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The Gloucestershire Naturalist



No.19 June 2008

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Editorial

Firstly, thank you to all the contributors to this edition of TGN. I am sure they make my life easier every year (always a dangerous thing to say!).

2007 was an interesting year weatherwise with summer in April followed by unseasonal flooding in June and July and this is reflected in many of the county recorders' reports. Initial visits after the floods subsided suggested that there was much damage to hedgerows, trees, herbaceous plants, breeding birds, earthworms and other invertebrates, as well as the surface layers of the soil. As time passed, there were signs of recovery, if somewhat unseasonal – Hawthorn and Dog Rose flowering in October/November, Springtails in large numbers, a few beetle species returning, among others. The only visible signs of the July floods this spring have been in the hedgerows where plants such as Hawthorn have flowered vigorously above flood level but the twigs below have died in many cases and dormant buds in the larger wood have begun to sprout. It has also been suggested that the apparent slowness of the normal annual winter flooding draining away could be partly due to the loss of earthworm burrows. Surveys and bird ringing carried out during 2008 by members and recorders of the GNS will help determine the longer term effects of the floods, if any.

Once again we have a wide range of recorders' reports and Keith Alexander presents Part 4 of his major work on the Gloucestershire bugs. There are also two new contributors this year – Richard Lansdown (discussing the moss flora of one of our nature reserves) and John Harper (researching the contorted Gloucestershire vice-county boundaries and thus producing a rare spider new to the county).

Articles on the county's flora and fauna are always welcome and can be sent to me at the addresses below. There are "Notes for Contributors" inside the back cover and a blank page setup can be emailed if requested.

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Notes on Contributors

David Scott-Langley has been GNS county recorder for Myriapods, Isopods, Harvestmen and Pseudoscorpions since 2000 and is currently Society Vice Chairman, Chairman of the GNS Scientific & Publications Sub-Committee and of the Society's Cirencester branch. He finds that working in the landscaping industry gives him access to otherwise unavailable sites for recording. He has also published works on the fauna of Foula, Shetland.

David Long has been county recorder for Molluscs since the 1980s, but has been recording land and freshwater molluscs since 1967. He is a Vice-President of the Conchological Society, chaired the Gloucestershire Wildlife Trust's Conservation Committee from 1980 to 1992, and now chairs the Gloucestershire Invertebrate Group. He has published papers on non-marine molluscs and (in one case) marine fossils both in the UK and in Australia.

Keith Alexander is the county recorder for Coleoptera (other than ladybirds), Diptera (other than hoverflies), Sawflies (Hymenoptera: Symphyta) and Barkflies (Psocoptera). He currently lives in Exeter and would be delighted if someone resident in the county would like to take over the baton for recording these insects.

David Haigh was born in Scotland and completed his education in Wales. He started teaching in 1960 in the Midlands and in 1965 came to Cheltenham where he continued to teach until 2002. Since 1967, when he joined the GNS, he has been recording spiders in the county. He is a member of The British Arachnological Society and is Area Organiser for the Spider Recording Scheme.

Mark Kitchen and Clare Kitchen are a husband and wife team who have contributed very substantially to botanical recording since 1981, especially to the north-east of Bristol, their home being near Berkeley. They have jointly acted, since 1993, as Recorders for the Botanical Society of the British Isles for vice-counties 33 (East Gloucestershire) and 34 (West Gloucestershire).

Colin Twissell took over from Peter Burns as Reptile and Amphibian Recorder for Gloucestershire in 1973. He has had a lifelong interest in all aspects of natural history.

Ingrid Twissell has been the Dragonfly recorder for Gloucestershire since 1993, taking over from Sonia Holland. Her interests are not solely confined to this group as she enjoys other facets of the Natural World.

Roger Gaunt was born and educated in Yorkshire. After National Service he trained as a Work Study Engineer, before changing to teaching and moving to Gloucestershire in 1962. He moved to his present address in 1968 and soon became interested in and recording the moths that came to his windows. Soon after taking early retirement he was invited to become moth recorder, in about 1988. He produces an electronic newsletter several times a year, and his 'Gloucestershire Moths - A Second Account' was published in 2006.

David Hiff was born in Dublin and grew up in southeast England. He moved to Gloucestershire in 1965 and joined the GNS, mainly for bird watching. During the 1970s he became increasingly interested in entomology and was appointed county hoverfly recorder after reviewing a book on the subject for the GNS Journal. He is the editor of the Hoverfly Newsletter which is published twice yearly by the Dipterists Forum. He has been the ladybird recorder since the early 1990s.

Ian Carle became the County Recorder for the newly-formed Lichen Group in 2004. He is also the Data Manager for the Gloucestershire Centre for Environmental Records and as such has been of great help to the Society's other recorders in digitising all their records.

John Widgery was born in Hertfordshire and only moved to Gloucestershire in 2006, although involved in biological recording in the County since the mid 1990s. Has had a lifelong interest in natural history. Contributed to the botanical recording of Hertfordshire and Middlesex until the 1970s. Intensively involved in ornithology up to late 1980s during which he ringed over 50,000 birds for the British Trust for Ornithology. Serious involvement with entomology since 1990, he became recorder for Orthoptera and terrestrial Heteroptera in Hertfordshire soon afterwards. Held the position of National Recorder for Orthoptera between 1996 and 2002.

Richard Lansdown has worked as an ecologist for nearly thirty years initially studying birds, before moving into Environmental Impact Assessment and taking up botany in the early 1990s. He currently works as a consultant ecologist specialising in the survey and identification of riverine plants and is the referee for water-crowfoots, water-starworts, bur-reeds and horned pondweed for the Botanical Society of the British Isles.

John Harper was a colonial boy born in Bermuda, educated in Shetland, Luton and London. Taught biology for 20 years - the most rewarding being 10 years in Kenya. He now lives near Abergavenny and encounters so few naturalists in Wales that he travels all the way to GIG meetings for intelligent conversation, and to exchange ideas and techniques. These are used to good effect back in Wales which is proving really rewarding as there are many untapped invertebrate treasures to be found. His recording interests are too many - covering non-marine molluscs, woodlice, millipedes, centipedes, spiders, harvestmen, pseudoscorpions, hoverflies, water beetles, and various other small groups - according to the season.

GLOUCESTERSHIRE BOTANY REPORT 2007

Clare and Mark Kitchen

Introduction

The year should not be allowed to pass without acknowledging the inestimable contribution to the world of botany made by Carl Linnaeus since 2007 was the 300th anniversary of his birth. The Swede can be said to be the father of modern botany, and, whilst he described a great many species for the very first time, it was his introduction of the binomial Latin nomenclature which has set him apart from his contemporaries. At this distance in time from him it is difficult to appreciate the quagmire that was the naming of names when Linnaeus arrived on the scene. Those of you who delve into the written works which predate him, books such as John Ray's Synopsis and Hudson's Flora Anglica, will soon be floundering amongst the world of *Veronica spicata recta minor* (Spiked Speedwell), *Rubeola arvensis repens caerulea* (Field Madder) and *Knawel flore majore perenne* (Perennial Knawel). We are indebted to Linnaeus for making life much simpler for us all.

Closer to home it is difficult to believe that it is ten years since the death of Stephen Bishop, a highly talented and greatly missed field botanist whose records we still refer to on a daily basis.

Whilst both the above have been truly beneficial to Gloucestershire botany, the jury is still out as to the effects of the 2007 July flooding. Historically the Severn and Avon Vales are well used to annual flooding but the big difference this year is that the floods came in the summer. Summer floods are very unusual here and we just do not know how this inundation will affect our flora. Whilst it is true that much of the vegetation died during the prolonged emersion under the waters, there is in the county a select suite of very special and rare species which might well benefit from the year's unusual weather. This group of species comprises *Carex vulpina* (True Fox sedge), *Myosorus minimus* (Mousetail) and *Oenanthe silaifolia* (Narrow-leaved Water-dropwort). These three species, all restricted to the Severn and Avon floodplain need to spend some time in the winter underwater for their survival. In addition seed dispersal is aided by seasonal flooding. All three species were formerly more widespread on the traditional flood plain but their distribution has been severely reduced due to land drainage and modern agricultural practises. Present day distribution of these species should be thought of in terms of metapopulations. They have the potential to establish colonies everywhere that the floodwater can penetrate and may possibly recolonise those parts of their former range where they have become extinct in recent times.

The problem is that in order for this to happen, the plants must have set seed before the submersion. Winter floods carry mature seed away and disperse it. The big question is which, if any, of these species had managed to produce mature seed before the floods came. Those that had not could well end up in severe trouble. *Cuscuta europaea* (Greater Dodder) is another floodplain speciality. Unlike the former species it is however a parasite living on nettles growing along the Severn and Avon riverbanks. In this case the distribution may be related to frost sensitivity. Post flood monitoring revealed an initial absence of this species from its usual localities although it was found still to be present along the Bristol Avon, an area, which had not been affected by the unseasonal flooding. This looked to be very bad news for the Gloucestershire populations. However, a resurvey in late autumn has revealed the reappearance, albeit much later in the flowering season than usual, of the dodder in at least at some of its traditional localities.

The Recorders

The names of contributors have been abbreviated as follows:

Armstrong D.J.	DJA	Leighton T.H.	THL
Avery G.	GA	Lewis J.	JL
Bailey B.	BB	Lusmore N.	NL
Bailey J.A.	JAB	Martin J.P.	JPM
Barber S.R.J.	SRJB	Martin P.	PM
Bishop S.H.	SHB	Meredith G.H.J.	GHJM
Budd P.	PB	Metcalf-Woodward L.	LM
Button M.R.	MRB	Overhill C.	CO
Chapman P.	PC	Palfrey M.J.	MJP
Colls H.	HC	Palmer P.	PP
Cooke R.J.	RJC	Pearce G.M.	GMP
Cooper R.S.	RSC	Pearce R.M.	RMP
Doe J.R.	JRD	Porley R.D.	RDP
Elphick I.	IE	Proctor I.	IP
Evans R.	RE	Quinn P.R.	PRQ
Fryer J.	JF	Ralphs I.L.	ILR

Garland S.	SG	Reade P.	PR
Godfrey M.	MG	Rees JS	JSR
Godfrey R.D.	RDG	Rich T.C.G.	TCGR
Greening M.	MG	Rumsey F.J.	FJR
Haigh D.J.	DJH	Ryves T.B.	TBR
Hilton P.	PH	Silverside A.J.	AJS
Homan R.	RH	Smart M.	MS
Houston L.	LH	Spencer J.	JS
Jannink M.	MJ	Stewart N. F.	NFS
Kay G.M.	GMK	Studholme C.	CS
Kitchen C.	CK	Westgate R.	RW
Kitchen M.A.R.	MARK	Wilcox M.P.	MPW
Lane D.	DL	Wilkins T.	TW
Lansdown R.E.	REL	Wollen K.	KW
Lansdown R.V.	RVL		

The Records

Unless otherwise stated all records lie within the administrative county of Gloucestershire. Nomenclature follows the Vice-county Census Catalogue of the Vascular Plants of Great Britain (Stace, Ellis, Kent and McCosh, 2003), with English plant names taken from C. A. Stace's "New Flora of the British Isles", second edition 1997.

* An asterisk denotes a species not native to the county.

Numbers prefixing species indicate taxonomic order taken from "List of Vascular Plants of the British Isles" (D H Kent 1992).

5/1/1 *Ophioglossum vulgatum* L., **Adder's-tongue**. V-c 33. Brockeridge Common, Twynning C.P., SO83 Y & Z. 16/04/2007. (PR). Chedworth, Chedworth C.P., SP01L. May 2007. (SG). Fifty to sixty plants, thirty percent with fertile blades.

11/1/1 *Polypodium vulgare* L., **Polypody**. V-c 33. Hawling, Hawling C.P., SP02L. 30/10/2007. (CK & MARK). Growing on a hedgerow Malus (apple).

11/1/3 *Polypodium cambricum* L., **Southern Polypody**. V-c 34. Snipehill Bridge, Tidenham C.P., ST59M. 4/11/2007. (MJ). Several populations confirming continued

presence in a known locality. Symonds Yat, English Bicknor, SO51T. 8/04/2007. (MJ conf. RJC). On the north side of Symonds Yat Rock.

17/2/1 **Cyrtomium falcatum* (L.f.) C. Presl., **House Holly-fern**. V-c 33. Bays Hill, Cheltenham, SO92L. 18/02/2007. (CK & MARK). Still extant in drain in St Georges Road where first recorded by E. Milne-Redhead in 1965 (see Plate 32). The 1983 Bishop record for St Georges Street would appear to be a transcription error as this is some distance away and no ferns were found there.

19/1/1 **Azolla filiculoides* Lam., **Water Fern**. V-c 33. Apperleyhall Farm, Deerhurst C.P., SO82T. 29/05/2007. (MS). Abundant in field pond.

21/4/1a *Juniperus communis* L. subsp. *communis*, **Common Juniper**. V-c 34. Swellshill, Minchinhampton C.P., SO80Q. 26/04/2007. (JSR). Still present at this known locality.

27/13/17b *Ranunculus ficaria* L. subsp. *bulbilifer* Lambinon, **Bulbous Lesser Celandine**. V-c 7. Ewen, Somerford C.P., SU09D. 06/05/2007. (CK & MARK). Beside River Thames. Near Neigh Bridge, Poole Keynes C.P., SU09C. 06/05/2007 (CK & MARK).

28/3/1 *Helleborus foetidus* L., **Stinking Hellebore**. V-c 33. Edgeworth C.P., SO90N. 13/02/2007. (RVL). About 35 plants on lower slopes of River Frome valley. Fire Seives Technical College grounds, Batsford C.P., SP23B. 16/02/2007. (RVL, RDP, FJR). Little Barrington, Barrington C.P., SP21B. 15/02/2007. (CK & MARK). South-east of Moreton-in-Marsh, Moreton-in-Marsh C.P., SP23A. 24/02/2007 (CK & MARK). Several naturalised near office buildings. Shooters Hill, Baunton C.P., SP00H. 24/01/2007. (CK & MARK). Staverton, Staverton C.P., SO82W. 21/01/2007. (CK & MARK). Single plant in roadside hedge near church.

28/11/1 *Pulsatilla vulgaris* Miller, **Pasque Flower**. V-c 34. Rodborough Common, Rodborough C.P., SO80L. 15/04/2007 to 18/05/2007. (RE). Five surveys conducted during the period producing a maximum count of 129 flowering plants. Rodborough Fort, Rodborough Common, Rodborough C.P., SO80L. 05/05/2007. (CK & MARK). Single fruiting spike at this second locality on the Common where not recorded previously since 1996, when two were found, despite frequent subsequent searches.

28/13/1 *Ranunculus parviflorus* L., **Small-flowered Buttercup**. V-c 34. Catsbury Hill, Hartpury C.P., SO72X. 15/04/2007. (CK & MARK). Abundant along green lane.

28/13/8 *Ranunculus arvensis* L., **Corn Buttercup**. V-c 33. Gardner's Farm, Aston Subedge C.P., SP14F. 18/06/2006. (CK & MARK). Persistent in four fields amongst beans and setaside, sometimes in thousands and in one field co-dominant with *Alopecurus myosuroides*. First recorded here by SHB & RJC in 1990.

28/13/10 *Ranunculus auricomus* L., **Goldilocks Buttercup**. V-c 33. Lower Swell. Swell C.P., SP12 S & X. 21/04/2007. (CK & MARK).

28/13/25a *Ranunculus penicillatus* (Dumort.) Bab. subsp. *penicillatus*, **Stream Water-crowfoot**. V-c 7. Poole Keynes C.P. and Somerford Keynes C.P., SU09 C & D. 06/05/2007. (CK & MARK). At several places in the River Thames between Ewen and Neigh Bridge.

31/5/1 *Fumaria capreolata* L., **White Ramping-fumitory**. V-c 34. Beachley, Tidenham C.P., ST59K. 8/08/2007. (MJ). Confirms continued existence at this known locality.

31/5/5b *Fumaria muralis* Sonder ex Koch subsp. *boraei* (Jordan) Pugsley, **Common Ramping-fumitory**. V-c 34. Wood Green, Churcham C.P., SO72K 01/08/2007. (CK & MARK). Plentiful on dumped ground by maize field.

31/5/7b *Fumaria officinalis* L. subsp. *wirtgenii* (Koch) Arcang, **Common Fumitory**. V-c 34. Collier's Elm, Churcham C.P., SO72K. 01/08/2007. (CK & MARK).

33/1/3 *Ulmus minor* Miller, **Smooth-leaved Elm**. V-c 33. Wotton, Gloucester, SO81P. 06/06/2007. (JAB). Mature tree outside hospital.

45/3/1 *Montia fontana* L., **Blinks**. V-c 33. Bowl Farm, Swell C.P., SP12S. 21/04/2007. (CK & MARK). Seasonally wet wall base.

46/4/5 *Minuartia hybrida* (Vill.) Schischk., **Fine-leaved Sandwort**. V-c 33. RAF Fairford, Kempsford C.P., SU19J & P. 26/05/2007. (CK & MARK).

46/5/3 *Stellaria pallida* (Dumort) Piré, **Lesser Chickweed**. V-c 33. Upper Swell, Swell C.P., SP12T. 21/04/2007. (CK & MARK). Bare bank in pasture.

46/5/4 *Stellaria neglecta* Weihe, **Greater Chickweed**. V-c 33. Bays Hill, Cheltenham, SO92L. 04/02/2007. (CK & MARK).

46/7/3 **Cerastium tomentosum* L., **Snow-in-summer**. V-c 34. Lower Redbrook, Newland C.P., SO50J. May 2007. (HC).

46/7/3 *Cerastium pumilum* Curtis, **Dwarf Mouse-ear**. V-c 33. RAF Fairford, Kempsford C.P., SU19P. 26/05/2007. (CK & MARK).

46/16/1 *Spergula arvensis* L., **Corn Spurrey**. V-c 34. Bright's Hill, Huntley C.P., ST71E. 18/02/2007. (CK & MARK).

46/18/2 *Lychnis flos-cuculi* L., **Ragged Robin**. V-c 33. Coombe Hill Nature Reserve, Deerhurst C.P., SO82T. 29/05/2007 (MS). V-c 34. Hasfield Ham, Hasfield C.P., SO82N. 23/05/2007. (MS).

51/1/15 *Hypericum montanum* L., **Pale St John's-wort**. V-c 34. Chase End Hill, Bromsberrow C.P., SO73M. 14/05/2006. (CK & MARK). Single road verge plant. V-c 37 (Gloucestershire Admin County). Cobhill Rough, Redmarley D'Abiot C.P., SO73K. 29/05/2006. (CK & MARK). Two spikes on trackside by wood edge.

57/1/12a *Viola tricolor* L. subsp. *tricolor*, **Wild Pansy**. V-c 34. Near Cole's Barn, Taynton C.P., SO72G. 07/05/2007. (CK & MARK). Single plant at edge of cereal field.

61/2/5 *Salix purpurea* L., **Purple Willow**. V-c 7. Ewen, Somerford Keynes C.P., SU09D. 06/05/2007. (CK & MARK). Beside River Thames.

62/23/5 *Cochlearia danica* L., **Danish Scurvygrass**. V-c 33. Outside Fire Services College, Moreton-in-Marsh, Batsford C.P., SP23 B & G. 24/02/2007. (CK & MARK). Well established along A44. V-c 34. Netherend, Woolaston C.P., SO50V. 25/01/2007. (CK & MARK).

62/30/8 **Lepidium draba* L., **Hoary Cress**. V-c 34, Lower Redbrook, Newland C.P., SO50J. May 2007 (HC).

62/35/2 **Sinapis alba* L., **White Mustard**. V-c 33. (Worcestershire) Hillenders, Forthampton C.P., SO83G. 12/10/2007. (CK & MARK).

62/42/1a **Raphanus raphanistrum* L. subsp. *raphanistrum*, **Wild Radish**. V-c 34. Near Cole's Barn, Taynton C.P., SO72G. 07/05/2007. (CK & MARK).

65/11/1 *Calluna vulgaris* (L.) Hull, **Heather**. V-c 34. Cinderford Linear park, Cinderford C.P., SO61M. 2007. (RDG & DL). Crabtree Hill, Cinderford C.P.,

SO61G. 2007. (RDG & DL). Laymoor Quag, Cinderford C.P., SO61M. 2007. (RDG & DL). In good quantity.

67/1/1 *Monotropa hypopitys* L. **Yellow Bird's-nest**. V-c 33. Charlton Kings Common, Charlton Kings C.P., SO91U. 'Within the past 10 years'. (GHJM). Single spikes in different years in two locations. Colesbourne, Chedworth C.P., SP01B. 'In recent years'. (GHJM). A few spikes on the side of a track. Cranham Common, Cranham C.P., SO81W. 22/07/2007. (GHJM). At least 100 plants in two patches on a steep slope under beech on the Common. Daneway Bank NR, Bisley-with-Lypiatt C.P., SO90G. 17/07/2007. (JRD). Two plants in the reserve and three outside. Moorhouse Bank Wood, Brimpsfield C.P., SO91F. 'In recent years'. (GHJM). Saltridge Wood, Cranham C.P., SO81V. 22/07/2007. (GHJM). Small numbers in several places in the wood. The Peak, Cowley C.P., SO91H. 30/07/2007. (JS). Twelve in flower. Upcote Plantation, Withington C.P., SP01D. Probably 1980s. (GHJM). Workmans Wood. 22/07/2007. (GHJM). Single plant.

69/3/1 **Cyclamen hederifolium* Aiton, **Cyclamen**. V-c 33. Maitlands Wood, Harescombe C.P., SO80P. 08/11/2007. (JRD).

69/6/1 *Anagallis tenella* (L.) L., **Bog Pimpernel**. V-c 34. Crabtree Hill, Cinderford C.P., SO61G. 26/06/2007. (RDG & DL). Abundant in ditch, providing an update for a known locality. Middleridge Inclosure, Ruspidge C.P., SO61F. 5/06/2007. (RDG & DL). Spread widely over a wet timber stacking area.

69/6/26 *Anagallis arvensis* L. subsp. *foemina* (Miller) Schinz & Thell. **Blue Pimpernel**. V-c 34. Tarlton Bridge, Coates C.P., SO90Q. 04/08/2007. (CK & MARK). Small patch in a pea field. Seldom recorded in the county, the more commonly found blue taxon being a colour variety of the subspecies *arvensis*.

73/13 **Crassula helmsii* (Kirk) Cockayne, **New Zealand Pigmyweed**. V-c 33. East of Moreton-in Marsh C.P., SP23B. 24/02/2007. (CK & MARK). Abundant in pond outside Cotswold Business Village.

73/5/17 **Sedum dasyphyllum* L., **Thick-leaved Stonecrop**. V-c 7. Ewen, Somerford Keynes C.P., SU09D. 06/05/2007. (CK & MARK). V-c 33. Stratton, Cirencester C.P., SP00B. 24/01/2007. (CK & MARK). V-c 34. Hampton Fields, Minchinhampton C.P., ST89Z. 14/11/2007. (CK & MARK).

75/17/1 *Sanguisorba officinalis* L., **Great Burnet**. V-c 34. Ashleworth Meadows, Hasfield C.P., SO82H. 24/06/2007. (MS). Abundant in two small fields.

75/19/15 **Alchemilla mollis* (Buser) Rothm., **Lady's Mantle**. V-c 34. Cowcombe Wood, Minchinhampton C.P., SO90B. 23/06/2006. (CK & MARK). Abundantly naturalised on Jurassic Limestone cliffs below the wood.

75/22/3 **Prunus cerasifera* Ehrh., **Cherry Plum**. V-c 33. Hidcote Road Barns, Ebrington C.P., SP14Q. 17/05/2007. (CK & MARK).

75/28/24 *Sorbus torminalis* (L.) Crantz, **Wild Service-tree**. V-c 34. The Grove, Taynton C.P., SO72K. 07/05/2007. (CK & MARK).

75/28/gla **Sorbus glabriuscula*. V-c 34. Plump Hill Dolomite quarry, Mitcheldean C.P., SO61T. 02/10/2005. (CK & MARK det TCGR from material collected 12/09/2007). Single tree growing on the quarry face. An escape from an adjacent garden. First V-c and County record. Probably the first British record but difficult to be certain as not previously differentiated from the closely related *S. pseudohupensis*.

75/32/40 **Cotoneaster sternianus* (Thurriell) Broom, **Stern's Cotoneaster**. V-c 34. Rodborough, King's Stanley C.P., SO80M. 05/02/2006. (CK & MARK det J. Fryer). Single bush on disused rail-line.

75/34 x 35/1x 8 X *Crataemespilus grandiflora* (Smith) E.G. Camus = *Mespilus germanica* x *Crataegus laevigata*. V-c 33 (Worcestershire Admin. County). Kemerton, Kemerton C.P., SO93N. 11/07/2007. (PP) Single tree on road verge (see Plate 34).

75/35/7 *Crataegus laevigata* (Poir.) DC, **Midland Hawthorne**. V-c 33. Lower Oddington Ashes, Oddington C.P., SP22H. 21/04/2007. (CK & MARK). Several along wood edge.

77/2/1 **Galega officinalis* L., **Goat's Rue**. V-c 33. Blockley Clay Pit, Northcot Brick, Blockley C.P., SP13Y. 21/09/2007. (DJH).

77/4/2 *Astragalus danicus* Retz., **Purple Milk-vetch**. V-c 33. Cleeve Common, Southam C.P., SO92Y. 25/06/2007. (MJP). Few small plants and not refound at the two other sites known to her on the Common, both now deeply covered with *Brachypodium pinnatum*.

77/8/1 *Lotus glaber* Miller, **Narrow-leaved Bird's-foot-trefoil**. V-c 34. Wickridge Street, Ashleworth C.P., SO81D. 12/07/2007. (JRD). On the roadside.

77/15/12 *Lathyris nissolia* L., **Grass Vetchling**. V-c 34. Cinderford Linear Park, Cinderford C.P., SO61M. 13/05/2007. (RDG & DL). On introduced soil or track material.

77/19/13 *Trifolium micranthum* Viv., **Slender trefoil**. V-c 34. Woodcroft, Tidenham C.P., 10/07/2007. (CK & MARK).

77/19/22 *Trifolium scabrum* L., **Rough Clover**. V-c 34. Lydney harbour, Lydney C.P., 01/08/2007. (CK & MARK). Abundant in short grassland by the quay.

77/19/23 *Trifolium arvense* L., **Haresfoot Clover**. V-c 34. Ketford Mill, Dymock C.P., SO73F. 12/08/2007. (CK & MARK). Single plant by edge of wheatfield.

77/25/2a *Genista tinctoria* L., subsp. *tinctoria*, **Dyer's Greenweed**. V-c 33. Vinegar Hill, Standish C.P., SO80E. 17/06/2007. (JAB). Abundant on open access land.

77/25/4 *Genista anglica* L., **Petty Whin**. V-c 34. Laymoor Quag, Cinderford C.P., SO61M. 2007. (RDG & DL). Spreading beyond its protective enclosure.

82/1/2 *Daphne laureola* L. **Spurge-laurel**. V-c 34. Sandford's Knoll, Frocester C.P., SO70W. 12/04/2007. (JPM). In beech woodland.

87/1/1 *Viscum album* L., **Mistletoe**. V-c 34. Beachley, Tidenham C.P., ST59K. 8/08/2007. (MJ).

91/2/7 *Euphorbia serrulata* Thuill., **Tintern Spurge/Upright Spurge**. V-c 7. Somerford Keynes, Somerford Keynes C.P., SU09C. 06/05/2007. (CK & MARK). Few plants, beyond churchyard gate and also within churchyard wall. V-c 34. Clay Wood, Hewelsfield C.P., SO50W & R. 01/04/2007. (CK & MARK). Plentiful along woodland track. Slade Bottom, St Briavels C.P., SO50S. 27/09/2207. (IP). Along the side of a track, 17 in flower at this known locality.

91/2/10 *Euphorbia exigua* L., **Dwarf Spurge**. V-c 33. Quarry Hill, Bibury C.P., SP10C. 17/07/2007. (CK & MARK). Few in cereal field corner.

92/2/1 *Frangula alnus* Miller **Alder Buckthorn**. V-c 33. Below the Lynches Wood, Dover's Hill, Weston Subedge C.P., SP14F. 26/10/2007. (GHJM). In hedge. Probably Neve's 1906-7 Campden locality. Until now had been thought to have been lost from the vice-county. V-c 34 Crabtree Hill, Cinderford C.P., SO61G. 2007. (RDG & DL).

102/1/4 **Oxalis exilis* Cunn., **Least Yellow-sorrel**. V-c 33. Gloucester, SO81J. 27/06/2007. (MARK). Extensively naturalised in amenity lawn near the cathedral. First VC record.

103/1/10 *Geranium columbinum* L., **Long-stalked Crane's-bill**. V-c 33. Cotswold Farm Park, Temple Guiting C.P., SP12D. 2007. (MRB). About ten plants in flower where also observed in 2002. V-c 34. Jackaments Bottom, Kemble C.P., ST99T. 27/07/2007. (CK & MARK). Good population along disused rail-line.

107/10/1 **Smyrniium olusatrum* L., **Alexanders**. V-c 33. Randwick, Randwick C.P., SO80I. 11/02/2007. (CK & MARK). Established along roadside.

107/19/2 *Oenanthe silaifolia* M. Bieb., **Narrow-leaved Water-dropwort**. V-c 33. Upham Meadow. SO93D. 25/06/2007. (MS). Abundant at this known locality. Walton Cardiff, Walton Cardiff C.P., SO93B. 08/04/2007. (CK & MARK). Locally abundant in pasture. V-c 34. Tibberton Meadows, Tibberton C.P., SO72L. 07/06/2006. (JPM). Single patch by ditch.

107/19/3 *Oenanthe pimpinelloides* L., **Corky-fruited Water-dropwort**. V-c 34. Lynch Knoll, Nymphsfield C.P., SO80A. 9/07/2007. (PRQ). Single plant in rank neutral grassland.

107/29/2 *Petroselinum segetum* (L.) Koch., **Corn Parsley**. V-c 33. Outside the Royal Agricultural College, Cirencester C.P., SP00A. 26/06/2007. (PH & PB). On road verge.

107/32/1 **Amni majus* L. **Bullwort**. V-c 33. Charlton Park, Cheltenham, SO92K. 2007. (GMP det ILR). Bird-seed alien which failed to set seed.

107/43/2 *Torilis arvensis* (Hudson) Link, **Spreading Hedge-parsley**. V-c 34. Near Desmesne Wood, Churcham C.P., SO72Q. 01/08/2007. (CK & MARK). Around 30 plants in wheatfield at a locality known to SHB.

