THE ESSEX FIELD CLUB

HEADQUARTERS:

THE PASSMORE EDWARDS MUSEUM,

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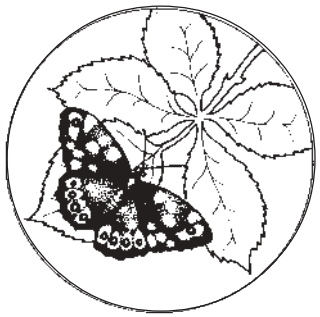

NEWSLETTER NO. 13 March 1995

THE THAMES GATEWAY - THE EAST THAMES CORRIDOR

I am grateful to Ken Hill in bringing to my notice the Thames Gateway Planning Framework Consultation Draft. This sets out a framework for a sustained programme of regeneration and development in the East Thames Corridor, extending from Docklands in London to Tilbury in Essex and the Isle of Sheppey in Kent. The intention seems to be to encourage major development of this area, "an area of opportunity which is at the threshold of Europe's largest city and the expanding continental marketplace." This does not bode well for the remaining sites of wildlife importance in the area. The Thames grazing marshes have long been recognised as of national importance for many plants, birds and invertebrates and there is increasing evidence that south Essex contains other sites of great importance for wildlife eg on terrace gravels and chalk.

Many areas of importance for nature conservation in South Essex and North Kent are therefore encompassed by this report which only recognises those designated as SSSIs (Sites of Special Scientific Interest) or SPAs (Special Protection Areas) and although the document advises a new approach of greater care for the environment, nature conservation seems to be only a small part of this consideration. The various development opportunities mapped out give little cause for optimism on the future of existing SSSIs such as Erith, Crayford and Dartford Marshes whose existence does not even seem to be recognised. There is little or no guidance concerning the conservation of sites of important wildlife value and what little is provided does not provide much comfort eg on the Thames and Medway Estuary Marshes, the report states "Other than at the already developed waterfront, proposals which do not support the long term conservation of the marshes will require special justification." In other words if the development is big enough the nature conservation interests will be overturned.

The document is available free of charge from the Thames Gateway Taskforce, C14/19, Department of the Environment, 2 Marsham Street, London SW1P 3EB. I would urge members to obtain a copy and to respond to David Curry, Minister of State, Department of the Environment, the Sponsor Minister for Thames Gateway whose preface invites response with the statement "An environment is being created in which opportunities can be fulfilled and investment can profit. I shall be very interested to hear your views".

Peter Harvey

NATIVE BLACK POPLAR SURVEY

While there is some uncertainty about the status of the Mistletoe, the true Native Black Poplar *Populus nigra* subsp. *betulifolia* is definitely in trouble, with only about 2,000-3,000 (mainly male) trees left in this country. The Native Black Poplar Working Group are planning to study most of the trees in this country and obtain cuttings from them to grow up new trees and maintain the gene pool. You will see from our new EFC program card that we have the first of what will be several meetings scheduled to make our own photographic record of tree shape before the leaves appear, and later on collect a foliage sample for the herbarium, together with site and ownership details, for all our Essex trees. How many are there in Essex? Probably no more than 50-60 at most. How does one recognise it? Although probably originally a tree of meandering river valleys, with an annual layer of flood plain silt remaining wet over the summer, so that seeds could germinate and establish seedlings. Most of our trees have been planted, presumably established from cuttings or trunchions, very often well away from a river valley. You could find them in a hedgerow virtually anywhere. The mature tree is usually distinctive with massive grey-brown fissured trunks to 2m in girth, that often lean, and huge lower branches that arch outwards and downwards, the trunks and these lower branches being heavily bossed or burred in older trees, whereas the upper branches spread upwards to form a wide crown, giving a tree up to 30m high. The leaves are generally longer pointed than the hybrid black poplars, and more often truncate rather than cordate at the base, with gently sinuous rather than sharply toothed margins, but where distinct teeth are evident in large leaves they are not hooked at the tip. The twigs and leafstalks are softly downy when young (one of the best characters) and seldom have glands at the junction of the laminar and petiole, unlike the other ‘blacks’. If you think you have found one please give me a ring.

Ken Adams

DO YOU EVER IDENTIFY WILD FLOWERS?

If so you are a botanist! and we would like your name and address on our mailing list. The Botany Group is a recently instigated informal assemblage of Essex botanists open to all interested parties. The idea of the group is to disseminate botanical information, and coordinate recording and conservation effort. Please send your name, address and ideally your telephone number as well, and you will receive our circulars and notices of meetings. If you consider yourself to be a 'well known botanist' and have not heard of the group, do not be offended! we have only had two preliminary meetings of a small group of us to sort out the kind of problems that as a larger group we need to address.

The most urgent of these was to draw up a list of our rarest plants that need visiting regularly, to access their status and arrange any necessary conservation measures. We now have to assign these to particular botanists to visit at the right time of year, and decide whether this needs doing every year, every other or every five.

