CLEVELAND NATURALISTS'

FIELD CLUB

RECORD OF PROCEEDINGS

Volume 5 Part 4 **Spring 1994**

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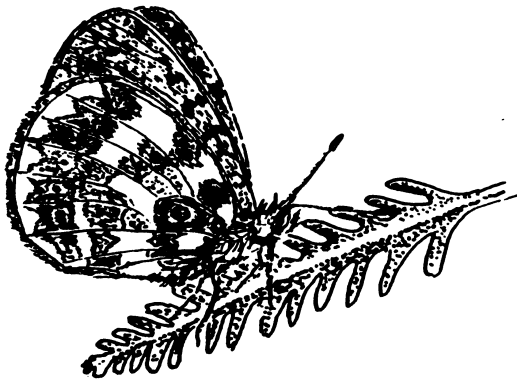
Membership Details

Any person interested in joining the Cleveland Naturalists Field Club should send their
subscription to the Membership Secretary. Potential members are welcome to our field meetings listed at the back of this issue.
Annual subscriptions are due on 1st January each year.
(Adult £5.00. Students under 18 years £1.00)
Members are entitled to attend meetings of:
Yorkshire Naturalists' Union,
Northern Naturalists' Union,
Cleveland Wildlife Trust.



Editorial

This is the fourth issue of the new Cleveland Naturalists Field Club Proceedings. The site chosen for special attention this year was Charltons Pond at Billingham. Also included in this issue is an extensive paper on the current state of knowledge concerning bats in Cleveland by Tony Wardaugh, and an appeal for information from members regarding the distribution of Helix aspersa. A contribution from Ian on some unusual plants in Thornaby shows that interesting things can turn up in the most unlikely places. Darroll has given us an update on the plants of the Guisborough Walkway. New information on any of the previous sites covered (Eston Moor, South Gare, Guisborough Walkway, and now Charltons Pond) is always welcome for inclusion in the Proceedings.

All Members of the Field Club are encouraged to contribute notable records for inclusion in the Proceedings; particularly from field meetings. There is always some space available for small pieces of art work. These reproduce best if in the form of black and white drawings. Many thanks to all the contributors to the current issue.

Malcolm Birtle

Acknowledgements to Contributors

Firstly belated thanks to Ian Lawrence for his extensive botanical recording for South Gare in the last issue. Apologies to Ian for the oversight.

Many thanks to all who contributed to this issue. The main contributors for Charltons Pond were Maurice Hallam, Ian Lawrence, Vincent Jones, John Blackburn, and Tony Wardaugh; Bats in Cleveland and Helix aspersa was Tony Wardaugh; Unusual Plants... was Ian Lawrence; Guisborough Walkway was Darroll Fryer; Wildlife Trust Liaison was Chris Lowe; Drawings by Tony Wardhaugh and Eric Gendle.

News

The 'Guide to the Wild Flowers of Cleveland' is now at the printers and should be generally available by the Spring of 1994.

Ian Lawrence

Highlights of the 1993 Field Meetings

Wednesday, May 5th, Newton Woods, Kath Dilworth

This was a rather damp,foggy, evening with few interesting records, but the following were noted Pheasant, Blackcap, Garden Warbler, Great Tit, Blue-tit, Wren, Chaffinch, and Robin. The lichen *Baeomyces rufus* was found on rock at the Southern margin of the wood.

Wednesday, May 19th, Rievaulx Area, Maurice Ward

Several of the classic plants of the rich calcareous woodland and grassland near Rievaulx were studied. These included *Helleborus viridus* (Green Hellebore), *Daphne laureola* (Spurge Laurel), *Aetaea spicata* (Baneberry), *Lathraea squamaria* (Toothwort) and a Hawkweed of northern limestone woodland *Hieracium oistrophyllum*. Members were particularly pleased to see flowering spikes of *Ophrys insectifera* (Fly Orchid). Blackcap, Whitethroat, Garden Warbler, Wood Warbler, Willow Warbler, Marsh Tit, Goldfinch, Bullfinch, Linnet and Grey Wagtail were included in the bird list for the day.

Sunday, May 23rd, Rosecroft & Loftus Woods, Darroll Fryer

Members enjoyed a circular walk from the centre of Loftus through Rosecroft, Loftus and Handale woods. There were some fine trees of *Castanea sativa* (Sweet Chestnut), and *Carpinus betulus* (Hornbeam) in Rosecroft woods. Also in the woods were several thousands of *Geum x intermedium* (the hybrid of Water and Wood Avens). On a grassy bank, near Handale Woods was *Genista tinetoria* (Dyers Greenweed). The most interesting botanical find of the day was *Euphorbia amygdaloides* (Wood Spurge), a plant very rare in the North, and a first Cleveland record. The lichens *Parmelia glabratula, P.sulcata*, and *Evernia prunastri* were found growing on tree trunks. *Pieris brassicae* (Large White), *Aglais urticae* (Small Tortoiseshell), *Inachis io* (Peacock), *Anthocharis cardamines* (Orange-tip), and *Vanessa atalanta* (Red Admiral) butterflies were noted. The *Ectropis crepuscularia* (Small Engrailed) moth was found at rest on an Oak tree in Handale Woods. The following molluscs were also recorded- *Trichia striolata* (Strawberry Snail), Arianta arbustorum (Copse Snail), *Discus rotundatus* (Rounded Snail), and Common Slug.

Wednesday, June 9th, Lovell Ponds, Alex Weir

This site was not found to be rich in vascular plant species. The most interesting finds were *Ranunculus trichophyllus* (a Water Crowfoot) and *Lemna trisulea* (Ivy Duckweed).

Wednesday, June 16th, Bluebell Beck,W. Plantation, Ian Lawrence

The walk took us through the area between Acklam and the A19. It has been lanscaped and consists of large areas of uncut and mown grassland, fenced areas seeded with wildflowers and planted with shrubs, a pond and a marshy area. The Blue Bell Beck runs through the valley and at the far end is a small area of woodland. Occuring naturally were several plants of *Carex spicata* (Spiked Sedge), a sedge not common in Cleveland. In the woodland

several garden throw-aways had become established, in particular *Montia sibirica* (Pink Purslane), *Poemonium caeruleum* (Jacob's ladder) and some *Geranium* species. The following lichens were noted on the bark of Crack Willow- *Phaeophyscia orbicularis, Parmelia sulcata, Xanthoria parietina, Physcia tenella*, and *Lepraria incana*. In addition *Evernia prunastri* was seen on the bark of Oak in nearby woods. *Epirrhoe alternata* (Common Carpet), *Lomaspilis marginata* (Clouded Border) and *Xanthorhoe montanata* (Silver Ground Carpet) were seen amongst the rough grassland and scrub. The butterfly *Ochlodes venata* (Large Skipper) was observed at rest amongst rough grass. A Great Spotted Woodpecker was also seen.

Saturday, June 19th, Hummersea, Pat Wood

An attempt is being made by the recording group to record the coastal plants between South Gare and Cowbar. Some records had already been made of the Hummersea area and we now have 147 species recorded between Skinninrove and Boulby Quarry. The most interesting area in this section lies above the steps at Hummersea. For many years now *Parnassus palustris* (Grass of Parnassus), a rare plant in Cleveland, has grown here.

Wednesday, June 23th, Crookfoot Reservoir, Vince Jones

The emergent species round the reservoir were studied. These included *Littorella uniflora* (Shoreweed), *Gnaphalium uglinosum* (Marsh Cudweed), *Rumex conglomeratus* (Clustered Dock), *Persicaria amphibia* (Amphibious Bistort), *Ranunculus sceleratus* (Celery-leaved Buttercup), and *Myosotis laxa* (Tufted Forget-me-not). Various sedges were found, in particular members were able to study the differences between the pond sedges *Carex riparia* and *Carex acutiformis*. In the wood *Epipactis helleborine* (Broad-leaved Helleborine) was found. Several grasses were found the most interesting being *Helictotrichon pubescens* (Downy Oat-grass)

Sunday, June 27th, Westgate, Weardale, Norma Padgin

This meeting took place on a very hot, sunny day. The following notable birds were seen Willow Warbler, Blackcap (with young), Whitethroat, Chiff-chaff, Goldfinch, Grey Wagtail, Dipper, Wheatear, Reed Bunting, Common Sandpiper, Redshank, and Linnets. The Small Heath (*Coenonympha pamphilus*) butterfly and the Common Blue Damselfly (*Enallagma cyathigerum*)were also seen.

Wednesday, June 30th, Larchfield Farm, Vince Jones

It was particularly pleasing to refind two rare species which the Club had seen a few years ago. *Ranunculus arvensis* (Corn Buttercup), albeit in reduced numbers, was still there, but *Anthemis cotula* (Stinking Chamomile)

had spread considerably. In a broad bean field there were some beautiful plants of the fodder form of Common Vetch *Vicia sativa ssp staiva*. One plant of *Trifolium incarnatum* (Crimson Clover) was found at the entrance to Larchfield Farm. A Grasshopper Warbler was heard calling.

Saturday, July 3rd, Beckdale, Helmsley, Norman Thompson

Populus trichocarpa (Western Balsam Poplar) and *Populus balsamifera* (Eastern Balsam Poplar) were studied. A fine stand of *Cicerbita macrophylla* (Common Blue Sow-thistle) was found, and several bushes of *Rosa arvensis*, a rose rare in Cleveland, were examined. The walk was particularly notable for its St. John's Wort species- *Hypericum androsaemum, Hypericum perforatum, H. hirsutum, H. tetrapterum, H. pulchrum* were found. A male Sparrowhawk was seen and a number of Ringlet butterflies.