108/5/4 *Gentianella amarella* (L.) Boerner, **Autumn Gentian**. V-c 34. Edgehills, Mitcheldean C.P., SO61T. 24/08/2007. (RDG & DL).

111/3/3 **Calystegia pulcra* Brumitt and Heywood, **Hairy Bindweed**. V-c 33. Notgrove, Notgrove C.P., SP12A. 08/07/2007. (CK & MARK). Large patch along road verge and field edge. V-c 34. Berkeley, Berkeley C.P., ST69Z. 31/07/2007. (CK & MARK). Well established in flower bed adjacent to public car park.

112/1/2 *Cuscuta europaea* L., **Greater Dodder**. V-c 34. Ashleworth Ham, Ashleworth C.P. and Hasfield C.P., SO82I. 04/11/2007. (CS). Three patches recovering post flooding. Stank Lane, Ashleworth Ham, Hasfield C.P., SO82I. 04/11/2007. (REL and RVL) Two populations on *Urtica dioica*. (CS) Same date and tetrad three populations, rather spindly but having survived the summer flooding. Wickridge Street, Ashleworth C.P., SO82D. 12/07/2007. (JRD). Side of road. Further from the river than most localities. Early records of the post summer flood survival of this species are encouraging.

113/1/1 *Menyanthes trifoliata* L. **Bogbean**. V-c34. Merring Meend, Mitcheldean C.P., SO61N. 2007. (RDG & DL). Wigpool, Mitcheldean C.P., SO61P. 2007. (RDG & DL).

115/1/1 **Phacelia tanacetifolia* Benth., **Phacelia**. V-c 33. Venthill, Cold Aston C.P., SP11J. 07/07/2007. (CK & MARK). Several along track by edge of rape field. V-c 34. The Splat, Frampton on Severn C.P., SO70N. 09/11/2007. (BB, CK & MARK). Few beside track.

116/3/1 **Pulmonaria officinalis* L., **Lungwort**. V-c 34. St Briavels, St Briavels C.P., SO50S. 18/03/2007. (CK & MARK).

116/4/1 x 2 x 4 *Symphytum* 'Hidcote Blue' = *Symphytum officinale* x *S. asperum* x *S. grandiflorum*, **Hidcote Comfrey**. V-c 33. Oxleaze, Hawling C.P., SP02K. 30/10/2007. (CK & MARK). Large patch in disused quarry. V-c 34. Batmore Hill, St Briavels C.P., SO50W. 18/03/2007. (CK & MARK). Small patch on dumped ground in copse.

116/4/3 *Symphytum tuberosum* L., **Tuberous Comfrey**. V-c 33. Craven Wood, Temple Guiting C.P., SP12D. 2007. (MRB). Dense masses of flowers both sides of Kinton Lane. V-c 34. Tyley Bottom, Wotton-under-Edge C.P., ST79X. 13/05/2006. (CK & MARK). Large patch by ruined building.

116/4/4 **Symphytum grandiflorum* DC, **Creeping Comfrey**. V-c 33. Stow-on-the-Wold, Stow-on-the-Wold C.P., SP12X. 21/04/2007. (CK & MARK). Well naturalised in field and along footpath.

116/15/10 *Myosotis discolor* Pers., **Changing Forget-me-not**. V-c 34. Hazel Hill, Mitcheldean C.P., SO61Y. 21/05/2007. (CK & MARK). V-c 37 (Gloucestershire Admin. County). Cobhill Rough, Redmarley D'Abiotot C.P., SO73K. 29/05/2007. (CK & MARK).

116/16/1 **Omphalodes verna* Moench., **Blue-eyed Mary**. V-c 33. Stow-on-the-Wold, Stow-on-the-Wold C.P., SP12X. 21/04/2007. (CK & MARK). Naturalised along footpath.

118/1/1 *Stachys officinalis* (L.) Trevis, **Betony**. V-c 34. Lynch Knoll, Nympsfield C.P., SO80A. 9/07/2007. (PRQ). More than 100 plants in rank neutral grassland.

118/1/8 *Stachys arvensis* (L.) L., **Field Woundwort**. V-c 34. Lynch Knoll, Nympsfield C.P., SO80A. 13/08/2007. (PRQ). 40 or more plants in a recently sown grass ley.

118/11/4 *Teucrium botrys* L. **Cut-leaved Germander**. V-c 33. Daneway Bank NR, Bisley-with-Lypiatt C.P., SO90L. 17/07/2007. (JRD). Doing well both sides of the fence.

118/18/2 *Clinopodium ascendens* (Jordan) Samp., **Common Calamint**. V-c 34. Catsbury Hill, Hartpury C.P., SO72X. 12/08/2007. (CK & MARK). Good quantity along road bank.

118/18/5 *Clinopodium acinos* (L.) Kuntze, **Basil Thyme**. V-c 33. Pitchcombe Wood, Pitchcombe C.P., SO80P. 08/10/2007. (JRD). In unimproved grassland below the wood.

121/1/1 *Plantago coronopus* L., **Buck's-horn Plantain**. V-c 33. East of Moreton - in-the-Marsh, Batsford C.P., SP23G. 24/02/2007. (CK & MARK). Several along verge of A44.

124/1/1 **Verbascum blattaria* L., **Moth Mullein**. V-c 34. Highleadon, Rudford C.P., SO72R. 14/09/2006. (JPM). Single white flowered plant on road verge.

124/8/2 *Chaenorhinum minus* (L.) Lange, **Small Toadflax**. V-c 33. Quarry Hill, Bibury C.P., SP10C. 17/07/2007. (CK & MARK). One plant in corner of wheatfield, Salperton, Hazleton C.P., SP02Q. 30/10/2007. (CK & MARK). Single plant in ploughed cereal field headland.

124/12/01 *Kickxia elatine* (L.) Dumort., **Sharp-leaved Fluellen**. V-c 33 (Worcestershire Admin. County). Hillenders, Forthampton C.P., SO83G. 12/10/2007. (CK & MARK). Abundant in two maize fields. Salperton, Hazleton C.P., SP02Q. 30/10/2007. (CK & MARK). At least 20 plants in ploughed cereal field headland.

124/12/2 *Kickxia spuria* (L.) Dumort., **Round-leaved Fluellen**. V-c 33. Hunting Butts, Prestbury C.P., SO92M. 27/07/2007. (RH). Three or four plants at the edge of set-aside in area disturbed by work on nearby disused rail-line. Quarry Hill, Bibury C.P., SP10C. 17/07/2007. (CK & MARK). One in corner of cereal field. V-c 33 (Worcestershire Admin. County). Hillenders, Forthampton C.P., SO83G. 12/10/2007. Single plant in maize field.

124/16/18 **Veronica peregrina* L., **American Speedwell**. V-c 34. Westonbirt School, Westonbirt with Lasborough C.P., ST88U. 21/04/2007. (MG det GMK). Well established in school grounds on gravel path and in lawn. First V-c and county record.

124/20/3 *Euphrasia anglica* Pugsley, an eyebright. Flaxley Wood, Blaisdon C.P. and Hope Wood, Longhope C.P., SO61T and Y. 27/09/2007. (CK & MARK). The only known extant county localities for this declining endemic species. Previously recorded here by CW Bannister in 1972. Not refound at Poors Allotment or Pudding Hill.

124/20/5b *Euphrasia arctica* Lange ex. Rostrup subsp. *borealis* (F. Towns.) Yeo, an eyebright. V-c 34. Meering Meend, Drybrook, Mitcheldean C.P., SO61N. 12/09/2007. (CK & MARK det AJS and HERB CK and MARK). Second V-c records and the first post 1970, having previously been recorded by Shoobred at Tidenham Chase in 1920 as *E. brevipila*.

124/20/7 x 9 *Euphrasia nemorosa* (Pers.) Wallr. x *E. confusa* Pugsley. V-c 34. Meering Meend, Drybrook, Mitcheldean C.P., SO61N. 12/09/2007. (CK & MARK det AJS and HERB CK and MARK). Plump Hill Dolomite Quarry NR, Drybrook, Mitcheldean C.P., SO61T. 12/09/2007. (CK & MARK det AJS and HERB CK and MARK). Abundant on disused quarry floor. Clearwell Meend, Newland C.P., SO50U. 12/09/2007. (CK & MARK det AJS and HERB CK and MARK). First, second and third county and V-c records respectively.

124/24/29 *Rhinanthus minor* L., **Yellow Rattle**. V-c 34. Cinderford Linear Park, Cinderford C.P., SO61M. 25/05/2007. (RDG & DL). On introduced soil.

124/25/2 *Pedicularis sylvatica* L. **Lousewort**. V-c 34. Sandford's Knoll, Frocester C.P., SO70W. 12/04/2007. (JPM).

125/2/8 *Orobanche hederæ* Duby, **Ivy Broomrape**, V-c 34. Beachley, Tidenham C.P., ST59K. 8/08/2007. (MJ). An update for a known locality.

125/2/10 *Orobanche minor* Smith, **Common Broomrape**, V-c 33. Eastleachdowns Farm, Eastleach C.P., SP20E. 29/05/2007. (ILR). Several hundred in recently sown rye-grass. Port Ham, Gloucester. 29/06/2007. (IE). Six spikes on verge of old A40. Venthill, Cold Aston C.P., SP11J. 07/07/2007. (CK & MARK). Two spikes on road verge. West of Beverston Old Brake, Beverston C. P., ST89M. July/2007 (PM). Around 15 spikes in clover field.

129/1/1 *Campanula patula* L. **Spreading Bellflower**. V-c 7. Sands Earth, Silk Wood, Westonbirt Arboretum, Westonbirt with Lasborough C.P., ST88P. 21/07/2007. (RW). Several flowering plants including one pale one. Known site incorrectly recorded as V-c 34 in 2000 and 2001 reports.

129/1/7 *Campanula glomerata* L. **Clustered Bellflower**. V-c 34, Lynch Knoll, Nympsfield C.P., SO80A. 2007. (PRQ). Small population.

129/1/15 *Campanula rotundifolia* L., **Harebell**. V-c 34. Cinderford Linear Park, Cinderford C.P., SO61L. 2007. (RDG & DL). Decreasing in coarser grass. Plump Hill Dolomite Quarry, Mitcheldean C.P., SO61T. 24/08/2007. (RDG & DL). Decreasing at this locality.

130/4/1 **Phuopsis stylosa* (Trim.) Benth. And J.D. Hook. ex B.D. Jackson, **Caucasian Crosswort**. V-c 34. Bulley, Churcham C.P., SO71P. 01/08/2007. (CK & MARK). Well established on roadbank by house.

130/6/14 *Galium parisiense* L. **Wall Bedstraw**. V-c 33. Coates, Coates C.P., SO90Q. 17/08/2007. (MARK & CK). A single plant in set-aside.

134/1/4 **Dipsacus strigosus* Willd. **Yellow-flowered Teasel**. V-c 33, near Royal Agricultural College, Cirencester C.P., SP00A. 26/06/2007. (PB & PH). Along roadside but all cut down.

135/9/1 *Serratula tinctoria* L. **Saw-wort**. V-c 34. Bowlers Hole, Symonds Yat, English Bicknor C.P., SO51S. 8/04/2007. (MJ).

135/30/1 *Filago vulgaris* Lam., **Common Cudweed**. V-c 34, Ever Hill Coppice, Dymock C.P., SO73F. 15/08/2007. (CK, MARK, TW, KW et al). Growing amongst, and in greater abundance than, *Filago lutescens*. Not previously reported from here.

135/30/2 *Filago lutescens* Jordan, **Red-tipped Cudweed**. V-c 34, Ever Hill Coppice, Dymock C.P., SO73F. 15/08/2007. (CK, MARK, TW, KW et al). Thirty-three plants amongst many *Filago vulgaris* at the usual locality.

135/55/3 *Anthemis cotula* L., **Stinking Chamomille**. V-c 33. Temple Guiting, Temple Guiting C.P., SP02Y. 08/07/2007. (CK & MARK). Along edge of rape field.

135/56/1 *Chrysanthemum segetum* L., **Corn Marigold**. V-c 33. Near Pemmington Coppice, Notgrove C.P., SP12A. 08/07/2007. (CK & MARK). Two small patches in rape field.

147/5/2 **Arum italicum* Miller, **Italian Lords-and-Ladies**, V-c 34. Westbury-on-Severn, Westbuty-on-Severn C.P., SO71B. 14/01/2007. (CK & MARK). Several along streamside by Westbury Court Garden.

147/5/2b **Arum italicum* Miller subsp. *italicum* **Italian Lords-and-Ladies**. V-c 34. Fromehall Mills, Stroud, SO80M. 05/02/2006. (CK & MARK). Single large clump on island in River Frome.

148/2/4 **Lemna minima* Kunth., **Least Duckweed**. V-c 33. Upham Meadow, Twynning C.P., SO93D. 21/10/2007. (CK & MARK). Locally abundant in rhyne. Second V-c record. V-c 34. Marl pool, Hamfallow C.P., SO70A. 12/11/2007. (CK & MARK). Abundant in cattle trough in pasture.

151/1/2 *Juncus tenuis* Willd., **Slender Rush**. V-c 34. Palmer's Flat, Coleford C.P., SO50Z. 12/12/2007. (CK & MARK). Few plants along disused rail-line.

151/1/3 *Juncus compressus* Jacq., **Round-fruited Rush**. V-c 34. Wickridge Street, Ashleworth C.P., SO82D. 12/07/2007. (JRD). Side of the road.

151/1/26x27 *Juncus x kern-reichgeltii* Jansen & Wachter ex Reichg. = *J. effusus x J. conglomeratus*. V-c 34. Michael Wood, Alkington C.P., ST79C. Probably 2002 (MPW, comm 21/12/2007) Edge of wood by north bound services M5 motorway. First county and V-c record.

151/2/1 *Luzula forsteri* (Smith) DC., **Southern Wood-rush**. V-c 37 (Gloucestershire Admin. County). Cobhill Rough, Redmarley D'Abitot C.P., SO73K. 29/05/2006. (CK & MARK). Abundant along wood edge by track.

152/1/1 *Eriophorum angustifolium* Honck., **Common Cottongrass**. V-c 34. Foxes Bridge Bog, Ruspudge C.P., SO61G. 4/06/2004. (RDG & DL).

152/16/9 *Carex divulsa* Stokes, **Grey Sedge**. V-c 34. Beachley, Tidenham C.P., ST59K 8/08/20007. (MJ).

152/16/26 *Carex riparia* Curtis, **Greater Pond-sedge**. V-c 33. Shuthonger, Twynning C.P., SO83S. 5/05/2007. (MJ). In ditch.

152/16/34 *Carex strigosa* Hudson, **Thin-spiked Wood-sedge**. V-c 33 (Worcestershire Admin. County). Hillenders, Forthampton C.P., SO83G. 12/10/2007. (CK & MARK). Abundant along woodland ride.

152/16/48 *Carex digitata* L., **Fingered Sedge**. V-c 33. Cranham Wood, Cranham C.P., SO81W. 29/06/2007. (MJ). Known locality update.

152/16/54 *Carex montana* L., **Soft-leaved Sedge**. V-c 34. Bowlers Hole, Symonds Yat, English Bicknor C.P., SO51M. 8/04/2007. (MJ).

153/16/2a *Puccinella distans* (Jacq.) Parl. subsp. *distans*, **Reflexed Saltmarsh-grass**. V-c 33. Slade Barn Farm, Hawling C.P., SP02Q. 30/10/2007. (CK & MARK). Few along verge of A436.

153/18/9 *Poa compressa* L. **Flattened Meadow-grass**. V-c 33. St Paul's, Cheltenham, SO92L. 29/07/2007. (CK & MARK). Locally abundant along disused rail-line bank. Pitchcombe Wood, Pitchcombe C.P., SO80P. 08/10/2007 (JRD). In unimproved grassland below the wood. V-c 34. Woodcroft, Tidenham C.P., ST59M. 25/05/2007. (LH, CK & MARK). Large patch on disused quarry floor.

153/35/2 *Aira praecox* L., **Early Hair-grass**. V-c 33. Bromsberrow Quarry, Redmarley D'Abitot C.P., SO73G 16/11/2007. (CK & MARK). Plentiful on Permian sandstone in disused quarry.

153/40/1 *Calamagrostis epigejos* (L.) Roth., **Wood Small-reed**. V-c 34. Hamfield Lane, Ham, Ham and Stone C.P., ST69U. 24/08/2007. (CK & MARK). Several clumps along road verge. High Nash, Coleford C.P., SO51V. 12/12/2007. (CK & MARK). Exclusive patch along disused rail-line.

153/46/2 **Polypogon viridis* (Gouan) Breistr., **Annual Beard-grass**. V-c 34. High Nash, Coleford C.P., SO50Z. 12/12/2007. (CK & MARK). Good patch by roadside in industrial estate.

153/50/7 **Bromus secalinus* L., **Rye Brome**. V-c 33. Venthill, Cold Aston C.P., SP11J. 07/07/2007. (CK & MARK). Single clump at edge of rape field.

153/52/1 **Anisantha diandra* (Roth.) Tutin ex Tzveler, **Great Brome**. V-c 33. Venthill, Cold Aston C.P., SP11J. 07/07/2007. (CK & MARK). Edge of rape field.

153/58/1 *Hordelymus europaeus* (L.) Jenssen, **Wood Barley**. V-c 33. Stockend Wood, Harescombe C.P., SO80P. 08/10/2007. (JRD). Two spikes.

153/61/1 *Danthonia decumbens* (L.) DC, **Heath-grass**. V-c 34. Mincinhampton Common, Minchinhampton C.P., SO80K. 23/06/2007. (CK & MARK). Patch 1 square metre on Jurassic Limestone grassland. This species is more commonly encountered in acid grassland.

153/68/col **Echinochloa colonum* (L.) Link, Shama Millet. V-c 33 (Worcestershire Admin County). Hillenders, Forthampton C.P., SO83G. 12/12/2007. (CK & MARK). Abundant in maize field.

153/70/1 **Setaria viridis* (L.) P. Beauv., **Green Bristle-grass**. V-c 34, Near Brimstones, Westbury-on-Severn C.P., SO71H. 14/01/2007. (CK & MARK det TBR). Good quantity in cut maize field.

153/70/vert **Setaria verticillata* (L.) P. Beauv., **Rough Bristle-grass**. V-c 33 (Worcestershire Admin County). Hillenders, Forthampton C.P., SO83G. 12/12/2007. (CK & MARK). Abundant in two maize fields.

Non Kent. Stace No 155/81/4 * *Panicum miliaceum* L., **Common Millet**. V-c 33 (Worcestershire Admin County). Hillenders, Forthampton C.P., SO83G. 12/10/2007. (CK & MARK). Abundant in one maize field and rare in a second

155/1/2 *Typha angustifolia* L., **Lesser Bulrush**. V-c 33. RAF Fairford, Kempsford C.P., SU19P. 06/08/2006. (CK & MARK).

158/2/1 *Narthecium ossifragum* (L.) Hudson, **Bog Asphodel**. Pithouse Pond, Mitcheldean C.P., SO61P. 2007. (RDG & DL).

158/9/1 *Gagea lutea* (L.) Ker Gawler, **Yellow Star-of-Bethlehem**. V-c 33. Thrift Wood, Southam C.P., SO92X. 3/03/2007. (ILR). Single plant in bud amongst large population of non-flowering plants. Known locality. Also observed 5/04/2007 (GHJM) when no evidence of flowering.

158/12/1 *Lilium martagon* L. **Martagon Lily**. V-c 34. Caswell Wood, Tidenham C.P., SO50K. 8/08/2007. (MJ).

158/17/1 *Paris quadrifolia* L., **Herb Paris**. V-c 34. Slade Bottom, St. Briavels C.P., SO50S. 18/04/2007. (IP). Group of 40-50 plants.

158/18/2 *Ornithogalum angustifolium* Boreau, **Star-of-Bethlehem**. V-c 34. Rodborough Fort, Rodborough C.P., SO80M. 05/05/2007. (CK & MARK). Six flowering clumps. Three Elms Farm, Taynton C.P., SO72F. 07/05/2007. (CK & MARK). Small flowering clump.

158/19/1 **Scilla bifolia* L., **Alpine Squill**. V-c 33. Northwick Park, Blockley C.P., SP13T. 11/03/2007. (CK & MARK). Four plants growing amongst *Omphaloides verna* in a copse. First V-c record. V-c 34. Batmore Hill, St. Briavels C.P., SO50W. 18/03/2007. (CK & MARK). Two flowering by copse edge.

158/24/9 **Allium paradoxum* (M.Bieb) Don, **Few-flowered Leek**. V-c 33. Tunway Gate, Chedworth Woods, Chedworth C.P., SP01M. April 2007. (MJP). Large patch just inside gateway into the woods. Confirmed existence in known locality where previously recorded in 1987.

158/24/11 *Allium oleraceum* L., **Field Garlic**. V-c 34. Ketford Mill, Dymock C.P., SO73F. 12/08/2007. (CK & MARK). Large patch extending along 32m of a roadside hedge but within field.

158/25/1 **Nectaroscordum siculum* (Ucria) Lindley, **Honey Garlic**. V-c 33. Fosse Way, Broadwell C.P., SP12Y. 25/05/2007. (MRB). Seven flowering plants in road cutting.

158/31/16 **Leucojum aestivum* L. subsp. *pulchellum* (Salisb.) Briq., **Summer Snowflake**. V-c 33. Near Longlands Cottages, Ebrington C.P., SP14Q. 17/03/2007. (CK & MARK). Two or three flowering clumps in roadside hedge but within field.

158/32/4 **Galanthus plicatus* M. Bieb., **Pleated Snowdrop**. V-c 33. . Jacquists Grange, Broadwell C.P., SP12Y. 03/03/2007. (CK & MARK). Small roadside patch. First county and V-c record.

158/32/wor **Galanthus woronowii* Losinsk., **Green Snowdrop**. V-c 33. Cornwell Holt, Aldestrop C.P., SP22T. 17/02/2007. (CK & MARK). Small patch with *Galanthus nivalis*. First county and V-c record (see Plate 33).

162/2/1 *Cephalanthera damasonium* (Miller) Druce, **White Helleborine**. V-c 33. The Peak, Cowley C.P., SO91H. 16/05/2007. (MRB). About twenty plants in flower. Painswick Beacon, Upton St Leonards C.P., SO81R. 28/04/2007. (CO). In flower at this early date, the population showing a massive increase on 2006. Also observed in 2007 by (JS).

162/2/2 *Cephalanthera longifolia* (L.) Fritsch, **Narrow-leaved Helleborine**. V-c 34. Rodborough Common, Rodborough C.P., SO80L. May 2007. (DJA). Three plants in flower at the known site.

162/2/3 *Cephalanthera rubra* (L.) Rich., **Red Helleborine**. V-c 33. Near Sheepscombe, Painswick C.P., SO81V. May 2007. (DJA and later PC & JS independently). At least 21 plants at the usual site following two years of on site management works. In 2006 there had been 8 plants, 3 flowered in 2007 where none flowered in the previous 2 years. Only 6 and 2 plants recorded in 2007 at the other two British sites where this rare orchid can still be seen.

162/3/4 *Epipactis helleborine* (L.) Crantz, **Broad-leaved Helleborine**. V-c 33. The Peak, Cowley C.P., SO91H. 17/08/2007. (MRB). Seventy-three plants in flower. 3/09/2007. (JS). Three plants with a yellowish-white lip a variety described in Summerhayes. Swindon village, Swindon C.P., SO92M. 06/08/2007. (RH). Single plant in garden. Householder had seen no other plants there in 20 years occupancy.

var *purpurea*. V-c 33, Short Wood, Cobberley C.P., SO91I. 20/08/2007. (JS). Two flowering plants.

var *viridiflora*. V-c 33, Birdlip Hill, Cowley C.P., SO91H. 6/08/2007. (JS). One flowering plant.

162/3/6 *Epipactis leptochila* (Godfery) Godfery, **Narrow-lipped Helleborine**. V-c 33. Buckholt Wood, Cranham C.P., SO91W. 24/08/2007. (JS). Three flowering plants next to path in wood. Buckle Wood, Brimsfield C.P., SO91B & G. 2007. (GHJM comm JS). Two colonies. Painswick Beacon. Upton St Leonards C.P., SO81R. 25/08/2007. (JS). A late flowering site.

162/3/7 *Epipactis phyllanthes* G.E. Smith, **Green-flowered Helleborine**. var *degenerata* V-c 33. Edge Common, Painswick C.P., SO80P. 2/08/2007. (JS). Nine flowering plants.

var *pendula* V-c 33. Painswick, Painswick C.P., SO81Q. 27/07/2007. (JS). Seven in flower in beech wood at the usual site.

162/5/1 *Neottia nidus-avis* (L.) Rich., **Bird's-nest Orchid**. V-c 33. Daneway Bank NR, Bisley-with-Lypiatt C.P., SO90G. 17/07/2007. (JRD). One just outside the reserve. The Peak, Cowley C.P., SO91H. 16/05/2007. (MRB). About fifteen plants in flower. V-c 34. Serridge Inclosure, Cinderford C.P., SO61B. May 2007. (JL). Group of 20-25 plants.

162/7/1 *Spiranthes spiralis* (L.) Chevall., **Autumn Lady's-tresses**. V-c 34. Breakheart Quarry, North Nibley C.P., ST79N. August 2007. (NL). At least 40 spikes in grassland close to the disused quarry. Downham Hill, Uley C.P., ST79U. 21/09/2007. (JRD). Three spikes amongst bracken. Plump Hill Dolomite Quarry, Mitcheldean C.P., SO61T. 24/08/2007. (RDG & DL). Still present at this known site.

162/12/1 *Herminium monorchis* (L.) R. Br., **Musk Orchid**. V-c 33. Cleeve Common, Southam C.P., SO92Y. 25/06/2007. (MJP). Around 100 spikes in small disused quarry where known by her for about 30 years.

162/13/1 *Platanthera chlorantha* (Custer) Reichb., **Greater Butterfly-orchid**. V-c 33. Gorse Valley, Cotswold Farm Park, Temple Guiting C.P., SP12C. 25/05/2007. (MRB et al). At least 30 spikes in bud, confirmed on 02/06/2007. Thick Wood, Duntisbourne Abbots C.P., SO90N. 07/06/2007. (THL). Small number of plants in field hedge and adjacent wood.

162/14/1 *Anacamptis pyramidalis* (L.) Rich., **Pyramidal Orchid**. V-c 33. Sud Meadow, Gloucester, SO81J. 12/07/2007. (GA). Three plants. Also previous years.

162/16/1 x 162/18/1 *Gymnadenia conopsea* x *Dactylorhiza fuchsii* = *X Dactylodenia St quintinii* (Godfery) J. Duvign. V-c 33. Sheepscombe Common, Painswick C.P., SO81V. 25/06/2007. (JS). Nine plants in flower, including a second newly found population.

162/18/3 *Dactylorhiza incarnata* (L.) Soó, **Early Marsh-orchid**. V-c 33. Sud Meadow, Gloucester, SO81J. 12/07/2007. (GA). Two plants. Not previously recorded here. Salmondsbury Meadows, Bourton-on-the-Water C.P., SP12Q. 9/06/2007. (MG). With possible hybrids.

162/18/4 *Dactylorhiza praetermissa* (Druce) Soó, **Southern Marsh-orchid**. V-c 33. Salmondsbury Meadows, Bourton-on-the-Water C.P., SP12Q. 9/06/2007. (MG). With possible hybrids.

162/20/3 *Orchis morio* L., **Green-winged Orchid**. V-c 33. Painswick Beacon, SO81. 10/05/2006 and 28/04/2007. (CO). A total of 39 spikes were noted in 2007 comprising several populations, whereas a single plant was observed in 2006. Most however had been eaten by rabbits by 13/05/2007. V-c 34. Near the Hill, Taynton C.P., SO72G. 29/04/2007. (SRJB). Eighteen spikes in neutral pasture.

162/20/4 *Orchis ustulata* L., **Burnt Orchid**. V-c 33. Hornsleasow Roughs, Snowhill C.P., SP13B. 9/06/2007. (MG). Two in flower.

162/22/1 *Himantoglossum hircinum* (L.) Sprengel, **Lizard Orchid**. V-c 34. Scar Hill, Nailsworth C.P., ST89P 15/05/2007. (CK & MARK). Single plant in bud on road verge, subsequently identified as this species on 23/05/2007 when it was unfortunately found to have been decapitated either by verge strimming or by a passing motor vehicle. A new locality. This species has been sporadically recorded in the Stroud District over the years as single plants but has never become established.

162/23/1 *Ophrys insectifera* L., **Fly Orchid**. V-c 33. Haresfield Hill, Haresfield C.P., SO80J. 2006 & 2007. (RMP). Three in 2006 with an extra two new plants in 2007.

162/23/3 *Ophrys apifera* Hudson, **Bee Orchid**. V-c 33. Cleeve Common, Southam C.P., SO92Y. 25/06/2007. (MJP). Few flowering spikes in 2007 but very rain damaged. Daglingworth Quarry, Daglingworth C.P., SP00C. 18/06/2007. (HP). About 60 on fairly recently constructed road bank off the A417. V-c 34. Cinderford Linear Park, Cinderford C.P., SO61M. 13/05/2007. (RDG & DL). On introduced soil or track material. Edgihills Quarry, Mitcheldean C.P., SO61T. 11/06/2007. (RDG & DL). Middleridge Inclosure, Ruspidge C.P., SO61F. 5/06/2007. (RDG & DL). Shakemantle Quarry, Ruspidge C.P., SO61K. June 2007. (LM comm RH). Several spikes.

Chara vulgaris L. var *longibracteata* (Kutz.) J. Groves and Bullock-Web, **Common Stonewort**. V-c 33. Vinegar Hill, Standish C.P., SO80E. 17/06/2007. (JAB det NFS). In a cattle trough.

INTERESTING NEW RECORDS OF DIPTERA

Keith Alexander

2007 saw the launch of a revised list of UK BAP Priority Species. Dotted Bee-fly *Bombylius discolor* goes, as it has proved to be very widespread in parts of the country, including the south Cotswolds.

But we haven't just lost a species, we have gained three more.

- The Spotty Sap Fly *Amiota variegata* now joins the select few. This New Forest speciality was discovered in Ban-y-Gor and Lancaut Woods by Dave Gibbs in 2003. It is thought to be associated with the sappy fluxes created by goat moth activity in the trunks of oak trees.
- The Borders Dance-Fly *Empis limata* which was recorded in the Painswick area in 1889 but hasn't been reported from the county since. It appears to be associated with periglacial sand deposits along and near the Rivers Monnow and Usk, and is also known from Moccas Park.
- The Giant Wood-gnat *Neoempheria lineola*, another New Forest speciality which I found in Oakley Wood in 1986. It is thought to develop in fallen hollow beech trunks and old stumps.

