

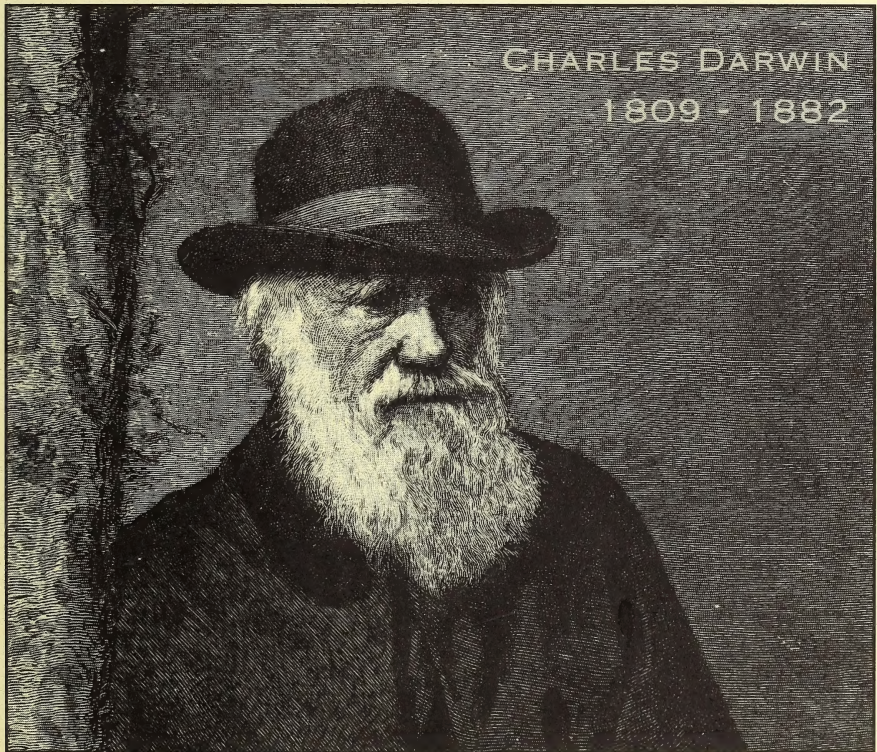
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Invertebrate Conservation News



Number 58

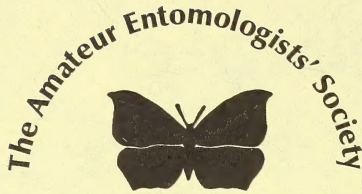
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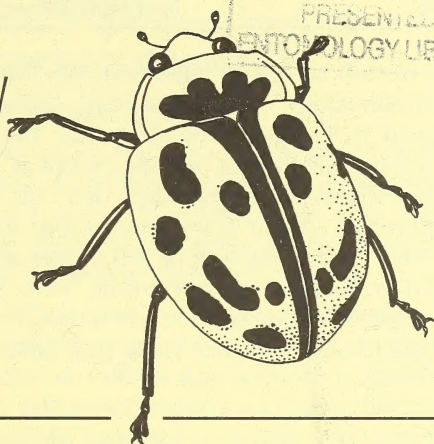
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INVERTEBRATE CONSERVATION NEWS



No. 58, February 2009

EDITORIAL

This edition of *ICN* sadly records the deaths of two men who did much to promote invertebrate conservation. Over forty years ago, Bill Parker played a key role in setting up a conservation group within the Amateur Entomologists' Society. His work, nowadays rarely acknowledged, was pivotal in developing invertebrate conservation within the Society and far beyond. Professor Mike Majerus, who has died tragically young, was a most inspiring President of the AES, whose commitment to conservation was epitomised by his rousing presentation at the Society's last annual Members' Day.

Another sad piece of news is the defeat of Buglife – The Invertebrate Conservation Trust in its legal battle to keep the developer's bulldozers away from West Thurrock Marshes, Essex; a site which ranks as one of the richest in Britain for rare and endangered invertebrates. This has been a flagship case, set against a background of 'brownfield' development throughout the UK and beyond, where planning consent for construction is often granted without any serious questions being asked about the invertebrate faunas that will be destroyed as a result. In recent decades, the relative importance of brownfield sites as refugia for wildlife has grown in proportion to the destruction and degradation of habitats on agricultural land. With the accelerated loss of brownfield habitats in industrialised countries, there can be little doubt that the conservation status of much of our invertebrate fauna has continued to worsen, despite the rise of organisations dedicated to its conservation.