Wednesday, July 7th, Carter Moor near Urlay Nook, Rob Scaife

Originally an airfield, now enclosed by high fences, much of the area has now been planted with *Pinus nigra ssp laricia* (Corsican Pine). Interesting finds in the waste areas were the Hawkweed *Hieracium sublepistoides*, the hybrid between Red and White Campion *Silene x hampeana*, *Viola tricolor ssp tricolor* (Wild Pansy), *Hirschfeldia incana* (Hoary Mustard), *Vulpia myuros* (Rats-tail Fescue) and espcially the true *Potentilla anglica* (Trailing Tormentil). This latter find was probably the first authentic Cleveland record. It is felt that all other *Potentilla sp*. displaying *P. anglica* characteristics in Cleveland were, in fact, the hybrid with *P.reptans (P.x mixta)*. Ponds had been made in the area and introduced plants were now well established. These included *Elodea nuttallii* (a close relative of Canadian Pondweed), the pondweeds *Potamegeton crispus, P. natans, P.pectinatus, Stratiotes alrides* (Water Soldier) and *Alisma plantago-aquatica* (Water Plantain).

Sunday, July 11th, Hamsterley Forest, Brian Walker

We were most ably led by the forest ranger, Mr. Brian Walker,. Brian gave an excellent field demonstration of the distinctive features of conifers, and followed this up with a lecture as part of our Winter programme. He also showed us some of the special plants of the forest. These included the Wintergreens *Pyrola minor* and *P. media*, the rare grass *Festuca albissima* (Wood Fescue), the most elusive *Listera cordata* (Lesser Twayblade), *Lycopodium clavatum* (Stags Horn Clubmoss), *Rorippa microphylla* (One-rowed Watercress) and the ferns *Ophioglossum vulgatum* (Adders Tongue), *Phegopteris connectilis* (Beech Fern) and *Gymnocarpium dryopteris* (Oak Fern).

Wednesday, July 14th, Hutton Rudby area, Ian Lawrence

A good turn-out on a very wet evening. *Rubus iogonabaccus* (Loganberry) was studied by the Sexhow road and a marshy area was searched nearby. This marsh had *Santellaria galericulata* (Skullcap), the Valerians *Valeriana dioica* and *Valeriana officinalis*, T*riglochin palustre* (Marsh Arrowgrass) and the sedges *Carex disticha* and *Carex acutiformis*.

Wednesday, July 21st, Charlton's Pond, Maurice Hallam

See report below.

Sunday, August 1st, Broadway Foot Farm, Eric Gendle

The following butterflies were seen flying actively in the sunshine around the pond on the farm- *Aphantopus hyperantus* (Ringlet), *Thymelicus sylvestris* (Small Skipper), *Ochlodes venata* (Large Skipper) together with the moths *Mythimna pallens* (Common Wainscot), *M.impura* (Smoky Wainscot), *Scopula immutata* (Lesser Cream Wave).

Wednesday, August 4th, Osmotherly area, Maurice Ward

This walk gave Club members an opportunity to study the common woodland and moorland ferns- *Blechnum spicant* (Hard Fern), *Anthyrium filix-femina* (Lady Fern), *Dryopteris filix-mas* (Male Fern), *D. affinis ssp borreri* (Scaly Male Fern), *D. dilitata* (Broad Buckler Fern) and *Oreopteris limbosperma* (Lemon Scented Fern).

Saturday, August 7th, Botton Village, Danby Dale, John Blackburn

Many interesting plants and trees have been introduced round the village and are now well naturalised. These include *Tolmiea menziesii* (Pick-a-back plant), *Malva moschata* (Musk Mallow), *Persicaria wallichii* (Himalayan Knotweed), *Tilia platyphyllus* (Large-leaved Lime), *Quercus rubra* (Red Oak), *Populus trichocarpa* (Western Balsam Poplar), *P. tremula* (Aspen), and *Carpinus betulus* (Hornbeam). Also seen were a hybrid St. Johns Wort, *Hypericum x desetangsii*, Trientalis europaea (*Chickweed Wintergreen*), *Thlaspi arvense* (Field Penny-cress) and *Mentha arvensis* (Corn Mint).

Saturday, August 22nd, Stanghow Moor, Darroll Fryer

As the group walked away from Birk Brow car park towards the Monk's Trod a pair of Hen Harriers were seen about half a mile to the East flying Northwards. Later, at the edge of Guisbrough Woods,between Wentworth Wood and Wileycat Woods the lichens *Hypogymnia tuberosa, Parmelia*

sulcata, and *Cladonia coniocrea* were noted growing at the base of an Alder. Members were shown Bulbous rush and Lemon-scented Fern growing in a ditch with Bog Pimpernel growing nearby.

Sunday October 17th, Fungus Foray,Lazenbey Bank, Alex Weir

This was a joint meeting with the British Mycological Society, and the Kit Robb group from Thirsk. A successful meeting despite the fact that that due to recent inclement weather there were not so many fungi to be found as in previous years. Thirty two people turned up and due to a motor-cycle rally the walk was started at Wilton Castle. This gave us the opportunity to study the deep wooded ravine above the castle and then after lunch we looked at the Birch woodland areas of Lazenby Beck. Fifty species were recorded including *Laccaria laccata, Mycena ganericulata, Coprinus micaceus, Clitocybe dealbata, C. nebularis, Xyleria polymorpha, Collybia butyraceae, C. fusipes, C. maculata, C. perowaym,, Hygrocybe nivea, , Inocybe geophylla, Lactarius quietus, Boletus chrysenteron, Leccinium scabrum, L. versipelle.*

Unusual Wild Plants on a Thornaby Wasteland

Last August, whilst taking a short cut from Tedder Avenue along a public trackway leading to the Stainsby Beck in the North West corner of square NZ 41S, I came across an open area behind the ASDA shopping precinct. I was, as usual, attracted to a 'weedy' patch which was dominated by Scentless Mayweed (*Tripleurospermum inodorum*) where I discovered several plants of Prickly Lettuce (*Lactuca serriola*) which I have only known from the Midlands and the South-East of England. It would be interesting to know how these plants found their way to this particular patch. Growing with it were Sticky Groundsel (*Senecio viscosus*) and Scarlet Pimpernel (*Anagalis arvensis*) both of which are not all that common in this area.

To further attract my attention alongside the track which leads to the shopping area were several extremely robust plants of Bristly Ox-tongue (*Picris echioides*) and Weld (*Reseda luteola*).

Nearby on an area of open scrub, which was very marshy in places, I came across a few plants of Imperforate St John's-wort (*Hypericum maculatum*). This plant is uncommon generally in the North East and occurs in only one or two sites in Cleveland. These plants would seem to be survivors of a once semi-wooded area of the Stainsby Beck valley. In the marshy area nearby Greater Hairy Willow-herb (*Epilobium hirsutum*) and Meadow-sweet (*Filipendula ulmaria*) with Lesser Stitchwort (*Stellaria graminea*) and an interesting Willow-herb which may well be *E. obscurum*, were further relics of an area now reclaimed for 'development'. This 'reclamation' disturbance has resulted in an abundance of the Black Bent-grass (*Agrostis gigantea*) along with the Creeping or White Bent (*A.stolonifera*) in the wetter parts. Another uncommon member of the Vetch family, the Smooth Tare (*Vicia tetrasperma*) was also found in this area.

Nearer to the beck itself Spiny Rest-harrow (*Ononis spinosa*) was plentiful along with Meadow Crane's-bill (*Geranium pratense*) to add to the colour of the many interesting wild plants which flourish in this little corner of Thornaby. A short cut which turned out to be very rewarding, especially as I had passed it by whilst surveying the County for the Flora of Cleveland.

Ian Lawrence, 1993

Guisborough Branch Walkway

During 1993 the flora of the Walkway has been closely examined in order to complete the determination of the frequency of the species that are present. During the years in which these determinations have been made, changes to the environment and change in the species present have been very evident. The movement of soil and the clearing of the soil surface during work to improve the drainage of the walkway left bare earth, sites for primary colonisers and other plants that could not compete with taller and more vigorous species. Some plants that were primary colonisers in these areas are no longer present; they have been replaced by better adapted, usually larger, species. Among species that were present in 1992 and earlier yeras but were not observed in1993 are Winter Cress (*Barbarea vulgaris),* Red Goosefoot (*Chenopodium rubrum),* Chicory *(Chicorium intybus),* Black Bindweed (*Fallopia convolvulus),* Common Ramping-fumitory (*Fumaria muralis ssp.boraei),* Common Fumitory (*Fumaria officinalis ssp.officinalis),* Common Mallow *(Malva sylvestris),* Field poppy *(Papaver rhoeas),* Parsley (*Petroselinum crispum),* Yellow Bartsia (*Parentucellia viscosa)* and White Stonecrop *(Sedum album).* A large and vigorous plant, Globe-thistle (*Echinops sphaerocephalus),* that has grown on the land adjacent to the car-park for many years, was not evident this year.

Changing environmental conditions and the dispersal of the seeds from weeds of cultivation on adjacent land all play a part in the change of the plant community, as does the planting of seeds and plants that takes place in this managed environment. Plants recorded for the first time this year are Black Bent-grass *(Agrostis gigantea),* Barren Brome (*Anisantha sterilis),* Hybrid Geum (*Geum x intermedium),* Hard Rush (*Juncus inflexus),* Great Water Dock (*Rumex hydrolapathum)* and Swedish Whitebeam *(Sorbus intermedia).*

During the winter of 1993-94 the walkway car-park at Pinchinthorpe has been considerably extended and now includes a pond Other ponds have been created in the adjacent water-meadow. The planting and the natural succession that occur in these newly disturbed areas will be interesting to observe.