Ken Adams

ATLAS 2000

The BSBI have announced that they want to aim for a new edition of the 1962 10Km^2 Atlas of the British Flora for the year 2000. Every third 10Km^2 was surveyed pretty thoroughlyduring the so-called BSBI Monitoring Scheme in 1987/88. What we are now being encouraged to do is to survey the additional squares during the next five years. The Monitoring Scheme involved surveying only 6 out of the total of 57 of our Essex squares - so we only have 51 to do! Rodney Burton (LNHS Botany Recorder) has been volunteered to coordinate the 'S.E. London' squares (including Vcs 18 & 19), and to chivy us into appointing a recorder for each square. This is being taken on board by our new Botany Group in conjunction with the Third Essex Flora project, but volunteers prepared to take on a 10km^2 would always be welcome, even if it means several people working in the same square. On the new maps plants recorded prior to 1987 will have a different symbol from later records, so it means we must have post 1987 confirmation for as many species and squares as possible.

Ken Adams

MISTLETOE SURVEY

Apparently Mistletoe is reckoned to be declining in Britain and so we have been asked to record all known occurrences within the county. This will include colonies growing in gardens on apple or other trees for commercial or personal supplies. In the wild we have found it growing on the following remarkable range of hosts in Hatfield Forest: Hawthorn (the majority), Maple, Hornbeam, Hybrid Black Poplar, Hazel (KJA), Goat Willow (Laurence Sisitka) and Dog Rose (John Fielding). If you want a copy of the recording card please send your address or give me a ring. The best time to record mistletoe is in March when it turns a beautiful golden yellow and stands out at a distance. If you simply find some and don't want the bother of filling in a card simply 'phone me and tell me about.

Ken Adams

MYCOLOGY IN ESSEX - RECENT RECORDS

The last three years have seen a welcome increase in rain and a return to almost normal of the water table with a subsequent rise in fruiting of fungi. This year in particular parts of Epping Forest were fruiting as I have not seen for over ten years, and some species normally very rare in the forest were out in abundance.

As one of the ancient woodlands of southern England Epping Forest has an enormous list of species of the larger fungi. This is only to be expected in a forest with a diverse series of habitats, a record of forest cover extending back many thousands of years and still with large numbers of very old, mature trees. Year after year of drought however - or at best irregular weather patterns - have produced a period extending from the worst drought in 1976 to the present, of very poor fruiting of fungi with a reduction of the diversity of species to be seen. Note the last three wrods "to be seen"; just because the fruitbodies are not present does not mean the fungi have vanished; they may be growing (albeit with difficulty) but just not fruiting due to the adverse conditions.

Perhaps the best recent example has been the reappearance in large numbers of *Hygrophorous eburneus* in the mature beech woods of Monks Wood. Although present on all the old lists and recorded sporadically in recent years I have never seen such extensive fruitings as appeared this year. A welcome return to conditions as they **should be**.

Epping Forest continues to be the main source of new records and a list of these finds is appended; however, Tony Boniface is making a wonderful study of a number of Essex churchyards which has also produced many fascinating records. He will report on these himself in a forthcoming article. One of the most fascinating day's recording this year occurred on the day of the EFC foray to The Brookes Nature Reserve.

Although the records from the site were interesting there was little of any great surprise, except perhaps the very large numbers of *Armillaria tabescens* (the "ringless" Armillaria) which is a very scarce species in this county, only appearing in years with a good, hot summer; almost every oak stump in the area had large clusters of this species.

The best finds of the day were made by Pam Kirby who did not join the rest of us on the walk but who went off to make some paintings of local scenery and happened to stop by Greenstead Green Church. She came back clutching a beautiful *Boletus* species which I recognised as *Boletus regius*, a red-capped species never recorded in Essex before to the best of my knowledge. It usually likes calcareous soils so was something of a surprise since although we were fairly far north in the county we were not supposed to be on any of the known calcareous outcroppings.

A number of us therefore went back to the churchyard and proceeded to make some remarkable finds. Two other species of bolete - *Boletus moravicus* and *B. queletii* were found under mature oaks in short grass. The first of these is a very rare species found only once before in Essex in Epping Forest (see appended list) also under oaks. It is a rich, tawny coloured species with pale ochre tubes and appears to be rare throughout Europe. There is a good illustration in **The Mushrooms of Switzerland Vol 3** by Breitenbach & Krantzlin 1993. *Boletus queletii* is also very rare in Essex although commoner further south where it once again prefers calcareous soils. It is a beautiful species with a reddish-brown cap, orange red tubes and a speckled stem shading to rhubarb-red at the base. Its flesh stains deep blue when cut.

A few yards away was the most interesting find, a large collection of *Amanita echinocephala*. This rather rare, completely white species, has numerous sharp warts on the cap and around the stem base, while the gills have a very faint greenish hue and there is often a rather strange, musty odour present. It too is a species of open woodlands on chalk downlands and one can usually see it around the Box Hill area in Surrey; certainly it was the last thing I expected to see in an Essex churchyard.

So in one small area there were four rare mushrooms, two of which were new records, and all preferring alkaline conditions. Is there calcareous soil coming to the surface here, or is there some leaching into the soil of minerals from the tombstones? This is an interesting subject for someone to follow up.