The current economic recession is of course another piece of bad news for most of us, but perhaps it will, in certain instances, help to forestall activities that would otherwise destroy the habitats of

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invertebrates and other wildlife. Also, amid current doubts over the sustainability of our economic system, perhaps more attention will be paid to fundamental questions about the human use of the Earth's natural resources. If our political leaders choose to address such questions honestly, they will be serving not only the long-term interests of our own species but also our co-existence with others. With the sad passing of Bill Parker and Mike Majerus, we have lost two advocates for conservation, who saw it as an essential aspect of economic activity: not just a token designation of individual sites or species. We can only hope that others will be motivated to take up the cause.



NEWS, VIEWS AND GENERAL INFORMATION

New strategy for invertebrate conservation in Scotland

As mentioned in *ICN 54*, the Initiative for Scottish Invertebrates was formed in 2007. Since then, Buglife – The Invertebrate Conservation Trust has developed a strategy, with funding from Scottish Natural Heritage, to help ensure that threatened habitats, sites and species are identified and conserved. The Strategy is designed to achieve this by harnessing the expertise and enthusiasm of hundreds of volunteers.

At the launch of the Strategy, it was pointed out that sustainable management is essential for certain invertebrates that have considerable direct importance for the Scottish economy, such as langoustine *Nephrops norvegicus* (Norway lobster or Scampi), a marine invertebrate, which contributed £89.3 million to the Scottish economy in 2006. Unsustainable exploitation has occurred in the case of the freshwater pearl mussel *Margaritifera margaritifera*, which, due to its slow breeding rate and diminished population, is protected under UK laws. Nevertheless, commercial pearl collectors continue to flout the law and are risking the extinction of this species from various Scottish rivers.



SITES AND SPECIES OF INTEREST

New project on White-clawed crayfish in England

Buglife - The Invertebrate Conservation Trust has launched a new conservation project, with the aim of working with the aggregates extraction industry in conserving the White-clawed crayfish *Austropotamobius pallipes*. The project is supported by Natural England through the Aggregates Levy Sustainability Fund.

The White-clawed crayfish, the UK's largest freshwater arthropod and its only native crayfish, was once widespread and common in English rivers, but has declined severely due to habitat degradation, pollution and the ravages of crayfish plague, a disease caused by an alien fungus which is carried by introduced crayfish, especially the American Signal crayfish (*Pacifastacus leniusculus*).

An example of habitat destruction has been documented in the county of Bedfordshire, where natural refugia have been destroyed by the digging of chalk streams to the bedrock (see *ICN* 30). In other cases, loss of habitat has been blamed on practices that lead to the development of muddy conditions, but relatively recent studies by Nick Mott of the Staffordshire Wildlife Trust indicate that the crayfish can thrive in muddy water, provided that there are clear spaces amongst twiggy debris or willow roots (see *ICN* 52). Other information on various local projects, surveys and pollution events involving *A. pallipes*, can be found in *ICN* Nos. 26, 30, 36, 38, 40, 43 and 52.

The White-clawed crayfish has been designated as a UK Biodiversity Action Plan Priority Species and has conservation priority status in Europe. Studies indicate an urgent need for refugia in isolation from non-native crayfish ('ark sites'), where new populations of *A. pallipes* could be established in isolation from exotic crayfish and from the pathogenic fungus that they carry. Buglife intends to work with the aggregates industry because old water-filled quarries and gravel pits can provide excellent and inexpensive opportunities for developing 'ark sites'. Buglife is also about to publish a guidance document, explaining how this can be done, and has already produced a best practice guide entitled "*Managing Aggregate Sites for Invertebrates*".