Darroll Fryer, February 1994.

Helix aspersa

Have you any large snails in your garden ??

The Common Snail, *Helix aspersa*, must be one of the best known of the 90 or so snails which occur in the British Isles, probably because of its large size and frequent occurrence in gardens. It may be native to South West England but could have been introduced from Southern Europe by the Romans as a source of food. Further Northward in Britain the Common Snail becomes progressively more synanthropic, perhaps because gardens and similar cultivated areas provide suitable hibernation sites such as beneath rockery stones or in wall crevices. During springtime it is not uncommon to find empty shells of both adults and juveniles in such places , indicating that the Common Snail finds it difficult to survive Winter in Britain, where it is at the Northern limit of its range. Because this species occurs predominantly in gardens and other similar areas it is probably very under-recorded in Cleveland, its known distribution being shown on the map below. For this reason records of the occurrence of this species would be much appreciated.

Northwards in Britain the Common Snail also becomes strongly associated with coastal dunes, where it can occur at high density, along with a limited number of other snail species such as the Brown-lipped Banded Snail (*Cepaea nemoralis*) and the smaller Striped Snail(*Cernuella virgata*) and Wrinkled Snail (*Candidula intersecta*). In this habitat, shells of all these species can be virtually white due to abrasion of the shell surface by sand particles.

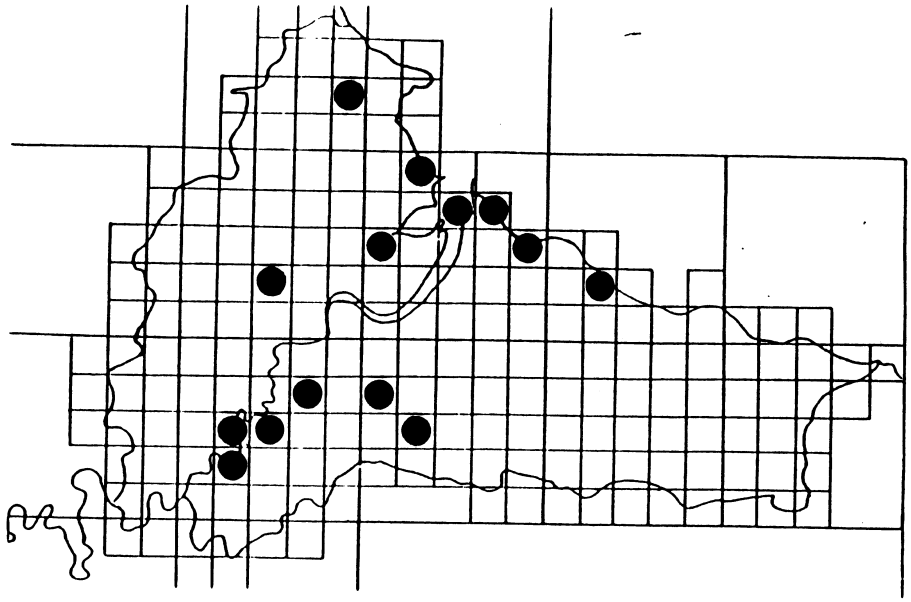
With a shell 30 mm tall by 30 mm in breadth, the Common Snail is the largest snail species occuring in Cleveland and therefore quite unmistakable. The globular shell is usually some shade of brown or dull yellowish, with paler flecks, and up to five darker spiral bands. The surface of unworn shells has a characteristically wrinkled texture and the lip of mature specimens is thickened and white in colour.

The only other snail species occuring in Cleveland with which the Common Snail might be confused is the smaller Copse Snail (*Arianta arbustorum*) which at around 16 x 21 mm is similar in size to the two Banded Snails (*Cepaea nemoralis* and *C. hortensis*). The Copse Snail can occur in any moist habitat, notably woodland, but is not likely to be found in gardens. Its shell is normally brown, or occasionally yellowish, again with paler flecks, but just a single, narrow, darker, spiral band.

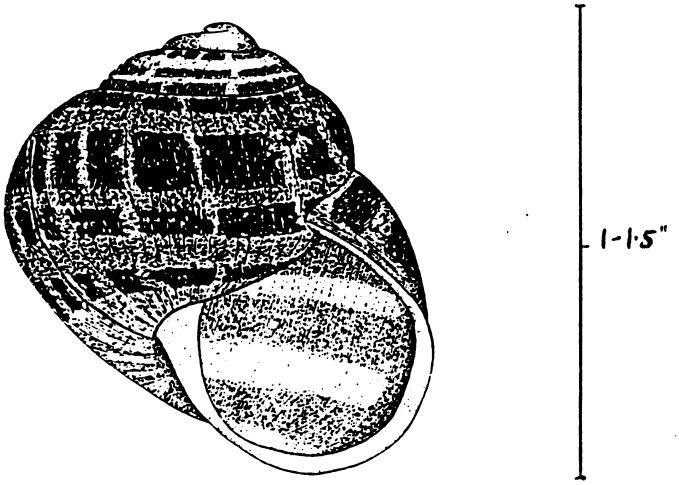
Further details on identfication can be found in "A Field Guide to the Land Snails of Britain and North-West Europe" by M. Kerney and R. Cameron, published by Collins, 1979.

If you are able to supply any records for the Common Snail, please provide a date , the location as precisely as possible (preferably with a grid reference number) and some indication of the habitat. Give your records to Tony Wardhaugh or any of the consultant members listed on your membership card.

A.A.Wardhaugh



Known Distribution of the Common Snail (*Helix aspersa*) in Cleveland. All records date from 1990 onwards.



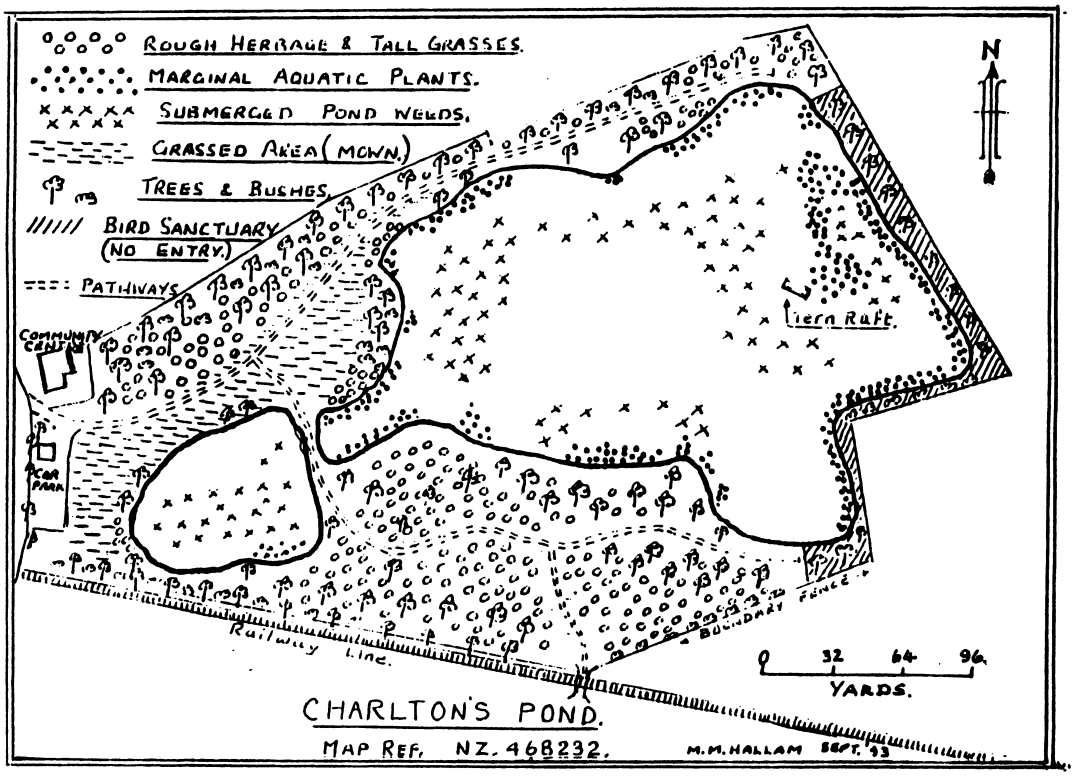
Shell of the Common Snail (*Helix aspersa*)

Charltons Pond

The Origin of Charltons Pond

Charltons Pond is situated between I.C.I. Billingham and the Cowpen Lane housing estate in the South-east corner of Billinghamm (NZ468232). It was at the end of the 19th century when a small brickworks began excavating clay from this site covering about 20 acres. However some time later natural springs flooded the workings and formed a lake. The workings were abandoned and left to nature. Soon it became a haven for wildlife and records show that Pochard were nesting there in 1903. In 1912 Mr. William Charlton (who became president of the Cleveland Naturalists Field Club 1n 1938) and Major Tristram leased the pond for twenty years and stocked it with Loch Leven trout. Early in 1920 the construction began nearby of the giant chemical works named Synthetic Ammonia and Nitrates Ltd. which subsequently became I.C.I. Ltd.. In 1930 the Billingham Urban District Council began building the Cowpen Lane Estate close by the pond. Because of the many birds living nearby it became known locally as "Dicky Bird Island" for many years. My first memory of the pond was in 1932 and to a boy already entranced by nature I found it a magical place. Around this time the ownership of the pond reverted back to the Dean and Chapter of Durham who in 1937 transferred ownership to Billingham Council and the area was fenced off. Up to this time the pond had provided a nesting haven for a wealth of bird species in comparative seclusion. Gradually this seclusion was eroded by the local youngsters and waterfowl like the Pochard and Tufted Duck became rare nesters. I recall, in 1935, finding high on the bank the remains of a trout about 15 inches long. This may have been the work of an otter which were not a rarity in the county at that time.

