly firing incendiary sprays in various shades of fuchsia and puce at each other.

Further studies in the summers of 1923-24 produced additional behavioural data. It appears that as a direct result of increased public access to the now popular chalk grassland meadows, aggravated territorial behaviour escalated. Inexplicably the close proximity of humans leads to an increase in both the frequency and ferocity of male beetle responses. Commonly the warning behaviour of vigorous crepitation leads to a complete exoskeletal explosion, resulting in several near fatal nose blockages of specialist entomologists.

The Society believes that the Exploding Bombardier Beetle is intrinsic to both our biodiversity and cultural heritage. We would like, through extended membership, to encourage further research into this fascinating and grossly endangered species.

Dated June 1924 from the Bulletin No.2 of the Society for the Encouragement of Micro Terrestrial

Explosions, S.E.M.T.E.X. Author Dr. O.P. Wort (*MISC*).

## MONITORING A NEW POND

*Tony F Marshall and Eric Hollowday*

In December 1995 the owners of Rickyard Cottage, Denner Hill, Prestwood (Richard and Sue Davis) excavated a new pond on their land, close to the site of a former ancient pond. They have left the pond to develop naturally, without deliberately introducing any plants or wildlife. This makes it a unique opportunity to observe the natural succession in the development of a pond without direct human interference.

The authors have been following the development of the pond since June 1996 and hope to be able to continue this over a longer period. Already interesting changes have occurred in the first few years.

When first observed, the pond was roughly circular, with a diameter of about 8 metres, and a couple of metres deep. The water was clear and the bank's bare yellowish soil derived from a deposit of sandy gravel within clay-with-flints. Further back from the pond was a field of "wasteland", largely robust vegetation of thistles and so on. There were, at this stage, no domestic animals present. The pond had filled naturally with water from the water-table and was holding its level well. The pH at this time was a very high 8.6, very alkaline, perhaps an indication that the water was from the aquifer in the underlying chalk, as the surface soil would be, if anything, slightly acid.



Six months after excavation there was no aquatic vegetation, but the water had already been colonised by backswimmers (*Notonecta* sp.), and the only microfauna present in the samples taken were crustaceans, myriads of the copepod *Cyclops* sp, with nauplius larvae, and a small unidentified species of ostracod. The *Notonecta* presumably preyed upon other insects falling into the water as their main food source. The lack of the smaller Corixid bugs was likely to have been a result of the lack of their food, decaying vegetation.

The next visit was in September 1997 (21 months). No vegetation had yet managed to gain a hold, but there was sufficient microscopic life to support good numbers of the predatory backswimmer *Notonecta maculata*, typical of ponds relatively devoid of vegetation. The microfauna, in addition to the above crustaceans, now included two water-fleas *Daphnia obtusa* and *Simocephalus vetulus*, both numerous, and no fewer than five rotifers (*Brachionus rubens*, commensal on the *Daphnia*, *Keratella cochlearis*, *Anureaopsis fissa*, *Synchaeta pectinata*, and *Lecane bulla*). Many of these species – the backswimmer, both water-fleas, and the last three mentioned rotifers – are generally common in the area, but neither *Brachionus rubens* nor *Keratella cochlearis* have been recorded in other local ponds. Interestingly, the *Brachionus* was later discovered in the pond formed around the spring of the Misbourne when this began flowing after an absence of ten years, just a mile or so outside the parish. It seems to be capable of invading new ponds from some distance away, its resting eggs adhering readily to the feet and plumage of birds. The *Daphnia* on

which it is commensal is almost universal in the ponds of the parish, which makes it puzzling that *Brachionus* is not more prevalent.

The third visit in June 1998 (30 months) found a few plants of the pond crowfoot *Ranunculus peltatus* with a toe-hold, presumably introduced through the agency of birds from nearby ponds, and there were some filamentous algae around the margins. By this time the variety of insects had increased markedly, with emperor dragonflies *Anax imperator*, further water bugs – *Notonecta marmorea* ssp *viridis* and the uncommon *Sigara limitata* – and terrestrial beetles on the margins (*Phyllopertha horticola*, *Rhagonycha lignosa*). The dragonfly is known from one nearby pond, but the *Sigara* has not been found elsewhere in the parish. Frogs had now also discovered the pond for breeding. On this occasion, six rotifers were in evidence, three of them newcomers. The previously recorded *Brachionus*, *Synchaeta* and *Anureaopsis* were now accompanied by a second species of *Keratella*, *K.brevispina*, *Squatinella tridentata* and a species of *Polyarthra*. All three are common locally. The pH, it was confirmed, was still alkaline at 8.0.