Thurrock Marshes, south-east England

As mentioned in *ICN* 52, Buglife - The Invertebrate Conservation Trust has been campaigning to save an outstanding brownfield habitat from development. West Thurrock Marshes in the county of Essex is a



floristically rich grassland, providing habitats that are partly a relict of former grazing marsh in the Thames Terrace grasslands and partly a product of industrial disturbance and deposition of fly ash in lagoons. The site is rated as one of the three most important sites for endangered wildlife in Great Britain, since it is home to 36 Red Data Book species and seventeen priority conservation species. The latter include the Brown-banded carder bee *Bombus humilis*, the banded digger wasp *Cerceris quinquefasciata*, the Saltmarsh shortspur beetle *Anisodactylus poeciloides* and the spider *Sitticus distinguendus*. None of the invertebrate species is, however, listed in Schedule 5 of the Wildlife and Countryside Act 1981.

Buglife mounted a legal challenge against planning consent that was granted to Royal Mail for the construction of a huge warehouse, threatening the destruction of up to 70% of the flower-rich habitat. Buglife's legal case was based on the alleged failure of the unelected planning authority (Thurrock Development Corporation) to protect the Marshes according to recent biodiversity protection laws. The case represents the first legal test of the application of these laws.

Buglife lost its first High Court challenge when Justice Mitting declared that biodiversity protection legislation in the UK was 'weak' and judged that Thurrock Development Corporation was right to override national planning guidance and allow the marshes to be destroyed. In view of the negative implications for the site and for the strength of the UK's wildlife protection laws, Buglife took the case to the Court of Appeal in November 2008, but recently announced that it had lost the appeal in a hearing at the end of January 2009.

In rejecting the appeal, the three Appeal Court judges agreed that Thurrock Development Corporation, despite having failed to follow national biodiversity and planning policy, was entitled to rely on a letter from Natural England, the national statutory conservation body. In the letter, Natural England had withdrawn a previous objection to the proposed development and had mentioned that the proposals offered the "possibility of a long-term nature conservation gain for the area".

Buglife regards the decision as a disappointing sign of the inadequacy of current wildlife protection in the UK. It is therefore calling for Government action to (1) establish a specialist Environmental Court with expert judges and scientific support, (2) provide better legal protection for habitats and (3) to strengthen the requirement (under the Natural Environment and Rural Communities Act 2006) for public bodies to take positive action to help halt and reverse biodiversity loss.



Due to the Court of Appeal decision, Buglife faces legal costs of £30,000. Anyone wishing to help with a donation or to become a Friend of Buglife is invited to do so via the organisation's website: www.buglife.org.uk

Medicinal leech in the UK

The Medicinal leech *Hirudo medicinalis* is one of 123 species on the original UK BAP list that have been removed because they were assessed as not meeting the criteria for retention. The Royal Society for the Protection of Birds (RSPB) was the Lead Partner for this species and was working towards a target, last revised in 2006, to maintain its populations at least within the 89 sites where it was found in surveys during 1995-96 in Scotland and 1998-2000 in England and Wales (see ICN 29 and 30). Many of these sites represented new records and in some cases new colonisation, as in a pond that the RSPB had created at its Dungeness nature reserve in Kent, south-east England.

The survey data showed that, although *H. medicinalis* had disappeared from many 'historical' sites, its overall status was more favourable than had been supposed on the basis of only 30 records between 1970 and the start of the surveys (Ausden *et al.*, 2002). It is, however, still vulnerable throughout the UK and elsewhere and is threatened by factors including road-widening, the effects of water abstraction, various forms of unsympathetic management for fisheries and probably also by the use of veterinary drugs (Ausden *et al.*, 2002).

The survey data also helped to define the habitat requirements of *H. medicinalis*, which include shallow, well-vegetated water bodies with gently shelving edges, together with the presence of vertebrate hosts. One report from Cumbria (north-west England) indicated that *H. medicinalis* might be feeding on the blood of cattle being used to control bracken in the interests of a butterfly; the High brown fritillary *Fabriciana adippe*.

The Medicinal leech is being increasingly used in medicine, especially to remove excess fluid following reconstructive or plastic surgery or swelling due to deep vein thrombosis. In the transplant of body parts such as fingers, hands, toes, legs, ears, noses and scalps, the use of leeches to drain excess blood from veins helps to maintain circulation, making a successful outcome more likely. There are also various research programmes, investigating the properties of leech saliva, which has remarkable anti-coagulant and analgesic effects. Due



to the need to comply with laws that protect wild populations, farms have been established for the captive-breeding of specimens for supply to hospitals and research institutions.

