

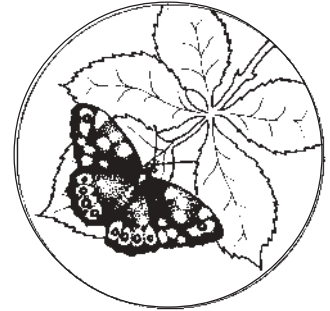
THE ESSEX FIELD CLUB

HEADQUARTERS:

THE PASSMORE EDWARDS MUSEUM,

ROMFORD ROAD, STRATFORD,

LONDON, E15 4LZ



NEWSLETTER NO. 8

November 1993

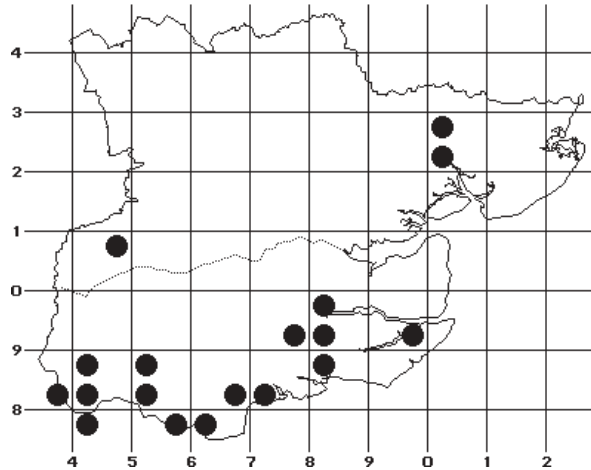
THE PASSMORE EDWARDS MUSEUM

For a long time the London Borough of Newham has been the principal source of funding for the Passmore Edwards Museum, but it has been experiencing increasingly serious financial restrictions in recent years. This has inevitably had its impact on the Museum with opening hours reduced, staff made redundant and services restricted in various ways. There are now further expenditure reductions being sought for the 1994/5 budget which could have a serious affect on the Museum necessitating the closure of one of the services.

The Museum house the collections and library of the Essex Field Club and there are clearly serious implications for the Club. These have been discussed by the Field Club Council which is exploring ways forward to safeguard the Club's collections and library. The Council will keep members informed of progress in the situation.

CONTRIBUTIONS TO THE NEXT NEWSLETTER

Please send contributions for the next Newsletter, due out in January, to the Editor, Mr Peter Harvey, 9 Kent Road, Grays, RM17 6DE by the last week of December.

AN UPDATE ON THE SPIDER *Nigma walckenaeri*

Updated map showing the distribution of *Nigma walckenaeri* in Essex.
(the map has been made using the computer program DMAP by Dr Alan Morton)

Thank you to those members who responded to my appeal in the last Newsletter to look out for *Nigma walckenaeri* in their gardens and local area. I have received samples of the spider from Alf Gudgion who sent me a female from his house near Harlow, a completely new part of the county for the species and from Dennis Brown who sent me one from a Forsythia leaf in his garden in Hawkwell, a new 10Km square record. Ray Ruffell has also found the spider in a new part of the Colchester area and one was found near Wanstead Park during a recent Essex Spider Group meeting. I have also now found it in East Ham, North Woolwich, Stanford-le-Hope South Woodham Ferrers and Burnham-on-Crouch. Clearly it is much more widespread than previously thought but the question remains - is it spreading its range or has it simply been under-recorded all the time?

The spider is still worth looking out for - I have found females still in their characteristic webs surviving on bushes outside at the end of October, and also the spider sometimes seems to come indoors in the winter. Don't forget to look at the leaves of your house plants!

Peter Harvey, 9 Kent Road, Grays, Essex, RM17 6DE

A NEW RECORD OF THE CAVE SPIDER *Meta menardi*

I have also received a number of spiders from Don Hunford in Benfleet who reports the likely occurrence of the Cave spider *Meta menardi*. He has sent me samples of the characteristic spherical eggsacs about 15mm in diameter which are suspended from the surfaces found in dark damp places such as caves, cellars, water conduits and possibly also abandoned badger tunnels. The only other Essex records of this spider known to me are for Grays Chalk Quarry and at Marks Hill in the Basildon area. It is not recorded very often in the country as a whole but it does seem that the species may be quite widespread and under-recorded because of the nature of its habitat. Unfortunately there is a very similar but rarer closely related species *Meta bourneti*, which means that certain determination of the species requires examination of male palp or female epigyne of the spider with a microscope.