Throughout the war years and up to 1961 the pond was left to nature and parts were filled in by the council. The following years saw much activity towards making the area a nature reserve and the Eastern end was made a bird sanctuary in 1965 and fenced off. The Teesmoth Bird Club anchored a raft to encourage wildfowl to nest in 1967. In 1968 the Home Office made a statuary order making the pond area a nature reserve and a board of management was formed with members from the Borough Council of Teesside, the Nature Conservancy Council, Teesmouth Bird Club, and the Synthonia Angling Club. Today, in 1993, we have a compact nature reserve of about 20 acres which is making good progress in all aspects despite the fact that access is free at all times to the public.


ROUGH HERBAGE & TALL GRASSES.
MARGINAL AQUATIC PLANTS.
SUBMERGED POND WEEDS.
GRASSED AREA (MOWN.)
TREES & BUSHES.
BIRD SANCTUARY (NO ENTRY.)
PATHWAYS
N
Fern Rutt.
COMMUNITY CENTRE
CAR PARK
Railway Line.
BOUNDARY FENCE
0 32 64 96
YARDS.
CHARLTON'S POND.
MAP REF. NZ. 468232.
M.M. HALLAM SEPT. 93

Birds

The greatest success has been the establishment of a breeding colony of Common Terns. A new raft designed and built by the writer was launched in 1985 and is used by around 35-40 terns each year. The breeding pairs produce about 20 young. Two other successes are the Great Crested Grebes which average 3 young per year, and the Mute Swans. This bird has suffered for many years from lead poisoning from anglers lead shot and at least six birds have died. However in 1990 a pair took up residence and produced five young. In 1991 10 cygnets were reared from one brood, 7 in 1992 and 5 in 1993. Other regular breeders are Mallard, Coot (both average a resident population of about 90 birds), Moorhen, Collared Dove, Magpie, Song Thrush, Blackbird, Greenfinch, Chaffinch, Goldfinch, Robin, Wren, Dunnock, Blue-tit, Great Tit, Willow Warbler, Blackcap, Reed Bunting, and Little Grebe. The total bird list of sightings within the reserve is around 160, many of which are rarities including the first ever record in Europe of the Double-crested Cormorant. Others are Meally Redpoll, Siberian Chiff-chaff, Yellow-browed Warbler, Rose Coloured Starling, Red Crested Pochard, Black Tern. Many other uncommon birds are listed such as Great Grey Shrike, Red Backed Shrike, Bearded Tit, Grasshopper Warbler, Black-throated and Red Throated Diver, Slavonian Grebe, Hobby, Gadwall, Long-eared Owl, and Ring-necked Parakeet..

Vascular Plants

A survey was carried out of the vegetation which exists in the surrounds of the pond area, as well as the aquatic vegetation in the pond itself.

51 flowering species were recorded in the area around the pond with 30 tree and shrub species, most of which have been planted within the past 30 years. These are, on the whole, the usual types which have been widely planted throughout the county.

Of the 51 herbaceous species all are typical of fly-ash type terrain which is widespread in C;eveland's urban and industrial areas. Of interest is Black Horehound (*Ballota nigra*) which has a localised distribution in the county. 14 grass species were recorded which, again, are what would be expected on this terrain.

10 aquatic species were recorded including the marginal vegetation. Great Pond Sedge (*Carex riparia*) is of interest as this is an uncommon species in West Cleveland. Growing with it is False Fox Sedge (*C.otrubae*), Great Reed Mace (*Typha latifolia*), and Branched Bur Reed (*Sparganium erectum*). Of the pond weeds to be found there *Potamogeton berchtoldii, P. crispus*, and *P. pectinatus* are of interest. In one place Water-fern (*Azolla filiculoides*) has become established. This plant prefers the warmer waters of the South. The Common Reed (*Phragmites australis*) provides good cover for the birds within the main reserve.

Area round the pond

Trees and shrubs

Acer platanoides	Norway Maple
Alnus cordata	Italian Alder
A.glutinosa	Alder
A.incana	Grey Alder
Carpinus betulus	Hornbeam
Corylus avellana	Hazel
Cotoneaster frigidus	Tree Cotoneaster
Crataegus monogyna ssp.nordica	Hawthorn
Fraxinus excelsior	Ash
Ilex aquifolium	Holly
*Ligustrum ovalifolium*Garden Privet	
Malus sylvestris	Crab Apple
Pinus sylvestris	Scots Pine
Populus nigra var. italica	Lombardy Poplar
Populus nigra	Black Poplar
Populus trichocarpa	Western Balsam Poplar
Populus x canadensis	Black Italian Poplar
Prunus avium	Wild Cherry
Prunus spinosa	Blackthorn
*Quercus rober*Common (Pedunculate Oak)	
Ribes sanguineum	Flowering Cherry
Rosa canina	Dog Rose
Salix caprea ssp.caprea	Great Sallow
S.cinerea ssp. cinerea	Common Sallow
S.fragilis	Crack Willow
S.viminalis	Common Osier
Salix x sepulcralis	Weeping Crack Willow
Sambucus nigra	Elder
Sorbus aucuparia	Rowan, Mountain Ash
S. intermedia	Swedish Whitebeam
Ulmus glabra ssp. glabra	Wych Elm
U. minor ssp.sarniensis	Jersey Elm
Viburnum opulus	Guelder Rose

Other plants.

Achillea millefolium	Yarrow

Agrostis stolonifera	Creeping Bent
Alliaria petiolata	Jack-by-the-Hedge
Alopecurus pratensis	Meadow Foxtail
Anthriscus sylvestris	Cow Parsley
Arctium minus ssp.nemorosum	Wood Burdock
Armoracia rusticana	Horse-radish
Arrhenatherum elatius	False Oat Grass
Artemesia vulgaris	Mugwort
Ballota nigra ssp.foetida	Black Horehound
Bellis perennis	Daisy
Bromus hordaceus	Soft Brome Grass(Lop grass)
Bromus sterilis	Barren Brome
Calystegia silvatica	Large Bindweed
Capsella bursa-pastoris	Shepherd's Purse
Chamerion angustifolium	Rosebay Willowherb
Cirsium arvense	Creeping Thistle
*C.vulgare*Spear Thistle	
Conium maculatum	Hemlock
Crepis capillaris	Smooth Hawk's Beard
Cynosurus cristatus	Crested Dogs Tail
Dactylis glomerata	Cocksfoot
Deschampsia caespitosa ssp.caespitosa	Tufted Hair Grass
Digitalis pupurea	Foxglove
Elytrigia repens ssp. repens	Couch Grass
Epilobium hirsutum	Great Hairy Willowherb
E.montanum Broad-leaved	Willowherb
Equisetum arvense	Common Horsetail
Eupatorium cannibinum	Hemp Agrimony
Fallopia japonica	Japanese Knotweed
Festuca rubra ssp.rubra	Red Fescue
Festulolium loliaceum x	Hybrid Fescue
Galeopsis tetrahit	Common Hemp-nettle
Galium aparine	Goosegrass
Geranium molle	Dove's Foot Cranes-bill
Heracleum sphondylium	Hogweed
Holcus lanatus	Yorkshire Fog
Hordeum murinum	Wall Barley
Lamium album	White Dead Nettle
Linaria vulgaris	Common Toadflax
Lolium perenne	Rye-grass
Malva sylvestris	Common Mallow
Matricaria discoidea	Pineapple Mayweed
Myrrhis odorata	Sweet Cicely
Papaver somniferum	Opium Poppy
Phragmites australis	Common Reed
Plantago lanceolata	Ribwort Plantain
Plantago major ssp.major	Rat-tail Plantain

Poa annua	Annual Meadow Grass
Poa trivialis	Rough-stalked Meadow Grass
Polygonum aviculare	Knotgrass
Potentilla anserina	Silverweed
Potentilla reptans	Creeping Cinquefoil
Ranunculus ficaria	Lesser Celandine
Ranunculus repens	Creeping Buttercup
Reseda luteola	Weld, Dyers Rocket
Rubus fruticosus agg.	Bramble, Blackberry
Rumex crispus ssp. Crispus	Curled Dock
Rumex obtusifolius	Broad-leaved Dock
Senecio jacobaea	Ragwort
Silene dioica	Red Campion
Sisymbrium officinale	Hedge Mustard
Solanum dulcamara	Woody Nightshade
*Sonchus asper*Prickly	Sow Thistle
*S. oleraceus*Smooth	Sow Thistle
Stellaria media	Common Chickweed
Taraxacum officinale agg.	Dandelion
Tragopogon pratensis ssp. pratensis	Goat's-Beard
Trifolium dubium	Lesser Yellow Trefoil
T. repens	White Clover
Tussilago farfara	Coltsfoot
Typha latifolia	Reed-mace
Urtica dioica	Common Stinging Nettle
Veronica arvensis	Wall Speedwell
Vicia sativa ssp. Sativa	Narrow-leaved Vetch

Sedges

Carex riparia

In the Pond

Alisma plantago-aquatica	Water Plantain
Azolla filiculoides	Water Fern
Carex otrubae	False Fox-Sedge
Ceratophyllum demersum	Rigid Hornwort
Eleocharis palustris ssp. palustris	Common Spike-rush
Elodea canadensis	Canadian Pondweed
Juncus actuiflorus	Sharp-flowered rush
J.articulatus	Jointed Rush
J.effuses	Soft Rush
J.inflexus	Hard Rush
Myriophyllum spicatum	Spiked Water Milfoil
Persicaria amphibum	Amphibious Bistort
Potamogeton berchtoldii	Slender Pondweed
P. crispus	Curly Pondweed