The import and export of captive-bred specimens, as well as of wild-caught ones within certain quotas, is permitted under the Convention on International Trade in Endangered Species (CITES), but the manner in which CITES is implemented can have undesirable consequences. In 1992, Dr. R. T. Sawyer, the Managing Director of a firm that supplies leeches (Biopharm UK), wrote to the conservation body now known as Invertebrate Link, outlining a predicament that had arisen for his company, which supplies leeches both for medical use and as bait for catfish anglers. Dr. Sawyer wrote that he had been very involved in getting *H. medicinalis* listed in CITES Appendix II but that his views had changed when he found that the system was delaying consignments in transit, with resulting morbidity and mortality of specimens and the deterioration of biochemicals derived from saliva. These problems had led him to conclude that inherently inefficient implementation of CITES was doing more harm than good. In view of recent changes in the administration of CITES by the UK government, ICN contacted Biopharm for an update on the situation.

It seems that mortality among imported specimens is no longer a problem in the UK. Biopharm occasionally imports specimens in order to maintain the viability of breeding stocks, which otherwise tends to decline during long-term captive breeding. There is, however, a problem with the export of specimens, which is necessary in order to supply countries where leech farms are not able to meet the demand. One problem is the price of a CITES permit, which has greatly increased under a new policy whereby applicants are expected to meet the full cost of running the system operated by the government department concerned (Defra). This policy was the subject of a consultation process last year, as mentioned in ICN 54. More seriously, Biopharm reports that a new, complicated permit procedure now prevents the prompt despatch of leeches from the UK to overseas hospitals, leading to the cancellation of urgent surgery in some instances.

Reference

- Ausden, M., Banks, B., Donnison, E., Howe, M. Nixon, A., Phillips, D., Wicks, D. and Wynne, C. (2002). The status, conservation and use of the Medicinal leech. *British Wildlife* **13**, 229-238.



BOOK REVIEWS

Water bugs and Water Beetles of Surrey by Jonty Denton, published by Surrey Wildlife Trust, September 2007, 200 pp., 32 colour plates. Hard cover £15.00 (plus £2.40 postage & packing). ISBN 978 0 9556188 02. Available from Atlas Sales, Surrey Wildlife Trust, School Lane, Pirbright, Woking, Surrey, GU24 0JN, Tel: 01483 795451; website: www.surreywildlifetrust.org

A full review of this book is to appear in the AES *Bulletin*. The following summary concentrates especially on the relevance of the book to conservation.

The Preface includes an enthusiastic account of the fascination that the author finds in water bugs and water beetles. He writes that perhaps his greatest joy is that the season starts early in the spring and lasts well into the following winter, when most sun-loving terrestrial invertebrates cannot be seen.

As in other books of the series, a wealth of general information precedes the accounts of individual species. The author points out that one of the most important differences between aquatic bugs and beetles is that the former do not have a pupal stage and thus do not require access to land in order to complete their development. This enables them to live in places such as cattle troughs that water beetles can use only on a temporary basis.

Except in the case of extinct species and of a relatively small number of poorly recorded species, such as the aquatic weevils of the genus *Bagous*, the account of each species includes a county distribution map, showing the 2 x 2 km tetrads in which it has been recorded. Also, many of the species appear in colour photos. Due to the need to include a relatively large number of species (59 water bugs and 283 water beetles), as compared with some of the other taxa covered in previous atlases in the Surrey series, the text covering individual species is brief in most cases. It describes the habitats where each species is likely to be found and, in the case of the less widespread species, it also lists particular sites in Surrey where the species has been recorded. Notes about the wider British distribution are not, in most cases, included.

