

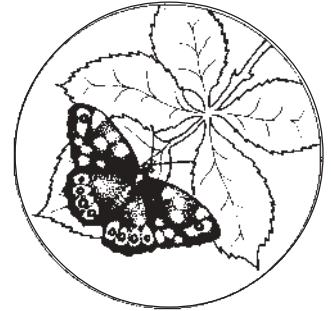
THE ESSEX FIELD CLUB

HEADQUARTERS:

THE PASSMORE EDWARDS MUSEUM,

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NEWSLETTER NO. 11

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EDITOR'S NOTE

There are two articles in this Newsletter about sites under threat. It is clear that if sites such as these are to be saved a lot of information about their wildlife value is needed, and this is where the difficulties begin. Very few sites in any county have had comprehensive wildlife surveys or even detailed studies of a few groups of animal. The Field Club has people with the necessary expertise to carry out such surveys, but of course they are time consuming and there is a limit to how much can be done. Most of our coastal saltmarsh and remaining grazing marsh grasslands are recognised by their status as Sites of Special Scientific Interest. The wealth of ancient woodland (although much fragmented) is identified by the Ancient Woodland Inventory. However most old grasslands in the county have been lost to the plough and there is increasing pressure on what remains for various road, retail and housing developments. I believe we should be trying to retain all those that remain. We should urgently try to identify the most valuable grassland sites that remain in the county. In many cases this might be a small flower-rich field left to be grazed by horses tucked away in some corner of a farm, or an old field that is now mostly scrub and in urgent need of management.

Although the Essex Wildlife Trust has surveyed the county in its identification of Sites of Importance for Nature Conservation (SINC sites), this has seemingly relied very much on items like the Ancient Woodland Inventory and by necessity a somewhat perfunctory survey of other habitats such as grasslands. Use was not made of the detailed county records that the Field Club Recorders have available and liaison with local wildlife groups seems to have come in at the end of the process rather than the beginning. Nevertheless the identification of SINC sites is an extremely important achievement and possibly a cornerstone in the forward planning that may help to save our wildlife sites. However looking at the map for the Thurrock Draft Plan I was concerned at how poorly represented grasslands are in the borough compared to comprehensive identification of virtually every single piece of ancient wood, copse and shaw either as a SINC site or an Area of Local Nature Conservation Significance.

In my view Orsett Golf Course and the Thames Terrace Gravel grasslands at West Tilbury represent two of the most important grassland sites in Essex but I doubt whether either would have been included as SINC sites without the evidence and wealth of rarities that Roger Payne and myself have recorded in the last 2-3 years. In comparison many of the small woods included as SINC sites can have few hard facts to support identification other than their ancient woodland status. Surely all old grasslands need inclusion on the same basis before we lose them completely.

Peter Harvey

A REPORT ON MILL WOOD (GIBBS) PIT (THURROCK)
AND SOME REMARKABLE NEW RECORDS.

The area is part of the very large Chafford Hundred development which stretches from Grays westwards to the famous "Lakeside" by the M25. At the present time I have recorded the astonishing total of 40 Nationally Vulnerable, Rare and Scarce invertebrates, mainly hymenoptera, here since last September. Mill Wood is a small remnant of ancient wood with a public footpath running along its southern edge. Immediately to the south of the wood is Gibbs Quarry, an old chalk pit. To the west and south of the wood is an area of sandy ground with various degrees of chalky influence resulting in a variety of flower-rich situations good for hymenoptera. The chalk comes to the surface towards the western edge of the site by the Ockendon-Grays railway line. To the south-east of the wood and east of Mill Lane is an area of south-facing flower-rich grassland and scrub grazed by horses. The northern and eastern edges seem likely to represent unimproved remnants of the former grasslands which must have existed in the area before they were destroyed by the extensive quarrying that stretches all the way from Purfleet through to Grays. These old quarries have themselves become excellent wildlife habitats, but many have already been developed for industrial, retail or housing purposes. Apart from the wood itself, all the Mill Wood area is ear-marked for Chafford Hundred housing development and even the interest in Mill Wood would be destroyed by proposed new link roads. There is some hope that these roads can be rerouted and that some of the most important parts of the site can be kept as open green space.

The most important areas for wildlife seem to be Mill Wood itself, sand exposures to the west and south of the Wood, grassland and scrub west of Gibbs Quarry with the grassland on the southern slopes, the open chalky area alongside the railway line at the south-west of the site where I recently found a colony of the Grayling butterfly and the grassland and scrub east and south of Mill Lane.

Mill Wood is a small remnant of ancient woodland, with indicator plants such as Stinking Iris *Iris foetidissima*, Wood Spurge *Euphorbia amygdaloides*, Sanicle *Sanicula europaea* and Pignut, *Conopodium majus*. With the exception of the Stinking Iris these occur along the southern edge of the wood and would be destroyed by the proposed building of a new road in the place of an existing public footpath.

The southern edge of the wood is also very good for invertebrate wildlife because of the plants that provide pollen and nectar sources and its south facing aspect. The footpath and its edges is itself an important area for the nesting of solitary bees and wasps. I have recorded the nationally rare and scarce bees *Andrena proxima* (Rare- RDB3) only the second known locality in Essex, *Andrena florea* (Rare- RDB3) an obligate collector of pollen from White Bryony which occurs by the side of the footpath at the western end of the wood, *Andrena trimmerana* (Scarce- Notable B), *Nomada fulvicornis* (Rare- RDB3) and *Nomada pleurosticta* (Scarce- Notable A). These bees were almost certainly foraging here but nesting in sandy exposures to the west and south of the wood (in area H2(c)): I have found the *Andrena florea* nesting in an exposure by the side of a path some distance to the southwest of the wood with no other White Bryony apparently available as a pollen source. *Nomada fulvicornis* is a cleptoparasite of the bee *Andrena pilipes* (Notable B) and *Nomada pleurosticta* is a cleptoparasite of the bee *Andrena labialis*. I have found the *Andrena pilipes* nesting in a sand exposure towards the southern end of the area and *Andrena labialis* forages and probably nests on the southern slopes .

The nationally scarce spiders *Philodromus albidus* (Notable B), *Philodromus praedatus* (Notable B) and *Zilla diodia* (Notable B) are present along the southern edge of the wood on oak and scrub. In addition the fly *Myopa buccata*, a parasite of certain bees, was

present in some numbers along the south edge of the wood together with the Nationally Scarce hoverflies *Triglyphus primus* (Notable B) and *Pipizella virens* (Notable B).

Two of the most remarkable records have been of two species of fly from the edge of the wood. On the 22nd June 1994 I found a male of the Nationally Vulnerable fly soldier fly *Stratiomys longicornis* (RDB2) along the footpath at the south edge of the wood. This species is supposed to be associated with coastal saltmarshes and highly brackish pools and ditches on coastal levels, especially the Thames marshes. It is difficult to decide where this individual came from, the nearest extensive grazing marshes being at Purfleet and Rainham to the west and Fobbing to the east. There are the nearer remnants of grazing marsh and saltmarsh at West Thurrock and Stone Ness, and the grazing marsh that still exists at Little Thurrock and the Ferry Fields at Tilbury.

On the 16th July I took a female of the Nationally Rare (RDB3) robber fly *Eutolmus rufibarbis* again by the footpath on the southern edge of the wood. This fly has its strongholds in the Breckland and some of the southern heathlands. It is thought to require large blocks of heathland, but there is certainly none in the vicinity or even the county! This appears to be a new county record and a most remarkable occurrence.

The edges and clearings of woods are essential to their wildlife interest. The small surviving part of Mill wood has no clearings inside and the northern edge is of little interest because the land has been banked up with a soil mound and is not south facing. The proposed construction of a road to replace the existing footpath would totally destroy the wildlife interest of this wood.