BOTANY GROUP MEETING, August 15th at Strethall

The weather was perfect for this outing, high in the N. W. corner of Essex, with fine views over Cambridgeshire.

Twelve species of butterfly were seen including several Wall Browns and a Brimstone on its food plant Buckthorn, *Rhamnus catharticus*. Common Blue was found feeding on the roadside flowers, Marjoram, Greater Knapweed, Valerian, Rockrose and Eyebright. A small patch of Twiggy Spurge, *Euphorbia pseudovirgata* was also seen and Greater Broomrape, *Orobanche elatior*.

There were seventeen of us in the group which strolled the lanes, field edges and roads and found Crosswort, *Galium cruciata* everywhere, yet it is scarce in Essex generally. The Bird's nest fungus (*Cyathus olla*) was discovered in an arable crop and whilst eating lunch at a field edge Tim Pyner found the corm-like roots of *Arrhenatherum elatius* var. *bulbosum*, called Onion Couch by country folk. Only a botanist would know what to look for and where to search for this variety of such a common grass, so it is mostly overlooked. One lane produced patches of the delightful late flowering Strawberry Clover, *Trifolium fragiferum* and Greater Burnet Saxifrage, *Pimpinella major*, also of damp places.

Some good arable weeds were found, notably the two Fluellens, *Kickxia spuria* and *K. elatine*, Venus Looking-glass, *Legousia hybrida* and Warty Spurge, *Euphorbia platyphyllos*. Half the group extended the meeting to see the long known roadside site for *Thalictrum minus* and saw a few more cornfield weeds, Corn Gromwell, *Lithospermum arvense*, Prickly Poppy, *Papaver argemone*, and Rough Poppy, *P. hybridum*. Before leaving for home we had a quick look at Coploe Hills N. R., then a brief stop to find *Crepis biennis*, Rough Hawks-beard on a verge near Littlebury.

An unusual wasp found was *Dolichovespula media*, a large wasp first recorded in Britain in 1980, in Sussex, but which has been increasing in frequency and is now recorded as far north as Lincolnshire.

Shirley & Charles Watson

GARRULUS GLANDARIUS VERSUS *HOMO SAPIENS* or
If you go down to the wood today you'd better go in disguise

The date September 19th, the scene Chalkney Wood, the good guys four members of the Bird Group who had just lunched in a sunny clearing. Enter the villain, a Jay, perched on a tree only a few feet away. We watch and comment on the unusual behaviour of this normally shy bird before continuing our walk. The villain follows from tree to tree along the path before taking centre stage on a fallen log. He poses professionally for Tony Boniface to take close up photographs before hopping on to his basket of fungi and tearing at the wickwork in a serious attempt at demolition. I offer a bribe, a blackberry which is gratefully accepted, I offer another, a fatal mistake as finger is preferred to berry. I pull away sharply but the villain takes his opportunity to deliver the coup de grace, a vicious peck at an eyebrow, I trip over a bramble and lie bleeding and defeated on the ground.

Is this why careless pedestrians are known as "Jay walkers"?

John Bath

The Hoverfly *Didea fasciata* Macq. (Diptera: Syrphidae) in Essex

Didea fasciata is a large and rather striking hoverfly, with black and yellow bands on its abdomen. As far as can be told, the only Essex records until now were those made by Harwood at Colchester High Woods in May 1900 and again in 1908. These specimens are in the collections at the Hope Department of Entomology at Oxford University Museum and were cited by Ron Payne in his 1973/4 review of Essex hoverflies published in *Essex Naturalist* **33**, on page 88. It therefore came as quite a shock to find a solitary female example in the ultra-violet light "electrocution trap" in the gate security lodge at Beckton Sewage Treatment Works in the eastern London portion of South Essex during July 1993.

Little is actually known about the ecology of this hoverfly. It is quite frequent but rather local in distribution across southern England, always in well-wooded areas. There is a very clear association with ancient deciduous woodlands and it may well be useful as an indicator of such habitats. However, the only positive information on the larvae relates to a single example collected at Kew Gardens where it was feeding on willow aphids; the adult was bred through (Rotheray, personal communication). Beckton lies on the former Thames flood-plain in east London and is probably the last place this hoverfly would be expected to be resident; the nearest woodland of consequence is Oxleas Wood across the river in West Kent but the insect is not recorded from that site at present. There are, however, a number of willow trees in the area.