The prolific wildlife of this new pond was even further increased by the time of the latest visit in July 1999 (43 months). The pond crowfoot was still present in a few places and seemed to be established. The two *Notonecta* species were also abundant, but joined by two smaller bugs – the uncommon *Plea leachi* and the common *Corixa punctata*. While both are present locally in other ponds (only one in the case of the *Plea*), the colonisation by the *Corixa* was

somewhat surprising, as it generally prefers plenty of aquatic vegetation, here still very sparse. It could be, of course, that both these species came in with the crowfoot. On the other hand, they may have responded to an increased level of organic matter in the water due to the recent introduction of geese and hens in the field occupied by the pond. The first water-beetles had also arrived, including *Helochaeres lividus*, recorded before in the parish, but only at a single pond. Ruddy darters *Sympetrum striolatum* were mating and egg-laying in the pond, where there were also young nymphs of *Libellula depressa* and of mayflies. Frogs, we were informed, had again used the pond earlier, and there were still smooth newts in residence. Toads had been seen in the garden next to the field, although whether they will use the pond remains to be seen, given that it holds relatively little vegetation at this stage. The rotifers *Anureaopsis* and *Keratella brevispina* were still present, both very numerous and carrying amictic eggs. There were also further newcomers – a single specimen of the common *Lepadella patella*, which had perhaps only just started to colonise, and small numbers of *Filinia longiseta*, yet another new record for the parish, and a species that prefers weed-free water. Although water-fleas were not recorded on this occasion, the *Cyclops* was still present.

It is remarkable how soon certain species of fauna began to colonise this new pond, compared to the slow advance of plantlife. This is only partly explained by mobility, as some of the microfauna and the *Plea* would have depended on carriers of some sort. Despite the relative lack of plants, the pond is already a haven for

a diverse pattern of wildlife, including some species not present elsewhere in the parish, demonstrating their capacity for colonising across considerable distances.

**1998 SPECIES ACTION PLAN  
SITES SURVEY  
The Striped Lychnis Moth**

*Peter Hall*

**Introduction**

During July and early August 1998 an extensive local survey was conducted on the status of the Striped Lychnis Moth (*Shargacucullia lychnitis*. Rambur.) and its foodplant Dark Mullein (*Verbascum nigrum*.L.).



The last major survey was carried out in 1996, with a much smaller one in 1997. Many of the 1998 survey area results can be used to directly compare with 1996, whilst other areas have been expanded and some new ones added too in this latest survey.



During the 1996 survey, which was conducted mainly in the first week of August, it was apparent that some of the larvae had already pupated. The subsequent season was even earlier and it was clear that during the survey week again in early August that most of the larvae had pupated. In 1998 surveying began much earlier, this time from mid-July and it was very noticeable to see the variation in larval sizes even at this stage from fully grown to just hatched, an observation that was apparent all through the later survey weeks. Possibly the coolness and wetness of the summer encouraged a larger than normal spread in ova hatchings. Further surveys are recommended to take place around the third to fourth weeks of July.

It was decided after the 1996 survey that the frequency of these major surveys should be every 5 years. 1998 proved to be a major survey and revealed often large changes in both foodplant as well as moth larvae. The next recommended major survey therefore, is suggested to be in the year 2000 with a selected minor survey in 1999.

Data from 1996 and 1997 has been re-structured with sites being grouped. These groupings results are shown in table 1 and provide a comparison with 1998. Tables 3 and 4 show selected group areas where direct comparisons on population trends of both plants and larvae can be seen. These are sites where new areas have not been found to any great extent within a group and therefore show increases or decreases of the monitored populations. The re-structuring of the results allows future surveys to be included with relative ease. The group names and the individual site

references belonging to these groups is shown in table 5.

The results show quite a mixed bag with some areas declining, some increasing and some fairly stable. What is again apparent is the fragility of most of the sites. The roadside verge is one of the most vulnerable of sites, but it is also one of the most important as it links areas together and hopefully will in future provide the means of population expansion to new areas. Most of the "action" required of the County Council is related to roadside sites. Plant populations will naturally wax and wane on these roadside verges. The foodplant is an opportunist, colonising disturbed ground and this provides an ideal opportunity to assist the spread of the foodplant by introducing seed to roadworks areas at sites where the moth could benefit. Declining plant populations along road verges, like in the Hambleden Valley are in part unavoidable in the natural cycle of events. However, some of these roadside sites are key areas and need to be maintained and to this extent active planting may well be the answer to populaton maintenance. Each of the group areas are discussed below and recommendations are given where it is felt to be of use. By far the biggest area for improvement is still the verge cutting which again has destroyed a large swathe of both foodplant and moth larvae. It is nice to see that in some areas verge cutters have carefully avoided plants, but in most areas this is still not happening.

If the verges can be successfully managed, and most of the core areas protected, then the moths future will look more safe.



This whole enterprise is quite new and innovative and the County Council's initiative and co-operation in this species recovery project is positive and far-sighted. A lot can be achieved and at little cost. It may be worth considering an approach to local newspapers to publicise what has been going on. In matters like this all news would be good news.

**Group Area Reports**

⇒ **Piddington/West Wycombe (A40)**

Plant populations in this area are still good although the allotment site which was very important in 1996 has shown a big decline in plants, partly due to cutting and partly the fact that much of the area is now very rank. Churchyards seem to be potentially good areas - frequent soil disturbance - but most of them are kept "tidy" and the church here is no exception. Additional plants were found on the railway embankment, but monitoring of these is difficult. Recommendations are to make this part of the annual survey area and if populations continue to decline then planting may become necessary.