New Species recorded in Epping Forest 1991-1994

Boletus moravicus
Clitocybe subalutacea
Clitocybe subspadicea
Collybia impudica
Conocybe magnicapitata
Conocybe mesospora
Conocybe subovalis
Coprinus hiascens
Coprinus leiocephalus
Cortinarius magentifolius
Cortinarius rigidus ss. K. & R.
Cortinarius nemorensis
Cortinarius paleiferus
Cortinarius uraceus
Galerina heterocystis
Hebeloma pallidoluctuosum
Hebeloma gigasperma
Hebeloma tomentosum
Hebeloma vaccinum
Hygrocybe discoxanthus
Inocybe hirtella var. *bispora*
Inocybe subcarpta
Lactarius fulvissimus
Lactarius subsericeus (= *ichoratus* ?)
Marasmius recubens
Melanoleuca brevipes ss. Lange
Melanoleuca adstringens
Mycena oortiana
Mycena megaspora
Mycena rosea
Mycena uracea
Pluteus luteovirens
Psathyrella canoceps
Psilocybe crobula
Ripartites metrodii
Russula carminipes
Russula cuprea *[1]
Russula curtipes
Russula elaeodes
Russula graveolens
Russula melliolens
Russula melzeri ?, Lord's Bushes, 29-ix.92, differs in longer, narrower warts and longer, narrower cystidia.
Russula olivaceoviolascens (=*laccata* ?)*[2]
Russula pelargonia
Russula puellula
Russula purpurata
Russula rubrocarminia
Simocybe centunculus
Tubaria conspersa

Notes:
1. The specimen of *Russula cupreae* was completely green in colour and may represent *R. urens* of European literature if that species is truly different (which has been debated).
2. Although placed in synonymy by some authors, in my opinion - having collected both in the forest at different times and locations - these two taxa are distinct.
R. laccata is a uniform purple-red and intensely glossy-lacquered in texture.
R. olivaceoviolascens is, as the name suggests, much more mixed in colour with greens, violet, purple and even black being present in the glossy cap cuticle.

Species recorded in Greenstead Green Churchyard 1994

Amanita echinocephala (new record)
Boletus regius (new record)
Boletus moravicus (2nd record for Essex)
Boletus queletii (2nd record for Essex)

Geoffrey Kibby

RED-VEINED DARTERS SEEN IN ESSEX

On July 31st 1994 Bill Varney visitedthe area around St Peter's Chapel, Bradwell-on-Sea to photograph dragonflies. On arrival he noticed at least six Migrant Hawkers *Aeshna mixta*, a couple of Ruddy Darters *Sympetrum sanguineum* and what, at first, he took to be a dozen or more Common Darters *S. striolatum* frequenting an area of rough grassland along the sheltered side of a small thicket, adjacent to the seawall. On closer inspection, however, he noticed that some of the last named, which were all females or immature males, seemed larger and brighter yellow in colour than their companions and had a distinct reddish sheen to their wings. Suspecting that they might be Red-veined Darters *S. fonscolombii* he informed the four people (including myself) who were staying at the nearby Bird Observatory and during the next few hours we were able to confirm that that indeed was what they were.

The chief distinguishing characteristics appeared to be 1). Size: they were noticeably longer bodied and had a broader wingspan than the Common Darters, a difference that soon became easy to pick out even when direct comparison between the two species was not possible. 2). The face, thorax and abdomen all seemed to be brighter yellow than on the Common Darters whilst the sternites were black, giving a dark edge to the sides of the abdomen. 3). The eyes were yellow or reddish-yellow above, blue-grey below. 4). The costa and sub-costa were red along their entire length - an obvious feature; so too the smaller veins in the wing, although these were more easily observed when viewed against the light. At such times the wings had an almost crimson sheen whilst when the light was from behind they sometimes showed a more yellowish tint and in shadow appeared blueish or merely dark. 5). The pterostigma on all individuals was either colourless or pale yellow, heavily outlined in black. 6). The anal appendages on at least one of the immature males was noticeably longer than on those of the Common Darters, appearing like a pair of claspers.

They were observed for a period of around four hours, most of which time they spent either hunting or sunbathing. On one occasion a young male made a brief attempt to mate with a female; the latter curving her abdomen towards the male invitingly when he approached but he soon lost interest and moved off. It was also noted that the Red-veined Darters seemed to perch on taller pieces of vegetation than the Commons. They were present until at least the early afternoon but neither they nor the Migrant Hawkers could be refound after 3pm.

On the previous day the weather had been hot and sultry with a strong south-easterly wind, culminating in overnight thunderstorms arriving from the Continent. Neither the Migrant Hawkers or Red-veined Darters had been present on the 30th, the implication being that they arrived ahead of the stormy weather. Their appearance coincided with the arrival of several migratory moths, notably, the Ni Moth *Trichoplusia ni*, Bordered Straw *Heliothis peltigera* and several Humming Bird Hawk Moths *Macroglossum stellatarum*.

This record has been accepted by the British Dragonfly Society and appears to be the first sighting in Essex of this migrant species, which is a regular visitor to the southern counties of England.

Graham Smith

THE ROCHFORD HUNDRED FIELD ARCHAEOLOGY GROUP

The Rochford Hundred Field Archaeology Group was formed in January, 1993, with a view to re-establishing voluntary archaeological fieldwork in south east Essex. The Group felt there was a significant potential in the area for this kind of activity and that there was an urgent need for building up an experienced body of unpaid archaeologists capable of undertaking scientific archaeological investigations as a Group, as well as providing additional effort in support of the under-resourced professional units.

Practical archaeology appeals to a surprisingly large number of people and it was this aspect we encouraged both as a leisure activity for the pleasure that could be derived from it but also as a means of strengthening archaeology and increasing knowledge of the past. Undertaking fieldwork involves an obligation to work to the highest possible standards, and the Group is committed to organising its operations and training its members to this end.

