

At the same time Manila was plastered with posters on how to kill as many mosquitoes as possible in dozens of ingenious ways. Newspaper cartoonists and editorial staff had a field day. Slap a mosquito while having dinner on your porch and the troops of the Department of Environment would arrest you. Tropical biodiversity might have a value that should go to country in question ... but a sense of proportion really is necessary as well!

My own attitude is clear. Any insect from a tropical country on a pin, in alcohol, or in papers, with good locality data is potentially an instant fossil of great value. But surely butterflies are different? So many collectors ... so much interest in rare species. I disagree. Virtually nothing is known about any African butterfly. Steve Collins and I have just described a new species called *Charaxes chevroti*, known only from the tiny, isolated Kagoro Forest in northern Nigeria, which may by now almost be destroyed. This is possibly one of the few insects in Africa that could reasonably be placed on a list of protected species – but to be honest, I would be prefer to see another specimen on a pin. The butterfly used to be quite common in the forest. If the forest has gone, so has the butterfly. If the forest survives, the butterfly will be just fine. Latest report from Kagoro are not encouraging. — TORBEN B. LARSEN, UNDP Vietnam, c/o Palais des Nations, 1211 Geneva 10, Switzerland (E-mail: torbenlarsen@netnam.vn).

News on the conservation of some UK Biodiversity Action Plan moths in 2004

This article follows in the foot-steps of similar annual reviews since 2000 in which the author has reported on some species and projects with which he is personally involved to achieve the objectives and targets of the UK Biodiversity Action Plan – see *Ent. Rec* **113**: 121-129 (for 2000), **114**: 149-153 (for 2001) **115**: 213-219 (for 2002) & **116**: 134-137 (for 2003). For brevity only selected highlights and key results from 2004 are included. In every case the author is indebted to Writtle College for support in writing up these results in his post as Reader within the Centre for Environment and Rural Affairs at the College and in some cases for financial help in conducting aspects of the fieldwork. Other partners and colleagues are acknowledged within each section and I am most thankful to all of them. Private land-owners and some others are generally not named, for reasons of privacy and security, but their help is also greatly appreciated. Where indicated, the studies are part of Butterfly Conservation's Action for Threatened Moths Project, which is part funded by English Nature, and the author is indebted to nominated officers Mark Parsons (BC) and David Sheppard (EN) for helping to ensure continued funding. Other aspects of the Action for Threatened Moths Project are reported elsewhere, in particular in the *Lepidoptera Conservation Bulletin*, issued annually by BC, which continues the National Moth Conservation Project News Bulletin which the author started in 1987 and which ran to ten issues, the last in 1999.

Barberry Carpet *Pareulype berberata* (D. & S.)

The recent successes in establishing additional populations of the Barberry Carpet moth were reported and reviewed at the end of 2004 in *Journal of Insect Conservation* **8**: 167-171. Just after the article had gone to press in early June, there was another piece of good news. The author succeeded in beating a young larva on 29 June 2004 from a bush of Barberry *Berberis vulgaris* at a site in Lincolnshire where it was thought that an establishment attempt had failed. This larva is six generations after the last release of the moth onto the site, so the population must be well established, but at low density. See *Ent. Rec.* **116**: 262-263 for more details.

Further plantings of Barberry have taken place in the last year, with a view to extending existing populations of the moth and establishing new ones. For example, in January and February 2005 in Northamptonshire 60 plants specially grown by Westonbirt Arboretum, Gloucestershire, were planted into gaps in a hedge and on an adjacent field near to a site where the moth has already been established on existing hedges. The latter population was monitored for larvae in 2004 and is continuing to thrive. Two larvae, one in its final instar, were found by beating at a single spot on a hedge, on 25 June, and were returned to the bush once a recording on video-tape had been made. On 11 September a final instar larva of the second generation was also recorded and released from a beat at a single spot on one of the bushes.

A comprehensive programme of monitoring the native and establishment sites was not possible in 2004 but, in addition to inspecting the sites in Northamptonshire and Lincolnshire, I visited one of the Wiltshire sites. This was in passing on a journey on 26 September 2004 with Nick O'Keeffe. The bushes were in good condition and had not been trimmed so far that season. No larvae were found when one of the bushes was beaten. This was as expected because most if not all of the larvae would have pupated by this date. An occupied hedge of Barberry nearby, which had been far too severely trimmed by the farmer in August 2003, had been cut much more lightly in 2004 which was pleasing to see because this will benefit the moth. As in 2003, the most successful establishment site in Wiltshire was monitored by locally-based volunteers. They reported a strong population of larvae well-distributed throughout the site again in 2004 (Godfrey & Michael Smith, pers. comm.).