⇒ **West Wycombe - Saunderton (A4010)**

This is mainly a roadside verge site. 1996 showed extensive damage by cutting and remaining plants frequently colonised by larvae indicating a potentially important site. It was good to see that the verge cutting here carefully cut around the plants on the verge area. The adjacent ditch on the section near to West Wycombe is owned by the Dashwood Estate and this is also potentially a very good site, but was mown by the

estate in 1998 as it was in 1996 just at the critical time. It is recommended that liaison is established between the County Council and the Estate regarding this site as well as good site just off Slough Lane regarding cutting times. A derelict field was also identified adjacent to the main road which had plenty of foodplant but no moth larvae and it would be worth the County Council tracing ownership to try to protect this small area.

⇒ **Cryer's Hill**

This is a disused field comprising quite a species rich rank grassland and a fast becoming overgrown small plot of chalk grassland (orchid rich). Although the *Verbascum* plant numbers have declined slightly this is still an excellent site recording the highest numbers of larvae for both a single site and also as a group with one plant recording a record 104 larvae. This site is very important and the owners need to be contacted to try to create a management plan, not just to protect the Striped Lychnis population, but also the chalk grassland area too. This site should be monitored annually and the plant numbers encouraged.

⇒ **Slough Lane/Buttler's Hangings**

Much of Slough Lane had been cut and as such the fooplant was scarce. Plants did re-grow and were in flower in mid-September, which was far too late for the moth. Two chalk grassland "set-aside" fields near to Buttler's Hangings showed a very healthy population of both plants and larvae. The site is part of the Dashwood Estate and the estate need to be contacted to be made aware of this site to avoid any possibility of untimely cutting. The road verge cutters need



to avoid cutting the plants along Slough Lane itself. Further populations of plants were found later on in and around Buttler's Hanging's reserve and this whole length of set-aside/chalk grassland bordering arable fields and woodland which stretches along much of Slough Lane needs to be inspected.

⇒ **Small Dean Lane**

The National Trust site has a small population of foodplant which supported a small number of larvae. Grass within the fenced area containing the car-park is kept short and this area supported a number of rosettes. The road itself has most plants emerging from the hedge line and this was cut just before surveying. A footpath entrance off the lane was also strimmed removing quite a number of plants. Here, the suspicion is that a local house owner performs this tidying up as it provides access to the road from the back gate. It is recommended that the National Trust is contacted to avoid cutting the plants in the car-park. It is hard to see how the roadside plants can be maintained successfully as the lane is so narrow, but this could be countered by increasing the numbers of plants on the National Trust area.

⇒ **Hughenden Valley**

It was very encouraging to see that the verge cutting contractor had carefully avoided plants on the verge. This whole area was rather disappointing and despite new sites being added to the group area, the numbers of larvae had dropped considerably and the numbers of plants too. Plants in the deep ditch 100 metres north of the Harrow public house were struggling to survive. This type of competitive condition is not a

preferred egg laying site for the adult moths and thought should be given to cutting these ditches either in Autumn or Spring time. Parts of the ditches in Warrendene Road and further along on the Hampden Road were cleaned in late September. Soil heaped on the verge was seeded as it is well away from the summer cut area. The disturbance to the ditch should help new plants to establish and existing ones on the far bank were left largely undamaged. Bryant's Bottom Road supported many plants but only a few larvae. Many of these plants were shaded by bushes and flowered late as a result - probably too late for the moth. The Longdown Plantation supported many plants and will continue to do so for another couple of seasons until the trees shade the plants out. All the *Verbascum thapsus* seen in profusion in 1996 had disappeared. There is little that can be done to preserve this colony of plants. All larvae found in the 1998 survey were re-located. Prestwood Picnic Site was very disappointing with few plants and no larvae. The recommendations for this area are as follows. Clear the remaining overgrown ditch lengths by cutting before the end of April. The Picnic Site should be targetted to establish a colony of foodplant and the whole Group area should be part of the annual surveying.

⇒ **Sands Bank NR**

Most plants are sited on the periphery of the reserve next to the industrial area. These should be preserved and maybe encouraged to colonise the reserve itself.

⇒ **Little Stockings Wood**

Little Stockings Wood supports a large number of plants in ideal fairly open



habitat, but no larvae have been recorded at the site. It is surrounded by woodland which may isolate it from the moths. There is enough foodplant to support a colony and pending the results of the introduction at Bacombe Hill, thought should be given to introducing larvae to this site. Around 50g of seed was harvested from this site for use in seeding in 1999. The Clappins Lane plants are mainly in a new Ash plantation and will disappear very shortly.

⇒ **Radnage**

This area was rather disappointing with an increase in plants recorded, but a large decrease in larval populations. Plant increases were due to new sites being discovered during surveying. The narrowness of the lanes make the expansion of the foodplant rather difficult. No action is recommended other than monitoring in the future.

⇒ **Swain's Wood SSSI**

The foodplant numbers were stable and supported a small population of larvae.

⇒ **Sprig's Alley**

There is a huge amount of foodplant present at this site with numbers of plants now probably double that of 1996 and estimated at over 4000. This is by far the richest site for *Verbascum nigrum*. However the numbers of larvae present were low, possibly reflecting the fact that the site is partly surrounded by woodland, but also that it is adjacent to Radnage - an area showing few larvae in 1998. Ideally the landowner should be contacted and encouraged to maintain at least part of the stock of plants. These

plants are now so numerous that remedial action from the farmer on this site which is used to graze sheep must be a strong possibility.