Immediately to the south of the western edge of the wood is a small area of gently sloping sandy ground where the Nationally Scarce (Notable B) bee *Dasygaster altercator* is nesting. The females are most impressive with their enormous pollen brushes. The most notable bees and wasps recorded elsewhere to the west and south of Mill Wood are the chrysid wasp *Hedychrum niemalei* (Rare- RDB3) and its host *Cerceris quinquefasciata* (Rare- RDB3), the Bee Wolf *Philanthus triangulum* (Vulnerable- RDB2), *Smicromyrme rufipes* (Notable B), *Hylaeus cornutus* (Notable A), *Andrena bimaculata* (Notable B), *Andrena florea* (Rare- RDB3), *Andrena pilipes* (Notable B), *Andrena trimmerana* (Notable B), *Lasioglossum malachurum* (Notable B), *Lasioglossum xanthopum* (Notable B), *Melitta tricincta* (Notable B) and its cleptoparasite *Nomada flavopicta* (Notable B), *Nomada fucata* (Notable A), *Stelis ornatula* (RDB3) and the Blue Carpenter bee *Ceratina cyanea* (Rare- RDB3). The Blue Carpenter bee also occurs elsewhere to the south and west of the area. This is the only known Essex locality for this bee which has not previously been recorded in the county for about a century. It occurs in some numbers, sometimes in hundreds, foraging on yellow composite, bramble and rose flowers. This is apparently extremely unusual, the bee normally being found in very small numbers at a site, indicating the presence of a large population. *Stelis ornatula* is a cleptoparasite of the small megachilid bee *Hoplitis claviventris* which seems to present in small numbers towards the southern end of the site. All *Stelis* are rare and this species does not appear to have been recorded in the county since early this century. The spider *Zodarion italicum* known in Britain only from South Essex and Kent occurs in some numbers in the area.

The southern slopes are covered with a flower-rich grassland where the Nationally Rare and Scarce bees *Ceratina cyanea* (Rare- RDB3), *Andrena fulvago* (Notable A), *Andrena humilis* (Notable B), *Lasioglossum malachurum* (Notable B), *Lasioglossum xanthopum* (Notable B), *Melitta tricincta* (Notable B), *Nomada flavopicta* (Notable B), *Nomada fulvicornis* (Rare- RDB3), *Nomada pleurosticta* (Notable A), *Sphecodes crassus* (Notable B), *Sphecodes reticulatus* (Notable A) and *Sphecodes rubicundus* (= *ruficrus*) (Notable A) all occur. I have not attempted to record the flora of the site comprehensively, but I have

seen Man Orchid *Aceras anthropophorum* on these southern slopes and Pyramidal Orchid *Anacamptis pyramidalis* occurs here and elsewhere on the site.

The railway line defines the western edge of the area. At the southern end the chalk has been colonised by birch but there are open clearings with very little vegetation where I recently found a colony of Grayling butterflies. Walking through this area on the 31st July I disturbed at least 9 specimens. Although single strays have been sighted in the Thurrock area before this is the first confirmation of a colony of this butterfly in South Essex. Grayling is very rare in the county with only small numbers surviving in the Colchester district. This new population is clearly important and attempts to preserve it should be made. A second notable find I made in this area on the same day is the Six-belted Clearwing.

East of Mill Lane there is an area of grassland with some scrub, mostly grazed by horses. The north and eastern parts of this area appear to be remnants of former grasslands that have survived the various quarrying activities. As such they are unique examples of such surviving calcicole grassland in South Essex. They have a good flora and an important invertebrate fauna, including the Nationally Rare (RDB3) fly *Zodion notatum* apparently with only four post 1960 sites in Britain and *Myopa buccata*, rare in Essex, both parasitic on certain bees. There is also the Nationally Scarce wasp *Odynerus melanocephalus* (Notable A), and the Nationally Rare and Scarce bees *Andrena proxima* (Rare- RDB3), *Andrena fulvago* (Notable A), *Andrena humilis* (Notable B), *Lasioglossum malachurum* (Notable B), *Lasioglossum xanthopum* (Notable B), *Nomada fucata* (Notable B), *Nomada pleurosticta* (Notable A), and the Nationally Scarce spider *Bianor aurocinctus* (Notable A).

The areas described here are clearly of county importance for invertebrates. It is now too late to hope for more than the retention of some parts of the site but whether what remains will be comparable is doubtful. Research (and common sense) dictate that the fauna will severely suffer from fragmentation. All too often a similar scenario takes place elsewhere in the country where the value of sites may be recognised by local naturalists but the actual evidence that might help support these sites is only identified by survey work done after threats appear, when the time span to identify most of the wildlife value is too brief. Now that Local Plans incorporate SINC sites, Local Nature Reserves and Areas of Local Nature Conservation Significance, the importance of having detailed information *before* planning applications for development are made is essential and here the Field Club has an important contribution to make today.

It seems worthwhile to include a full list of my records to date for the Mill Wood Pit area:

Chrysid wasps	Na	<i>Andrena fulvago</i>		<i>Nomada rufipes</i>
		<i>Andrena haemorrhoa</i>		<i>Nomada striata</i>
<i>Chrysis cyanea</i>		<i>Andrena helvola</i>		<i>Osmia caerulescens</i>
<i>Chrysis rutiliventris</i>	Nb	<i>Andrena humilis</i>		<i>Osmia rufa</i>
<i>Chrysis viridula</i>		<i>Andrena labialis</i>		<i>Osmia ventralis</i>
<i>Hedychridium ardens</i>		<i>Andrena minutula</i>		<i>Panurgus calcaratus</i>
RDB3 <i>Hedychrum niemelai</i>		<i>Andrena nigroaenea</i>	Nb	<i>Sphecodes crassus</i>
<i>Omalus auratus</i>		<i>Andrena ovatula</i>		<i>Sphecodes ephippius</i>
Wasps	Nb	<i>Andrena pilipes</i>		<i>Sphecodes geoffrellus</i>
		<i>Andrena praecox</i>		<i>Sphecodes gibbus</i>
	RDB3	<i>Andrena proxima</i>		<i>Sphecodes monilicornis</i>
Superfamily Scoliioidea		<i>Andrena pubescens</i>		<i>Sphecodes pellucidus</i>
		<i>Andrena scotica</i>		<i>Sphecodes puncticeps</i>
<i>Myrmosa atra</i>		<i>Andrena subopaca</i>	Na	<i>Sphecodes reticulatus</i>
<i>Sapyga quinquepunctata</i>		<i>Andrena synadelpha</i>	Na	<i>Sphecodes ruficrus</i>
Nb <i>Smicromyrme rufipes</i>		<i>Andrena thoracica</i>		(= <i>rubicundus</i>)
<i>Tiphia femorata</i>	Nb	<i>Andrena trimmerana</i>	RDB3	<i>Stelis ornatula</i>
		<i>Andrena wilkella</i>		
Superfamily Vespoidea		<i>Anthophora plumipes</i>		
		<i>Bombus humilis</i>		Spiders
Nb <i>Microdynerus eximia</i>	RDB3	<i>Ceratina cyanea</i>		
Na <i>Odynerus melanocephalus</i>		<i>Chelostoma florissomne</i>		<i>Dictyna arundinacea</i>
<i>Odynerus spinipes</i>		<i>Coelioxys rufescens</i>		<i>Dictyna latens</i>
<i>Dolichovespula sylvestris</i>		<i>Colletes daviesanus</i>		<i>Dictyna uncinata</i>
<i>Vespula vulgaris</i>	Nb	<i>Dasypoda altercator</i>	Na	<i>Nigma walckenaeri</i>
Superfamily Sphecoidea		<i>Halictus tumulorum</i>		<i>Dysdera crocata</i>
		<i>Hoplitis claviventris</i>		<i>Haplodrassus signifer</i>
<i>Ammophila sabulosa</i>		<i>Hoplitis spinulosa</i>		<i>Drassodes lapidosus</i>
<i>Argogorytes mystaceus</i>		<i>Hylaeus annularis</i>		<i>Zelotes apricorum</i>
<i>Cerceris arenaria</i>		<i>Hylaeus brevicornis</i>		<i>Zelotes latreillei</i>
<i>Cerceris rybyensis</i>	Na	<i>Hylaeus communis</i>		<i>Micaria pulicaria</i>
RDB3 <i>Cerceris quinquefasciata</i>		<i>Hylaeus cornutus</i>		<i>Zodarion italicum</i>
<i>Crossocerus megacephalus</i>		<i>Hylaeus hyalinatus</i>		<i>Clubiona comta</i>
<i>Crossocerus ovalis</i>		<i>Lasioglossum albipes</i>		<i>Clubiona reclusa</i>
<i>Crossocerus pusillus</i>		<i>Lasioglossum calceatus</i>		<i>Cheiracanthium erraticum</i>
<i>Crossocerus quadrimaculatus</i>		<i>Lasioglossum fulvicornis</i>		<i>Phrurolithus festivus</i>
<i>Diodontus minutus</i>		<i>Lasioglossum lativentre</i>		<i>Zora spinimana</i>
<i>Ectemnius continuus</i>		<i>Lasioglossum leucopum</i>		<i>Misumena vatia</i>
<i>Ectemnius lituratus</i>	Nb	<i>Lasioglossum leucozonium</i>		<i>Xysticus cristatus</i>
<i>Entomognathus brevis</i>		<i>Lasioglossum malachurum</i>	Nb	<i>Ozyptila sanctuaria</i>
<i>Lindenius albilabris</i>		<i>Lasioglossum minutissimum</i>		<i>Philodromus albidus</i>
<i>Mellinus arvensis</i>		<i>Lasioglossum morio</i>		<i>Philodromus cespitum</i>
Nb <i>Nysson trimaculatus</i>		<i>Lasioglossum parvulum</i>	Nb	<i>Philodromus praedatus</i>
<i>Oxybelus uniglumis</i>		<i>Lasioglossum smeathmanellum</i>		<i>Tibellus oblongus</i>
<i>Passaloecus corniger</i>	Nb	<i>Lasioglossum villosulum</i>		<i>Salticus scenicus</i>
<i>Passaloecus gracilis</i>		<i>Lasioglossum xanthopum</i>		<i>Heliophanus cupreus</i>
RBD2 <i>Philanthus triangulum</i>		<i>Megachile centuncularis</i>		<i>Heliophanus flavipes</i>
Na <i>Psen bruxellensis</i>		<i>Megachile maritima</i>		<i>Ballus depressus</i>
<i>Psen dahlbomi</i>		<i>Megachile versicolor</i>	Na	<i>Bianor aurocinctus</i>
<i>Psen lutarius</i>		<i>Megachile willughbiella</i>		<i>Euophrys frontalis</i>
<i>Rhopalum coarctatum</i>	Nb	<i>Melitta leporina</i>		<i>Pardosa hortensis</i>
<i>Tachysphex pompiliformis</i>		<i>Melitta tricineta</i>		<i>Pardosa lugubris</i>
<i>Trypoxylon clavicerum</i>		<i>Nomada fabriciana</i>		<i>Pardosa nigriceps</i>
		<i>Nomada flava</i>		<i>Pardosa pullata</i>
Bees	Nb	<i>Nomada flavoguttata</i>		<i>Alopecosa pulverulenta</i>
	Nb	<i>Nomada flavopicta</i>		<i>Trochosa terricola</i>
		<i>Nomada fucata</i>		<i>Enoplognatha latimana</i>
<i>Andrena bicolor</i>	RDB3	<i>Nomada fulvicornis</i>		<i>Enoplognatha thoracica</i>
Nb <i>Andrena bimaculata</i>		<i>Nomada goodeniana</i>		<i>Crustulina guttata</i>
<i>Andrena chrysoseles</i>		<i>Nomada marshamella</i>		<i>Anelosimus vittatus</i>
<i>Andrena dorsata</i>		<i>Nomada panzeri</i>		<i>Theridion bimaculatum</i>
<i>Andrena flavipes</i>	Na	<i>Nomada pleurosticta</i>		<i>Theridion pallens</i>
RDB3 <i>Andrena florea</i>		<i>Nomada ruficornis</i>		<i>Theridion sisyphium</i>

	<i>Theridion tinctum</i>	Asilid flies	<i>Eristalis tenax</i>
	<i>Theridion varians</i>		<i>Ferninandea cuprea</i>
	<i>Enoplognatha thoracica</i>	<i>Dioctria atricapillus</i>	<i>Helophilus pendulus</i>
	<i>Enoplognatha ovata</i>	<i>Dioctria hyalipennis</i>	<i>Heringia heringi</i>
	<i>Enoplognatha latimana</i>	<i>Dioctria rufipes</i>	<i>Meliscaeva auricollis</i>
	<i>Metellina mendei</i>	<i>Dysmachus trigonus</i>	<i>Parhelophilus versicolor</i>
	<i>Tetragnatha obtusa</i>	RDB3 <i>Eutolmus rufibarbis</i>	<i>Pipiza bimaculata</i>
	<i>Agalenatea redii</i>	<i>Leptogaster cylindrica</i>	<i>Pipizella varipes</i>
	<i>Araniella opistographa</i>	<i>Machimus atricapillus</i>	N <i>Pipizella virens</i>
Nb	<i>Zilla diodia</i>		<i>Syrphus balteatus</i>
	<i>Walckenaeria antica</i>	Stratiomyid flies	N <i>Triglyphus primus</i>
	<i>Walckenaeria unicornis</i>		<i>Volucella bombylans</i>
	<i>Pocadicnemis juncea</i>	<i>Chloromyia formosa</i>	N <i>Volucella inanis</i>
	<i>Neriere clathrata</i>	RDB2 <i>Stratiomys longicornis</i>	<i>Volucella pellucens</i>
	<i>Neriere peltata</i>		<i>Xanthogramma citrofasciatum</i>
		Tabanid flies	<i>Xanthogramma pedissequum</i>
	Diptera	<i>Chrysops relictus</i>	Lepidoptera
	Bombyliid flies	Syrphid flies	Green Hairstreak
	<i>Bombylius major</i>	<i>Chalcosyrphus nemorum</i>	Common Blue
		<i>Cheilosia species D</i>	Gatekeeper
	Conopid flies	<i>Cheilosia honesta</i>	Grayling
	<i>Conops ceriaeformis</i>	<i>Cheilosia vernalis</i>	Meadow Brown
	<i>Myopa buccata</i>	<i>Cheilosia bergenstammi</i>	Ringlet
	<i>Physocephala rufipes</i>	<i>Chrysotoxum bicinctum</i>	Speckled Wood
	<i>Sicus ferrugineus</i>	<i>Chrysotoxum cautum</i>	Comma
RDB3	<i>Zodion notatum</i>	<i>Chrysotoxum festivum</i>	Small tortoiseshell
		<i>Chrysotoxum verralli</i>	Painted Lady
	Empid flies	<i>Dasysyrphus albostrigatus</i>	Large Skipper
	<i>Lissempis nigratarsis</i>	<i>Epistrophe eligans</i>	Small Skipper
		<i>Eristalis arbustorum</i>	Six-spot Burnet
		<i>Eristalis intricarius</i>	<i>Zygaena filipendulae</i>
			Six-belted Clearwing
			<i>Bembecia scopigera</i>

Peter Harvey

TWO INTERESTING WASP RECORDS IN ONE GO!

