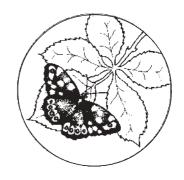
THE ESSEX FIELD CLUB

DEPARTMENT OF LIFE SCIENCES

UNIVERSITY OF EAST LONDON

ROMFORD ROAD, STRATFORD,

LONDON, E15 4LZ



NEWSLETTER NO. 21

May 1997

THE PRESIDENT'S BIT ...

Those who attended the AGM on 15th March will already know that the members present saw fit to elect me as the Essex Field Club's President for 1997/98. For those who do not know me, a few words of introduction seem appropriate.

My main "claim to fame", I suppose, is that I was in charge of the Biology Section at the Passmore Edwards Museum from 1979 until the London Borough of Newham saw fit to abolish natural history and make me redundant on Xmas eve 1994. During the time I was at the museum I was responsible not only for the collections, but also for the running of the East Ham Nature Reserve and for biological recording in the west of the county.

I came to Essex from my native Newcastle-under-Lyme in Staffordshire in 1970. As a penniless student with an interest in natural history I regret that I found the Essex Field Club an unattractive proposition. Indoor meetings in Chelmsford and field trips to the coast had little appeal to a skint young man with no wheels. I found the London Natural History Society a far more accommodating body and joined soon after arrival here in "The South". At the time, my main interest was in birds. I qualified as a bird ringer and began work on a project studying the birds in the urban area of southern Epping Forest, around Wanstead and Manor Park. I still retain a particular interest in urban wildlife, though in recent years I was converted from birds to insects! I have written a number of papers on urban wildlife and once represented Britain at an urban ecology conference in Poland - though my lasting memory of that trip was the bottled beer at only 5000 Zlotti (20 pence) per half litre and finding Pink Floyd's Dark Side of the Moon" in a Warsaw shop for 25,000 Zlotti (exactly £1).

My interest in the Essex Field Club came much later, and was largely the result of both acquiring a car and becoming somewhat more financially solvent. I observe, however, that indoor meetings are still held in Chelmsford and, though I agree this is a central venue and that most people now do have transport, I wonder what members views are on this. After all, the attendance at meetings is pretty poor, though in this respect we are no different from almost every other natural history society in Britain.

Essex Field Club Newsletter No. 21, May 1997

In 1987 I left Essex for Hertfordshire, mainly because I was thoroughly unhappy at the prospect of my children attending an East London school, and I have lived in Bishops Stortford, just over the Essex boundary, since then. I have a wife, a brace of kids, a dog, a cat, two guinea pigs, a tank of tropical fish and a mortgage.

So, after this brief introduction, what am I going to do for you and your Club whilst I am President?

I would very much to do five things:

- Increase the number of members from the present two hundred and something to 500;
- Establish the nature of the desires and wishes of the membership and respond to these in a positive manner;
- Generally raise the profile of the Club through the production of a high quality journal;
- Improve the existing liaison between the Club and other organisations, especially the Essex Wildlife Trust, the London Natural History Society (with whom we have a large geographical overlap) and English Nature.
- Consolidate the Club's position as the county's premier wildlife recording body.

To achieve this, I need first to hear from the membership. It is logical to assume that those people I see at meetings are happy enough to turn up. So I am also assuming that those people who I never meet are in some way unhappy, as I was back in 1970. I want to know what it is that displeases (or pleases) you. I want to hear your suggestions for improving the Club - even (especially) if you disagree with me. I hope that I will be able to produce a short questionnaire for the next Newsletter, but in the meantime, please feel free to write to me or telephone me with all your comments. It may take a while, but I will reply to all communications eventually, and I will take on board all of your comments. Remember, it is YOUR club, and I am only the President because YOU chose to put me in this position. Tell me what you would like me to do while I am here!

Colin W. Plant

14 West Road, Bishops Stortford, Herts, CM23 3QP. 01279-507697.

All members should by now have received their new-look Essex Naturalist. This issue marks the end of the journal as a series of monographs and a return to the original format of a paper-carrying journal. Together with the Newsletter, the Essex Field Club now has, therefore, two excellent publications which together cover the whole spectrum of publishing on the Essex Flora and Fauna. The Newsletter will continue to carry shorter contributions, anecdotal information, announcements and the like, whilst The Essex naturalist will carry more "scientific" papers, notes and communications covering all aspects of Essex flora, fauna, geology, ecology and conservation.