During its first year, the Group carried out a week-long survey and a three-week excavation on an area of the Leigh Beck Marshes. The aim was to recover more detailed information about the character of the estuarine settlement indicated by extensive red hill deposits and large quantities of briquetage, pottery, animal bones, shellfish and other finds on the foreshore.

The survey mapped the whole site and recorded the locations of numerous groups of features each comprising a hearth and set of clay-lined tanks, believed to be associated with a salt-making activity. The excavation included salvaging the remains of a hearth and two sets of settlement tanks on the foreshore, and the removal of a section of surviving bank to show an Iron Age, Roman, medieval and early modern sequence which together formed a distinctive mound.

Post-excavation analysis was done during the winter months and included work on some 700 Iron Age and Roman sherds, 750 medieval sherds, over 1000 briquetage fragments, and over 1000 animal bone fragments. Volume 1 of the Group Transactions, covering the Leigh Beck operation to date, was published in late Spring 1994.

Work is continuing on the Canvey project with a landscape survey of the Island as a whole, analysis of existing artefact collections, and the expectation of some further salvage excavation on the Leigh Beck foreshore.

The most uncomfortable working conditions of the intertidal Canvey site were a complete contrast to those found at the Group's 1994 site, that of the redundant and derelict church of Pitsea St Michael. This project involved over six weeks' work, the aim being to reconstruct and publish in due course as full a history of this beautiful old church - sadly, now badly vandalised - as the historical and archaeological evidence would allow.

As a preliminary, a thorough search and record were made of all historical doculments relating to the church. A full survey was carried out of the church, the graveyard and the grave memorials. Detailed elevation drawings of the late medieval tower were prepared. Two large trial trench excavations were undertaken inside the church with the intention of finding evidence of structural phases predating the complete rebuilding of the sanctuary, chancel and nave in 1871. A complex sequence of deposits representing earlier floor

surfaces was discovered in the chancel area, as was a section of the medieval church foundations which had not been disturbed by the massive new footings put in by the Victorians during the 1871 rebuilding. A number of early modern burials within the chur ch were also excavated.

Post-excavation work has now commenced and will continue through the Winter with a view to publishing Volume 2 of the Group Transactions during the first half of 1995.

Our 1995 operations are now being planned but firm decisions have yet to be made as to where the Group will be working this Summer.

Roderick Mackley

74 Warren Road, Leigh-on-Sea, Essex SS9 3TS

THE FOUR SEASONS RECORDING PROJECT
Danbury Common TL782045

The fourth meeting was held on January 14th 1995.

The birds were recorded by John Bath and Judith Boniface.

Blackbird
Magpie
Jay
Blue tit
Great tit
Long tailed tit
Tree creeper
Redpoll
Greater spotted woodpecker
Green woodpecker
Wren

Winter twigs were identified with a key. The characteristics of the Rowan *Sorbus aucuparia* confused the group, looking suspiciously like a willow, but with more than one bud-scale. The Hornbeam *Carpinus betulus* was also put to the test, but with more success. No new species were found which had not been recorded in the summer.

The day was not one for rapid on the spot identifications. Tony Boniface collected fungi, lichens, mosses, liverworts and galls. The successfully identified specimens are listed below:

Fungi

Exidia thuretiana (a jelly fungus)
Coriolus versicolor (Varicoloured bracket fungus)

Stereum hirsutum (Yellow stereum)
Piptoporus betulinus (Razor strop fungus)
Pseudotrametes gibbosa
Pleurotus cornucopiae (Branched oyster mushroom)

Lichens

Parmelia sulcata

Mosses

Polytrichum juniperinum
Dicranella heteromalla
Dicranum scoparium
Brachythecium albicans
Eurynchium praelongum
Hypnum cupressiforme

Liverworts

Lophocolea heterophylla (a leafy liverwort)

Galls

Neuroterus quercus-baccarum (Common spangle gall)
Andricus kollari (Marble gall)
Aceria genistae (Broom gall)

The last-mentioned gall is not described in the identification guides but was recognised over the phone by Jerry Bowdrey. It is usually found in parks and gardens.

Tony Boniface

GREENSTEAD GREEN CHURCHYARD

The church was built in 1844-45 upon land given by Joseph Nunn Brewster of Halstead Lodge from his estate. The first burial was in 1846. The churchyard contains many large trees, some of which may have been present before the church was built, although this would make them over 150 years old. They are scattered and marginal in position. The trees were identified and counted:

Yew	9
Scots pine	7
Sycamore	11
Lime	18
Oak	8
Holly	17 (mainly marginal)
Horse chestnut	1

Boletus and *Amanita* fungi which were found in the churchyard on September 3rd 1994 are all mycorrhizal and thus depend opon the existence of the trees. They were

Boletus regius	- broad leaved trees
Boletus moravicus	- broad leaved trees
Boletus queletii	- Beech, Oak andLime
Amanita echinocephala	- broad leaved trees

The grid reference is TL822285 and the church lies between the 60 and 70 metre contours. My calculations place it on an outcrop glacial till as shown on the surface geology map in Jermyn's "Flora of Essex". On searching for sub-soil dug up from graves some pebbles of chalk were found. However in the surface soil no chalk pebbles or fragments were noticed. The soil was dark in colour.