On the 19th of June I was walking by the side of Childerditch Pond at Thorndon Park North when I noticed (and collected) a large wasp scraping wood fibres from the fence paling at one end of the pond. Continuing along the path I then noticed a second even larger wasp (*Dolichovespula media*) nearly the size of a hornet worker scraping wood from a fence paling at the opposite end of the fence! Using an old key I initially identified the first wasp as *Dolichovespula norvegica*, a rare wasp with only one recent record in the county. However using the new key published by George Else recently in British Wildlife it became clear that it is in fact *Dolichovespula saxonica* and new to the county (although this needs confirmation). Both *D. media* and *D. saxonica* were first recorded in Britain relatively recently (1980 and 1987 respectively) and are thought to have been introduced into Britain. Both have been steadily spreading, *D. media* extending from east Kent to north-west Devon and northwards to Lincolnshire and *D. saxonica* being recorded from Norfolk, Greater London, Surrey, West and East Sussex and Hampshire (Identification, Social Wasps by George Else in British Wildlife June 1994).

Peter Harvey

GENERAL MEETING 1386, 12TH JUNE 1994

A pleasant day was spent recording the flora and fauna of the Old Water Works Site at Sandford Mill near Chelmsford on Sunday 12th June 1994. The recorders were Tim Pyner (Higher Plants and Bryophytes), John Bath (Birds), Alistair Wardle (Fish), Martin Gregory (Fungi and Insects) and Tony Boniface (Higher Plants).

The weather was hot and sunny. The site provided good areas for observing fish from above, waterside habitats, grassland and some dried-up, overgrown lagoons, which were relics of the former use of the site. A wide range of species was observed. The rarest flowering plant was the Birdsfoot Fenugreek (*Trifolium ornithopodioides*) in the small field separated from the main site. One hundred and fiftysix species of higher plants, eleven species of mosses, one species of liverwort, twentyeight species of birds, ten species of fish, four species of insect and six species of fungi were recorded. Three of the insects were gall forming species and five of the fungi were rusts.

Tony Boniface

Fish species observed in the River Chelmer (TL739060)	Great tit	<i>Melampsora epitea</i> (rust on <i>Salix sepulcralis</i>)
	Heron	<i>Phragmidium violaceum</i> (rust on <i>Rubus fruticosus</i>)
<i>Anguilla anguilla</i> (Eel)	House sparrow	<i>Puccinia punctiformis</i> (rust which smells of honey found on <i>Cirsium arvense</i>)
<i>Abramis brama</i> (Common Bream)	Jay	<i>Marasmius oreades</i> (Rairy ring mushroom)
<i>Gobio gobio</i> (Gudgeon)	Kestrel	Bryophytes (Mosses)
<i>Leuciscus cephalus</i> (Chub)	Magpie	
<i>Leuciscus leuciscus</i> (Dace)	Mallard	<i>Bryum argenteum</i>
<i>Phoxinus phoxinus</i> (Minnow)	Pied wagtail	<i>Brachythecium rutabulum</i>
<i>Rutilus rutilus</i> (Roach)	Sedge warbler	<i>Dicranella varia</i> *
<i>Esox lucius</i> (Pike)	Song thrush	<i>Hypnum cupressiforme</i>
	Starling	<i>Leptobryum pyriforme</i> *
	Swallow	<i>Grimmia pulvinata</i>
Fish species observed in the Meadgate Brook (TL737060)	Swift	<i>Fontinalis antipyretica</i> +
	Turtle dove	<i>Tortula muralis</i>
<i>Noemacheilus barbatulus</i> (Stone Loach)	Willow warbler	<i>Tortula intermedia</i>
<i>Leuciscus cephalus</i> (Chub)	Wood pigeon	<i>Tortula latifolia</i> +
<i>Gasterosteus aculeatus</i> (Three-spined Stickleback)	Wren	<i>Cratoneuron filicinum</i>
	Insects	Bryophytes (Liverworts)
	<i>Adalia 2-punctata</i> (2 spot ladybird)	<i>Aneura pinguis</i> *
Birds	<i>Dasyneura urticae</i> ("Nettle gnat", Gall midge on <i>Urtica dioica</i>)	
Blackbird	<i>Andricus kollari</i> (Oak marble gall, gall wasp on <i>Quercus robur</i>)	
Blackcap	<i>Potania proxima</i> ("Bean gall", gall sawfly on <i>Salix alba</i> var <i>caerulea</i>)	
Carrion crow		
Chaffinch		
Collared dove		
Common tern	Fungi	* Found in lime-rich areas.
Common whitethroat		+ Found on the weir.
Coot	<i>Puccinia malvacearum</i> (Hollyhock rust on <i>Malva sylvestris</i>)	
Cormorant	<i>Puccinia caricina</i> (Gooseberry rust on <i>Urtica dioica</i>)	
Cuckoo		
Dunnoek		

Higher Plants

<i>Acer campestre</i>	Field Maple	<i>Festuca ovina</i>	Sheep's Fescue
<i>Achillea millefolium</i>	Yarrow	<i>Festuca rubra</i>	Red Fescue
<i>Acorus calamus</i>	Sweet Falg	<i>Fraxinus excelsior</i>	Ash
<i>Aegopodium podagraria</i>	Ground Elder	<i>Galium aparine</i>	Goosegrass
<i>Agrostis stolonifera</i>	Florin	<i>Geranium dissectum</i>	Cut-leaved Cranesbill
<i>Alisma plantag-aquatica</i>	Water Plantain	<i>Geranium pyrenaicum</i>	Mountain Cranesbill
<i>Alliaria petiolata</i>	Hedge Garlic	<i>Geum urbanum</i>	Herb Bennet
<i>Alnus glutinosa</i>	Alder	<i>Glechoma hederacea</i>	Ground Ivy
<i>Alopecurus pratensis</i>	Meadow Foxtail	<i>Hedera helix</i>	Ivy
<i>Anthriscus sylvestris</i>	Cow Parsley	<i>Heracleum sphondylium</i>	Hogweed
<i>Aphanes arvensis</i>	Parsley Piert	<i>Holcus lanatus</i>	Yorkshire Fog
<i>Apium nodiflorum</i>	Fool's Watercress	<i>Hordeum murinum</i>	Wall Barley
<i>Arctium minus</i>	Lesser Burdock	<i>Hordeum secalinum</i>	Meadow Barley
<i>Arrhenatherum elatius</i>	Oat-grass	<i>Humulus lupulus</i>	Hop
<i>Artemesia vulgaris</i>	Mugwort	<i>Hypericum perforatum</i>	Common St John's Wort
<i>Armoracia rusticana</i>	Horse Radish	<i>Hypericum tetrapterum</i>	Square-stemmed St John's Wort
<i>Ballota nigra</i>	Black Horehound	<i>Juncus inflexus</i>	Hard Rush
<i>Barbarea vulgaris</i>	Winter Cress	<i>Lactuca serriola</i>	Prickly Lettuce
<i>Bellis perennis</i>	Daisy	<i>Lamium album</i>	White Dead-nettle
<i>Betula pendula</i>	Silver Birch	<i>Lamium purpureum</i>	Red Dead-nettle
<i>Bromus hordeaceus</i>	Lop-grass	<i>Lapsana communis</i>	Nipplewort
<i>Bromus sterilis</i>	Barren Brome	<i>Lathyrus nissolia</i>	Grass Vetchling
<i>Bryonia dioica</i>	White Bryony	<i>Lathyrus pratensis</i>	Meadow Vetchling
<i>Buddleja davidii</i>	Buddleja	<i>Leucanthemum vulgare</i>	Ox-eye Daisy
<i>Butomus umbellatus</i>	Flowering Rush	<i>Lolium perenne</i>	Rye-grass
<i>Calystegia × lucana</i>	Hybrid Bindweed	<i>Lotus corniculatus</i>	Birdsfoot Trefoil
<i>Calystegia silvatica</i>	Larger Bindweed	<i>Lythrum salicaria</i>	Purple Loosestrife
<i>Capsella bursa-pastoris</i>	Shepherd's Purse	<i>Malva sylvestris</i>	Common Mallow
<i>Cardamine hirsuta</i>	Hairy Bitter-cress	<i>Matricaria recutita</i>	Wild Chamomile
<i>Cardaria draba</i>	Hoary Pepperwort	<i>Medicago arabica</i>	Spotted Medick
<i>Carduus acanthoides</i>	Wetted Thistle	<i>Medicago lupulina</i>	Black Medick
<i>Carex pendula</i>	Pendulous Sedge	<i>Mentha aquatica</i>	Water Mint
<i>Carex riparia</i>	Great Pond-sedge	<i>Myosoton aquaticum</i>	Water Chickweed
<i>Centaurium erythraea</i>	Centuary	<i>Nuphar lutea</i>	Yellow Water-lily
<i>Cerastium fontanum</i>	Common Mouse-ear	<i>Oenothera erythrosepala</i>	Evening Primrose
	Chickweed	<i>Phalaris arundinacea</i>	Reed-grass
<i>Cerastium glomeratum</i>	Sticky Mouse-ear Chickweed	<i>Phragmites australis</i>	Reed
<i>Chamerion</i>	Rose-bay Willow-herb	<i>Picris echioides</i>	Bristly Ox-tongue
<i>angustifolium</i>	Creeping Thistle	<i>Plantago lanceolata</i>	Ribwort
<i>Cirsium arvense</i>	Spear Thistle	<i>Plantago Major</i>	Rat-tail Plantain
<i>Cirsium vulgare</i>	Hemlock	<i>Poa annua</i>	Annual Poa
<i>Conium maculatum</i>	Bindweed	<i>Poa pratensis</i>	Smooth-stalked Meadow-grass
<i>Convolvulus arvensis</i>	Common Hawthorn	<i>Poa trivialis</i>	Rough-stalked Meadow-grass
<i>Crataegus monogyna</i>	Beaked Hawk's-beard	<i>Polygonum amphibium</i>	Amphibious Bistort
<i>Crepis vesicaria</i>	Cock's-foot	<i>Potamogeton perfoliatus</i>	Pondweed
<i>Dactylis glomerata</i>	Teasel	<i>Potentilla reptans</i>	Creeping Cinquefoil
<i>Dipsacus fullonum</i>	Couch-grass	<i>Prunella vulgaris</i>	Self-heal
<i>Elymus repens</i>	American Willow-herb	<i>Prunus spinosa</i>	Blackthorn
<i>Epilobium ciliatum</i>	Great hairy Willow-herb	<i>Pteridium aquilinum</i>	Bracken
<i>Epilobium hirsutum</i>	Square-stemmed Willow-herb	<i>Quercus robur</i>	Pendunculate Oak
<i>Epilobium tetragonum</i>	herb	<i>Ranunculus acris</i>	Meadow Buttercup
<i>Erigeron canadensis</i>	Canadian Fleabane	<i>Ranunculus bulbosus</i>	Bulbous Buttercup
<i>Festuca gigantea</i>	Tall Brome	<i>Ranunculus repens</i>	Creeping Buttercup
		<i>Rosa canina</i>	Dog Rose
		<i>Rubus fruticosus</i>	Blackberry