P. natans	Broad-leaved Pondweed
P. pectinatus	Fennel Pondweed
Sparganium erectum ssp. erectum	Bur-reed
Zannichellia palustris	Horned Pondweed

Unique to the cut grassland - *Erodium cicutarium* Common Storksbill

Bryophytes

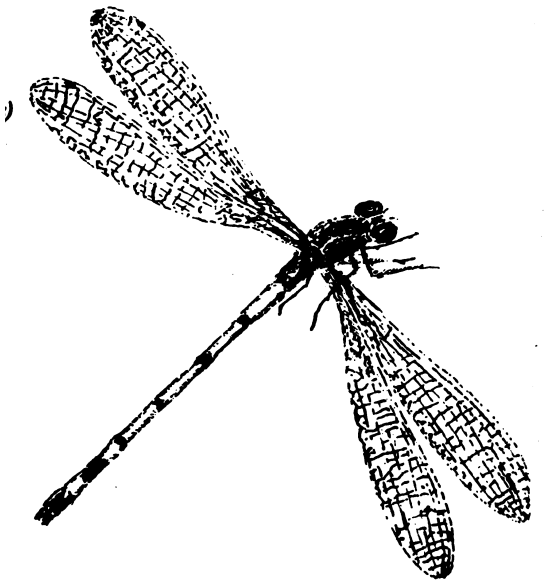
Most of the mosses seen were species commonly found in grassland and on bare ground. Two species of marshy ground were growing round the ponds, *Drepanocladus aduncus* and *Calliergon cuspidatum*. The significant find, however, was *Pottia bryoides* on the edge of the large pond. When first seen in January 1992, this was the only known current record for the plant in Co. Durham. It has since been found in two stubble fields in the Wolviston area. The full list is given below. No liverworts were found.

Barbula unguiculata
Brachythecium albicans
B.rutabulum
Bryum bicolor
Calliergon cuspidatum
Drepanocladus aduncus
Phascum cuspidatum
Pottia bryoides
Rhynchostegium confertum
Tortula muralis

John Blackburn

Fungi

Calvatia utriformis (exipuliformis)
Langermannia gigantea
Coprinus atramantarius
C.comatus
Lycoperdon perlatum
Lepista nuda
Hebeloma crustuliniforme
Hirneola auricular judae
Pleurotus cornucopiae



Lepidoptera

Vanessa atalanta	Red Admiral
Aglais urticae	Small Tortoishell
Inachis io	Peacock
Lasiomamata megera	Wall
Maniola jurtina	Meadow Brown
Anthocharis cardamine	Orange Tip
Artogeia rapae	Small White
A. napi	Green Veined White
Xanthorhoe fluctuata	Garden Carpet
Camptogramma bilineata	Yellow Shell
Peribatodes rhomboidaria	Willow Beauty
Cerura vinula	Puss Moth
Arctia caja	Garden Tiger
Noctua pronuba	Large Yellow Underwing
Phlogophora meticulosa	Angle Shades
Pterophorus pentadactyla	Large White Plume Moth

Dragonflies

Cordulegaster boltonii (visitor)	Golden Ringed Dragonfly
Sympetrum striolatum	Common Darter
Ishnura elegans	Blue-tailed Damselfly
Enallagma cythigerum	Common Blue Damselfly

Fish

Cyprinus carpio	Common Carp
Carassius carassius (?)	Crucian Carp
Cyprinus carpio	Mirror Carp
Abramis brama	Common Bream
Squalius cephalus	Chub
Scardinius erythrophthalmus	Rudd
Rutilus rutilus	Roach
Tinca tinca	Tench
Perca fluviatilis	Perch
Gobio gobio	Gudgeon

Anguilla anguilla Eel

Although many Trout were introduced in the 1960's none have been caught or seen for many years now.

Amphibians

Rana temporaria Common Frog
*Bufo bufo*Common Toad
Triturus vulgaris vulgaris Smooth Newt has been seen but the eggs are predated by fish.

Mammals

Vulpes vulpes	Fox
Mustela vison	Mink (now eliminated)
Erinaceus europaeus	Hedgehog
Talpa europaea	Mole
Microtus agrestis	Short-tailed Vole
Rattus norvegicus	Brown Rat
Mustela erminea	Stoat
M. nivalis	Weasel
Apodemus sylvaticus	Long-tailed Field Mouse
Sorex araneus	Common Shrew
Oryctolagus cuniculus	Rabbit
Pipistrellus pipistrellus	Pipistrelle Bat

Terrestrial Molluscs

Recorded 21st July 1993.

Cochlicopa lubrica	Slippery Snail
Discus rotundatus	Rounded Snail
Arion ater	Black Slug

Arion circumscriptus	
Arion intermedius	Hedgehog Slug
Vitrina pellucida	Pellucid Snail
Nesovitrea hammonis	Rayed Snail
Aegopinella nitidula	Smooth Snail
Oxychilus alliarius	Garlic Snail
Deroceras reticulatum	Netted Slug
D. caruanae	
Trichia striolata	Strawberry Snail
T.hispida	Hairy Snail
Capaea nemoralis	Brown-lipped Banded Snail
Helix aspersa	Common Snail

All of the above are both nationally and locally common species. They were recorded in the field and ground layers of the grassland and scrub surrounding the pond. Surprisingly, no marshland species were found, in spite of careful searching of vegetation around the pond margin. Of the species found, all the specimens of the slug *Arion ater* were black i.e. the wild type. None of the other colour varieties, such as brown, orange or greenish were found, these being typically synanthropic. The snail *Vitrina pellucida* is unusual in being a species with a marked annual life-cycle, maturing in the Winter. Several small juveniles were found and one old, empty shell of an adult.

Bats and Their Roosts in Cleveland

Introduction

Three papers have been published elsewhere on bats and their roosts in Cleveland (Wardhaugh 1992, 1993 and 1994), these being based on work carried out since 1983 in the area shown in figure 1. The aim of this article is to summarise the essential findings and to update all information to the end of 1993. The original papers included data on 58 roost sites and 44 records of individual bats found away from known roosts and identified in the hand, these being chiefly exhausted, injured or freshly dead animals. This article extends coverage to 75 roosts and 62 records of individuals. The additional data does not result in any significant change to patterns reported previously but some new information and ideas are outlined below. Prior to this study little was known about the status and distribution of bats in the Cleveland area, although some information is provided by Howes and Thompson (1985). For the present purpose, the most convenient approach is to cover each of the eight recorded bat species in turn, however a few preliminary remarks are necessary in order to provide a full appreciation of the data.

Details of the life-cycles of British bats vary to some extent between species so the following account involves some generalisation. The large majority of roost sites located have been in buildings, where considerable numbers of bats often congregate in the Summer. At first these groups are usually made up entirely of females, most of the animals already being pregnant when they arrive. Birth generally occurs in late June or early July, females producing a single young (twins probably being very unusual) which is weaned after about three to four weeks. The colony then disperses. During Summer, adult males roost singly or in small groups and are therefore much more difficult to locate. From about November to March bats hibernate, chiefly in moist and cool but frost free places such as wall and tree cavities, caves, disused tunnels, and similar places.

When considering the information below, the following points should be borne in mind. Firstly, regarding roosts, a colony of bats will use a number of sites during the course of a year and may move from one to another quite frequently. This is especially true of the Pipistrelle in Summer, groups of females often vacating a roost for no apparent reason. Thus nursery roosts may be occupied for any period from approximately May to September inclusive, either throughout this time or for as little as a single day. Nevertheless, at any given season, bats frequently return to a favoured site,

often for many successive years. Alternatively they might occupy a site once only, or else sporadically, being present some years and absent others. To complicate matters further, not all animals will move into a roost site on the same day, nor will they all leave together. Occasionally, nursery colonies will split up and the members then occupy two (or even more) roost sites simultaneously.

Accurate counts of the numbers of bats at a roost site are rarely possible. This is because most British species occupy confined and inaccessible spaces where they cannot be viewed directly. In Summer, the best that can be done is to visit the site at dusk and count the individuals which emerge to fly and feed at this time. In general all the animals seem to leave within about a half hour period but not all bats will fly every night, although the large majority probably do so on fine Summer evenings. Thus counts indicate the minimum number of animals present at the time and not necessarily the total. Regarding counts of nursery colonies, it should be borne in mind that earlier in the year (e.g. June) these would be of adults only but by August newly fledged offspring will be on the wing too.

Bats enjoy protection under the 1981 Wildlife and Countryside Act and consequently the work described here was carried out under licence from English Nature.