The Action Plans have not yet been formulated.

With all of this emphasis on New Forest specialities occurring in the county it is good to be able to announce confirmation of a Windsor Forest speciality here, and the author makes bold to claim the title of 'fly of the year, 2007' on this basis:

Pandivirilia melaleuca (Loew) Forest Silver-Stiletto - **Red Data Book Category 1 (Endangered)**. Relict old forest species, thought to be confined to the Windsor Forest area, but with a thin scatter of unconfirmed records elsewhere across southern and south-eastern Britain. Larvae live among dry powdery, red-rotten heartwood in old hollow trees, especially oak at Windsor, but also other broadleaves. The Oakle Street female is the first confirmed occurrence away from the Windsor area.

SO71 Oakle Street, Churcham, reared from larva in red-rot wood mould in base of hollow pear tree in traditional orchard, 27.ix.2006, KA; adult female emerged Spring 2007 & det. AE Stubbs.

Odontomyia ornata (Meigen) – Ornate Brigadier. **Red Data Book Category 2 (Vulnerable)**. A speciality of lowland grazing levels, especially those on peat. The larvae live amongst duckweed *Lemna* or other floating vegetation in wide ditches and at the margins of ponds with rich submergent vegetation. Adults are

attracted to the blossom of umbels. Best known from the Somerset and Gwent Levels, and the coastal levels of East Sussex. One seen at The Mythe in 2005.

SO 83 The Mythe, three along the embankment between the fishing lake and the river, 1.vi.2007, M. Matthews.

Other important finds during 2007 include the following:

Haematopota crassicornis Wahlberg – Black-horned Cleg. **County Rarity.**

Widespread nationally in wet woodland, carr and poorly-drained pastures, but apparently very localised in the county.

SP03 Cutsdean/Taddington stream, males on bridge, 2.vi.2007, M. Matthews.

Bombylius canescens Mikan – Western Bee-fly. **Nationally Scarce.** Larvae in cells of *Halictus* bees, sand dunes, heathland, calcareous grassland; mostly in south-west of Britain (see Plate 9).

SO61 Pope's Hill, one feeding at bird's-eye speedwell flowers, 29.v.2007, N.J. Phillips.

Villa cingulata (Meigen) – Downland Villa. **Red Data Book Category 1 (Endangered).** Associated with sheltered calcareous grassland and especially the grassland/woodland edge habitat, but a very little known species, believed to develop as a parasitoid of either moth, bee or wasp larvae. Discovered in the county only in 2000, but is doing well and expanding..

SO90 North bank of canal below Siccaridge Wood, 2.vii.2007, and Miserden Park, 16.vii.2007, MM.

Choerades marginatus (Linnaeus) – Golden-haired Robberfly. **Nationally Scarce & County Rarity.** Confined to the ancient oak forests of southern England.

SO61 Blaisdon Wood, pair in cop & several others seen, 15.vi.2007 & with prey, 18.vii.2007, N.J. Phillips. Mugglewort Wood, Flaxley, 8.viii.2007, NJP.

Dioctria oelandica (Linnaeus) - Orange-legged Robberfly. **Nationally Scarce & County Rarity** Associated with rides and glades and other open-canopied situations in oak woodland, perhaps with a preference for coppices (see Plate 10).

SO60 Brierley, 3.vi.2007, NJP.

SO61 Ware Slade, Brierley, 3.vi.2007, NJP.

Neoitamus cyanurus (Loew) – Common Awl Robberfly. **County Rarity.** Ancient woodland, especially oak, and best known in the county from the Forest of Dean.

SO60 Nagshead Reserve, 16.vii.2007, NJP.

SO61 Astonbridgehill Incl. & Upper Lydbrook, 8.vii.2007, NJP.

During 2007 Dave Gibbs' new *Chyromya* was formally announced in *Dipterists Digest* (14: 13-22):

Chyromya britannica Gibbs – Reared from rot-hole debris in broad-leaved trees in a variety of situations. Added to the British List based on Gloucestershire material, but also known from VCs 6 (Bristol), 21 (Middlesex), 23 (Oxfordshire) & 56 (Nottinghamshire) and possibly a widespread but overlooked species.

SO71 Highnam Woods, males & females reared from rot-hole debris at base of oak tree, emerged 2003 & 2004 (Gibbs, 2007).

BEETLE RECORDING IN GLOUCESTERSHIRE

Keith Alexander

BAP Priority Species

The UK Biodiversity Action Plan has until recently included only a few beetle species which occur in the county. Much of the work carried out on these species is reported in the 'grey literature', i.e. unpublished reports, and never gets copied to the county recorder. The situation is due to get much worse, with the 2007 revision of the list of Priority Species resulting in an increase to 25 species known locally:

Scientific name	Common name	Habitat	Recent records	Old records, most recent date
<i>Agonum scitulum</i>	a Ground Beetle	shaded marsh	Coombe Hill Canal 1994	FoD
<i>Ampedus rufipennis</i>	Red-horned Cardinal Click Beetle	heartwood decay in old trees larvae develop in unshaded accumulations of sandy soils at the base of crags	north Cotswold ash pollards	
<i>Anostirus castaneus</i>	Chestnut Click Beetle	damp bare sand or mud at margins of water	None	FoD 1926
<i>Bembidion quadripustulatum</i>	Scarce Four-dot Pin-palp		The Warth, Slimbridge 1992	Rendcomb 1940s
<i>Calosoma inquisitor</i>	Lesser Searcher Necklace	old oak forest	None	FoD 1937
<i>Carabus monilis</i>	Ground Beetle	well-drained soils; variety of situations	Cotswolds	widespread
<i>Cryptocephalus nitidulus</i>	Shining Pot Beetle	birch and hazel within limestone pastures	None	Colesbourne 1940s
<i>Cryptocephalus primarius</i>	Rock-rose Pot Beetle	scrubby limestone	Stinchcombe Hill area	Rodborough Common

		pastures		1940s
<i>Cryptocephalus sexpunctatus</i>	Six-spotted Pot Beetle	birch and hazel within limestone pastures	None	Colesbourne 1940s
<i>Donacia aquatica</i>	Zircon Reed Beetle	emergent vegetation in still water	None	SO81 (no details)
<i>Dromius quadrisignatus</i>	a Ground Beetle	dead branches	Welshbury 1987	Newnham
<i>Gnorimus nobilis</i>	Noble Chafer	heartwood decay in old fruit trees	Forest of Dean District	
<i>Limonicus violaceus</i>	Violet Click Beetle	heartwood decay in old trees	Dixton Wood, 1998	
<i>Lucanus cervus</i>	Stag Beetle	decaying wood in contact with soil	small colonies on raised ground along Severn Vale	
<i>Malachius aeneus</i>	Scarlet Malachite Beetle	flowery grasslands & wood edge	Daglingworth 1940s	
<i>Meloe proscarabaeus</i>	Black Oil-beetle	flowery grasslands	None	Chalford 1906
<i>Meloe rugosus</i>	Rugged Oil-beetle	flowery grasslands	four Cotswold sites	
<i>Meloe violaceus</i>	Violet Oil-beetle	flowery grasslands	None	Cotswolds 1966
<i>Ophonus melletii</i>	Mellet's Downy-back	limestone pastures	None	Thrupp 1904
<i>Ophonus puncticollis</i>	a Downy-back Ground Beetle	limestone pastures	Rodborough Common 1985	
<i>Ophonus stictus = obscurus</i>	Oolite Downy-back	calcareous soils	None	Hailey canal spoil 1919
<i>Panagaeus cruxmajor</i>	Crucifix ground beetle	marshes & fens	None	Wotton 1898

<i>Platycis cosnardi</i>	Cosnard's Net-winged Beetle	decaying old beeches	None (see Plate 17 for a related species)	FoD 1940s
<i>Pogonus luridipennis</i>	Yellow Pogonus	saltmarshes	None	Severn Estuary 1940s
<i>Synaptus filiformis</i>	Hairy Click Beetle	reed canary- grass growing in freshly deposited river silt	River Severn near Gloucester 2005	Elmore & Tewkesbury 1904

Most of these are the domain of specialist coleopterists but there is scope for contributions from the average GNS member with the oil beetles, noble chafer and stag beetle. Have the two large oil beetles *Meloe proscarabaeus* and *M. violaceus* really become extinct in the county? They are active in March and April in flowery grassy places and could potentially survive in the Cotswolds and Forest of Dean areas. Searching for them should be a pleasant experience, walking in flowery places in spring sunshine!

2007 finds

2007 appears to have been a relatively quiet year for finding interesting beetles in the county. The outstanding find was the ground beetle *Amara strenua* which is a completely unexpected addition to the county list. The recently established Rosemary Leaf Beetle *Chrysolina americana* has been found on lavender in an urban garden at Clifton, Bristol, and so may appear in a garden near you very soon.

Amongst the more interesting encounters reported are:

Amara (Zezea) strenua Zimmermann – **RDB3**. Lives in tidal litter, etc, and amongst vegetation on the coastal saltmarshes of the Thames and Bristol Channels. Very few modern records.

SO82 Coombe Hill Meadows, two in pitfall traps operated 22.v.-5.vi.2007, Andrew Stanbury, identified by David Scott-Langley and confirmed by Mark Telfer, national organiser of the Carabidae Recording Scheme.

Amphimallon ochraceus (Knoch) - **Nationally Scarce Category A & County Rarity**. Similar to the summer chafer *A. solstitialis*, a key difference being that it flies at about midday in contrast to the late evening flights of summer chafer. It is associated with herb-rich native grasslands on free-draining soils

and is largely confined to seacliffs these days due to habitat destruction inland. The larvae are soil dwellers, probably feeding at the roots of broad-leaved herbs. There had only been a single old record from Coleford (1938) until Colin Twissell started finding it in the Cotswolds. A surprising species to elude recorders as it is large and obvious – perhaps some of the summer chafer *A. solstitialis* records were not properly checked? The details of the 2007 records are not provided here as the specimens are still with the national scarab recorder for confirmation.

Gnorimus nobilis (Linnaeus) - Noble Chafer. **Red Data Book Category 2 (Threatened) & BAP Priority Species**. Associated with hollowing old trees, especially concentrations in old orchards; larvae develop in wood mould; adults attracted to large white flowers. A speciality of the lower Severn, Thames, and Solent Basins.

SO61 Pope's Hill, Littledean, one at hogweed flower, 4.vi.2007, two mating on elder blossom, 10.vi.2007, NJ & VE Phillips. Welshbury Wood, adult seen, 24/6/2007, NJP/VEP. Shapridge Farm, Mitcheldean, faecal pellets in cavity in orchard plum tree, 8.x.2007, KNAA.

Leptura quadrifasciata Linnaeus – Four-banded Longhorn **County Rarity**. Develops in decaying stumps and the adults are attracted to blossom. A relict old forest species in the county, and largely confined to the north-west.

SO70 Hock Cliff, at blossom, viii.2007, Mike King (image provided).

Poecilium (Phymatodes) alni (Linnaeus) - **Nationally Scarce Category B & County Rarity**. Develops in recently dead and decaying branches and has perhaps declined with the widespread abandonment of coppicing. The following is the first record locally in over 70 years.

SO73 Bromsberrow Heath, 5.v.2007, J Harper.

MOLLUSCS IN GLOUCESTERSHIRE 2007

David Long

One new vice-county record was verified by the Conchological Society's Non-marine Molluscs Recorder, Adrian Norris. This was John Harper's find of the small introduced freshwater limpet *Ferrissia wautieri* in Clearwell Meend ponds (SO/580081) on 15th February 2007; 4 specimens have been donated to Leeds City Museum. This species was first recorded in Britain in a hothouse tank in 1931 (Kerney 1999:73) and first found in an open habitat in 1976 (Brown D S, 1977 Conchologists' Newsletter 62, pp23-25).

Recording by Gloucestershire Invertebrate Group and GNS members produced the RDB3 Mountain bulin, *Ena montana*, in Lineover Wood (SO/987187) and very juvenile Slender slug, *Malacolimax tenellus* in Nagshead (SO/605086) again. Roman snail, *Helix pomatia* records included Chedworth Roman Villa, SP/054132) (visit by BBC Natural History Unit on 13th June).

Visits to Coombe Hill nature reserve on 18th September, 3rd and 10th October indicated that the June and July floods had probably killed most land molluscs and redistributed and or killed many of the freshwater ones. At the same time, flood-transported single shells added two species to the reserve's list – Chris Wiltshire's find of the River snail *Viviparus viviparus* (earlier found here in the 1980s as old, probably 19th Century, specimens) and David Haigh's find of the Moss snail *Azeca goodalli*. A small whirlpool snail found live on 17th November in a shallow ditch at SO 878271 has been submitted for expert examination and was found to be juvenile, keel-less *Planorbis planorbis*.

On 13th June a find of 3 very fresh shells indicated that *Lauria sempronii* was almost certainly still present at Edgeworth. These shells have been donated to Leeds City Museum, where the 1894 *L. sempronii* material from Haresfield is housed. A third site for *Lauria sempronii* on the outskirts of Stroud in 2006 has been reported by Paul E Whitehead in the Journal of Conchology (J Conch 39(4): 37-379, December 2007). Interestingly specimens from this site have been examined by Dr E Gitteberger and are believed to be hybrids between *L sempronii* and *L cylindracea*.

A number of species, recently distinguished from similar species long recorded from Britain may be found in Gloucestershire. Until recently the only *Balea* Door snail believed to be in Britain and other parts of Europe was *Balea perversa*. But it has now been established that *Balea heydeni* (von Maltzan, 1881) is also present (Gittenberger, Preece and Ripken, 2006) and needs to be looked for. The Pond snail,

Lymnaea palustris, appears to be a complex of several species, mainly distinguished by genital anatomy. And finally the Swamp orb mussel, *Sphaerium nucleus* (Studer, 1820) closely resembles the Horny orb mussel *Sphaerium corneum* (L.) (Killeen, Aldridge and Oliver, 2004) and may turn up in marsh drainage ditches for example in the Severn Hams. If you think you have found any of these I would welcome a sight of them.

Many thanks to the following for finds and records: Juliet Bailey, Jeremy Doe, David Haigh, John Harper, Kathy Meakin, David Scott-Langley, Richard Spyvee, and Colin and Ingrid Twissell.

AMPHIBIAN AND REPTILE REPORT 2007

Colin Twissell

The Amphibian and Reptile Groups of the UK (ARG-UK) held a meeting in Coventry on the 27-28th January 2007 with various lectures and workshops. The event was very well supported. Dr Chris Gleed-Owen, the National Amphibian and Reptile Recording Scheme (NARRS) Coordinator / Research and Monitoring Officer with the Herpetological Conservation Trust, was encouraging those present to adopt a 1km square, the squares being randomly generated by computer (ensuring no bias), to survey for either reptiles or amphibians during the spring and summer months. The surveyor for each square was held responsible for contacting the relevant landowners. Chris Gleed-Owen subsequently organised numerous training days throughout the country. The Gloucestershire Wildlife Trust Headquarters on Robinswood Hill was one of the venues chosen. A well-attended meeting was held on the 21st April, with training in the morning and fieldwork in the afternoon and evening. I adopted three 1km squares, but soon realised this was too ambitious. One chosen square, intensively surveyed, would probably have been more productive.

Esther Collis took up the post of Great Crested Newt Project Officer/ Biodiversity Action Plan Co-ordinator early in 2007. Esther was allocated five project areas across the county, with each area known to support Great Crested Newts. Each site would benefit from improved management of both pond and terrestrial habitat. Despite her late start date (early March) Esther did a sterling job in contacting landowners and other relevant people, mustering up enthusiastic volunteers (amateur and professional) to help in resurveying the ponds in the five areas. Having achieved the targets set for 2007 and the management plans in place for 2008, it is just a matter of ensuring that the plans are implemented over the next two years.

A **Great Crested Newt** (*Triturus cristatus*) male was found for the first time at the Dilke pond after having only found eggs previously; the pond could well be part of the meta-population of those in the Cinderford Linear Park. The species seems to be doing well in areas around the Cotswold Water Park and in one location, near Fairford, 600 individuals were counted.

A school pond in Tetbury was visited in the summer because Great Crested Newts were found earlier in the year and it was just a matter of confirming their presence. No adults were found at this time, but many Great Crested Newt larvae were netted. The problem now exists as to how to use a pond for educational purposes, when it contains a protected species!

Attention was drawn to an area of the Tewkesbury Business Park where late in September, Great Crested Newts were discovered under various bits of discarded material. During a visit to the site in October, Great Crested Newts were still found under any suitable refugia, together with numerous **Smooth Newts** (*Triturus vulgaris*) plus the occasional **Common Frog** (*Rana temporaria*) and **Common Toad** (*Bufo bufo*). The site could well have been part of an old moat, but is now in the process of being back-filled. With planning permission already granted, letters to the appropriate bodies, outlining the presence of a protected species, were sent; the outcome being that an Ecological Consultancy is now involved with assessing the area.

Ten records for **Palmate Newt** (*Triturus helveticus*) were received; five from the Cotswold Escarpment, plus Chedworth, Rodborough, Stroud, Cranham and Robinswood Hill. The remaining records were from the newt's other stronghold - sites in the Forest of Dean.

The Smooth Newt or Common Newt is the one species that surveyors will often discover when netting a pond, but they have been confused with the great crested newt, presumably due to the presence of a crest seen in the males during the breeding period. On two occasions I have investigated the possible presence of great crested newt, but which have turned out to be smooth newt. One interesting record was from Cromall quarry, which is just outside the Gloucestershire boundary. This is a flooded quarry, but at a depth of 17 metres smooth newts were recorded!

Eighteen sightings of Common Toad were received, mostly single individuals. The evening of 20th February was 9°C and wet and toads were seen moving towards a garden pond in Churchdown and by the 24th February both frogs and toads were in amplexus and spawning, but generally other breeding activity was observed at the end of March.

At St Briavels, spawn of the Common Frog was seen on the 27th January. The pond they use never freezes, making spawning here the earliest known Gloucestershire site. Other spawning dates were two or three weeks later, while in some areas spawning did not take place until well into March. At Coombe Hill, frogspawn was seen lying in the meadows where the late winter flood in March had carried the spawn with it, and as the water levels fell, the gelatinous mat was left to desiccate.

Twenty-seven **Common Lizard** (*Lacerta vivipara*) sightings were submitted, from areas of the Cotswold Scarp and the Forest of Dean. An interesting observation taken from the Gloster Birder website was of a Great Grey Shrike (*Lanius excubitor*) taking and impaling a common lizard on the 16th March, in the Forest of Dean! Also a lady from Caudle Green wrote to say that she had rescued a common lizard from

incarceration in her larder. It appeared to have entered the house whilst the porch door was ajar. Two juveniles were seen at Wimberry Slade on the 29th June, and on the 4th July nine juveniles were seen at Dowdeswell Reservoir NR. These early dates for sighting juvenile lizards (August/September being the norm) are presumably due to early mating induced by very mild weather during March and April.

Slow Worms (*Anguis fragilis*) are usually encountered in ones or twos, either in compost or when turning over logs, stones or other material, so finding seventeen at Ringhill Farm, Haresfield and twenty at Cutsdean is quite rewarding. Along the Stroudwater Canal there is an area that is now being restored, but after many years of abandonment, nature has taken over. This "brown-field" site, having lain undisturbed for decades, has become an ideal Slow Worm habitat. With the canal restoration taking place the Slow Worms had to be captured and translocated to another site along the canal, but regrettably, it is known from studies that translocated slow worms do not fare very well.

A good distribution of **Grass Snake** (*Natrix natrix*) records were received from throughout the county, thirty-two in total, eleven of which were sightings from the Cotswold Water Park. A melanistic specimen was seen at Coombe Hill Meadows (see GNS News January 2008), between the June and July floods. Interestingly two Grass Snakes were sighted 700 metres along the canal after the July flood, on the 16th August. Both were basking in an area that had been damaged by the floods. Two sloughs were found at this site on the 10th September. Two juvenile snakes were seen at Dowdeswell Reservoir on the 11th July.

Most of the twelve **Adder** (*Vipera berus*) records were from known sites, but nevertheless always welcome. In 2006 an adder slough was found at Bilson Green so it was good to have a brief view of a basking male on the 17th March. Again, on the website of Gloster Birder, there was an entry of an adder sighting in woods near Parkend on the 20th October, accompanied by a splendid picture of the snake.

Only two reports of **Red-eared Terrapin** (*Trachemys scripta*) sightings were received, one along the Stroudwater Canal at Ebley and the other at Horcott in the Cotswold Water Park.

Thanks to the following for sending in records:- J Bailey, A Ball, C Bevan, A Bingle, A Bluett, I Carle, D Chamberlain, E Collis, J Doe, I Elphick, J Fleming, D Foster, K Fox de Vere, R Gaunt, M Glenny, Gloster Birder, R Godfrey, T Grant, D Haigh, C Harmer, G Harris, K Heron, R Homan, D Lane, A Langford, R Lewis, M Matthews, C McLaren, G Meredith, R Pearce, J & V Phillips, L Pierce, A Robbins, S Ross, I

Proctor, D Scott-Langley, P Scully, R Spyvee, P Stanley, C Studholme, A Taylor, I Twissell, J Wathen, M Webley, G Welch, J Widgery, C Wiltshire.

LADYBIRD REPORT 2007

David Iliff

Since its first arrival in Britain in 2004 the Harlequin Ladybird (*Harmonia axyridis*) has been much written about and has featured in several editions of GNS News and in the last two issues of The Gloucestershire Naturalist. Dr. Michael Majerus predicted that it would rapidly eclipse the native ladybirds as it had previously done when introduced into North America - where interestingly it shares its bad reputation with our own 7 Spot Ladybird (*Coccinella 7-punctata*), an earlier unwelcome alien introduction into USA - and more recently seems to be doing in continental Europe. His prophecies appear to have been fulfilled at a rapid rate in Gloucestershire where numerous sightings, including some very large aggregations, were reported in 2007. These included a count of over 800 individuals (larvae, pupae and adults) on 18th October at Pittville Park, Cheltenham (where this alien invader has quickly established itself at a site previously well-known for its diversity of native ladybird species). Larvae and pupae were seen there throughout most of the year indicating an almost unbroken breeding season (see Plate 18), and the species was present at the site right up till 31st December. A very thorough report of the Harlequin's progress in Britain has just been published in British Wildlife (Volume 19 Number 3).

Dr Majerus also expressed the view that as result of the Harlequin's proliferation our native ladybirds would be confined to the ecological margins by 2008. It is therefore something of a consolation to report that in spite of the very large numbers of Harlequins there was also a wealth of records of other ladybird species in the county in 2007, and there has so far been no detectable sign of diminished numbers of these species. The majority of Harlequin sightings were from urban and suburban sites rather than in the rural locations; indeed no Harlequins were found during field meetings of the Gloucestershire Invertebrate Group (GIG) until the very last one of the season at Lineover Wood on 7th October, where David Scott-Langley found a single individual. At the GIG field meetings counts of native ladybird species were much as would have been expected in pre-Harlequin years.

Ivan Proctor provided some fascinating records, mainly from the Forest of Dean area. The highlight of these was a Striped Ladybird (*Myzia oblongoguttata*) (see Plate 19) beaten from Scots Pine at Crabtree Hill on 1st June. This was only the second county record of the species (which is, as the location of the record would indicate, a specialist dweller in Scots Pine on heathland). Indeed the previous record is a somewhat vague one; it is ascribed to V R Perkins at Wotton-under-Edge on an unknown date in the late 19th or early 20th Century. Ivan also found two examples of the Hieroglyphic Ladybird (*Coccinella hieroglyphica*), another heathland specialist,

(see Plate 20) at Crabtree Hill on 4th October; this ladybird had been found at that site in 2002, but the 2007 record is only the sixth for the county. The 16-Spot Ladybird (*Tytthaspis 16-punctata*) can be fairly elusive, but when it is found it is often in large aggregations, of which a number were recorded during the year. This is one of the mildew-feeding species, but it has also been reported occasionally as feeding on pollen. Ivan Proctor saw and photographed an example of this at Bearse on 19th April; in that instance the ladybirds were grazing on dandelion pollen (see Plate 21).

The Orange Ladybird (*Halyzia 16-guttata*), a relative newcomer to the county, continued to be found regularly, while the 11-Spot Ladybird (*Coccinella 11-punctata*), which seems to have declined in Gloucestershire since the start of the new millennium, was reported near Berkeley by John Widgery on 9th April, the first county record of the species since 2001.

The very large numbers of Harlequin Ladybirds that were present on the railings at Pittville Park made the task of finding other species there difficult, especially in the late autumn. However earlier in the year that site's usual remarkable diversity of ladybird species continued to be seen there among the Harlequins, including the 16-Spot Ladybird, the 18-Spot Ladybird (*Myrrha 18-guttata*) and the Eyed Ladybird (*Anatis ocellata*); an Eyed Ladybird was seen there on 28th June (see Plate 22) when its impressive size made the nearby Harlequins seem small in comparison. The species was again present at the site on 16th July, and Eyed Ladybirds were also recorded at Blaize Bailey on 8th June by John and Viv Phillips and near Snowhill on 6th April by John Widgery.

The Kidney Spot Ladybird (*Chilocorus renipustulatus*) is associated with ash trees; Colin Twissell found a quantity of larvae of this species on an ash trunk near Rook Hill Covert Lake on 16th June (see Plate 23). Adults were seen in a number of sites.

I thank everyone who provided me with records, including the numerous non-entomologists and non GNS members who found Harlequin Ladybirds and sent specimens or photographs to me for verification.

THE BRYOPHYTE FLORA OF ELLIOT NATURE RESERVE, SWIFT'S HILL

R.V. Lansdown

Introduction

Swift's Hill, also known as Elliott Nature Reserve, has been a Gloucestershire Wildlife Trust reserve since 1967. It is an iconic ridge of grassland sticking out into the Slad Valley from its eastern flank (see Plate 1), centred around OS grid reference SO877067. It has been designated as a SSSI mainly for its geology but is also protected for its plants and other wildlife. In the past, particularly when the area was a thriving centre for the wool industry, these steep grasslands would have been grazed by sheep. Nowadays, there are few flocks on the Cotswolds and most grassland is cattle-grazed. Grazing by sheep was probably ideal for many species of moss because the sheep create open areas, stress the richer grasslands, allowing colonisation by the ephemeral mosses and break up closed grassy swards that are poor bryophyte habitat. It is now only the steepness of the slopes that allows many bryophytes to survive, although the recent introduction of belted Galloway cattle to some commons may help to restore habitat diversity and should be monitored.

Quarrying activity in the past has changed the shape of the Cotswolds and the evidence can be seen throughout, particularly when there is a light dusting of snow that highlights the old trackways, and dips and mounds associated with small-scale quarrying. The Cotswolds are also dotted with larger quarries and since the decline in sheep grazing, the abandoned quarries and associated features probably support greater bryophyte diversity than the open grasslands. This not the case in South Wales, where colonisation of quarries by bryophytes appears to be slow and they rarely support taxa of note (S.D.S. Bosanquet pers. comm.), however most of the quarries in the Cotswolds have been abandoned for a long time.

There is little published information on the bryophytes of calcareous grassland in the Cotswolds, in spite of the fact that it supports a rich and diverse bryophyte flora including a number of nationally rare species. The main published information is in H.H. Knight's accounts of the moss (1914) and liverwort (1920) flora of Gloucestershire which provides information on all taxa known to occur in the county up to the time of publication, whilst a few taxonomic studies (e.g. Crundwell and Nyholm 1962) have listed records for particular taxa. The only specific account is that by Callaghan (2005) who recorded the bryophytes in a small number of grassland quadrats and provided a concise and informative description of the character of the Cotswold limestone grasslands.

The bryophyte flora of Swift's Hill is very typical of that of the grassland overlying the oolitic limestone throughout the Cotswolds. However, in addition to the widespread grassland species, Swift's Hill supports four nationally scarce species; one of them at its only known Gloucestershire site. The habitats occupied by bryophytes at Swift's Hill echo those of the Cotswold limestone grasslands as a whole and can be divided into six groups which are described below. Although it lacks some of the typical or rare bryophytes species found at other sites, it has its own suite of rarities, including *Tortella inclinata* (see Plate 5) at its only known site in the county and the largest Cotswold populations of *Scapania aspera* and *Pleurochaete squarrosa*. For its size, it is certainly the most important area of limestone grassland for bryophytes in the Cotswolds and it is of very high conservation value for bryophytes by any standard.

Mosses are usually grouped, depending upon whether their fruit are produced on the main stem or on side shoots, into pleurocarps and acrocarps. In practice, most of the creeping, much-branched mosses are pleurocarpous and the shorter, tufted or sward-forming mosses are acrocarpous. In the accounts below, "BRC" refers to data from the Biological Records Centre, a unit within the Centre for Ecology and Hydrology, **BM** refers to specimens in the herbarium of the Natural History Museum, London and **NMW** refers to specimens in the herbarium of the National Museums and Galleries of Wales, Cardiff which also hosts the herbarium of the British Bryological Society. Names of bryophytes are taken from the checklist (Hill and Preston at www.britishbryologicalsociety.org.uk) and the nationally scarce taxa are listed by Preston (2006). All photographs (apart from Plate 1) were taken at Swift's Hill.

Bryophyte habitats

Tall grassland on level ground and gentle slopes

At Swift's Hill, this habitat is best represented on the western slope above the lay-by, where dense, lush mounds of larger pleurocarpous mosses occur, dominated by *Calliergonella cuspidata*, *Ctenidium molluscum* var. *molluscum*, *Homalothecium lutescens*, *Hypnum lacunosum* var. *lacunosum*, *Rhytidiadelphus squarrosus*, *R. triquetrus* and *Scleropodium purum* and this is where species such as *Dicranum scoparium*, *Eurhynchium hians*, *Fissidens taxifolius*, *Hylocomium splendens* and *Thuidium tamariscinum* are most likely to occur (see Plate 2). This is the habitat characterised in detail by Callaghan (2005) and about 60% of the species that he lists typically occur in this richer grassland.