<i>Rumex acetosa</i>	Sorrel	<i>Sonchus oleraceus</i>	Sow Thistle
<i>Rumex acetosella</i>	Sheep's Sorrel	<i>Sorbus aucuparia</i>	Rowan
<i>Rumex crispus</i>	Curled Dock	<i>Sparganium erectum</i>	Bur-reed
<i>Rumex obtusifolius</i>	Broad-leaved Dock	<i>Stachys sylvatica</i>	Hedge Woundwort
<i>Rumex sanguineus</i>	Red-veined Dock	<i>Stellaria graminea</i>	Lesser Stitchwort
<i>Sagina apetala ssp erecta</i>	Pearlwort	<i>Stellaria media</i>	Chickweed
<i>Sagina procumbens</i>	Procumbent Pearlwort	<i>Symphytum officinale</i>	Comfrey
<i>Salix alba</i>	White Willow	<i>Tragopogon pratensis</i>	Goat's Beard
<i>Salix alba var caerulea</i>	Cricket-bat Willow	<i>ssp minor</i>	
<i>Salix cinerea ssp cineria</i>	Grey Willow	<i>Trifolium dubium</i>	Lesser Yellow Trefoil
<i>Salix cineria ssp oleifolia</i>	Rusty Willow	<i>Trifolium ornithopodioides</i>	Birdsfoot Fenugreek
<i>Salix ×reichardtii</i>	A hybrid Willow	<i>Trifolium pratense</i>	Red Clover
<i>Salix viminalis</i>	Osier	<i>Trifolium repens</i>	White Clover
<i>Sambucus nigra</i>	Elder	<i>Tripleurospermum</i>	Scentless Mayweed
<i>Schoenoplectus lacustris</i>	Bulrush	<i>inodorum</i>	
<i>Scrophularia auriculata</i>	Water Betony	<i>Trisetum flavescens</i>	Yellow Oat
<i>Sedum album</i>	White Stonecrop	<i>Tussilago farfara</i>	Coltsfoot
<i>Senecio erucifolius</i>	Hoary Ragwort	<i>Ulex europaeus</i>	Gorse
<i>Senecio jacobaea</i>	Ragwort	<i>Urtica dioica</i>	Stinging Nettle
<i>Senecio viscosus</i>	Stinking Groundsel	<i>Veronica arvensis</i>	Wall Speedwell
<i>Senecio vulgaris</i>	Groundsel	<i>Veronica chamaedrys</i>	Germander Speedwell
<i>Silene alba</i>	White Campion	<i>Veronica persica</i>	Large Field Speedwell
<i>Silene dioica</i>	Red Campion	<i>Veronica serpyllifolia</i>	Thyme-leaved Speedwell
<i>Sisymbrium officinale</i>	Hedge Mustard	<i>Vicia sativa</i>	Common Vetch
<i>Solanum dulcamara</i>	Woody Nightshade	<i>Vulpia bromoides</i>	Barren Fescue
<i>Sonchus arvensis</i>	Field Milk Thistle		
<i>Sonchus asper</i>	Spiny Sow Thistle		

NOAK BRIDGE FIELD MEETING SATURDAY 18TH JUNE 1994

The purpose of this meeting was to help record the wildlife interest in an area of old Plotlands near Basildon that is under threat from housing development. We were shown round by the local champion of the site Betty Haynes and Phil Butler, a member of the Field Club who has been helping to record the area. The site is now mainly composed of scrub and secondary woodland with small areas of surviving grassland. There is a pond with marshy edges and much of the site is wet during the winter and spring. The pond was extremely low at the time of our meeting, quite possibly due to drainage work being carried out for the nearby housing development.

Spiders were recorded by David Carr, Spiders, Woodlice, Hoverflies and Hymenoptera by Peter Harvey. The most notable find was a female *Singa hamata* only the fourth record for the county. This attractive spider was found in its retreat in herbage by the side of the path near the pond. Judging from its other Essex localities it may possibly require uncut or ungrazed herbage and the vicinity of water. Other Nationally Scarce species recorded were the spiders *Philodromus praedatus* and *Zilla didia*, the hoverfly *Pipizella virens* and the soldier fly *Odontomyia tigrina*. Both spiders have in recent years turned out to be quite widespread in the county. Other local species of interest were the Crab spiders *Ozyptila brevipes* and *Misumena vatia*, several of which were seen with prey, and the Jumping spider *Ballus chalybeius*.

Higher Plants were recorded by Tony Boniface during the meeting and on a subsequent visit. One hundred and eight species were identified. Species of note included Wild Service tree *Sorbus torminalis*, Grass Vetchling *Lathyrus nissola*, Dyer's Greenweed *Genista tinctoria* and Twiggy Spurge *Euphorbia ×pseudovirgata*.