The pH was measured at five scattered points using a Rapitest pH meter. A square of turf (3 inches × 3 inches was removed with a trowel and the soil immediately beneath was mixed with rainwater to form a mud. The probe behind the tip was shone with the pad provided, and then inserted into the mud for 60 seconds, and twisted two or three times. It was then removed and wiped clean with a paper towel. As the pH readings were below 7 the probe did not have to be reshone. (Reshone if 7 or higher). It was reinserted in a new position, twisted and read after 60 seconds (thirty seconds if it had been 7 or higher). The following readings were obtained:

6.5 : 6.6 : 6.0 : 6.5 : 6.7

Therefore the top-soil was acid in pH despite the existence of chalk in the sub-soil. This suggests that the boulder clay was leached.

Geoffrey Kibby states that these four rare fungi all prefer alkaline conditions. In order to obtain such conditions the fungal mycelium must extend below the top 4-6 inches, which, if they are to form mycorrhizae with the tree roots they presumably do. These fungi were the only species found on this occasion.

In my current survey of Essex churchyards around Chelmsford preliminary observations suggest a correlation between soil acidity and fungal diversity. I have measured the pH of the soil in the following churchyards in the same manner and related it to the number of species identified from September 1994 to the end of November 1995. Lignicolous species were excluded. The results are shown below:

Great Leighs	7.5	6.8	6.2	6.6	6.3	27 species	14 visits	acid
Broomfield	6.2	7.2	6.6	6.7	6.8	24 species	18 visits	acid
Fryerning	6.6	6.5	6.7	6.5	6.0	24 species	7 visits	acid
Sandon	6.2	6.6	6.5	6.5	6.5	23 species	8 visits	acid
Danbury	6.5	6.0	5.6	5.8	6.5	22 species	8 visits	acid
Terling	7.1	6.7	6.6	6.6	6.7	18 species	9 visits	acid
Little Waltham	6.6	6.5	6.6	5.9	6.6	16 species	9 visits	acid
Little Baddow	6.4	5.8	6.3	5.9	5.7	11 species	6 visits	acid
Margaretting	7.3	6.1	6.1	6.7	6.6	9 species	7 visits	acid
Boreham	6.5	6.0	6.0	6.3	6.0	6 species	5 visits	acid
Fairstead	7.2	6.3	6.4	6.4	6.2	5 species	4 visits	acid
Good Easter	7.5	7.1	7.5	6.5	7.2	4 species	6 visits	alkaline
Pleshey	7.3	6.0	7.0	7.4	7.3	1 species	5 visits	alkaline
High Easter	7.9	7.5	7.5	7.5	7.4	0 species	5 visits	alkaline

So far the results appear significant even without statistical analysis. I have records for forty-three churchyards and pH measurements will be made in the rest in due course. An initial account of the species found from Autumn 1994 to Spring 1995 will be published in the next Essex Naturalist. Further records are being collected.

Tony Boniface

Aeons ago, in the primaeval slime
Lived a lot of amoebae who were just killing time.
No-one was born and nobody died
To multiply amoebas you simply divide.
They were all alike, they spoke with one voice,
NaturalSelection didn't have any choice.
They were all related, they looked just the same,
They thought the same thoughts and they had the same name.
They were all called Henry, for as you can see,
There was nobody new and no evolution
Till the Great White Amoeba found a solution.
He smiled at a Henry from his pearly gate,
And suddenly its genes began to mutate.
Now oozing about on the ocean floor
With a lot of dull Henrys soon becomes a bore,
So Henrietta's advent was welcomed with joy.
At last an amoeba that wasn't a boy!
They gathered round and looked adoring
And all agreed she was not a bit boring.
They gathered round and gazed and sighed,
And Henrietta saw she would have to divide.
Their lives were pointless, without play or laughter,
They were rather shabby and they needed looking after.
She took a quick count and, smiling sweetly,
Lowered her eyes and divided neatly.
Now each Henry had a Henrietta
Things were looking up, life was getting better.
They woudn't part with their newfound wives
Though it meant an end to their once immortal lives
They had birth and change now, death and competition.
Omnia Mutantor was the new condition.
It wasn't quite so peaceful but MUCH more fun
And that's the main thing when all's said and done.

(found in a box of old material at the South London Botanical Institute, author unknown).
Sent in by Ken Hill

HALES WOOD, SAFFRON WALDEN - A National Vegetation Classification Survey

In the summer of 1993, the members of BirkbeckCollege's Ecology and Conservation Studies Society visited Hales Wood, just east of Saffron Walden, both to have a look at the wood, and to practice the use of the new National Vegetation Classification (NVC) survey technique.

The wood is a National Nature Reserve, although there is no right of public access, but this can be arranged by obtaining a permit from the Area Office of English Nature. There is documentary evidence for the existence of this woodland in 1251, and although reduced in size over the centuries, and partly converted to conifer plantation within the last 30 years, one section remains as an example of the ancient coppice woods of Essex, which were a valuable resource before the age of plastic and fossil fuels, supplying wood for fences, tool handles, thatching spars and house building, and wood for burning. It is still managed today, by the British Trust for Conservation Volunteers, who aim to continue the coppice rotation on an eight year cycle, coping with modern problems like the large numbers of Fallow and Muntjac deer which are resident locally, and which have to be kept out of the re-growing coppice by fences, to prevent them from severely damaging both the regrowth of the coppice stools of Hazel and Ash, as well as the attractive ground flora.