Of the species that have been recorded in the south-eastern English county of Surrey, the book lists one water bug and 39 water beetles as probably extinct in the county, while a further four beetles have declined seriously since 1950. These figures seem to paint a less



worrying picture of the conservation status of Surrey's aquatic invertebrates than emerges from the author's comments on aquatic habitats in the county. He mentions that well-meaning members of the public sustain inflated populations of ducks and geese by feeding them, with disastrous results for the invertebrate communities of many ponds in the county. Considerable harm is done also by the stocking of ponds with coarse fish and by the spread of invasive alien water plants, often aided by pet dogs. A more insidious problem is caused by the colonisation of damp heathland by Scots pine *Pinus sylvestris*, which affects the water table and acidifies the soil water. The author is concerned also about the effects of the increasing human population, especially with regard to the draining of floodplain wetlands for housing development.

The main text is followed by two appendices, comprising a list of literature references and a gazetteer of notable sites in Surrey. There are also indices of English and scientific names of species of water bugs and water beetles and of the plants with which they are associated but, as in other books of the series, there is no subject-index.

This book maintains the excellent standards of content and style that have been set by others in the series. Although it necessarily includes less detail on individual species than do some of its predecessors, it is a mine of fascinating and very useful information and is excellent value of money.

Bees of Surrey by David W. Baldock, published by Surrey Wildlife Trust, October 2008, 303 pp., 48 colour plates. Hard cover £16.00 (plus £2.40 postage & packing). ISBN 978 0 9556188 1 9. Available from Atlas Sales, Surrey Wildlife Trust, School Lane, Pirbright, Woking, Surrey, GU24 0JN, Tel: 01483 795451; website: www.surreywildlifetrust.org

This book is the eleventh in the series being published on the fauna and flora of the south-eastern English county of Surrey, a series which admirably continues the British tradition of publishing records and field information on particular taxa at a county level. Like the recent volume on water bugs and water beetles (see above), this book covers a relatively large number of species (222 bees in Surrey), compared with those covered in some of the earlier books; for example those dealing with ladybirds or ants. Nevertheless, with over 300 pages and with excellent colour photos of many species, the book provides a considerable amount of information at an individual species-level.



Remarkably, the author, who also wrote *Grasshoppers and Crickets of Surrey*, has been studying bees only since 1996, having previously recorded dragonflies and the larger Lepidoptera. Since then, he has contributed an astonishing 18,500 records. He gives an account of the records provided by various recorders, from 1830 to the present day, in a "history of aculeate collecting in Surrey". Collectively, the records cover all the 450 or so complete 2 km x 2 km tetrads in the county.

Like others in the series, the book includes a lot of very useful information about the natural history of the taxa included. This includes a definition of bees, comparing them with other insects and with other Hymenoptera. There are also sections dealing with different types of habitat, the nesting habits of bees (including fascinating modes of life such as cleptoparasitism), predators and parasites, mimicry, sociality and classification. Additionally, there is guidance for would-be recorders and some facts and figures about changes in the bee fauna of Surrey. With regard to distribution within the county, about half of the species seem to have remained about the same since the year 1900, while about 30% show evidence of an increase. A further 10% show evidence of a decline. The remainder are not sufficiently recorded to be classified in this way. About 25 species have been gained since 1900, but 17 species have been lost since 1910.

The book includes an illustrated key, by Graham Collins, to all British genera of bees, except for *Dufourea*, which was thought until recently to be nationally extinct. The author points out, however, that a key to all the individual species is still needed. He mentions that such a key, by George Else, is due for publication and that he has been able to make use of various sections of this in draft.

From a conservation standpoint, Surrey is well favoured for bees in general, although some of the bumblebees are in decline. The county has includes extensive areas of lowland heath, together with the south-facing chalk grasslands of the North Downs, which provide an exceptionally good range of habitats for warmth-loving insects like bees. The author writes of nine sites, each of which supports more than 200 bee species. Also, there are numerous mineral extraction sites, which provide the sunny areas of bare ground that many species require for nesting.

As far as harmful factors are concerned, the author mentions the increasing infilling of old sandpits, which destroys their habitats. Also, some bee species or their nectar and pollen sources require the disturbance that occurs while mineral extraction is continuing.



Cessation of extraction can cause them to die out, as has happened in the case of the only Surrey population of the rare *Andrena nigrospina*, which used to occur at Papercourt Gravelpit near Send. Also, he comments that the poorest areas for bees are in the urbanised north-eastern part of Surrey that forms part of Greater London and in the agricultural areas on Weald Clay in the south-east of the county.