On the north-facing wall of the abandoned quarry workings, the aspect and steepness of the slope allow species that cannot tolerate desiccation to survive, including the

liverworts *Plagiochila porelloides*, *Riccardia chamaedryfolia* and *Scapania aspera*, as well as the mosses *Neckera crispa* and *Plagiomnium undulatum* and the alga *Nostoc commune*. *Scapania aspera* (see Plate 3) is one of the specialities of Swift's Hill, where there are two small populations in the quarry, one of which is on top of a large boulder, and the largest known population in the Cotswolds under trees on the northern edge of the site. Knight (1920) described it as occurring "sparingly all over the Cotswolds" without further details and away from Swift's Hill, it is currently known from only from single populations on Cleeve Hill, Scottsquar Quarry and Selsley Common and two small populations on Leckhampton Hill. There are relatively recent records from Rodborough Common in 1988 (BRC), Cooper's Hill in 1968 (BRC) and Cleeve Cloud Hill in 1988 (BRC), as well as older records from Stanley Mount in 1909 (BM) and Pen Wood, King's Stanley in 1912 (NMW), although the latter could actually be the same as the current population on Selsley Common.

Short, stressed grassland on steep slopes

This habitat covers most of the reserve at Swift's Hill, wherever the slopes are too steep for deeper soils to develop. In the past this habitat would have been maintained by sheep grazing on much of the Cotswold escarpment, but these days it is limited to areas where the slope precludes development of taller vegetation on richer soils. It is characterised by Upright Brome (*Bromopsis erecta*) and Glaucous Sedge (*Carex flacca*) but almost always has a diverse bryophyte component, which at Swift's Hill includes both widespread, pleurocarpous mosses such as *Ctenidium molluscum* var. *molluscum*, *Hypnum lacunosum* var. *lacunosum* and *Scleropodium purum*, but also species which in the Cotswolds are strongly associated with this habitat, particularly *Entodon concinnus*, *Pleurochaete squarrosa*, *Thuidium assimile*, *Trichostomum crispulum* and *Tortella tortuosa*.

In the UK, *Pleurochaete squarrosa* (see Plate 4) is listed as nationally scarce and is typically a coastal species, often occurring in dune systems, with only a few known sites in limestone and chalk grassland. Knight (1914) only listed four populations from the Cotswolds, Minchinhampton Common in 1901, Stinchcombe Hill in 1910 (NMW), Whittington in 1913 (NMW) and Crickley Hill in 1923 (NMW). The only one of these populations that I have been able to re-find is on Minchinhampton Common, but there are now ten sites supporting populations of *P. squarrosa*, on the hill above Coombe, near Wotton-under-Edge, Cranham Common, Haresfield, Juniper Hill (near Painswick), Minchinhampton Common, Nibley Knoll, Painswick Beacon, Rodborough Common, Selsley Common and Swift's Hill and there is no reason to suppose that other populations will not be found. The population at Swift's Hill is probably the largest known in the Cotswolds and plants occur scattered or in stands

throughout the short grassland on steep slopes. It seems likely that *P. squarrosa* is increasing in the UK, both on inland sites (F.J. Rumsey pers. comm.) and in South Wales (S.D.S. Bosanquet pers. comm.).

Bare ground, tracks and quarry floors

At Swift's Hill there are a number of footpaths leading across the short grassland, these are represented by a low drop on the uphill side, a more or less level path that is usually bare or at most sparsely vegetated, with a taller tuft of grasses on the downhill side before returning to the natural slope of the land (see Plate 6). These are fairly well vegetated and support few bryophytes of note, except where they are reasonably frequently used by people and may support a variety of species such as *Bryum argenteum*, *B. dichotomum*, *B. rubens*, *Didymodon fallax* and *Pseudocrossidium hornschurchianum*.

Bare ground at Swift's Hill occurs mainly around the abandoned quarry workings, particularly on the western lip, where there is a broad, level area with a small fire site, characteristically highlighted by abundantly fruiting *Funaria hygrometrica*. Below this, there is open scree with few plants but where this stabilises it also supports a diverse bryophyte flora. Where the grass is thinner, mosses dominate and include many of the small, acrocarpous mosses characteristic of bare ground in the Cotswold grasslands, including *Aloina aloides*, *Barbula unguiculata*, *Bryum capillare*, *Campyliadelphus chrysophyllus*, *Didymodon fallax*, *D. ferrugineus*, *D. vinealis*, *Ditrichum gracile*, *Microbryum curvicolle*, *Pseudocrossidium hornschurchianum*, *Syntrichia ruralis*, *Tortella tortuosa*, *Tortula modica*, *T. truncata*, *Trichostomum crispulum* and the liverwort *Leiocolea turbinata*, wherever the soil remains humid throughout the winter.

The edge of the level area and some of the stabilised, exposed scree at Swift's Hill support the only known population of the nationally scarce *Tortella inclinata* (see Plate 5) in the Cotswolds. Knight (1914) reported *T. inclinata* from two sites in the north Cotswolds, Cutsdean and Snowhill (BRC), but there are no recent records of this species from these sites.

Bare stone, oolite fragments and quarry faces

A characteristic feature of the grassland overlying the oolite is the presence of pebbles and small stones. These provide a surprisingly rich habitat for bryophytes, including *Tortella inflexa* which usually forms bright green swards about 2 millimetres high. *T. inflexa* is nationally scarce but appears to be frequent, if not common, on these

oolite fragments in the Cotswolds. Another species that typically occurs on these oolite fragments is *Seligeria calcarea*.

One of the lasting effects of quarrying has been to expose the bare oolite leaving vertical stone faces, probably creating a habitat that was at best scarce before quarrying began. This habitat supports a variety of mosses that are typical of walls and buildings throughout the Cotswolds, such as *Encalypta streptocarpa*, *Homalothecium sericeum*, *Rhynchostegiella tenella* and *Tortula muralis* var. *muralis*, with *Gyroweissia tenuis* forming dense carpets in cracks and crevices. In addition, a number of boulders in the floor of the quarry have a relatively diverse bryophyte flora, including *Didymodon luridum*, *D. vinealis*, *Grimmia pulvinata*, *Schistidium crassipilum* and a small population of *Scapania aspera*.

Ant-hills and richer bare soils

At Swift's Hill, richer soils occur on ant-hills and along the edge of the road, where there is a drop down from the grassland. Typically, these are largely bare or support only a few acrocarpous moss species such as *Barbula unguiculata*, *Didymodon insulanus*, *Fissidens dubius* and *Trichostomum brachydontium*, as well as creeping strands of some of the larger pleurocarpous mosses spreading in from adjacent grassland.

Ant-hills have a number of specialists. *Fissidens incurvus* typically occurs on the steep faces of ant-hills, along with the *Weissia* species, *W. brachycarpa* var. *obliqua*, *W. controversa* var. *controversa* and *W. longifolia* var. *angustifolia* as well as a hybrid of which one parent is *W. longifolia* var. *angustifolia* and the other is probably *W. brachycarpa*. The shaded side of ant-hills usually supports dense *Scleropodium purum*, while bare patches on the top often support species such as *Tortula acaulon* var. *acaulon* as well as *Bryum dichotomum*, *B. rubens* and probably other *Bryum* species.

Woodland

The trees on the site support very few truly epiphytic bryophytes compared to most other sites in the Cotswolds – a single ash (*Fraxinus excelsior*) had a few tufts of *Orthotrichum affine* with single tufts of *O. pulchellum* and *O. stramineum*, whilst one beech (*Fagus sylvatica*) has a small population of the liverwort *Metzgeria furcata*. This impoverished flora is hard to explain but it may be because the isolated trees scattered over the grassland are too exposed to support a rich epiphytic bryophyte flora, whilst those in the woodland are generally too young.

In contrast to the tree trunks and branches, the tree roots and ground between them support a rich and diverse bryophyte flora. This is dominated by larger pleurocarpous mosses, such as *Brachythecium rutabulum*, *B. velutinum*, *Ctenidium molluscum*, *Eurhynchium praelongum*, *E. striatum*, *Rhynchostegiella tenella* and *Rhynchostegium confertum*, with the liverwort *Lophocolea bidentata* and species such as *Homalothecium sericeum* and *Hypnum cupressiforme* var. *cupressiforme* creeping over the tree bases. *Fissidens dubius* is very common in this habitat, forming dense stands of upright leaves and there are a few swards of *Dicranella heteromalla*. The woodland floor on a steep slope on the northern edge of the site supports the largest known population of *Scapania aspera* in the Cotswolds, with a number of large healthy stands scattered over approximately 10m², growing through clumps of *Encalypta streptocarpa*, *Ctenidium molluscum* and *Brachythecium rutabulum*. A small area almost along the boundary fence on the southern edge of the site supports a very large stand of another nationally scarce moss, *Campylophyllum calcareum* (see Plate 7).

Acknowledgements

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Bryophyte species recorded at Swift's Hill

The species recorded are listed by scientific name in alphabetical order but with the "common" name presented first. It should be noted that the common names have no standing and as noted by A J E Smith, "should not be given unless the [scientific] names are given as well". Names in **bold** text indicate nationally scarce species.

Liverworts

Top notchwort *Leiocolea turbinata* c. per.
Bifid crestwort *Lophocolea bidentata*
Forked veilwort *Metzgeria furcata*
Lesser featherwort *Plagiochila porelloides*
Jagged germanderwort *Riccardia chamedryfolia*
Rough earwort *Scapania aspera*

Mosses

Common aloe-moss *Aloina aloides*
Sardinian bird's-claw beard-moss *Barbula sardoa*
Bird's-claw beard-moss *Barbula unguiculata*
Rough-stalked feather-moss *Brachythecium rutabulum*
Velvet feather-moss *Brachythecium velutinum*
Red beard-moss *Bryoerythrophyllum recurvirostrum*
Silver-moss *Bryum argenteum*
Tufted thread-moss *Bryum caespiticium*
Capillary thread-moss *Bryum capillare*
Bicoloured bryum *Bryum dichotomum*
Crimson-tuber thread-moss *Bryum rubens*
Pointed spear-moss *Calliergonella cuspidata*
Golden feather-moss *Campyliadelphus chrysophyllus*
Dull starry feather-moss *Campylium protensum*
Chalk feather-moss *Campylophyllum calcareum*
Beech feather-moss *Cirriphyllum crassinervium*
Chalk comb-moss *Ctenidium molluscum* var. *molluscum*
Silky forklet-moss *Dicranella heteromalla*
Variable forklet-moss *Dicranella varia*
Broom fork-moss *Dicranum scoparium*
False beard-moss *Didymodon fallax*

Rusty beard-moss *Didymodon ferrugineus*
Cylindric beard-moss *Didymodon insulanus*
Dusky beard-moss *Didymodon luridus*
Olive beard-moss *Didymodon tophaceus*
Soft-tufted beard-moss *Didymodon vinealis*
Slender Ditrichum *Ditrichum gracile*
Spiral extinguisher-moss *Encalypta streptocarpa*
Montagne's cylinder-moss *Entodon concinnus*
Swartz's feather-moss *Eurhynchium hians*
Common feather-moss *Eurhynchium praelongum*
Common striated feather-moss *Eurhynchium striatum*
Maidenhair pocket-moss *Fissidens adianthoides*
Rock pocket-moss *Fissidens dubius*
Short-leaved pocket-moss *Fissidens incurvus*
Common cord-moss *Fumaria hygrometrica*
Grey-cushioned grimmia *Grimmia pulvinata*
Slender stubble-moss *Gyroweissia tenuis*
Yellow feather-moss *Homalothecium lutescens*
Silky wall feather-moss *Homalothecium sericeum*
Glittering wood-moss *Hylocomium splendens*
Cypress-leaved plait-moss *Hypnum cupressiforme* var. *cupressiforme*
Great plait-moss *Hypnum lacunosum* var. *lacunosum*
Swan-necked Earth-moss *Microbryum curvicolle*
Crisped neckera *Neckera crispa*
Wood bristle-moss *Orthotrichum affine*
Elegant bristle-moss *Orthotrichum pulchellum*
Straw bristle-moss *Orthotrichum stramineum*
Long-beaked thyme-moss *Plagiomnium rostratum*
Waved silk-moss *Plagiomnium undulatum*
Side-fruited crisp-moss *Pleurochaete squarrosa*
Hornschurch's beard-moss *Pseudocrossidium hornschurchianum*
Tender feather-moss *Rhynchostegiella tenella*
Clustered feather-moss *Rhynchostegium confertum*
Springy turf-moss *Rhytidiadelphus squarrosus*
Big shaggy-moss *Rhytidiadelphus triquetrus*
Thickpoint grimmia *Schistidium crassipilum*
Neat feather-moss *Scleropodium purum*
Chalk rock-bristle *Seligeria calcarea*
Great hairy screw-moss *Syntrichia ruralis*
Philibert's tamarisk-moss *Thuidium assimile*
Lesser tamarisk-moss *Thuidium tamariscinum*

Bent crisp-moss *Tortella inclinata*
Sassari crisp-moss *Tortella inflexa*
Frizzled crisp-moss *Tortella tortuosa*
Cuspidate earth-moss *Tortula acaulon* var. *acaulon*
Blunt-fruited pottia *Tortula modica*
Wall screw-moss *Tortula muralis* var. *muralis*
Common pottia *Tortula truncata*
Variable crisp-moss *Trichostomum brachydontium*
Curly crisp-moss *Trichostomum crispulum*
Oblique-mouthed beardless-moss *Weissia brachycarpa* var. *obliqua*
Green-tufted stubble-moss *Weissia controversa* var. *controversa*
Narrow-leaved beardless-moss *Weissia longifolia* var. *angustifolia*



Plate 1. Swift's Hill, looking north from the Slad road



Plate 2. Dense vegetation dominated by large pleurocarpous mosses



Plate 3. Scapania aspera

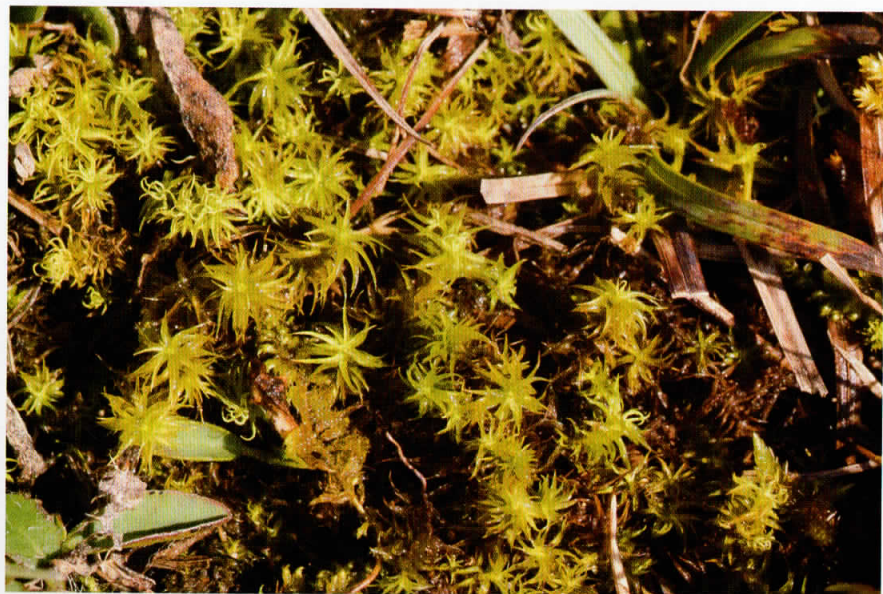


Plate 4. Pleurochaete squarrosa



Plate 5. Tortella inclinata



Plate 6. Grassland on steep slopes with ant-hills and a footpath



Plate 7. *Campyllophyllum calcareum*

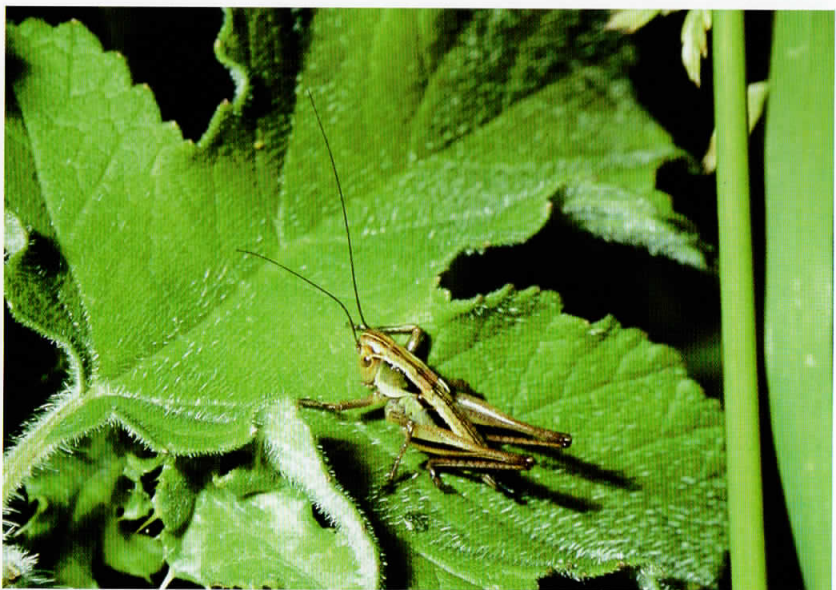


Plate 8. Roesel's Bush Cricket (*Metrioptera roeseli*) at Rook Hill Covert, 16th June 2007 (David Iliff)



Plate 9. *Bombylius canescens* at Pope's Hill, FOD. 29th May 2007. (N J Phillips)



Plate 10. *Dioctria oelandica* (Orange-legged Robberfly) at Ware Slade, FOD. 3rd June 2007. (N J Phillips)



Plate 11. Hoverfly Volucella zonaria (female) by River Chelt, 5th July 2007 (David Iliff)



Plate 12. Hoverfly Volucella inanis (female) on Hebe "Great Orme", Woodmancote, 17th August 2007 (David Iliff)



Plate 13. Hoverfly Rhingia rostrata (female), Bull's Cross, 12th August 2007 (David Iliff)



Plate 14. Hoverfly Chrysotoxum arcuatum (female), Ruardeanhill Plantation, 20th May 2007 (John Phillips)



Plate 15. Hoverfly Xanthandrus comtus (female) at Michael Wood, 17th October 1993 (David Iliff)



Plate 16. Hoverfly *Helophilus trivittatus* (female), Nagshead, 24th June 2007
(David Iliff)



Plate 17. Net-wing Beetle *Platycis minuta* at Nagshead, 8th September 2007
(David Iliff)



Plate 18. Adult Harlequin Ladybird (*Harmonia axyridis*) emerging from pupa, Pittville Park, Cheltenham, 8th October 2007 (David Iliff)



Plate 19. Striped Ladybird (*Myzia oblongoguttata*), Crabtree Hill, 1st June 2007
(Ivan Proctor)

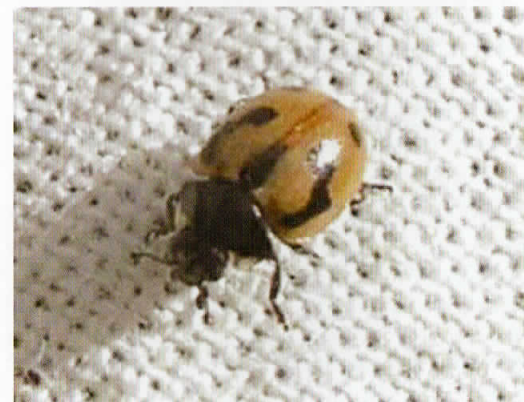


Plate 20. Hieroglyphic Ladybird (*Coccinella hieroglyphica*), Crabtree Hill, 8th October 2007
(Ivan Proctor)



Plate 21. 16-Spot Ladybirds (Tythaspis 16-punctata) grazing on dandelion pollen, Bears, 19th April 2007 (Ivan Proctor)



Plate 22. Eyed Ladybird (Anatis ocellata) on railings at Pittville Park, Cheltenham, 28th June 2007 (David Iliff)



Plate 23. Larva of Kidney Spot Ladybird (Chilocorus renipustulatus) on ash trunk at Rook Hill Covert, 16th June 2007 (David Iliff)



Plate 24. The capsid bug Oncotylus viridiflavus, August 1998, Hertfordshire (John Widgery)

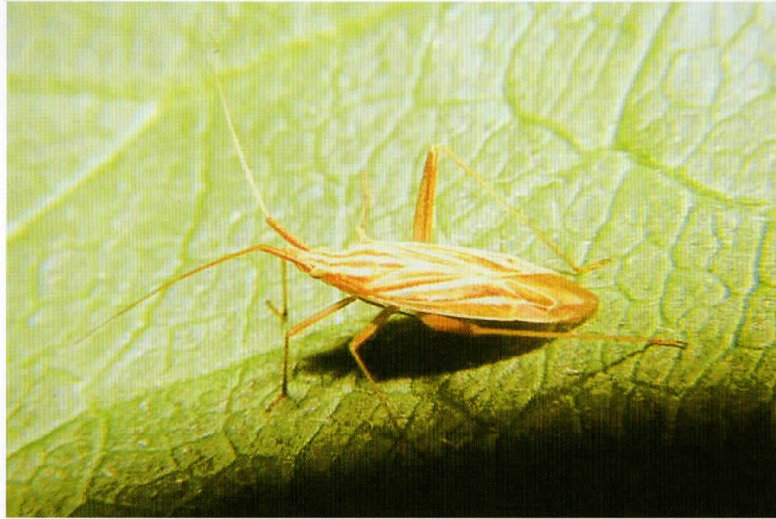


Plate 25. The capsid bug *Miridius quadrivirgatus*, Gotherington, 9th July 2007
(John Widgery)

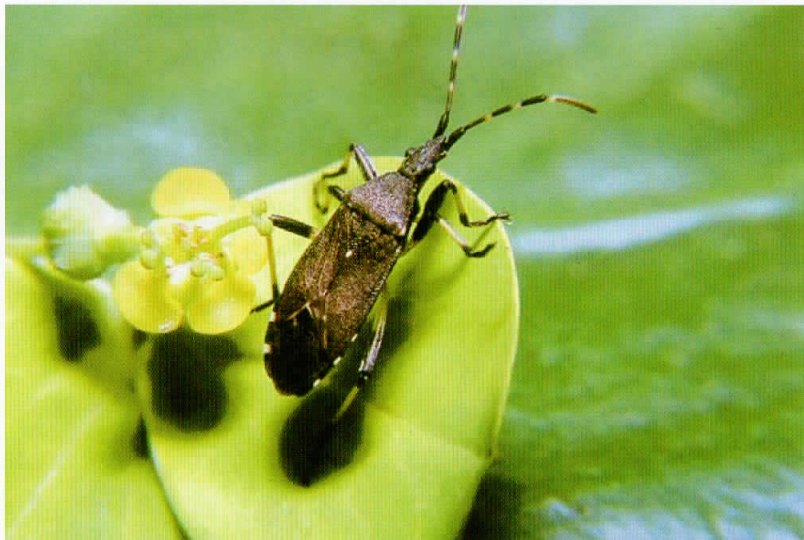


Plate 26. The spurgebug *Dicranocephalus medius*, found by David Haigh, Black Morgans Wood, 12th May 2007 (John Widgery)



Plate 27. Emperor Dragonfly (*Anax imperator*) eating a female Broad-bodied Chaser (*Libellula depressa*), Dam Green, 31st July 2007 (Colin Twissell)



Plate 28. The False Widow spider (*Steatoda nobilis*), Tewkesbury, 1st June 2007
(Andrew Haigh)

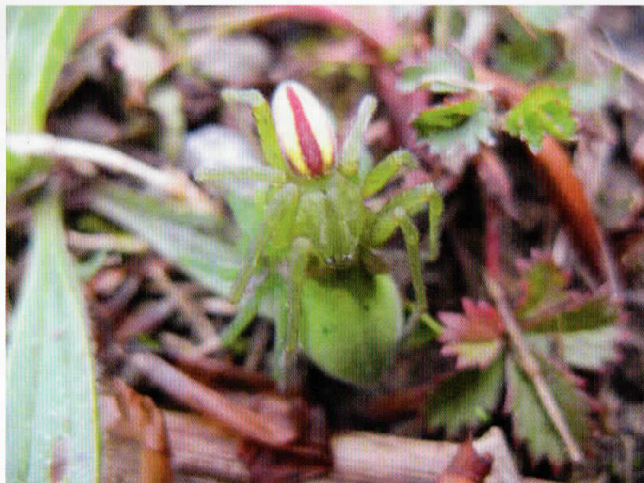


Plate 29. A mating pair of *Micrommata virescens* (Roger Gaunt)



Plate 30. Male and female *Araniella alpica*
Wigpool, Forest of Dean. 1st June 2007 (John Harper)



Plate 31. (left) *Phrurolithus minimus* – male right palp and (right) *Phrurolithus festivus* – male right palp. See page 85. (John Harper)



Plate 32. *Cytromium falcatum* (House Holly-fern), Cheltenham, 18th February 2007
(Mark Kitchen)

ORTHOPTERA (GRASSHOPPERS, CRICKETS and RELATED INSECTS) 2007

John Widgery

It is not often that a new species of Orthoptera can be reported but I have been informed by the national recorder of the discovery of the Southern Oak Bush-cricket, *Meconema meridionale*, in a house in the Bishopston area of Bristol on 31st October. This species, which is new for vice county 34, is superficially similar to the common Oak Bush-cricket, *Meconema thalassinum*, except it is smaller and, importantly, only carries vestigial wings, which means it is flightless. It can be confused with the immature stages of the Oak Bush-cricket when they also only have short wings but any doubts do not normally arise from August onwards by which time this species is adult and long-winged. Quite remarkably, for a flightless insect, the Southern Oak Bush-cricket has had an 'explosive' expansion of range over the past two decades from its Mediterranean stronghold into northern Europe. It was first recorded in Britain in 2001 when it was found at several well separated sites over 50 km apart in Surrey and Berkshire. It has since turned up at several other localities particularly in and around the London area.

It is for conjecture as to how such a species can make such an impressive move but it is thought that it readily gets shaken from trees and bushes adjacent to roads to be carried by an ever-increasing amount of traffic across Europe including into the UK. There is also considerable evidence of introduction through the horticultural trade on the high percentage of trees and shrubs now imported regularly from southern Europe. This latter route of arrival means that it may well be worth exploring areas around garden centres and nurseries for this species and other potential colonisers from all invertebrate groups.

The range expansion of Roesel's Bush Cricket, *Metrioptera roeselii*, is continuing apace (see Plate 8). It was recorded at many new sites in 2007 including eight new 10km squares. It is a similar story so far as Long-winged Conehead, *Conocephalus discolor*, is concerned but there were many more records for this species and it is obviously spreading more rapidly.

Despite this spread, records for both species are still lacking from much of the Forest of Dean which is probably merely due to the absence of searches at the appropriate time. I would guess that both species are in fact already present throughout this area. There were many other new 2km square records for most of the other orthopteroid species in the County but none of these were particularly significant.



Plate 33. *Galanthus woronowii* (Green Snowdrop) with *G. nivalis* (Snowdrop), Cornwell Halt, 17th February 2007 (Mark Kitchen)



Plate 34. Fruits of *Crataegus grandiflora*, Kemerton, 6th December 2007 (Mark Kitchen)

SHIELDBUG REPORT 2006*

David Iliff

Shieldbug recording in Gloucestershire seems to be in a very healthy state at the moment, and I received numerous records throughout 2006. No doubt the recent publication of several high quality guides, reviewed in GNS literature, has helped greatly in the identification of these insects. My thanks to everyone who provided records.

Last year's report described the finding of several examples of *Eurygaster testudinaria*, previously regarded as a county rarity. 2006 produced a number of additional records, with adults being seen by Colin and Ingrid Twissell at Wigpool on 8th August 2006, Robert Homan at Whittington on 10th August 2006, and John Widgery at Charlton Kings Common on 27th August 2006 and Woodmancote on 5th September 2006; John also had an adult and a nymph at Haresfield Beacon on 4th July 2006 and seven nymphs on Cleeve Hill on 23rd July 2006.

Another county rarity, *Neotiglossa pusilla*, was taken at Cutsdean Quarry by David Scott-Langley on 24th June 2006. Other records of note included *Legnotus limbosus* at Woodmancote on 24th June 2006 (John Widgery) and the Blue Bug (*Zicrona coerulea*) at Wigpool on 28th October 2006 (Colin and Ingrid Twissell).

I have continued to monitor the colony of the Juniper Shieldbug (*Cyphostethus tristriatus*) in a variegated False Cypress (*Chamaecyparis*) in my garden. For much of the year numbers of adults and nymphs in the tree seemed to be lower than in 2005, but they recovered towards the end of 2006. John Widgery found the bug in *Chamaecyparis* and *Thuja* in a number of sites and Roger Gaunt took one at Silk Wood on 22nd April 2006.

Finally, I remember seeing in my garden in 2005 a Forest Bug (*Pentatoma rufipes*) flying into the web of a garden spider which instantly bound it tightly in silk. I was therefore surprised to see, also in my garden on 26th August 2006, a Hawthorn Shieldbug (*Acanthosoma haemorrhoidale*) land from flight on a strand of spider silk and then slowly walk along it upside down for about 30cm until it reached the safety of a leaf.

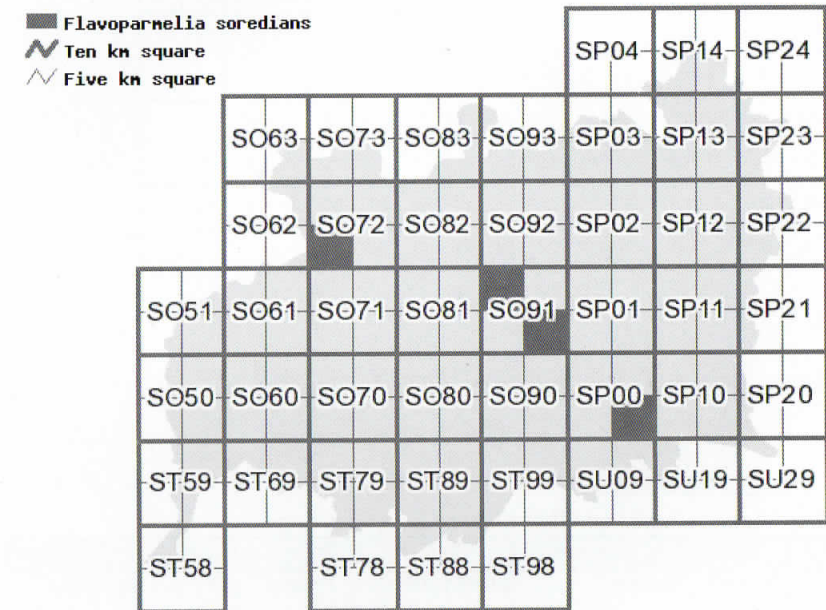
* (This report was inadvertently left out of last year's TGN no.18 – Editor.)