I am now leading the conservation work on this species from a base at Writtle College. The College have joined Hillier Gardens, Westonbirt Arboretum and others in growing Barberry of various provenances, and in helping to support other aspects of the project. Ian Hughes continues to co-ordinate members of the Zoo Federation and others in maintaining captive stock for future establishment projects. Planting projects for new stands of Barberry are underway at London Zoo and Whipsnade Wildlife Park, with the ultimate aim of establishing wild populations of the moth there also. Major plantings previously reported in Wiltshire, Gloucestershire and Northamptonshire are continuing.

Black-veined moth *Siona lineata* (Scop.)

During May, June and September 2004 I examined the four remaining British sites which support populations of the endangered Black-veined Moth. All four sites have been monitored by weekly transect counts of adults by day for more than a decade. I started the present transect routes at two of them in 1987 and at both of these sites there are earlier counts of somewhat similar routes extending back to 1976 (see *Nota Lepidopterologica*. Suppl. 5: 51-64). Since 2002, the transects have been walked by Sean Clancy. The monitoring and my inspections both indicate that the populations at two of the sites are fair, at a third site there has been a substantial decline in the last few years and at the fourth the population is at such precariously low levels that none were seen in 2004, on the three monitoring visits (3, 9 & 16 June), nor on my separate inspection on 9 June. The numbers of adult moths have been vanishingly small at this last site ever since the land-owner machine-cut the whole of the occupied field in February 2001. The species is known to thrive in rough, tussocky chalk grassland swards where various herbs such as Marjoram *Origanum vulgare* are frequent.

The moths were recorded in reasonable numbers right up to the cutting but not since. In June 2001 none were seen at all on the transect counts (*Ent. Rec.* 114: 152) and just one, which flew away from the site during a watch at dusk. In some years prior to the cutting the population density on this site was higher than on any of the other three sites, with sightings on a single day in double figures. The cutting would have interfered with the over-wintering larvae roosting on the dry grass stems standing in the tussocks. Some larvae may have been killed during the cutting operation and suitable cover for the rest was massively reduced, leaving them much more vulnerable to predators and to a changed micro-climate.

This case is extremely important in that it shows without any doubt that a single act of cutting at the wrong time of year can have disastrous effects on the population of a highly localised and endangered insect. The cutting was contrary to all the ample management advice supplied and is now regretted by the farmer. The situation has been exacerbated by over-grazing in three of the four subsequent winters (Sean Clancy, BC report, 2004). There were signs that the Black-veined Moth was staging a recovery in 2002, when four adults were seen, but the subsequent grazing appears to have prevented this. In 2003 only one adult was recorded, on 10 June. Visits on 5 & 18 June produced none. Sean and I both consider that it is critically important that this site is allowed to rest, free of any disturbance, for the next two years at least. We also recommend that annual monitoring should continue for a minimum of five consecutive years of negative results after the most recent sighting so that, in the event of extinction, this is properly documented. If extinction happens, this case will certainly become a text-book example of bad management.

My three visits in 2004 were as supervisor and technical advisor to a student dissertation project on the Black-veined moth by Stephen Hunt at Writtle College. The visits enabled me to record the condition of all the sites and to continue my annual observations and monitoring of these moth populations which I began in 1987. There are several valuable and encouraging items of news from these visits:

On 5 May I found three final instar larvae of the Black-veined moth. The records are of interest because relatively few larvae have been found previously and larval

feeding in the wild only observed on a handful of occasions, mainly on Marjoram, but also on knapweeds *Centaurea* spp. and Common Bird's-foot Trefoil *Lotus corniculatus*. One of the larvae in May 2004 was found by day at rest on a dry stem by leaves of Marjoram bearing typical feeding damage. One of the two larvae found by night was roaming through the sward and the other was feeding on a leaf of Hairy St John's-wort *Hypericum hirsutum* (*British Wildlife* **15**: 433).

On 8 June, we watched adult moths on the wing at dusk in increased numbers on a grassy bank where grazing had been relaxed after our observations from previous years indicated that numbers had declined in response to over-grazing. Numbers of adults had not declined during this period on a nearby bank where there was no over-grazing. We also found a good population in 2004 on a grassy mound within the same site that was colonised naturally by the moths a few years ago when grazing was adjusted to provide a suitable sward.

On 29 September Steve Hunt and I swept a Black-veined moth larva from a sward 16 cm tall (Boorman drop-disc method), predominantly of Tor-grass *Brachypodium pinnatum* and Marjoram. It was the only Black-veined moth larva we saw in a total of seven samples (each of five minutes and 300 swings duration) on two occupied sites. The larva was 2 cm in length. A larva of the Clouded Buff *Diacrisia sannio* was also obtained in the same spot and we have evidence that the two species benefit from similar management to maintain a tussocky, small-scale mosaic of grasses and mixed herbs. Steve reports finding two Black-veined larvae again on 18 October in the same place, in a similar sward 22 cm tall but again none in nine similar samples elsewhere on the site, suggesting larvae were either sparsely distributed or poorly extracted by sweeping at this time of year (*British Wildlife* **16**: 133). I have obtained the younger larvae much more readily by sweeping on warm, dry days in August.