In addition to an index of bee species, the book includes five appendices, comprising a gazetteer of sites, a list of literature references, a glossary / list of acronyms, an index of plants, listed by their common names and a list of useful addresses.

This is yet another excellent book in the 'Surrey series', which very much lives up to the high standard that has been set by its predecessors and will be valued by readers all over the UK and beyond. At £16, it is excellent value for money.



OBITUARIES

William Parker

Bill Parker, who played a major role in promoting conservation within the Amateur Entomologists' Society (AES), died on 4th January 2009 while in nursing care near his home in Maidenhead, Berkshire. He was 88. In the late 1960s, Bill joined the lepidopterist Ken Willmott in running a group which Ken had set up within the Society. The 'Amateur Conservation Group' was initially devoted to the conservation of butterflies. With the support of Peter Cribb and other members of the AES Council, Bill recognised a need to widen the remit of the Group to allow the inclusion, in principle, of all insect taxa. He realised that a broad-brush approach would therefore be required, due to the sheer numbers of species involved and the lack of records for most taxa. He intended the Group to comprise a number of taxonomic sections, and he soon recruited David Lonsdale, then a student, to organise the formation of a Coleoptera section.

Despite Bill's far-sighted recognition that taxonomic favouritism should not drive insect conservation, there was no easy means of persuading amateurs to follow this principle within an organised



framework. A more tractable approach was to involve people in recovery plans for individual species of wide appeal, and so Ken Willmott decided to work under the auspices of the organisation that is now Butterfly Conservation. Later, Bill also stepped down from the re-named 'AES Conservation Group', feeling that his efforts would be better directed towards the protection of habitats in his home area of Berkshire. His aims were, however, later enshrined in AES policy and were pursued through the appointment of a Habitat Conservation Officer and through the Society's role as an active member of the umbrella body now known as Invertebrate Link. In this role, the AES produced a discussion document (in 1984), which eventually contributed to the formation of Buglife – The Invertebrate Conservation Trust.

Professor Michael Majerus

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At the end of 2008 Mike Majerus, President of the Amateur Entomologists' Society, announced to shocked colleagues that he had been diagnosed as having mesothelioma. He was expected to live for up to 18 months and was hoping to continue his work well into 2009, but we later received the very sad news that he had died peacefully during the night of 26 / 27th January, aged 54.

Mike was an evolutionary biologist, whose research on moths and ladybirds was widely acclaimed. While growing up in Northwood, Middlesex, he became fascinated in insects and their genetic variation, becoming a member of the AES in his early teens. He remained a member during his studies at Royal Holloway College London and then throughout his distinguished academic career, mainly at Cambridge University. His loyalty to the Society symbolised his strong support for the encouragement and education of future generations of entomologists.

In 2005, when Mike had attained a senior position in the Department of Genetics at Cambridge, and was soon to be appointed to the post of Professor of Evolution, he agreed to become AES President. By then, he had become publicly known for his work on the Harlequin ladybird *Harmonia axyridis*, an invasive species which had recently arrived in Britain. Rather than serving as a mere figurehead, he played an exceptionally active and positive role, which has helped to revitalise the Society. Thus, he was persuaded to remain as President in a full executive capacity until April 2008 and then in an honorary, non-executive capacity for a further year.



While writing numerous publications for scientific journals, Mike and his co-workers at Cambridge also kept the Society's Bulletin well provided with articles designed to enthuse the amateur. Moreover, he gave some memorable talks at AES Members' Days; most recently in April 2008, when he combined a fascinating account of his international studies with an impassioned presentation of the need for human beings to turn away from the unsustainable use of resources that is destroying not only the biodiversity around us but also our own future means of livelihood.

In addition to being President of the AES, Mike was a Life Fellow of the British Naturalists' Association and the recipient of a number of awards, including the Sir Peter Scott Memorial Award, in 2006, for contributions to British natural history. He wrote or co-authored several books, including *Melanism: Evolution in Action* (1998), *Ladybirds* (1994) and *Moths* (2002) in the New Naturalist series and *Guide to Ladybirds of the British Isles* in the Field Studies Council series.