The NVC scheme is a system which classifies all British vegetation as a description of the present state of affairs, but also as a practical tool for identifying vegetation types, describing and mapping sites and providing a basis for further study. A set of volumes have been published by Cambridge University Press as British Plant Communities by J. Rodwell, but they are expensive at £70.00 or more each. The books are a comprehensive description of each recognisable vegetation stand; a tract of vegetation which is homogeneous in its composition. The survey method involves taking a number of samples within a stand, and use of NVC keys can match a survey to the NVC type. The system is based on two concepts, frequency and abundance.

Frequency is used to describe how often a species is encountered in samples of the vegetation type, irrespective of how much is present in each sample. Five samples are taken, using quadrat sizes which are standardised for each type of habitat, for example short woodland field layers are sampled with 4m × 4m quadrats. For each species, you decide which of the following frequencies is appropriate:

I	1-20% frequency (i.e. 1 stand in 5)	- scarce
II	21-40%	- occasional
III	41-60%	- frequent
IV	61-80%	
V	81-100%	constant

Abundance is used to describe how much of a species is present in a stand or sample, irrespective of how frequently it is encountered from one sample to another. The survey records percentage cover using a 10 point DOMIN scale:

10	91-100% cover	
9	75-90%	
8	51-74%	
7	34-50%	
6	26-33%	
5	11-25%	
4	4-10%	
3		many individuals
2	less than 4%	several individuals
1		few individuals

Both measures are necessary because many species which are frequent in a community have characteristically low covers, and many infrequent species can have high abundance when they do occur.

The NVC classifies vegetation types by its constant species, and the abundance and frquency of each species is tabulated. Sub-communities of the main type community are identified by the presence of species which are differentials (when confined absolutely to one sub-community) or preferentials (when they are not so strictly confined).

A final list of associate species is shown, which are not constant throughout but which occur at low frequencies showing no particular affiliation to any of the sub-communities.

On the day of the Hales Wood survey, the party was unfortunately not armed with the rather expensive "British Plant Communities - Woodlands" volume or the NVC key, but the survey method was used; selecting a homogeneous stand of vegetation; laying out five quadrats of 4m × 4m; and recording frequency and abundance of all species. A brief summary of the frequencies recorded is quite interesting:

Oxlip	*Primula elatior*	100%
Willowherb	*Epilobium (Chamaenerion) angustifolium*	100%
Violets	*Viola* spp.	80%
Meadowsweet	*Filipendula ulmaria*	100%
Creeping thistle	*Cirsium arvense*	60%
Marsh thistle	*Cirsium palustre*	80%
Wood avens	*Geum urbanum*	60%
Sanicle	*Sanicula europaea*	40%
Celandine	*Ranunculus ficaria*	80%
St. John's wort	*Hypericum* sp.	80%
Enchanters' nightshade	*Circaea lutetiana*	80%
Burdock	*Arctium minus*	80%
Lords and Ladies	*Arum maculatum*	40%
Wood anemone	*Anemone nemorosa*	20%
Barren strawberry	*Potentilla sterilis*	40%

As well as the woodland flora which one might hope to find (especially our treasured oxlip), we found a lot of "weeds" such as willowherb and thistles although *C. palustre* is quite a handsome plant. This is a wet plateau wood, so the Meadowsweet is not a surprise. Could it be the wetness which results in so little Wood anemone? and no-one recorded Bluebells!

Although this is not a full NVC survey, I know that this wood is classified in the NVC as woodland type W8 - Fraxinus excelsior - Acer campestre - Mercurialis perennis woodland. If you can find a copy of the British Plant Communities - Woodland volume, there is a good description of this type.

Finally, although access to Hales Wood is limited, the nearby Essex Wildlife Trust owned Shadwell Wood is freely accessible, and a similarly interesting Ancient Coppice Wood. A springtime visit is recommended.

References:

British Plant Communities - John Rodwell, Cambridge University Press. (separate volumes on woodlands, grasslands, wetlands, etc.).
Ecology and Conservation Studies Vol. 14, No. 3 - Hales Wood Survey, Tony Morton. (The Bulletin of the Ecology and Conservation Studies Society).

Tony Morton.

A VERY RARE TACHINID AT MILL WOOD PIT, THURROCK

In recent weeks two female specimens of the very rare Tachinid fly *Gymnosoma nitens* Meigen, have been sent to me for identification. They were both captured at Mill House wood pit near Grays in South Essex., TQ 5978. The first was taken by Peter Harvey on the 1/8/94 and the second by Colin Plant two days later on the 3/8/94. They were both captured on open chalky ground with scattered Birch scrub. The "Harvey" specimen being swept on a sparsley vegetated west facing bank. These two records are only the second and third for Britain the first being recorded near Boxhill in Surrey on 8/7/56.

The fly which is only about 4mm long is parasitic on the shield bug *Sciocoris cursitans* (Fabricius) which occurs in dry warm localities usually on chalk or sand in southern England. *Sciocoris* has been recorded from Purfleet as well as Boxhill.

These two records appear to indicate that the fly is established in the area and further work will be undertaken this year to confirm if that is the case. Sadly the whole of this site is under threat of development and outline planning permission has already been given for housing development. Chalk habitats in southern Essex are extremely limited and it would be tragic if a site such as this were to be lost without a thorough environmental appraisal.