However, members should not be put off by the statement that the journal will be "scientific", since it is my intention as editor to make it a highly reader-friendly publication. After all, the purpose of publishing papers is to make the information they contain available to people who will be able to use it or benefit from it, so there is little point in producing something that members can't understand. The main difference is that all contributions will be subjected to peer review before acceptance. This means that what we publish in the journal should be of the highest standard of quality and accuracy.

I would hope that the journal would contain a balance of contributions, covering each of the five main headings of botany, invertebrates, vertebrates, geology and conservation in each issue, as well as annual reports from the Club's Recorders. Something for everyone! But all this does rather depend on me receiving enough suitable material.

So, how can members help? Very easily, in fact - by writing something and sending it to me. As well as carrying larger "papers" the journal will also carry shorter notes of interest to Essex naturalists, reviews of books of relevance to the county and probably other contributions too. I have already received a major contribution on the bats of Essex, currently with a referee, and other contributions are positively welcomed at my home address, be they major papers or shorter articles of interest. If a short contribution is not appropriate for the journal, the chances are we will put it in the Newsletter, so whatever you want to say will be said!

If you are a keen naturalist/geologist and have something that you think is worth publishing please feel free to either send me a draft or telephone me first to discuss its suitability. If you are not sure whether or not what you have to share is worthy, send it anyway and let me decide. Very often the best and most important contributions are short notes from people who did not realise the significance of their information. Anyone who has ever done any bird survey work for the BTO will be fully aware how an individual contribution, no matter how small, can make an awful lot of sense when put together with similar small contributions from lots of other people. That is just what a journal is about sharing information with others that have similar interests. First time authors are very welcome indeed to telephone me for help. Authorship is by no means restricted to established "experts" although we want their contributions too.

One final think - if you have a PC compatible word processor, I would be very happy to receive your contribution on a 31/2 inch floppy disk, though this is not compulsory and in any case I would also like a paper copy as well. However, please only send disks from stand-alone computers. If your computer is networked or is accessed by people other than yourself then there is a very serious risk of computer virus infection and you should telephone me first before sending disks. This is especially the case when disks have originated in computers at universities or hospitals.

All contributions or books for review should be sent directly to me ... Colin W. Plant

14 West Road, Bishoips Stortford, Herts, CM23 3QP. Telephone 01279-507697.

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AN IPSWICHIAN INTERGLACIAL SITE AT WRABNESS, ESSEX

Introduction

Large fossilised mammal bones have been collected from Wrabness, Essex for nearly 300 years. The majority of these bones were collected in 1701 and 1906/1907. This short note reviews some of the published accounts and details some recent finds which confirm the source of much of this material.

History of Collecting

On 15th September 1701 Mr John Luffkin wrote a letter detailing the discovery that summer at Wrabness, Essex of "diverse bones of an extraordinary bigness, which were found at fifteen or sixteen foot [4.6-4.9m] beneath the surface of the earth, in digging for gravel to mend the road with" (Luffkin 1701 p.924). Some of the bones were obtained by the Rector of Wrabness Robert Rich and sent to Luffkin who identified them as elelphant having been buried there by the Romans. The Reverend Rich also sent two pieces of bone to Samuel Dale who thought them to be some whale "from the thickness, shortness and largeness of them" (Dale 1730 p.296).