LICHEN REPORT 2007

Ian Carle

I made a total of 651 records on non-Lichen Group trips, and Lichen Group visits added a further 412, and individual Lichen Group members added two more records giving a grand total of 1065 for the year.

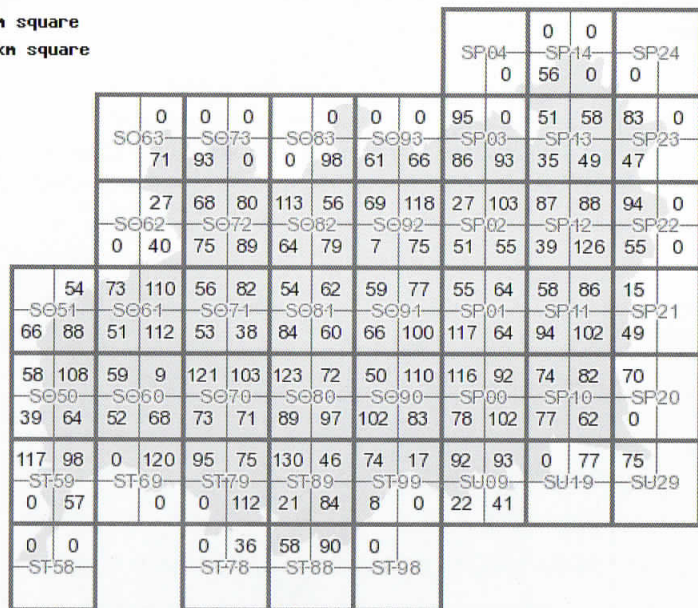
Last year I mentioned the finding of *Flavoparmelia soredians* from Glasshouse on one of our meetings and wondered if it would be found elsewhere the county. I am pleased to report that I found it in two further five-kilometre squares in 2007 – at Ullenwood (SO91NW) and Ampney St Mary (SP00SE). (See distribution map below).



Other notable finds of mine include a first East Gloucestershire Vice County record for *Pertusaria lactea*, from Sevenhampton. A new site for *Anaptychia ciliaris* ssp. *ciliaris* on several ash trees at Barton and a re-find of *Toninia sedifolia* at Ampney St Mary, whilst searching an old site for *Anaptychia ciliaris* ssp. *ciliaris*. Both *Anaptychia ciliaris* ssp. *ciliaris* and *Toninia sedifolia* were added to the UK list of Priority Species in 2007.

Lichen Group visits were hampered by the awful weather last summer, but still produced some good lichen lists including a first county record for *Strangospora moriformis* from Alan Orange.

⚡ Ten km square
 ⚡ Five km square



Map showing the number of records per five-kilometre square on our database at the end of 2007.

Interesting records

Records in bold were gathered on GNS Lichen Group meetings

Name	Grid	Location	Date	Status	VC	Recorder
<i>Anaptychia ciliaris</i> subsp. <i>ciliaris</i>	SP1025	Barton	20/05/2007	VU. Priority Species (2007)	33	Ian Carle
<i>Caloplaca ulcerosa</i>	SP1025	Barton	20/05/2007	LC NS	33	Ian Carle
<i>Catapyrenium squamulosum</i>	SP0013	Colesbourne	08/09/2007	LC NS	33	Ian Carle
<i>Catapyrenium squamulosum</i>	ST9498	Rodmarton	02/06/2007	LC NS	33	Ian Carle
<i>Pertusaria lactea</i>	SP0321	Sevenhampton	26/05/2007	First VC Record	33	Ian Carle

<i>Punctelia jeckeri</i>	SP0801	Ampney St Peter	09/06/2007	LC NS	33	Ian Carle
<i>Punctelia jeckeri</i>	SP1025	Barton	20/05/2007	LC NS	33	Ian Carle
<i>Punctelia jeckeri</i>	SO6815	Flaxley	05/05/2007	LC NS	34	Alan Orange
<i>Strangospora moriformis</i>	SO6814	Popes Hill	05/05/2007	LC NS	34	Alan Orange
<i>Toninia sedifolia</i>	SP0701	Ampney St. Mary	09/06/2007	Priority Species (2007)	33	Ian Carle
<i>Verrucaria elaeina</i>	SO6815	Flaxley	05/05/2007	LC NS	34	Alan Orange
<i>Verrucaria elaeina</i>	SO6814	Popes Hill	05/05/2007	LC NS	34	Alan Orange
<i>Xanthoria ucraïnica</i>	SP0013	Colesbourne	08/09/2007	LC NS	33	Ian Carle
<i>Xanthoria ucraïnica</i>	SO6815	Flaxley	05/05/2007	LC NS	34	Alan Orange

Key to status

DD - Data Deficient NR - Nationally Rare IR International Responsibility
 NS - Nationally Scarce VU - Vulnerable LC - Least Concern*

*The least concern category indicates that although the taxon may appear to be currently scarce or rare there is good evidence that with further recording effort it will be found in more locations. Status information has been taken from 'A Conservation Evaluation of British Lichens' by R.G. Woods and B.J. Coppins published by the British Lichen Society in 2003.

I would like to thank the following for their support: Joy Ricketts the Worcestershire County Recorder, Bryan Edwards (BLS Conservation Officer), Alan Orange (National Museum of Wales). Thanks also to Juliet Bailey for her records, Ingrid and Colin Twissell for bringing lichen covered twigs in for me to identify and to Richard Spyvee for recognising the potential of the ash trees at Barton.

TERRESTRIAL HETEROPTERA (LAND BUGS) 2007

John Widgery

Thanks must go to David Iliff who has, in recent years, handled the recording of a comparatively small section of the Heteroptera (the Shield Bugs) for the county. Now that I have taken on the recording for the whole of this group it has been agreed that it would no longer be sensible for Shield Bugs to be dealt with separately and they should therefore be incorporated with the main Heteroptera recording scheme. This report will therefore include them and any future records should be sent to me.

Despite the appalling summer rains, 2007 turned out to be quite a good year overall with five species being recorded in the county for the first time, plus the finding of a further three which had not been seen for over fifty years and another two that had only been recorded once over a similar period. However, perhaps not surprisingly, there were negatives with evidence that the spread of some recent colonisers, particularly *Stictopleurus* species (see 2006 report), has been checked. Moreover, the rare ground bug *Heterogaster artemesiae* which was discovered in 2006 in good numbers on Cleeve Hill for the first time in over 60 years could not be refound this year.

New County Records

Deraeocoris flavilinea:- This species was first recorded in the UK in 1996 in the London area. Since 2000 it has been spreading rapidly. The first Gloucestershire record was this year at Pittville Park, Cheltenham (SO9523) on 13th June. It was also found at Coombe Canal NR (SO8827), near Stanton (SP0734) on 6th July and at Juniper Hill, Painswick (SO8608) on 28th July. It would already appear to be well established here.

Hypseloecus visci:- First recorded in the UK in Somerset in 2003, this is another species which has since spread quickly through Southern England. A search of Mistletoe, *Viscum album* its food plant, produced the first and, to date, the only County record in an abandoned apple orchard at Woodmancote (SO9628) on 4th August. I am fairly confident that it will be found elsewhere over the next few years.

Phytocoris pini:- Whilst this species is widespread on the continent, it is predominantly a northern species in the UK although it has been recorded previously in adjacent counties such as Herefordshire. It was discovered for the first time in Gloucestershire on Scots Pine (*Pinus sylvestris*) at May Hill (SO6921) on 9th August.

Elatophilus nigricornis:- This conifer specialist was originally confined to Scotland but has spread into many areas as a result of conifer afforestation. It had not been seen in the county prior to it turning up, together with the above species, in the same beating tray, at May Hill (SO6921) on 9th August.

Campylomma annulicorne:- This tiny (3mm), pale whitish-green insect, which is yet another species recently new to the UK, was found for the first time in Gloucestershire in some numbers on its food plant White Willow, *Salix alba* at Tewkesbury (SO8832) and at two sites in the Cotswold Water Park near Somerford Keynes (SU0293/4) during August and September. It is probably already well established throughout the county.

County Scarce or Rare Species

Miridius quadrivirgatus:- In my opinion this is the most attractive of the grass bugs (see Plate 25). It has always been fairly sparsely distributed but there is evidence to suggest that it has been spreading in recent years. It was first discovered in the County in 1999 and two further records this year at Cleeve Hill (SO9827) and near Woodmancote (SO9628) brings the total number of records to six.

Oncotylus viridiflavus:- This species, which feeds on Knapweeds, *Centaurea* spp. was first recorded in the County as recently as 2003. There had been no further records until this year when I found it at Upleadon (SO7326), May Hill (SO7020) and Cutsdean Quarry (SP1031), all in August (see Plate 24). It is yet another species which seems to be expanding its range.

Orthops basalis:- This species is easily overlooked and its presence in the county was only confirmed in 2005. A second specimen was collected from weedy arable near Gotherington (SO9629) on 30th October.

Nabis ericetorum:- This county rarity, which is associated with heather, had not been seen here since 1957. It was refound at The Park, Tidenham Chase (ST5599) on 4th October.

Megalonotus dilatatus:- Once again, this ground bug is another species rediscovered after an absence of at least 50 years. It was found in litter under gorse (*Ulex europaeus*) at Poor's Allotment, Tidenham Chase (ST5598) on 4th October.

Scolopostethus pictus:- Apart from an isolated record in 1991, this nationally scarce species had not been recorded for over 50 years. I swept it from grass adjacent to the River Severn at Fretherne (SO7308) on 5th October.

Dicranocephalus medius:- Another nationally scarce insect which, apart from a record in 1998 at Randwick Wood, had not been found in Gloucestershire since the 1950s. It was brought to me by David Haigh following its discovery on Wood Spurge (*Euphorbia amygdaloides*) its food plant, on a GNS field trip at Black Morgans Wood in the Wye Valley (ST5398) on 12th May (see Plate 26). Amazingly, it was found again by John Harper at East Wood, Tidenham Chase (SO5600) on 23rd May. This is a difficult-to-find species, spending much of its time on the ground or in litter beneath its food plant and is therefore probably under-recorded.

Anthocoris butleri:- The only previous county record for this species, which lives exclusively on Box (*Buxus sempervirens*) was in 1973 at Boxwell Wood (ST89). It

was re-found in 2007 on its food plant in Pittville Park, Cheltenham (SO9523) on 8th August.

GLOUCESTERSHIRE MOTH REPORT - 2007

Roger Gaunt

2007 got off to a slow start with wet and windy conditions initially, however normal weather returned in March, and April was outstanding with 'summer' weather. Indeed many of the summer species appeared up to a month early. May was only average and June and July are best forgotten, being cold and wet for the most part. Though the weather was a little better in August moth numbers did not improve much. September was reasonably dry, but in general the autumn was only average.

Having had such a brilliant year in 2006, the year now being reviewed was very disappointing. Even so with many species to consider, a small army of active recorders and over 7000 records for the year already in the database with more to come there is plenty to report.

MACROLEPIDOPTERA

There is one new species for the county and that is **Cypress Carpet**. This was recorded and photographed by John Martin at Pilning (VC 34) on 14th October. This was first recorded in mainland Britain in 1984 and has become well established along the south coast.

There were far fewer migrants than in 2006. The only ones worthy of special mention are **Pearly Underwing** (Cheltenham – Guy Meredith, and Thrupp – Peter Hugo), **Delicate** (Cinderford – Liz Radcliffe) and **Great Brocade** (Pilning - John Martin; John had two different individuals on 23rd and 28th August).

There is news of the **Barberry Carpet**, one of our Red Data-book species. One was recorded in the Rothamsted trap at Westonbirt on 3rd September 2006. Larvae were recorded a couple of days later by Paul Waring *et al.* However, 2007 saw the first record away from Westonbirt for a long time. Matthew Oates had a worn specimen at his home at Culkerton on 30th August.

Until 2007 the Lower Woods complex had the only known population of **Light Orange Underwing** in the county. The knowledge that a good number of Aspen trees grow in Collinpark Wood took Guy Meredith there on the 5th April. There he found a female of the species and was able to confirm the identity.

The **Chalk Carpet** was a target for National Moth Night and Day. Despite several sites being searched the only ones found were on the Postlip side of Cleeve Hill where Robert Homan was successful in finding four altogether.

When discovered, the young alders at Woorgreens were for several years the only known site for the **White-barred Clearwing**. Slowly, new sites within the main part of the Forest of Dean are being found. A male was attracted to my pheromone lure in the Greathough Brook Valley on 2nd June.

The **Pauper Pug** (Red Data-book) has hitherto been found only in the Wye Valley in this part of the country. Guy Meredith knocked one up in Welshbury Wood on 10th June. This is not entirely surprising as this wood has a marvellous stand of ancient Small-leaved Lime coppice.

The **Great Prominent** is worth a mention. It has been recorded regularly in the Forest of Dean and also at Westonbirt. Peter Hugo has found that there is a good population at the GWT Midger Reserve where he has recorded up to eight at a time and most surprisingly Steve Owen had one at Winchcombe on 4th May. As far as I can tell this is the first ever record from VC 33.

The spectacular **Emperor Moth** turns up once or twice a year in the Gloucester – Cheltenham area so it was interesting to have two records this year from the Stroud Valleys.

Only the second **Bird's Wing** in many years was trapped at Pool Hill near Newent by Mike Bradley on 17th May.

Mention should be made of the BAP species **Drab Looper**. For reasons that are not entirely clear, Gloucestershire seems to be a hot-spot for this day-flying species. It is well established in several parts of the county where the food-plant is present and this year there were no fewer than 22 records with as many as 30 being seen at the same site.

Peter Hugo had a field meeting in Withington Woods in early November to show quite a large gathering the **Plumed Prominent**. Some people came from far afield as this species is quite rarely recorded. Roy Hilton also recorded this species at one of our other county sites, Lineover Wood.

Though by no means common, the **Waved Black** seems to be becoming less uncommon. Our first modern record was in 2001, since which time it has been recorded in six different places. This year the new records are from Cinderford (Liz Radcliffe) and Clifford's Mesne (David Armstrong).

There were two more records of the **Ruddy Carpet** in 2007 following the three in the previous year. These were from Neil Tappin at Northwood Green on 10th June and David Armstrong at Clifford's Mesne on 11th July.

Other species recorded just once in 2007 and worth mentioning are:

Blossom Underwing – Yorkley Wood, 13th April, Rosie Castle

Small Brindled Beauty – St Briavels, 6th March, Roger Gaunt.

Double Lobed – Thrupp, 6th August, Peter Hugo

Alder Kitten – Cinderford, 17th May, Liz Radcliffe

Wood Tiger – Haresfield Hill, 2nd June, Roger Pearce – a new site. There were two other records from known sites.

Great Oak Beauty – Kidnalls, 16th June, George Davis – a new site.

Chevron – The Park, Tidenham Chase, 11th August, Alan Prior *et al.*

Devon Carpet – Greathough Brook Valley, 9th August, Roger Gaunt *et al.*

MICROLEPIDOPTERA

Guy Meredith and Robert Homan in particular have continued intensive recording of the smaller moths. Guy has devoted many hours to this work and has produced over 1400 records of micro-moths this year. As he knows the county so well from his years as butterfly recorder he knows where to look for food-plants and suitable habitats for his target species.

In a year when weather conditions were not helpful they still managed to find a number of new county and vice-county records. These are tabulated below along with those from other recorders.

Code	Taxon	Site	Date	Recorder	Stage	New to
39	<i>Ectoedemia heringi</i>	Lineover Wood	16/11/07	Guy Meredith	Mine	VC33
41	<i>Ectoedemia atrifrontella</i>	Collinpark Wood	2/4/07	Robert Homan	Mine	Glos.
74	<i>Stigmella assimilella</i>	Collinpark Wood	24/8/07	Robert Homan	Mine	VC34
289	<i>Caloptilia falconipennella</i>	Cheltenham	20/9/07	Robert Homan	Fold	Glos.
440	<i>Paraswammerdamia albicapitella</i>	Haresfield Hill	31/8/07	Roger Pearce	Adult	VC33
473	<i>Acrolepiopsis assectella</i>	Cheltenham	11/10/07	Robert Homan	Larval	VC33
602	<i>Elachista apicipunctella</i>	Dowdeswell Wood	8/5/07	Guy Meredith	Adult	VC33
666	<i>Semioscopis avellanella</i>	Thrupp	13/4/07	Peter Hugo	Adult	VC33
691	<i>Agonopterix purpurea</i>	Colesbourne	8/4/07	Guy Meredith	Adult	VC33
1023	<i>Cnephasia genitalana</i>	Brassey NR	4/8/07	Guy Meredith	Adult	Glos.
1055	<i>Acleris hyemana</i>	Wigpool	26/9/07	Colin Twissell	Adult	Glos.
1314	<i>Catoptria margaritella</i>	Dursley	5/8/07	Peter Cranswick	Adult	Glos.

The above are all species that have never been recorded in the vice-county (or county). There are more records from 2007 of species that have not been recorded for

many years - perhaps as long as a century ago! I will list the species below, and if anyone wishes to know more please ask!

<u>Code</u>	<u>Taxon</u>	<u>Last year recorded</u>	<u>Site</u>	<u>Recorder</u>
82	<i>Stigmella paradoxa</i>	No firm record	Leckhampton Hill	Guy Meredith
101	<i>Stigmella pyri</i>	1977	N of Leckhampton Hill	Guy Meredith
101	<i>Stigmella pyri</i>	1977	Cheltenham	Robert Homan
107	<i>Stigmella regiella</i>	No firm record	Cheltenham	Robert Homan
128	<i>Phylloporia bistrigella</i>	1922	Welshbury Wood	Guy Meredith
245	<i>Tinea pallescentella</i>	1955	Bishop's Cleeve	Jon Brock
478	<i>Phaulernis fulviguttella</i>	1941	Greathough Brook Valley	Guy Meredith
617	<i>Elachista obliquella</i>	1924	Cotswold Water Park	Robert Homan
764	<i>Pseudotelphusa scaetella</i>	1977	Greathough Brook Valley	Roger Gaunt
773	<i>Pseudotelphusa paripunctella</i>	1937	Greathough Brook Valley	Roger Gaunt
855	<i>Acompsia cinerella</i>	1936	Hailey Wood	Guy Meredith
1122	<i>Ancylis obtusana</i>	1964	Cannop Valley	Dave Grundy
1254	<i>Cydia strobilella</i>	1930	Cannop Valley	Guy Meredith
1330	<i>Donacaula mucronellus</i>	1900	Hempsted	Gordon Avery

I have also had some older Slimbridge records from Alan Prior. His group recorded 1328 *Schoenobius gigantella* there in 2005. This is the first record of this species for over 100 years.

I have already mentioned the work done on the micros by Guy Meredith and Robert Homan. I must also make special mention of the work done by Peter Hugo mainly on the macros. Peter traps frequently in many different places. A quick check of my records makes over 40 trapping visits in 2007. He has concentrated on the Midger Reserve and Greystones Farm this year adding 53 to the species list for the former and 91 to the species list for the latter.

The following is, I hope, a full list of those who have contributed records this year and many thanks to them all:

David Armstrong, Tricia Atkinson, Gordon Avery, Michael Bradley, Jon Brock, Rosie Castle, Peter Cranswick, Rob Crofton, David Cross, George Davis, Peter Fitchett, John Fleming, Dave Grundy, David Haigh, Robin Hemming, Ken Heron, Roy Hilton, Robert Homan, Peter Hugo, David Iliff, John Martin, Guy Meredith, Clive Mowforth, J. Oakley, Matthew Oates, Grace O'Donovan, Steve Owen, Mark Parsons, Roger Pearce, Gavin Peplow, Vic Polley, Alan Prior *et al*, Ivan Proctor, Liz

Radcliffe, Ian Ralphs, Neil Tappin, Kelly Thomas, Chris Tracey, Colin Twissell, Richard Tyler, Roger Ward, Paul Waring *et al*, Steve Whitehouse and John Widgery.

HOVERFLY REPORT 2007

David Iliff

2007 was a productive year for hoverfly recording in the county, and I wish to thank everyone who supplied records. However the most striking phenomenon to emerge from analysis of these records is the dramatic change in county status of certain species that has occurred since the start of the new millennium. The two social wasp mimics in the genus *Volucella*, the hornet-like *V. zonaria* (the largest of all British hoverflies) and its slightly smaller relative *V. inanis* were unknown in Gloucestershire (as currently defined) in the 20th Century (though *V. zonaria* has been present within VC34 in the Bristol area since the 1940s). *V. zonaria* was first seen in the county in 2001 and *V. inanis* in 2004. Records of *V. zonaria* between 2001 and 2006 were few, and consisted of fleeting observations, but *V. inanis* has been seen regularly since its first appearance. In 2007 both species were conspicuous in the county. I saw a female *V. zonaria* on sycamore foliage alongside the River Chelt in Cheltenham on 5th July (see Plate 11), and females were reported by Martin Matthews at Ashchurch on 9th July and by David Haigh in his Cheltenham garden on 8th August, while I had a female in my garden at Woodmancote from 11th to 17th August together with a female *V. inanis* (see Plate 12) both seen feeding on the *Hebe* cultivar 'Great Orme' (a shrub which is known to be attractive to these species).

An example of the rare colour-form of *Volucella bombylans* that has white tail hairs but is otherwise totally black-haired was seen briefly at Crickley Hill on 14th July. This form was previously seen in Dowdeswell Woods in May 1989.

Another former county rarity, the RDB3 species *Rhingia rostrata* (see Plate 13) was represented before 2000 by only a handful of records from the Wye Valley area. However since first being seen in the Cotswolds in 2000 it has been recorded often in every subsequent year, including 2007, throughout Gloucestershire. The Hoverfly Recording Scheme has commented on its recent increase and eastward spread in southern England, and its Red Data Book status must surely be due for revision.

Two *Chrysotoxum* species that are rarities in Gloucestershire, which is at the edge of their range, were recorded in 2007. A female *C. arcuatum* (see Plate 14) was found at Ruardeanhill Plantation on 20th May by John Phillips. The only previous county sightings were at Poor's Allotment in 1993 when a male and a female were found. This species has a northern distribution and the Forest of Dean is at the southern extremity of its range. In 2006 Martin Matthews found the first two county specimens (both females) of *Chrysotoxum verralli* at the Mythe, these being the westernmost records in Britain of this species which was considered by the recording scheme to be

declining in numbers. I saw another female of *C. verralli* at Woodmancote on 11th July 2007.

The bumblebee mimic *Arctophila superbiens* was seldom recorded in Gloucestershire before the 1990s since when it had appeared with increasing frequency until 2006 at sites in the Forest of Dean and the Cotswolds. The species was not recorded in the county in 2007, although some of its known sites were visited on several occasions. The Hoverfly Recording Scheme has commented on a recent dearth of 2007 records and considers that the species may be in decline, though there seems to be no obvious reason for this.

At the Gloucestershire Invertebrate Group (GIG) field meeting at Rook Hill Covert Lake on 16th June a total of 41 hoverfly species was recorded (easily the largest number for a single site visit that I have ever experienced). Among these were two county rarities, *Neoascia meticulousa* taken by Martin Matthews, and a female *Xanthandrus comtus* (see Plate 15) which was observed hovering above lakeside vegetation. John Phillips found another female *X. comtus* at Blaisdon Wood on 19th June.

Helophilus trivittatus (see Plate 16) is a large brightly-coloured hoverfly which is always an impressive sight. It is usually found singly. However Martin Matthews encountered between 12 and 20 individuals at the Mythe Fishing Lake on 8th August when the site was still showing the effects of the recent flooding.

Other records of note are as follows:

<i>Meligramma trianguliferum</i>	Sharpness Island	21 st April	David Iliff
<i>Eriozona syrphoides</i>	Blaisdon Wood	13 th September	John Phillips
<i>Pipiza luteitarsis</i>	Shenberrow Hill	28 th April	Martin Matthews
<i>Pipiza luteitarsis</i>	Lidcombe Wood	28 th April	Martin Matthews
<i>Parasyrphus malinellus</i>	Near Brierley	24 th May	John Phillips
<i>Heringia latitarsis</i>	Great Palescot	3 rd May	John Phillips

Finally, although 2007 yielded no species that were totally new to the county, I received a 2006 record from Nigel Jones of *Sphegina sibirica* at the Wilderness on 23 May 2006, the only county record to date for this species which was added to the British list in 1994 – the earliest known British specimen was found in 1976.

ODONATA REPORT 2007

Ingrid Twissell

The 2007 dragonfly season started off very well with sixteen of the UK's species being seen before the end of April, the usual number being only eight or nine. In Gloucestershire the first sighting of the year was of **Broad-bodied Chaser** (*Libellula depressa*) at Longlevens, Gloucester, with one male and an ovipositing female seen on 4th April. The next species to be spotted was **Large Red Damselfly** (*Pyrrosoma nymphula*) at both Whelford Pools in the Cotswold Water Park (CWP) and at Slimbridge WWT Reserve on 14th April. This was soon followed by the first appearance of the year of **Hairy Dragonfly** (*Brachytron pratense*) on 19th April at Slimbridge WWT, this being about two weeks earlier than usual. The **Hairy Dragonfly** has increased in numbers greatly over the past couple of years and is spreading over the reserve, the only location in the county where this species is found.

In May, two of Gloucestershire's Nationally Scarce species were seen; **Common Clubtail** (*Gomphus vulgatissimus*) was seen at St. Briavels in its usual location, and at The Mythe on 21st May, and **Downy Emerald** (*Cordulia aenea*) was noted from four locations, two being in the CWP where a single was seen at Lakes 111/111b, on 4th May, this being a new site, and a single was also at Swillbrook Lakes NR on 22nd May. The other two locations were in the Forest of Dean, on 23rd May, at Woorgreens Lake, where a copulating pair was seen, plus a single adult, and at the Dilke Lagoon where two adults were flying low over the water near to the edge of the pond. At Twyning and The Mythe there were first sightings of **White-legged Damselfly** (*Platycnemis pennipes*) on 24th May and 29th May respectively.

June 1st saw about 700 **Azure Damselflies** (*Coenagrion puella*) on the sunny side of Coombe Hill Canal on floating and submerged vegetation and small overhanging branches, with 100's of copulating and ovipositing pairs as well as single adults, and with more on the Meadows, a total of 900 -1000 adults were seen. A fantastic sight (and "site" as well?!). One wonders what numbers will be present in 2008 after the devastating floods of June and July 2007.

Southern Hawker (*Aeshna cyanea*) made its first appearance of the year on 3rd June at Whiteshill, Stroud, where freshly emerged adults were seen, and on the same day at Slimbridge, 40+ **Four-spotted Chasers** (*Libellula quadrimaculata*) were counted. The month continued with the sighting of a freshly-emerged **Lesser Emperor** (*Anax parthenope*) at Swillbrook Lakes on 5th June, the same location where an ovipositing pair was seen in 2006, which makes it seem likely that there may be a breeding population present. Several more sightings of the species, both male and female, were seen in the CWP in 2007.

It appears that **Scarce Chaser** (*Libellula fulva*) is continuing to expand its range with sightings in three locations. There was a single at The Mythe on three occasions in June, several, including copulating pairs at Twyning on 14th June, and a single male at Nebrow Hill, Frampton, on 5th August. It seems likely that the Twyning site holds a breeding population even though the numbers were not as great as in 2006.

At the Gloucestershire Invertebrate Group meeting at Rook Hill Covert on 16th June, a single **Red-eyed Damselfly** (*Erythromma najas*) was spotted, an unusual location for this species, along with two males and an ovipositing female **Emperor Dragonfly** (*Anax imperator*) and 50-100 **Blue-tailed Damselflies** (*Ischnura elegans*) as well as other species.

Just before the deluge in July, **Small Red-eyed Damselfly** (*Erythromma viridulum*) was spotted at three locations; at The Wharf End of Coombe Hill Canal there were about 12 adults, with ovipositing pairs, on 9th, 11th and 12th July, at The Mythe Fishing Lake on 19th July about 12 were seen, and at the Nature in Art, Wallsworth Hall, pond over 30 adults with many ovipositing pairs and singles were present on the same day – a very warm sunny afternoon. About 10 **Small Red-eyed Damselflies** were seen on 5th August after the floods at Coombe Hill Canal, and were present until the resident Mute Swans had eaten all the floating vegetation! At The Mythe Fishing Lake, after the floods, 7 species of Odonata were seen on 9th August, including 20 **Black-tailed Skimmers** (*Orthetrum cancellatum*) and about 50 **Red-eyed Damselflies** with copulating and ovipositing pairs. Out of the three locations, only the Wallsworth Hall pond was not affected by the floods.

An interesting event happened on two occasions in the year when an **Emperor Dragonfly** (*Anax imperator*) was seen catching another species of dragonfly in flight. On both occasions the poor unsuspecting victim/s was **Black-tailed Skimmer** – a mating pair was taken at the WWT on 28th June and a female at Dam Green on 31st July.

After the miserable wet summer, the warmer and sunnier autumn produced some interesting sightings with greater numbers of some of the late summer/autumn species and much later dates of others. Large numbers of **Migrant Hawker** (*Aeshna mixta*) were seen at several locations – at Slimbridge, approximately 50 on 28th August, 150 on 13th September and approximately 30 on 30th September, at Coombe Hill NR approximately 60 on 22nd September, with the latest date for the year at Ashleworth, one male on 17th October.

Large numbers of **Common Darters** (*Sympetrum striolatum*) were seen at Slimbridge – approximately 40 on 13th September, at Coombe Hill NR – approximately 50 on

22nd September, near Slade Bottom Quarry pond - over 100 on 30th September, with the latest sighting at Coombe Hill Meadows on 10th November.

At Coombe Hill Meadows, the latest date for **Emperor Dragonfly** was on 27th August, with a very late date for **Black-tailed Skimmer** on 4th October when a sunbathing male was spotted at the edge of the Snipe Pool; the latest date for **Southern Hawker** was at Little Staple Edge Wood on 20th October, and for **Common Hawker** (*Aeshna juncea*) along with **Ruddy Darter** (*Sympetrum sanguineum*) at Woorgreens Lake on 15th November.

The damselflies were also on the wing much later than usual with **Emerald Damselfly** (*Lestes sponsa*) at Coombe Hill Meadows on 14th October, also **Blue-tailed Damselfly** on 4th October, **Common Blue Damselfly** (*Enallagma cyathigerum*) at Slimbridge and Apperley on 13th September, along with **Banded Demoiselle** (*Calopteryx splendens*) and **White-legged Damselfly** at the latter location, **Azure Damselfly** was seen at Cinderford Linear Park on 9th September, and **Beautiful Demoiselle** (*Calopteryx virgo*) was spotted ovipositing at Stoneworks Marsh on 4th September. We will all have to wait and see what happens in 2008.