My thanks go to Peter Harvey and Colin Plant for permission to publish this note and to Roger Payne for bringing to my attention the Purfleet record of *Sciocorus*.

References.

Belshaw, R. (1993). Diptera. Tachinidae, Handbk. Ident. Br. Insects.
Southwood & Leston. (1959). Land and Water Bugs of the British Isles. Warne, London.
Groves, E.W. (1938). Hemiptera-Heteroptera of the London Area, Lond. Nat. **43**, p51.

Del Smith

THE IMPORTANCE OF THE EAST THAMES CORRIDOR

The flora and fauna of the whole Thames Valley east of London (the East Thames Corridor, now renamed the Thames Gateway to encourage major development in the area) appears to contain continental and mediterranean elements unique to this part of Britain. The area has the lowest rainfall and is one of the warmest parts of country, warmer for example than Kent, further south. The average winter temperatures are however several degrees colder than those of south-western England, resulting in a greater range of temperature and a more continental climate than the rest of Britain.

The Essex side of the Thames may be the most important, certainly for thermophilous species, because of the presence of south facing escarpments. Between Purfleet and Grays the Upper Chalk and Thanet Sand outcrops. Just east of Grays there are further south and west facing escarpments of Thames Terrace gravels at Chadwell and West Tilbury. South-facing escarpments continue to stretch towards Southend-on-Sea where there are the London Clay and gravel escarpments of the Benfleet and Hadleigh Downs.

The Purfleet - Grays area has a long history of chalk extraction. In the past chalk was quarried for use in strengthening river-walls, building and soil improvement. Old leases dated 1574 and 1594 are known for chalk pits at Purfleet. I believe much of our present-day fauna in this region is likely to be a (now much impoverished) survival from this past.

In more recent times quarrying has been much more extensive, the cement industry for example using the chalk in large quantities. Quarrying ceased over ten years ago and there are numerous abandoned chalk and sand exposures of different ages between Purfleet and Grays. All this land has been viewed as "derelict" land, an eyesore and a blight on Thurrock. Most has been developed for industrial or retail use and for housing, and apart from three quarries (Grays Chalk Pit SSSI and the Warren Gorge and Lion Gorge proposed Local Nature Reserves) what is left is in imminent danger of destruction for ever. Unfortunately these three quarries do not contain the same important elements of habitat that are found in the threatened Mill Wood Pit site described in Newsletter No. 11: here old habitats such as Mill Wood itself and some calcareous grassland are adjacent to the more recent disturbed habitats produced by chalk quarrying and sand extraction. Together with south facing slopes this combination has produced a variety of flower-rich habitats, sparsely vegetated ground, sand faces and warm sheltered habitats that provide many invertebrates especially hymenoptera with good foraging and nesting sites and also allowed a history of movement between populations.

It is essential that these already fragmented south Essex sites are thoroughly surveyed quickly and measures taken them before it is too late to avoid the loss of this special fauna.

Peter Harvey

CONTRIBUTIONS TO THE NEXT NEWSLETTER

Please send contributions for the next Newsletter, due out at in April, to the Editor, Mr Peter Harvey, 9 Kent Road, Grays, RM17 6DE first week of April.

INTERESTING RECORDS FROM EASTBROOKEND, DAGENHAM CHASE

Eastbrookend is an area of Green Belt land in the "Dagenham Corridor" with the River Rom running down the eastern edge. The most important area for wildlife has been managed as a nature reserve (The Chase Nature Reserve) by the London Wildlife Trust since 1988. Old workings of the River Terrace Gravels have helpedproduce a number of lakes with marshy edges, low lying wet grassland as well as areas of dry grassland and bare exposures. The gravel substrate together with grazing by horses maintains a short sward but there are also areas of hawthorn, blackthorn and sallow scrub. In the eastern and southern parts of the site the presence of plants such as Spiny rest-harrow *Ononis spinosa* provide evidence of an unimproved flora, presumably surviving from before the gravel working.

Although I had previously investigated the site for spiders, in 1994 I specifically visited the area in search of hymenoptera. As expected the area proved of interest and a total of sixtyone hymenoptera were recorded. This included nine Nationally Scarce species and a single female of the RDB2 *Philanthus triangulum* the "Bee wolf", which was found hunting along the riverside vegetation of the River Rom. This species has apparently undergone a considerable expansion in range in the last two or three years, and in 1994 it has continued to turn up in new sites in southern England.

Of particular interest earlier in the season was *Andrena tibialis*, a bee otherwise recorded in South Essex from Linford Wood and Linford Sand Pit. This species gathers pollen from a variety of flowers but Sallows are frequently referred to in British records.

In August a male *Colletes halophilus* was taken at Fleabane flowers . This Nationally Scarce bee is usually found on the upper margins of saltmarshes and is widely distributed along the coast of Essex. The females normally collect pollen from Sea aster *Aster tripolium*, but I would think the nearest Sea aster to Eastbrookend must be some distance and it would be interesting to know if there is an established population of the bee in the vicinity. The closely related *Colletes succinctus* has been taken at Barking and this is an even stranger find, since the females of this species are known to have an obligate association with heather flowers.