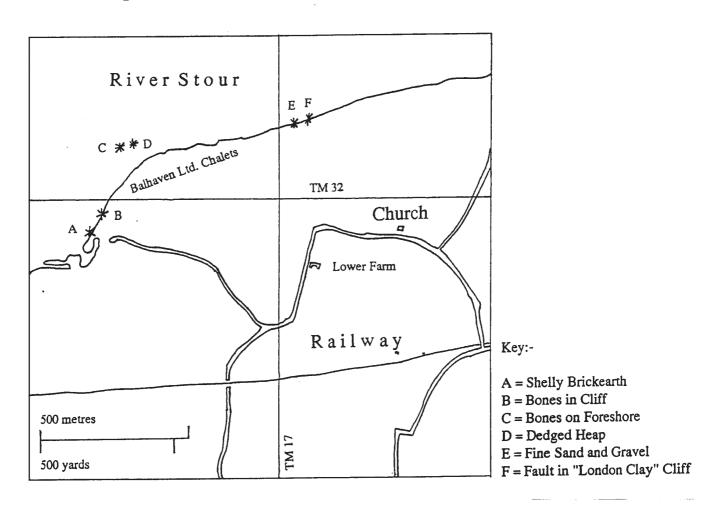
In 1885 the site was briefly recorded during the Geological Survey by William Whitaker (Whitaker 1885 p.95) in the chapter on Post Glacial Beds:- "On the southern side of that river [Stour], just below Wrabness sluice, there is a low cliff, in bedded sand (mostly fine), and loam, with a little gravel in parts, and with broken shells at one spot". On 20th April 1907 at an indoor meeting of the Essex Field Club Mr Miller Christy exhibited some fragmentary bones obtained at Wrabness by himself and Mr Wilmer which Mr E.T. Newton identified as being of mammoth (Cole 1907 pp.46-47). The discovery of these remains was detailed by Christy (1907 pp.102-103) who stated the bones were found in the spring of 1907 "on the eastern side of Wrabness sluice and of the road which comes down from Low Farm to the shore close to the sluice". At this place the cliff was fifteen or twenty feet high [4.6-6.1m] and consisted of sand and fine gravel which rested on a very stiff clay which was stated to be probably redeposited London Clay. The bones had been disturbed by a previous visitor and included extremely soft and friable though perfect limb bones imbedded in the surface of the stiff tenacious clay and had been freshly uncovered by a recent high tide. Apparently a Mr Walter Nichols of Stour Lodge, Bradfield reported the bones had been discovered in May 1906 following a high tide which led to a cliff fall. A couple of teeth were collected by a "youth named Young" before the remains were again temporarily buried by a further cliff fall. These teeth were acquired by a Mr R. Brooks and donated to the Essex Field Club where they were subsequently identified as those of a straight tusked elephant. In the summer of 1907 a party including Mr Miller Christy; Dr Philip Laver; Mr E. MacArthur Moir; Mr H. Wilmer and Mr A.G. Wright attempted to examine the site more thoroughly and found bones in abundance at the base of the cliff, overlain by a dozen to fifteen feet [3.65-4.6m] of small gravel and sand, and washed out onto the adjacent beach but the only significant find was a well preserved mammoth tooth. Miller Christy concluded that from the large number of bones "more than one mammoth must have bogged, or have perished otherwise at or near the spot in question". On 26th October 1907 during a meeting of the Essex Field Club at Stratford near London Mr Miller Christy exhibited on behalf of Mr W.B. Nichols of Stour Lodge Bradfield a few mammoth bones from Wrabness (Cole 1908 p.148). A month later on 30th November 1907 two "straight-tusked elephant teeth from Wrabness belonging to Mr R. Brooks of Mistley were exhibited at an Essex Field Club meeting at Stratford" (Cole 1908 p.151).

In a short note about the Stutton Brickearth, Suffolk on the northern bank of the River Stour (Spencer 1953 p.26) the cliff section at Wrabness is briefly mentioned and the formerly common occurrence of elephant bones etc. noted with the observation that due to the little erosion then taking place they were now rarely encountered although an os lunare, probably of an elephant had recently been discovered at the extreme western end of the cliff. Nearly ten years later Sparks and West (1964 p.422) visited Wrabness, Essex and Harkstead, Suffolk looking for sites to compare with Stutton, but failed to find any shelly sections. Wymer (1985 p.236) mentioned this site and added that material in Colchester Museum included mammoth, elephant, bos, bison, red deer, horse, hippopotamus and whale. The whale bone is presumably derived from the Red Crag. This section was examined as part of the Hullbridge Survey by Wilkinson and Murphy (1988 pp.22-23). They found several flint flakes but were not sure of the context.

Recent Field Work

Recent collecting at this site has confirmed much of the information detailed above (see map).