Early in 2007, many Odonata records were entered onto my MapMate database, and over 6000 records were subsequently sent to Ian Carle at Gloucestershire Centre for Environmental Records, and to Graham French at the British Dragonfly Society (BDS) who then passed them on to the Dragonfly Recording Network (DRN).

At the end of April 2007 in Milton Keynes, I attended a meeting of Odonata Vice-county Recorders from all over the UK, which was arranged by the BDS to discuss the forthcoming National Atlas for Odonata. The Atlas will be launched in April 2008 and, like the BTO National Bird Atlas, recording will take place over several years. So, if anyone would like to see their name in print, please send me detailed dragonfly records so that I can then forward them to the BDS/DRN. Details required are: Recorder's name, Date, Species, Abundance, Male and/or female (if possible), Evidence of breeding - mating pairs, egg-laying, exuviae, newly-emerged adults. There are recording forms available, or, if preferred, emails with the appropriate details may be sent to canditwissell@btinternet.com

As well as the National Atlas, a Dragonfly Atlas for the Cotswold Water Park is being planned over the same period, to be Co-ordinated by Gareth Harris, the Biodiversity Officer for the CWP, and involving Steve Covey, the Wiltshire Dragonfly Recorder, and myself, for Gloucestershire. Any records received will be for both the National and the CWP Atlas.

My thanks go to everyone who sent me records in 2007: Gordon Avery, Juliet Bailey, Arthur Ball, Andy Bluett, Elizabeth Butler, Ian Carle, Mark Connelly (via Ian Carle), Steve Covey, Rob Crofton, Michael Dean, Ian Elphick, Peter Fitchett, John Fleming, Wendy Freedman, Jackie Garner, Roger Gaunt, Gareth Harris, Ken Heron, David Iliff, Andy Jayne, Peter Martin, Martin Matthews, Martin McGill, John Meiklejohn (via Mike Averill), Dave Paynter, David Perkins, John Phillips, Viv Phillips, Greg Poole, Ivan Proctor, Rosie Ray, Andy Robbins, David Scott-Langley, Mervyn Taylor, Colin Twissell and John Widgery.

Many thanks go to Ian Carle for helping me transfer all my MapMate Records from our old computer to the new Vista computer we purchased in the late summer, also to Colin Twissell for the photograph of the **Emperor Dragonfly** eating the female **Broad-bodied Chaser** at Dam Green (see Plate 27).

SPIDERS IN GLOUCESTERSHIRE 2007

David Haigh

Introduction

Following the severe summer flooding on the Severn Hams a walk along the tow path at Coombe Hill Canal on September 18th revealed a scene of devastation. Foliage up to height of around 3 metres was brown and brittle, dead to all appearances. At a time of the year when hedges and perennial herbs are festooned with dewy spiders' webs there was a total absence of orb and hammock webs. In 200 metres from the wharf end of the canal only one small sheet web was seen and that at ground level. During the course of the day just 3 adult spider species were recorded together with a small number of immatures of the same species. Two further visits in October at both the east and west ends of the canal revealed some recovery in numbers with 15 species recorded on October 3rd and 22 species on October 10th. Adults were considerably outnumbered by immatures but this is usual in autumn. It would be expected that immatures are 'ballooning' in from the surrounding unaffected countryside.

I was able to attend 8 GIG Field Meetings with additional visits to Purton (GNS Field Meeting), Siccaridge Wood, Daneway and Strawberry Banks. Unfortunately a GNS Field Meeting to Sedbury was a complete 'wash out' on May 13th.

I must thank Elizabeth Butler for her invitation to visit Glasshouse Orchard, Taynton on 'Apple Day', October 20th and look forward to further visits on what appears to be a habitat of invertebrate interest.

The following records are those of the author except where otherwise attributed.

New County Records (NCRs)

While 2006 did not have any new NCRs, 2007 produced five.

Steatoda nobilis, Introduced

Known as the 'False Widow' it has been naturalised in the southern counties for many years. It has a reputation for biting people, the most recent event being in Wiltshire when hospital treatment was required for a Salisbury man. I was contacted on June 1st by a Tewkesbury resident who reported spiders in her garden shed. A visit revealed several individuals of varying ages including an adult female guarding a cocoon of eggs. This shed is used to store rabbit litter and bedding and a possible source of this spider is through the pet trade. I still have a live individual safely bottled (see Plate 28) and a voucher specimen in alcohol.

Trematocephalus cristatus, Nationally Scarce, Notable A

5 individuals (1 male and 4 females) were identified from Black Morgan's Wood, ST59J, May 12th. John Harper (JH) had recorded this spider at Piercefield, Vc 35

across the River Wye in 2004. The Spider Atlas (2002) shows only one other record for the ST 100Km square.

Ceratinopsis stativa

JH recorded a female of this uncommon spider at Blake's Wood, Staunton, SO51L, 13/6/07. This species has a scattered distribution in England and Wales with most records from south-east England.

Araniella alpica, RDB3

JH has confirmed this species as a Gloucestershire spider as a result of an investigation of the vice county and political boundaries in the area of Lea Bailey Inclosures, SO62. An account of his research follows this report on page 89.

Phrurolithus minimus, Nationally Scarce, Notable A

A male and female were identified from Strawberry Banks, Oakridge, SO90B, July 24th. This would appear to be the first record for the SO 100Km square. This spider requires open, sparsely vegetated, usually stony, ground and has on occasion been found running with the ants, *Formica fusca* and *Myrmica scabrinodis*. This record was from a stony area at the top of a steep herb rich limestone grassland. Plate 31 shows the male palps, of this species and the common but closely related *P. festivus*, which are needed to confirm identification. The palps are about 0.8mm long.

Red Data Book

Hyptiotes paradoxus, RDB3

Recorded on 2 occasions, (a) Black Morgan's Wood, ST59P, 13/4/07, sub-adult female (JH) and (b) Nagshead, RSPB, SO60E, 8/9/07, an immature beaten from yew. This record confirms its continued presence at Nagshead, first recorded there in 2004.

Centromerus cavernarum, RDB3

JH recorded a female at Black Morgan's Wood on the same occasion as (a) above. This is the 4th county record and the 2nd for the FOD.

Nationally Scarce, Notable A

Nigma walckenaeri

Before 1993 this spider was known only from the Home Counties. Since its first discovery at Alderton in 1993 by Nigel Burston it has been recorded from 9 sites in Gloucestershire. A further record in August 2007 was by Alison Iliff at Woodmancote. A photograph of this small attractive green spider confirmed identification.

Nationally Scarce, Notable B

The following Nb spiders were recorded on several occasions during 2007.

Zilla diodia -----5 records, all by JH.

Nigma puella -----4 records.

Philodromus albidus -----5 records, 3 by JH

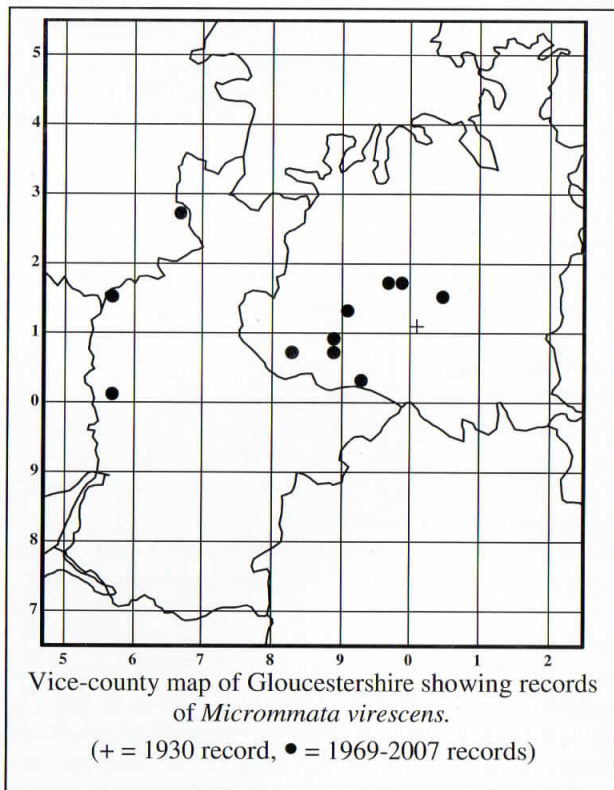
Achaearanea simulans -----3 records, 1 by JH

Porrhomma oblitum -- 1 record by JH at Bromsberrow Heath, SO73G, 5/5/07. This is the 2nd county record, 1st record at Wickwar 16/5/2004 by JH. This spider is a specialist of damp woodland and fen carr.

Other Observations

Micrommata virescens -- 'Very' Local

On May 18th Roger Gaunt, our Moth Recorder photographed a mating pair of *M. virescens* (see Plate 29) at East Wood, FOD, SO50Q. Of the 15 county records since 1930 only 3 have been of the adult male and Roger's record is the first to be photographed. This is the second time Roger has recorded *M. virescens* from his moth trap at East Wood. Other records of *M. virescens* in 2007 were from Siccaridge Wood, SO90G by Kathy Meakin and a sub-adult female, also from East Wood, 23/5/07 by JH.



Larinioides sclopetarius -- Local

Colin Twissell recorded a sub-adult female on a footbridge over the Thames-Severn Canal at Thrupp, SO80L, September 2007. This is a new tetrad record on the canal and approximately 5 km east of the Downton Bridge, Stonehouse record of September 2006. The canal is a 'corridor' of habitat connecting the two main record areas for this species, the Gloucester-Sharpness Canal and the Cotswold Water Park. A further

record by DH was at Over Basin, SO81E, 24/4/07 on the Bailey bridge at the beginning of the 'old' Gloucester - Hereford Canal. Many webs were present.

Araeoncus humilis

JH recorded this species at Parson's Allotment, ST59P, 29/5/07. This observation confirms R.S. George's record in his 1957 County Check List.

Overlooked in previous Spider Reports are records of 2 Linyphiid spiders of the genus *Tapinocyba*. Both records are those of JH taken at the same time from the same locality. All four spiders of this genus are small and pale and could be easily passed over as immatures.

Tapinocyba praecox 3 females, and *Tapinocyba pallens* 1 male, both Local, Cinderford Linear Park, 14/2/2005.

As part of an RSPB Survey a programme of pit-fall trapping was undertaken at Coombe Hill (May/June) and a followup GWT/GNS survey to the floods at Ashleworth Ham (October, November and December). At Coombe Hill, trapping sites produced up to 270 individual spiders, the most numerous being the 'wolf-spider' *Pardosa palustris* followed by *Pardosa purbeckensis*. Some rarities were also identified, *Robertus arundineti* (2nd county record), *Trochosa spinipalpis*, *Ozyptila simplex* (Coombe Hill the only known site in the county) and *Arctosa leopardus*. Ashleworth Ham, just across the River Severn recorded numbers only in single figures but did include the rare wetland spider *Halorates distinctus*. It is supposed the huge disparity in records is due in large part to the devastating effect of the summer floods.

At the end of November Robert Homan brought me a spider discovered in bananas at Cheltenham Ladies College. The bananas had been imported from Colombia. I sent the spider to Peter Harvey, National Organiser of the Spider Recording Scheme, and he forwarded it to John Murphy. On January 15th 2008 I was emailed by Peter to say that John had tracked the spider down to a paper by Petrunkevitch as *Elaver* (formerly *Clubiona*) *sigillata*, (Petrunkevitch 1925). Apparently it was initially recorded from Panama and has probably not been seen since.

A further record of an exotic spider was reported in the local press (Gloucestershire Echo 29/9/07). A Black Widow spider was discovered in a Cadillac as it was being transferred out of a trailer at the American Truck Shop in Strensham. The RSPCA was called and it was taken to the Vale Wildlife Rescue Centre in Beckford and they then sent it on to a butterfly farm in Stratford-on-Avon. The Cadillac had been imported from Arizona.

Records are provided by members of the Gloucestershire Invertebrate Group (GIG) and many eyes and nets increase the efficiency of collecting spiders. John Harper continues to provide spiders and lists from GIG meetings and other excursions from within the county. His records over the past years are invaluable as is also his advice. I must also acknowledge the records and photographic contributions of Colin Twissell and this year from Roger Gaunt. David Long and I have had fewer opportunities to survey Reserves this year but our visit to Strawberry Banks was memorable for discovering *Phrurolithus minimus* and we hope to continue to monitor the after-effects of the flooding at Coombe Hill. Finally, may I thank John Widgery for his records and David Scott-Langley for providing the pit-fall material from Coombe Hill and Ashleworth Ham.

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A Rare Spider - *Araniella alpica* RDB3 - New to Gloucestershire

John Harper

In 2006 I took an interest in the rare araneid spiders *Araniella inconspicua* (Nationally Scarce Nb) and *Araniella alpica* (RDB3). As the status of each suggests, they are infrequently found and *A. alpica* had not been seen in England for at least 10 years. From distribution plots in the Spider Atlas (Harvey et al, 2002) they clearly occurred on or near the Gloucestershire border in 10kmsq SO62.

Although Araniellids are orb web spinners they have a slight similarity to crab spiders in shape and attitude and are among the few spiders that have a significantly greenish abdomen in life; however the yellow-green colours had mostly been washed out by preservation in alcohol before the picture (Plate 30) was taken. The slightly longer front legs, giving the crabby stance typical of genus *Araniella*, can be seen in the photo.

Information kindly provided by John Partridge (Herefordshire spider recorder) indicated that the two rare species were indeed found near to Gloucestershire. The records showed that on 13th June 1996 W.G. Rixom, S. Dobson, D. Marriot and D. Nellist worked the Lea Bailey Inclosures near Dancing Green (10kmsq SO62) and found both species. They ascribed the records to Herefordshire vc36 but hadn't reckoned with vice county Gloucestershire's notoriously convoluted northern border.

On 20th June 2006 I searched the Lea Bailey Inclosures but failed to find the target species - perhaps it was too late in the season. Their early maturity may be one reason generally why they are not often found. However out of interest I did look up the detail of the distribution maps on the NBN website and painstakingly deciphered the vice county boundary. It was clear that the Lea Bailey Inclosures were in fact in Gloucestershire (vc34) even if over the current political border in Herefordshire. Result - vc34 has acquired a new RDB3 and a new Nationally Scarce Nb spider - I hope the punishment for poaching in The Forest is not too severe nowadays.

I repeated the searches slightly earlier in 2007, 1st June to be precise, but still failed to find the species in the northern (SO62) part of the inclosures. So, still in Lea Bailey Inclosure, I turned south into SO61 and did find a male *A. alpica* at an intersection of two rides where the spider was swept from tall grass under mature Oaks. I suspect that the species normally lives high up in the canopy, experience suggesting that Oaks are frequently involved, but can be blown off in high winds (which may have caused the leg loss in both males); significantly, the previous day had been blustery and homing in on such situations is known to be a collecting wrinkle for canopy species.

Indeed it was on a GIG meeting long ago that I learned this trick from Keith Alexander to whom many thanks!

Greatly satisfied I proceeded to the nearby heath restoration area at Wigpool (still in SO61) and knocked a few young Oak regrowths over my net and was amazed to get *A. alpica* again, both a male and a female. In this case these scrubby regrowths were 100m from any trees (and they were mostly conifers) but experience has shown that they are the alternative niche to try.

Reference:

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THE LAND AND FRESHWATER BUGS (HEMIPTERA) OF GLOUCESTERSHIRE: PART 4. FROGHOPPERS, LEAF HOPPERS, PLANT HOPPERS AND RELATED BUGS (AUCHENORHYNCHA)

Keith N. A. Alexander

The first three parts of this county Hemiptera list (Alexander 1995, 1996 & 2005) covered the Heteroptera – the shield bugs through to the water bugs. This fourth part covers the Auchenorhyncha, better known as froghoppers, leaf hoppers, plant hoppers and lace hoppers. Part 5 will cover the Sternorhyncha which include the infamous scales, whiteflies and aphids. Background information on the catalogue is provided in Part 1.

INTRODUCTION TO THE HOPPERS

The Auchenorhyncha have attracted little interest from most entomologists, and it has tended to be the larger and more striking in appearances that have received most attention. The black and red froghopper *Cercopis vulnerata* is certainly the most easily recognised, while the treehopper *Centrotus cornutus* is large and unusual looking and so tends to get noticed. But, overall, few of the species are readily recognisable to species level by eye or with a hand lens, and most require examination under a microscope, and expert verification is essential for many. The current identification works for the British fauna are Le Quesne (1960, 1965 & 1969) and Le Quesne & Payne (1981), although people increasingly tend to use the European literature, notably Ossiannilsson (1978, 1981 & 1983).

The entire group feed on vascular plants, sucking either the sap or – in the case of the Typhlocybinae – feeding on the contents of the mesophyll cells. They feed on stems, leaves and roots but rarely on the buds, flowers or seeds. Most lay their eggs into slits in the plant tissues, but the Tettigometridae and Issidae lay their eggs onto the substrate, while Cixiidae insert their eggs into the soil. The froghoppers are the best known group for the secretion with which the larvae of many species surround themselves – “cuckoo-spit”.

The main sampling techniques are the use of standard entomological sweeping nets and beating trays, although domestic leaf-suction machines are also increasingly finding great favour amongst specialists. In each case a pooter is recommended for actually controlling specimens once captured.

A total of 169 species of Auchenorhyncha are recognised as occurring in the county. This represents 46% of the full British check-list which stands at 369 species.

SOURCES OF RECORDS

Gloucestershire has been fortunate in having had James Edwards resident at Colesbourne when he was writing his important monograph "The Hemiptera – Homoptera of the British Islands" (Edwards, 1896). Edwards (1856-1928) was one of the greatest British hemipterists and published on leafhoppers and planthoppers for over 50 years, from his first paper in 1876 to the year he died in 1928. His book contains many Cotswold records and provides a baseline for comparison with the modern fauna. There followed a period of almost 100 years when virtually no recording of these bugs appears to have been carried out. Walter Le Quesne – author of the current identification texts - carried out some recording during a visit to Cowley in 1962.

During 1968 and 1969 the Nature Conservancy conducted an examination of all important biological sites in Britain, the results of which were published as A Nature Conservation Review (Ratcliffe, 1977). As a part - and an extension of this work - a large number of faunal samples were taken from lowland grassland sites, almost exclusively calcareous ones, from 1967 to 1970 (Morris, 1972). The sites included Rodborough Common and Barnsley Warren and the work was carried out by Mike Morris, a well-known expert in the group.

The present author began to record a few species from the 1980s and to collect material which was forwarded initially to Keith Payne, then Walter le Quesne, and later to Pete Kirby for identification. Very little other work has been carried out – Pete Kirby was himself contracted to carry out survey work at the Woodland Trust's Cadora and Bigsweir Woods in 2000, while Peter Hodge has visited Rodborough Common on a number of occasions. Otherwise the main recent records have been a few from John Bratton, Andy Foster and Paul Whitehead.

NOMENCLATURE

The species names used in this account are those used by Le Quesne & Payne (1981).

STATUS

The national status of hoppers was assessed by Kirby (1992) and the county has a good list of eleven species which have been given "Nationally Scarce" status. This status indicates that the species is believed to occur in fewer than a hundred 10km squares of the OS National Grid. Not surprisingly, calcareous grassland species feature – *Ulopa trivialis*, *Ribautodelphax pungens*, *Tettigometra impressopunctata* (and possibly *Scleroracrus decumanus*), but also the saltmarsh species *Aphrodes limicola* and *Oliarus leporinus*, the wetland *Chloriona dorsata* and *Laodelphax striatellus*, the arable farmland *Oliarus panzeri*, and the tree associated *Pediopsis tiliae* (lime in the Wye Valley) and *Edwardsiana alnicola* (alder).

Local status, ie in Gloucestershire, is difficult to ascertain at the present level of knowledge but a few species are put forward as county rarities: *Aphrophora salicina*, *Ribautiana scalaris*, *Cixius cunicularis* and *C. distinguendus*.

INDEX TO FAMILIES COVERED IN PART 4

Cercopidae	94	Delphacidae	112	Tettigometridae	115
Cicadellidae	98	Issidae	115		
Cixiidae	111	Membracidae	98		

LIST OF GENERA COVERED IN PART 4

<i>Adarrus</i>	<i>Eurysa</i>	<i>Paluda</i>
<i>Agallia</i>	<i>Euscelis</i>	<i>Pediopsis</i>
<i>Aguriahana</i>	<i>Evacanthus</i>	<i>Philaenus</i>
<i>Alebra</i>	<i>Fagocyba</i>	<i>Psamnotettix</i>
<i>Allygus</i>	<i>Florodelphax</i>	<i>Recilia</i>
<i>Alnetoidia</i>	<i>Forcipata</i>	<i>Rhytistylus</i>
<i>Anakelisia</i>	<i>Graphocraerus</i>	<i>Ribautiana</i>
<i>Aphrodes</i>	<i>Grypotes</i>	<i>Ribautodelphax</i>
<i>Aphrophora</i>	<i>Hyledelphax</i>	<i>Scleroracrus</i>
<i>Arboridia</i>	<i>Iassus</i>	<i>Sonronius</i>
<i>Arocephalus</i>	<i>Idiocerus</i>	<i>Speudotettix</i>
<i>Arthaldeus</i>	<i>Issus</i>	<i>Stenocranus</i>
<i>Balclutha</i>	<i>Javesella</i>	<i>Stiroma</i>
<i>Centrotus</i>	<i>Jassargus</i>	<i>Streptanus</i>
<i>Cercopis</i>	<i>Kelisia</i>	<i>Struebingianella</i>
<i>Chloriona</i>	<i>Kosswigianella</i>	<i>Tachycixius</i>
<i>Cicadella</i>	<i>Kybos</i>	<i>Tettigometra</i>
<i>Cicadula</i>	<i>Lamprotettix</i>	<i>Thamnotettix</i>
<i>Cixius</i>	<i>Laodelphax</i>	<i>Turrutus</i>
<i>Colladonus</i>	<i>Ledra</i>	<i>Typhlocyba</i>
<i>Conomelus</i>	<i>Lindbergina</i>	<i>Ulopa</i>
<i>Conosanus</i>	<i>Linnavuoriana</i>	<i>Zygina</i>
<i>Criomorphus</i>	<i>Macropsis</i>	<i>Zyginidia</i>
<i>Deltocephalus</i>	<i>Macrosteles</i>	
<i>Dicranotropis</i>	<i>Macustus</i>	
<i>Dikraneura</i>	<i>Megamelodes</i>	
<i>Ditropis</i>	<i>Megamelus</i>	
<i>Doratura</i>	<i>Megophthalmus</i>	
<i>Edwardsiana</i>	<i>Mocuellus</i>	

<i>Elymana</i>	<i>Mocydia</i>
<i>Emelyanoviana</i>	<i>Muellerianella</i>
<i>Empoasca</i>	<i>Neophilaenus</i>
<i>Eupelix</i>	<i>Notus</i>
<i>Eupteryx</i>	<i>Oliarus</i>
<i>Eurhadina</i>	<i>Oncopsis</i>

ABBREVIATIONS USED FOR MAIN RECORDERS

APF	A.P. Foster	JB	J. Bratton	PJH	PJ Hodge
CT	C. Twissell	JPW	J. P. Widgery	PK	P. Kirby
DJG	D.J. Gibbs	MMB	M.M. Betts	WJLQ	W.J. Le Quesne
DJRH	D.J.R. Haigh	MGM	M.G. Morris		
KNAA	K.N.A. Alexander	PFW	P.F. Whitehead		

CATALOGUE OF GLOUCESTERSHIRE BUGS – PART 4

Order HEMIPTERA

Series AUCHENORHYNCHA

Super-family CICADOMORPHA

Family CERCOPIDAE Froghoppers

Cercopis vulnerata Illiger - Larvae develop underground, gregariously, in a mass of solidified froth around plant roots, usually in or near woods. Widespread in England, although somewhat localised. Very widespread in the county and known to the earlier recorders: Cotswold district (Edwards, 1896).

- SO50 Slade Bottom, 10.v.1992, KNAA.
 SO51 Highmeadow Woods, 8.v.1995, KNAA.
 SO61 Mitcheldean, 30.xii.1959, D. Humphries.
 SO80 Cottage Bank, Rabbit Warren Wood, Selsley, 25.v.1998; Bisley Road Cemetery, 20.v.2001, KNAA.
 SO81 Buckholt Wood, 24.v.1998, KNAA.
 SO90 Hen Wood, 19.v.1985; Hailey Wood, 8.vi.1985; Halfpenny Hill, Bagendon Valley, 24.vi.1984; Overlay Wood, 30.v.1988; Sapperton Common, 29.v.1993; Misarden Park, 24.v.1998; Frampton Mansell, by disused canal, 18.v.2001, KNAA..
 SO91 Lyde Bank, Hilcot, 15.vi.1985; Dowdeswell Wood, 29.v.1995; Hilcot Wood, 16.v.1999, KNAA.
 SO92 Dowdeswell Wood, 29.v.1995, KNAA. Cheltenham, 2.vi.1997, v.1999, R. Homan.
 SO93 Ashchurch, 29.vi.1985, KNAA.

- SP00 Barnsley Wold, 2.vi.1985; Cherry Tree Lane, Cirencester, 1.vi.1993; Calmsden, 2.vi.1993, 1.vi.1997, KNAA.
 SP01 Colesbourne & Withington Wood, 28.v.1995; Gulf Scrubs, 16.v.1999; Chedworth Woods, 8.vi.2002; Kilkenny Viewpoint, 8.vi.2002, KNAA.
 SP02 Hailes Abbey, 20.v.1985; Guiting Wood, 31.v.1993, KNAA.
 SP11 Newbridge Meadow, Bourton-on-the-Water, 16.vi.1991; Farmington, 31.v.1993, KNAA.
 SP12 Brassey Reserve, 28.v.1997, J. Meiklejohn.
 SP13 Campden Wood & Weston Park, 15.v.1995, KNAA.
 SP14 Aston-sub-Edge, 31.v.1993, KNAA.
 ST57 Lawrence Weston Moor, 18.vi.1999, DJG. Avonmouth Sewage Farm, 29.v.2001, DJG.
 ST78 Horton Court, 21.vi.1982, KNAA.
 ST79 Coaley Wood, 25.vi.1996, I. Gray. Coombe Hill, 16.v.1999, M.A. Howe.

Aphrophora alni (Fallen) - Adults widespread on the foliage of broadleaved trees and shrubs. Generally distributed and common (Edwards, 1896), and still very common and widespread in the county:

- SO50 Wyeseal Wood, 17.x.1982; East Wood, 12.vii.1997; Woolaston Lime Coppice, 26.vi.1999, KNAA. Cadora Wood, Causeway Grove & Highbury Fields, 2000, PK.
 SO60 Moseley Green, 18.vii.1998; Clarke's Pool Meadows, 25.vi.1999, KNAA.
 SO61 Cannop Ponds, 18.x.1981; Stenders Quarry, 1996 & 2003; Wigpool, 10.viii.1996; Leymoor Quagg, 13.ix.1997; Foxes Bridge Marsh, 10.viii.2002, KNAA.
 SO62 Betty Daws Wood, 18.viii.1991, KNAA.
 SO70 Smith's Wood, Fretherne, 28.viii.1995, KNAA. Stonehouse, 2001, KNAA.
 SO71 Highnam Woods, 10.x.1992; Bulley Woods, 2.vii.1997, KNAA.
 SO72 Bulley Woods, 2.vii.1997, KNAA. Glasshouse Orchard, Taynton, 4.vii.2001, KNAA.
 SO80 Rodborough Common, 1968, MGM; 18.vi.1999 & 18.vi.2000, PJH. Rabbit Warren Wood, Selsley, 4.viii.1996; Bisley Road Cemetery, two swept, 16.viii.1997, KNAA. Stroudwater Canal, Ebley, 19.vi.2000, APF. Swifts Hill, 2003, KNAA.
 SO81 Lord's Wood, Sheepscombe, 31.vi.1998, KNAA.
 SO82 Sandhurst NR, 20.viii.1989, KNAA. Coombe Hill Canal, 22.vii.2001, KNAA; 27.vii.2003, APF. Ashleworth Ham, 4.viii.2002, KNAA,

- SO83 Chaceley Meadow, 26.vi.1999; Mythe Brook, Shuthonger Common, 14.viii.1999, KNAA.
- SO90 Sapperton Valley, 12.x.1980; Overley Wood, 2002; Siccaridge Wood, 2003, KNAA.
- SO91 Cowley, 21.vii.1962, WJLQ. Bubbs Hill, 20.vii.1991; Cockleford Marsh, 14.vii.1996, KNAA.
- SO92 Dowdeswell Wood, 29.viii.1994, 8.vii.1995; Pittville Park, Cheltenham, 16.ix.2001, KNAA. Badgeworth Reserve, 28.vi.2003, APF.
- SO93 Tewkesbury, 22.vii.2001, KNAA.
- SP03 Stanton Hill, 3.vii.1998, KNAA.
- SP10 Rack Isle, Bibury, 1.vii.2001, KNAA.
- SP11 Sherborne Farm, 17.ix.1994, KNAA.
- SP12 Hyde Mill Meadow, 22.vi.1997; Stow Bridge Coppice, 17.vii.1999; Salmonsbury Meadows, 17.vi.2000, KNAA.
- SP13 Bourton Woods, 18.ix.1988, KNAA.
- SP20 Lechlade Reserve, 17.ix.1995, 7.x.2000, KNAA.
- SP22 Lower Oddington Ashes, 10.ix.1994, KNAA.
- ST57 Coombe Dingle, 30.vi.1998, KNAA.
- ST59 Ridley Bottom, 2003, KNAA.
- ST78 Midger, 18.ix.1993, KNAA.
- ST89 Field Farm, Nympsfield, 19.viii.1995; Box Farm Meadows, 2003, KNAA.
- SU09 Swillbrook Lakes Reserve, 19.ix.1998, KNAA.
- Aphrophora salicina* (Goeze) – County rarity. On willows *Salix* spp. across southern England. Cotswold district (Edwards, 1896) but not seen recently.
- Philaenus spumarius* (Linnaeus) - The very common and widespread meadow spittlebug. Very abundant in the county (Edwards, 1896), and still so.
- SO50 East Wood, 12.vii.1997, KNAA. Cadora Wood & Highbury Fields, 2000, PK.
- SO60 Clarke's Pool Meadows, 25.vi.1999, KNAA.
- SO61 Stenders Quarry, 10.viii.1996; Leymoor Quagg, 13.ix.1997, KNAA.
- SO62 Betty Daws Wood, 18.viii.1991, KNAA.
- SO80 Rodborough Common, 1968, MGM; 18.vi.2000, PJH. Woodchester Park, 9.x.1994; Bisley Road Cemetary, Stroud, 16.viii.1997, KNAA. Stroudwater Canal, Ebley, 19.vi.2000, APF. Swifts Hill, 2003, KNAA.
- SO81 Churchdown Hill, 31.viii.1992; Butlers Grove Pasture, Sheepscombe, 31.vii.1998, KNAA.
- SO82 Coombe Hill Canal, 2.xi.2003, APF.
- SO83 Chaceley Meadow, 26.vi.1999, KNAA.