The author thanks English Nature and the three private land-owners for continuing their management efforts to conserve the Black-veined and co-operating with these studies. Sean Clancy undertakes the transect counts and habitat monitoring as part of the BC Action for Threatened Moths Project.

Barred Tooth-striped *Trichopteryx polycommata* (D. & S.)

Many searches for the Barred Tooth-striped moth took place throughout Great Britain during 2004, more than in any year previously. This special effort was co-ordinated and promoted by the BC Action for Threatened Moths Project, of which the work below was a part. Because the moth flies early in the year and comes only occasionally to light-traps, even where there are sizeable populations, it is easily overlooked and often under-worked. Furthermore, few people seem to have tried beating for the larvae in the years prior to inclusion of the species in the UK Biodiversity Action Plan. Consequently a fair proportion of sites from which the moth has been recorded in the past have only old records that need to be updated. There are also concerns and evidence that the larval food-plant, Wild Privet *Ligustrum vulgare* has become either overgrown and shaded by other plants at some sites or has been removed or greatly reduced in amount as a result of site management or construction of roads and buildings. All of this is particularly true in

the Midland counties of England, in which the author and colleagues undertook searches in 2004 and to which this brief report is confined. A more detailed article on these and other searches for this moth is in preparation by the author and the national results will be drawn together by BC for the national database. In summary, the author, sometimes accompanied by others, searched Bedford Purlieus NNR (on 26 March, 7 & 22 April, 4, 14 & 25 May & 4 June, mainly with Mick Beeson but also the Northamptonshire Moth Group on the first date); the following sites with Mick Beeson: Castor Hanglands NNR (2, 9 & 16 April), Oxey Wood and Ben Johnson's Pit (both 24 March) (all VC 32 Northamptonshire); Monks Wood NNR (9 & 30 March, with Nick Greatorex-Davies and a posse of about a dozen people) (VC 31 Huntingdonshire); the Devil's Dyke and Newmarket Stud (13 May for larvae) (with Sharon Hearle and John Dawson) (on the border of VC 29 Cambridgeshire and VC 26 West Suffolk) and Hell Coppice in Bernwood Forest (22 May for larvae, BENHS field meeting) (on the border of VC 23 Oxfordshire & VC 24 Buckinghamshire). The four sites marked with asterisks have previous records of the moth, the last records for which are Bedford Purlieus: 30 March 1987 (two adults at bushes, Andy Foster & Mark Parsons); Castor Hanglands: 18 April 1986 (one adult at bush, John Ward), Monks Wood: 16 March 1997 (one adult in Rothamsted light-trap, Nick Greatorex-Davies) and Hell Coppice: 28 March 1950 (several adults, Maitland Emmet). No adults or larvae were seen during searches at any of these sites during 2004. This does not mean the species is absent, but it suggests that any populations that survive must be at very low density and possibly highly localised. The search techniques included looking for the adult moths at rest and on the wing around the bushes after dark and operating actinic light-traps in March and April and beating for larvae around dusk in late April, May and early June. While the search period was underway, it was most helpful and encouraging to receive the news sent out by e-mail from BC and others concerning the positive results of similar searches in southern England, north-west England and western Scotland and to know that our timing for adults and larvae was largely appropriate for the locations and type of season in 2004.

Particular thanks are due to Mick Beeson for his help, particularly at Castor Hanglands, and to Sharon Hearle, BC Regional Officer for East Anglia, for obtaining travel expenses for the author to help search some of the above sites and for organising the logistics at Devil's Dyke and Newmarket Stud. BC Cambridgeshire & Essex Branch contributed to the searches at Monks Wood and all the other volunteers are thanked.

Buttoned Snout *Hypena rostralis* (L.)

The following news on the Buttoned Snout *Hypena rostralis* comes from a three-year joint project between Butterfly Conservation Cambridgeshire & Essex Branch and Writtle College, with funding from English Nature. Study this year centred on observing the life-cycle in a large outdoor cage erected at the College to investigate key aspects of behaviour and ecology such as overwintering, mating, nectaring, egg-laying and larval feeding. The moth is also resident on the College estate. Additional

field survey work was undertaken elsewhere in Essex, where larvae have now been found in most 10 km squares, and in Cambridgeshire. Indications from work in 2002 and 2003 that populations are mainly in the south of Cambridgeshire, and are much more thinly distributed than in Essex, have been confirmed by the work in 2004. For example two larval searches (on 25 July & 11 August 2004) of a large stand of the foodplant (Hop *Humulus lupulus*) in the north of the county between Etton and Glinton (modern Cambridgeshire but vice-county Northamptonshire) proved negative, for the second year running (see also *Ent. Rec.* **116**: 77-78). Another substantial stand at nearby Maxey was searched on three dates (13 & 25 July & 11 August 2004), for the first time, and also produced negative results.