Map of Wrabness Scale 1: 10 000



Very shelly brickearth is exposed on the beach and upper foreshore at TM16333189 just to the north east of the Balhaven Saltmarsh SSSI. Samples of this shelly material have been collected for processing. It contains fragile freshwater molluscs and micromammalian teeth. The low cliff at TM16383196 has yielded an elephant vertebra, which is currently being conserved by Graham Ward; a right elephant astragalus and a large

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mammoth tooth. Although complete these remains are very fragile and difficult to conserve. A large rib has been seen in the cliff. Pieces of better preserved bone, including the end of an elephant tibia and tusk fragments are particularly common on the foreshore around TM16483221 where they appear to be cast up by the numerous bait diggers here. The low cliff of Brickearth with lenses of gravel and much fine sand is greatly obscured by chalets which are often perched on stilts. The owners of these chalets are waging constant war against attack from the ever encroaching sea which appears to be cutting down into the beach and foreshore. The adjacent land and foreshore was bought by the chalet owners in 1986 (Balhaven Ltd.) "to maintain its peace and tranquility for future generations to enjoy". A great heap of dredged material about 2m high measuring 10m by 15m containing many thick shelled grey oysters; black angular flint pebbles; lumps of green and grey clay and a small piece of sarsen stone has recently been dumped at TM16493220 to be used to construct an offshore breakwater. The brickearth, sand and gravel is intermittently exposed in the low cliff from TM16343190 to TM17063227. Just to the east of this at TM17103229 is a fault in the London Clay (Whitaker 1885 p.18). Whale bone fragments and a shark's tooth of *Isurus hastalis*, both presumably derived from the Red Crag, have been collected from the beach at this point. This interglacial deposit is presumably the same age as the nearby Ipswichian Age (sensu Trafalgar Square) site at Stutton, Suffolk. Both sites have yielded hippopotamus and dated to stage 5e of the oxygen isotope record and are about 125,000 years old.

Bibliography

Christy, M	1907	Bones of Mammoth at Wrabness. <i>Essex Naturalist</i> Vol.15 pp.102-104.
Cole, W.	1907	Report of Ordinary Meeting held on 20th April 1907. Essex naturalist Vol.15 pp.46-49.
Cole, W.	1908	Report of Ordinary Meeting held on 26th October 1907. Essex naturalist Vol.15 pp.148-149.
Cole, W.	1908	Report of Ordinary Meeting held on 30th November 1907. <i>Essex naturalist</i> Vol.15 p.151.
Dale, S.	1730	The History and Antiquities of Harwich and Dovercourt.
Luffkin, J.	1701	Part of a letter from Mr John Luffkin to the publisher, concerning some large bones, lately found in a gravel-pit near Colchester. <i>Philosophical Transactions of the Royal Society</i> Vol. 22 pp.924-
926.		T miosopnicai Transactions of the Royal Society Vol. 22 pp.924-
Sparks, B.W. & West, R.G.	1964	The Interglacial Deposits at Stutton, Suffolk. <i>Proceedings of the Geologists' Association</i> Vol. 74 pp.419-432.
Spencer, H.E.P.	1953	The Stutton Brickearth, Suffolk. <i>Proceedings of the Geologists' Association</i> Vol. 64 pp.25-28.
Whitaker, W.	1885	The Geology of the Country around Ipswich, Hadleigh, and Felixstow. Memoir of the Geological Survey.
Wilkinson, T.J. & Murphy, P.	1988	The Hullbridge Basin Survey 1987. Interim Report No. 8
Wymer, J.J.	1985	Palaeolithic Sites of East Anglia.
W.H. George		

Essex Field Club Newsletter No. 21, May 1997

ARE WE ALL POTTY?

We have often heard the suggestion that entomologists are somewhat eccentric - and that is putting it mildly! After all, who, in their right mind would stand in the sun for ages, simply staring at a brick wall, or up at the tops of trees? We have even seen a certain prominent member of the Field Club climb up an old pollard oak tree to install a pitfall trap. Strange behaviour indeed.

You may smile, but, perhaps you are a geologist? One of those people who plods around all day picking up stones and then dropping them again? Or a birdwatcher perhaps? In winter we have seen these strange people, huddled together in huts which seem to have holes along the sides for ventilation. One wonders what the birds think of it all.