FUTURE UK EVENTS

Amateur Entomologists' Society (www.amentsoc.org). The society is holding many field and indoor meetings in 2009. Conservation is the main purpose of the following events:

Sat. 22nd – Sun. 23rd August, 2009: Osterley Park BioBlitz. This will involve a weekend survey of ancient grassland and woodland at Osterley Park, a National Trust property in Middlesex, including examination of the contents of the moth traps left out the previous night. The site, which is within walking distance of Osterley Underground Station (Piccadilly Line), is on the London A-Z map. There are no fixed start-times, but general information can be obtained from Dafydd Lewis: dafydd@mayoconsulting.com

Sat. 20th June: AES Conservation Project: AES & Bug Club Field Trip to Bersted Brooks, Rowan Way, Bognor Regis, West Sussex. Site entrance: a few metres down Rowan Way off the A29, on the outskirts of Bognor Regis. Starting at 11.00 a.m.



This is a return visit to this site, which was designated as a public open space a few years ago, previously being agricultural land. The site is managed by the Friends of Bersted Brooks and Arun District Council. The aim of the visit is to expand the list of invertebrate records. Our previous visit in August 2005 resulted in the first UK record of the picture-winged fly *Tephritis divisa*. There is a small car park at the site, but a much larger free car park on the opposite side of Rowan Way serving various retail outlets such as Halfords.

Wyre Forest Study Group

Sat. 7th November: Worcestershire Entomology Day. Venue: Heighington village hall, grid ref. SO764711. This event will include talks and displays, focussing on changes in the insect fauna of the county, mainly in relation to climate change. AES members are invited free of charge, provided that they book in advance, stating that they are paid-up members. To do so and to obtain further details, please contact Geoff Trevis (AES Conservation Representative for Worcestershire) on 01905 774952 or by e-mail at geoff.trevis@btinternet.com.

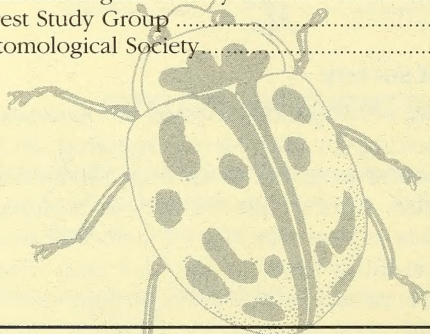
Royal Entomological Society

Weds. 1st April, 2009 – “The Conservation of Aculeates” Start-time 10.00 a.m. Advance booking (by 20th March) required: £6.50 incl. lunch etc, form and programme available from <http://www.royensoc.co.uk/meetings.shtml>. Venue: Conference Centre, Rothamsted Research, Harpenden, Herts. (This is near the M1, A1 and M25 and Harpenden railway station (London-Kings Cross to Bedford line). The Rothamsted website provides directions: <http://www.rothamsted.bbsrc.ac.uk/corporate/Location.html>

This, the 9th meeting of the Society’s “Insect Conservation” Special Interest Group, will be an opportunity for anyone with an involvement in aculeate conservation (e.g. as researcher, conservation professional, amateur recorder, site manager) to hear talks on a wide range of current projects. There will be ample time over lunch and during refreshment breaks to discuss issues with other aculeate enthusiasts. Posters are invited: offer these via the form. Other info from the SIG organiser: Dr Alan J.A. Stewart, School of Life Sciences, University of Sussex, Falmer, Brighton, East Sussex BN1 9QG. Tel: 01273-877476. Fax: 01273-678433. e-mail: a.j.a.stewart@sussex.ac.uk

CONTENTS

EDITORIAL	1
NEWS, VIEWS AND GENERAL INFORMATION	
New strategy for invertebrate conservation in Scotland	2
SITE AND SPECIES OF INTEREST	
New project on White-clawed crayfish in England	3
Thurrock Marshes, south-east England	3
Medicinal leech in the UK	5
BOOK REVIEWS	
Water beetles and water bugs of Surrey	7
Bees of Surrey.....	8
OBITUARIES	
William Parker	10
Professor Michael Majerus	11
FUTURE UK EVENTS	
Amateur Entomologists' Society.....	12
Wyre Forest Study Group	13
Royal Entomological Society.....	13



NOTICE

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