The trap at Beckton was emptied in early July by Charlie Gibson of Bioscan (UK) Ltd and the fly was given to me for identification. It is not known when the trap was last emptied before then. The moths in the trap included spring species such as *Diaphora mendica* Cl. (Arctiidae) and *Orthosia gothica* L. (Noctuidae) but none of the autumnal or winter species. Thus, one can be fairly certain that the specimen was taken during 1993 but a more precise date is impossible to discern.

Given the apparently unsuitable habitat of the Beckton area, the possibility that the fly was taken here as a primary immigrant can not be ignored, though there was a distinct lack of other immigrant hoverflies, and of immigrant Lepidoptera, in the first six months of 1993. It is difficult to imagine the fly being a local resident, though perhaps finding it may require specialist techniques. If willow aphids are the sole larval food then there is no real reason why the insect should not be present in areas away from old woodland, including the suburban zone of London. I have taken it occasionally in malaise traps in other parts of the country so perhaps entomologists should try this technique in areas of willow woodland/scrub in their local area and see if the fly is present. Either myself, or Roger Payne at Southend Museum, would be delighted to identify any hoverflies which Field Club members collect.

Colin W. Plant

East Ham Nature Reserve (Newham Museum Service),
The Visitor Centre, Norman Road, East Ham, London, E6 4HN

ESSEX LARGER BRACHYCERA DISTRIBUTION MAPS

Colin Plant is shortly publishing the third edition of distribution maps for the Larger Brachycera. It includes all records received by him up to and including 26th October this year, and collates and summarises all available data for the two vice-counties of South Essex and North Essex in the form of ten-kilometre square dot-distribution maps.

The Larger Brachycera is a division of the true flies (Diptera). In the British Isles, this involves the ten families Stratiomyidae (soldier flies), Xylomyiidae (= Solvidae), Xylophagidae, Tabanidae (horse flies, cleggs, etc.), Rhagionidae (snipe flies), Asilidae (robber flies), Therevidae (stiletto flies), Scenopinidae (window flies), Acroceridae and Bombyliidae (bee flies); all except the Xylophagidae are represented in the currently known Essex fauna. Included are some of our largest and most striking flies.

Colin notes the distributions of some species are beginning to adopt a pattern. *Chloromyia formosa* (Stratiomyidae) and *Bombylius major* (Bombyliidae) are evidently widespread and common, though the latter species clearly dislikes the London region. The coastal distributions of some species, most notably of *Nemotelus notatus* and *Nemotelus uliginosus* (Stratiomyidae) are also fairly evident.

However the county remains very poorly recorded for the Larger Brachycera and even common and widespread species are still not yet noted from every ten-kilometre square whilst there are no records at all for any member of the Xylophagidae.

It is hoped that entomologists will be stimulated by the poor state of records in Essex to increase their recording efforts. Colin emphasises that records are being kept on the basis of one-kilometre squares, so that records are still wanted for all ten-kilometre squares.

If you would like a copy of the Essex Larger Brachycera distribution maps, please send a large (A4) SAE with stamps for the second weight band (upto 100g) to Colin W. Plant, The Visitor Centre, East Ham Nature Reserve, Norman Road, East Ham, London E6 4HN.

A NEW CHRYSID WASP FOR ESSEX

In June this year I took a specimen of the rare chrysid wasp *Chrysis gracillima* (formerly *Chrysogona gracillima*) at an important site on Thames Terrace gravels at Chadwell, South Essex. The species has a national Red Data Book status of vulnerable (RDB2) and very few specimens have been taken in Britain. It has previously been found in Kent, West Sussex, Surrey and Hampshire, three specimens being taken in consecutive years on a dead tree near Winchester (George Else, personal communication). It is a parasitoid of the larvae of other aculeates, possibly of the sphecid wasp genus *Trypoxylon*, which is quite frequent at the Chadwell site. I am grateful to John Felton and George Else for confirming the identity of the wasp.