⇒ **Lodge Hill SSSI**

This site was targetted in 1996 as being a potential core site and action was initiated to increase the numbers of foodplant available. The limited plantings were in the end insignificant compared to the action of the rabbits on site which have created large areas of bare ground through their digging and scraping on which have appeared hundreds of *Verbascum nigrum* plants. Currently the rabbits are biting off most of the flower spikes which is not helping in providing habitat for the larvae, but future control of the rabbits will see a large colony of foodplant available in an ideal area and this site should become a healthy core site in years to come. Recommendations are therefore to reduce the rabbit population and monitor the site annually.

⇒ **Bledlow Ridge**

Most of the sites in this group are road verge sites and it was pleasing to note that the verge cutting contractors carefully avoided cutting the plants. This area almost seemed to be short of enough foodplants to support larvae as overcrowding was frequently observed. No further action is proposed here except the continued careful mowing of the verges.

⇒ **East Marlow to Well End**

Sheepridge Lane and Fern Lane were all cut at the critical time. This is largely a new group area only partially covered in the 1996 survey. This years



results show it to be a very important site with the third largest population of larvae and plants. The roadside verge is an important habitat here and action should involve contacting the cutting contractors to prevent a repetition of the 1998 seasons cutting.

⇒ **Hedsor**

A private garden supports a large colony of plants with larvae. Roadside verge sites were mown.

⇒ **Pump Lane**

This is a narrow lane site and although not mown at the survey time, any indiscriminate mowing during the feeding stage would seriously affect the foodplant and larval populations.

⇒ **Hambleden Valley**

This area is typified by narrow lanes and equally narrow verges. The plants on the verges are thin on the ground and often found growing out of hedgerows. Plants seem to be generally in decline in this group. There are two set-aside fields near Dudley Lane which have been cut at the critical time in both 1996 and 1998 which could support larvae. The road verge supported reduced numbers of larvae this year and shortly after the survey, the verges were cut. Two fields, formerly horse paddocks at Fingest, both of which supported large numbers of both foodplant and larvae in 1996, were first ploughed in 1997, re-seeded with grass and then treated with a herbicide in 1998, all of which reduced the site from core status to no plants or larvae. Recommendations for this area are as follows. This is one of the moths main areas of existence and is a link from the Thames Valley north towards the M40 where seeding

occurred early in 1998. Many of the areas existing plant sites are poorly located and help in selecting better sites for the plant to survive and avoid mowing would help. An expansion of the small colony at the base of Turville Hill would be very useful. Cutting contractors would also help considerably by avoiding plants on the road verges.

⇒ **Hambleden Estate**

1998 was the first season where access to this estate was obtained. Results show that this seems to be a very important site. Many of the sites are precarious, but the main one bordering Dairy Lane seems secure. The Forester-in-Charge Brian Russ has been made aware of the importance of the plant and hopefully he will cut around in the future. Tree planting is going on apace on the estate and much of the foodplant has appeared in disturbed areas planted with trees. These sites will be transitory. This site should be monitored bi-annually during the major surveys.

⇒ **Medmenham to Fawley Court**

The main site here was the entrance to Dairy Lane and the Hambleden Estate where plants grew along the fence line and in a newly tree planted corner next to the entrance. This site yielded good numbers of larvae but was unfortunately strimmed on the same day as the survey. This will require liaison with the estate for next season. A second site, almost opposite at the entrance to Henley Management College had plants growing under mature larch trees although this shaded site is not a preferred habitat for the moth, larvae



were found in small numbers. This was also strimmed the same day as surveying. The few remaining plants in this group area along the main road supported no larvae this year.

⇒ **Wendover**

This area is targeted for seeding and planting of foodplant. Seeding occurred in April 1998 and seedlings also planted on the southern roundabout area of the by-pass. Further planting is envisaged to create a larger habitat area. The current foodplant location is the Wendover churchyard which contains reasonable numbers of plants. A single larva was found in 1996, but none in 1998. This area is near the rich foodplant site at Bacombe Hill where introductions have taken place this year and hopefully the Wendover area will provide a link to other sites via the A413 corridor.

⇒ **Bacombe Hill**

There has been a considerable increase in numbers of foodplant on and around the tumulus area. This site is fairly shaded and many of the plants flowered late. It is recommended to open this site up a little more to sunlight. This site was targeted for seeding in the newly re-cleared slopes along with seedling plantings too, all from local seed taken from the site in 1997. This should provide a very large area of suitable foodplant for 1999 onwards.

During the surveying in 1996 it was decided to turn Bacombe Hill into a new core site by increasing foodplant availability and then, if no natural colonisation had taken place, to introduce larvae to the site. Surveying in both 1997 and 1998 revealed no larvae so introductions were

undertaken in 1998. In total 120 larvae were released onto foodplants around the tumulus. These were taken from various sites to try to establish a large enough gene pool to sustain a healthy colony. Larvae were taken from Bisham (Berks), Cryer's Hill, the Hambleton Estate, Medmenham Road, Marlow, Sprig's Alley, Hambleton Valley and the Hughenden Valley areas with a maximum ceiling of 10% of larvae taken from any site targeted (with the exception of Sprig's Alley and the Longdown plantation at Hughenden Valley where it was felt that the survival potential at these two sites was poor). Bacombe Hill will be monitored in 1999 with great interest. Recommendations are to further increase the foodplant availability and monitor the site annually. With this in mind around 150g of seed was harvested from the site this year for use in seeding in 1999.