Discovery of larvae during a BENHS field meeting led by the author in the grounds of London Zoo on 17 July 2004 was one of the highlights of this event and was reported in an illustrated article in *Lifewatch*, the magazine for members and supporters of the Zoological Society of London (Autumn 2004: 4). This is the first UK BAP species to be recorded wild in the Zoo and the first time that invertebrates other than butterflies have been surveyed there.

The observation cage at Writtle College was manned mainly by Graham Watkins, with assistance from Robin Field and others. A great deal of time was spent watching adult moths that were placed in the cage and searching for the eggs, larvae and pupae that resulted. Observations indicated that the adults were mainly active around dusk and much less so after dark. Nectaring was never seen, despite placing a range of seasonal flowers freshly gathered from the college estate alongside the potted Hop plants in the cage. The adult moths hardly roused from hibernation when the willows *Salix* spp. were in bloom and did not appear to be tempted when flowers of Blackthorn *Prunus spinosa* and Common Hawthorn *Crataegus monogyna* were added later on. No mating was observed and individual moths tended not to roost alongside each other. Although plenty of larvae were produced in the cage, no egg-laying was seen. No eggs were found in searches of the undersides of growing Hop plants, suggesting they are either tucked out of sight on the plant – perhaps into the leaf axil – or on surrounding debris. A hibernating individual is currently under observation in an old garage, the third year running that this building has been used, and a roost with a large number of adults in a war-time gun emplacement has been visited, but even here adults tend to be dispersed singly on walls rather than in association.

Four-spotted Moth *Tyta luctuosa* (D. & S.)

Four-spotted Moths *Tyta luctuosa* were recorded by the author on a transect walk at Peterborough, Northamptonshire, with positive results every week from 10 May to 13 July in 2004. The peak count, of 29 sightings on 30 May, is the highest since the counts began in 2000. On 14 June, when 19 adults were seen, a pair was found mating at 14.30 hours, the first time this has been observed on the transect. This suggests that fresh females were continuing to emerge at this date because female moths are usually mated in their first days of adult life. The distinctive and nationally scarce tortricoid moth *Commophila aeneana* (photo) was also recorded on the site for the first time.

Highlights of 2004 included the discovery of a population of the moth on a protected roadside verge near Littlebury in Essex at last, after a tantalising record of an adult nearby in 2000 (Charles Watson) and subsequent exploration of the area. The population was found by Richard Fowling who saw about six adults on 28 May and there were subsequent sightings by Sharon Hearle (one on 3 June) and the author (four on 9 June). There was confirmation that the moth is still present on two sites in Oxfordshire (Paul Waring and Richard Lewington). Four individuals were seen in one day (10 June, by the author) at a site in the Sharnbrooke area of Bedfordshire where there are concerns that the species may be lost unless there is some management intervention. Good numbers were reported again in 2004 at the Portland Bill Bird Observatory light-trap, Dorset, with adults seen from 21 May to 19 June and from 11 July to 14 August, with a peak count of eight in the trap on the night of 29 July (Martin Cade).

As in past years, there was a scatter of records of single individuals at light-traps in south and central England in 2004, including a very welcome probable sighting (not confirmed by photograph or specimen) from a former breeding site in Nottinghamshire. At least some of these moths are likely to indicate the existence of nearby undiscovered populations. In one case this is known. Geoff Moss reported that on 27 July 2004 he had a female in good condition in his garden at an 6W actinic light-trap at Lavendon, near Olney, Buckinghamshire. Geoff has been operating this trap at his home there since 1980. This is his second Four-spotted moth, the first was on 26 June 1999. Both records follow a proliferation of Field Bindweed *Convolvulus arvensis*, the larval foodplant, after up-grading of local farm-tracks using limestone chippings. In addition Lavendon is only 7 km south-west of the Sharnbrooke area of Bedfordshire where the moth is resident.

There is good news from the single known but large population in Lincolnshire. The main population was discovered in the 1980s by Tony Smith and is within a SSSI covered by a management agreement with English Nature. On 8 June 2002 James McGill and I counted a minimum of 62 adult Four-spotted moths on the grassy valley-side containing the SSSI. In this and subsequent years a few moths have been noted in an adjacent open field of similar habitat but it was not clear if they were resident or simply wanderers from the SSSI. This field has a different ownership and the owners are interested in the moth and other wildlife. On the evening of 29 June 2004 Paul Waring searched this area for larvae after dark to see if breeding could be confirmed here. This is an important issue because the owners are entering the land into the government's Countryside Stewardship Scheme (CSS), through which they will receive financial help to manage it to favour wildlife. It is good to report that larvae of the Four-spotted moth were found at each of four likely-looking spots which were searched, throughout the upper slope of this property, spread over a distance of just over 100m. A total of nine larvae were found during a forty minute search, which started at midnight, and covered only a fraction of the promising habitat. If the whole of the site had been searched, undoubtedly a great many more larvae would have been discovered.