	Spiders		<i>Theridion pallens</i>		Woodlice
			<i>Theridion simile</i>		
	<i>Dictyna arundinacea</i>		<i>Theridion sisyphium</i>		<i>Philoscia muscorum</i>
	<i>Dictyna uncinata</i>		<i>Theridion varians</i>		<i>Trichoniscus pusillus</i>
	<i>Micaria pulicaria</i>		<i>Enoplognatha ovata</i>		Solder flies
	<i>Clubiona brevipes</i>		<i>Tetragnatha montana</i>		
	<i>Clubiona lutescens</i>		<i>Pachygnatha clercki</i>	N	<i>Odontomyia tigrina</i>
	<i>Clubiona phragmitis</i>		<i>Metellina mengei</i>		
	<i>Clubiona reclusa</i>		<i>Larinioides cornutus</i>		Hoverflies
	<i>Cheiracanthium erraticum</i>		<i>Nuctenea umbratica</i>		
	<i>Phrurolithus festivus</i>		<i>Agelenatea redii</i>		<i>Chrysogaster hirtella</i>
	<i>Zora spinimana</i>		<i>Araniella cucurbitina</i>		<i>Eristalinus sepulchralis</i>
	<i>Misumena vatia</i>		<i>Araniella opistographa</i>		<i>Eristalis arbustorum</i>
	<i>Xysticus cristatus</i>	Nb	<i>Zilla diodia</i>		<i>Eristalis intricarius</i>
	<i>Xysticus ulmi</i>		<i>Hypsosinga pygmaea</i>		<i>Parhelophilus frutecorum</i>
	<i>Ozyptila brevipes</i>	Nb	<i>Singa hamata</i>		<i>Pipiza austriaca</i>
	<i>Philodromus aureolus</i>		<i>Gongylidium rufipes</i>	N	<i>Pipizella varipes</i>
	<i>Philodromus cespitum</i>		<i>Dismodicus bifrons</i>		<i>Pipizella virens</i>
	<i>Philodromus dispar</i>		<i>Hypomma bituberculatum</i>		<i>Volucella bombylans</i>
Nb	<i>Philodromus praedatus</i>		<i>Pocadicnemis juncea</i>		<i>Volucella pellucens</i>
	<i>Tibellus oblongus</i>		<i>Oedothorax apicatus</i>		Ants
	<i>Heliophanus cupreus</i>		<i>Diplocephalus permixtus</i>		
	<i>Ballus chalybeius</i>		<i>Erigone atra</i>		<i>Myrmica ruginodis</i>
	<i>Euophrys frontalis</i>		<i>Bathyphantes gracilis</i>		Aculeate wasps
	<i>Pardosa amentata</i>		<i>Bathyphantes parvulus</i>		
	<i>Pardosa palustris</i>		<i>Kaestneria pullata</i>		<i>Lindenius albilabris</i>
	<i>Pardosa prativaga</i>		<i>Lepthyphantes tenuis</i>		<i>Odynerus spinipes</i>
	<i>Pisaura mirabilis</i>		<i>Linyphia (Neriene) clathrata</i>		<i>Oxybelus uniglumis</i>
	<i>Ero cambridgei</i>		<i>Linyphia (Neriene) peltata</i>		<i>Trypoxylon attenuatum</i>
	<i>Episinus angulatus</i>				Bees
	<i>Anelosimus vittatus</i>		Harvestman		
Nb	<i>Achaearanea simulans</i>				<i>Andrena chrysoseles</i>
	<i>Theridion bimaculatum</i>		<i>Lacinius ephippiatus</i>		<i>Andrena subopaca</i>

Higher Plants

<i>Dryopteris dilatata</i>	Broad Buckler fern	<i>Galega officinalis</i>	Goat's Rue
<i>Ranunculus acris</i>	Meadow Buttercup	<i>Lotus corniculatus</i>	Bird's-foot Trefoil
<i>Ranunculus repens</i>	Creeping Buttercup	<i>Vicia cracca</i>	Tufted Vetch
<i>Ranunculus sceleratus</i>	Celery-leaved Buttercup	<i>Vicia hirsuta</i>	Hairy Tare
<i>Urtica dioica</i>	Common Nettle	<i>Vicia tetrasperma</i>	Smooth Tare
<i>Quercus robur</i>	Pedunculate Oak	<i>Vicia sativa</i>	Common Vetch
<i>Stellaria holostea</i>	Greater Stitchwort	<i>Lathyrus pratensis</i>	Meadow Vetchling
<i>Stellaria graminea</i>	Lesser Stitchwort	<i>Lathyrus nissolia</i>	Grass Vetchling
<i>Silene latifolia</i>	White Campion	<i>Medicago lupulina</i>	Black Medick
<i>Silene dioica</i>	Red Campion	<i>Trifolium repens</i>	White Clover
<i>Populus tremula</i>	Aspen	<i>Trifolium campestre</i>	Hop Trefoil
<i>Salix caprea</i>	Goat Willow	<i>Trifolium dubium</i>	Lesser Trefoil
<i>Salix cinerea ssp oleifolia</i>	Rusty Willow	<i>Trifolium pratense</i>	Red Clover
<i>Salix fragilis</i>	Crack Willow	<i>Genista tinctoria</i>	Dyer's Greenweed
<i>Rumex sanguineus</i>	Wood Dock	<i>Melilotus altissimus</i>	Tall Melilot
<i>Hypericum hirsutum</i>	Hairy St John's Wort	<i>Epilobium hirsutum</i>	Great Willowherb
<i>Lepidium draba</i>	Hoary Cress	<i>Epilobium parviflorum</i>	Hoary Willowherb
<i>Armoracia rusticana</i>	Horse Radish	<i>Chamerion angustifolium</i>	Rose-bay Willowherb
<i>Sisymbrium officinale</i>	Hedge Mustard	<i>Cornus sanguinea</i>	Dogwood
<i>Potentilla reptans</i>	Creeping Cinquefoil	<i>Euphorbia x pseudovirgata</i>	Twiggy Spurge
<i>Rosa canina</i>	Dog Rose	<i>Acer pseudoplatanus</i>	Sycamore
<i>Prunus spinosa</i>	Blackthorn	<i>Hedera helix</i>	Ivy
<i>Prunus avium</i>	Wild Cherry	<i>Anthriscus sylvestris</i>	Cow Parsley
<i>Sorbus torminalis</i>	Wild Service tree	<i>Pastinaca sativa</i>	Wild Parsnip
<i>Crataegus monogyna</i>	Common Hawthorn	<i>Daucus carota</i>	Hogweed
<i>Pyrus pyraster</i>	Wild Pear	<i>Solanum dulcamara</i>	Bittersweet
<i>Agrimonia eupatoria</i>	Agrimony	<i>Convolvulus arvensis</i>	Field Bindweed