Pipistrelle *(Pipistrellus pipistrellus)*

The Pipistrelle is probably far more numerous in the Cleveland area than all the other bat species together, a pattern which is in line with findings nationally (Stebbings and Griffith 1986). Fifty-nine Pipistrelle roost sites have been located (Cleveland County 41, North Yorkshire 18), these comprising 78.6% of all known roost sites in the study area (figure 2). Of these, 53 have been occupied by nursery colonies, 38 being in two storey houses, six in other two storey buildings, six in bungalows, two in churches and one in a garden shed. The relative abundance of this species surely must be related to its willingness and ability to exploit buildings, often modern ones, as roosts. The mean age of buildings occupied (where this could be ascertained) was 34.5 years, this figure being based on 30 roosts (for details of how this was calculated see Wardhaugh 1992). One site is atypical, being a house built in 1851, all other buildings being much newer. If this site is excluded (where bats have been present since at least 1976) then the mean age is 16.5 years (range 4 to 41 years). The significance of this useage is hard to evaluate; it may be that the Pipistrelle simply exploits what is available rather than deliberately selecting newer buildings. Of these nursery roosts, 26 were in soffits (i.e. the timber box section beneath guttering or on gable ends), seven behind facia boards, five behind hanging tiles, five behind timber cladding, four in wall cavities, four in flat roof voids, and one beneath roof slates (and at one site the exact location of the colony could not be determined). The aspects faced by the roosts has a noticeable bias, only ten falling within an arc from WNW through N to ENE and 41 facing the remaining directions (i.e. from ENE through S to WNW). The earliest date when concentrations of females have been recorded was the 25th April, and the latest, the 20th

September, with a peak period of occupancy from mid-May to mid-August inclusive.

Maximum numbers of animals have occurred in late May, with a dip in early June followed by a second, larger peak from mid-June to mid-July inclusive (table 1). This pattern of fluctuation was evident in data published previously (Wardhaugh 1992) and is reinforced by further counts made during 1992 and 1993. Surprisingly it seems to have been reported only once previously, being evident, although not commented on, in a small amount of data provided by Richardson (1984). Consequently it is a pattern worthy of further consideration here. It appears to be a genuine effect and may relate to the breeding cycle of the animals and the way in which they regulate their body temperature. Even during Summer months British bat species do not maintain a high, constant body temperature at all times. In order to conserve energy they often let their body cool down when resting by day, behaviour known as heterothermy. Thompson (1990) suggested that female bats may use roosts according to their temperature requirements, initially selecting cooler sites early in pregnancy, when the embryo has not yet begun to grow rapidly, and they can afford to let their body temperature fall. Later, during mid pregnancy, they select warmer sites and become homeothermic (i.e. maintaining a constant, high body temperature) in order to promote foetal growth. Similarly during lactation they are necessarily more active and therefore homeothermic, requiring warm sites both for themselves and their young. A newly born pipistrelle can be as much as one third of adult body weight, and interestingly, Stebbings (1986) stated that in late pregnancy the foetus takes up most of the room in the abdomen, so the female cannot eat a great deal and may become heterothermic at this time. This last fact may serve to explain the low counts recorded in the present study for early June. Breeding in the Pipistrelle is highly synchronous and late pregnancy will probably coincide with this period during most Summers. At this time the females may be obliged to eat less, and therefore become heterothermic in order to conserve energy. Consequently they may either disperse to cooler sites, become less active, or possibly both. Recently, further support for these ideas has been gained from observations of a colony of Natterer's bats (see below).

Just six roosts which seem not to be nursery roosts have been located in the study area. Details of five of these have been described previously (Wardhaugh 1992), two being hibernacula containing a very few animals, and three being Summer sites seemingly occupied by small numbers of males. Of significance is the recent finding of a hibernaculum which contained at least 20 animals (possibly far more) on 4th February 1993. No bats remained however by the 15th March. The site is in a very large country house in North Yorkshire, in a wall cavity above a timber window frame. It is of interest to note that in an extensive survey of Pipistrelle roosts on the Vale of York, no large hibernacula, with several bats present, were found (Thompson 1990). Such sites seem to be unknown in the South of England although some are known in the Durham area and further North (G. Hinchcliffe, personal communication). If this is a genuine geographical difference in behaviour then its biological significance is not easy to explain.

Another hibernation site worthy of mention was located in March 1993, in a large, two storey building, already known to be used as a nursery roost. Unfortunately the building had to be demolished, this being done in early Spring, when it was hoped no bats would be present. Nevertheless initial dismantling by workers was carried out with care and in fact eleven Pipistrelles (9 males and 2 females) were found behind facia boards.

The distribution of 46 individual Pipistrelles found away from roosts is shown in figure 3. As stated above, these were chiefly exhausted, injured, or freshly dead adults but the total includes 3 stranded juveniles which in some way must have become separated from their mothers, perhaps dropped in flight by the parent during a change in roost site. For 41 of the adults, sex was recorded, there being 30 males and 11 females, a very significant bias. A possible reason for this has been suggested previously (Wardhaugh 1993) essentially that males may perhaps fly more often than females in adverse conditions and hence are more likely to encounter problems. This may be linked to the fact that males are of smaller mass then females and therefore have a larger surface area to volume ratio. Hence males may need to fly and feed more frequently and are less able to avoid flight in poor conditions. Other reasons for greater activity of males at such times are possible however, for example the need to seek out females during the mating period (principally in Autumn) or the need to change roost site.

When considering the distribution of both Pipistrelle roosts (figure 2) and individual animals (figure 3) at least four patterns are evident. Firstly there is a very marked tendency for this species to occur in urban areas (figure 1) as opposed to open countryside or small rural villages (table 2). As indicated above, the Pipistrelle is highly dependent upon houses and other buildings for roost sites, something which is true nationally as well as locally (Avery 1991). This apparent association could be due at least in part to both roosts and displaced individuals coming to light more readily in well populated areas. However information on the distribution of the Brown Long-eared Bat, provided below, suggests that this is not the case. This categorisation of the study area is very simplistic and further collection of data during 1992 and 1993 has made it increasingly evident that within the urban areas, as defined in table 2, most bats occur towards the periphery, with very few records indeed for the industrial Tees corridor and estuary. For example, no records of roosts and just four records of individual bats (one Pipistrelle, one Nathusius' Pipistrelle, and two Noctule bats) have been collected for the area covered by the Teesside Development Corporation. Clearly this is an aspect of distribution worthy of further study in order to determine whether this pattern is genuine and if so, why.

A further point of interest reported previously (Wardhaugh 1992) is a strong association with areas below an altitude of 100 metres. Thus within the study area, approximately 56.8% of the area is below 100 metres, but holds 93.2% (=55) of all known roosts (=59) and 93.5% (=43) of all recorded individuals (=46). Finally the data collected suggests that the Pipistrelle may have a tendency to avoid areas within 5 km of the coast although this association is less marked. Thus 16.1% of land is within 5 km of the coast and holds only 5.1% (=3) of known roosts and 4.3% (=2) of individual records.

All of these distribution patterns could be due to one or more of a number of factors such as aspects of climate or the availability of food, or roost sites. Moreover, causes could be related, not least because urban areas and land over 100 metres are almost mutually exclusive in the study area. Much of the latter, for example, is open moorland with few buildings or other potential roost sites. Consequently attempting to evaluate the relative importance of the patterns noted, and their possible underlying causes, is extremely difficult.

Table 1

Pipistrelle nursery roosts: numbers of animals recorded.

	May 1-15	May 16-31	Jun 1-15	Jun 16-30	Jul 1-15	Jul 16-31	Aug 1-15	Aug 16-31	Sept 1-15	Sept 16-30
Mean No	.44.3	128.1	38.4	88.8	94.4	76.7	45.5	41	-	4

Data based on observation of 37 root sites and a total of 89 counts.

The Brown Long-eared Bat *(Plecotus auritus)*

This species of bat is probably the second most numerous in the study area but even so, it seems to be far less common than the Pipistrelle. Eleven roost sites have been located, eight of these being in loft voids of sandstone or brick houses or similar buildings where up to about 30 individuals have been noted at a number of sites during the Summer (See Wardhaugh 1992 and 1993 for details). Compared with those occupied by the Pipistrelle, these roost sites are typically more rural and the buildings older, generally 100 years or more in age. Seven displaced individuals have been found, all records being shown in figure 4, which along with the data in table 2 indicates that the Brown Long-eared Bat does not have a preference for urban areas. This point serves to show that the observed association of the Pipistrelle in this respect is likely to be at least in part genuine and not purely a consequence of the process of data collection as outlined above. Futhermore, these findings agree with the stated habitat preferences of these two species in Britain generally (Avery 1991, Swift 1991), although it should be stressed that available information seems to be principally anecdotal. Like the Pipistrelle the Brown Long-eared Bat shows a tendency to occur at altitudes below 100 metres where 83.3% of all records (15 out of 18) have occurred.

Table 2

Association between land use and occurrence of bats

Land* Use	Land Area	Pipistrelle occasional	Pipistrelle Roosts	Brown Long-eared Bat All records
records	Km^2(%)	no.(%)	no.(%)	no.(%)
Urban	201 (12.2)	30 (65.2)	39 (66.1)	3 (16.7)
Rural	1444 (87.8)	16 (34.8)	20 (33.9)	15 (83.3)
Totals	1645 (100)	46 (100)	59 (100)	18 (100)

* Urban land is defined as areas of housing, industrial or similar land, greater than one square km. in area.