One disappointment is that no populations have yet been located in Somerset, despite a number of records of adults from certain areas in recent years and several searches of likely localities, particularly by James McGill and David Evans. The pattern of records strongly suggests the moth is resident in the county but James and David report concerns that changes in habitat condition may be a problem at some of the former and more obvious sites.

The above work took place as part of a national project on the Four-spotted Moth, being coordinated by Writtle College and the Cambridgeshire and Essex Branch of Butterfly Conservation, with funding from English Nature and the help of many volunteers. The author would particularly like to thank Robin Field, Chairman of this Branch of BC, for all his help with the running of this project, and the private owners of the sites for their cooperation and interest. Contributory funding and support for the monitoring and site management advice at the Peterborough site is also gratefully received from Cambridgeshire County Council, the Environment Agency and Peterborough City Council.

Marsh Moth *Athetis pallustris* (Hb.)

On 1 & 2 June 2004 BC & BENHS jointly held a search organised and led by the author for the Marsh Moth *Athetis pallustris* at its single known British site on the Lincolnshire coast, concentrating on seldom explored parts of the site. A total of eight adult males was light-trapped in the central part of the site, several hundreds of metres from the traditionally known breeding grounds where they were also recorded, by Tony Davis, Mark Parsons and Paul Pugh on 27 May and Sean Clancy on 28 May (see *British Wildlife* **15**: 434).

The results of this event are important in demonstrating that the Marsh Moth is not confined solely to the well-known location, but still occurs on the central part of the reserve where it was first found by Bernard Skinner (pers. comm.) in the 1970s. The central part of the reserve differs from the traditional spot in that it is not cut for hay. From a management point of view it is most helpful to know that the moth is not restricted to a single part of the reserve and that it has survived under two different management regimes. From a scientific point of view, the results open up a much larger area within which to study the ecology of the Marsh Moth and to compare and contrast different breeding situations.

No Marsh Moth larvae were found during the routine litter-pile monitoring of the traditional breeding area when the piles were inspected on 9 October 2004. Twenty-four litter-piles had been assembled, just before the August Bank Holiday, in a grid pattern which has now become standard. Ten lepidopterous larvae and one pupa of other species were recorded. Unfortunately, it has become unusual to find Marsh Moth larvae in the piles in recent years, in contrast to the late 1980s and early 1990s when double figures and even in excess of one hundred larvae were being found by this method. It is hoped that litter-piling can be tried in the central part of the reserve in 2005 to see how the results compare, possibly leading to a clearer explanation of the reasons why larvae enter the piles at all. This will be a great help in interpreting the monitoring results. Perversely, one possibility is that larvae accumulate in litter-piles

in numbers only when conditions are LESS favourable elsewhere, rather than indicating that the population is high, and this needs to be examined.

The author is co-ordinating a national project on this moth, as part of the BC Action for Threatened Moths Project. In 2004 the fieldwork concentrated on Lincolnshire. The author thanks particularly all those who participated in the visits to survey for adults, John Walker, Assistant Site Manager, English Nature, for construction of the litter-piles, much reconnaissance, liaison and habitat management work, and Graham Weaver, former Site Manager, for help sifting the litter-piles.

Reddish Buff *Acosmetia caliginosa* (Hb.)

In Britain the Reddish Buff moth *Acosmetia caliginosa* is confined to a complex of small sites in various ownerships in a single locality in the north-west of the Isle of Wight, having formerly occurred also in Hampshire. The author rediscovered this remaining population in 1988 and monitored adult numbers annually until 2002 inclusive, latterly as part of the English Nature Species Recovery Programme, also conducting a number of surveys of the larvae. In 2002 virtually the entire breeding area was notified by English Nature as a Site of Special Scientific Interest and the Hampshire & Isle of Wight Wildlife Trust completed protracted negotiations to become the new owners of the largest portion of the occupied ground. In 2003 and 2004 monitoring was undertaken by Martin Harvey, working for the Trust, with support from English Nature, to cover both the Trust and non-Trust parts of the SSSI. Martin has continued light-trapping for adults but has also been experimenting with a small portable suction sampler for daytime survey of the larvae (see BC News 85: 27 for illustration). On 21 July 2004 I joined Martin on site with the main aims of observing and evaluating suction-sampling as a technique for detecting larvae of the Reddish Buff; to see the numbers of larvae obtained in fixed effort samples and to see how the occurrence of larvae compared with predictions based on the results of different methods of larval and adult sampling used by the author in previous years. Other aims were to see and record on video-tape the condition of the habitat in key locations and to meet up with some of the site owners.