Peter Harvey

THE BLUE CARPENTER BEE IN SOUTH ESSEX

On the 31st August I visited Mill Wood Pits near the famous 'Lakeside' in Thurrock and spent a couple of hours looking for hymenoptera. A male Blue Carpenter bee *Ceratina cyanea* (national status rare RDB3) was found resting on a yellow composite flower. This is apparently the first record for the county for a very long time (George Else, personal communication). The nationally notable A bee *Hylaeus cornutus* and Notable B *Nomada flavopicta* were also found during the visit. Two further visits in the following two weeks found males and females of the *Ceratina cyanea* to be present in some numbers.

According to the English Nature publication "A review of the scarce, and threatened bees, wasps and ants of Great Britain" (Falk, 1991) the species has seemingly disappeared from large parts of its former range and today is largely confined to sites on or adjacent to the South Downs of W. Sussex, where it is locally frequent. The bee favours a variety of warm situations, including chalk grassland, particularly south-facing slopes, abandoned sand and gravel pits, waste ground, heathland and open rides in woodland. Cooler and more shaded north-facing sites and exposed situations all seem to be avoided. Usually there is a requirement for clumps of bramble or rose bushes, the broken dead pithy stems being used for nesting and hibernation sites.

The Mill Wood Pit site consists of a deep chalk pit above which there is a large area of sandy ground, the chalk coming to the surface at the western side of the site. A small strip of Mill Wood survives and contains species such as Wood Spurge and Stinking Iris. The sandy area is excellent for hymenoptera because of the variety of south-facing sand exposures available for nesting and the uneven nature of the ground means that there are many small sheltered parts to the site. A certain amount of regular scrambler-biking has helped to maintain areas of bare sandy ground. The vegetation shows various degrees of calcareous influence and is flower-rich, providing an excellent variety of pollen and nectar sources for the hymenoptera.

During the two further visits to the site more nationally notable and rare species of hymenoptera were recorded, including the bees *Melitta tricincta* (Notable B) with a requirement for Red Bartsia pollen, *Lasioglossum xanthopum* and *L. malachurum* (both Notable B) together with the aculeate wasps *Smicromyrme rufipes* (Notable B), *Philanthus triangulum* (RDB2), *Cerceris quinquefasciata* (RDB3) and its parasitoid the chrysid wasp *Hedychrum niemalei* (RDB3). All this at the end of the season! Clearly this is likely to be an important site for invertebrates generally.

Peter Harvey

NEW RECORDS FOR THE ACULEATE WASP *Crossocerus distinguendus*

This small black solitary wasp was first found in the county in 1989 by Mark Hanson in Epping Forest at Yardley Hill. This year two more specimens, both males, have turned up in Essex. I collected one on the 28th May in my garden in Grays, Essex and the second on the 1st July in the Flich Way Country Park, a stretch of disused railway track west of Great Dunmow. Yet another male was amongst some material that I looked at recently, collected in September 1988 by Colin Plant in his garden in Bishops Stortford, just over the border in Hertfordshire.

The English Nature publication "A Review of the threatened bees, wasps and ants of Great Britain" (S. Falk, 1991) states that the species is apparently increasing in frequency and largely associated with unthreatened, often artificial habitat types. Nesting usually occurs in sand or gravel slopes or vertical banks fully exposed to the sun. It has even been discovered nesting in a rockery at a railway station. The wasp has been taken on a number of occasions in gardens, as in two instances reported here. The species is very similar to the common *Crossocerus elongatulus*, but the absence of records in Britain before the 1970s is thought to suggest that the wasp may be a recent colonist.

Peter Harvey

SOME UNUSUAL FISH REPORTED

The Southend Area News reports the appearance of shoals of Norwegian Haddock off Southend. The Southend Sea Centre has received two of the fish for its displays. Both measure about five inches long and have striking rosy backs and fins.

A Ministry of Fisheries official Peter Walker said that the species had not been seen off the Southend coast since 1975. He was not sure why they had come back now, but the feeling is cleaner seas have encouraged them to return.

The Echo Angling reports another surprise fish, a common or short sun-fish *Mola mola*. The capture of the sun-fish, which took twenty minutes to bring to the boat, was made in the vicinity of Man Made Island by John Clarke, skipper of the Canvey based Sharon Lee. It is possibly the first of its species ever taken in the Thames on rod and line and thought to be the first from the Thames in living memory. Apparently only two references can be found of sun-fish in the Thames, in 1872 a specimen of 5 feet 2 inches in length and four foot 3 inches in depth and weighing 196lb was caught in a shrimp net off Southend and a second fifty pound plus fish was taken by shrimpers off Canvey Island in September 1897.