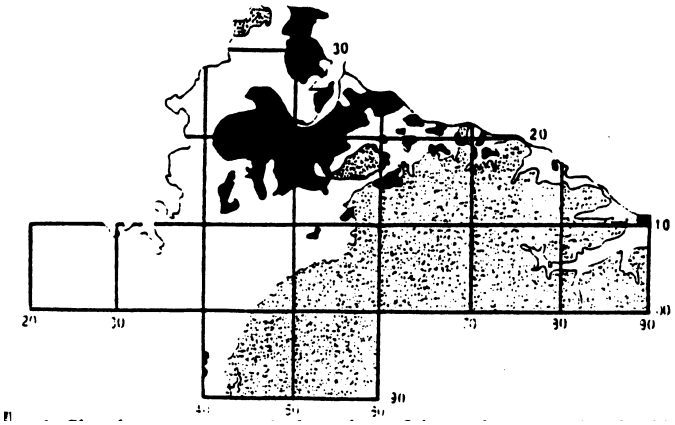


Figure 1: Sketch map showing the boundary of the study area. Urban land is shown in black (defined as areas of housing, industrial or other similar land of greater than 1 km^2 in area). Stippled areas are those 100m or more above sea level. (Reproduced from the Naturalist, volume 118, page 34, by permission of the editor, Prof. M.R.D. Seaward)

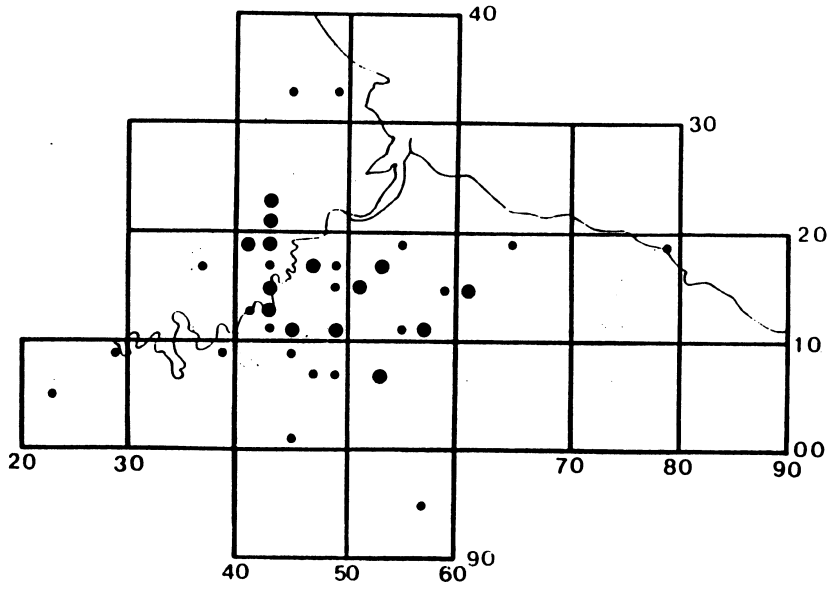


Figure 2: Tetrad

distribution of known roost sites of the Pipistrelle in Cleveland and North-East Yorkshire.
Small circle = one roost
Large circle = two to six roosts
Cleveland County boundary (dotted line and River Tees are shown.

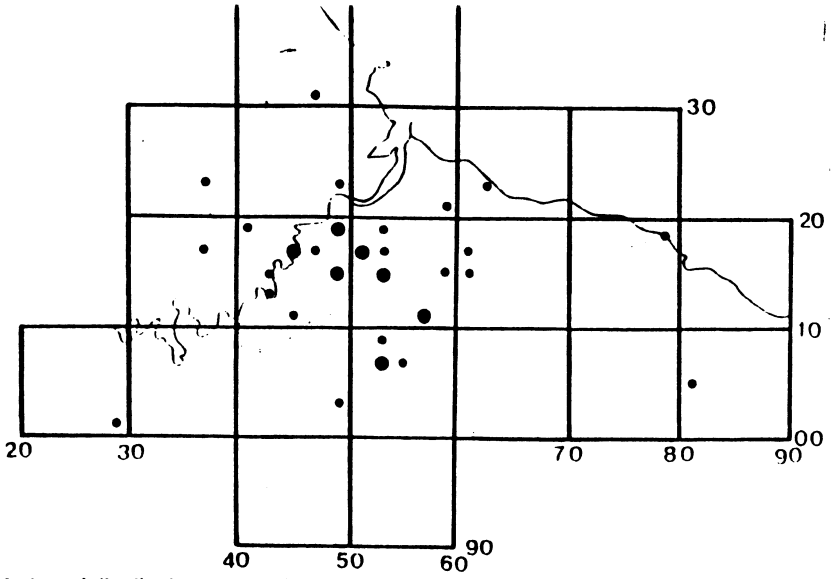


Figure 3: Tetrad distribution of records of individual Pipistrelles in Cleveland and North-East Yorkshire.
Small circle = one individual
Large circle = two to six individuals

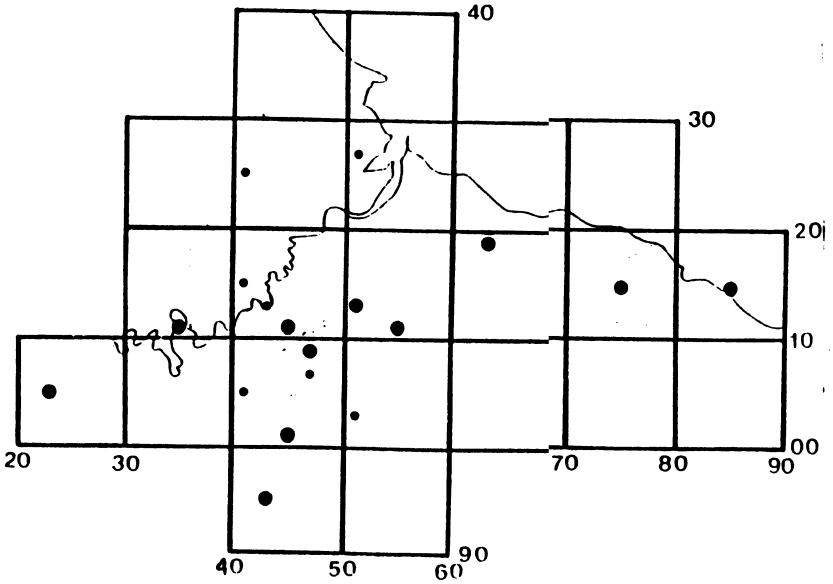


Figure 4: Tetrad distribution of records of Brown Long-eared Bat roosts and individuals in Cleveland and North-East Yorkshire.
Small circles = records of individuals
Large circles = roost sites

The Noctule Bat *(Nyctalus noctula)*

This species has been the subject of a recent article elsewhere (Wardhaugh 1994), of which the following is a summary.

For the period 1969 to 1993 inclusive there are only five certain records of individuals identified in the hand:

Place	Grid	Ref.Date	No.of Bats
Saltholme Pools	45/504.224	1/9/1969	2
Hartlepool Headland	45/531.341	23/4/1971	1
Carlton-in-Cleveland	45/512.030	17/8/1992	1 female
Yarm	45/413.106	25/5/1993	1 male

Fortunately the Noctule can be identified on the wing with a high level of certainty, unlike most other bat species. It is the only large bat known to occur in the area, its flight is high, fast, and quite distinctive and it emits ultrasound for echolocation at a characteristic frequency peak of 20 to 25 kHz. The latter can be determined by the use of a bat detector but is often clearly audible to young people with good high pitch hearing. On this basis the Noctule has been recorded flying and feeding at dusk at eleven sites in recent years (See Wardhaugh 1994 for distribution map).

Surprisingly no roost sites of this species have yet been located. The Noctule roosts very largely in tree cavities, a number of sites being known in Durham County (Jackson and Hinchcliffe 1986).

Daubenton's Bat *(Myotis daubentonii)*

Two roost sites are known, both on the underside of road bridges over rivers. One has been known since 1985 and the other since 1988. Both are nursery roosts where numbers of bats are very difficult to estimate. Possibly up to 50 animals occur at one site and up to 30 at the other. At one of the roosts a few bats have been present at times in Winter.

Brandt's Bat *(Myotis brantii)*

Two roost sites have been located, one being a nursery roost in a sandstone church where the bats occupy a space between the roof slates and timber underboarding. Up to 16 bats have been recorded here since 1985. The second site is in the roof void of a sandstone single storey house where two males were found in a wall crevice on the 18th June 1988. Another

part of this loft void is used as a Summer nursery roost by Brown Long-eared Bats.

Natterer's Bat *(Myotis nattereri)*

One nursery roost is known. This is in a large sandstone church where bats have been present every year since at least 1983 but probably for much longer. Up to 22 individuals have been counted leaving the church, where they occupy three sites behind timber beams in the nave. Initial casual observations followed by more systematic recording during 1992 and 1993 suggest that the bats may move between these sites on a regular basis. For most of the period of occupancy (mid May to late September) the animals roost in a site below a South facing part of the church roof. However for around two weeks in early June they move to North facing sites. This period could coincide with late pregnancy, the overall pattern fitting well with findings for the Pipistrelle outlined above. The site lends itself well to more detailed studies, without disturbance to the animals, and it is hoped that these will be carried out over the next few summers. The colony is of significance, not only for this reason but also because relatively few Natterer's bat roosts are known in the North East of England and therefore it is of considerable conservation value.

Whiskered Bat *(Myotis mystacinus)*

No roost sites are known for this species, which seems to be not uncommon in the Durham area (Jackson and Hinchcliffe 1986). There are two records of displaced individuals:

Eaglescliffe	45/39.142	2/8/1988
Hutton Rudby	45/47.06	7/10/1993

(A distribution map of all known *Myotis* species roost sites is provided in Wardhaugh 1992).

Nathusius' Pipistrelle *(Pipistrellus nathusii)*

This continental species is not known to be resident in Britain but is migratory and individuals have been recorded in this country on a few occasions. A female in poor condition, was found at Teesport (45/54.23) on 26th April 1991. It seems very likely that this animal arrived in Britain by ship but regrettably this could not be ascertained for certain.