In brief, it was noted that after about 30 seconds of continuous sampling, the sampler can become somewhat full of vegetation and other debris so individual samples of longer than 30 seconds duration are likely to diminish in effectiveness. Consequently a standard 30 second sample was adopted for collecting results. Each of the samples was timed using a Casio battery-operated wrist-watch. The sampling was filmed on video-tape. During the sampling on 21 July 2004 a single Reddish Buff larva was found in three of five 30 second samples from areas where the author had found larvae in previous years. The larvae were 12, 8 and 6 mm in length respectively, i.e. less than half-grown on this date. There was no evidence that any of these larvae were harmed in any way by the sampling technique. The swards in which larvae were found on this date varied from ankle-deep mixtures of Ling Heather *Calluna vulgaris*, various grasses, Gorse *Ulex europaeus* and Saw-wort *Serratula tinctoria* (the sole larval foodplant) to clumps of knee-deep Blackthorn and Gorse, as in previous years. The Saw-wort was never less than frequent. The

sampling took place between 14.00-16.00 hours, during which the weather was warm and calm and the vegetation on the open ground was dry. In some previous years more advanced larvae have been seen by the author at this time. Martin confirms that the method does succeed in collecting late instar Reddish Buff larvae - some were found using the same equipment in 2003. Consequently, it would appear that 2004 was a somewhat later season than some previous years. (In contrast, 2003 certainly an early season for many species of moth). As larvae were as small as 6 mm, it is quite possible that others were even smaller or unhatched at this date. It is also very likely that the numbers of larvae seen in the suction-samples are an underestimate of the larvae present in the sward covered by the sampling because vegetation in the sward acts to prevent some larvae from being extracted into the vacuum-sampler.

The condition of the breeding habitat was very variable on the inspection but substantial areas were in fair condition. Some parts are still recovering from fires and gorse-clearance and in these Saw-wort is sparse. At the other extreme there are areas which are becoming severely overgrown with woody growth and are in urgent need of management. A more detailed report has been supplied to English Nature and the Wildlife Trust. Quantities of Saw-wort were observed in some parts of the new and widened access routes through the scrub and woodland to the Trust land and this will have extended the breeding areas.

The author was not surprised by any of the larval survey results, which were well within the range of his previous experience of larval numbers, condition and behaviour on these sites. However, the visit was invaluable in seeing and recording this type of sampling on these sites and in keeping up to date with the condition of the habitat and other site issues. His time was provided by Writtle College and he is grateful to English Nature for covering his transport costs. Hopefully, with the SSSI notification, the efforts of Martin Harvey and other members of the Hampshire & Isle of Wight Wildlife Trust and continued funding assistance from English Nature, the future of the Reddish Buff in this locality is more secure than previously.

The author also made a site visit on 15-16 April 2004. This allowed closer examination of the effects of winter management operations and more time to be spent with some of the land-owners, whose continuing co-operation is greatly appreciated.

Square-spotted Clay *Xestia rhomboidea* (Esp.)

The main high-lights of work on the Square-spotted Clay *Xestia rhomboidea* in 2004 were the discovery in March of wild larvae in Wester Ross, Argyll, Essex and Hertfordshire, all for the first time ever (*Brit. Wildlife* **15**: 361-362 and *Ent. Rec.* **116**: 275-277). The larvae in Scotland were found as part of a BENHS-sponsored survey of sites where adults had been recorded in recent years and are the first larval records for the whole of Scotland. This survey was undertaken by Robin Field and Tim Gardiner (both of Writtle College at the time) with assistance from local BC staff and others. A total of three larvae was found, two on 22 March on Primrose *Primula vulgaris* in Wester Ross and one on 26 March on Dog's Mercury

Mercurialis perennis in Argyll. The adult moth has been recorded from a very wide scatter of sites in Scotland and some of these were searched without success during the survey. The author and Robin Field mounted the first successful search in Essex on 15 March, joined by members of the Moth Groups of Essex and Hertfordshire who subsequently used their newly acquired skills to find six larvae in a site in Hertfordshire (a small conservation wood near Meldeth) on 16 March (Jim Reid) and two in another site in Essex (an elm copse in Langley Upper Green) on 17 March (Ted Ponting).