- SO91 Cowley, 21.vii.1962, WJLQ. Bubbs Hill, 20.vii.1991, KNAA.
- SO92 Dowdeswell Wood, 29.viii.1994, KNAA. Badgeworth Reserve, 28.vi.2003, APF.
- SO93 Tewkesbury, 22.vii.2001, KNAA.
- SP00 Winson Meadows, 17.ix.1995, KNAA.
- SP01 Colesbourne Park, 14.vii.1996, KNAA.
- SP10 Rack Isle, Bibury, 1.vii.2001, KNAA.
- SP12 Hyde Mill Meadow, 22.vi.1997; Salmonsbury Meadows, 17.vi.2000, KNAA.
- SP20 Lechlade Reserve, 17.ix.1995, KNAA.
- SP22 Lower Oddington Ashes, 10.ix.1994, KNAA.
- ST57 Coombe Dingle, 30.vi.1998, KNAA. Kings Weston Down, 15.vii.1999, DJG.
- ST88 Silk Wood, 19.x.1980. KNAA.
- ST89 Highgrove House, haymeadow, 17.viii.1995, 17.vii.1996, 2.vii.1997; Field Farm, Nympsfield, 19.viii.1995; Box Farm Meadows, 2003, KNAA.
- SU09 Claymeadow Farm, South Cerney, 3.viii.1996; Swillbrook Lakes Reserve, 19.ix.1998, KNAA.
- Neophilaenus campestris* (Fallen) - Locally abundant on low plants in dry places; Cotswold district (Edwards, 1896) but not found recently.
- Neophilaenus exclamationis* (Thunberg) - Locally abundant on low plants in dry places; Cotswold district (Edwards, 1896).
- SO80 Rodborough Common, 1968, MGM. Selsley Common, 10.viii.1997, KNAA.
- ST98 Aston Farm, Cherington, 16.vii.2000, KNAA.
- Neophilaenus lineatus* (Linnaeus) - Very common in grassy places; Cotswold district (Edwards, 1896). More frequent in tall damper grasslands, but still very common.
- SO50 Highbury Fields, 2000, PK.
- SO60 Moseley Green, 18.vii.1998, KNAA.
- SO61 Wigpool Common, 10.viii.1996; Leymoor Quagg, 13.ix.1997, KNAA.
- SO70 Coaley Peak, 19.viii.1995, KNAA.
- SO80 Rodborough Common, 1968, MGM. Swifts Hill, 2003, KNAA.
- SO82 Coombe Hill Canal, 22.vii.2001, KNAA.
- SO91 Cowley, 21.vii.1962, WJLQ. Bubbs Hill, 20.vii.1991, KNAA.
- SO92 Dowdeswell Wood, 29.viii.1994, KNAA.
- SO93 Ashchurch, 29.vi.1985, KNAA.
- SP00 Winson Meadows, 17.ix.1995, KNAA.
- SP01 Hedgley Bottom, 17.vii.1999, KNAA.

- SP20 Lechlade Reserve, 17.ix.1995, KNAA.
 ST59 Sedbury Marsh & Poor's Allotment, 15.viii.1993, KNAA.
 ST78 Midger, 18.ix.1993, KNAA.
 ST89 Highgrove House, haymeadow, 17.viii.1995, KNAA.
 SU09 Swillbrook Lakes Reserve, 19.ix.1998, KNAA.

Family MEMBRACIDAE Treehoppers

Centrotus cornutus (Linnaeus) - Widespread in wooded or shrubby situations; polyphagous on broadleaved herbs, brambles and saplings of woody plants. Sparingly in woods & hedgerows (Edwards, 1896) and this is still the case.

- SO50 Orles Wood, 10.v.1992, KNAA. Lower Palmers Flat, 2000, JPW.
 SO60 Churchill Inclosure, 1.vi.1991, KNAA.
 SO61 Stenders Quarry, 2003, KNAA.
 SO80 Swift's Hill, 2.vi.1991, KNAA.
 SO90 Overley Wood, on bramble, 8.vi.1985; Siccaridge Wood, 29.v.1993, 2003; Hailey Wood, 5.vi.1993, KNAA.
 SO91 Dowdeswell Wood, 29.v.1995; Hilcot Wood, on rideside hazel and oak, 16.v.1999, KNAA.
 SO92 Dowdeswell Wood, 8.vii.1995, KNAA.
 SO92 Bishop's Cleeve, c.1990, D. Iliff.
 SP00 North Cerney Banks, 12.vi.1988, KNAA.
 SP01 Rendcomb, 1957, C. Swaine. Cott Plantation, Colesbourne, 16.v.1999, A. Taylor. Kilkenny Viewpoint, a few, 8.vi.2002, KNAA.
 ST78 Lower Woods, nymph in moss and litter at base of tree stump, 31.v.1997, KNAA.

Family CICADELLIDAE Leafhoppers

Ulopa reticulata (Fabricius) - A common species nationally, on *Erica* and *Calluna*, but very localised in the county due to the rarity of the foodplants. Only found on the relict acid heaths of the Forest of Dean where not uncommon; apparently not present on the Limestone heath of Cleeve Common.

- SO61 Merring Meend NR, 15.ix.1990; Pithouse Pond, 10.viii.1996, KNAA.
 ST59 Poor's Allotment, 15.viii.1993; The Park, Tidenham Chase, 8.ix.2002, KNAA.

Ulopa trivia Germar - Nationally Scarce. A scarce south-eastern species associated with calcareous grasslands, possibly feeding on ribwort plantain *Plantago lanceolata* and other herbs. Only known in the county from Rodborough Common, where it was re-discovered in 1985.

- SO80 Rodborough Common, steep WNW-facing slope, in 1968, MGM (1972); 30.v.1985, KNAA, det. WJLQ.

Megophthalmus scanicus (Fallen) - Widely distributed and common at the roots of low plants; Cotswold district (Edwards, 1896).

- SO60 Fairmoor Green, female *Megophthalmus* presumably this species, 18.vii.1998, KNAA.
 SO61 Barnhill Plantation, Nagshead, 1948-51, MMB.
 SO80 Rodborough Common, 1968, MGM.

Ledra aurita (Linnaeus) - Occurs on lichen-covered branches of trees in woods, especially oakwoods. Cotswold district (Edwards, 1896).

- SO61 Barnhill Plantation, Nagshead, 1948-51, MMB. Chestnut Cottage Orchard, Popes Hill, nymph from hedge, 7.vii.2002, KNAA/GIG.
 SO73 Bromesberrow Place, mature nymph on parkland oak, 14.vi.2000, DJRH.
 SO81 Brockworth Park, 24.v.2000, PFW. Churchdown Hill, 6.viii.2002, CT.

- SO90 Siccaridge Wood, on hazel, 16.viii.1992, KNAA.
 SO92 The Reddings, Cheltenham, at light in house, evening of 20.viii.1995, CT.
 SO93 Dixton, oak, 23.vii.1998, PFW.
 SP03 Tewkesbury, breeding on oak, 1986-90; Stanway, on oak, 24.vii.1990, PFW (1991).

Cicadella viridis (Linnaeus) - Very abundant in damp rushy places; lays eggs in rushes *Juncus* spp. Cotswold district (Edwards, 1896).

- SO60 Nagshead Reserve, 14.ix.1991; Moseley Green, 18.vii.1998, KNAA.
 SO61 Cannop Ponds, 18.x.1981; Merring Meend NR, 15.ix.1990; Wigpool Common, 1996 & 2000; Leymoor Quagg & Lightmoor Works, 13.ix.1997; Cinderford Linear Park, 12.viii.2000; Crabtree Hill & Foxes Bridge Marsh, 10.viii.2002; Stenders Quarry, 2003, KNAA.
 SO62 Betty Daws Wood, 18.viii.1991, KNAA.
 SO70 The Warth, 4.viii.1992, JB.
 SO71 Bulley Woods, 4.x.1997, KNAA. Gamekeeper's Orchard, Blaisdon, 19.vii.2000, PFW.
 SO80 Stonehouse Newt Pond, 18.viii.2001, KNAA.
 SO91 Cockleford, 27.vii.1995; Cockleford Marsh, nymphs, 14.vii.1996; Bushley Muzzard SSSI, Brimpsfield, 9.viii.1998, KNAA.
 SP00 Perrotts Brook Marsh, 1985, 1991; Winson Meadows, 17.ix.1995, KNAA.
 SP01 Hedgley Bottom, 17.vii.1999, KNAA.

- SP20 Lechlade Reserve, 17.ix.1995, KNAA.
 SP22 Bledington Heath, 10.ix.1994, KNAA.
 ST59 Poor's Allotment, 15.viii.1993; The Park, Tidenham Chase, 8.ix.2002, KNAA.
 ST78 Lower Wetmoor, 1.viii.1992, JB.
 ST89 Lasborough Park, 18.ix.1993; Field Farm, Nympsfield, 19.viii.1995, KNAA.
 SU09 Claymeadow Farm, South Cerney, 3.viii.1996; Swillbrook Lakes Reserve, 19.ix.1998, KNAA.
- Evacanthus acuminatus* (Fabricius) - Grassy places. Widespread; Cotswold district (Edwards, 1896).
 SO50 Cadora Wood, 2000, PK.
 ST78 Lower Wetmoor, 1.viii.1992, JB.
 SU09 Claymeadow Farm, 3.viii.1996, KNAA.
- Evacanthus interruptus* (Linnaeus) - Widespread in tall grassy or shrubby places. Common & generally distributed; Cotswold district (Edwards, 1896).
 SO62 Betty Daws Wood, 18.viii.1991, KNAA.
 SO70 Coaley Peak, 19.viii.1995, KNAA.
 SO81 Highfield Bank, Sheepscombe, 31.vii.1998, KNAA.
 SO82 Long Pool, Deerhurst, 3.ix.2000; Ashleworth Ham, 4.viii.2002, KNAA. Coombe Hill Canal, 2.xi.2003, APF.
 SO91 Cockleford Marsh, 14.vii.1996, KNAA.
 SO92 Dowdeswell Wood, 29.viii.1994, KNAA.
 SP00 Perrotts Brook Marsh, 20.vii.1991, KNAA.
 SP11 Sherborne Farm, 17.ix.1994, KNAA.
 SP22 Bledington Heath, 10.ix.1994, KNAA.
 ST59 Ban-y-Gor-Wood, 12.vii.1997, KNAA.
 ST89 Field Farm, Nympsfield, 19.viii.1995, KNAA.
- Idiocerus confusus* Flor - On sallows; common nationally; Cotswold district (Edwards, 1896).
Idiocerus distinguendus Kirschbaum - On *Populus alba* and *P. canescens*, locally common; Cotswold district (Edwards, 1896).
Idiocerus elegans Flor - On sallows, local and not common; Cotswold district (Edwards, 1896).
Idiocerus laminatus Flor - Locally common on *Populus alba* and *P. canescens*; Cotswold district (Edwards, 1896).
Idiocerus lituratus (Fallén) - Reputedly common on *Salix caprea*, *S. cinerea*, *S. repens* and *S. fragilis*.
 SO61 Wigpool, 12.viii.2000, KNAA.
Idiocerus nitidissimus (Herrich-Schaeffer) = *fulgidus* misident. - On hybrid black (*Populus nigra*) and Lombardy (*P. italica*) poplars.

- SP20 Lechlade Reserve, 17.ix.1995, KNAA.
Idiocerus populi (Linnaeus) - Not uncommon; on aspen and other *Populus*; Cotswold district (Edwards, 1896).
 SP20 Lechlade Reserve, 17.ix.1995, KNAA.
Idiocerus rutilans Kirschbaum - On sallows *Salix caprea* and *S. cinerea*; local, south & east England. Glos (Le Quesne, 1965).
Idiocerus stigmatalis Lewis - On willows, particularly *Salix alba* and *S. fragilis*, common. Cotswold district, as *I. adustus* Herrich-Schaeffer. (Edwards, 1896).
Idiocerus vittifrons Kirschbaum - On maple; local. Glos (Le Quesne, 1965).
 SO93 Dixton Wood, nymphs on field maple, 29 & 31.vii.1998, PFW.
- Batracomorphus irroratus* Lewis - A local species of calcareous hillsides; associated with rock-rose. Widespread in lowland England. Cotswold district, as *Macropsis microcephala* (Herrich-Schaeffer) (Edwards, 1896).
 SO80 Rodborough Common, 1968, MGM. Short Wood, Haresfield Beacon, 28.vii.1998, APF.
 SP00 Barnsley Warren (Ratcliffe, 1977).
 ST79 Wotton-under-Edge, Perkins.
- Iassus lanio* (Linnaeus) - Common on foliage of oaks. Cotswold district (Edwards, 1896).
 SO50 Bigsweir Woods, 2000, PK.
 SO51 Forest of Dean, SO563118, 18.x.1981, KNAA.
 SO60 Moseley Green, 18.vii.1998, KNAA.
 SO61 Barnhill Plantation, 1948-51, MMB.
 SO70 Hock Cliff, Fretherne, hedgerow oak, 28.viii.1995, KNAA.
 SO71 Gamekeeper's Orchard, Blaisdon, 19.vii.2000, PFW.
 SO81 Nut Hill, Upton St Leonards, 18.vii.1998, KNAA. Brockworth Park, 24.v. & 13.vi.2000, PFW.
 SO82 Coombe Hill Canal, 22.vii.2001, KNAA.
 SO83 Forthampton Oaks, 14.viii.1999, KNAA.
 SO92 Dowdeswell Wood, 8.vii.1995; Queenswood Farm, 19.vi.2002, KNAA. Badgeworth Reserve, 28.vi.2003, APF.
 SO93 Dixton, vii.1998, PFW.
 SP02 Guiting Wood, 19.vii.1992, KNAA.
 SP12 Stow Bridge Coppice, on field oak, 17.vii.1999, KNAA.
 ST89 Highgrove House, haymeadow, 17.viii.1995, 17.vii.1996; Lower Lutheridge Farm Banks, 10.viii.1997, KNAA.
 SU09 Claymeadow Farm, South Cerney, 3.viii.1996, KNAA.
- Oncopsis alni* (Schrank) - Widespread on alder. Cotswold district, as *Bythoscopus alni* (Edwards, 1896).
 ST79 Wotton-under-Edge, Perkins.

- Oncopsis avellanae* Edwards – Widespread on hazel across southern Britain.
SO50 Bigsweir Woods, 2000, P Kirby.
- Oncopsis carpini* (J.Sahlberg) - Widespread on hornbeam within native range of the foodplant. Glos (Le Quesne, 1965).
- Oncopsis flavicollis* (Linnaeus) - Common and widespread on birch. Three species are believed to have been confounded under this name (WLQ, 1985). Cotswold district (Edwards, 1896).
SO50 Bigsweir Woods & Highbury Fields, 2000, P Kirby.
SO73 Bromesberrow Place, 14.vi.2000, KNAA.
SO80 Woodchester Park, 31.v.1994, APFoster, det. PK.
SO92 Dowdeswell Wood, 8.vii.1995, KNAA.
- Oncopsis tristis* (Zetterstedt) – Common and widespread on birch.
SO50 Cadora Wood, 2000, P Kirby.
- Pediopsis tiliae* Germar - Nationally Scarce. On lime, southern & eastern England (Le Quesne, 1965); rare (Edwards, 1896).
SO50 Cadora & Bigsweir Woods, 2000, P Kirby.
ST79 Wotton-under-Edge, VR Perkins, almost certainly not off lime (Edwards, 1896).
- Macropsis cerea* (Germar) - On sallows and purple osier. Widespread. Cotswold district; common on sallows (Edwards, 1896).
- Macropsis fuscula* (Zetterstedt) - On *Rubus*.
SO81 Robinswood Hill, 19.x.1997, KNAA.
- Macropsis graminea* (Fabricius) - On hybrid black and Lombardy poplars.
ST89 Highgrove House, 17.vii.1996, KNAA.
- Macropsis impura* (Boheman) - Not uncommon on *Salix repens* (Edwards, 1896). An unlikely species for the Cotswolds.
ST79 Wotton-under-Edge, Perkins.
- Macropsis prasina* (Boheman) - On sallows, widely lowland England. Cotswold district; common on osiers, etc, as *Pediopsis virescens* Fabricius (Edwards, 1896).
- Macropsis scotti* Edwards - On bramble, much of lowland England. Cotswold district, on brambles, as *Pediopsis tibialis* (Edwards, 1896).
ST79 Wotton-under-Edge, Perkins.
- Agallia consobrina* Curtis - Common among low plants. Commonly; Cotswold district, as *A. puncticeps* Germar (Edwards, 1896).
- Agallia venosa* (Fallen) - On grass in dry places. Very common at roots of grass, etc; Cotswold district (Edwards, 1896).
SO61 Stenders Quarry, 10.viii.1996, KNAA.
SO80 Rodborough Common, 1968, MGM.
- Eupelix cuspidata* (Fabricius) - On grasses, dry places. Not uncommon at the roots of low plants; Cotswold district (Edwards, 1896).

- SO60 Moseley Green, 18.vii.1998, KNAA.
SO80 Snows Farm, 21.xi.1998, KNAA.
SP00 Barnsley Warren (Ratcliffe, 1977)
SP03 Stanton, 19.vi.1994, KNAA.
- Aphrodes albifrons* (Linnaeus) - Common on grasses, usually near ground level. Common at roots of low plants; Cotswold district (Edwards, 1896).
SO60 Moseley Green, 18.vii.1998, KNAA.
ST98 Aston Farm, Cherington, 16.vii.2000, KNAA.
- Aphrodes bicinctus* (Schrank) - Mainly found in dry calcareous situations in Britain.
SP01 Hedgeley Bottom, 17.vii.1999, KNAA.
- Aphrodes bifasciatus* (Linnaeus) - Occurs in two forms, one on dry hillsides, the other in marshy habitats. At roots of low plants, not very common; Cotswold district (Edwards, 1896).
SO80 Rodborough Common, 1968, MGM.
- Aphrodes flavostriatus* (Donovan) - On grasses in damp places. Very common amongst low plants, especially in damp places; Cotswold district (Edwards, 1896).
SO82 Long Pool, 3.ix.2000, KNAA.
- Aphrodes limicola* (Edwards) - Nationally Scarce. A saltmarsh species. Glos (Kirby, 1992).
- Aphrodes makarovi* Zakhvatkin - Common on grasses. Recently split from *A. bicinctus* and the commoner of the two - old records need to be treated with caution but are more likely to be this species.
SO61 Barnhill Plantation, Nagshead, 1948-51, as *A. bicinctus* but more likely this species on habitat grounds, MMB.
SO70 Hock Cliff, 28.viii.1995, KNAA.
SO80 Rodborough Common, "A. bicinctus", 1968, MGM.
SO80 Rabbit Warren Wood, 4.viii.1996; Bisley Road Cemetery, Stroud, 16.viii.1997, KNAA.
ST89 Highgrove House, meadow, 17.viii.1995; Nymphsfield Valley, 19.viii.1995, KNAA.
ST98 Aston Farm, Cherington, 16.vii.2000, KNAA.
SU09 Claymeadow Farm, 3.viii.1996, KNAA.
- Doratura stylata* (Boheman) - Widespread in open situations, often on sandy or calcareous soils. Common amongst low plants in dry places; Cotswold district (Edwards, 1896).
- Deltocephalus pulicaris* (Fallen) - Common on short grasses, usually in drier localities, such as hillsides (Le Quesne, 1969). Common amongst grasses in damp places; Cotswold district (Edwards, 1896).
SO60 Moseley Green, 18.vii.1998, KNAA.
ST79 Wotton-under-Edge, Perkins.

Recilia coronifera (Marshall) - Local, on short grass in heathy or calcareous situations.

SP00 Barnsley Warren (Ratcliffe, 1977)

Arocephalus punctum (Flor) - Not uncommon among fine grasses in dry places; Cotswold district (Edwards, 1896).

Turrutus socialis (Flor) - On grasses, usually on calcareous soils. Widely distributed, but local; Cotswold district (Edwards, 1896).

SO80 Rodborough Common, 1968, MGM. Swifts Hill, 20.iv.1997; Bisley Road Cemetery, Stroud, 10 swept, 16.viii.1997; Selsley Common, 10.viii.1997, KNAA.

ST79 Wotton-under-Edge, Perkins.

ST98 Aston Farm, Cherington, 16.vii.2000, KNAA.

Adarrus multinotatus (Boheman) - Local, near base of taller grasses, usually in calcareous areas. Glos (Le Quesne, 1969).

Adarrus ocellaris (Fallen) - Widely distributed and common on grasses, especially in rather rank vegetation. Very abundant among grasses; Cotswold district (Edwards, 1896).

Jassargus sp.

SO60 Moseley Green, female, 18.vii.1998, KNAA.

Jassargus distinguendus (Flor) - Common and widespread on grasses. Cotswold district (Edwards, 1896).

Jassargus flori (Fieber) - Locally common on grasses. Amongst long grass in woods (Edwards, 1896).

ST79 Wotton-under-Edge, Perkins.

Mocuellus metrius (Flor) - A localised species of coarse marshy vegetation; widely scattered across lowland England.

SO82 Long Pool, 3.ix.2000, KNAA.

Arthaldeus pascuellus (Fallen) - Widely distributed and common on grasses, especially in drier situations. Very common among grasses in damp places; Cotswold district (Edwards, 1896).

SO80 Rodborough Common, 1968, MGM.

SO83 Chaceley Meadow, 30.viii.1999, KNAA.

ST89 Highgrove House, meadow, 17.viii.1995, KNAA.

Psammotettix nodosus (Ribaut) - On grasses, often in woods or on moorland. Cotswold district, as *P. striatus* (Linnaeus) (Edwards, 1896).

ST79 Wotton-under-Edge, Perkins.

Rhytistylus proceps (Kirschbaum) - Locally common on calcareous soils, near base of tall grasses.

SO80 Selsley Common, 10.viii.1997, KNAA.

Graphocraerus ventralis (Fallen) - Local, on grasses.

SP01 Colesbourne, by sweeping long grass, Edwards (1896).

Allygus mixtus (Fabricius) - Common; adult generally on trees, especially oak; larva feeds on grasses. Common on oaks; Cotswold district (Edwards, 1896).

SO60 Fairmoor Green, 18.vii.1998, KNAA.

ST57 Kings Weston Down, 15.vii.1999, DJG.

Allygus modestus Scott - Fairly common; adult generally on tree foliage, but larva on grasses. Widely distributed; Cotswold district (Edwards, 1896); Glos (Le Quesne, 1969).

Scleroracis decumanus (Kontkanen) - Nationally Scarce. A species of dry grassy heathland and acid grassland, although there are records from limestone areas; one possible host plant is *Holcus mollis*. Widely distributed in Britain but very local.

SP01 Colesbourne (Le Quesne, 1969).

ST79 Wotton-under-Edge, Perkins, as *Thamnotettix striatula* Fall. (Edwards, 1896).

Conosanus obsoletus (Kirschbaum) - Generally common on grasses in damp places. Very abundant in damp grassy places; Cotswold district (Edwards, 1896).

SP00 Winson Meadows, 17.ix.1995, KNAA.

Euscelis incisus (Kirschbaum) - Common on grasses.

SO91 Ebworth Estate, limestone grassland, 9.v.1994, APF, det. PK.

SP01 Hedgeley Bottom, 17.vii.1999, KNAA.

ST89 Highgrove House, meadow, 17.viii.1995; Lower Lutheridge Farm, 10.viii.1997, KNAA.

ST98 Aston Farm, Cherington, 16.vii.2000, KNAA.

SU09 Claymeadow Farm, 3.viii.1996, KNAA.

Euscelis lineolatus Brulle - Locally common on grasses in lowland England. Glos (Le Quesne, 1969).

Streptanus sordidus (Zetterstedt) - Common on grasses.

SO80 Rodborough Common, 1968, MGM.

ST79 Wotton-under-Edge, Perkins (Edwards, 1896)

Macustus grisescens (Zetterstedt) - Common on grasses. Cotswold district (Edwards, 1896).

SO80 Rodborough Common, 1968, MGM.

ST79 Wotton-under-Edge, Perkins.

Paluda adumbrata (C.Sahlberg) - Local, on grasses, usually on calcareous or other dry hillsides; lowland England. Cotswold district, as *Stictocoris preysleri* Herrich-Schaeffer (Edwards, 1896). Glos (Le Quesne, 1969).

Mocydia crocea (Herrich-Schaeffer) - Common on grasses. Cotswold district (Edwards, 1896).

SO72 Highnam Woods North, 18.x.1998, KNAA.

SO80 Rodborough Common, 30.v.1985, coll. KNAA, det. WJLQ.

- Thamnotettix confinis* (Zetterstedt) - Widespread on tree foliage. Cotswold district, as *T. prasina* (Edwards, 1896).
- Thamnotettix dilutior* (Kirschbaum) - On oak and other tree foliage across southern Britain.
SO50 Bigsweir Woods, 2000, PK.
- Speudotettix subfuscus* (Fallen) - Common on trees, especially oak. Cotswold district (Edwards, 1896).
SO50 Bigsweir Woods, 2000, PK.
SO80 Woodchester Park, woodland ride, 9.vi.1994, APF, det. PK.
ST79 Wotton-under-Edge, Perkins.
- Colladonus torneellus* (Zetterstedt) - Local, usually in woods. Cotswold district, by sweeping in woods (Edwards, 1896).
ST79 Wotton-under-Edge, Perkins.
- Lamprotettix nitidulus* (Fabricius) - Local, usually on tree foliage. Cotswold district, as *Thamnotettix splendidula* Fabricius (Edwards, 1896).
- Cicadula* sp.
SO61 Wigpool, female, 10.viii.1996, KNAA.
- Cicadula frontalis* (Herrich-Schaeffer) - Locally common, on tall *Carex* or *Scirpus* in marshy places. Common in marshes; Cotswold district, as *Limotettix antennata* (Edwards, 1896).
SP20 Lechlade Reserve, 17.ix.1995, KNAA.
- Cicadula persimilis* (Edwards) - Widespread on rushes & sedges.
SO50 Highbury Fields, 2000, PK.
- Cicadula quadrinotata* (Fabricius) - Widespread, often in damp places, on *Carex*. Cotswold district (Edwards, 1896).
- Elymana sulphurella* (Zetterstedt) - Common on grasses, often in drier areas. Cotswold district (Edwards, 1896).
- Grypotes puncticollis* (Herrich-Schaeffer) - Locally common on pines in lowland England. Glos (Le Quesne, 1969)
- Sonronius dahlbomi* (Zetterstedt) - Very local, occurring in colonies, often in woodland, possibly associated with *Epilobium angustifolium* or *Rubus idaeus*.
SO91 Hilcot Wood, very local on *Epilobium angustifolium* (Edwards, 1896) - this probably the Glos record referred to in Le Quesne (1969).
- Macrosteles* sp.
SO70 Hock Cliff, female, 28.viii.1995, KNAA.
- Macrosteles horvathi* (Wagner) - Locally common in marshy areas, perhaps associated with *Juncus articulatus*. Cotswold district, as *Cicadula fasciifrons* (Edwards, 1896).
- Macrosteles laevis* (Ribaut) - Widespread on dry calcareous grasslands.

- SO50 Highbury Fields, 2000, PK.
- Macrosteles septemnotatus* (Fallen) - Locally common on meadow-sweet. Locally abundant among low plants in damp places; Cotswold district (Edwards, 1896)
- Macrosteles sexnotatus* (Fallen) - Common and widespread, on grasses.
SP00 Winson Meadows, 17.ix.1995, KNAA.
- Macrosteles variatus* (Fallen) - Widely distributed, often in woodland, possibly associated with nettles. Cotswold district, on nettle (Edwards, 1896).
- Balclutha punctata* (Fab.) - On grasses; widespread.
SO50 Cadora Wood, 2000, PK.
- Typhlocybinæ
- Alebra albostriella* (Fallen) - Common on oak. Cotswold district (Edwards, 1896).
ST89 Highgrove House, 17.vii.1996 & 2.vii.1997, KNAA.
- Notus flavipennis* (Zetterstedt) - Locally common in base-rich habitats, on *Carex*, including *C. flacca*. Cotswold district (Edwards, 1896)
SO61 Wigpool, 10.viii.1996, KNAA.
SO70 Hock Cliff, 28.viii.1995, KNAA.
SO82 Ashleworth Ham, 13.ix.1998, KNAA.
- Forcipata citrinella* (Zetterstedt) - On *Carex* and grasses in damp places, locally common. Cotswold district (Edwards, 1896).
SO80 Rodborough Common, 1968, MGM.
SP00 Barnsley Warren (Ratcliffe, 1977).
- Forcipata forcipata* (Flor) - In damp areas in woods, with sedges or grasses.
SO50 Bigsweir Woods, 2000, PK.
- Dikraneura variata* Hardy - On grass often in heathy areas. Cotswold district (Edwards, 1896).
- Emelyanoviana mollicula* (Boheman) - On calcareous soils; has been reared from betony, and associated with *Primula*, *Plantago*, *Calamintha* and *Verbascum*, and perhaps *Origanum*. Very common amongst Labiatae; Cotswold district (Edwards, 1896)
- Empoasca* sp.
SO82 Ashleworth Ham, female, 13.ix.1998, KNAA.
SP20 Lechlade Reserve, female, 17.ix.1995, KNAA.
- Empoasca decipiens* Paoli - Common on nettles and raspberry, etc.
SO50 Cadora Wood & Causeway Grove, 2000, PK.
- Empoasca vitis* (Gothe) - Common, especially on trees and shrubs.
SO50 Cadora Wood & Causeway Grove, 2000, PK.
SO70 Hock Cliff, 28.viii.1995, KNAA.
SO71 Highnam Woods, 18.x.1998, KNAA.