By comparison you might think that botanists are quite sane - but don't you believe it.

My wife and I had not done any recording for the Essex Flora Project for some time, and must have been suffering withdrawal symptons. We decided that we needed some exercise, and as an excuse for this took a recording card to The Common in Saffron Walden to walk a 1Km square. Now this square comprises an improved grassland open space, a large cemetery, a dry ditch, some old flint walls, a few roads and lots of houses. The date was January 12th. The weather was cold, - bitterly so, but we were lucky and it did not snow. Flowers were few. *Bellis, Senecio* and *Lamium*, etc., and after an hour or so we gave up due to bad light and frozen fingers.

However we had recorded over 150 species, so the outing was far from a waste of time. It could be argued that a better result could have been achieved in summer. Perhaps, but some plants such as Mistletoe and ferns are easier to see in the winter. Bee orchids are very obvious in short turf from December onwards and many grasses can be identified from dead stems. Most trees can be named, although *Salix* and *Ulmus* are impossible.

On the whole a worthwhile outing, but a second visit will be needed in spring or summer to complete the square. For those botanists who have not tried recording in January we can commend it - the exercise alone will do you good. Anyone who sees you out there in mid-winter with a recording card will probably think you are daft, but it is all in a good cause. Perhaps we are all slightly pooty!

Shirley and Charles Watson	
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SOME INFORMATION ON THE NATTERJACK TOAD (Bufo calamita Laur.)

This amphibian is smaller than the Common Toad *Bufo bufo* being about 6 to 8cm long as an adult. It is often tinged geeenish and can be easily identified by the borad yellow stripe down its back, it also has pale silvery yellow eyes. The body is not very thick and carries shorter legs than in other anurans, the back bears numerous small flat warts. The parotid glands (paired salivary glands) are relatively small, the webs are short being about half the length of the longest toes. Both sexes are roughly the same size but the male develops a large vocal sac, particularly during the breeding season. There may be greyish to red brown blotches on the back, the underside being light grey with black spots anteriorly and greyish black with white dots posteriorly. The male utters a loud grating croak, often part of a noisy chorus, starting shortly after sunset.

Habits

The animal comes out of hibernation around the beginning of April, to re-enter water, which is often brackish, and frequently in dune slacks. Breeding takes place from late March through and into summer, the female laying a band of rather few eggs in one or two rows, twisted round reeds and water plants, and deposited at night over a few hours. The tadpoles are the smallest of European anurans, often with paler spots, a pale back stripe and a mouth only half as wide as the Common Toad's. The toadlets have metamorphosed at about 6 to 7 weeks, when only a third of an inch long.

Peculiarly, the Natterjack gait is a running motion similar to a mouse, stopping every 30cm or so for a brief rest. It is able to jump, though rather clumsily and only for short distances. It is an excellent climber and may be found several feet above surrounding ground level.

Food is of imago and larval arthropods, caught at night. It is nocturnal, usually passing the day buried in sand, although it may be encountered along dune ridges. Hibernation is usually October to February. Unusually among amphibians, the Natterjack is able to withstand long periods of drought. This adaptation to drought may be associated with an ability to withstand higher saline levels. As a protection against predators, it secretes a whitish substance from its skin, carrying a smell reminiscent of burnt sulphur and india rubber.

Carnivorous beetles will prey on tadpoles and newly developed toadlets, newts will take tadpoles and the tadpoles themselves are often cannibalistic in the absence of suitable food. Birds such as Heron, Wigeon and Black-headed gull and mammals such as rats and foxes may actively seek the adults for food, trying to skin the carcass before devouring it in order to avoid the poisons present in the skin (the venesio-horrendi of Linne). Bufotoxin, bufotalin and bufotenin have been extracted from Common Toad exudates.

Habitat and distribution

The species is local in distribution and because of its burrowing habits it tends to live in sand dunes, dune slacks, or on sandy heaths, usually in coastal areas, not going inland. Malcolm Smith (1969) says that in the British Isles the Natterjack is only found at around sea level. He says that occasionally whole colonies will migrate for no understood reason. The Natterjack is not so faithful to one pond for breeding as the Common Toad, and may even deposit spawn into puddles or ditches that can dry up before the tadpoles' metamorphosis, causing their death.