Various other nocturnal searches for larvae took place, some involving quite large numbers of people. For example fourteen people, including the author, Nick Greatorex-Davies, Barry Dickerson & Henry Arnold, searched Monks Wood and nearby Riddy Wood, Huntingdonshire, for larvae on 30 March 2004. The Square-spotted Clay is present on the list of moths recorded for this famous site, apparently on the basis of a single adult captured in 1974 in the light-trap of the Rothamsted Insect Survey. There appear to be no other records of this species for the site despite the fact that the light-trap is still in operation nightly (pers. comm. Nick Greatorex Davies, who records the catches, and Barry Dickerson, County Moth Recorder for Huntingdonshire). We spent 10 man-hours searching at Monks Wood between 21.00-22.00 hours, mainly in the "Owl Ride" portion of the wood and near elms and by the edge of the wood. There were lots of young plants of Common Nettle *Urtica dioica* (a favourite larval foodplant locally, see *Atropos* 17: 37-41) and lots of larvae of other noctuid species were seen, including several Broad-bordered Yellow Underwing *Noctua fimbriata*, four Angle Shades *Phlogophora meticulosa* and at least three additional species. It was evidently a good night for searching for larvae. The sky was clear, the air calm and relatively warm (7°C within wood, 6°C outside), the vegetation was dry and it was moonlit, but we saw no Square-spotted Clay larvae. A previous search of the site on 9 March 2004, involving most of the same people, also produced numbers of noctuid larvae but none of the Square-spotted Clay. We could not cover the whole of the wood however, and it remains possible that a small or localised population of the moth could be present but overlooked.

In contrast, a larva of the Square-spotted Clay was found by the author, searching with Mick Beeson and Roy Goff at Bedford Purlieus, Northamptonshire, at 22.40 hours on 7 April 2004. It was feeding on young nettle growth in a cross-rides within the wood. This record is important because it is the first time the larvae has been found at this site and it is some decades since the adult was last seen here. The last record appears to be of an adult recorded by S. W. P. Pooles at some time prior to 1961 (John Ward, County Moth Recorder for Northamptonshire, pers. comm.) but there are more recent records from the surrounding area.

During a search at Oxey Wood, near Helpston, Northamptonshire, on 24 March 2004, Mick Beeson and I found that the roadside verge where we discovered a Square-spotted Clay larva on 28 March 2003 (see *British Wildlife* 14: 362) had been severely disturbed by a burst water-main and by the subsequent clean-up operation. This event occurred at the end of 2003 and the area is now bare mud. Any young larvae present at the time might have been washed away, but they are unlikely to be confined to this area.

Efforts were made to observe the behaviour of wild females in their natural habitat. A group led by the author and Robin Field confirmed that mated females as well as males visit flowers for nectar at dusk. On the evening of 11 August a total of six Square-spotted Clay, all in fresh condition, were observed nectaring at flowers of Teasel *Dipsacus fullonum* at Overhall Grove, Cambridgeshire. The six included three males and three females. Fertile eggs were subsequently laid by one of the females in isolation, confirming that she was already mated. Access to such flowers may improve the suitability of sites as breeding grounds. Unfortunately, no egg-laying was seen during nocturnal observation sessions in August and no eggs were found subsequently in day-light searches. Possibly the searches in 2004 were slightly too early because the year was not as advanced as 2002 and 2003.

At the time of writing, larvae are already showing some activity. Two were seen after dark on 10 January on the first search of the winter. They were both climbing onto Ground-ivy *Gelechoma hederacea* at Fulbourn Fen nature reserve, Cambridgeshire, but feeding on this plant was not confirmed (John Dawson). The larvae were just 10 & 12 mm in length respectively.

The above work on the Square-spotted Clay was largely undertaken as part of a three-year joint project between Butterfly Conservation Cambridgeshire & Essex Branch and Writtle College, with funding from English Nature. The searches in Scotland were funded by a grant from the Maitland Emmet BENHS Research Fund.

White-spotted Pinion *Cosmia diffinis* (L.)

The main high-light of work in 2004 on the White-spotted Pinion moth was the discovery of the first larva ever found in Essex, thereby confirming a breeding area, at Langenhoe. Until then evidence of breeding in Essex had been lacking and the only records in recent decades are of very occasional singletons at light (Brian Goodey, 2004, *The Moths of Essex*). An illustrated report of the discovery at Langenhoe is in press. The search followed on from the capture of an adult in a light-trap there on 18 August 2002. This was the first record of the species from Essex since a single individual was captured at Saffron Walden in 1997 by Maitland Emmet (*British Wildlife* 14: 285-288). The following spring the area was searched for larvae without success on 22 May 2003, although a suspected larval spinning was noted (Joe Firmin, Hugh Owen, Phil Smith and myself, see *Ent. Rec.* **116**: 134-137). Later in the year six additional adults were recorded at the site, the first on 31 July 2003, followed by two on 2 August and three on 7 August (Hugh Owen). Determined to find larvae at Langenhoe, the site was searched again on 25 May 2004, by Joe Firmin, Hugh Owen, Ian Rose, Phil Smith and the author and after the five of us had been searching for one hour, I found a larval spinning, occupied by a White-spotted Pinion larva 2.5 cm in length, in its black-headed penultimate instar.