- Kybos* sp.
 SP20 Lechlade Reserve, female, 17.ix.1995, KNAA.
- Kybos populi* (Edwards) - On *Populus* spp.
 E. Glos (Le Quesne & Payne, 1981)
- Kybos smaragdula* (Fallen) - Common on *Populus* and *Salix*; Cotswold district (Edwards, 1896) – however, Edwards only recognised one species in this genus.
- Eurhadina pulchella* (Fallen) - Mainly on oak foliage. Common on oaks; Cotswold district (Edwards, 1896)
 SO93 Dixton, oak, 23.vii.1998, PFW.
 ST89 Highgrove House, 17.vii.1996, KNAA.
- Eupteryx aurata* (Linnaeus) - Common on nettle, later in year also on labiates & other plants. Common amongst nettles, etc; Cotswold district (Edwards, 1896)
 SO50 Cadora Wood, 2000, PK.
 SO81 Robinswood Hill, 19.x.1997, KNAA.
 SP00 Winson Meadows, 17.ix.1995, KNAA.
- Eupteryx filicum* (Newman) - On ferns, including polypody; local. Cotswold district (Edwards, 1896) - E. Glos (Le Quesne & Payne, 1981)
 SO50 Bigsweir Woods & Causeway Grove, 2000, PK.
- Eupteryx notata* Curtis - On low calcareous vegetation, probably associated with *Prunella*, *Thymus* and various Compositae. Common amongst low plants in dry places; Cotswold district (Edwards, 1896)
- Eupteryx signatipennis* (Boheman) - Locally common on meadow-sweet. Cotswold district (Edwards, 1896)
- Eupteryx stachydearum* (Hardy) - Common on labiates, especially *Stachys sylvatica*, *Teucrium* and *Lamium*. Very common on *Teucrium* and other labiates; Cotswold district (Edwards, 1896)
 SO50 Cadora Woods, 2000, PK.
- Eupteryx urticae* (Fabricius) - On nettle, often in damper and upland situations. Common on nettles; Cotswold district (Edwards, 1896)
 SO50 Cadora & Bigsweir Woods, 2000, PK.
 SO60 Moseley Green, 18.vii.1998, KNAA.
 SO82 Coombe Hill Canal, 2.xi.2003, APF.
- Eupteryx vittata* (Linnaeus) - Occasional, but widespread, on ground-ivy, *Mentha*, *Ranunculus repens*, *Plantago major* and nettle. Common amongst *Mentha*, etc, in damp places; Cotswold district (Edwards, 1896).
 SO50 Cadora Wood, 2000, PK.
 SO82 Long Pool, 3.ix.2000, KNAA.
- Aguriahana germari* (Zetterstedt) - On pines throughout Britain. Cotswold district (Edwards, 1896).

- Aguriahana stellulata* (Burmeister) – On lime foliage, plum and cherry; very localised in lowland England.
 ST89 Westonbirt Arboretum, 3.ix.2000, DJG.
- Ribautiana cruciata* (Ribaut) - On loganberry, blackberry, whitebeam, willow and hazel.
 SP20 Lechlade Reserve, 17.ix.1995, KNAA.
- Ribautiana scalaris* (Ribaut) – County rarity. An uncommon species found on oaks, with a generally eastern distribution in Britain.
 SO73 Bromesberrow Place, 14.vi.2000, KNAA.
- Ribautiana tenerrima* (Herrich-Schaeffer) - Often common on bramble, dewberry and loganberry. Common on brambles; Cotswold district (Edwards, 1896).
 SO50 Highbury Fields, 2000, PK.
- Ribautiana ulmi* (Linnaeus) - Normally on elm, also reported from other trees and shrubs. Very abundant on elm; Cotswold district (Edwards, 1896).
 SO73 Bromesberrow Place, 14.vi.2000, KNAA.
- Linnavuoriana sexmaculata* (Hardy) - On *Salix*, especially willows. On willows, not uncommon; Cotswold district, as *Typhlocyba sexpunctata/10-punctata* (Edwards, 1896)
 SO50 Cadora Wood, 2000, PK.
 SP20 Lechlade Reserve, 17.ix.1995, KNAA.
- Typhlocyba bifasciata* Boheman - On hornbeam and elm. Sometimes common on wych elm; Cotswold district, as *Typhlocyba nitidula* (Edwards, 1896)
- Typhlocyba quercus* (Fabricius) - On oak and various other trees and shrubs. Very common on oak; Cotswold district (Edwards, 1896).
 SO50 Bigsweir Woods & Causeway Grove, 2000, PK.
 SO71 Highnam Woods, 18.x.1998, KNAA.
 ST89 Highgrove House, 17.vii.1996, KNAA.
- Lindbergina aurovittata* (Douglas) – A local southern species, found on oak, bramble and loganberry.
 SO71 Highnam Woods, 18.x.1998, KNAA.
- Fagocyba carri* (Edwards) - Local, on oak. E.Glos (Le Quesne & Payne, 1981).
 SO70 Hock Cliff, 28.viii.1995, KNAA.
- Fagocyba cruenta* (Herrich-Schaeffer) - Often abundant on beech, but also on other trees. Common on beech; Cotswold district, as *Typhlocyba douglasi* & *T. gratiosa* (Edwards, 1896)
- Edwardsiana* sp.
 SO70 Hock Cliff, female, 28.viii.1995, KNAA.
 SO71 Highnam Woods, female, 18.x.1998, KNAA.
 SP20 Lechlade Reserve, female, 17.ix.1995, KNAA.
- Edwardsiana alnicola* (Edwards) - Nationally Scarce. On alder, and possibly also maple.

- SO91 Colesborne (Kirby, 1992). E. Glos (Le Quesne & Payne, 1981)
Edwardsiana bergmani (Tullgren) - On birch and alder. E. Glos (Le Quesne & Payne, 1981).
Edwardsiana crataegi (Douglas) - On hawthorn, rowan, alder, apple & cherry. Not uncommon on whitethorn; Cotswold district (Edwards, 1896).
SO83 Chaceley Meadow, 30.viii.1999, KNAA.
Edwardsiana diversa (Edwards) - From dogwood, also maple. E.Glos (Le Quesne & Payne, 1981)
Edwardsiana flavescens (Fabricius) - From hornbeam and beech, possibly other trees. Common on various trees & bushes; Cotswold district, as *Chlorita flavescens* Fabricius; "occurs with *C. viridula*" (Edwards, 1896). E. Glos (Le Quesne & Payne, 1981).
Edwardsiana lethierryi (Edwards) - On lime, maple & horse chestnut, and other trees. On various trees, especially elm; Cotswold district (Edwards, 1896).
Edwardsiana nigriloba (Edwards) - On sycamore. E. Glos (Le Quesne & Payne, 1981).
Edwardsiana prunicola (Edwards) - On sloe, cultivated plum, currant, *Viburnum lantana* and willow. Glos (Le Quesne & Payne, 1981).
SO83 Chaceley Meadow, 30.viii.1999, KNAA.
Edwardsiana rosae (Linnaeus) - On wild and cultivated rose, apple, rowan, cherry, hawthorn and whitebeam. Very common on roses; Cotswold district (Edwards, 1896)
Edwardsiana spinigera (Edwards) - On hazel and alder; very local. E. Glos (Le Quesne & Payne, 1981).
Alnetoidia alneti (Dahlbom) - On alder, hazel and a wide range of other trees. Common on alder & hazel; Cotswold district (Edwards, 1896).
Zyginidia scutellaris (Herrich-Schaeffer) - Common in grass, mainly associated with *Dactylis glomerata* and *Festuca rubra*. On fine grasses, in dry places; Cotswold district (Edwards, 1896).
SO80 Rodborough Common, 1968, MGM.
Arboridia parvula (Boheman) - Found on low plants on calcareous soils and fenland, possibly associated with rock-rose on the former. Moderately common among low plants in damp places; Cotswold district (Edwards, 1896).
Arboridia ribauti (Ossiannilsson) - On oak in southern and eastern England.
SO50 Bigsweir Woods, 2000, PK.
Zygina hyperici (Herrich-Schaeffer) - On *Hypericum*, especially *perforatum*, in calcareous situations. On *Hypericum* in autumn, rare; Cotswold district (Edwards, 1896) - E. Glos (Le Quesne & Payne, 1981).
Zygina flammigera (Geoffroy) - On various trees and bushes, especially oak, hawthorn and *Prunus*. Very common in autumn in mixed hedges and various low plants; Cotswold district (Edwards, 1896)

- Zygina suavis* Rey - On buckthorns, *Rhamnus* and *Frangula*. E.Glos (Le Quesne & Payne, 1981)
- Super-family FULGOROMORPHA
Family CIXIIDAE Lace hoppers
- Oliarus leporinus* (Linnaeus) - Nationally Scarce. A saltmarsh species, with records along Bristol Channel, Solent and East Anglia.
ST57 Clifton, coarse grass by the side of the Avon, Curtis (Edwards, 1896).
ST59 Beachley Point, 14.vii.1990, KNAA.
- Oliarus panzeri* Low - Nationally Scarce. Fields that become dry and cracked in summer.
SO82 Willowhill Farm, Apperley, 16.viii.2000, PFW.
Tachycixius pilosus (Olivier) - In open, near base of grasses, in dry places. Common and widespread. Common and generally distributed (Edwards, 1896).
SO50 Bigsweir Woods & Highbury Fields, 2000, PK.
SO61 Stenders Quarry, 5.viii.2003, KNAA.
SO72 Glasshouse Orchard, 4.vii.2001, KNAA.
SO80 Woodchester Park, 6.vi.1994, APF, det. PK. Swifts Hill, 20.iv.1997; Bisley Road Cemetery, 20.v.2001; Frith Wood, 4.vi.2003, KNAA.
SO81 Brockworth Park, blackthorn, 13.vi.2000, PFW.
SO90 Siccaridge Wood, 11.vi.2003, KNAA.
SP01 Chedworth Woods, 8.vi.2002, KNAA.
ST59 Ridley Bottom, 15.v.2003, KNAA.
- Cixius cunicularius* (Linnaeus) - County Rarity. Usually near streams. Rather local. Cotswold district (Edwards 1896) and still only known in the county from the Cotswolds.
SO80 Woodchester Park, 31.v. & 9.vi.1994, APF, det. PK. Shortwood, Haresfield, 27.vi.2002, DJG.
SO90 Siccaridge Wood, 11.vi.2003, KNAA.
- Cixius distinguendus* Kirschbaum - County rarity. A woodland species. Local nationally. Cotswold district, as *C. brachycranus* Fieber (Edwards 1896)
SO50 Bigsweir Woods, Causeway Grove & Highbury Fields, 2000, PK.
- Cixius nervosus* (Linnaeus) - A woodland species. Common & widely distributed (Edwards, 1896).
SO50 Cadora & Bigsweir Woods, Causeway Grove & Highbury Fields, 2000, PK.
SO60 Fairmoor Green, 18.vii.1998, KNAA.
SO61 Stenders Quarry, 10.viii.1996, KNAA.
SO62 May Hill, 15.vi.1998, KNAA.
SO72 Glasshouse Orchard, 4.vii.2001, KNAA.

- SO80 Woodchester Park, 31.v.1994, APF, det. PK. Bisley Road Cemetery, 20.v.2001; Frith Wood, 4.vi.2003, KNAA.
SO81 Brockworth Park, 13.vi.2000, PFW.
SO90 Siccaridge Wood, 11.vi.2003, KNAA.
SO91 Cowley, 21.vii.1962, WJLQ.
SP00 Cirencester Golf Course, 1.vii.2001, KNAA.
SP01 Kilkeny Viewpoint & Chedworth Woods, 8.vi.2002, KNAA.
ST57 Avonmouth Sewage Farm, 5.vii.2001, DJG.
ST59 Lancaut, 16.vii.1989, KNAA.

Family DELPHACIDAE

Kelisia guttula (Germar) - Widespread, on sedges on calcareous hillsides and in marshes. Cotswold Hills, Edwards (1896)

- SO61 Leymoor Quagg, Cinderford, 13.ix.1997, KNAA.
SO80 Rodborough Common, 1968, MGM. Selsley Common, 10.viii.1997, KNAA.

Kelisia vittipennis (Sahlberg) - Widespread on sedges on dry hillsides or in peat-bogs. Feed exclusively on sedges and cotton grass. Cotswold district (Edwards 1896).

- SO61 Stenders Quarry, 10.viii.1996, KNAA.
SO70 Coaley Peak, 19.viii.1995, KNAA.
SO80 Rodborough Common, 1968, MGM. Bisley Road Cemetery, Stroud, 16.viii.1997, KNAA.
SU09 Swillbrook Lakes, 19.ix.1998, KNAA.

Anakelisia perspicillata (Boheman) - Local, on dry hillsides and heathy places.

- SP00 Barnsley Warren (Ratcliffe, 1977)
SP01 Colesbourne, ix.1892, Edwards (1896)

Stenocranus minutus (Fabricius) - Common among grasses in woods and meadows. Only feeds on cocksfoot grass. Glos (Le Quesne, 1960); as *Liburnia lineola* Germ.: on long grasses, especially in woods; Cotswold district, common (Edwards, 1896); Cotswold Hills, Cheltenham, as *Delphax lineola* Germar (Marshall, 1864/65)

- SO80 Rodborough Common, 1968, MGM.

Chloriona dorsata Edwards - Nationally Scarce. On common reed, *Phragmites*. Glos (Kirby, 1992) but not in Le Quesne (1960)

Chloriona smaragdula (Stal) - Locally abundant on common reed. Glos (Le Quesne, 1960)

Conomelus anceps (Germar) - Widespread and common on rushes. As *Liburnia limbata* in Edwards (1896) and stated to be very abundant, but he gives no Glos records.

- SO60 Nagshead, 14.ix.1991, KNAA.

- SO61 Wigpool Common, 10.viii.1996 & 12.viii.2000; Leymoor Quagg & Lightmoor Works, 13.ix.1997; Cinderford Linear Park, 12.viii.2000, KNAA.

- SO83 Chaceley Meadow, 30.viii.1999, KNAA.
SO91 Bushley Muzzard SSSI, Brimpsfield, 9.viii.1998, KNAA.
SO92 Dowdeswell Wood, 29.viii.1994, KNAA.
SP00 Winson Meadows, 17.ix.1995, KNAA.
SP20 Lechlade Reserve, 17.ix.1995, 7.x.2000, KNAA.
ST59 The Park, Tidenham Chase, 8.ix.2002, KNAA.
ST89 Field Farm, Nympsfield, 19.viii.1995, KNAA.
ST98 Aston Farm, Cherington, 16.vii.2000, KNAA.
SU09 Swillbrook Lakes Reserve, 19.ix.1998, KNAA.

Eurysa brunnea Melichar - Warmth-demanding species of open floristically rich grassland swards; only known in GB from Worcs & Glos.

- SO60 Purton, brachypterous male swept from a thin grass community by Sharpness Canal, 23.vi.1996, PF Whitehead (1998)

Ditropis pteridis (Spinola) - Common and widespread nationally on bracken.

- SO50 Highbury Fields, 2000, PK.
SO62 May Hill, 15.vi.1998, KNAA.
SP01 Chedworth Woods, 8.vi.2002, KNAA.

Stiroma affinis Fieber - Locally common, usually in woods, perhaps associated with *Fragaria* or *Geum*. On long grass in woods; Cotswold district, common (Edwards, 1896)

- SO80 Woodchester Park, woodland ride, 9.vi.1994, APF, det. PK.
ST79 Wotton-under-Edge, Perkins.

Criomorphus albomarginatus Curtis - Common and widespread on grass in woods and on hillsides. On grasses (Edwards, 1896).

- SO80 Woodchester Park, 6.vi.1994, APF, det. PK.
SO91 pre1970, Auchenorhyncha Recording Scheme.
ST79 Wotton-under-Edge, Perkins.

Dicranotropis hamata (Boheman) - Generally common on grasses. Cotswold district (Edwards, 1896).

- ST79 Wotton-under-Edge, Perkins.

Megamelus notula (Germar) - Locally common in low marshy vegetation. Feed on sedges.

- SO61 Wigpool, 10.viii.1996; 12.viii.2000, KNAA.

Megamelodes quadrimaculatus (Signoret) - Local, in marshy places.

- SP01 Colesbourne: as *Liburnia fieberi* Scott - I once found it in quantity by sweeping *Myosotis palustris* (Edwards, 1896).

Muellerianella sp.

- SO50 Cadora Wood & Highbury Fields, 2000, PK.

- Muellerianella fairmairei* (Perris) - Widely distributed in damp places. On *Holcus lanatus*. Very common on grasses by roadsides, etc; Cotswold district (Edwards, 1896). These records may refer to *M. extrusa*.
ST79 Wotton-under-Edge, Perkins.
- Laodelphax striatellus* (Fallen) - Nationally Scarce. On grasses in damp places. Gloucestershire (Kirby).
- Hyledelphax elegantulus* (Boheman) - Common among grasses, usually in rather dry places.
SO83 Shuthonger Common, 14.viii.1999, KNAA.
SO91 Ebworth Estate, limestone grassland, 9.v.1994, APF, det. PK.
SP00 Barnsley Warren (Ratcliffe, 1977)
ST79 Wotton-under-Edge, Perkins (Edwards, 1896)
- Javesella discolor* (Boheman) - Widely distributed, on long grasses, usually in or near woods. Woods in early summer. Cotswold district (Edwards, 1896)
ST79 Wotton-under-Edge, Perkins.
- Javesella dubia* (Kirschbaum) - Common and widespread on grasses, especially in woods.
SO50 Cadora Wood, 2000, PK.
SO62 May Hill, 15.vi.1998, KNAA.
ST79 Wotton-under-Edge, Perkins, as *Liburnia difficilis* Edw. (Edwards, 1896).
SO61 Wigpool, 12.viii.2000, KNAA.
- Javesella forcipata* (Boheman) - Local, on grass, often in or near woods. In woods in spring; Cotswold district (Edwards, 1896)
- Javesella pellucida* (Fabricius) - Common and widespread on grasses. Cotswold district, very common amongst grasses (Edwards, 1896)
SO50 Cadora Wood, 2000, PK.
SO81 Brockworth Park, 24.v.2000, PFW.
SO91 Ebworth Estate, limestone grassland, 9.v.1994, APF, det. PK.
ST79 Wotton-under-Edge, Perkins.
ST89 Highgrove House, meadow, 17.viii.1995; Lower Lutheridge Farm, 10.viii.1997, KNAA.
ST98 Aston Farm, Cherington, 16.vii.2000, KNAA.
- Ribautodelphax "collinus"*
ST79 Wotton-under-Edge (Perkins), as *Liburnia collina* Boh. (Edwards, 1896), but this species has since been split.
- Ribautodelphax pungens* (Ribaut) - Nationally Scarce. Dry calcareous grasslands, with restricted occurrence nationally – the Cotswolds are reputedly one of the better areas for the species in GB (Morris, 1972).
SO80 Rodborough Common, 1968, MGM.
SP01 Withington & Colesbourne (Le Quesne, 1960).

- Kosswigianella exigua* (Boheman) - On short grass in dry, open places; local. On grasses in dry places in the county (Edwards, 1896)
SO60 Moseley Green, 18.vii.1998, KNAA.
SP01 Hedgeley Bottom, 17.vii.1999, KNAA.
ST79 Wotton-under-Edge, Perkins.
ST98 Aston Farm, Cherington, 16.vii.2000, KNAA.
- Florodelphax leptosoma* (Flor) - Long herbage in swampy places.
SO61 Leymoor Quagg, Cinderford, 13.ix.1997, KNAA.
SP00 Winson Meadows, 17.ix.1995, KNAA.
SU09 Swillbrook Lakes, 19.ix.1998, KNAA.
- Struebingianella lugubrina* (Boheman) - In marshy places, at base of *Glyceria*, local. Glos (Le Quesne, 1960)

Family ISSIDAE

- Issus coleoptratus* (Fabricius) - Lives on trees and shrubs, often evergreens such as ivy and yew. Widespread in lowland southern Britain, as far north as Gwent, Herefords, Worcs, Herts, Suffolk, and west to Seaton in SE Devon and Glam.
SO50 Cadora & Bigsweir Woods, 2000, PK.
SO51 Lady Park Wood, nymph on yew foliage, and adult swept beneath lime-beech canopy, 1.vii.1984; Elliots Wood, 13.ix.1992, KNAA.
SO61 Lightmoor Works, one beaten from hawthorn, 13.ix.1997; Cinderford Linear Park, in car park, 12.viii.2000, KNAA. Foxes Bridge Marsh, off birch, 10.viii.2002, CT.
SO80 Selsley, specimen from here in BMNH collections, W. Dolling (pers. comm.). Frith Wood, nymph from yew, 11.xi.2003, KNAA.
SO81 Saltridge Wood, 19.ix.1985, KNAA.
SO90 Siccaridge Wood, 16.viii.1992, 7.x.2001; Three Groves Wood, nymphs 5.vi. & 13.xi.2003, KNAA.
SO91 A.J.A. Stewart (Auchenorhyncha Recording Scheme)
ST57 Coombe Dingle, nymph, 30.vi.1998, KNAA. Kings Weston Down, 15.vii.1999; Avon Gorge, 18.vii.2000, DJG.
ST59 A.J.A. Stewart (Auchenorhyncha Recording Scheme)
ST79 Wotton-under-Edge, Perkins (Edwards, 1896).

Family TETTIGOMETRIDAE

- Tettigometra impressopunctata* Dufour - Nationally Scarce. A scarce insect, confined to southern counties, where it occurs on the ground surface in areas of well-drained chalky or sandy soils. Glos (Kirby, 1992).
SO70 Coaley Peak, 19.viii.1995, KNAA.
SO80 Rodborough Common, 1968, MGM.

Acknowledgements

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WILDLIFE RECORDING INFORMATION

The Society's official recording area is the whole of the vice-counties 33 (East Gloucestershire) and 34 (West Gloucestershire). However, for practical purposes, certain recorders only cover the administrative county of Gloucestershire, comprising the districts of Cotswold, Stroud, Forest of Dean, Cheltenham, Gloucester and Tewkesbury, since the Bristol Naturalists' Society covers the Unitary Authority of South Gloucestershire and the City of Bristol (further details available from the individual recorders as listed below).

The Society welcomes observations and records from members and others, and these should be sent to the Recorders as detailed below. Records may be submitted in any form (so long as they are legible and intelligible); some Recorders prefer them on A6 cards (one per species), or, for certain groups, on the appropriate recording form (available from the Recorders - see below), though a simple list (preferably in systematic order) is acceptable for groups such as moths.

Ideally the following information should be supplied:

- * Species name.
- * Where seen (name of location, preferably using names on the 1:50000/1:25000 Ordnance Survey maps; if in doubt include a sketch map of the site) plus six figure map reference. It is helpful to Recorders if the tetrad number is also given. For sightings in the Cotswold Water Park observers are asked to quote the official County Council pit numbers whenever possible.
- * Date.
- * Observer's name and address.

Also useful:

- * Number or abundance.
- * Habitat.
- * Where appropriate a description of the species or a note of how identification was made including details of any guidebook used.
- * Any other relevant information.

These details should be sent to the appropriate Recorder from the list below. The precise location of rare species will be kept confidential in the interests of conservation - records should be clearly labelled CONFIDENTIAL if they are to be so treated. Straightforward records are too numerous to be acknowledged individually by the Recorders, but **when a reply is required please enclose a stamped addressed envelope.**

The most interesting records are published in the Society's "GNS News", but **all** records are valuable in building up a picture of the present status and distribution of species in our county, for compiling annual reports and for updating our records and those at the Gloucestershire Centre for Environmental Records and the national Biological Records Centre, Monks Wood. The Society's recording is well described in "Dot Mapping and the Recording of Species' Distribution in Gloucestershire" in *The Gloucestershire Naturalist (TGN)*, No.1, 1984, price £2.00 plus £1.00 p. & p., available from the Chairman of the Scientific & Publications Sub-committee (for address see below).

Under the Data Protection Act the GNS advises members and other observers that their personal details (name, address, telephone number, email address) will be stored, either on paper or electronically, as part of the Society's recording system. These details will not be passed on, or sold, to third parties with the exception of the Gloucestershire Centre for Environmental Records, subject to the Memorandum of Understanding between the two organisations. Should the observer wish that certain parts of a record remain confidential (e.g. for reasons such as sensitive species, sensitive site, restriction of access to land, anonymity), they should contact the relevant Recorder and discuss the matter, stating their reasons.

NAMES AND ADDRESSES OF RECORDERS
with information on the most up-to-date sources for check-lists

BIRDS: Richard Baatsen, 1 Prestwick Terrace, Bristol Road, Whitminster, Glos GL2 7PA (01452 740161); email: baatsen@surfbirder.com. For those observers who are reporting a county rarity or BBRC species, the appropriate forms can be obtained from the Recorder; a guidance document listing all the species that require detailed descriptions is also available (**please send sae**); **submission of records by email preferred** (see also Gloucestershire Bird Report 2005 pp 18-20). The GNS website has a recording form showing all required information that can be printed off. Checklist in *TGN 5* (1992). Fuller account in *Birds of Gloucestershire* by C.M.Swaine (1982).

- **British Trust for Ornithology Representative:** Mike Smart, 143 Cheltenham Road, Gloucester GL2 0JH (01452 421131); email: smartmike@btinternet.com.
- **Gloucestershire Bird Report** (annual report on the county's avifauna) published by Gloucestershire Ornithological Coordinating Committee (GOCC).

MAMMALS: Rosie Kelsall, c/o The Gloucestershire Wildlife Trust, Conservation Centre, Robinswood Hill Country Park, Reservoir Road, Gloucester GL4 6SX. (01452 383333); email: rosie.kelsall@gloucestershirewildlifetrust.co.uk. Checklist in *TGN 5* (1992).

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FISH & CRAYFISH: Pete Bradshaw, c/o The Gloucestershire Wildlife Trust, Church House, Standish, Stonehouse, Gloucestershire GL10 3EU; email: peter.bradshaw@gloucestershirewildlifetrust.co.uk. Fish checklist in *TGN 5* (1992).

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- **MOTHS:** Roger Gaunt, Firtree Cottage, St.Briavels, Lydney, Glos GL15 6SB (01594 530475); email: roger.gaunt@btinternet.com. *Gloucestershire Moths – An Account* by Roger Gaunt (2000), (2nd edition 2006); *Set of Moth Distribution Maps* by Roger Gaunt (80 maps showing distribution of selected species) (2003).
- **DRAGONFLIES:** Ingrid Twissell, Arfonia, The Green, Churchdown, Glos GL3 2LE (01452 714413); email: canditwissell@btinternet.com. *Distribution of Dragonflies in Gloucestershire* by S.C.Holland (1991). Checklist available from Ingrid Twissell.

- **HOVERFLIES & LADYBIRDS:** David Iliff, Green Willows, Station Road, Woodmancote, Cheltenham, Glos GL52 9HN (01242 674398); email: davidiliff@talk21.com. Ladybirds in *Coleoptera of Gloucestershire* by D.B. Atty (1983).
- **ANTS, BEES & WASPS:** Tony Taylor, Clover Cottage, Chatter Street, Longney, Gloucester GL2 3SN (01452 728734).
- **SPIDERS:** David Haigh, 27 St.Luke's Road, Cheltenham, Glos GL53 7JF (01242 513544); email: djrhaigh@hotmail.co.uk. Animals for identification can be sent by post in an envelope containing a small flat non-crushable box holding some moss or slightly damp cotton wool.
- **WOODLICE, CENTIPEDES, MILLIPEDES, HARVESTMEN, FALSE SCORPIONS, LACEWINGS, SPRINGTAILS & FRESHWATER INVERTEBRATES:** David Scott-Langley, 19 Chesterton Grove, Cirencester, Glos GL7 1XN (01285 659631); email: david@scott-langley.freeserve.co.uk. Check-lists for millipedes and false scorpions in *TGN 12* (1999); centipedes in *TGN 18* (2007); springtails in *TGN 16* (2005) & *18* (2007).
- **BEETLES (other than ladybirds), SAWFLIES, FLIES (other than hoverflies), BARK FLIES):** Keith Alexander, 59 Sweetbrier Lane, Heavitree, Exeter, Devon EX1 3AQ (01392 413092); email: keith.alexander@waitrose.com. Checklists for bark flies in *TGN 17* (2006). *Coleoptera of Gloucestershire* by D.B. Atty (1983).
- **GRASSHOPPERS, BUSH-CRICKETS, EARWIGS, & COCKROACHES, BUGS (HEMIPTERA):** John Widgery, 12 Bushcombe Close, Woodmancote, Cheltenham, Glos. GL52 9HX. (01242 673873); email: johnwidgery@waitrose.com. Checklists for bugs in *TGN 8, 9 & 16* (1995, 1996 & 2005), Checklist for Orthopteroids in *TGN 15* (2004)
- **LAND & FRESHWATER MOLLUSCS:** David Long, 83 Moored Road, Leckhampton, Cheltenham, Glos GL53 0HB (01242 527673); email: david@long55.wanadoo.co.uk. Checklist in *TGN 3* (1989).
- **ECTOPARASITES (Fleas, lice, louse-flies):** Robin Sellers, Crag House, Eilerslie Park, Gosforth, Cumbria CA20 1BL (01946 725453); email: sellers@craghouse7.freeserve.co.uk. Checklist of louse-flies in *TGN 1* (1984).
- **FRESHWATER TRICLADS:** Larry Bellamy, 6 Dean Road, Newnham-on-Severn, Glos. GL14 1AB (1594 516420); email: lsb@rdplus.net. Checklist in *TGN 1* (1984).

FLOWERING PLANTS, FERNS & STONEWORTS: Mark and Clare Kitchen, The Cottage, Bevington, Berkeley, Glos GL13 9RB (01453 810958); email: markarkitchen@yahoo.com. *Supplement to the Flora of Gloucestershire* by S.C.Holland, H.M.Caddick and D.S.Dudley-Smith (1986); *The Flora of the Bristol Region* by I.P.Green, R.J.Higgins, C.Kitchen & M.A.R.Kitchen (2000); *Stephen Bishop's New Flora of Gloucestershire*, Part 1 edited by R. Cooper: *TGN 13* (2000), and Part 2 edited by C. & M. Kitchen and I. Carle: *TGN 14* (2008).

MOSSES AND LIVERWORTS: Peter Martin, 60 West Street, Tetbury, Glos GL8 8DR. (01666 503791); email: petergmartin@btinternet.com.

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1. The Editor will be pleased to receive papers relating to the fauna and flora of Gloucestershire, of a more scientific nature than would be published in the GNS News, as well as annual reports from the County Recorders.
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