<i>Calystegia sepium</i>	Hedge Bindweed	<i>Juncus conglomeratus</i>	Compact Rush
<i>Calystegia sylvatica</i>	Large Bindweed	<i>Carex otrubae</i>	False Fox Sedge
<i>Prunella vulgaris</i>	Self Heal	<i>Carex spicata</i>	Spiked Sedge
<i>Stachys sylvatica</i>	Hedge Woundwort	<i>Carex sylvatica</i>	Wood Sedge
<i>Plantago major</i>	Greater Plantain	<i>Carex flacca</i>	Glaucous Sedge
<i>Plantago lanceolata</i>	Ribwort Plantain	<i>Festuca arundinacea</i>	Tall Fescue
<i>Galium mollugo</i>	Hedge Bedstraw	<i>Lolium perenne</i>	Perennial Rye-grass
<i>Galium aparine</i>	Cleavers	<i>Vulpia myuros</i>	Rat's-tail Fescue
<i>Sambucus nigra</i>	Elder	<i>Cynosurus cristatus</i>	Crested Dog's Tail
<i>Lonicera periclymenum</i>	Honeysuckle	<i>Poa annua</i>	Annual Meadow Grass
<i>Dipsacus fullonum</i>	Wild Teasel	<i>Poa trivialis</i>	Rough Meadow Grass
<i>Achillea millefolium</i>	Yarrow	<i>Dactylis glomerata</i>	Cock's-foot Grass
<i>Cirsium arvense</i>	Creeping Thistle	<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Picris echioides</i>	Bristly Oxtongue	<i>Deschampsia cespitosa</i>	Tufted Hair Grass
<i>Sonchus oleraceus</i>	Smooth Sow Thistle	<i>Holcus lanatus</i>	Yorkshire Fog
<i>Crepis vesicaria</i>	Beaked Hawk's Beard	<i>Phalaris arundinacea</i>	Reed Canary Grass
<i>Pulicaria dysenterica</i>	Common Fleabane	<i>Alopecurus pratensis</i>	Meadow Fox-tail
<i>Artemisia vulgaris</i>	Mugwort	<i>Alopecurus geniculatus</i>	Marsh Fox-tail
<i>Leucanthemum vulgare</i>	Ox-eye Daisy	<i>Alopecurus myosuroides</i>	Black Grass
<i>Senecio erucifolius</i>	Hoary Ragwort	<i>Phleum bertolonii</i>	Smaller Cat's-tail
<i>Tussilago farfara</i>	Colt's Foot	<i>Bromus hordeaceus</i> ssp	Soft Brome
<i>Lactuca serriola</i>	Prickly Lettuce	<i>hordeaceus</i>	
<i>Anthemis arvensis</i>	Corn Chamomile	<i>Phragmites australis</i>	Common Reed
<i>Alisma plantago-aquatica</i>	Water Plantain	<i>Elytrigia repens</i>	Common Couch
<i>Juncus acutiflorus</i>	Sharp Flowered Rush	<i>Typha latifolia</i>	Reedmace
<i>Juncus inflexus</i>	Hard Rush	<i>Allium vineale</i>	Wild Onion
<i>Juncus effusus</i>	Soft Rush		

Ref. New Flora of British Isles - C. Stace, Cambridge 1991.

BOTANY GROUP MEETING TO CHALKNEY WOOD 14TH MAY 1994

Eight members were present at this meeting, to look at the vascular plants and bryophytes of the northern part of the wood, paying particular attention to the four spectacular boggy flushes for which management advice was required.

Chalkney Wood is one of the most important ancient woodland sites in the county. Its natural history has been well-documented and its boundary has remained virtually unchanged since the Earl's Colne map of 1598. Currently the south-western third of the wood is owned by Essex County Council and designated as 'access woodland', the rest belonging to Forest Enterprise (formerly The Forest Commission). The County Council portion still retains what is assumed to be its original native vegetation and in this part of the wood the coppice cycle is now well re-established. In contrast, the native vegetation of the remainder of the wood was virtually destroyed in the 1950s and '60s followed by replanting with conifers, in accordance with forest management practices current at the time.

Recently however, Forest Enterprise has changed its attitude towards the management of ancient woodland, and at Chalkney some areas are being cleared of conifers and allowed to regenerate naturally. Because of these changes, a Field club visit to the Forest Enterprise, rather than the County Council portion of the wood, was particularly relevant at this time.

Both vascular plants and bryophytes have been fairly well recorded in Chalkney wood over the years. Prior to our visit, the vascular plant list stood at nearly 240 species, of which over 200 had been recorded from the Forest Enterprise section. We found 147 species, of which about a dozen were 'new', boosting the overall list for the wood to more than 250.

This diversity of species reveals that, fortunately, attempts to completely eradicate the native vegetation have been unsuccessful. In many parts of the wood, conifers have not established themselves well, and are poorly grown, considering that most must be more than 30 years old. Native trees, including Small-leaved Lime and Hornbeam, which once appeared to be totally absent from much of the coniferised area, are quite widely distributed amongst the conifers. Presumably, having re-grown from old coppice stools which survived the clearing and replanting. Some of the areas cleared of conifers have taken on the appearance of recently coppiced broadleaved woodland. On these sites it can need quite careful searching for the stumps to reveal that the conifers were ever present. It should prove interesting to see how these areas develop in comparison with the County Council part of the wood which was never coniferised.

Perhaps the best discoveries were in the case of the ferns, where the frequency of the Golden-scaled Male Fern (*Dryopteris affinis* Ssp. *borreri*) and Narrow Buckler Fern (*Dryopteris carthusiana*) was much higher than in most of the woods in our area. Although both were largely associated with the boggy flushes, the former was also found in several patches along the rides, and the latter was widespread in hollows in an area recently cleared of conifers.

The flushes are dominated by Alder and Ramsons (*Allium ursinum*). In the most westerly flush, hybrid poplars have been planted amongst the Alder, and are gradually falling over naturally as they age. The canopy however is still reasonably open, and remarkably, a dense carpet of the large thalloid liverwort *Conocephalum conicum* occurs over a wide area of the accumulated peat beneath the *Allium*. In the next flush moving east, a sizable colony of the Opposite-leaved Golden Saxifrage (*Chrysosplenium oppositifolium*) was found, together with the very local moss *Fissidens adiantoides*, fruiting abundantly.

The two most easterly flushes, however, were far too densely overgrown to penetrate in the time available, and are clearly ready for some selective coppicing. The only other notable bryophyte was a scrap of *Plagiothecium laetum* on a hornbeam stump near the northern entrance car park, which had been recorded for the wood before. In conclusion, although no really spectacular new finds were made, the visit confirmed that Chalkney wood is an interesting site and that even the coniferised areas have retained many of their important features. Continued monitoring is needed particularly with regard to the re-establishment of native vegetation as the conifers are removed, and see if the very rare sedge *Carex elongata*, recorded from the wood by Dr E Varenne in the 1840s, (presumably from one of the boggy flushes), ever reappears.

Jeremy Ison & Ken Adams

BSBI FIELD MEETING, SHOEBURY OLD RANGES NR, 28TH MAY 1994

To avoid too much trampling, only 10 BSBI members were allowed on this fragile area of old rabbit grazed dunes and dune slack. Fortunately a cold spell had held back flowering of many species and with Tim Pyner's help, the following notables were winkled out of the short turf in a hands and knees operation: *Trifolium scabrum*, *T. glomeratum* (new to the site), *T. suffocatum* (only site in Essex), *Vicia lathyroides*, *Moenchia erecta*, *Sagina maritima* and at the far eastern end *Ranunculus parviflorus* (5 healthy patches) and *Cerastium semidecandrum*. At the far western end of the NR extensive spreads of *Medicago minima* and the dead remains of the early flowering *Poa bulbosa* and *Saxifraga granulata* were found, together with a patch of the Bearded Fescue, *Vulpia ciliata* Ssp. *ambigua*, pointed out to us by Arthur Copping, and new to Vc18.

After lunch we literally moved a couple of yards in a roundabout route by road, to explore the grounds of the Coastguard Station next door. The whole area was carpeted with

Meadow Saxifrage, and further, this time very extensive patches, of *Vulpia ciliata* Ssp. *ambigua*, clearly distinguished from *V. bromoides* by its upright habit, reddish hue and on closer examination, vanishingly minute lower glume. A few patches of the Dune Fescue *V. fasciculata* were also found, plus further extensive patches of *Medicago minima* and *Poa bulbosa*. Tim Pynner reported that in 1993 he had found *Medicago polymorpha* on the seawall but it could not be refound. Tim also reported that earlier in the year he had found patches of *Saxifraga tridactylites* close by the western wall of the compound.

Ken Adams

BOTANY GROUP FIELD MEETING, PURFLEET, 29TH MAY 1994

This meeting was intended to assess the ecological damage likely to be incurred by the new Channel Tunnel rail link. In the event it was found that the apex of Beacon Hill had already been quarried away and the floor of the chalk pit had become an industrial park. Members therefore explored the fragments of chalk habitat left in the area and compiled lists for two local 1km squares.