Deryk Fraser (1983) says that there have been reports of *B. calamita* from boggy ground in Cambridgeshire, and from sandstone areas of the Furness region of Lancashire. He also says it was formerly known in a band from Dorset, Hampshire and Surrey to East Anglia, though it is now found in small numbers in Hampshire and a few coastal areas of Norfolk and Lincolnshire, with other populations along the coast from the Dee to the Solway, also including the Scottish shore. Malcom Smith (1969) said that it was present in the sandy areas of Woking. The Lincolnshire and South Humberside Trust state that this animal is to be found on their Saltfleet-by-Theddlethorpe reserve, on the coast just north of Skegness, in its last area in Lincolnshire. Ros Evans says it is to be found at N.C.C. Studland Heath reserve on the Isle of Purbeck in Dorset.

Reasons for decline

As noted the species prefers loose sandy soil of dunes and heaths, and heathland is one of the fastest decreasing habitats in this country. It appears to require pools with a high pH - a rare occurrence on heathland and becoming even scarcer. Small ponds have a

tendency to dry out, proceeding to scrub and then woodland. Growing areas of caravan and campsites along the coast, agricultural practices and building sites developed on former territories have all inflicted their toll. Past collecting by man (now illegal) has doubtless also contributed.

Conservation

As usual the loss of habitat due to man's activites is the largest cause of the species' decline. Some protection is afforded on reserves managed by nature conservation bodies and by the 1981 Wildlife and Countryside Act. It is obviously necessary to ensure that existing sites are not reduced further in size, and if possible to create additional habitat possibly by extending into suitable adjacent areas. Access to some vulnerable sites near towns which are liable to heavy human interference needs to be controlled. Where spawning is seen to have taken place in unsuitable areas, sufficient water needs to be brought in to maintain levels during dry weather, and some spawn removed to fresh ponds, ensuring sufficient food is available to the developing tadpoles.

Restriction of interference, prevention of further developments and finally attempts to form new colonies appears to be the species best hope for continued survival.

References

Smith, Malcolm The British Amphibians and Reptiles. Collins New Naturalist.

Frazer, Deryk Reptiles and Amphibians in Britain. Collins New Naturalist.

Hvass, Hans Reptiles and Amphibians. Blandford Colour Series.

Barnes, R. Coasts and Estuaries- The Natural History of Britain and North Europe.

Fitter, R. &. Collins Guide to Freshwater Life.

Manuel, R

Evans, Ros Nature Guide to East Anglia and Lincolnshire. Usborne.

Ken Hill

CONTRIBUTIONS TO THE NEWSLETTER

Please send contributions for the next Newsletter, due out August, to the Editor, Mr Peter Harvey, 9 Kent Road, Grays, RM17 6DE by the end of July at the latest.

Remember that the production of the Newsletter depends on contributions from members.

Many members must have wildlife news, observations or the results of fieldwork that would be of interest to others - do not underestimate the interest of your own observations!!

If text has already been typed on a standalone PC computer then a disk with the file would be very helpful but typed or handwritten notes are welcome.

Deadline dates for the Newsletter each year

January/February Newsletter: deadline - end of December April/May Newsletter: deadline - end of March August/September Newsletter: deadline - end of July October/November Newsletter: deadline - end of September