The species is relatively common off the Irish coast, where it was once harpooned for the oil in its liver. It habitually basks on the surface with its shark-like fin sticking out of the water, and this made it an easy target. The fish grows to a great size, and may be seven foot or so long and weighing many hundreds of pounds.

'MEDITERRANEAN' CLIMATE?

The Financial Times on the 29th September carried an article about a Department of the Environment report which explores the effects on plants and animals that Britain could expect if global warming occurs. Poisonous purple spiders with "an unpleasant bite" are supposed to have spread along the south and east coasts of England during recent abnormally warm weather and are now common in Portsmouth and Worthing and have been spotted in Essex. The spider in question is *Steatoda nobilis*, a spider in the family Theridiidae, related to the Black widow spider. However probably almost all houses and outhouses contain *Steatoda bipunctata* a species which has certainly been present in Britain for a long time.

Steatoda nobilis is fairly large and has been known to bite. The bite is apparently fairly potent by British standards but the spider is most unlikely to be in a situation where people would normally come into contact with it. It makes a complex scaffold

web in cracks in fences, walls, windowframes and similar places. Only the harmless adult males would normally leave their web. Roger Payne has had the spider present in his house for a number of years and has yet to be bitten! A related mediterranean species *Steatoda paykulliana* is known to bite and has for example affected workers in Spain picking grapes. It has occasionally been recorded in Britain usually imported with produce.

I am personally extremely doubtful that these new finds of *Steatoda nobilis* are due to its sudden increase and spread. In my view the spider is likely to have been present in Britain for some time. The spider's habitat makes it difficult to find since it spends most of its time hidden in cracks and usually only appears on the web in order to deal with prey. The web can easily be confused with those of other spiders living in similar places and as is often the case, if you are not specifically looking for a species it is easily missed.

However there does seem to be a genuine increase in the frequency and range of some invertebrates. There is fairly convincing evidence that the Bee Wolf *Philanthus triangulum* is undergoing a dramatic increase. The regular occurrence of this aculeate wasp was restricted to the Isle of Wight, with other modern records from Hampshire, N. Essex and Suffolk. Last year it was found in new localities in Essex, Kent, Norfolk and Cambridgeshire with possible sightings in Surrey.

This year it has continued to be found in new localities, for example it has been observed in four West Sussex sites (the first records of this species for the county), at least five new localities in Surrey, with others in Kent. Many records are of the wasp being found for the first time in well-known sites (e.g. Horsell Sand Pit, Surrey). Some of these records are of aggregations of 100 or more nests. A sand pit in Kent was estimated to contain a minimum total of about 12-15,000 nests! So common were these nests there that the workmen in the pit dug out the larvae during the winter and fed them to the birds. The owner of the pit found the wasps there for the first time about two or three years ago (George Else, personal communication).

The wasp has also continued to turn up in new localities in south Essex, at Fobbing, Linford, Mill House Pit, Grays and Shoebury East Beach. Certainly at some of these sites there were quite large nesting aggregations present. At the Chadwell site first discovered last year the wasp seemed to be present in much larger numbers this year.

Lomholdt in "The Sphecidae (Hymenoptera) of Fennoscandia and Denmark", 1975-6, mentions what may be a similar expansion of the range of *Philanthus* in Europe in the late 1930's probably caused by unusually favourable weather conditions in July and August.

The Department of Environment report says that there is no evidence that the recent warm weather in the mild winters and hot summers between 1988 and 1990 was due to the emission of "greenhouse gases". However the Financial Times article says that a vision of Britain with a mediterranean climate emerges from the report's 150 pages of statistics. The grape and sunflower harvests in the south of England flourished during the abnormally warm weather and gardens bloomed weeks early - and so did the pests! The agrochemical companies were the real winners with sales of insecticides rising by more than a third in 1989.

Peter Harvey

BOTANICAL MEETING, RIVER STORT: 18th July 1993

Six members gathered at Twyford Lock. Rain was forecast for the day but in the event it remained dry until the end of the meeting. In the morning we walked the one kilometre to the Thorley Flood Pound. This is an area which is flooded at times of heavy rainfall. It proved to be an area rich in rare and local marsh plants which are decreasing rapidly in Essex due to loss of habitat. The margins of the river had many of the more common water-side plants such as Purple Loosestrife *Lythrum salicaria*, Hemp Agrimony *Eupatorium cannabinum* and Indian Balsam *Impatiens glandulifera*.