⇒ **Great Missenden**

This whole area needs an action plan. The cutting contractors seem oblivious to the foodplant and plants were cut at the critical time. Plants were also strimmed at the Nags Head site and along the main road. Most of the surviving plants are situated in the deep ditches alongside the main road, but this type of habitat is not ideal as most egg laying occurs on plants more in open sites. As with most roadside verge sites, it is the most vulnerable plants to cutting that are the most preferred by moths. Recommendations here are to reiterate to the contractors to avoid cutting the foodplant and also to plant along the verges in areas beyond the summer cut line.

⇒ **Shardeloes and Amersham**

Here the plant population is declining rapidly. There are still no signs of colonisation by the moth as yet which is slightly puzzling as larvae are to be found only a few miles away. Recommendations here are as for the Great Missenden group site in that verge cutting should avoid the foodplants. Additionally, planting may have to be undertaken to re-establish the numbers of foodplant and some degree of scrub control may be necessary on the steep slopes of the Amersham by-pass to avoid the foodplant being competed out.

#### ⇒ **Holtspur/Broad Lane**

The numbers of plants on Holtspur nature reserve is rather disappointing with plant numbers in decline. It is recommended that BBONT is contacted to increase the foodplant availability. Broad Lane itself is a narrow verge site which was cut in about the third week of August removing numbers of the foodplant. This may have been late enough, but probably not and like so many of the other roadside sites, the cutting contractors need to avoid these plants. Cutting in mid August may as well be deferred to September as growth has largely stopped.

#### ⇒ **Cadsden to Rignall Road**

There are only a few plants along this stretch of road and no evidence of any moth populations. No action is recommended for this site other than monitoring during major survey years.

#### **Conclusions**

The moth seems to be holding up fairly well despite all the habitat loss caused by cutting during the larval

stages. However there are no signs of any recovery which it was hoped that the Action plan would stimulate. There is hope in that some of the foodplant on the roadside verge is now being avoided, but this avoidance needs to be general rather than exceptional. In fact the majority of the recommendations on roadside verge sites point to avoidance of cutting the foodplant. Along verges it is the exposed plants near the road, rather than those in the ditches, which are preferred egg laying sites for the moth.

Of the Habitat types shown in graphs 1 to 4, only Fields (includes set-aside, margins and permanent pasture), Grassland (mainly chalk grassland), Woodland (rides, new plantations and clearings) and Roadside Verges are important. The other habitat types are minor. With only two major surveys undertaken, it is very early days to begin predicting trends, but Graph 1 shows that plants along the roadside verge are in decline. This is potentially of great importance as Graph 2 highlights the significant population of larvae on the roadside plants. Indeed Graphs 3 and 4 show that verges record the highest numbers of larvae per plant as regards major habitat types. The roadside verge is the means for the moth to spread between foodplant sites.

What is encouraging is the rise in importance of grassland sites highlighted in Graphs 1 and 2. This reflects the increase in foodplant at controlled sites such as Lodge Hill and Bacombe Hill and the future will hopefully continue to show increases in both plant and larval numbers.

Table 3 shows that in the survey area, the availability of foodplant is

increasing, but the fluctuations of foodplant numbers over just three years is often considerable, hence the request for a biennial major survey alternating with a minor survey, which would encompass just the site groups in Tables 3 and 4. Table 3 highlights the decline in plant numbers at the most important site of Cryer's Hill, but also declining numbers along the Hambleton Valley and the A413 from Great Missenden to Amersham. Conversely the table also shows the huge increase at Sprig's Alley, Lodge Hill, Bacombe Hill and along the A4155. Larval populations have reflected these plant population changes in many instances and although Table 4 shows a fairly stable population in terms of total numbers, there are considerable fluctuations in some of the site groups. The underlying message is clear: If suitable foodplant sites are available, then the moth will utilise them.

### Summary of Recommended Action Points

#### ◆ General

1. The frequency of major surveys to be biennial and alternate with minor surveys incorporating the site groups shown in Tables 3 and 4.
2. Survey times to be between week numbers 29 and 31 inclusive.
3. All Verge Cutting Contractors in all areas to avoid mowing foodplants between May and August inclusive.

#### ◆ Group Sites

1. **West Wycombe to Saunderton:** Establish ownership of the derelict field identified in the 1998 survey and formulate a management plan. Contact the Dashwood Estate to stop untimely ditch cutting.