During 2003 two adults of the White-spotted Pinion were also light-trapped at another site in Essex, by David Scott at Ford Farm, Brightlingsea, both on 6 August. This is the first time the species has ever been recorded on the farm, where David has operated a Robinson light-trap since 1998. Accordingly, a search for larvae also took place here in 2004, on 25 May (Joe Firmin, Ian Rose, David Scott and the

author). No larvae were found in the time available, but two areas of very promising habitat were located. A single adult was captured on 14 August 2004 in an actinic trap at the edge of one of these. Hopefully larvae will be searched for and found in this area and at Chalkney Wood in 2005, where a single adult was recorded on 16 August 2002 (Joe Firmin, Ian Rose & David Warner). Other Essex sites with elms will also be investigated.

Huntingdonshire and Cambridgeshire are the current strongholds for the White-spotted Pinion and indications are that the populations have increased in recent years and perhaps colonised some new sites. The first adult of 2004 was one recorded at Earith on 27 July (David Griffiths). Between 1-9 August Barry Dickerson (BD) (Huntingdonshire County Moth Recorder) noted the moth at a number of sites around the county, including the first records for the species at Midloe Grange Farm. Poor weather prevented sampling all the known sites but thirty individuals came to a single light at Raveley Wood on 14 August, the largest number BD has ever recorded at one light in about 15 years of trapping for the moth. This suggests the species had a particularly good year, perhaps as a result of the warm, dry weather in 2003. Meanwhile, seven individuals were caught in the Rothamsted trap at Monks Wood in 2004, between 6-25 August (Nick Greatorex-Davies). This is the largest number ever recorded at this site too, the previous highest total was six in 1997. Twice as many have been recorded at this site in the fifteen year period from 1989-2003 (24 moths) as in the previous fifteen year period from 1974 (when trapping started) to 1988. The trap is not near the main stands of elms in the wood, suggesting this wood also supports a strong population.

However, Dutch elm disease is continuing to damage elm populations in the places where the White-spotted Pinion breeds. A stand of tall elms which supports one of the populations of the moth at Dry Drayton, Cambridgeshire, showed severe symptoms of advanced Dutch elm disease when the author visited on 11 August 2004. Of a dozen main trees, all but one were largely bare of foliage. Light-trapping here on 3 & 11 August 2004 produced one and five adults respectively. It will be interesting to see if numbers of the moths crash in 2005. Dutch elm disease is also affecting increasing numbers of trees in Raveley Wood.

Meanwhile, no White-spotted Pinion were recorded at Coppice Wood, Riseley, Bedfordshire, on the BENHS field meeting on 12 August 2004, despite operation of six light-traps all night. This was the site of the last record of the moth in Bedfordshire (in 1985) until rediscovery at a single site in the county in 2002 (single adults captured by John Day at a garden light-trap near Sandy on 2 Aug. 2002 and on one night in August 2003). The only elm specialist seen during the BENHS meeting at Coppice Wood was a single Lesser-spotted Pinion *Cosmia affinis* the despite the wood being full of elm re-growth.

Eggs laid by a gravid female captured in 2003 failed to hatch. The intention was to rear some larvae during 2004, to study their feeding behaviour and any preferences, sleeving some outside on growing foodplant. The foodplants are well-established and ready and hopefully more eggs will be obtained in 2005.

My work in co-ordinating a national project on this moth is part of the BC Action for Threatened Moths Project. The work has involved a large number of people, but in addition to the above, the author would particularly like to thank Barry Dickerson and John Dawson ((County Moth Recorders for Huntingdonshire and Cambridgeshire respectively), Ruth Edwards (site owner and moth enthusiast), Will Kirby (RSPB), John Comont (Bedfordshire County Ecologist), Charles Baker, David Manning and everyone else who helped with searches.— PAUL WARING, Reader, Centre for Environment & Rural Affairs, Writtle College, Essex. Contact address: Windmill View, 1366 Lincoln Road, Werrington, Peterborough, PE4 6 LS (E-mail: paul_waring@btinternet.com).

***Valenzuela atricornis* (McLachlan, 1869) (Psocoptera: Caeciliusidae) in Yorkshire**

Among a general collection of insects taken by myself at the Haverfield Quarries Site of Special Scientific Interest, East Yorkshire (VC 61; O.S. grid reference TA 3219), on 17.ix.1996, but not fully worked up until recently, was a single specimen that keyed to *Caecilius atricornis* in T. R. New, 1974, Psocoptera, *Handbooks for the Identification of British Insects* Vol. 1, Part 7. New (*op. cit.* p. 52) states that this species is rare, perhaps local, and found on low vegetation. My specimen was beaten from a Sallow bush beside reed-fringed water in a shallow gravel and shell-sand quarry close to the North bank of the Humber. This is apparently the only known record from Yorkshire. I am grateful to Bob Saville, Lothian Wildlife Information Centre, and Dr Charles Lienhard, Museum of Natural History, Geneva, for confirming the identification and indicating the present generic placement of the species.— WILLIAM R. DOLLING, Brook Farm, Elstronwick, Hull HU12 9BP.

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