Two cuckoo bees of special interest were found, *Sphecodes ruficrus* and *S. reticulatus*. Both are Nationally Scarce with only 20 to 25 known post-1970 sites. *S. ruficrus* is a cleptoparasite on the bee *Andrena labialis* and is only otherwise known in Essex from Mill Wood Pit in Thurrock. *S. reticulatus*, which was found during August in some numbers on Fleabane and thistle flowers, is only otherwise known from Mill Wood Pit, Broom Hill and Ferry Fields, all in Thurrock.

The area would undoubtably continue to repay further survey work on all groups. It is another example of the increasing evidence that South Essex contains an invertebrate wealth that will soon be lost without drastic action and the co-ordination of wildlife groups.

Chrysididae (Ruby-tailed wasps)
Omalus auratus

Pompilidae (Spider hunting wasps)
Priocnemis exaltata
Arachnospila anceps

Vespidae (Social wasps)
Vespula germanica

Sphecidae (Solitary wasps)
Trypoxylon attenuatum
Crossocerus nigritus
Crossocerus pusillus
Ectemnius continuus
Ectemnius rubicola
Lindenius albilabris
Rhopalum coarctatum
Na *Psen unicolor*
Psenulus pallipes
Pemphredon inornatus
Diodontus minutus
Passaloecus singularis
Nb *Gorytes bicinctus*
Cerceris rybyensis
RDB2 *Philanthus triangulum*

bees
Colletidae
Na *Colletes halophilus*
Colletes similis
Hylaeus annularis
Hylaeus communis
Nb *Hylaeus signatus*

Andrenidae
Andrena bicolor
Andrena clarkella
Andrena dorsata
Andrena flavipes
Andrena fulva
Andrena haemorrhoa
Andrena labialis
Andrena minutula
Andrena nigroaenea
Andrena pubescens
Andrena scotica
Andrena synadelpha
Na *Andrena tibialis*

Halictidae
Halictus rubicundus
Halictus tumulorum
Lasioglossum albipes
Lasioglossum calceatum
Lasioglossum leucopum
Lasioglossum leucozonium
Nb *Lasioglossum malachurus*
Lasioglossum morio
Lasioglossum villosulum
Sphecodes monilicornis
Sphecodes puncticeps
Na *Sphecodes reticulatus*
Na *Sphecodes ruficrus*

Melittidae
Melitta leporina

Megachilidae
Anthidium manicatum
Megachile ligniseca
Megachile versicolor

Anthophoridae
Nomada flavoguttata
Na *Nomada fucata*
Epeolus variegatus
Anthophora furcata

Apidae
Bombus lapidarius
Bombus pascuorum
Apis mellifera

Diptera parasitic on hymenoptera
Conopidae (Thick-headed flies)
Conops ceriaeformis
Physocephala rufipes
Thecophora atra

Peter Harvey

WHATS ON: ESSEX FIELD CLUB

MARCH

Sunday 5th	**Bird Group.** Wrabness for waders and woodland birds. Meet Railway Station car park TM 181316 at 10.30 am. Leader John Bath. Phone 01277 651890 for details.
Saturday 18th	**Annual General Meeting 115**. Red Cross Hall, London Road, Chelmsford (car park entrance in Writtle Road) at 3.00 pm followed by presidential address "Changes in the flora of Essex 1974-1994 for better or worse?"

APRIL

Sunday 9th	**Botany Group**. Black poplar and Toothwort survey. Meet Greenstead Green Church TL 822285, 11.00 am. Leader Ken Adams. Phone 0181-5087863 for details.
Saturday 15th	**Joint Meeting with Colchester N.H.S.** Garlic pennycress hunt along the Chelmer. Meet 10.00 am, car park by Langford Cut TL 839085.
Saturday 22nd	**Joint Meeting with Essex Rock and Mineral Society**. Fossil. rocks and minerals in Roxwell Gravel Quarry. Meet Roxwell Road entrance at 8.15 am, TL 653086. Leader Gerald Lucy. Phone David Turner 01245 267450 for details.
Wed. 26th	**General Meeting 1394**. Belhus Woods Country Park for migrant birds. Meet 10.00 am at car park TQ 565825. Leaders Judith and Tony Boniface. Phone 01245 266316 for details.

MAY

Saturday 6th	**Botany Group**. Spring fungi in Danbury area. Meet 10.30 am at entrance to Scrubs Wood TL 787057 or meet 2.00 pm at Danbury Church TL 729051. Leader Martin Gregory. Phone 01245 223300 for details.
Sunday 7th	**Pond Dipping and Amphibians**. Meet Thaxted Guidhall 10.00 am. Leader David Scott. Phone 01245 361475 for details.
Friday 12th	**Bird Group**. Danbury Common for Nightingales. Meet 7.00 pm at car park, TL 782045. Leader John Bath. Phone 01277 651890 for details.
Saturday 13th	**General Meeting 1395**. Ponds of the Forest Walk. Meet Loughton Station 10.30 am. All day. Leader Irene Buchan. Phone 0181-5296423 for details.
Sunday 14th	**Recording on Galleywood Common**. Pond dipping/Botany/Birds/ Invertebrates. Meet Central Car Park off Margaretting Road at 10.00 am TL 702026. All recorders welcome. Details from Tony Boniface 01245 266316.
Saturday 20th	**Botany Group**. Woodland plants in Broaks Wood. Meet car park at 10.30 am, TL790313. Leader Jeremy Ison. Phone 01376 345235 for details.