2. **Cryer's Hill:** Contact the owner and arrange to increase foodplant numbers back to 1996 levels.
3. **Slough Lane/Buttler's Hanging's:** Contact the Dashwood Estate and liaise regarding the set-aside margin.
4. **Small Dean Lane:** Contact the National Trust to encourage non-mowing of plants in the carpark fenced area and request planting in the grassland area to increase numbers.
5. **Hughenden Valley:** Clear ditches of growth from Harrow public House to Perks Lane. Establish more foodplant at Prestwood Picnic site.
6. **Lodge Hill:** Reduce the rabbit population.
7. **Hambleton Valley:** Look for sites to establish colonies of foodplant.
8. **Medmenham to Fawley Court:** Liaise with the Hambleton Estate to avoid a repeat of the cutting at Dairy Lane entrance.
9. **Bacombe Hill:** Continue to seed in winter scrub cleared sites and consider removal of two small trees on the tumulus site to allow in more light.
10. **Holtpur NR:** Establish a colony of foodplant.
11. **Great Missenden:** Planting at selected sites.
12. **Shardeloes-Amersham:** Seeding and planting at selected sites.
13. **Wendover:** Planting along the new by-pass at selected sites.

### Acknowledgements

I would like to thank Martin Albertini, Julia Carey and Andy McVeigh for their contributions in the 1998 survey.



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## ***Ilyocoris cimicoides* IN FLIGHT?**

***Martin Albertini***

At the Invertebrate Group's indoor meetings Eric Hollowday has often spoken about the supposed ability of the saucer bug *Ilyocoris cimicoides* (*Hemiptera*) to fly and has specifically asked people running moth lamps to look out for it. The following two extracts may be of interest to those intrigued by this topic.

Heteroptera Study Group newsletter no. 13 March 1996. Observations on aquatic Heteroptera from Suffolk by adrian Chalkley. *I. cimicoides* is not found often, but tends to be in large numbers where it is found. ".....one lone individual from a puddle on a school playground where it presumably died after diving in at night in the middle of a flight."

British Journal of Entomology and Natural History, 10: 1998, p225. Jonty Denton & Christian Rørdam. Observations of *Ilyocoris cimicoides* (L.) (*Hemipetra: Naucoridae*) in flight. This gives two examples of *I. cimicoides* in flight: "On 3-4.ix.1985 on Møller and the junior author observed large numbers of *I. cimicoides* flying from a pond in North Zealand, Denmark. Conditions were warm, sunny and calm. Several specimens were found basking on emergent leaves of *Typha*, whilst others sat on leaves of *Potamogeton natans*, and floating pieces of wood. Many took to the air when the breeze abated, but no specimens were seen to take off from the water surface in the manner of Corixids. Their flight was heavy and laboured, but they were able to avoid being caught in a small net. Several were unable to

clear the surrounding vegetation and wall, and fell to the ground where they lay still. The strong fliers appeared to disperse at random, and a soft humming could be heard as bugs passed at close quarters. On the 4.ix. hundreds of bugs took to the air, in a period of about 1 hour.

On 9.iii.97 a single *I. cimicoides* flew low over and landed on the water surface of a wide dyke on 'the Pells', near Lewes, E. Sussex (TQ4011). The weather was unseasonably hot and sunny, and many Corixids and aquatic beetles (*Heterocerus*, *Helophorus* etc.) were flying around.

Clearly some individuals/populations are able to fly, but it is clearly a rare phenomenon. How far such individuals can disperse is unknown, and the genetics or other factors that regulate this capacity remains enigmatic."

Although not observations from Bucks, these may answer Eric Hollowday's question.

## **BIODIVERSITY ACTION PLANS**

***Martin Harvey***

"Biodiversity" has become something of a buzz-word among conservationists in recent years, and much effort has been devoted to drawing up Biodiversity Action Plans, both locally and nationally. Some of the action proposed simply continues the normal work of conservationists in protecting habitats and species. However, the new emphasis on biodiversity has resulted in some significant gains for conservation in general, and for invertebrates in particular.



The word biodiversity was coined to include the whole of biological diversity, and has drawn attention to the fact that the majority of species in Britain (and indeed the world) are invertebrates. The Government's Biodiversity Steering Group Report included an extensive list of 1,252 species which were proposed as conservation priorities. Of these, about 450 species (36%) were non-marine invertebrates. This list has subsequently been revised, and a shorter list has been drawn up of species of the greatest conservation priority. However, invertebrates are still well represented, and national action plans are now available for 183 species of invertebrate throughout the UK (UK Biodiversity Group 1999). This all means that invertebrates now have a higher profile than in many previous conservation strategies – quite rightly, given that at least 158, and possibly many more, species of invertebrate have become extinct in England since 1750.

At a local level, local authorities are now required to address biodiversity conservation, and many are in the process of drawing up local biodiversity action plans (LBAPs). Local BAPs should include an audit of all the species listed in the national BAP which occur in the local area (other local priority species may also be added). For invertebrates, it is not always easy to find out which species have been recorded locally, as such information may be widely scattered among recording schemes, specialist publications and individual entomologists. To address this problem in Buckinghamshire, BBONT commissioned a report on the county's BAP invertebrates. The report details all the species listed on the national BAP for which evidence of their

occurrence in Buckinghamshire could be found.