Conclusion

Under the 1981 Wildlife and Countryside Act, bats were given extensive protection because of known dramatic declines in the populations of several species. The Lesser Horseshoe Bat (*Rhinolophus hipposideros*) and the Barbastelle (*Barbastella barbastellus*), for example, both occurred in the Helmsley area until as recently as the 1950's but now, both are probably extinct in Northern England. There are thought to be two main reasons for this decline in bat populations, loss of feeding habitat, and loss of suitable roost sites. All British bats feed on insects, mostly caught on the wing, and with the intensification of agriculture, insect rich habitats have been much reduced. Similarly, suitable roost sites in tree cavities and buildings have been lost due to "tidying up" of the countryside and demolition or renovation of rural properties. In the present, more enlightened times, when public sympathy for bats is growing, one might feel that their future would be more secure. There is however no room for complacency. Ten years work in the Cleveland area has shown that seven species of bat occur here. To take one example, Natterer's Bat has been described recently as "a scarce and poorly known species" (Roberts and Hutson 1993). This is particularly true of the local region with just one known Summer breeding site in Cleveland and one other in the West of Durham County. In both cases the Winter hibernation sites are not known. If these colonies were destroyed by any unfortunate circumstances, this species may well become locally extinct. Thus on a national scale, several species of bat remain vulnerable to local extinctions and rapid contraction in range.

There are however grounds for optimism, given the upsurge of interest in bats in recent years. Public awareness and sympathy for the plight of bats has increased. There has been a decline in the use of organochlorine compounds, both as agricultural pesticides and in their use for timber treatment of buildings suffering from woodworm where bats are present. Changes in forestry policy have placed more emphasis on conservation, large scale bat box schemes in Dalby and Hamsterley Forests being relevant and welcome examples. Nevertheless much more, often very basic information on the ecological requirements of bat species is needed if these animals are to be conserved successfully and the declines of this century halted or even reversed.

Acknowledgements

I am grateful to members of Cleveland Bat Group, both past and present, for their help in providing data included in this paper. In addition I wish to thank R.T.McAndrew for supplying records of two Long-eared Bats and three Noctule Bats noted above.

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A.A. Wardhaugh, 1994

Cleveland Wildlife Trust Liaison

Conservation, rightly, has diversified in recent times. Its concerns nowadays embrace global warming and acid rain; its activities include pond-creation schemes, sheep-grazing as management on nature reserves and, necessarily, marketing and fund-raising.

Nonetheless, conservation and the recording of natural history remain closely linked. Recognising, and indeed reinforcing, this has been Cleveland Wildlife Trust's appointment in July 1991 of a 'Biological Survey Officer'. In part, the Trust was motivated by its need to know more effectively what 'resources' the County has- in other words, a 'stock-taking' of habitats valuable to wildlife. Equally, marshalling accurate and detailed data is a pre-requisite to combatting developmental threats.

Thus, 'Phase II' surveys form a major element of the job. Logically enough, these follow Cleveland's 'Phase I' surveys done some years ago by Alex Weir and Neil Allinson. 'Phase I' is a wide-ranging, comprehansive but relatively quick-fire differentiation into habitat- categories such as deciduous woodland, arable fields, drainage courses, or industrial useage. This information is summarised on colour coded Phase I maps. 'Phase II' entails a much fuller assemblage of environmental facts, recorded in systematic

fashion such that like sites- for example, semi-improved, herb-rich grasslands- can be easily compared, or monitored over time.

The field-work is essentially botanical. Other aspects of natural history may be remarked on in passing, but the emphasis of data collecting must be floristic: plants are fixed and available year-round, albeit less well represented in the Winter period, whereas insects die off, birds fly away, and mammals skulk unseen.

More importantly, vegetation constitutes the obvious appearance within the landscape; it provides the ecological basis, directly or indirectly, on which other wildlife depends; and it offers measurable phenomena, such as total area of habitat, or relative abundance of species. The nationwide system of classifying habitats (NVC) relies fundamentally on plant communities.

Of course not all of the County can be, or should be, surveyed at 'Phase II' level. For detailed study promising localities are selected from the existing Register of 'Sites of Nature Conservation Importance'. Field-work programmes for each of the four Cleveland districts have been followed. At present, the final series of surveys, in Hartleppol, is well underway.

It has been my pleasure to compare notes with, and tap the local knowldege of, botanists in the Field Club, and I hope that a useful exchange of information and ideas can be maintained in the future.

Christopher J. Lowe

Miscellaneous Records

The following moths were observed at a mercury vapour moth trap in Thorpe Wood (NZ404246) between 9.00 p.m. and midnight on the 29th May 1993. This was an extremely wet night with persistent rain, but no wind. The habitat was a forestry track edge through secondary mixed deciduous woodland.

Chloroclysta truncata	Common Marbled Carpet
Epirrhoe alternata	Common Carpet
Xanthorhoe montanata	Silver Ground Carpet
Pterostoma palpina	Pale Prominent
Perizoma affinitata	Rivulet
Hepialus hecta	Gold Swift
Eulithis silaceata	Small Phoenix
Odontopera bidentata	Scalloped Hazel
Lomographa temerata	Clouded Silver
Alcis rependata	Mottled Beauty
Selenia lunularia	Lunar Thorn
Spilosoma lubricipeda	White Ermine
Pertrophora chlorosata	Brown Silver-line
Ectropis bistortata	Engrailed

On the night of 10th July 1993 a single specimen of Buff Arches (*Habrosyne pyritoides*) was attracted to a mercury vapour light in my garden (Crooksbarn Estate, Norton). This moth is reported from all the vice-counties in Yorkshire (Sutton and Beaumont), but has been described as extinct in Co.Durham (Dunn and Parrack). It has been recorded recently at Gainford (between Darlington and Barnard Castle) by R.Wood (personal comm.) which is in Co. Durham. With the potential imminent demise of Cleveland County, and the fact that most recording is done using vice-counties, perhaps it is now possible to state, happily, that this moth is not quite extinct in Co. Durham. This moth is large and very attractively marked and coloured; a worthy competitor to any butterfly in terms of beauty.According to 'The Moths and Butterflies of Gt. Britain and Ireland: Vol 7(2)' the foodplants are bramble and raspberry mainly. Both of these grow in my garden.

Malcolm Birtle,1994

Field Meetings 1994

DATE	TIME	AREA OF WALK	LEADER	MEETING PLACE
Sat. April 23rd	2.00pm	Saltburn Gill	Maurice	Cat Nab WardCar Park
Wed. May 11th	7.00pm	Poole Hospital Grounds*	Vincent Jones	Staff Car Park
Sun. May 15th	11.00am	Ashdale, Helmsley	Norman Thompson	Castle Car
Wed. May 18th	7.00pm	Hagg Wood, Moorsholm *	John Backburn	Moorsholm Village
Sat. May 21st	10.30am	Low Dalby (Y.N.U.)	John Blackburn	Dalby Village
Wed. May 25th	7.00pm	Great Ayton & Easby	Kath Dilworth	High Green Car Park
Sun. June 5th	11.00am	Caydale, Murton Grange*	Ian Lawrence	Hawnby lane end, B1257
Wed. June 8th	7.00pm	Hilton Woods	Chris Lowe	Hilton sewage works
Wed. June 15th	7.00pm	Lockwood Beck Reservoir	John Backburn	The Reservoir Car Park
Sat. June 18th	11.00am	Arkengarthdale	Joan Bradbury	Langthwaite Parish Church
Wed. June 22nd	7.00pm	North Gare	Maurice Hallam	North Gare Car Park.
Sun. June 26th	2.00pm	Blackhall Rocks	Maurice Hallam	Station Road.

Wed. June 29th	7.00pm	Eaglescliffe Ponds	Rob Scaife	Cliff Mill allotments
Sun. July 3rd	10.30am	Kirby Stephen	Eric Gendle	A66/A685 junction
Wed. July 6th	7.00pm	Hargreaves Quarry	Chris Lowe	Near North Tees Works
Sat. July 9th	11.00am	Hole of Horcum	Colin Chatto	The nearby Car Park
Wed. July 13th	7.00pm	Upleatham & Errington Wood	Darroll Fryer	Upleatham Village
Sat. July 16th	11.00am	Whisperdale	Eric Gendle	Reasty Bank Car Park
Wed. July 20th	7.00pm	Crimdon Cut	Vincent Jones	Hartlepool Golf Course
Sat. July30th2.00pm	Raisdale		Maurice Ward	Chop Gate Car Park
Sat. Aug.13th	11.00am	Douthwaite Dale	Pam Law	Hutton-le-Hole Car Park
Sun. Aug.21st	11.00am	Caydale*	Ian Lawrence	As for June 5th
Sun. Oct.2nd	11.00am	Mulgrave Woods	Pat Wood	The Shore Car Park

Please see the programme notes for further details.
Please note that meetings marked * are specifically for recording flora and fauna
in a particular area and there may be no sustained walk. All members are welcome
to contribute their enthusiasm and expertise!

Members are asked to report finds or records to the Secretary, who has a list of
specialist consultant members who will be pleased to help with the identification
of specimens.

Meetings of the Northern Naturalists Union 1994

14th May	Teesdale
18th June	Brasside Ponds
9th July	Chopwell Woods
3rd September	Northumberland Coast

Further details of times etc.. will be available from M.Birtle on 0642 558055.

CONSULTANT MEMBERS

Members are asked to report finds or records to the following who will be pleased to help with the identification of specimens

Flowering Plants
I.C. Lawrence

Fungi
Alex Weir

Bryophytes (Mosses 6 Liverworts)
J. Blackburn

Birds
M. Hallam

Lepidoptera (Butterflies & Moths)
N Harwood (General Entomology)
M. Birtle (and Geology)

Heraldry & Genealogy
T.H. Brown

Representatives:
I. C.Lawrence (CWT)
J. Blackburn (YNU)
M. Birtle (NNU)