The flood pound has a large population of Common Valerian *Valeriana officinalis* in full flower. Southern Marsh Orchid *Dactylorhiza praetermissa* was abundant but had almost finished flowering. There were also a few plants of Early Marsh Orchid *D. incarnata*. Other local plants present in quantity were Fen Bedstraw *Galium uliginosum*, Lesser Water Parsnip *Berula erecta*, Marsh Ragwort *Senecio aquaticus*, Brown Sedge *Carex disticha* and Blunt flowered Rush *Juncus subnodulosus*. The latter could be compared with the much commoner Sharp flowered Rush *J. acutiflorus*. Around a shallow pond Bristle Club-Rush *Isolepis setacea* was abundant whilst in the pond large fruiting colonies of the Stonewort *Chara vulgaris* var. *vulgaris* occurred.

An area which is occasionally grazed revealed an interesting occurrence. Both Water-Plantain *Alisma plantago-aquatica* and Narrow leaved Water-Plantain *A. lanceolatum* were growing together in quantity. Although I have read of a difference in flowering time during the day I have never seen the two species intermixed before to confirm it. The time was 1pm and the flowers of *A. lanceolatum* were fully open whereas those of *A. plantago-aquatica* were fully closed and would open later in the day. There was no sign of any hybrids which have occasionally been reported when the two species grow together. Some of the *A. lanceolatum* plants were as large as *A. plantago-aquatica* and had leaves approaching the latter's in width and this character had to be used with caution when separating them.

After lunch we walked in the opposite direction along the Stort to Rushy Mead N. R. There were a few large clumps of Greater Tussock Sedge *Carex paniculata* in a pond. Both Common Hemp-Nettle *Galeopsis tetrahit* and Bifid Hemp-Nettle *G. bifida* grow in the reserve and the subtle differences in corolla shape could be observed.

In the river a small colony of Sweet Flag *Acorus calamus* was pointed out by Charles Watson showing the characteristic transverse wrinkling of the leaves. Shining Pondweed *Potamogeton lucens* also grew in the river.

Tim Pyner

WHATS ON: ESSEX FIELD CLUB

NOVEMBER

Saturday 20th **General Meeting No. 1380.** "Gold in Scotland". Talk by Graham Ward at 3.00pm. Red Cross Hall, London Road, Chelmsford. (Car Park entrance in Writtle Road). Tea and Biscuits provided.

Sunday 21st **Bird Group.** Fishers Green, Waltham Abbey for Wintering Birds. Meet 10.30 am at Car Park. TL 377032. Leader John Bath. Phone: 0277 651890.

DECEMBER

Saturday 11th **Botany Group.** "Puff Balls". Talk by John Skinner. Meet 1.30pm. Southend Museum. Park in Car Park by Library.

Sunday 26th **General Meeting No. 1381.** Boxing Day Ramble: 4½ miles. The Uncommon Common, Epping Green, Nazingwood Common and Epping Long Green. Meet Car Park Epping Green on B181 at 10.30am. TL 436056. Phone: 0708 742206.

JANUARY

Sunday 30th **General Meeting No. 1382.** Hanningfield Reservoir for Wintering Birds. Meet 10.30am on causeway. TQ 723971. Leader John Bath. Phone: 0277 651890.

ESSEX WILDLIFE TRUST
(selected events organised by local Groups)

NOVEMBER

- Monday 8th **"Green Medicine" by Andrew Chevallier (Medical Herbalist).**
Hornchurch Library 8.00 pm.
- Thursday 11th **Wildlife and Conservation on the Essex Coast.** An illustrated talk by
Dr Chris Gibson, Conservation Officer with English Nature. Braintree
Town Hall Centre. 8pm.
- Friday 12th **"Barn Owls"** - An illustrated talk by Bob Hills. Danbury Recreation
Centre, near Eves Corner, Danbury. 7.30 pm.
- Thursday 18th **"The Heathlands of Essex"** (With particular reference to Galleywood
Common) - An illustrated talk by Dr Tony Walentowicz. United Reform
Church Hall, High Street, Great Baddow. 8.15 pm.
- Wednesday 24th **Talking on "Argentina, The Falklands, and Antarctica"** by Dr
Simon and Mrs Pat Cox. (Joint meeting with Clacton and St Osyth Bird
Watching Society). Kirby Le Soken Church Hall, 7.30 pm.