***BAP invertebrates recorded in Buckinghamshire***

<i>Group</i>	<i>No. of BAP species recorded in Bucks</i>	<i>No. (%) of these now believed to be extinct in Bucks</i>
bees	8	6 (75%)
beetles	4	2 (50%)
bryozoans	1	1 (100%)
butterflies	17	6 (35%)
crustaceans	2	1 (50%)
dragonflies	1	–
flies	5	1 (20%)
millipedes	2	–
molluscs	10	4 (40%)
moths	38	18 (47%)
pseudoscorpions	1	1 (100%)
spiders	3	1 (33%)
wasps	1	1 (100%)

The report shows that of the c. 485 terrestrial invertebrate species listed in the UK BAP, 93 (19%) have been recorded in Bucks (another 10 have unconfirmed or dubious records in Bucks). Of these 93, 42 (45%) may be extinct in the county (see Table 1 above). These range from species such as the bee *Andrena floricola*, for which the only British record was at Princes Risborough in 1939, to the Small pearl-bordered fritillary butterfly, recorded in 1989 but not reliably recorded since despite searches at known sites. It is difficult to state with confidence that an invertebrate species is extinct. For butterflies and to a lesser extent moths and molluscs, there has been enough recording to be fairly confident that a species is extinct if it has not been seen for 5–10 years or more. For the less well-recorded groups it is not unusual for many years to elapse between records of a given species at a particular site. Indeed, for some of the species classed as extinct in the report the first priority should be to survey the last-known sites to see if, in fact, they do still occur.



The report summarises the known records for BAP species, giving brief details of dates and sites. Initially, further recording work is the main priority, in the hope of finding strong colonies. Colonies can then be targeted for monitoring and ecological research, leading to a better understanding of the species concerned and enabling conservation strategies to put in place as necessary.

Copies of the Buckinghamshire BAP invertebrate report are available on paper from the Berks, Bucks and Oxon Wildlife Trust (The Lodge, 1 Armstrong Road, Littlemore, Oxford, OX4 4XT; tel: 01865 775476), or on disk/email from Martin Harvey (10 Kiln Ride, Upper Basildon, Berkshire, RG8 8TA; tel: 01491 671889, email: martin#kitenet.freereserve.co.uk).

## NEW CHECK LISTS

### *Martin Albertini*

During the past year or so two new insect check lists have been published.

The first is the "Checklist of Lepidoptera recorded from the British Isles", J. D. Bradley, published by Bradley and Bradley, April 1998, ISBN 0 9532508 0 6, 106 pages.

This supersedes the now well-known lists of 1979 and 1986 of J. D. Bradley and D. S. Fletcher and brings the British list up to date following changes in nomenclature and taxonomy of European Lepidoptera and various additions and deletions from the British list (around 2550 spp).

The now widely used numbering system which started in 1979 has

been retained, with new additions (with the exception of one added to the end of the list) inserted with alphabetic suffixes. This is, perhaps, a lost opportunity as decimal suffixes, which are more amenable to modern data processing systems, could have been introduced.

This new list clearly shows where names have changed and gives the former versions. An advance from previous lists are various annotations giving points of interest, especially for migrants, adventives, vagrants and species that are particularly rare or of very restricted distribution including those that are (or possibly are) extinct or new colonisers. It is pity that a status from various existing sources was not included for all species.

Full indexing of common and scientific names is included.

A very useful publication, but as with most similar lists, some part is invariably out of date as soon as it is published. This list is no exception as Bucks has recently added an adventive species to the British List, namely *Virachola antalus*, Brown Playboy, reared from larvae, found (xi.1996) at a Colnbrook air-freight depot, in South African peaches.

The second is the "Checklist of Insects of the British Isles (New Series) Part 1: Diptera", P.J. Chandler (editor), Handbooks for the Identification of British Insects Volume 12, Royal Entomological Society, 1998, ISBN 0 901546 82 8, 234 pages.

This list is much more than just an update of the previous list (Kloet & Hincks 1976). Not only does it list species having accounted for over 20 years of nomenclatural and taxonomic



changes, but also addresses past confusion with names, names no longer considered valid and areas where there is still debate about names or taxonomy. Each family has its own section which commences with a brief historical introduction followed by the list of species, including past names and synonyms. There are various annotations and references to notes that are given towards the end of each section. In addition are details of dubious names, species that have not been accepted plus a list of references. There is a comprehensive index, but unlike the Lepidoptera, there is no attempt to use a numbering system.

This work appears to be very comprehensive and with about 6,670 species, must have involved a huge amount of work for the editor and the various family experts.

**MOTHS  
THINGS TO WATCH OUT FOR**

*Martin Albertini*

**Obscure wainscot, *Mythimna obsoleta***, Paul Waring reported on this species in British Wildlife vol. 8, no. 6, 1997 as having been nationally scarce in the 1980's, but now known to be much more widespread. The up to date distribution map shows recent records partially surrounding Bucks, particularly around the South and East borders. Please check your moth books for details of this species and look carefully at wainscots, particularly early ones and especially if you are near areas of the Common Reed *Phragmites australis*, the foodplant of the moth.

**Firethorn leaf miner, *Phyllonorycter leucographella***, was first recorded in

the UK in Essex in 1989. Records have shown the species to have steadily spread and during 1998 Martin Albertini recorded it for the first time in South Bucks, having been keeping an eye out for it for some years. Additionally, Peter Hall recorded it in Ballinger in 1999. How far has the species spread in Bucks? This is something everyone can look for. The larvae mine in leaves of *Pyracantha* leaving a characteristic almost silvery blotch on the upper surface of leaves, normally either side of the midrib. Also, particularly with younger leaves, there is a tendency for them to fold up with the midrib as the hinge. Both features are quite distinct and often many leaves bear larvae. The mines, tenanted or old can be found at anytime of year, so please look for these on any *Pyracantha*, or send a few leaves to Martin Albertini if you are unsure of the identification.