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WHATS ON: ESSEX FIELD CLUB

JUNE	WHATS ON: ESSEX FIELD CLUB
Sunday 1st	General Meeting 1413. General Natural History on Skippers Island. Meet at 8.30am at end of private road, Birch Hall Farm, Kirby Le Soken. TM 218238. Bring wellington boots and lunch. Return at 3.00pm. Leaders Tony and Judith Boniface (01245) 266316. Early start essential because of tide.
Saturday 7th	Botany Group . BSBI Atlas 2000 recording meeting. Square TL63. Meet at Little Sampford Church. TL 653337 at 10.30am. Leader Jeremy Ison (01376) 345235.
Sunday 8th	Joint Meeting . with Colchester NHS Invertebrates and Botany at Pitchbury Wood. Meet at 9.30pm at TL 968295 which is a farm loading area opposite N.E. corner of the wood on Coach Road. Leader Joe Firmin (01206) 241389.
Saturday 14th	Botany Group . BSBI Atlas 2000 recording meeting. Squares 53 and 54. Meet at 11.00am at Great Chesterford Churchyard. TL 505427. Leader Ken Adams 0181-508 7863.
Sunday 15th	Reptiles . Reptile walk at Hadleigh Country Park. Meet 9.45am at Chapel Lane car park. TQ 802868. Leader John Wright (01702) 78409.
Saturday 21st	Botany Group . BSBI Atlas 2000 recording meeting. Square TL61. Meet at Stagden Cross where Essex Way going north crosses the road. TL 639148 at 10.30am. Leader Jeremy Ison (01376) 345235.
Sunday 22nd	Bird Group . Fingringhoe Wick. Meet 10.30am at the central car park. TM 048193. Leader Carole Wilken (01245) 450872.
Saturday 28th	Botany Group . BSBI Atlas 2000 recording meeting. Square TL73. Meet at Toppesfield Church. TL 739374 at 10.30am. Leader Jeremy Ison (01376) 345235.
Sunday 29th	Botany Group . Plants and General Natural History. Chrishall. Meet 11.00am at Red Cow public house. TL 446394. Returning to pub for lunch before the afternoon session. Leaders Charles and Shirley Watson (01279) 505309.
Sunday 29th	Geology Group and Essex Rock and Mineral Society. Sand and gravel quarry Birch near Tiptree. TL 927200. Meet at 11.00am. Leader Bob Burton. Refreshments are offered afterwards at the leader's home. Details David Turner (01245) 267450.
JULY	Turner (01243) 207430.
Friday 4th	Mammal Group. Bats and Birds. Waalk around Hanningfield Reservoir. Meet at 8.00 pm. West Hanningfield car aaprk. TQ 730996. Leader John Dobson (01245) 224408.
Saturday 5th	Botany Group . BSBI Atlas 2000 recording meeting. TL50. Meet at High Ongar Church. TL 565037 at 11.00am. Leader Ken Adams 0181-508 7863.
Sunday 6th	Joint Meeting with Colchester Natural History Society. Botany and Invertebrates. Layer Marney Towers. TL 927175. Meet at 11.00am. Leader Joe Firmin (01206) 241389.
Saturday 12th	General Meeting 1414. Glow-worms and tour of Hitchcock's Meadows. TL 788049. Meet 8.00pm at reserve entrance. Park at Eves Corner or at top of Gay Bowers Lane. Leader Peter Scotcher (01245) 226225.
Sunday 13th	Botany Group . BSBI Atlas 2000 recording meeting. TL71. Meet at Great Leighs Church. TL 738155 at 10.30am. Leader Jeremy Ison (01376)345235.
Tuesday 15th	Moth Trapping at Old Water Works site, Sandford Mill. Meet outside gate. TL 739063 at 8.00pm. Leader Tony Walentowicz (01245) 350016.
Saturday 19th	Botany Group . BSBI Atlas 2000 recording meeting. Great Wakering. Meet at Oxenham Farm. TQ 961882 at 10.30am. Leader Tim Pyner (01702) 332425
Saturday 26th	Botany Group . BSBI Atlas 2000 recording meeting. Square TL74. Meet at Ridgewell Village. TL 737408 at 11.00am. Leader Ken Adams 0181-508 7863.
Sunday 27th	Geology Group and Essex Rock and Mineral Society. Essex Red Crag and London Clay Fossils. The Naze, Walton. Meet outside cafe near tower at 10.00am. TM 265235. Bring garden sieve (fine). Leader Gerald Lucy (01799) 523310. Essex Field Club Newsletter No. 21, May 1997

ESSEX FIELD CLUB NOTELETS

The notelets illustrated are marketed in packets of ten, two of each design, together with envelopes. They are on sale at Field Club Meetings at £1.00 per packet or by post for

£1 + 75p to cover postage and packing.

Orders to Tony Boniface at 40 Pentland Avenue, Chelmsford, Essex, CM1 4AZ. Write now to ensure your supply while stocks last.



Essex Field Club Newsletter No. 21, May 1997

The following publications are still available, now from Tony Boniface, 40 Pentland Avenue, Chelmsford, Essex, CM1 4AZ.

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).
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