The old Botany Pit, so called, Martin Gregory informed us, because it was formerly planted up as a botanic garden, had become completely overgrown, but useful lists were compiled from the nearby recreation ground, the banks of a lane leading to Beacon Hill pit, and a nearby building site. The latter two sites yielded *Iris foetidissima* and three taxa of *Hieracia*, *H. lepidulum*, *H. strumosum* and an as yet undetermined brownish/purple spotted taxon related to but not the same as *H. maculatum*. The southern slopes of Beacon Hill are now all but enveloped in modern housing, but several patches of *Geranium rotundifolium* were found on waste ground, a plant that we are repeatedly turning up in hedgebanks and on waste ground on the southern Essex chalk where as Tim Pynner observes it appears to replace *Geranium robertianum*.

On the broken ground of the narrow cliff edge on the southern margin of the Beacon Hill Pit, two plants of Deadly Nightshade, *Atropa belladonna* were found, and a sizeable patch of the Milk Vetch or Wild Liquorice *Astragalus glycyphyllos*, precariously perched on an overhang, appeared to be parasitised by an equally sizeable patch of the broorape *Orobanche minor*. Tim clambered down into the pit, to investigate a yellow flowered alien Comfrey on a spoil heap, which turned out to be *Symphytum tuberosum*. Altogether 152 species were clocked up for 1 km square TQ55,78.

Finally, after lunch an area of disused barracks and new sea wall defences was explored on the west side of the Mar Dyke. *Lactuca saligna* the Least Lettuce, one of the 62 specially scheduled plants supposedly protected by the Wild Life & Countryside Act 1981, was searched for without any success. The new seawall defences having destroyed the small colony that had been in the vicinity since at least 1849. Apparently, although aware of the colony NCC failed to act in time to save it. The same fate befalling all the Kentish colonies on the other side of the river. The landward slopes of the new sea wall however had been colonised by a large population of *Petroselinum segetum* the Corn Parsley, a plant now considered endangered in Europe. In the disused barracks area a further colony of *Geranium rotundifolium* and a patch of *Carex divisa* were found, plus a patch of the rayless form of *Matricaria recutita*. The latter resembles large headed Pineapple weed *M. discoidea* but smells of camomile rather than pineapple. 92 species were recorded for the 1km square TQ54,78.

Meanwhile on the same day, up in north Essex Terri Tarpey & Co. reported finding a large patch of the Mossy Stonecrop, *Crassula tillaea* in Alphamstone gravel pit, new to Essex.

Ken Adams

HARTWORT - THE GOOD AND THE BAD NEWS.

At last! It has finally been agreed that *Tordylium maximum*, the Hartwort is to receive Red_Data_Book status in the next revision.

Known in Britain since 1670 it has been found at scattered sites along the Thames valley since then, and could well be a native plant, as it occurs just over the channel in France. In Essex its *locus classicus* was on a roadverge just north of Tilbury Fort, where it has survived remarkable predation by Botanists collecting plants for herbarium specimens ever since its discovery in 1875. In 1949 a further colony was discovered on Benfleet Downs, and in 1966 a third colony was found near Benfleet Sewage Works.

Now for the bad news! In 1984 Colin Plant and Sarah Lambert just happened to be down at Tilbury to check on the abundance of the plant, when they discovered that a pipeline was being laid right along the road verge directly in line with the *Tordylium* plants, and they were all being uprooted and cast aside in the process. Colin tried to stop the operations by appealing to officials at the Fort, but to no avail, and so in desperation rescued seven plants and took them back to the East Ham Nature Reserve. Unfortunately these plants died after two years.

When Tim Pyner visited the Tilbury site in 1993 no plants were to be seen. When I visited this location in early July 1994, I discovered that the site of the main original patch now lay beneath a huge pile of concrete blocks and rubble and the rest of the verge on which it grew had been plastered with the dredgings from one of the dykes of the Fort's moated defences. It would appear that English Heritage is attempting to give the area a 'face lift'. Hopefully we can indulge eventually in a management agreement and reseed the verge from the other main colony on Benfleet Downs.

Ken Adams

BEAN BROOMRAPE BACK AT CRANHAM

As many of you will be aware, way back in 1975 I discovered a large colony of the magnificent broomrape *Orobanche crenata*, parasitising a patch of *Vicia tetrasperma* just outside the then proposed Cranham Marsh Reserve. By stretching the boundary we managed to get the site included in the newly designated reserve, and I spent a whole day on site singlehandedly clearing invading aspen. Unfortunately the ENT as it then was, did not keep the site clear and the broomrape colony was lost as from about 1983. Apart from a further sighting in a pea field about a mile away in 1986, that appeared to be its swansong. You can imagine how delighted we were to hear from Tony Dunton that a single plant had reappeared on the margin of a rape field only yards from the original colony, the site of which, incidentally, Tony had put a lot of effort into clearing in faithful anticipation! The seed from this one plant has been scattered on a patch of its former host and we are keeping our fingers crossed!

This is the first time that *O. crenata* has firmly established itself in Britain, although it occurs sporadically in Broad Bean crops. We believe that it became established at Cranham prior to 1950, as plants were recorded in gardens nearby in Upminster in 1950, 1951 and 1975. Unlike the other broomrapes it is scented (of carnations) and probably insect rather than wind pollinated, and normally more at home in Spain or elsewhere around the Mediterranean. Perhaps its the first local evidence of the effects of global warming!

Ken Adams

WHATS ON: ESSEX FIELD CLUB

SEPTEMBER

- Saturday 3rd **General Meeting 1388.**Fungus Foray. The Brookes reserve. Meet road corner on east side of wood TL 813267, on road from Stisted to Greenstead Green. Time 10.30 am. Leader Martin Gregory. Phone: (0245) 223300 for details.
- Sunday 18th **Bird Group.** Coalhouse Fort, East Tilbury. Meet at car park TQ 690768 at 10.30 am. Leader John Bath. Phone: (0277) 651890 for details.
- Sunday 25th **Geology Group.** The evolution and drainage of the fens. Meet at the picnic area on the A1065 at Barton Mills, 9 miles north east of Newmarket TL 728743 at 10.00 am. It is essential to phone the leader Peter Allen if attending to avoid being left behind. Phone: (0992) 630661.

OCTOBER

- Sunday 2nd **General Meeting No. 1389.** The four seasons recording project. Danbury area. Morning. Mice, voles and dormice in the Backwarden reserve. Meet 9.00 am at car park TL 782039. Leader John Dobson. Phone: (0245) 224408 for details. Followed by Fungus Foray on Danbury Common. Leader Tony Boniface. Phone: (0245) 266316 for details. Recorders for other groups also needed.
- Sunday 16th **Bird Group.** Dungeness RSPB Reserve. Meet 11.00 am at entrance near Boulderwall Farm. TR 063196. Leader John Bath. Phone: (0277) 651890 for details.
- Sunday 23rd **Botany Group.** Fungus Foray in Epping Forest. Meet 10.30 am at Epping Forest Conservation Centre car park. Leader Martin Gregory. Phone: (0245) 223300 for details.

NOVEMBER

- Saturday 12th **General Meeting 1390.** "Pyrenean Butterflies" talk by David Corke at 3.00 pm. Red Cross hall, London Road, Chelmsford. (Car park entrance in Writtle Road).
- Sunday 27th **Bird Group.** Southend pier for sea birds. Meet at 10.30 am at pier entrance. Leader Judith Boniface. Phone: (0245) 266316 for details.

<p>CONTRIBUTIONS TO THE NEXT NEWSLETTER</p>
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<p>Please send contributions for the next Newsletter, due out in November, to the Editor, Mr Peter Harvey, 9 Kent Road, Grays, RM17 6DE by the end of the second week of October.</p>

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.