**ANOTHER FOODPLANT FOR THE  
STRIPED LYCHNIS MOTH  
(*Shargacucullia lychnitis*) IN  
BUCKS**

*Alan Showler*

In my garden in Hughenden Valley, I regularly grow white mullein (*Verbascum lychnitis*) which originated from Sussex seed. The plants are rather bigger than black mullein (*V. nigrum*), more branched but otherwise are very similar.

On 28 July 1998 I found, feeding on the fruits and flowers, 9 larvae of *S. lychnitis*. On this date they were small to medium-sized and subsequently fed up and disappeared. On this same date larvae were found feeding on *V.*

*nigrum* at Bryants Bottom, about 2 miles away.

Since white mullein is not native to Bucks. (and I know of none in the Chilterns) it is not surprising that the moth larvae have not previously been recorded as feeding on it within the county. It is stated to feed on *V. lychnitis* in literature so perhaps they do so elsewhere. Equally, it is not surprising that they will eat it when available.

There are moths in the vicinity, since larvae were found in 1996 no more than 800m away in three different directions. Nevertheless, the observation seems worth recording.

*Indeed this seems possible, our surveying in the county has only included V. nigrum, the hybrid V. x semialbum and V. thapsus. It is only the latter that has yielded no records of larvae of S. lychnitis. - Ed.*

#### STRAIGHT FROM THE ANORAK'S LAPEL

*Professor Lovibond  
F.L.S. Wg. Cmndr.*



#### CRICKET PITCHES FINAL DELIVERY

The entomological community was twitching frantically following the discovery of a subterranean interloper at a Luton warehouse recently. The appearance initially left experts baffled. One suggestion in a local newspaper suggested that the insects poor aerial abilities and lack of an automated landing system over-ride, may have resulted in a crash landing as it mistook the warehouse for the new terminal at Luton airport - here at the Lapel we know differently!

Information supplied by our very own mole has informed us that the cricket was in fact trying to escape from an illegal and covert operation. The situation became a little clearer when we discovered that amongst the warehouse contents were a large number of packing crates containing chocolate coated GMO's (Genetically Modified Orthopterans). These crates were due to be exported to the Far-East where such titbits are considered a delicacy. This type of treatment is rather disturbing news to all invertebrates as they may be next in line to end up in the cookie jar. Life may not be a bed (or jar) of Roses after all!

The information received from our source leads us to believe that the cricket was not alone and a colleague may have successfully escaped in an attempt to expose this shocking trade. British authorities have made great efforts to play down this incident and a spokesman dismissed it as nothing more than an "insect found in box of fruit". Readers may recall a similar case last year in which it was claimed that a Long-tailed Blue butterfly was discovered in a consignment of



peaches somewhere in Buckinghamshire.

It is believed the remaining cricket will be heading south and the M1 approaches are now being scoured for small hitchhikers possibly disguised as Christmas decorations. Police have already advised motorists in the immediate area to approach fairies and other such seasonal artefacts with extreme caution.

We do advise our readers to look carefully this Christmas at the descriptions of the chocolates they are intending to eat just in case. Not all the crunchy ones are nuts!

### ***ARCHER'S DART – MOTHS FOR QUESTIONS?***

Little reliable information is available on this species (or is it?) and new findings due to be published in the New Year suggests it will not be taxonomically accepted. Rumour has it that the moth in question is an aberrant form of the Light Fingered Rustic (not to be confused to the similar Ruddy Highlyer) unique to Greater London. It is recognised as having rather unpredictable and unusual habits. For instance, the moth is rarely taken at light and the now accepted way of finding the moth is by hanging up brown, cash filled, paper envelopes on trees for which it displays a considerable interest. It has been successfully reared on cheap paperbacks and produces at least one generation a year, sometimes two in unfavourable seasons.

At the Lapel we have now seen an early version of the distribution map which we find fails to supply the true picture. Given the moths unreliability, can we be sure it was truly seen in

these locations? Hopefully the moth will be pinned down soon.

### **DEADLINES FOR THE BIG BULLETIN #10**

***Peter Hall***

As described at the last BIG meeting on November 6<sup>th</sup>. 1999 at Halton, the deadline for issue number 10 is the end of February 2000. This next issue will also begin to feature reports of field meetings, in this case all those from the 1999 campaign. Future meetings to be held from 2000 onwards will require a person who will be designated as responsible for writing up of field meetings and submitting them to the editors for inclusion in future bulletins.

Hand written and typed reports or articles are acceptable but please keep pictures or diagrams on separate sheets. For those submitting articles taken from computer files; Microsoft Word, PowerPoint, Excel or Access is suitable from 95, 97 or 98 versions. Type should be preferably in Tahoma size 11, although this is not a problem if presented in another font style. Please submit files either on disc or send them via e-mail (address is to be found on the "footer" of each page).

Remember this is your bulletin, so keep those articles coming.

We would like to wish all BIG members a happy Christmas and a bugfull New Year.



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