DECEMBER

- Monday 13th **"Danbury a talk on the Wildside"** - Geoff Pyman. Hornchurch
Library. 8.00 pm.
- Wednesday 8th **"The Essex Coastline - Present and Future"**, illustrated talk by Dr
Jeremy Dagley of English Nature. St Mary's Hall, Burnham on Crouch.
8 pm.

JANUARY

- Thursday 27th **"Butterflies of Europe"** - An illustrated talk by Ted Benton, at the
Trinity Link, Rainsford Road, opposite the County Hotel, 7.30 pm.
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ESSEX FIELD CLUB PUBLICATIONS

The following publications are still available from Essex Field Club (Publications), Mark Hanson, 28 Sylvan Road, Forest Gate, London E7 8BN.

All titles are available to individuals on a cash with order basis. Please add 50p towards postage and packing irrespective of the size of the order.

THE ESSEX NATURALIST SERIES

- No. 1. **Deer of Essex** by Dr Donald Chapman.
A 50 page paperback describing the distribution and history of deer in Essex. Photographs, maps, etc. ISBN 0 905637 06 2 (published 1977) PRICE £2.00
- No. 3. **Tiptree Heath - its history and natural history** by Laurie Forsyth.
19 page booklet describing the most important heathland habitat in Essex. ISBN 0 905637 08 9 (published 1978) PRICE 60p.
- No. 4. **The Wildlife of Epping Forest** edited by Dr David Corke.
60 page paperback with photographs and line illustrations. A review of the animal life of the Forest by the leading experts on each group of animals. ISBN 0 905637 09 7 (published 1979) PRICE £1.50
- No. 5. **The Essex Field Club - the first 100 years** by L. S. Harley.
21 page booklet describing the history of the Club on the occasion of its centenary. Photographs. ISBN 0 905637 10 0 (published 1980) PRICE £1.00
- No. 6. **The Smaller Moths of Essex** by A. M. Emmet.
The most detailed account of the smaller moths ever published for any British county. Distribution maps and details of over 1000 species. Illustrations of representative moths in each major group. ISBN 0 905637 11 9 (published 1981) PRICE £5.00 (reduced from £7.00).
- No. 7. **Lords Bushes** by M. W. Hanson.
The history and ecology of an Epping Forest woodland. 69 page paperback with 8 pages of photographs and additional line drawings. ISBN 0 905637 12 7 (published 1983) PRICE £3.00
- No. 8. **The Larger Moths and Butterflies of Essex** by A. M. Emmet and G. A. Pyman.
The companion volume to No. 6. Distribution maps for every species and a complete analysis of the changing butterfly and moth fauna of Essex. ISBN 0 905637 13 5 (published 1985) PRICE £6.00 (reduced from £9.00).
- No. 9. **The Dragonflies of Essex** by Dr Edward Benton.
A very comprehensive and readable account of the county dragonfly fauna. It includes the results of a recent county-wide survey and much historical information. ISBN 0 905637 14 3 (published 1988) PRICE £5.95
- No. 10. **Essex Elm** by M. W. Hanson.
Elms were devastated by Dutch Elm disease. In this booklet Mark Hanson examines the role of elms in the landscape and their uses, and also gives an up-to-date account of their status in Essex today. 87 pages, 19 photographs, maps and illustrations. ISBN 0 905637 15 1 (published 1990) PRICE £3.95
- No. 11. **Epping Forest - through the eye of the naturalist** edited by M. W. Hanson.
A book chronicling the complex land-use history of Essex's most famous Forest with modern accounts of its flora and fauna. ISBN 0 905637 16 X (published 1992) PRICE £10

OTHER

The Clay Tobacco-pipe in Britain by L. S. Harley. 51 page paperback covering the history and identification of these pipes. Special attention is given to pipes made in Essex and East Anglia. ISBN 0 905637 00 3 (second edition 1976) PRICE £2.50.

SPECIAL OFFER

Volume 6 (The Smaller Moths) and Volume 8 (The Larger Moths and Butterflies) are available together for £9.00 post free.